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(SPACE BELOW FOR FILING STAMP ONLY)

6 Attorneys for Petitioner  
7 PAUL RYKEN and ESTATE OF NICK VAN VLIET

8 BEFORE THE  
9 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

11 In the Matter of the Estate of Nick Van  
12 Vliet and Paul Ryken's Petition for Review  
13 of Action and Failure to Act by the  
14 California Regional Water Quality Control  
15 Board, Lahontan Region, in Issuing  
16 Cleanup and Abatement Order No. R6V-  
17 2008-0034A3.,

Case No.

**OBJECTIONS TO INVESTIGATIVE  
ORDER NO. R6V-2010-0005 FOR  
ADDITIONAL INFORMATION ON  
ALTERNATE WATER SUPPLY  
EVALUATION; REQUEST FOR A STAY;  
and PETITION FOR REVIEW AND  
REQUEST FOR HEARING**

**[Cal. Water Code §§ 13320, 13221;  
Cal.Code.Reg. Title 23 2053]**

19 Pursuant to section 13320 of California Water Code and section 2050, *et seq.*, of Title 23  
20 of the California Code of Regulations, the Estate of Nick Van Vliet and Paul Ryken (hereinafter  
21 collectively "Desert View Dairy") hereby petition the State Water Resources Control Board  
22 (hereinafter "State Board") to review and vacate the final decisions of the California Regional  
23 Water Quality Control Board for the Lahontan Region (hereinafter "Regional Board") in the  
24 Investigative Order No. R6V-2010-0005 requesting Desert View Dairy to augment the existing  
25 proposal for groundwater sampling, Hinkley, San Bernardino County – Amended Cleanup and  
26 Abatement Order (herein "CAO") No. 6B360409002 ("Investigative Order").

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**I.**  
**NAMES AND ADDRESSES OF PETITIONERS**

Paul Ryken  
Desert View Dairy  
37501 Mountain View Road  
Hinkley, CA 92347

Estate of Nick Van Vliet  
c/o Gary B. Genske  
1835 Newport Blvd., Suite D-263  
Costa Mesa, CA 92627

Petitioners may be contacted through counsel of record:

Gregory S. Mason, # 148997  
McCormick, Barstow, Sheppard,  
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**II.**  
**SPECIFIC ACTION FOR WHICH THIS PETITION FOR REVIEW IS SOUGHT**

The Regional Board action that is the subject of this Petition is the issuance of the Amended Cleanup and Abatement Order No. R6V-2008-0034A3 WDID No. 6B360409002 and Revised Investigative Order No. R6V-2010-0005, and all actions that Desert View Dairy needs to take in response to the Orders, including, but not limited to, submitting a revised off-site groundwater investigation work plan to be called the Groundwater Investigation and Characterization Report and provide a Long-Term Replacement Water Supply Plan. The report and plan require a detailed proposal to investigate and determine the off-site extent of groundwater contamination from unauthorized discharges from Desert View Dairy, Nelson Dairy, and the former field crop parcel. Further the Amended Cleanup and Abatement Order No. R6V-2008-0034A3 requires the implementation of a permanent water supply plan that allows for all indoor and outdoor domestic uses for all private wells with nitrate concentrations exceeding 45 mg/L and/or providing interim and/or long term water supply to "affected" residences and/or for any other purpose. (See Order No. R6V-2008-0034A, **Exhibit A** to the Declaration of Paul Ryken attached hereto.) The amended Order further imposes stringent timelines and requirements for extensive reporting if those timelines and requirements cannot be met.

The original Cleanup and Abatement Order upon which COA No. R6V-2008-0034A3 is

1 premised, outlined the rationale the Regional Board took for naming Desert View Dairy primarily  
2 responsible, and PG&E only secondarily responsible. (See Order No. R6V-2008-0034 **Exhibit B**  
3 to the Declaration of Paul Ryken attached hereto.) Each amended COA merely adopted the  
4 originally assigned responsible parties, but did not go into an explanation as to why such  
5 responsibility was assigned or what considerations were made before doing so. The rationale  
6 given in the original COA was that active contributors of the discharge, namely Desert View  
7 Dairy and Flameling Dairy, would be held primarily responsible, and mere landowners,  
8 specifically PG&E, would only be held secondarily responsible. (See **Exhibit B** at pg. 6 ¶22.)

9 Desert View Dairy strongly objects to this rationale because it is in direct contradiction to  
10 the weight of the evidence. Desert View Dairy feels that it has been arbitrarily named the  
11 primarily responsible party for the land constituting Desert View Dairy. PG&E has owned the  
12 land for several years and contributed significantly to the daily discharge that effects the Nitrate  
13 levels in the surrounding groundwater. (See **Exhibit E** to the Declaration of Stephen  
14 Mockenhaupt attached hereto.) This is a fact of which the Regional Board is aware. Therefore,  
15 Desert View Dairy requests the State Board to vacate the Order.

16 Further, Desert View Dairy objects to the Investigative Order that requires it to develop a  
17 work plan including the Nelson Dairy and former field crop parcel. Investigative Order No. R6V-  
18 2010-0005, upon which the latest demand for action is premised, clearly states that Desert View  
19 Dairy is not at all responsible for those lands. (See **Exhibit C** to the Declaration of Paul Ryken  
20 attached hereto.) Therefore, to declare Desert View Dairy in violation of the previous  
21 Investigative Order, for the sole reason that its work plan did not encompass those lands for  
22 which it is not responsible, is improper. Accordingly, Desert View Dairy requests a hearing on  
23 those grounds as well.

24 Finally, the Amended Order states that the current method for replacing water is no longer  
25 acceptable, and Desert View Dairy must replace the affected water by using a permanent pipeline  
26 that PG&E is currently using for other purposes. There are several problems with this option for  
27 replacement water, including the overriding question of whether the pump even has the capacity  
28 to replace the water needed for all four affected wells. In addition to harboring Desert View

1 Dairy with the task of coming up with a way to make this order successful, or in the alternative,  
2 provide a detailed analysis of why it cannot be implemented, the Regional Board has placed  
3 deadlines that are much too onerous with which to comply. Desert View Dairy has given its best  
4 efforts so far to comply with the Order, but has already had to notify the Regional Board, that the  
5 deadline placed was impossible to meet. It is for the aforementioned reasons that Desert View  
6 Dairy asks that the State Board review the actions of the Regional Board.

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8 **III.**  
9 **THE DATE THE REGIONAL BOARD ACTED.**

10 The Regional Board issued Amended Cleanup and Abatement Order No. R6V-2008-  
11 0034A3 on **February 24, 2011**. Within that amended order was an order for Desert View Dairy  
12 to refine and update the existing proposal for groundwater sampling filed with the Regional  
13 Board pursuant to Investigative Order No. R6V-2010-0005. The initial Investigative Order No  
14 R6V-2010-0005 Hinkley, San Bernardino County, WDID No. 6B360409002A was dated  
15 September 13, 2010 and required Desert View Dairy to submit a technical report for groundwater  
16 investigation. Desert View Dairy submitted such a report. In the February 24, 2011 Investigative  
17 Order, Desert View Dairy was made aware that its good faith attempt to comply with the  
18 Investigative Order was not adequate according to the Regional Water Board. (See **Exhibit A** to  
19 the Declaration of Paul Ryken.)

20 Additionally, Desert View Dairy has, on a continual basis attempted to comply with the  
21 Cleanup and Abatement Order by supplying bottled water for all of the owners of the effected  
22 wells. This Amended Cleanup and Abatement Order issued February 24, 2011, again names  
23 Desert View Dairy primarily responsible and requires Desert View Dairy to solely take action  
24 over land that is was not responsible for (namely, Nelson Dairy and the former field crop parcel)  
25 and severely affected by others' discharges, namely PG&E. Desert View Dairy maintains that  
26 this classification is arbitrary and the required acts are in violation of its Constitutional Due  
27 Process rights.  
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**IV.**  
**OBJECTIONS TO INVESTIGATIVE ORDER NO. R6V-2010-0005**  
**TO SUBMIT A TECHNICAL REPORT FOR GROUNDWATER INVESTIGATION, AND**  
**STATEMENT OF THE REASONS THE ACTION IS INAPPROPRIATE AND**  
**IMPROPER**

5 The Investigative Order is improper, inappropriate, arbitrary and capricious for the following reasons:

6 (1) The Regional Board's findings in the Investigative Order are not supported by  
7 evidence in the record, and, in fact, are contrary to such evidence;

8 (2) The Investigative Order was issued without a hearing. Desert View Dairy was  
9 afforded no opportunity to formally introduce evidence on the record;

10 (3) The Investigative Order requires Desert View Dairy to submit technical reports  
11 and perform investigations under arbitrary and capricious time frames;

12 (4) The Investigative Order seeks to hold Desert View Dairy solely responsible for  
13 actions of parties over whom it has no control and areas the Regional Water Board admitted that  
14 Desert View Dairy is not responsible for;

15 (5) The Investigative Order fails to make any attempt to apportion liability and/or the  
16 costs of remediation between all responsible parties, e.g., Pacific Gas and Electric Company, and  
17 moreover, fails to find Pacific Gas and Electric Company to be a "primary responsible" party;

18 (6) The Investigative Order does not take into consideration the fact that any  
19 discharges by Desert View Dairy were pursuant to the consent of the Regional Board and its  
20 waiver of any waste discharge requirements imposed by law;

21 (7) The Investigative Order is vague and uncertain as to the extent clean water is to be  
22 provided to the four affected residences; the scope of the water service and the indefinite and/or  
23 impracticable time period Desert View Dairy is obligated to do sampling and submit technical  
24 reports to the Regional Board and/or evaluate alternative water supply implementation for long-  
25 term, uninterrupted replacement water for residences with domestic wells; and

26 (8) The Investigative Order arbitrarily seeks to impose administrative civil fines in  
27 violation of Desert View Dairy's due process rights.

28 (9) The Order arbitrarily dismisses the method of replacement water currently used by

1 Desert View Dairy, and orders the implementation of a less feasible solution that must be  
2 underway within impossible deadlines.

3 Desert View Dairy reserves the right to submit an additional statement of reasons as to  
4 why the action taken by the Regional Board was inappropriate and improper if the State Board  
5 grants a hearing on the matter.

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7 **V.**  
**PETITIONERS ARE AGGRIEVED**

8 Desert View Dairy is, and will be, adversely affected by the actions taken by the Regional  
9 Board. Desert View Dairy is aggrieved in that it is required by an overbroad and unsubstantiated  
10 Investigative Order to expend substantial funds to provide alternate sources of water for all indoor  
11 and outdoor domestic uses to four properties, to prepare and submit a work plan with different  
12 options for alternate water supply, and to conduct testing to verify that clean water is being  
13 provided to owners of impacted water wells, for which Desert View Dairy has no legal  
14 responsibility, or at best, only partial responsibility.

15 **A. Primarily Responsible Party for Desert View Dairy in Investigative Order No. R6V-**  
**2010-0005**

16 Specifically, within the original Investigative Order No. R6V-2010-0005, the Executive  
17 Officer identified only Paul Ryken, the estate of Nick Van Vliet, and Flaming Dairy, Inc.  
18 primarily responsible for conducting a groundwater investigation at Desert View Dairy. (See  
19 **Exhibit C** to the Declaration of Paul Ryken.) In the Order, there was no explanation why PG&E  
20 was only considered secondarily responsible other than that it was a landowner. This leaves  
21 Desert View Dairy to assume that the Board was still assigning only secondary responsibility to  
22 PG&E, as it had in CAO R6V-2008-0034, on the basis that it was not contributing to the  
23 discharge. Contrary to that earlier finding, the Regional Water Board has been aware for several  
24 years prior to the issuance of this Investigative Order that PG&E had been contributing an  
25 overwhelmingly greater volume of discharge containing high levels of nitrate than the parties who  
26 were held primarily responsible. (See **Exhibit E** to the Declaration of Paul Ryken.)

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1 **B. Primarily Responsible Party for Nelson Dairy and Former Field Crop Parcel in**  
2 **Investigative Order No. R6V-2010-0005**

3 It must first be noted that the Regional Board has been nothing but contradictory when it  
4 comes to Investigative Order No. R6V-2010-0005. Within the Investigative Order, the Executive  
5 Officer identified Mildred Nelson as the primarily responsible party for the groundwater  
6 investigation that was to be performed on the Nelson Dairy. (See **Exhibit C** to the Declaration of  
7 Paul Ryken.) Mildred Nelson was further identified as the primarily responsible parties to  
8 conduct the groundwater investigation on the former field crop parcel identified in the Order.  
9 Most importantly, within the Order, the Executive Director acknowledged that the responsible  
10 parties for Desert View Dairy were “not expect[ed] to investigate the extent of pollution in the  
11 upgradient direction”. Also noted in the Order, was the fact that the Nelson Dairy was south of  
12 Desert View Dairy. The Executive Director acknowledged in Table 1 on page 2 of the Order that  
13 the southern end of Desert View Dairy was upgradient. (See **Exhibit C** to the Declaration of Paul  
14 Ryken.) It logically follows that if Nelson Dairy is south of Desert View Dairy, south is  
15 upgradient, and Desert View Dairy is not responsible for anything upgradient of it, then Desert  
16 View Dairy should not be responsible for submitting plans regarding Nelson Dairy.

17 This was the rationale Desert View Dairy adopted when it attempted to comply with the  
18 Order and submit a groundwater investigation report concerning only its property. Its report was  
19 answered with a notice from the Regional Board that stated Desert View Dairy was in violation of  
20 the Order because its work plan “failed to propose investigations from the former Nelson Dairy  
21 and the former field crop parcel.” (See pg. 3 at ¶6 of **Exhibit A** to the Declaration of Paul  
22 Ryken.) Thus, to now declare that Desert View Dairy was in violation of the earlier Order, by  
23 creating a plan only for the land in which it was responsible, is completely contradictory to the  
24 express language of the Order. The most recent Order states: a revised work plan is needed to  
25 propose additional sampling locations for determining the plume boundaries from the DVD and  
26 other listed properties.” (See pg. 3 at ¶6 of **Exhibit A** to the Declaration of Paul Ryken.)  
27 Subsequent to receiving this Order, a representative of Desert View Dairy called Lisa Darnbauch,  
28 who indicated again that Desert View Dairy was not responsible for investigations and reports as

1 to Nelson Dairy. Desert View Dairy has been left by the above various actions of the Regional  
2 Board at a loss. For this reason, it is clear that the Order as it was written, and the subsequent  
3 Order indicating a violation, are vague, ambiguous, and thus, unenforceable.

4 Desert View Dairy, with the understanding that it was only responsible for conducting a  
5 groundwater investigation and report on its own land, performed the investigation and submitted  
6 the related Off-site Groundwater Investigation Work Plan received by the Regional Water Board  
7 on December 16, 2010. Thus, Desert View Dairy complied with the express requests of the  
8 Investigative Order, yet is now being held accountable for land over which the Board formerly  
9 stated it had no responsibility for, and stands to suffer from exorbitant civil penalties unless it  
10 undertakes someone else's responsibilities. It is clear that the initial Order was vague, ambiguous  
11 and as such, unenforceable. Regardless, of how it is interpreted, the Amended Investigative  
12 Order is in violation of Desert View Dairy's constitutional rights.

13 Furthermore, Desert View Dairy has been aggrieved by the process used by the Executive  
14 Officer. The Executive Officer failed to set forth the evidence relied upon by the Regional Board  
15 in support of its new Investigative Order requiring Desert View Dairy to submit a plan including  
16 Nelson Dairy and the former field parcel, and there has been no formal hearing or development of  
17 evidentiary records. This has left Desert View Dairy with no meaningful ability to evaluate an  
18 evidentiary record on which to seek relief.

19 **C. Finding PG&E Only Secondarily Responsible**

20 The original Cleanup and Abatement Order upon which COA No. R6V-2008-0034A3 is  
21 premised, outlined the rationale the Regional Board adopted in naming Desert View Dairy  
22 primarily responsible, and PG&E only secondarily responsible. (See **Exhibit B** to the  
23 Declaration of Paul Ryken.) Each amended COA merely adopted the originally assigned  
24 responsibility, but did not go into an explanation as to why such responsibility was assigned or  
25 what considerations were made before doing so. The rationale given in the original COA was that  
26 active contributors of the discharge, namely Desert View Dairy and Flaming Dairy, would be  
27 held primarily responsible, and mere landowners, specifically PG&E, would only be held  
28 secondarily responsible. (See **Exhibit B** at pg. 6 ¶22.)

1 Desert View Dairy strongly objects to this rationale because it is in direct contradiction to  
2 the weight of the evidence. Desert View Dairy feels that it has been arbitrarily named the  
3 primarily responsible party for the land constituting Desert View Dairy. PG&E has owned the  
4 land for several years and contributed ten times the amount of daily discharge that effects the  
5 Nitrate levels in the surrounding groundwater. (See Exhibit E to the Declaration of Stephen  
6 Mockenhaupt.) Therefore, Desert View Dairy requests the Board to review the evidence and hold  
7 a hearing on the matter.

8 For all reasons set forth above, Desert View Dairy's legal and constitutional rights have  
9 been encroached upon and without a fair opportunity to be heard, its rights will further be  
10 violated.

11 VI.

12 **PETITIONERS' REQUEST FOR ACTION BY THE STATE BOARD**

13 Desert View Dairy seeks an order by the State Board:

14 (1) To vacate the Order of the Regional Board and clarify the Order by identifying the  
15 responsible parties for each area, and the scope and extent of liability for each responsible party  
16 with respect to the area each is responsible for;

17 (2) That it **Order a Stay** of the actions required by COA No. R6V-2008-0034A3 and  
18 the changes it makes to Investigative Order No. R6V-2010-0005.

19 (3) That Desert View Dairy **be granted a hearing**, which has never been previously  
20 provided by the Regional Water Board, to allow it to address the issues presented in its Petition;

21 (4) That it instruct the Regional Water Board to outline the evidence relied upon in the  
22 future:

23 i. In making its decisions and orders, specifically in regard to assignment of  
24 primary and secondary responsibility;

25 ii. Also with regards to determining whether an option for replacement of  
26 water is satisfactory;

27 iii. Also with regards to determining that an option for replacement water is  
28 unsatisfactory;

1           iv.     And finally, provide an explanation when orders for investigative reports or  
2           work plans require parties to include areas they are not responsible for.

3           (5)    That an order be issued by the State Board providing for such other and further  
4           relief that it deems just and proper.

5           Desert View Dairy Reserves the right to request any and all actions authorized by  
6           California Water Code section 13320. Desert View Dairy further requests a stay of proceedings  
7           pursuant to California Water Code section 13321 at this time, and though it will continue to  
8           perform the actions it is currently taking that it believes to be in accordance with the Regional  
9           Board's Order, those actions should not be considered a waiver of its request for a stay.

10           **1.     Petitioner Requests a Stay be Ordered**

11           Pursuant to California Code of Regulations, Title 23 §2053, Desert View Dairy requests a  
12           Stay be ordered by the State Board. Desert View Dairy is being substantially harmed by being  
13           forced to comply with arbitrary and capricious orders of the Regional Board holding Desert View  
14           Dairy primarily responsible over lands that it has no responsibility or control. Desert View Dairy  
15           has complied with the orders to the best of its ability, and intends to continue to provide  
16           replacement water in the manner it has been using for the past several years. Therefore, since the  
17           only people who may suffer harm from a stay would be continually provided replacement water,  
18           there is no risk of harm to any other party. Finally, Desert View Dairy has attempted to raise the  
19           factual question of whether other parties should be held primarily responsible, but has repeatedly  
20           been denied a due process hearing by the board. Accordingly, substantial questions of fact and  
21           law remain as to the most recent Regional Board action. As such, Desert View Dairy has made a  
22           proper showing under section 2053 for a Stay to be granted by the State Board. (See the  
23           Declaration of Paul Ryken in Support of Desert View Dairy's Request for a Stay, attached  
24           hereto.)

25           **2.     Petitioner Requests a Hearing Before the State Board**

26           To date, Petitioner has not been granted its due process right to a hearing by the Regional  
27           Board, and therefore requests that the State Board grant a hearing on this matter pursuant to  
28           California Code of Regulations, Title 23 §2050.6(b). The matters contained within this Petition

1 are complex and have been ongoing for several years. Desert View Dairy feels that the State  
2 Board will have a better opportunity to fully understand the issues if it were presented with live  
3 testimony from the experts retained by Desert View Dairy who have been performing the  
4 research and testing since the Regional Board began issuing orders several years ago. Further, a  
5 hearing will afford Desert View Dairy, for the first time, its due process rights. At the hearing,  
6 Desert View Dairy will present testimony of the efforts it has taken to comply with the arbitrary  
7 orders and stringent deadlines of the Regional Board. It will additionally provide evidence to the  
8 State Board in the form of testing and investigation that is currently being performed as to why  
9 the options for long-term replacement water set forth by the Regional Board are infeasible.  
10 Finally, Desert View Dairy feels that oral argument of the issues addressed in section IV of this  
11 Petition would be best presented through live argument which would provide an opportunity for  
12 the State Board to ask any unanswered questions to aid it in making its decisions.

13 **VI.**  
14 **STATEMENT OF POINTS AND AUTHORITIES**

15 With reference to **Exhibit E** to the Declaration of Stephen Mockenhaupt, evidence is  
16 adduced therein to clearly establish that Pacific Gas and Electric Company, through its  
17 groundwater discharge activities on land south and west of Desert View Dairy, discharges  
18 approximately ten times the mass of nitrate per acre compared to the current operations of Desert  
19 View Dairy. The Cleanup and Abatement and Investigative Orders completely fail to address  
20 Pacific Gas and Electric's primary responsibility. Further, Desert View Dairy feels that it is in  
21 compliance with the Investigative Order because it was only named primarily responsible for its  
22 own land and submitted a work plan on the same. To now be forced to submit work plans for  
23 land that the Board expressly deemed it not responsible (Nelson Dairy), would be fully unjust.

24 Moreover, Desert View Dairy respectfully submits that it has not been afforded adequate  
25 due process in these proceedings, as required by state and federal law. An administrative agency,  
26 in exercising adjudicatory functions, "is bound by the due process clause of the fourteenth  
27 amendment [of] the United States Constitution to give the parties before it a fair and open  
28 hearing." (Kaiser Co., Inc. v. Industrial Accident Commission et al. (1952) 109 Cal.App.2d 54,

1 60 [240 P.2d 57, 58].) The fundamental requirement of due process is “the opportunity to be  
2 heard at a meaningful time and in a meaningful manner.” (F. David Matthews v. George H.  
3 Eldridge (1976) 424 U.S. 319, 333 [96 S.Ct. 893, 902].) Under federal law, at a minimum, an  
4 individual “entitled to due process should be afforded: written notice; disclosure of adverse  
5 evidence; the right to present witnesses and to confront adverse witnesses; the right to be  
6 represented by counsel; a fair and impartial decision maker; and a written statement from the fact  
7 finder listing the evidence relied upon and the reasons for the determination made.” (Roger  
8 Burrell v. City of Los Angeles et. al. (1989) 209 Cal.App.3d 568, 577 [257 Cal.Rptr. 427, 432].)  
9 Similarly, the Supreme Court of California states that in an administrative setting procedural due  
10 process “requires notice of the proposed action; the reasons therefore; a copy of the charges and  
11 materials on which the action is based; and the right to respond to the authority initially imposing  
12 the discipline ‘before a reasonably impartial, noninvolved reviewer.’” (Burrell, supra, 209  
13 Cal.App.3d at 581 citing Williams v. County of Los Angeles (1978) 22 Cal.3d 731, 736-737 [150  
14 Cal.Rptr. 475].) Each of the foregoing due process requirements has not been met in the instant  
15 matter. Desert View Dairy has never been afforded the opportunity to be heard before the  
16 underlying Orders were issued, and even once the Orders were issued, Desert View Dairy was not  
17 provided any of the evidence upon which the decisions were based. Further, Desert View Dairy  
18 asserts its right be treated equally, and not arbitrarily. Based upon the express language in the  
19 Amended Order, the Executive Officer did not give any explanation as to why Desert View Dairy  
20 would be help responsible for lands over which it has no ownership or control (Nelson Dairy and  
21 former field parcel), and further gave no rationale explaining why each Long-Term Water  
22 Replacement Plan was favored over the next. Without such explanations, the hands of Desert  
23 View Dairy are completely tied with regard to making an adequate appeal or argument.

24 Desert View Dairy, therefore objects to the aforementioned Investigation and Cleanup and  
25 Abatement Orders, and respectfully requests a full hearing as to all issues raised therein. Desert  
26 View Dairy also requests a Stay be ordered as to COA R6V-2008-0034A3 and the changes it  
27 makes to Investigative Order No. R6V-2010-0005.

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**VII.**  
**STATEMENT OF TRANSMITTAL OF PETITION TO THE REGIONAL BOARD**  
**AND INVOLVED PARTIES**

A true and correct copy of this Petition was transmitted to:

Harold J. Singer, Executive Officer  
California Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, California 9 96150

A true an correct copy of this Petition was also sent to Flamelng Dairy, Inc., Pacific Gas and Electric Company, and K&H Van Vliet Children, LLC, which are named in the Investigative Order, but are not Petitioners, at the following addresses:

Flamelng Dairy, Inc.  
c/o Bert & Kathleen A. Flamelng  
2088 Candlewood Avenue  
Twin Falls, ID 83301-8338

Robert Doss  
Mail Code B16A  
Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, CA 94105-1814

K&H Van Vliet Children, LLC  
c/o Nellie Ruisch  
23925 Waalew Road  
Apple Valley, CA 92307-6932

**IX.**

**SUBSTANTIVE ISSUES RAISED BEFORE THE REGIONAL BOARD**

Desert View Dairy , to date, has not been given an opportunity to review and/or challenge the determinations made by the Executive Officer in support of the Investigative Order. However, Desert View Dairy reserves the right to present evidence at the hearing that it deems appropriate to challenge the Investigative Order. Desert View Dairy has simultaneously filed a request for an evidentiary hearing with the Regional Water Board, and therefore has attached a true and accurate copy of that request as **Exhibit 1**, for the sake of completeness of the record.

**VIII.**  
**CONCLUSION**

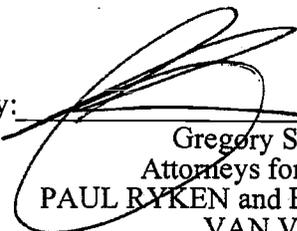
For the foregoing reasons, Desert View Dairy requests a Stay be Ordered as to the Regional Board's most recent February 24, 2011 action and a hearing be granted on this Petition

1 along with the consolidated Petitions being activated herewith.

2 Finally, Desert View Dairy is informed and thereon believes that PG&E has data that is  
3 relevant to this proceeding, and is making every effort to obtain that data. On this basis, Desert  
4 View Dairy reserves the right to Supplement this record with any further evidence that may be  
5 relevant to this proceeding, as soon as is reasonably practical.

6 Dated: March 25, 2010

McCORMICK, BARSTOW, SHEPPARD,  
WAYTE & CARRUTH LLP

8  
9 By:   
10 Gregory S. Mason  
11 Attorneys for Petitioner  
12 PAUL RYKEN and ESTATE OF NICK  
13 VAN VLIET

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Attorneys for Petitioner  
PAUL RYKEN and ESTATE OF NICK VAN VLIET

BEFORE THE  
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Estate of Nick Van Vliet and Paul Ryken's Petition for Review of Action and Failure to Act by the California Regional Water Quality Control Board, Lahontan Region, in Issuing Cleanup and Abatement Order No. R6V-2008-0034A3.,

Case No.  
**OBJECTIONS TO AMENDED CLEAN UP AND ABATEMENT ORDER NO. R6V-2008-0034A3 and AMENDED INVESTIGATIVE ORDER NO. R6V-2010-0005 FOR ADDITIONAL INFORMATION ON ALTERNATE WATER SUPPLY EVALUATION; and REQUEST FOR AN EVIDENTIARY HEARING**

Subsequent to Paul Ryken and The Estate of Nick Van Vliet's (hereinafter "Desert View Dairy") receipt of the California Regional Water Quality Control Board for the Lahontan Region's (hereinafter "Regional Board") Amended Cleanup and Abatement Order to. R6V-2008-0034A3 (hereinafter "CAO") and Amendment to Investigative Order No. R6V-2010-0005 (hereinafter "Investigative Order"), Desert View Dairy hereby requests an evidentiary hearing before the Regional Board.

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I.

NAMES AND ADDRESSES OF PETITIONERS

Paul Ryken	Estate of Nick Van Vliet
Desert View Dairy	c/o Gary B. Genske
37501 Mountain View Road	1835 Newport Blvd., Suite D-263
Hinkley, CA 92347	Costa Mesa, CA 92627

Petitioners may be contacted through counsel of record:

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II.

SPECIFIC ACTION FOR WHICH AN EVIDENTIARY HEARING IS SOUGHT

The Regional Board action that is the subject of this request for an evidentiary hearing is the issuance of the Amended Cleanup and Abatement Order No. R6V-2008-0034A3 WDID No. 6B360409002 and Revised Investigative Order No. R6V-2010-0005, and all actions that Desert View Dairy needs to take in response to the Orders, including, but not limited to, submitting a revised off-site groundwater investigation work plan to be called the Groundwater Investigation and Characterization Report and provide a Long-Term Replacement Water Supply Plan. The report and plan require a detailed proposal to investigate and determine the off-site extent of groundwater contamination from unauthorized discharges from Desert View Dairy, Nelson Dairy, and the former field crop parcel. Further the Amended Cleanup and Abatement Order No. R6V-2008-0034A3 requires the implementation of a permanent water supply plan that allows for all indoor and outdoor domestic uses for all private wells with nitrate concentrations exceeding 45 mg/L and/or providing interim and/or long term water supply to "affected" residences and/or for any other purpose. Attached hereto as **Exhibit A** is a true and correct copy of the February 24, 2011 Amended Order No. R6V-2008-0034A3. The amended Order further imposes stringent timelines and requirements for extensive reporting if those timelines and requirements cannot be

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1 met.

2 The original Cleanup and Abatement Order upon which COA No. R6V-2008-0034A3 is  
3 premised, outlined the rationale the Regional Board took for naming Desert View Dairy primarily  
4 responsible, and PG&E only secondarily responsible. Attached as **Exhibit B** is a true and correct  
5 copy of COA R6V-2008-0034. Each amended COA merely adopted the originally assigned  
6 responsibility, but did not go into an explanation as to why such responsibility was assigned or  
7 what considerations were made before doing so. The rationale given in the original COA was that  
8 active contributors of the discharge, namely Desert View Dairy and Flaming Dairy, would be  
9 held primarily responsible, and mere landowners, specifically PG&E, would only be held  
10 secondarily responsible. (See **Exhibit B** at pg. 6 ¶22.)

11 Desert View Dairy strongly objects to this rationale because it is in direct contradiction to  
12 the weight of the evidence. Desert View Dairy feels that it has been arbitrarily named the  
13 primarily responsible party for the land constituting Desert View Dairy. PG&E has owned the  
14 land for several years and contributed significantly to the discharge that effects the Nitrate levels  
15 in the surrounding groundwater. Attached as **Exhibit C** is true and correct copy of a March 2011  
16 report made by Consetoga-Rovers & Associates detailing PG&E's discharge. Therefore, Desert  
17 View Dairy requests the Board to review the evidence and hold a hearing on the matter.

18 Further, Desert View Dairy objects to the Investigative Order that requires it to develop a  
19 work plan including the Nelson Dairy and former field crop parcel. Investigative Order No. R6V-  
20 2010-0005, upon which the latest demand for action is premised, clearly states that Desert View  
21 Dairy is not at all responsible for those lands. Therefore, to declare Desert View Dairy in  
22 violation of the previous Investigative Order, for the sole reason that its work plan did not  
23 encompass those lands for which it is not responsible, is improper. Accordingly, Desert View  
24 Dairy requests an evidentiary hearing on those grounds as well.

25 **III.**

26 **THE DATE THE REGIONAL BOARD ACTED**

27 The Regional Board issued Amended Cleanup and Abatement Order No. R6V-2008-  
28 0034A3 on **February 24, 2011**. Within that amended order was an order for Desert View Dairy  
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1 to refine and update the existing proposal for groundwater sampling filed with the board pursuant  
2 to Investigative Order No. R6V-2010-0005. The initial Investigative Order No R6V-2010-0005  
3 Hinkley, San Bernardino County, WDID No. 6B360409002A was dated September 13, 2010 and  
4 required Desert View Dairy to submit a technical report for groundwater investigation. A true  
5 and correct copy of Investigative Order No. R6V-2010-0005 is attached hereto as **Exhibit D**.  
6 Desert View Dairy submitted a report in December 2010 that it believed satisfied the  
7 requirements made by the Order. In the February 24, 2011 Investigative Order, Desert View  
8 Dairy was made aware that its good faith attempt to comply with the Investigative Order was not  
9 adequate according to the Regional Water Board. *See Exhibit A.*

10 Additionally, Desert View Dairy has, on a continual basis attempted to comply with the  
11 Cleanup and Abatement Order by supplying bottled water for all of the owners of the effected  
12 wells. This Amended Cleanup and Abatement Order issued February 24, 2011, again names  
13 Desert View Dairy primarily responsible and requires Desert View Dairy to solely take action  
14 over land that is was not responsible for (namely, Nelson Dairy and the former field crop parcel)  
15 and severely affected by others' discharges, namely PG&E. Desert View Dairy maintains that  
16 this classification is arbitrary and the required acts are in violation of its Constitutional Due  
17 Process rights.

18 **V.**

19 **PETITIONERS ARE AGGRIEVED BY THE ACTIONS TAKEN BY THIS REGIONAL**  
20 **WATER BOARD AND ASK FOR AN EVIDENTIARY HEARING ON THE MATTER**

21 Desert View Dairy is, and will be, adversely affected by the actions taken by the Regional  
22 Board. Desert View Dairy is aggrieved in that it is required by an overbroad and unsubstantiated  
23 Investigative Order to expend substantial funds to provide alternate sources of water for all indoor  
24 and outdoor domestic uses to four properties, to prepare and submit a work plan with different  
25 options for alternate water supply, and to conduct testing to verify that clean water is being  
26 provided to owners of impacted water wells, for which Desert View Dairy has no legal  
27 responsibility.

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**A. Primarily Responsible Party for Desert View Dairy in Investigative Order No. R6V-2010-0005**

Specifically, within the original Investigative Order No. R6V-2010-0005, the Executive Officer identified only Paul Ryken, the estate of Nick Van Vliet, and Flameling Dairy, Inc. primarily responsible for conducting a groundwater investigation at Desert View Dairy. *See Exhibit B.* In the Order, there was no explanation why PG&E was only considered secondarily responsible other than that it was a landowner. This leaves Desert View Dairy to assume that the Board was still assigning only secondary responsibility to PG&E, as it had in CAO R6V-2008-0034, on the basis that it was not contributing to the discharge. Contrary to that earlier finding, the Regional Water Board has been aware for several years prior to the issuance of this Investigative Order that PG&E had been contributing an overwhelmingly greater volume of discharge containing high levels of nitrate than the parties who were held primarily responsible. *See Exhibit C.*

**B. Primarily Responsible Party for Nelson Dairy and Former Field Crop Parcel in Investigative Order No. R6V-2010-0005**

It must first be noted that the Regional Board has been nothing but contradictory when it comes to Investigative Order No. R6V-2010-0005. Within the Investigative Order, the Executive Officer identified Mildred Nelson as the primarily responsible party for the groundwater investigation that was to be performed on the Nelson Dairy. (See *Exhibit D.*) Mildred Nelson was further identified as the primarily responsible parties to conduct the groundwater investigation on the former field crop parcel identified in the Order. Most importantly, within the Order, the Executive Director acknowledged that the responsible parties for Desert View Dairy were “not expect[ed] to investigate the extent of pollution in the upgradient direction”. Also noted in the Order, was the fact that the Nelson Dairy was south of Desert View Dairy. The Executive Director acknowledged in Table 1 on page 2 of the Order that the southern end of Desert View Dairy was upgradient. (See *Exhibit D.*) It logically follows that if Nelson Dairy is south of Desert View Dairy, south is upgradient, and Desert View Dairy is not responsible for anything upgradient of it, then Desert View Dairy should not be responsible for submitting plans regarding Nelson Dairy.

1 This was the rationale Desert View Dairy adopted when it attempted to comply with the  
2 Order and submit a groundwater investigation report concerning only its property. Its report was  
3 answered with a notice from the Regional Board that stated Desert View Dairy was in violation of  
4 the Order because its work plan “failed to propose investigations from the former Nelson Dairy  
5 and the former field crop parcel.” (See Exhibit A at pg. 3 ¶6.) Thus, to now declare that Desert  
6 View Dairy was in violation of the earlier Order, by creating a plan only for the land in which it  
7 was responsible, is completely contradictory to the express language of the Order. The most  
8 recent Order states: a revised work plan is needed to propose additional sampling locations for  
9 determining the plume boundaries from the DVD and other listed properties.” (See Exhibit A at  
10 pg. 3 ¶6.) Subsequent to receiving this Order, a representative of Desert View Dairy called Lisa  
11 Darnbauch, who indicated again that Desert View Dairy was not responsible for investigations  
12 and reports as to Nelson Dairy. Desert View Dairy has been left by the above various actions of  
13 the Regional Board at a loss. For this reason, it is clear that the Order as it was written, and the  
14 subsequent Order indicating a violation, are vague, ambiguous, and thus, unenforceable.

15 Desert View Dairy, with the understanding that it was only responsible for conducting a  
16 groundwater investigation and report on its own land, performed the investigation and submitted  
17 the related Off-site Groundwater Investigation Work Plan received by the Regional Water Board  
18 on December 16, 2010. Thus, Desert View Dairy complied with the express requests of the  
19 Investigative Order, yet is now being held accountable for land over which the Board formerly  
20 stated it had no responsibility for, and stands to suffer from exorbitant civil penalties unless it  
21 undertakes someone else’s responsibilities. It is clear that the initial Order was vague, ambiguous  
22 and as such, unenforceable. Regardless, of how it is interpreted, the Amended Investigative  
23 Order is in violation of Desert View Dairy’s constitutional rights.

24 Furthermore, Desert View Dairy has been aggrieved by the process used by the Executive  
25 Officer. The Executive Officer failed to set forth the evidence relied upon by the Regional Board  
26 in support of its new Investigative Order requiring Desert View Dairy to submit a plan including  
27 Nelson Dairy and the former field parcel, and there has been no formal hearing or development of  
28 evidentiary records. This has left Desert View Dairy with no meaningful ability to evaluate an

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1 evidentiary record on which to seek relief.

2 **C. Finding PG&E Only Secondarily Responsible**

3 The original Cleanup and Abatement Order upon which COA No. R6V-2008-0034A3 is  
4 premised, ~~outlined the rationale the Regional Board took for naming Desert View Dairy primarily~~  
5 responsible, and PG&E only secondarily responsible. See **Exhibit B**. Each amended COA  
6 merely adopted the originally assigned responsibility, but did not go into an explanation as to why  
7 such responsibility was assigned or what considerations were made before doing so. The rationale  
8 given in the original COA was that active contributors of the discharge, namely Desert View  
9 Dairy and Flaming Dairy, would be held primarily responsible, and mere landowners,  
10 specifically PG&E, would only be held secondarily responsible. (See **Exhibit B** at pg. 6 ¶22.)

11 Desert View Dairy strongly objects to this rationale because it is in direct contradiction to  
12 the weight of the evidence. Desert View Dairy feels that it has been arbitrarily named the  
13 primarily responsible party for the land constituting Desert View Dairy. PG&E has owned the  
14 land for several years and contributed ten times the amount of daily discharge that effects the  
15 Nitrate levels in the surrounding groundwater. See **Exhibit C**. Therefore, Desert View Dairy  
16 requests the Board to review the evidence and hold a hearing on the matter.

17 For all reasons set forth above, Desert View Dairy's legal and constitutional rights have  
18 been encroached upon and without a fair opportunity to be heard, its rights will further be  
19 violated.

20 **VII.**

21 **STATEMENT OF POINTS AND AUTHORITIES**

22 With reference to **Exhibit C**, evidence is adduced therein to clearly establish that Pacific  
23 Gas and Electric Company, through its groundwater discharge activities on land south and west of  
24 Desert View Dairy, discharges approximately ten times the mass of nitrate per acre compared to  
25 the current operations of Desert View Dairy. The Cleanup and Abatement and Investigative  
26 Orders completely fail to address Pacific Gas and Electric's primary responsibility. Further, with  
27 reference to **Exhibit B**, Desert View Dairy feels that it is in compliance with the Investigative  
28 Order because it was only named primarily responsible for its own land and submitted a work

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1 plan on the same. To now be forced to submit work plans for land that the Board expressly  
2 deemed it not responsible (Nelson Dairy), would be fully unjust.

3 Moreover, Desert View Dairy respectfully submits that it not been afforded adequate due  
4 process in these proceedings, as required by state and federal law. An administrative agency, in  
5 exercising adjudicatory functions, "is bound by the due process clause of the fourteenth  
6 amendment [of] the United States Constitution to give the parties before it a fair and open  
7 hearing." (Kaiser Co., Inc. v. Industrial Accident Commission et al. (1952) 109 Cal.App.2d 54,  
8 60 [240 P.2d 57, 58].) The fundamental requirement of due process is "the opportunity to be  
9 heard at a meaningful time and in a meaningful manner." (F. David Matthews v. George H.  
10 Eldridge (1976) 424 U.S. 319, 333 [96 S.Ct. 893, 902].) Under federal law, at a minimum, an  
11 individual "entitled to due process should be afforded: written notice; disclosure of adverse  
12 evidence; the right to present witnesses and to confront adverse witnesses; the right to be  
13 represented by counsel; a fair and impartial decision maker; and a written statement from the fact  
14 finder listing the evidence relied upon and the reasons for the determination made." (Roger  
15 Burrell v. City of Los Angeles et. al. (1989) 209 Cal.App.3d 568, 577 [257 Cal.Rptr. 427, 432].)  
16 Similarly, the Supreme Court of California states that in an administrative setting procedural due  
17 process "requires notice of the proposed action; the reasons therefore; a copy of the charges and  
18 materials on which the action is based; and the right to respond to the authority initially imposing  
19 the discipline 'before a reasonably impartial, noninvolved reviewer.'" (Burrell, supra, 209  
20 Cal.App.3d at 581 citing Williams v. County of Los Angles (1978) 22 Cal.3d 731, 736-737 [150  
21 Cal.Rptr. 475].) Each of the foregoing due process requirements has not been met in the instant  
22 matter. Desert View has never been afforded the opportunity to be heard before the underlying  
23 Orders were issued, and even once the Orders were issued, Desert View Dairy was not provided  
24 any of the evidence upon which the decisions were based. Further, Desert View Dairy asserts its  
25 right be treated equally, and not arbitrarily. Based upon the express language in the Amended  
26 Order, the Executive Officer did not give any explanation as to why Desert View Dairy would be  
27 help responsible for lands over which it has no ownership or control (Nelson Dairy and former  
28 field parcel), and further gave no rationale explaining why each Long-Term Water Replacement

1 Plan was favored over the next. Without such explanations, the hands of Desert View Dairy are  
2 completely tied with regard to making an adequate appeal or argument.

3 Desert View Dairy, therefore objects to the aforementioned Investigation and Cleanup and  
4 Abatement Orders, and respectfully requests a full hearing as to all issues raised above. Desert  
5 View Dairy further requests a detailed explanation of the decisions of the Board on each issue  
6 addressed within this request upon the completion of the hearing so that it can make a meaningful  
7 appeal to the State Board if necessary.

8 **VIII.**

9 **STATEMENT OF TRANSMITTAL OF PETITION TO THE INVOLVED PARTIES**

10 A true and correct copy of this Petition was also sent to Flameling Dairy, Inc., Pacific Gas  
11 and Electric Company, and K&H Van Vliet Children, LLC, which are named in the Investigative  
12 Order, but are not Petitioners, at the following addresses:

13  
14  
15 Flameling Dairy, Inc.  
16 c/o Bert & Kathleen A. Flameling  
2088 Candlewood Avenue  
Twin Falls, ID 83301-8338

Robert Doss  
Mail Code B16A  
Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, CA 94105-1814

17 K&H Van Vliet Children, LLC  
18 c/o Nellie Ruisch  
23925 Waalew Road  
19 Apple Valley, CA 92307-6932

20 **IV.**

21 **CONCLUSION**

22 For the foregoing reasons, Desert View Dairy asks that the Regional Board grant its  
23 request for an Evidentiary Hearing. Desert View Dairy further reserves the right to Supplement  
24 the evidence contained in this Petition because its investigation into this matter is ongoing.

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Dated: March \_\_\_\_\_, 2010

McCORMICK, BARSTOW, SHEPPARD,  
WAYTE & CARRUTH LLP

By: \_\_\_\_\_

Gregory S. Mason  
Attorneys for Petitioner  
PAUL RYKEN and ESTATE OF NICK  
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6 Attorneys for Petitioner  
PAUL RYKEN and ESTATE OF NICK VAN VLIET  
7

8 BEFORE THE  
9 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD  
10

11 In the Matter of the Estate of Nick Van  
Vliet and Paul Ryken's Petition for Review  
12 of Action and Failure to Act by the  
California Regional Water Quality Control  
13 Board, Lahontan Region, in Issuing  
Cleanup and Abatement Order No. R6V-  
14 2008-0034A3.,

Case No.

**DESERT VIEW DAIRY'S REQUEST TO  
THE STATE WATER BOARD TO  
ACTIVATE ALL PRIOR RELATED  
PETITIONS**

**[Cal.Code.Reg. Title 23 §2054]**

15  
16  
17 TO JEANNETTE BASHAW OF THE CALIFORNIA STATE WATER RESOURCES  
18 CONTROL BOARD:

19 Paul Ryken and the Estate of Nick Van Vliet (herein collectively, "Desert View Dairy") at  
20 this time request that the California State Water Resources Control Board (herein "State Board")  
21 activate any and all Petitions previously filed by, or on behalf of, Desert View Dairy, that are  
22 currently being held in abeyance, including but not limited to:

- 23 1. A-1975  
24 2. A-2089(a)  
25 3. A-2115

26 Pursuant to California Code of Regulations, Title 23 §2054, Desert View Dairy further  
27 requests that all of the aforementioned Petitions be consolidated so that they are considered and  
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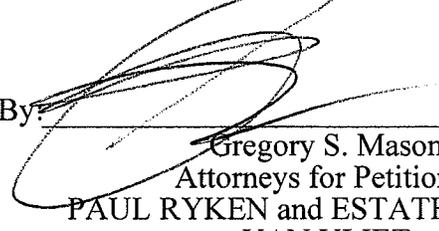
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1 heard in concurrence with the Petition filed herewith. The underlying factual and legal issues  
2 pertaining to each said Petition are nearly identical, therefore in the interest of efficiency, they  
3 should be consolidated. The initial action of the California Regional Water Quality Control  
4 Board, Lahontan Region (herein "Regional Board") was taken in Cleanup and Abatement Order  
5 No. R6V-2008-0034, which is the subject of the A-1975 Petition filed by Desert View Dairy.  
6 Subsequent to that action, the Regional Board has amended the initial Order three times. The A-  
7 2089(a) Petition was filed pursuant to the second Amended Order. The Regional Board, has also  
8 issued a series of Investigative Orders in relation to the groundwater allegedly affected by Desert  
9 View Dairy. The A-2115 Petition addressed Desert View Dairy's objections to the Investigative  
10 Order No. R6V-2010-0005 that was modified within the Regional Board's most recent action that  
11 is the subject matter of the Petition filed herewith.

12 Ultimately, Desert View Dairy objects to the Regional Board's arbitrary assignment of  
13 responsibility, which is consistent through all of the aforementioned Orders, the Regional Board's  
14 continual failure to explain the evidence relied upon in determining responsibility, and most  
15 importantly the Regional Board's absolute failure to provide any sort of meaningful hearing or  
16 appeal process. Desert View Dairy's due process rights have been repeatedly violated by the  
17 Orders for the above reasons, and for the sake of completeness of the record and administrative  
18 efficiency, it asks that the State Board activate all Petitions currently held in abeyance, and  
19 consolidate the records to be considered together.

20  
21 Dated: March 25, 2011

McCORMICK, BARSTOW, SHEPPARD,  
WAYTE & CARRUTH LLP

22  
23  
24 By: 

Gregory S. Mason  
Attorneys for Petitioner  
PAUL RYKEN and ESTATE OF NICK  
VAN VLIET

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Attorneys for Petitioner  
PAUL RYKEN and ESTATE OF NICK VAN VLIET

BEFORE THE  
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Estate of Nick Van Vliet and Paul Ryken's Petition for Review of Action and Failure to Act by the California Regional Water Quality Control Board, Lahontan Region, in Issuing Cleanup and Abatement Order No. R6V-2008-0034A3.,

Case No.  
**DECLARATION OF PAUL RYKEN IN SUPPORT OF PETITION FOR REVIEW, REQUEST FOR STAY, AND REQUEST FOR A HEARING**  
[Cal. Water Code §13320, 13221; Cal. Code Reg. Title 23, §2053]

I, Paul Ryken, do hereby declare:

1. I submit this declaration in Support of the Estate of Nick Van Vliet and Paul Ryken's (herein referred to collectively as "Desert View Dairy") Petition for Review, Request for Stay, and Request for a Hearing by the California State Water Resources Control Board (herein referred to as "State Board"). The basis for this Petition is derived from the action taken by the California Regional Water Quality Control Board for the Lahontan region (herein referred to as "Regional Board") within its February 24, 2011 Cleanup and Abatement Order No. R6V-2008-0034A3, which served to modify its Investigative Order No. R6V-2010-0005 (herein referred to collectively as "Amended Order").

2. I am familiar with the following information and base it upon my personal knowledge, except as to those matter upon which I base upon information and belief. If called  
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1 upon as a witness in this matter, I could and would competently testify to the matters contained  
2 herein.

3 3. I am one of the operators of Desert View Dairy, and received the February 24,  
4 2011 Amended Order which required Desert View Dairy to take additional steps to develop a  
5 Long-term Replacement Water Supply Plan, and submit a revised Groundwater Investigation and  
6 Characterization Work Plan and Report. The first deadline set forth in the Amended Order was to  
7 submit the required work plan by April 1, 2011. Several onerous deadlines and tasks were also  
8 called for within the Amended Order. Attached hereto as **Exhibit A** is a true and correct copy of  
9 the February 24, 2011 Amended Order.

10 4. The Amended Order is the most recent in a series of Orders, that have all been  
11 based on Cleanup and Abatement Order No. R6V-2008-0034. Attached hereto as **Exhibit B** is a  
12 true and correct copy of the original Cleanup and Abatement Order No. R6V-2008-0034. The  
13 Amended Order also modified Investigative Order No. R6V-2010-0005, a true and correct copy  
14 of which is attached hereto as **Exhibit C**.

15 5. By way of background, Desert View Dairy began operating on the site that is  
16 currently in dispute in 1991. In 2001, the Regional Board's Executive Officer notified Desert  
17 View Dairy that it needed to create a work plan that would adequately characterize impacts to  
18 groundwater from Desert View Dairy's wash water, dairy manure storage, and agricultural  
19 operations. I complied with the Regional Board's Request and submitted a Waste Management  
20 Plan, prepared by Nolte Associates.

21 6. In 2002, PG&E bought the land upon which Desert View Dairy still operates and  
22 leased it back to us to continue the operation of our dairy. Meanwhile, PG&E commenced its  
23 Interim Plume Containment and Hexavalent Chromium Treatment Project. In 2004, the Regional  
24 Board issued an Order outlining new waste discharge requirements for PG&E and its project.  
25 Attached as **Exhibit D** is a true and correct copy of the 2004 Order issued to PG&E. This Order  
26 clearly demonstrates that the Regional Board was aware as early as 2004 that PG&E was a major  
27 contributor of waste discharge on the Desert View Dairy property, and that the discharge was  
28 causing nitrate to be in the groundwater.

1           7.       Though PG&E has repeatedly asserted to the Regional Board that its project would  
2 not and has not over-applied water to the Desert View Dairy land, this is not the case. On more  
3 than one occasion, a PG&E hose has blown on the property and caused a flood. I am informed  
4 and thereon believe that this over-application of water has caused leeching of the nitrates already  
5 in the ground. It is likely that this contributed to the spike in the nitrate levels within the  
6 groundwater.

7           8.       On November 12, 2008 I received the original Cleanup and Abatement Order No.  
8 R6V-2008-0034 from the Regional Board naming Desert View Dairy the primarily responsible  
9 party for the nitrate found in the groundwater, and ordering that Desert View Dairy (1) provide  
10 uninterrupted replacement water supply to well owners in the vicinity of and in the downgradient  
11 flow of Desert View Dairy's property, (2) perform quarterly testing of all private wells affected or  
12 potentially affected by nitrate pollution, and (3) submit reports to the Regional Board of the  
13 above, on a regular basis. PG&E was named secondarily responsible.

14          9.       Since that original Order, Desert View Dairy has complied with the Regional  
15 Board's requests. Though Desert View Dairy timely filed a Petition each time the Regional  
16 Board acted, in order to preserve its right to appeal, it has diligently attempted to provide the  
17 affected landowners with water, and performs the required tests and reporting.

18          10.      In addition to complying with the Regional Board's Orders each time they are  
19 issued, Desert View Dairy has, in good faith, gone above and beyond what was required of it. It  
20 has continuously provided bottled and potable water to the well owners who have been affected.  
21 It has continued to sample other residential wells not even included in the Board's Orders.  
22 Additionally, it has provided interim replacement water to Gorman, which was also never  
23 required by a Board Order.

24          11.      Over the past three years, Desert View Dairy has tried on several occasions to  
25 work with the Regional Board and comply with its, oftentimes, stringent and onerous demands, in  
26 hopes that there would be no need for this appeal to the State Board. For this reason, Desert View  
27 Dairy has requested that each prior petition be held in abeyance.

28          12.      As of February 24, 2011, when the most recent Amended Order was issued, Desert  
18147/00000-1708803.v1

1 View Dairy was still in compliance with the testing and planning requirements of the Regional  
2 Board. Further, it has continuously provided the affected well owners with replacement water for  
3 their domestic needs. Bottled and potable water is trucked to each location and provided to the  
4 well owners for their use.

5 13. Investigative Order No. R6V-2010-0005 has proven to be extremely ambiguous.  
6 Though, the Regional Board, in its most recent action, has alleged that Desert View Dairy is in  
7 violation of the Order to investigate and develop a work plan related to Desert View Dairy,  
8 Nelson Dairy, and the adjacent former field crop parcel, I adamantly disagree. As can be seen in  
9 **Exhibit C**, the board clearly stated that Desert View Dairy was not responsible for Nelson Dairy.  
10 Based upon this express statement, Desert View Dairy did not include Nelson Dairy in its work  
11 plan. Now, in its most recent Order, **Exhibit A**, the Board states that Desert View Dairy has  
12 “failed to propose investigations from the former Nelson Dairy....[and] a revised work plan is  
13 needed...[to include the] other listed properties.” This statement is extremely perplexing because  
14 a representative of Desert View Dairy called Lisa Dernbauch, of the Regional Board, and was  
15 informed by her that Desert View Dairy was not responsible for the monitoring of Nelson Dairy  
16 or the former field crop parcel. It is for reasons such as this that I have been forced to ask the  
17 State Board to step in to grant clarification on the many arbitrary and ambiguous Orders from the  
18 Regional Board.

19 14. With regard to Desert View Dairy’s Request for a Stay of the current Order, it  
20 must first be noted that Desert View Dairy plans to continue to provide replacement (bottled and  
21 potable) water to the affected well owners, and will not cease to do so even if the State Board  
22 chooses to grant its Request for a Stay. Therefore, because the only concern of substantial harm  
23 that could be raised in response to this Request for a Stay is the well owners’ needs for  
24 replacement water, there should be no objection by any party with regards to harm to any person  
25 or the public.

26 15. Desert View Dairy has suffered substantial harm at the hand of the Regional Water  
27 Board for several years now because the Regional Water Board refuses to acknowledge that  
28 Desert View Dairy is not the only party responsible for the nitrate levels found in the

18147/00000-1708803.v1

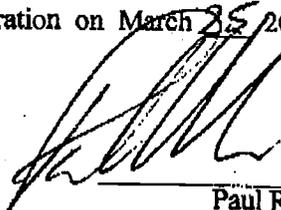
1 groundwater. There were clearly nitrates present before Desert View Dairy ever began operating,  
2 and there have been several contributing parties since. Because Desert View Dairy did not want  
3 to risk the substantial civil penalties for up to \$5,000.00 per day that the Regional Board has  
4 threatened for non-compliance, Desert View Dairy has undertaken the majority of the Orders on  
5 its own. This undertaking has proven time consuming, outrageously costly, and overly-  
6 burdensome. To date, over the last three years, Desert View Dairy has expended, **at a minimum,**  
7 **\$472,000.00** in its efforts to comply with the Regional Board's Orders. Therefore, a Stay would  
8 offer substantial relief to Desert View Dairy and would allow for it to stop being drained of time  
9 and financial resources until the State Board can determine whether the Orders are even justified  
10 or lawful. Attached as **Exhibit E** for the State Board's review is a true and correct copy of the  
11 projected costs that Desert View Dairy will incur over the next several years if it is forced to  
12 comply alone with the Regional Board's Orders.

13 16. Finally, there are substantial questions of both law and fact intertwined in Desert  
14 View Dairy's Petition and Request for a Stay and Hearing. First, as the State Board will see upon  
15 the review of the various earlier Petitions that have been filed and activated to consolidate with  
16 this matter, the Regional Board has repeatedly failed to include other responsible parties in its  
17 Orders. Specifically, in every Order issued to Desert View Dairy, the Regional Board has named  
18 only Desert View Dairy primarily responsible, and has named PG&E secondarily responsible.  
19 This classification is the cause of both a grave factual and legal dispute because I am informed  
20 and thereon believe that PG&E has been discharging a substantial amount of waste on the  
21 affected land since 2002, and therefore should equally be held responsible.

22 17. There are also significant legal issues involved with the underlying Regional  
23 Board Orders. Never once has the Regional Board provided Desert View Dairy the opportunity  
24 to be heard on the issues it has raised with regard to its responsibility and entitlement to  
25 contribution from other responsible parties. Further, the Regional Board has repeatedly failed to  
26 outline the evidence upon which it assigns responsibility to Desert View Dairy in lieu of other  
27 very viable contributing dischargers such as PG&E. The Regional Board has, most recently,  
28 arbitrarily demanded that Desert View Dairy cease providing replacement water in the manner it

1 has been doing so, and ordered it to develop an alternative. The options provided and the  
 2 stringent deadlines placed upon Desert View Dairy are not possible to comply with.  
 3 Additionally, no reason was provided as to why the current water replacement method was  
 4 insufficient. The various Orders have been unendingly vague and ambiguous as to what is  
 5 expected of Desert View Dairy. Most importantly though, Desert View Dairy's due process  
 6 rights have been denied time and time again when the Board acts and provides no recourse or  
 7 process for re-evaluation of its decision. For all of the above reasons, Desert View Dairy requests  
 8 a Stay be issued as to the matters addressed within the most recently Amended Order No. R6V-  
 9 2008-0034A3 of the Regional Board.

10 I declare under the penalty of perjury under the law of the State of California that the  
 11 foregoing is true and correct. I executed this declaration on March 25, 2011 in Hinkley,  
 12 California.

  
 Paul Ryken

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# Exhibit A



**California Regional Water Quality Control Board**  
**Lahontan Region**



Linda S. Adams  
Acting Secretary for  
Environmental Protection

South Lake Tahoe Office  
2501 Lake Tahoe Blvd., So Lake Tahoe, California 96150  
(530) 542-5400 • Fax (530) 542-2271  
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Edmund G. Brown Jr.  
Governor

February 24, 2011

Paul Ryken  
Desert View Dairy  
37501 Mountain View Road  
Hinkley, CA 92347

**Certified Mail 7099 3220 0007 3471 2923**

Estate of Nick Van Vliet  
c/o Gary B. Genske  
1835 Newport Boulevard, Suite D-263  
Costa Mesa, CA 92627

**Certified Mail 7099 3220 0007 3471 2930**

Flameling Dairy, Inc.  
c/o Bert & Kathleen A. Flameling  
2088 Candlewood Avenue  
Twin Falls, ID 83301-8338

**Certified Mail 7099 3220 0007 3471 2947**

K&H Van Vliet Children LLC  
c/o Nellie Ruisch  
23925 Waalew Road  
Apple Valley, CA 92307-6932

**Certified Mail 7099 3220 0007 3471 2954**

Robert Doss  
Mail Code B16A  
Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, CA 94105-1814

**Certified Mail 7099 3220 0007 3471 2961**

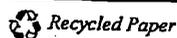
Mildred Nelson Diaz  
21250 Frontier Road  
Hinkley, CA 92347

**Certified Mail 7099 3220 0007 3471 2978**

**AMENDED CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0034A3, DESERT VIEW DAIRY CONTAMINATION IN GROUNDWATER, HINKLEY, SAN BERNARDINO COUNTY, WDID NO. 6B360409002**

Enclosed for your immediate attention is the Amended Cleanup and Abatement Order No. R6V-2008-0034A3 (Order) to the operators, past operator, and owners of the Desert View Dairy. The Order modifies directives requiring permanent water supply replacement in Cleanup or Abatement Order No. R6V-2008-0034A2 to address dairy pollution in the downgradient groundwater flow direction of the Dairy. The Amended Order also requires the responsible parties to submit a revised work plan and implement a groundwater investigation.

**California Environmental Protection Agency**



## Background

Cleanup and Abatement Order No. R6V-2008-0034A2, issued on March 9, 2010, directs the operators, past operator, and owners of the Dairy to, among other things, provide an uninterrupted, interim water supply to well owners with elevated nitrate concentrations in private drinking water supply wells. The responsible parties were also required to submit an evaluation for permanent water supply replacement to the affected residents.

Investigative Order No. R6V-2010-0005, issued on September 13, 2010, directs the operators, past operator, and owners of the Dairy, the former Nelson Dairy, and former adjacent field crop parcel to submit a work plan and implement a groundwater investigation to determine the extent of contamination of current and past dairy activities.

## Modifications to CAO R6V-2008-0034A2

The enclosed Amended Order requires that the responsible parties for the Dairy implement the November 2010 *Supplemental Evaluation* document for permanent water supply for long-term, uninterrupted, permanent water supply that allows for all domestic uses (drinking, cooking, bathing, washing, appliances, pets, outdoor needs, etc.) for all private wells with nitrate as  $\text{NO}_3$  concentrations exceeding 45 mg/L. You must follow up this action by submitting a technical report detailing the corrective action and providing water sample results verifying that clean water is being provided to owners of impacted water wells. Clean water must meet all state primary and secondary drinking water standards. The Amended Order names the current and past operators of the Dairy (Mr. Paul Ryken, Flameling Dairy, Inc, and the Estate of Nick Van Vliet) as being primarily responsible for complying with directives and deadlines. The Van Vliet Children LLC and PG&E are named as secondarily responsible for complying with this portion of the Amended Order if informed by the Water Board that the primary responsible parties fail to comply with directives or deadlines.

In addition, the Amended Order requires all the responsible parties to submit a revised work plan for groundwater investigation to determine the extent of contamination from the Dairy, former Nelson Dairy, and the former adjacent field crop parcel. Since the December 15, 2010 work plan only addressed contamination from the Dairy and not the other two properties, this letter informs the secondary responsible parties of the non-compliance status of the primary responsible parties. The K&H Van Vliet Children LLC and PG&E are now required to comply with directives in Investigative Order No. R6V-2010-0005 and this Amended Order for work plan and report submittals and undertaking groundwater investigations.

## Responsible Parties

I consider the above parties and entities listed in this letter to be responsible parties for discharges of waste at the subject properties that have impacted and threaten water quality. The cleanup and abatement actions and technical report submittals listed in this letter can be completed by one or both of the responsible parties, so long as Water Board directives are complied with. If neither of the responsible parties complies with these directives, all parties will be subject to enforcement action by the Water Board. Such an action may include issuance of an assessment of an administrative civil liability for up to five thousand dollars (\$5,000) for each day of violation of a directive, or referral to the California Attorney General for appropriate action.

Desert View Dairy  
Amended CAO R6V-2008-0034A3

- 3 -

February 24, 2011

I appreciate your cooperation in this matter. If you have any questions, please contact Lisa Dernbach at (530) 542-5424 ([ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov)) or me at (530) 542-5436 ([lkemper@waterboards.ca.gov](mailto:lkemper@waterboards.ca.gov)).



LAURI KEMPER  
ASSISTANT EXECUTIVE OFFICER

Enclosures: CAO R6V-2008-0034A3  
Water Code Section 13267 Fact Sheet

cc: Desert View Dairy Mailing list

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

**AMENDED CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0034A3**

**REQUIRING PAUL RYKEN, THE ESTATE OF NICK VAN VLIET, FLAMELING DAIRY, INC.,  
K&H VAN VLIET CHILDREN LLC, AND  
THE PACIFIC GAS AND ELECTRIC COMPANY  
TO CLEAN UP OR ABATE THE EFFECTS OF  
CONTAMINANTS TO GROUNDWATERS OF  
THE MOJAVE RIVER HYDROLOGIC UNIT,  
DESERT VIEW DAIRY, HINKLEY,  
WDID NO. 6B360409002**

San Bernardino County

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

**LEGAL AND REGULATORY AUTHORITY**

1. This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (Division 7, commencing with Water Code (WC) Section 13000) including (1) WC Sections 13267 and 13304; (2) applicable State and federal regulations; (3) all applicable provisions of Statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Board) and the *Water Quality Control Plan, Lahontan Basin* (Basin Plan) adopted by the Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Board policies and regulations, including State Board Resolution No. 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Waters in California*), Resolution No. 88-63 (*Sources of Drinking Water*), and Resolution No. 92-49 (*Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under California Water Code Section 13304*); California Code of Regulations (CCR) Title 23, Chapter 16, Article 11; CCR Title 23, Section 3890 et. seq., and (5) relevant standards, criteria, and advisories adopted by other State and federal agencies.

**RESPONSIBLE PARTIES**

2. For the purposes of this amended Cleanup and Abatement Order (*Amended Order 3*), the designation of primarily and secondarily responsible parties are the same as in CAO R6V-2008-0034A2. The operators of the Desert View Dairy, Mr. Paul Ryken and the Estate of Nick Van Vliet, and the past operator, Flaming Dairy Inc., are primarily responsible for complying with the requirements of this order because they caused or contributed to the pollution and degradation of groundwater from discharges at the Dairy. The owners of the Desert View Dairy, the K&H Van Vliet Children LLC and Pacific Gas and Electric Company, are secondarily responsible for complying with the requirements of this order because they are ultimately responsible for activities at the Dairy.

### FINDINGS

3. On November 10, 2008, the Water Board issued Cleanup and Abatement Order (Order) No. R6V-2008-0034 to Paul Ryken, the Estate of Nick Van Vliet, Flameling Dairy, Inc., K&H Van Vliet Children LLC, and the Pacific Gas and Electric Company (hereinafter referred to as the Dischargers). Amended Order No. R6V-2008-0034A1 (*Amended Order 1*) was issued on June 16, 2009 modifying the well sampling requirements of the original Order. Second Amended Order No. R6V-2008-0034A2 (*Amended Order 2*) was issued on March 9, 2010, modifying the replacement water requirements in the original Order. Amended Order 2 identified problems with the Alternative Water Supply Implementation Plan as designed and constructed, and required the Dischargers to submit an *Alternative Water Supply Evaluation* to identify a new, long-term uninterrupted replacement water plan (*Long Term Plan*), while continuing to implement an interim replacement water plan while.

A new, *Long Term Plan* based on the findings of the *Alternative Water Supply Evaluation* is necessary because affected residents have indicated that the interim replacement water provided by the Discharger does not meet all of their domestic water needs. Residents indicated that continuing to receive water from the current storage tanks was not desirable based on problems with pipes freezing and other implementation constraints. Some residents have been forced to supplement their needs using contaminated well water, and have experienced advanced deterioration of household appliances caused by increased levels of total dissolved salts (TDS). Other residents have found the interim replacement water to be incompatible with existing water heating systems.

4. Investigative Order R6V-2010-0028 (*2010 Investigative Order*) was issued on July 8, 2010. It found that the *Alternative Water Supply Evaluation* submitted pursuant to order No. 1 of Amended Order 2 was insufficient. Investigative Order 2010 required the Dischargers to continue with ongoing plans to provide interim water as required in Amended Order 2, but extended the deadline for providing a new, sufficient long-term *Alternative Water Supply Supplemental Evaluation* (*Supplemental Evaluation*) to the Lahontan Water Board to August 9, 2010.
5. On November 8, 2010, the Lahontan Water Board received the *Supplemental Evaluation*, pursuant to the 2010 Investigative Order. The Supplemental Evaluation describes four options for providing permanent water supply to off-site affected residents: (1) treatment of existing groundwater supplies using reverse osmosis, (2) providing a new community water supply either (a) from a well on Thompson Road or (b) through connection to the PG&E force main, (3) providing new individual replacement water supply wells, and (4) continuing the current interim water supply delivery and storage. The Supplemental Evaluation recommends continued implementation of Alternate 4, while pursuing the feasibility of the other options. The latter entails discussions with PG&E for access to its force main, conducting a packer/ step test of current domestic

wells, drilling and sampling the deep groundwater, and evaluating constituents in domestic wells to properly size a reverse osmosis system.

6. On December 16, 2010, The Lahontan Water Board received the *Off-site Groundwater Investigation Workplan*, pursuant to Investigative Order No. R6V-2010-0005. The Workplan proposes an investigation to determine the off-site extent of groundwater contamination from unauthorized discharges at the DVD. The proposed investigation, however, is insufficient to define the full extent of contamination from the DVD. Furthermore, the Workplan failed to propose investigations from the former Nelson Dairy and the former field crop parcel. A revised workplan is needed to propose additional sampling locations for determining the plume boundaries from the DVD and other listed properties.
7. This *Amended Order 3* requires the Discharger to implement plans to provide long-term independent, uninterrupted replacement water service to affected properties. In consideration of public comments and our own concerns, we are requiring the DVD responsible parties to pursue the following permanent water supply alternatives from the November 8, 2010 Supplemental Evaluation in this order: Options 2b, 2a, and 3. Option 4 is not a desired option for permanent water supply by the affected residents. In the meantime, water delivery of water supply meeting state drinking water standards must continue until a permanent water supply alternative is fully operational.
8. This *Amended Order 3* requires work plans, monitoring, and reports pursuant to Water Code section 13267, subdivision (b). The Dischargers are responsible for increasing the number of testing wells in the area to define the extent of contamination in groundwater. The current proposed wells are located within the middle of the plume, and cannot be used to determine the extent of the affected aquifer. Starting at the DVD, we are requiring more multi-depth wells to be installed to delineate the extent of the contaminant plume along and west of Mountain View Road, to the north along Salinas Road, and east towards Summerset Road. An additional proposal is needed to define contamination from the former Nelson Dairy and the former adjacent field crops.
9. On January 26, 2011 the Lahontan Water Board issued Notice of Violation of Cleanup and Abatement Order R6V-2008-0034A2 and Investigative Order R6V-2010-0028 (*January 2011 NOV*) based on the Discharger's failure to deliver interim replacement water by the July 30, 2010 and October 11, 2010 deadlines in accordance with the *Amended Order 2* and *2010 Investigative Order*. This *Amended Order 3* in no way absolves the discharger from any liability for fines indicated in the *January 2011 NOV* based on violations of previous Orders. Findings and requirements that are in Cleanup and Abatement Order Nos. R6V-2008-0034, R6V-2008-0034A1, and R6V-2008-0034A2 and that are not amended by *Amended Order 3* remain in effect.

## DIRECTIVES

**IT IS HEREBY ORDERED**, pursuant to the Water Code sections 13267 and 13304, that Mr. Paul Ryken, the estate of Nick Van Vliet, and Flameling Dairy, Inc., are primarily responsible for the discharge of waste that has caused or threatens to cause a condition of pollution or nuisance, and shall abate the effects of waste discharges at, near, and down gradient of the Facility as directed in Cleanup and Abatement Order No. R6V-2008-0034 and as amended below. As secondarily liable for the discharge of waste that has caused or threatens to cause a condition of pollution or nuisance, the K&H Van Vliet Children LLC and PG&E shall abate the effects of waste discharges at, near, or down gradient of the Facility as directed in Cleanup and Abatement Order No. R6V-2008-0034 and as amended below, in the event that Mr. Paul Ryken, the estate of Nick Van Vliet, and Flameling Dairy, Inc., fail to comply with all or any portion of this Amended Order after being so notified by the Water Board to comply with this Amended Order.

### A. LONG-TERM REPLACEMENT WATER SUPPLY PLAN

1. **By April 11, 2011**, a workplan and schedule to provide permanent water supply via Option 2b to the affected residents for all indoor and outdoor domestic uses **by July 11, 2011**. Indoor and outdoor domestic uses include drinking, cooking, bathing, washing, appliances, domestic animals, landscaping, and similar uses. Include schematics showing the location of all relevant piping, structures, and properties required to implement this alternative. The schedule must list dates for completing tasks necessary to implement Option 2b. Permanent water supply must be able to meet state primary and secondary drinking water standards by the July 11, 2011 deadline.
2. **If not pursuing Option 2b, by March 23, 2011**, provide written notification and evidence to the Water Board if negotiations with outside parties are unsuccessful for providing permanent water supply to the affected residents for all indoor and outdoor domestic uses via Option 2b. Evidence must include dates of discussions, names of participants, and matters in dispute.
  - a. **By April 11, 2011**, you must provide a workplan and schedule for implementing Option 2a **by July 11, 2011**. The schedule must list dates for completing tasks necessary to implement Option 2a. Include schematics showing the location of all relevant piping, structures, and properties required to implement this alternative.
  - b. **By May 27, 2011**, investigation results of geology and water quality in the western and eastern portions of the affected areas along Thompson Road. Water quality data must be collected from the aquifer sufficiently below the zone of pollution and must include all parameters to meet state primary and secondary drinking water standards. Water samples from more than one depth may be necessary to meet this requirement. If one or more parameters from

the desirable depth do not meet drinking water standards, provide a remedy for making water potable. State whether implementation of Option 2a is feasible and reasonable.

3. **If not continuing to pursue Options 2a or 2b, by June 10, 2011**, provide written notification and evidence to the Water Board if providing permanent water supply to the affected residents for all indoor and outdoor domestic uses via Option 2a is not feasible. Evidence may be dates of discussions, names of participants, matters in dispute, or technical information.
  - a. **By June 10, 2011**, you must provide a workplan and schedule for implementing **Option 3 by August 12, 2011**. If one or more parameters from the desirable depth do not meet drinking water standards, provide a remedy for making water potable. Include schematics for each affected parcel showing the location of all relevant piping, structures, and properties required to implement this alternative. The schedule must list dates for completing tasks necessary to implement Option 3.
  - b. **By July 22, 2011**, investigation results of geology and water quality on each of the affected individual parcels along Thompson Road. Water quality data must be collected from the aquifer sufficiently below the zone of pollution and must include all parameters to meet state primary and secondary drinking water standards. Water samples from more than one depth may be necessary to meet this requirement. If one or more parameters from the desirable depth do not meet drinking water standards, provide a remedy for making water potable. State whether implementation of Option 3 is feasible and reasonable.

**IT IS HEREBY ORDERED**, pursuant to the Water Code sections 13267 and 13304, that all primary (Mr. Paul Ryken, the estate of Nick Van Vliet, and Flämeling Dairy, Inc.) and secondary (the K&H Van Vliet Children LLC and PG&E ) responsible parties, are responsible for the discharge of waste that has caused or threatens to cause a condition of pollution or nuisance, and shall investigate and abate the effects of waste discharges at, near, and down gradient of the Facility as directed in Investigative Order No. R6V-2010-0005 and as amended below.

**B. GROUNDWATER INVESTIGATION AND CHARACTERIZATION**

1. **Revised Off-site Groundwater Investigation Work Plan** - The Dischargers shall refine and update the existing proposal for groundwater sampling required by Investigative Order No. R6V-2010-0005 by sampling additional locations in the vicinity of the DVD, the former Nelson Dairy property (0494-221-11, -18, -47), and the former adjacent field parcel (APN 0494-221-51) Additional sampling locations in the north, west, east and south should be selected to determine the extent and temporal variability of nitrates, total

dissolved solids, and other waste constituents, routes of waste constituent migration, and the location and exposure points of actual and potential receptors (humans, animals, and plants). This report or reports shall be called a Groundwater Investigation and Characterization Report.

2. **Groundwater Investigation and Characterization Work Plan** - The Dischargers shall develop and submit to the Water Board by April 1, 2011, a work plan to guide the collection of information adequate to produce the Groundwater Investigation and Characterization Report described in Directive B.3.
  - a. **Proposed Action** - The work plan shall include a description of proposed actions including field methodologies, chemical analyses methods, detection limits, and proposed multi-depth monitoring well installation locations. Contingencies for collection of additional environmental samples shall be proposed in the work plan.
  - b. **Work Plan Implementation** - The Dischargers shall implement the work plan within 30 calendar days after submission of an adequate work plan, unless otherwise directed in writing by the Water Board. Before beginning these activities the Dischargers shall:
    - i. Notify the Water Board of the intent to initiate the proposed actions included in the work plan submitted at least one week before the start of field work; and
    - ii. Comply with any conditions set by the Water Board, including mitigation of adverse consequences from investigation activities.
3. **Groundwater Investigation and Characterization Report** - The Dischargers shall prepare and submit an adequate Groundwater Investigation and Characterization Report by June 30, 2011 presenting the final results of the groundwater investigation and characterization study. The Report shall contain the following information:
  - a. **Geologic Characterization** - The Report shall contain an accurate characterization of the subsurface geology, the hydrogeologic characteristics, and all preferential pathways that may affect groundwater flow and contaminant migration. The geologic characterization must be adequate to explain groundwater flow characteristics of the site, and how site geology and groundwater flow affect contaminant migration.
  - b. **Groundwater Flow Characterization** - The Report shall describe the rate(s) and direction(s) of local groundwater flow, in both the horizontal and vertical dimension, for all water-bearing units potentially affected

by the wastes discharged from the Site. A potentiometric map showing groundwater elevation contours must be included in the report.

- c. **Groundwater Monitoring Wells** - The Report shall describe the location of existing residential wells subject to monitoring under *Amended Order 1*, along with the location of additional monitoring wells to the north, west, east, and south needed to characterize the concentrations of waste constituents and their lateral and vertical extent in groundwater. Additional nested monitoring wells shall be proposed in locations adequate to determine the lateral and vertical extent of waste constituents throughout the plume extent to the background value in the subsurface. Proposed wells shall be located no more than 1,500 feet from each other. Proposed wells must also be sited in locations that will provide results that show whether the size and mass contaminant plume is expanding, stable or shrinking.
- d. **Field Methodologies** - The Report shall describe the field methodologies used for drilling, soil sampling, groundwater sampling, well and piezometer construction, and other activities. Methods for purging and sampling monitoring wells must be capable of providing representative samples of groundwater for detecting the waste constituents of interest.
- e. **Chemical Analyses** - The Report shall describe the laboratory analytical methods and protocols used for each environmental medium including but not limited to soil and groundwater. The suite of chemical analyses must be adequate to identify the full range of site-specific waste constituents identified in prior investigations. At a minimum, analyses shall be for chloride, nitrate as  $\text{NO}_3$ , potassium, total phosphorus, sodium, sulfate, and total dissolved solids. Records of other chemical use, storage, and disposal shall be evaluated and discussed in the Report to provide documentation that all of the waste constituents of concern have been identified. Bacterial analyses (fecal coliform) shall also be conducted for all wells located within 2,600 feet of the DVD. Laboratory chain of custody must be included in the report and any discrepancies with the number of samples analyzed and reported shall be explained.
- f. **Sample Locations and Number** - The locations, type, and number of samples shall be identified and shown on a site map and cross sections. Maps must show the constituent concentration at each sampling location and show isoconcentration contours for nitrate and total dissolved solids. Contour lines shall be dashed where inferred or unknown. Cross sections must be able to show the vertical thickness of the contaminant plume in the Upper Aquifer. The number of samples and suite of chemical analyses must be sufficient to identify

the nature of waste constituent sources, to define the distribution of waste constituents in the subsurface, and to provide data for environmental risk assessment, remedy selection, and remedial design. In addition samples shall be collected to evaluate physical properties of soils and aquifer materials. All monitoring data shall be presented in graphical and tabular forms, to include the sample result, sample medium, location, depth, sampling method, analyses, and rationale for the method.

4. **Rescissions** - This Amended Order rescinds Orders No. 3 and 4 in Investigative Order No. R6V-2010-0005 requiring workplan implementation and reporting by specified deadlines.

### PROVISIONS

1. **Duty to Comply** - The Dischargers shall properly manage, treat, and/or dispose of contaminated soils and groundwater in accordance with applicable federal, State, and local laws and regulations.
2. **Request to Provide Information** - The Dischargers may present characterization data, and preliminary interpretations and conclusions as they become available, rather than waiting until a final report is prepared. This type of on-going reporting can facilitate more effective and efficient regulatory oversight by the Water Board and may result in an overall reduction of the time necessary for the production of adequate deliverables required by this Order.
3. **Laboratory Qualifications** - Unless otherwise permitted by the Water Board, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Specific methods of analysis must be identified. If the Dischargers propose to use methods or test procedures other than those included in the most current version of "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*" (U.S. Environmental Protection Agency) or 40 CFR 136, "*Guidelines Establishing Test Procedures for the Analysis of Pollutants; Procedures for Detection and Quantification*", the exact methodology must be submitted for review and must be approved by the Water Board prior to use. The Dischargers must use a laboratory capable of producing and providing quality assurance/quality control (QA/QC) records for Water Board review. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports submitted to the Water Board.
  - a. **Laboratory Qualifications** - All samples must be analyzed by California State-certified laboratories using methods approved by the U.S. Environmental Protection Agency (USEPA) for the type of

analysis to be performed. Any report presenting new analytical data is required to include the complete Laboratory Analytical Report(s). The Laboratory Analytical Report(s) must be signed by the laboratory director and contain:

- i. Complete sample analytical report;
  - ii. Complete laboratory quality assurance/quality control (QA/QC) report;
  - iii. Discussion of the sample and QA/QC data, and
  - iv. A transmittal letter that shall indicate whether or not all the analytical work was supervised by the director of the laboratory, and contain the following statement, "All analyses were conducted at a laboratory certified for such analyses by the California Department of Health Services in accordance with current USEPA procedures."
4. **Duty to Use Registered Professionals** - The Dischargers shall provide documentation that plans and reports required under this Order are prepared under the direction of appropriately qualified professionals. California Business and Professions Code Sections 6735, 7835 and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of registered professionals. A statement of qualifications and registration numbers of responsible lead professionals shall be included in initial site investigation work plans and reports submitted by the Dischargers. The responsible lead professional shall sign and affix their registration stamp to the report, plan or document. If the responsible lead professional changes, then the statement of qualifications shall be updated with the next submittal.
5. **Corporate Signatory Requirements** - All reports required under this Order shall be signed and certified by a responsible corporate officer(s) of the Discharger described in paragraph 5.a. of this provision or by a duly authorized representative of that person as described in paragraph 5.b. of this provision.
- a. **Responsible Corporate Officer(s)** - For the purposes of this provision, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy - or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment

recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- b. **Duly Authorized Representative** - A person is a duly authorized representative only if:
- i. The authorization is made in writing by a person described in paragraph (a) of this provision;
  - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
  - iii. The written authorization is submitted to the Water Board.
- c. **Changes to Authorization** - If an authorization under paragraph (b) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this provision must be submitted to the Water Board prior to or together with any reports or information to be signed by an authorized representative.
- d. **Reporting of Changed Owner or Operator** - The Dischargers must notify the Water Board of any changes in facility occupancy or ownership associated with the property described in this Order.
6. **Penalty of Perjury Statement** - All reports must be signed by the Discharger's principal executive officer or its duly authorized representative, and must include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
- a. **Certification Statement** - Any person signing a shall make the following certification:

"I certify under penalty of law 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 gather and evaluate 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, 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."

- b. **Electronic and Paper Media Reporting Requirements** - The Dischargers shall submit both electronic (on a CD) and paper copies of all reports required under this Cleanup and Abatement Order including work plans, technical reports, and monitoring reports. The Dischargers shall comply with electronic reporting requirements of CCR Title 23, Division 3, Section 3893, including the provision requiring that complete copies of all reports be submitted to Geotracker in PDF format, and include the signed transmittal letter and professional certification. Electronic documents must be in a text searchable PDF format.

#### NOTIFICATIONS

1. **Cost Recovery** - Pursuant to Water Code Section 13304(c), 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 waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by the Order.
2. **Enforcement Notification** - Pursuant to Water Code Section 13350, the Water Board may administratively impose civil liability on any person who violates a cleanup and abatement order, in an amount of not less than five hundred dollars (\$500) or more than five thousand dollars (\$5,000), for each day in which the cleanup and abatement order is violated.
3. **Enforcement Notification** - Pursuant to Water Code Section 13385, the Water Board may administratively impose civil liability on any person who violates a cleanup and abatement order, for an activity subject to regulation under Division 7, Chapter 5.5 of the Water Code. Failure to comply with these requirements may subject you to the imposition of an administrative civil liability in an amount not to exceed ten thousand dollars (\$10,000) for each day in which the cleanup and abatement order is violated.
4. **Enforcement Discretion** - The Water Board reserves the right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.

5. **Evidentiary Hearing before the Water Board** - Any person affected by this action of the Water Board may request an evidentiary hearing before the Water Board. The Water Board's Executive Officer may elect to hold an informal hearing or a "paper hearing" in lieu of scheduling a hearing before the Water Board itself.
- a. The Water Board must receive your request within **30 calendar days** of the date of this Order.
  - b. Your request must include all comments, technical analysis, documents, reports, and other evidence that you wish to submit for the evidentiary hearing. However, please note that the administrative record will include all materials the Water Board has previously received regarding this Site. You are not required to submit documents that are already in the record.
  - c. The Executive Officer or Water Board may deny your request for a hearing after reviewing the evidence.
  - d. If you do not request an evidentiary hearing, the State Board may prevent you from submitting new evidence in support of a State Board petition.
  - e. Your request for an evidentiary hearing, if you submit one, does not stay the effective date of the Order, whether or not a hearing is scheduled.
  - f. A request for a hearing does not extend the 30-day period to file a petition with the State Board (see below). However, you we suggest that you ask the State Board to hold the petition in abeyance while your request for a hearing is pending. (Refer to CCR Title 23 Section 2050.5(d)) Additional information regarding the SWRCB petition process is provided below.
6. **Requesting Administrative Review by the State Board** - Any person affected by this action of the Water Board may petition the State Board to review the action in accordance with Section 13320 of the Water Code and CCR Title 23 Section 2050. The petition must be received by the SWRCB (Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812) within **30 calendar days** of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

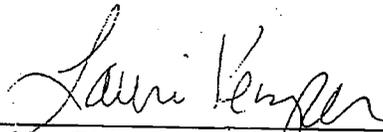
DESERT VIEW DAIRY  
San Bernardino County

AMENDED CLEANUP AND ABATEMENT ORDER  
NO. R6V-2008-0034A3  
WDID NO. 6B360409002

All technical documents that include engineering calculations and geologic or hydrogeologic evaluations submitted to the Water Board must be signed by a California licensed geologist and civil engineer.

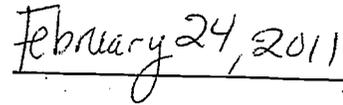
Please be sure that a copy of all documents sent to the Water Board's South Lake Tahoe office are also sent to the Water Board's Victorville office at: 14440 Civic Drive, Suite 200, Victorville, California 93292.

Ordered by:



LAURI KEMPER, P.E.  
ASSISTANT EXECUTIVE OFFICER

Dated:



Attachment: Water Code Section 13267 Fact Sheet

DVD Amended CAO R6V-2008-0034A3.doc

**Fact Sheet – Requirements for Submitting Technical Reports  
Under Section 13267 of the California Water Code**

October 8, 2008

**What does it mean when the regional water board requires a technical report?**

Section 13267<sup>1</sup> of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

**This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?**

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

**Are there limits to what the regional water board can ask for?**

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

**What if I can provide the information, but not by the date specified?**

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

**Are there penalties if I don't comply?**

Depending on the situation, the regional water board can impose a fine of up to \$1,000 per day, and a court can impose fines of up to \$25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

<sup>1</sup> All code sections referenced herein can be found by going to [www.leginfo.ca.gov](http://www.leginfo.ca.gov). Copies of the regulations cited are available from the Regional Board upon request.

**What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?**

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with 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 the 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

**Claim of Copyright or other Protection**

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

**If I have more questions, who do I ask?**

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

LAW OFFICES OF J. DREW PAGE

Albert & Lori Jackson

Eric P. Johnson  
Pacific Gas and Electric  
Company

Jessie Orr

CARMELA GONZALEZ

Calif. Environmental Protection  
Agency  
Office of the Secretary  
Water Programs Office

Ed Riddel

ROSEMARY MUNOZ

Robert Conaway

Anne Estabrook, PE  
CH2MHill

Gregory S. Mason  
McCormick, Barstow, Sheppard

Chris Maxwell  
Secor

D. Norman Diaz  
Helphinkley.Org

INGRID BROSTROM  
CENTER FOR RACE, POVERTY, AND  
ENVIRONMENT

Bill Orr

Reed Sato  
Office of Enforcement  
SWRCB

KENNETH J BORTNER

WILLIAM LARRENCE

RAY & BARBARA GROVEAU

Sierra Club San Gorgonio  
Chapter

GORMAN TRUST

GREG & ELAINE KEARNEY

Kim Niemeyer  
Office of Chief Counsel  
SWRCB

PAUL RYKEN  
DESERT VIEW DAIRY

SAN BERNARDINO COUNTY  
ENVIRONMENTAL HEALTH SERVICES

JOSEPH GISLER

DAVE GILBERT  
PACIFIC GAS AND ELECTRIC

BOB AND CARLA WARNER

J. AGUAYO & J. RUNKLE

KEN BERRY

EUGENE FRITZ

J. VALENZUELA & D. FLORES

PRINCIPAL  
HINKLEY ELEMENTARY  
SCHOOL

MIKE PLAZIAK  
CA RWQCB, LAHONTAN

SHIRES THOMAS

TOM CARY

Desert Dispatch Newspaper

MCHENRY COOK

ERROL NIEBERT

## Exhibit B



# California Regional Water Quality Control Board Lahontan Region



Linda S. Adams  
Secretary for  
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150  
(530) 542-5400 • Fax (530) 544-2271  
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger  
Governor

NOV 10 2008

Paul Ryken  
Desert View Dairy  
37501 Mountain View Road  
Hinkley, CA 92347

CERTIFIED MAIL: 7006 2760 0003 9496 7059

Estate of Nick Van Vliet  
Van Vliet Dairy  
8571 Merrill Avenue  
Chino, CA 92710

CERTIFIED MAIL: 7006 2760 0003 9496 7066

Flameling Dairy, Inc.  
c/o Bert & Kathleen A. Flameling  
2088 Candlewood Avenue  
Twin Falls, ID 83301-8338

CERTIFIED MAIL: 7006 2760 0003 9496 7073

K&H Van Vliet Children LLC  
c/o Nellie Ruisch  
23925 Waalew Road  
Apple Valley, CA 92307-6932

CERTIFIED MAIL: 7006 2760 0003 9496 7202

Robert Doss  
Mail Code B16A  
Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, CA 94105-1814

CERTIFIED MAIL: 7006 2760 0003 9496 7226

### **CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0034, DESERT VIEW DAIRY CONTAMINATION IN GROUNDWATER, HINKLEY, SAN BERNARDINO COUNTY, WDID NO. 6B36040900**

Enclosed is Cleanup and Abatement Order (CAO) No. R6V-2008-0034. This CAO directs the operators, past operator, and owners of the Desert View Dairy to provide an uninterrupted replacement water supply (i.e., bottled water, well head treatment or equivalent) to well owners with elevated nitrate concentrations in private drinking water supply wells in the vicinity of and in the downgradient flow direction of the Dairy.

The operators of the Desert View Dairy, Mr. Paul Ryken and the Estate of Nick Van Vliet, and the past operator, Flameling Dairy Inc., are primarily responsible for complying with the requirements of this order because they caused or contributed to the pollution and degradation of groundwater from discharges at the Dairy. The owners of the Desert View Dairy, the K&H Van Vliet Children LLC and Pacific Gas and Electric Company, are secondarily responsible for complying with the requirements of this order because they are ultimately responsible for activities at the Dairy.

*California Environmental Protection Agency*



Paul Ryken  
Estate of Nick Van Vliet  
Flameling Dairy, Inc.  
K&H Van Vliet Children LLC  
Robert Doss

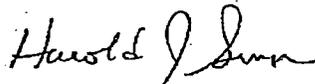
- 2 -

The CAO requires that you provide uninterrupted replacement water to residences where analysis of groundwater samples have indicated or future sample results indicate nitrate as  $\text{NO}_3$  levels greater than the Maximum Contaminant Level (MCL) of 45 milligrams per liter (mg/L) (10 mg/L nitrate as nitrogen). The CAO requires that you also test all private wells affected or potentially affected by pollution four times per year and submit technical reports. You may request to cease supply of uninterrupted water service if four consecutive quarters of testing indicate that nitrate concentrations are all less than the MCL.

Failure to comply with these directives subjects you to enforcement action by the Water Board. Such an action may include assessment of an administrative civil liability for up to five thousand dollars (\$5,000) for each day of violation of a directive, or referral to the California Attorney General for appropriate action.

I appreciate your cooperation in this matter. Please be sure that copies of all documents sent to the Water Board's South Lake Tahoe office are also sent to the Water Board's office at: 14440 Civic Drive, Suite 200, Victorville, California 93292.

If you have any questions, please contact Lisa Dernbach at (530) 542-5424 ([ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov)) or Chuck Curtis at (530) 542-5460 ([ccurtis@waterboards.ca.gov](mailto:ccurtis@waterboards.ca.gov)).



HAROLD J. SINGER  
EXECUTIVE OFFICER

cc (w/ enclosure): Lahontan Water Board Members  
David Coupe, OCC, State Water Resources Control Board  
San Bernardino County Health Department  
Mailing list

Enclosure: Cleanup and Abatement Order No. R6V-2008-0034

LSD/clhT: U:Cleanup and Enforcement/ Specialists Desert View Dairy CAO cover letter 11-6-08.doc  
[WDID 6B36040900]

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

**CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0034  
REQUIRING PAUL RYKEN, THE ESTATE OF NICK VAN VLIET, FLAMELING  
DAIRY, INCORPORATED, K&H VAN VLIET CHILDREN LLC, AND  
THE PACIFIC GAS AND ELECTRIC COMPANY  
TO CLEANUP OR ABATE THE EFFECTS OF  
CONTAMINANTS TO GROUNDWATERS OF  
THE MOJAVE RIVER HYDROLOGIC UNIT,  
DESERT VIEW DAIRY, HINKLEY,  
WDID NO. 6B36040900**

**SAN BERNARDINO COUNTY**

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

**FINDINGS**

1. The Desert View Dairy (DVD) is located at 37501 Mountain View Road in Hinkley. The DVD is situated east of this unincorporated community in San Bernardino County, in the Harper Valley Subarea of the Mojave Hydrologic Unit. As described below, the Flameling Dairy operated at this location. Hereinafter, land upon which the Desert View Dairy is located and the Flameling Dairy was located will be referred to as the "Property" and the operations of the DVD and Flameling Dairy as "dairy operations."
2. From 1981 to 1992, the Property was owned by FD Farms and from 1981 to 1986 the dairy operations were controlled by Flameling Dairy, Inc. From 1986 to approximately 1992, no dairy operations were conducted at the Property.
3. The K&H Van Vliet Children LLC and various Van Vliet trusts owned the property from 1992 to 2002. Mr. Paul Ryken and Mr. Nick Van Vliet have conducted dairy operations on the Property since approximately 1992 under a general partnership known as the Desert View Dairy. Mr. Van Vliet is recently deceased. The Water Board understands that the estate of Mr. Van Vliet remains a partner in the dairy operation.
4. The Pacific Gas and Electric Company (PG&E) bought the property in 2002 and leases it to the Desert View Dairy partnership to operate as a dairy.
5. Mr. Ryken, the estate of Mr. Van Vliet, Flameling Dairy, Inc., the K&H Van Vliet Children LLC and PG&E are hereinafter referred to as "Dischargers." Additional dischargers may be named as additional information becomes available.
6. The Property consists of approximately 180 acres that include a dairy operation, two residences, crop fields, and a manure/wastewater storage pond. The current

PAUL RYKEN,  
 THE ESTATE OF NICK VAN VLIET,  
 FLAMELING DAIRY, INCORPORATED,  
 K&H VAN VLIET CHILDREN LLC, AND  
 THE PACIFIC GAS AND ELECTRIC COMPANY  
 San Bernardino County

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CLEANUP & ABATEMENT  
 ORDER NO. R6V-2008-0034  
 WDID NO. 6B36040900

dairy operation includes approximately 1,500 dairy cows on the Property. In a July 30, 2008 letter report from Conestoga-Rovers and Associates on behalf of Mr. Ryken, it was estimated that approximately 43,000 gallons of wastewater containing nitrogen and total dissolved solids is generated each day by dairy operations. Liquid wastewater is stored in a storm water pond that was reportedly constructed with a clay liner in 1981, when Flameling Dairy, Inc. operated the dairy. The integrity of the clay liner is unknown. The wastewater is applied onto fields in the northern portion of the property. These discharges contributed to increased nitrate and other constituents in groundwater beneath and in the downgradient groundwater flow direction of the Property due to the nitrate and salts present in the wastewater.

7. From approximately 1992 to 1996, the Desert View Dairy partnership discharged manure solid waste to areas in the northern portion of the property. Between 1996 and 2001, manure was both spread on the site and exported to surrounding fields on other properties. Since 2002, manure has been trucked to an off-site facility for processing. No records were kept of the volume of manure applied at the Property each year when land disposal occurred. However, records from 2004 to 2007 show that the dairy operation produces an annual average of 5,314 tons of solid waste. These past discharges may have contributed to increased nitrate and other constituents in groundwater beneath and downgradient of the Property due to the nitrate and salts present in the manure.
8. As the current dairy operators, Mr. Paul Ryken and the estate of Mr. Nick Van Vliet, as the Desert View Dairy general partnership, are subject to this Order because they know or should know of the discharge of waste and have the ability to control it. As the former dairy operator, Flameling Dairy, Inc. are subject to this Order because it knew or should have known of the discharge of waste and had the ability to control it. As former owner of the property, the K&H Van Vliet Children LLC knew or should have known of the discharge of waste and had the ability to control it. Since it acquired the Property in 2002, PG&E knows or should know of the discharge of waste and has the ability to control it.
9. On January 31, 2008, Water Board staff collected a water sample from the domestic well at the residence located at 22858 Alcludia Road in Hinkley, at the owner's request. The well is situated approximately 200 feet north of the Property. Six measured constituents in the sample exceed either the primary or secondary drinking water standards (Maximum Contaminant Levels or MCLs) or a USEPA Health Advisory level. The detected concentrations for the six constituents are shown here:

Constituent	Concentration	Standard
Nitrate as NO <sub>3</sub>	81 mg/L	45 mg/L
Chloride	1200 mg/L	250-600 mg/L

PAUL RYKEN,  
 THE ESTATE OF NICK VAN VLIET,  
 FLAMELING DAIRY, INCORPORATED,  
 K&H VAN VLIET CHILDREN LLC, AND  
 THE PACIFIC GAS AND ELECTRIC COMPANY  
 San Bernardino County

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CLEANUP & ABATEMENT  
 ORDER NO. R6V-2008-0034  
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Sulfate as SO <sub>4</sub>	1400 mg/L	250-600 mg/L
Specific Conductance (EC)	5100 µmhos/cm	900-2200 µmhos/cm
Sodium	410 mg/L	20 mg/L
Total Dissolved Solids	4600 mg/L	500-1500 mg/L

10. On May 9, 2008, the Water Board ordered Mr. Ryken and PG&E to submit technical reports to investigate pollution in groundwater beneath and adjacent to the Property. The order was based on prior ground water samples collected at the Property showing concentrations of nitrates (as NO<sub>3</sub>) up to 81 mg/L and total dissolved solids up to 3120 mg/L, which exceed MCLs. The order, issued pursuant to section 13267 of the Water Code, required the submittal of: a groundwater investigation workplan; description of all waste disposal actions for the past 15 years, and; a technical report describing the results of a groundwater investigation to evaluate the extent of pollution from dairy operations on the Property.
11. On August 11, 2008, the Water Board received a citizen letter complaining about high levels of nitrates detected in her residential well, located at 22726 Thompson Road in Hinkley. The residence is situated about 2,500 feet north of the Property, in the estimated downgradient groundwater flow direction from the Property. The letter included a copy of laboratory results showing that 96 mg/L nitrate (as NO<sub>3</sub>) was detected in a water sample. The letter expressed concern about the source of nitrates, potential health affects, and actions that the Water Board is taking to address the problem. A reply letter by Water Board staff was issued on September 15, 2008.
12. As of October 31, Mr. Ryken has complied with the three directives in the Water Code section 13267 order issued on May 9, 2008. The Water Board received a workplan proposing a groundwater investigation at and in the vicinity of the Property and a letter report describing waste management practices during the past 15 years. The workplan states that based on historical database review, the general background concentration of nitrate as nitrogen in groundwater ranges from 1 to 15 mg/L (nitrate as NO<sub>3</sub> from 4.5 to 67.5 mg/L) on properties surrounding the Property. Mr. Ryken conducted the groundwater investigation, with off-site domestic well sampling in early-October 2008. The technical report describing the investigation results was submitted to the Water Board on October 31, 2008.
13. The 1995 *Water Quality Control Plan for the Lahontan Region* (Basin Plan) established water quality objectives (WQOs) for the protection of beneficial uses. WQOs include the following primary MCL established by the California Department of Public Health as a safe level to protect public drinking water supplies:

PAUL RYKEN,  
 THE ESTATE OF NICK VAN VLIET,  
 FLAMELING DAIRY, INCORPORATED,  
 K&H VAN VLIET CHILDREN LLC, AND  
 THE PACIFIC GAS AND ELECTRIC COMPANY  
 San Bernardino County

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CLEANUP & ABATEMENT  
 ORDER NO. R6V-2008-0034  
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Nitrate as NO<sub>3</sub>

45 mg/L

The following secondary MCLs are established by the California Department of Public Health as consumer acceptance contaminant levels:

Constituent	Recommended	Upper	Short Term
Chloride (mg/L)	250	500	600
Sulfate as SO <sub>4</sub> (mg/L)	250	500	600
Total Dissolved Solids (mg/L)	500	1000	1500
Specific Conductance (EC) (µmhos/cm)	900	1600	2200

The following U.S. EPA Health Advisory is established as a secondary drinking water standard for individuals on a 500 mg/day restricted sodium diet:

Sodium

20 mg/L

14. Dairy wastewater and solid manure are defined as wastes pursuant to Water Code section 13050, subdivision (d).
15. The Dischargers caused or allowed or threatened to cause nitrate-containing wastes and other wastes to be discharged to waters of the State underlying the Property.
16. Nitrate-containing wastes and other wastes have impacted groundwater beyond the boundaries of the Property. Water data from wells on the Property and off-site domestic wells as presented in Finding Nos. 9 - 12 indicate that the nitrate plume originating at the Property has migrated to at least Thompson Road, about 2,500 feet to the north. The lateral and vertical extent of the plume is not fully known but is under investigation. The required investigation report is the subject of another order of the Water Board.
17. Parcels within one mile to the north of the Property contain approximately 40 private and community domestic drinking supply wells, as indicated in a 2006 well survey report submitted by PG&E. Wastes from the Property either have adversely impacted or threaten to impact supply wells with nitrates and other wastes exceeding the drinking water MCLs.

PAUL RYKEN,  
THE ESTATE OF NICK VAN VLIET,  
FLAMELING DAIRY, INCORPORATED,  
K&H VAN VLIET CHILDREN LLC, AND  
THE PACIFIC GAS AND ELECTRIC COMPANY  
San Bernardino County

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CLEANUP & ABATEMENT  
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18. Water Code section 13050, subdivision (l) defines "pollution" as follows:

*... an alteration of the water quality to a degree that unreasonably affects either beneficial uses or facilities that serve these beneficial uses.*

19. Pursuant to Chapter 2 of the Basin Plan, present and potential beneficial uses of groundwater underlying and downgradient of the Property include domestic and municipal water supply, agricultural water supply, industrial water supply, freshwater replenishment, and aquaculture.
20. Because the discharges have caused or contributed to groundwater beneath and downgradient of the Property to exceed the drinking water standard for nitrate as NO<sub>3</sub> (45 mg/L), the affected ground water is no longer useable for drinking or domestic supply. 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.
21. Mr. Paul Ryken, the estate of Mr. Nick Van Vliet, and Flameling Dairy, Inc., are primarily liable for complying with this Order. A regional board may make a distinction between primary and secondary liability. (See, e.g., *Alcoa et al.*, State Water Resources Control Board (State Water Board) WQ Order No. 93-09 at p. 12, fn. 8.) This distinction has been made primarily for equitable reasons.

In this case, Mr. Paul Ryken, the estate of Mr. Nick Van Vliet, and Flameling Dairy, Inc., are primarily liable for compliance with this cleanup order because Mr. Ryken and Mr. Van Vliet, as the Desert View Dairy general partnership, and the Flameling Dairy, Inc., as dairy operators initiated and contributed to the discharge of waste. More specifically, because Mr. Paul Ryken, Mr. Van Vliet and Flameling Dairy, Inc., caused waste to be discharged such that groundwater has been adversely affected by elevated concentrations of nitrate and salts, Mr. Paul Ryken, the estate of Nick Van Vliet, and Flameling Dairy, Inc., are primarily responsible for compliance with this Order.

22. The K&H Van Vliet Children LLC and PG&E are secondarily liable for complying with this Order. The State Water Board has also cited factors that are appropriate for regional boards to consider in determining whether a party should be held secondarily liable. These factors include making a distinction between those parties who were considered responsible parties solely due to their land ownership and whether or not the parties initiated or contributed to the discharge.

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In this case, Mr. Ryken, Mr. Van Vliet, and Flaming Dairy, Inc., rather than the K&H Van Vliet Children LLC and PG&E, initiated or contributed to the discharge, and the K&H Van Vliet Children LLC and PG&E are named as responsible parties due to their former or current ownership of the Property.

#### AUTHORITY – LEGAL REQUIREMENTS

23. Water Code 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 to 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 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 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 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.*

24. Pursuant to Water Code 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.*

25. The conditions described in Findings No. 9 - 12 constitute violations of the Basin Plan. The conditions described in these Findings also identify discharges of wastes where it has been discharged or deposited into waters of the State (groundwater) or probably will be discharged into the waters of the State. The Dischargers are therefore subject to Water Code section 13304.

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26. 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.*

27. This Order requires monitoring, workplans and reports pursuant to Water Code section 13267, subdivision (b). The monitoring required by this Order is necessary to evaluate the extent of pollution in groundwater, determine affected well owners, and to protect human health. Workplan and technical reports required in this Order are essential to design a water replacement plan and implementation schedule and to determine compliance with this Order.
28. 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 or to oversee cleanup of such waste, abatement of the effect thereof, or other remedial action pursuant to this Order.
29. 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 California Code of Regulations (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.

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## ORDERS

**IT IS HEREBY ORDERED**, pursuant to Water Code sections 13267 and 13304, that Mr. Paul Ryken, the estate of Mr. Nick Van Vliet, and Flameling Dairy, Inc., as primarily responsible for the discharge of waste that has caused or threatens to cause a condition of pollution or nuisance, shall abate the effects of waste discharges at, near, and downgradient of the Property as follows in paragraphs 1 through 9. As secondarily liable for the discharge of waste that has caused or threatens to cause a condition of pollution or nuisance, the K&H Van Vliet Children LLC and PG&E shall abate the effects of waste discharges, at, near, or downgradient of the Property as follows in paragraphs 1 through 9 in the event that Mr. Ryken, the estate of Mr. Van Vliet, and Flameling Dairy, Inc. fail to comply with all or any portion of this Order and the Water Board notifies the K&H Van Vliet Children LLC and PG&E of the failure of Mr. Ryken, the estate of Mr. Van Vliet, and Flameling Dairy, Inc. to comply with this Order.

- 1. By November 19, 2008**, supply interim uninterrupted replacement water service (i.e., bottled water or equivalent), to residences or businesses served by private or community domestic wells in which nitrate has been detected at concentrations exceeding 45 mg/L nitrate as  $\text{NO}_3$  (10 mg/L nitrate as nitrogen), based on data generated in the most recent sampling event for any domestic well in the Affected Area. The Affected Area is defined as the area that is bounded by Serra Road in the west, Santa Fe Road in the south, Summerset Road in the east and Salinas Road in the north. The Affected Area may be modified as additional information becomes available. Furthermore, the Dischargers shall supply interim uninterrupted replacement water service (i.e., bottled water or equivalent), to any residence or business served by a private or community domestic well within the Affected Area within 48 hours of determining that the domestic well exhibits a nitrate as  $\text{NO}_3$  concentration greater than 45 mg/L (10 mg/L nitrate as nitrogen) for the first time.
- 2. By November 26, 2008**, provide notification to all parcel owners and occupants in the Affected Area that nitrate as  $\text{NO}_3$  concentrations in groundwater may exceed the MCL of 45 mg/L. The Dischargers shall also include notification that all potentially affected wells will need to be sampled on a quarterly basis, beginning December 10, 2008. A copy of the notification must be received by the Water Board.
- 3. By December 1, 2008**, submit a technical report to the Water Board listing all residences and businesses that have been provided interim uninterrupted replacement water service. The report must include the method(s) that the Dischargers have implemented to provide interim uninterrupted replacement water service including how this service will be maintained. If a residence or

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business should have been provided interim uninterrupted replacement water service based on the requirement in Order No. 1 above and has not been provided interim uninterrupted replacement water service, the technical report must include actions the Dischargers have taken and will continue to take to provide interim uninterrupted replacement water service to the residence or business. If the reason that the Dischargers have failed to provide interim uninterrupted replacement water service is the refusal of the occupants of the residence or business to accept such service, the report must include a statement from the occupants of this refusal. The report must identify all other wells in the Affected Area that are threatened by the discharge and have yet to be sampled.

4. **By December 31, 2008 and quarterly thereafter (by March 31, June 30, September 30, and December 31)**, complete the quarterly sampling of all private and community domestic wells within the Affected Area and submit samples with chain of custody documentation to a California certified laboratory for nitrate analyses. Laboratory analyses must include general minerals and regulated inorganics. Nitrate as  $\text{NO}_3$  analysis must have a Method Detection Limit of 2 mg/L or less (nitrate as nitrogen Method Detection Limit of 0.4 mg/L or less).
5. **By January 31, 2009, and quarterly thereafter** (April 30, July 31, October 31, and January 31) but no later than 30 days after completing the well sampling required in Order 4 above, submit to the Water Board California-certified laboratory results and other quality assurance/control documentation from the first quarterly sampling event (and subsequent quarterly sampling events) for all potentially affected private and community domestic wells and a list of residences with nitrate as  $\text{NO}_3$  concentrations exceeding 45 mg/L in their supply water. If the results indicate that other constituents beside nitrate are detected exceeding the MCL, the report must describe those wells affected. The report must state how each parcel owner and occupant were notified of these results within the required 48 hour period if a new detection above the MCL or within 5 days if previously detected at levels above the MCL. The report must contain a map showing the location of all wells that were sampled or attempted to be sampled. If the results of this monitoring identify a well that exhibits a nitrate as  $\text{NO}_3$  concentration exceeding 45 mg/L (10 mg/L nitrate as nitrogen) for the first time, the Dischargers must notify the Water Board of this information within 48 hours of the Dischargers receiving the monitoring information and state the alternate water supply to be given to the residence or occupants.
6. **By March 20, 2009**, submit a detailed Alternative Water Supply Implementation Workplan for long-term, uninterrupted, replacement water, for domestic and community supply wells with nitrate as  $\text{NO}_3$  concentrations exceeding 45 mg/L

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(10 mg/L nitrate as nitrogen). The workplan must propose an implementation schedule. Include a report describing the volumes of interim uninterrupted water supplied to specific addresses up to February 28, 2009.

7. Following Executive Officer's concurrence with the detailed Alternate Water Supply Implementation Workplan for wells with nitrate as  $\text{NO}_3$  concentrations exceeding 45 mg/L (10 mg/L nitrate as nitrogen), the Dischargers shall implement the plan according to a schedule approved by the Executive Officer.
8. The Dischargers shall be liable, pursuant to Water Code 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 Dischargers 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.
9. All technical and monitoring plans and reports required in conjunction with this Order are required pursuant to Water Code section 13267 and shall include a statement by the Dischargers, or an authorized representative of the Dischargers, certifying (under penalty of perjury in conformance with the laws of the State of California) that the workplan and/or report is true, complete, and accurate. Hydrogeologic reports and plans shall be prepared or directly supervised by, and signed and stamped by a Professional Geologist or Professional Civil Engineer registered in California.

This Order in no way limits the authority of this Water Board to institute additional enforcement actions or to require additional investigation and cleanup of the site consistent with the Water Code. This Order may be revised by the Executive Officer as additional information becomes available.

Compliance with the provisions of this Order by any one or more of the primary responsible parties will be considered as compliance by all primary and secondary responsible parties. If none of the primary responsible parties comply with this Order, all of the primary responsible parties will be considered in non-compliance with this Order and subject to additional enforcement action.

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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 Water Code sections 13350 and 13268 or referral to the Attorney General of the State of California for such legal action as he or she may deem appropriate.

Any person aggrieved by this action of the Lahontan Water Board may petition the State Water Board to review the action in accordance with 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

Ordered by: Harold J. Singer Dated: Nov 10, 2008

HAROLD J. SINGER  
 EXECUTIVE OFFICER

**EXHIBIT C**



**California Regional Water Quality Control Board**  
**Lahontan Region**



Linda S. Adams  
 Secretary for  
 Environmental Protection

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Arnold Schwarzenegger  
 Governor

SEP 13 2010

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 Desert View Dairy  
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 Hinkley, CA 92347

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 2088 Candlewood Avenue  
 Twin Falls, ID 83301-8338

K&H Van Vliet Children LLC  
 c/o Nellie Ruisch  
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 Apple Valley, CA 92307-6932

Robert Doss  
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The Thelma Van Vliet Living Trust  
 c/o Accommodators Inc.  
 1835 Newport Boulevard, Suite B-263  
 Costa Mesa, CA 92627

**INVESTIGATIVE ORDER NO. R6V-2010-0005 TO SUBMIT A TECHNICAL REPORT FOR  
 GROUNDWATER INVESTIGATION, HINKLEY, SAN BERNARDINO COUNTY, W DID NO.  
 6B360409002**

You were previously sent a draft investigative order, dated April 13, 2010 for providing written comments on a groundwater investigation. Since no comments were received by the Water Board, I am now issuing this final order for implementation.

This investigative order directs the above-referenced responsible parties to submit a workplan for conducting an investigation to determine the extent of groundwater contamination from dairy waste discharges at the Desert View Dairy, the former Nelson Dairy, and former adjacent field crops in Hinkley. The following sections discuss the background of nitrate pollution, the affected areas in Hinkley, and responsible parties determination that led to this investigative order being issued.

**Background**

Technical reports received by the Water Board in 2008 and 2009 evaluated groundwater contamination in the area around the Desert View Dairy (DVD). The reports, prepared by Conestoga-Rovers on behalf of Mr. Paul Ryken, describe the results of groundwater sampling from 28 monitoring wells and 34 residential wells. The results show levels of nitrate, total dissolved solids (TDS), chloride, sodium, sulfate, and specific conductance

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 Estate of Nick Van Vliet  
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above drinking water standards on the DVD property and on other properties to the north and south.

While these reports show domestic wells on Thompson Road impacted and other wells threatened by contamination, they do not show the lateral and vertical extent of contamination in groundwater. The extent of nitrate and other salt pollution in groundwater in the downgradient flow direction to the north of the DVD is unknown. Samples collected along Sonoma Road, approximately one mile north of Thompson Road, appear to be unaffected by the nitrate and salt pollution. There is no information on the extent of pollution between Thompson and Sonoma Roads. In addition, samples collected upgradient of the DVD indicate some contamination is migrating with groundwater from the south. The vertical extent of the contaminant plume is also unknown. A groundwater investigation is needed to define the lateral and vertical plume boundaries, to monitor potential pollutant migration, and to determine the extent of actual and threatened adverse impacts to beneficial uses of the aquifer, which include domestic, municipal, and agricultural uses.

**Nitrate Sources**

Past investigations conducted by the responsible parties for the DVD have detected a range of nitrate concentrations in groundwater across the DVD property. The October 2008 investigation showed on-site nitrate (as NO<sub>3</sub>) ranging from 41 to 420 milligrams per liter (mg/L). Most of the detected nitrate levels exceed the primary drinking water standard of 45 mg/L. Table 1 shows DVD nitrate data from the October 2008 investigation in the upgradient (southern) and downgradient (northern) groundwater flow direction. While the range of nitrate concentration is large, the trend across the DVD property is consistent in that concentrations increase with groundwater migration from the southern property boundary to the northern property boundary. The increasing nitrate trend across the site indicates the property is a source of groundwater pollution.

**Table 1. Comparison of Nitrate & TDS Monitoring Data\*  
 Desert View Dairy**

Well	DW-01	WW-42B1	DW-02	EX-13	DW-03
Nitrates as NO <sub>3</sub> (mg/L)	110	64	420	150	320
TDS (mg/L)	3100	1400	4000	4800	4100
Well Location	South, central	South, central	Northwest corner	North, central	Northeast corner
Groundwater Flow Location	Upgradient	Upgradient	Downgradient	Downgradient	Downgradient

\*October 2008 Groundwater Investigation Report

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The October 2008 investigation results also showed that nitrate concentrations at the southern property boundary of the DVD exceed the primary drinking water standard. This information suggests that a separate contaminant source or sources exist south from the DVD in the groundwater flow direction.

I understand that another dairy, the Nelson Dairy, previously operated south of the DVD (see enclosed map) and involved discharges of dairy wastewater and manure. Groundwater data from the Nelson Dairy in 1991 show nitrate as  $\text{NO}_3$  concentrations in groundwater up to  $44 \text{ mg/L}^1$ . This concentration is very close to the  $45 \text{ mg/L}$  primary drinking water standard for nitrate as  $\text{NO}_3$ .

Historical land use information submitted to this office indicates that the parcel immediately east of the former Nelson Dairy was used to grow field crops and may have included discharges of dairy wastewater and manure. Groundwater data from the field crop parcel in 1991 shows nitrate as  $\text{NO}_3$  concentrations detected at  $77 \text{ mg/L}^1$ , which is well above the drinking water standard.

From 1997 until 2001, this parcel east of the former Nelson Dairy was used as a land treatment unit (Ranch LTU) by the Pacific Gas and Electric Company (PG&E) for discharges of chromium-contaminated groundwater that was extracted from beneath the parcel. The discharged groundwater also contained nitrate and other salts that were already in the groundwater from previous agricultural or dairy operations.

Nitrate data collected by PG&E since 1988<sup>2</sup> also suggests an increasing nitrate trend as groundwater flows across the subject properties from the south to the north. As seen in Table 2, maximum and average nitrate concentrations increase on the DVD, former Nelson Dairy, and the adjacent field crops from their respective southern property line to their respective northern property line.

**Table 2. Comparison of Nitrate as  $\text{NO}_3$  Data (mg/L)\***

Location	Maximum	Average
DVD, north end	440	165
DVD, south end	145	65
Nelson, north end	63	57
Nelson, south end	48	43
Former field crops, north end	90	62
Former field crops, south end	48	48

\*Converted from nitrate as N data

<sup>1</sup> December 8, 2008 letter from Conestoga-Rovers, Summary of Historical Data

<sup>2</sup> November 30, 2009 Nitrate Data submittal by PG&E

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Based upon the above historical information, waste discharges at the DVD, the former Nelson Dairy, and the adjacent former field crops appear to be sources of groundwater pollution. Further investigations are needed to define the boundaries of nitrate and other salt impacts to groundwater where not defined on these properties and in the downgradient flow direction. I am therefore ordering the responsible parties of these properties to conduct a groundwater investigation to achieve this goal.

#### **Responsible Parties**

Cleanup and Abatement Order Nos. R6V-2008-0034, R6V-2008-0034A1, and R6V-2008-0034A2 identify, Paul Ryken, the estate of Nick Van Vliet, K&H Van Vliet Children LLC, Flameling Dairy, Inc. and the Pacific Gas and Electric Company (PG&E) as being responsible parties for discharges of waste affecting groundwater quality at the DVD and in the downgradient flow direction. Specifically, the Orders state that wastes from the DVD have adversely impacted groundwater with nitrate, TDS, chloride, sulfate, and sodium at levels exceeding drinking water standards. The responsible parties were ordered to provide alternate water supply to affected domestic well owners or tenants and submit monitoring reports to the Water Board. Additionally, because groundwater beneath the DVD contains nitrate and other salts at concentrations adversely impacting or threatening to adversely impact beneficial uses, I consider Paul Ryken, the estate of Nick Van Vliet, and Flameling Dairy, Inc. to be primarily responsible for conducting a groundwater investigation associated with discharges at the DVD. Because K&H Van Vliet Children LLC was the prior land owner of the DVD, I consider K&H Van Vliet Children LLC to be secondarily responsible for conducting a groundwater investigation associated with discharges at the DVD. Because PG&E is the current land owner of the DVD, I consider PG&E to be secondarily responsible for conducting a groundwater investigation associated with discharges at the DVD.

The former Nelson Dairy was located [REDACTED] and Santa Fe Avenue. I understand that starting in 1987, Billy and Mildred Nelson operated a dairy on the three parcels having Assessor's Parcel Numbers (APN) 0494-221-11, -18, -47 (see enclosed map). These parcels, totaling 40 acres, are located on the northeast corner of State Highway 58 and Mountain View Road, at 36975 Mountain View Road. After Mr. Nelson passed on, Mrs. Nelson sold the parcels to PG&E in 2006. Because groundwater beneath the parcels contain nitrate and other salts at concentrations adversely impacting or threatening to adversely impact beneficial uses, I consider Mildred Nelson to be primarily responsible for conducting a groundwater investigation associated with discharges at the former Nelson Dairy. Because PG&E is the current land owner of the former Nelson Dairy, I consider PG&E to be secondarily responsible for conducting a groundwater investigation associated with discharges at the former Nelson Dairy.

Immediately [REDACTED] former Nelson Dairy parcels are 95 acres of former field crops on APN 0494-221-51. Historical land use information indicates that dairy wastewater and manure from the former Nelson Dairy were applied to the field crops over a course of

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unknown years. Such wastes likely contributed to nitrate and other salts in soil and currently detected in groundwater. Discharges of waste containing nitrate and salts likely continued until the property was bought by PG&E in 1992. I therefore consider Mildred Nelson as primarily responsible for conducting a groundwater investigation associated with dairy waste discharges at this property. In 1991 when high levels of nitrate were detected in groundwater, Thelma Van Vliet and Cynthia Van Wyk were the property owners. Because Thelma Van Vliet was the prior land owner and PG&E is the current land owner, I consider the Thelma Van Vliet Living Trust and PG&E to be secondarily responsible for conducting a groundwater investigation associated with discharges at the former field crops. Cynthia Van Wyk is not listed as a responsible party in this matter because no information on her whereabouts was obtained. I do not consider PG&E a primary responsible party for the nitrate pollution for its discharges associated with operation of the former Ranch land treatment unit. PG&E's discharges at the former field crop parcel were of groundwater pumped from beneath the parcel. Those discharges did not add nitrate to the system and may have removed some nitrate through crop uptake.

I regard all the parties and entities listed in this letter to be responsible parties for wastes affecting groundwater quality on their respective properties and detected off site in the northerly groundwater flow direction. I do not expect the responsible parties for the DVD to be the primary source of pollution in the upgradient direction. The directives listed in this letter can be completed by just one of the responsible parties or the entire group, so long as Water Board directives are complied with. In the event that the parties considered primarily responsible fail to comply with all or any portion of this order, the Water Board will notify the parties considered to be secondarily responsible to comply with this order.

If none of the responsible parties complies with these directives, all parties will be subject to enforcement action by the Water Board. Such an action may include assessment of an administrative civil liability pursuant to Water Code section 13268, subdivision (b) for up to one thousand dollars (\$1,000) for each day of violation of a directive, or referral to the California Attorney General for appropriate action.

#### **Report Justification**

Water Board staff believes that, in light of the following facts, there is evidence to support ordering that technical reports be provided in this particular situation.

1. Concentrations of nitrate as  $\text{NO}_3$ , TDS, and other constituents and parameters significantly exceeding California drinking water standards have been reported in groundwater at domestic wells and monitoring wells located on the DVD and in the off-site downgradient flow direction. Such conditions make the groundwater unsuitable for drinking and other domestic and municipal uses. Groundwater in the area has a designated beneficial use of municipal and domestic water supply, agricultural supply, and industrial supply.

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2. Concentrations of nitrate as NO<sub>3</sub>, TDS, and other constituents and parameters reported in groundwater collected from the DVD upgradient property boundary indicate that another pollution source or sources exist to the south.
3. The former Nelson Dairy at 36975 Mountain View Road, located south of the DVD, historically has discharged dairy wastewater and manure to land. Such waste discharges contain high concentrations of NO<sub>3</sub>, TDS, and other constituents.
4. Dairy wastewater and manure were likely discharged to the land and field crops located on the 95-acre parcel (APN 0494-221-51), also located south of the DVD and east of the former Nelson Dairy.
5. Further investigation is necessary to evaluate the extent of adverse impacts to groundwater quality and threat to nearby receptors.

#### Order

Pursuant to Water Code section 13267, the primary responsible parties (Paul Ryken, Estate of Nick Van Vliet, Flameling Dairy, Inc., and Mildred Nelson Diaz) are required to complete the following actions:

1. **By November 15, 2010**, submit correspondence stating whether the primary responsible parties will be collaborating and submitting a joint workplan or whether multiple workplans will be submitted by two or more primary responsible parties to comply with the orders below.
2. **By December 15, 2010**, submit a workplan or workplans for defining the lateral and vertical extent of groundwater contamination from the DVD, former Nelson Dairy, and the former field crop property (APN 0494-221-51). The workplan(s) must describe the method and manner to collect groundwater samples from multi-depth locations in the aquifer in the areas of known contamination and in the downgradient groundwater flow direction of each property (DVD, former Nelson Dairy, and the former field crop parcel) and downgradient of the affected domestic wells on Thompson Road. A number of existing monitoring wells owned by PG&E and used for its chromium investigation may be suitable for satisfying portions of the needed investigation. Data less than one year old and collected for other investigations may also be suitable for satisfying portions of the required investigation. Data from domestic wells can only be proposed if the well design is known, screen lengths are short, and the pump depth is known. Enclose a map showing proposed sampling locations. The workplan must be signed by a California licensed geologist or civil engineer.

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*California Environmental Protection Agency*



Paul Ryken  
Estate of Nick Van Vliet  
Flameling Dairy, Inc., K&H Van Vliet Children LLC  
Robert Doss, Mildred Nelson Diaz  
The Thelma Van Vliet Living Trust

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CALANDARED

3. **By February 1, 2011**, implement the workplan(s) approved by Water Board staff.
4. **By May 1, 2011**, submit a technical report or reports of the groundwater investigation(s) conducted. Describe the method and manner used to collect groundwater samples from multi-depth locations in the aquifer. Include laboratory reports and tabulate data. Provide boring logs and monitoring well designs, if appropriate. Enclose a map showing sampling locations and estimate boundary lines for groundwater contamination. Provide a conclusion regarding the lateral and vertical extent of groundwater contamination. If the extent of contamination was not fully defined, include a recommendation for additional investigation needs. The report must be signed by a California licensed geologist or civil engineer.

The responsible parties may propose an alternate schedule for the above-required actions, but must provide justification for why the above schedule is not appropriate or achievable.

If the parties considered primarily responsible fail to comply with all or any portion of this order, the Water Board will notify the parties considered to be secondarily responsible to comply with this order. Revised due dates will be given if appropriate.

Please be sure that a copy of all documents sent to the Water Board's South Lake Tahoe office are also sent to the Water Board's Victorville office at: 14440 Civic Drive, Suite 200, Victorville, California 93292.

If you have any questions, please contact Lisa Dernbach at (530) 542-5424 ([ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov)) or Chuck Curtis at (530) 542-5460 ([ccurtis@waterboards.ca.gov](mailto:ccurtis@waterboards.ca.gov)).



HAROLD J. SINGER  
EXECUTIVE OFFICER

Enclosures: 1. Assessor's Parcel Map  
2. Section 13267 Fact Sheet

cc: Desert View Dairy Mailing list

LSD/clhT: DVD Nelson gw invest letter.doc  
File: VVL WDID 6B36040900

*California Environmental Protection Agency*





**Fact Sheet – Requirements for Submitting Technical Reports  
Under Section 13267 of the California Water Code**

October 8, 2008

**ENCLOSURE 2**

**What does it mean when the regional water board requires a technical report?**

Section 13267<sup>1</sup> of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

**This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?**

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

**Are there limits to what the regional water board can ask for?**

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

**What if I can provide the information, but not by the date specified?**

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

**Are there penalties if I don't comply?**

Depending on the situation, the regional water board can impose a fine of up to \$1,000 per day, and a court can impose fines of up to \$25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

<sup>1</sup> All code sections referenced herein can be found by going to [www.lcinfo.ca.gov](http://www.lcinfo.ca.gov). Copies of the regulations cited are available from the Regional Board upon request.

**What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?**

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with 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 the 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

**Claim of Copyright or other Protection**

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

**If I have more questions, who do I ask?**

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

**EXHIBIT D**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

BOARD ORDER NO. R6V-2004-0034  
WDID NO. 6B360303001

NEW WASTE DISCHARGE REQUIREMENTS  
FOR

PACIFIC GAS AND ELECTRIC COMPANY  
INTERIM PLUME CONTAINMENT AND HEXAVALENT CHROMIUM  
TREATMENT PROJECT

San Bernardino County

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

1. Dischargers

Pacific Gas and Electric Company (PG&E) submitted a Report of Waste Discharge (RWD) to conduct an Interim Plume Containment and Hexavalent Chromium Treatment Project (Project) at the Desert View Dairy located east of the community of Hinkley in San Bernardino County. The RWD consists of transmittals dated August 4, 2003, January 13, 2004, March 5, 2004, and reports listed in Attachment "C" – List of References. The RWD was deemed complete on March 5, 2004. PG&E proposes to discharge pumped ground water containing hexavalent chromium to a land treatment unit on the Desert View Dairy Property. The project is intended to provide containment of hexavalent chromium pollution in the ground water. PG&E owns the land on which the dairy is located. For the purposes of this Order (Order), PG&E is referred to as the "Discharger."

2. Facility

PG&E has proposed to construct and operate an interim Land Treatment Unit (LTU) encompassing approximately 80 acres on the Desert View Dairy to treat ground water polluted with hexavalent chromium [Cr(VI)]. The polluted ground water will be extracted and applied to the LTU through subsurface irrigation. The soils and vegetation in the LTU will reduce the Cr(VI) to trivalent chromium [Cr(III)]. The LTU on the Desert View Dairy is the facility to which the discharge occurs. The proposed drip irrigation system is part of what PG&E has called its "Interim Pumping Project" (Project), is planned as a temporary measure to limit further movement of the ground water plume containing Cr(VI). PG&E plans to operate the Project until a long-term ground water treatment system is constructed and operational. For the purposes of this Order, the LTU on the Desert View Dairy is referred to as the "Facility."

3. Facility Location

The Facility is located east of the community of Hinkley in San Bernardino County in the Harper Valley Subarea of the Mojave Hydrologic Unit within portions of Section 26, T10N, R3W and Section 2, T9N, R3W, SBB&M, as shown on Attachment "A," which is made a part of this Order.

4 Permit History

These are new Waste Discharge Requirements (WDRs) for a new facility. PG&E had operated a ground water remediation system at the East and Ranch LTUs located within 8,000 feet south of the proposed project location during 1991 to 2001 under the WDRs set forth in Board Order No. 6-91-917 and revised in Board Order No. 6-97-81.

5. Enforcement History

On December 29, 1987, the Executive Officer issued Cleanup and Abatement Order (CAO) No. 6-87-160 to the Discharger, ordering the investigation, cleanup and abatement of the effects of chromium in the soil and ground water, that were discharged at the PG&E Compressor Station. The selected remediation system consisted of the extraction of ground water for irrigation of pasture crops on the East and Ranch LTUs.

In June 2001, the Regional Board issued CAO 6-01-50 ordering PG&E to eliminate the threatened nuisance condition created at the East and Ranch LTUs due to the spray irrigation of chromium-polluted ground water to crops at these LTUs. In response to this order, PG&E shut down the ground water remediation system.

6. Reason for Action

In response to the termination of the prior remediation method, PG&E proposed a temporary measure to limit further movement of the ground water plume. The Regional Board is issuing WDRs for this new facility (LTU) proposed to receive the discharge of extracted ground water associated with a ground water containment and remediation system designed to protect the beneficial uses of downgradient ground water.

7. Site Geology

The soils underlying the Facility are comprised of interbedded sands, gravels, silts, and clays. The depth to bedrock is about 175 feet below the Facility. The nearest active fault is the northwest - southeast trending Lenwood fault located about one mile southeast of the Facility.

8. Site Hydrogeology and Hydrology

The hydrogeology in the vicinity of the LTU consists of an upper confined-to-semi-confined, aquifer, and a lower confined aquifer separated by approximately 20 feet of lacustrine clay that forms a regional aquitard.

The upper aquifer is approximately 80 feet thick and extends from 80 feet below the ground surface (bgs) to 160 bgs. The upper aquifer is comprised of interbedded gravels, silts, and clay and is divided into two major production zones, the "A" zone, and the "B" zone. Ground water flow in the upper aquifer is primarily to the north with an average gradient of 0.002 feet per foot.

The lower aquifer, or "C" zone, consists of semi-consolidated calcareous sediments, layers of silty sand, and minor amounts of clay. The lower aquifer extends from approximately 180 feet bgs to 230 bgs and is bounded at its base by competent crystalline rock.

The closest surface water body is the Mojave River, which is located approximately one mile southeast of the Facility.

9. Climatology

The precipitation in the area of the Facility is approximately three inches annually. The evaporation rate is approximately 74 inches annually.

10. Ground Water Quality

The ground water below the Desert View Dairy contains constituents from past and present agricultural activities, chromium from the PG&E plume, and naturally occurring constituents.

The most significant constituents are chromium, nitrate and TDS. The ground water quality, based on data from one extraction well has total chromium [Cr(T)] concentration of 0.05 mg/L, a nitrate concentration of 9.35 mg/L (as nitrogen) and a TDS concentration of 997 mg/L. Within the capture zone of the ground water extraction system, nitrate concentrations range from less than 0.1 mg/L (as nitrogen) to a maximum of 62.2 mg/L. Within the same area, TDS ranges from 997 mg/L to a maximum of 3,884 mg/L. Cr(T) concentrations in the untreated extracted ground water are estimated to range from 0.001 mg/L to 0.295 mg/L.

The maximum contaminant levels (MCLs) for a municipal water source for these constituents are: 10 mg/L for nitrate as N; 500 mg/L for TDS (a California Secondary MCL); 1,000 mg/L for TDS (a California Primary MCL); and 0.050 mg/L for Cr(T). Therefore, some of the ground water in the capture zone does not presently support the beneficial use of a municipal and domestic supply.

The water quality goals for an agricultural water source for TDS is 450 mg/L (Water Quality for Agriculture - Ayers & Westcot). Therefore, some of the ground water in the capture zone does not presently support the beneficial use for an agricultural supply. The TDS concentrations are unsuitable for irrigation of some sensitive crops but are still suitable for moderately tolerable crops, such as alfalfa, that are expected to be grown in this area.

11. Project Description

The Project is comprised of a ground water extraction system and an 80-acre LTU. The ground water extraction system is designed to provide hydraulic containment of the chromium contamination plume. Three ground water extraction wells will provide the necessary hydraulic control of the leading edge of the plume by pumping an estimated average of 345 gallons per minute (gpm) to nine irrigation fields. The extraction field will be operated from September through May to provide a flow rate of approximately 300 gpm (0.432 million gallons per day (mgd)). During the months of June, July, and August, the extraction rate will be increased to approximately 450 gpm (0.648 mgd). The nine irrigated fields are classified as an LTU and consist of approximately 80 acres of cultivated grasses. These fields are shown on Attachment "B," which is made a part of

this Order. The LTU is designed primarily to treat hexavalent chromium in extracted ground water and convert it to trivalent chromium. Treatment will occur in the vadose zone from ground surface to a depth of five feet bgs. Natural soil properties will promote the reduction of hexavalent chromium Cr(VI) in the applied extracted ground water to less-mobile, less-soluble, and less-toxic trivalent chromium Cr(III) during crop cultivation. Based on ground water and vadose zone monitoring data from the East LTU that operated for almost nine years (1992 to 2001) using a similar remediation technology, Cr(VI) reduction in the LTU is expected to be approximately 95 percent. Analyses of data from plume monitoring wells show that Cr(T) concentrations may be as high as 0.295 mg/L. According to the baseline soil data obtained at the DVD in April 2004, the average Cr(T) concentration is 11.9 mg/kg (Cr(T) ranges from 5.7 mg/kg to 19.0 mg/kg). The increase of Cr(T) concentration in soil after 8 years of operation is estimated to be 0.5 mg/kg over the baseline. Using this number, after 8 years of continue operation, the Cr(T) concentration in the soil at the DVD would increase from 11.9 mg/kg to 12.4 mg/kg. The predicted Cr(T) concentration remaining in the soil at the end of the project would still be far below the USEPA Region 9 preliminary remediation goal (PRG) for residential soil of 210 mg/kg for Cr(T).

While the primary objective of the LTU is to treat hexavalent chromium, the application of extracted ground water to the irrigated fields will provide much-needed nitrogen to crops. This will have the secondary effect of reducing nitrate mass in ground water. Deep percolation of irrigation water below the LTU was predicted using unsaturated zone capillary characteristics and irrigation water application rates. Deep percolation of irrigation water is predicted to reach ground water after eight years. The long-term nitrate concentration in ground water will be approximately 9.0 mg/L after eight years when the vadose zone water encounters the upper aquifer.

The mass loading of TDS to the ground water will increase due to operation of the LTU. The estimated TDS concentration at the end of eight years of operation will be 1,400 mg/L in the ground water. The increase of TDS caused by the LTU operation does not render this water unusable for agricultural use for the types of crops typically grown in this area. Currently, ground water under the LTU does not meet the beneficial use of municipal and domestic supply due to the TDS levels.

12. Waste Classification

The chromium-contaminated extracted ground water is classified as a liquid designated waste under Section 20210 of Title 27 California Code of Regulations.

13. Waste Management Unit Classification

The first five feet of soils in the irrigation sites are classified as a Class II LTU in accordance with Section 20614 of Title 27 California Code of Regulations.

14. Authorized Disposal Sites

The LTU delineated on Attachment "B" is the only authorized disposal site.

15. Water Quality Protection Standard

A Water Quality Protection Standard (WQPS) is established in the Order for the Facility, and consists of constituents of concern (including monitoring parameters), concentration limits, monitoring points, and the point of compliance. The WQPS applies over the active life of the Facility, post-closure monitoring period, and the compliance period.

16. Land Uses

The land uses at, and surrounding, the Facility consist of residential, commercial, agricultural, and open desert land. The nearest residence, worker housing for dairy personnel, is located adjacent to the eastern boundary of the LTU.

17. Receiving Waters

The receiving waters are the ground waters of the Harper Valley Hydrologic Area of the Mojave Hydrologic Unit. The Department of Water Resources (DWR) designation for the Harper Valley Hydrologic Area is 628.42.

18. Lahontan Basin Plan

The Regional Board adopted a Water Quality Control Plan for the Lahontan Basin (Basin Plan), which became effective on March 31, 1995. This Order implements the Basin Plan.

19. Beneficial Ground Water Uses

The beneficial uses of the ground water of the Middle Mojave River Valley Ground Water Basin as set forth in the Basin Plan are:

- a. MUN - municipal and domestic supply;
- b. AGR - agricultural supply;
- c. IND - industrial supply;
- d. FRSH - freshwater replenishment; and
- e. AQUA - aquaculture.

20. Non-Degradation

In accordance with State Water Resources Control Board (SWRCB) Resolution No. 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Waters in California*) and the Water Quality Control Plan for the Lahontan Region (Basin Plan) water degradation may be allowed if the following conditions are met: 1) any change in water quality must be consistent with maximum benefit to the people of the State; 2) will not unreasonably affect present and anticipated beneficial uses; and 3) will not result in water quality less than that prescribed in the Basin Plan; and 4) discharges must use the best practicable treatment or control to avoid pollution or nuisance and maintain the highest water quality consistent with maximum benefit to the people of the State.

The application of extracted ground water to irrigate crops will cause some TDS and nitrate degradation of the ground water consistent with the effects of crop irrigation observed

throughout the watershed. Within the capture zone of the ground water extraction system, nitrate concentrations range from less than 0.1 mg/L to a maximum of 62.2 mg/L. TDS for the same area ranges from 997 mg/L to a maximum of 3,884 mg/L. However, the nitrate degradation will be temporary and improve over time as more nitrate mass is removed from ground water by extraction than is added from percolation. The long-term nitrate concentration in ground water will be approximately 9.0 mg/L after eight years of the operation when the vadose zone water encounters the upper aquifer. At the same period of the operation, the estimated TDS concentration of 1,400 mg/L in the aquifer below the LTU is well within the tolerance ranges of crop grown in the area. The TDS degradation will be localized, minor and will not further adversely impact present or future beneficial uses of the ground water in the area. The LTU and the ground water extraction system are designed to implement equivalent of the Best Practicable Technology as required by SWRCB's Resolution No. 68-16. The long-term benefit of the project will result in removal of chromium and nitrate from the ground water. The TDS concentration of 1,400 mg/L in the ground water will still be suitable for crops expected to be grown in the area. Therefore, the resulting water quality from this project will be consistent with the SWRCB's Resolution No. 68-16.

21. Constituents of Concern

The Constituents of Concern (COCs) consist of total chromium Cr(T), hexavalent chromium Cr(VI), nitrate (as N) and TDS.

22. Water Quality Data Evaluation

A statistical method for evaluation of monitoring data is necessary for the earliest detection of a statistically significant evidence of a release of waste from the Facility. Title 27 requires statistical analysis. The Monitoring and Reporting Program includes a method for statistical analysis.

23. Detection Monitoring

A Detection Monitoring Program (DMP) is designed to monitor the ground water for evidence of a release. Pursuant to Sections 20385 and 20420, Title 27 CCR, the Discharger is required to submit a DMP. The DMP is described in the Monitoring and Reporting Program No. R6V-2004-0034.

24. Evaluation Monitoring

An Evaluation Monitoring Program (EMP) may be required, pursuant to Sections 20385 and 20425, Title 27 CCR, to evaluate evidence of a release, if detection monitoring and/or verification procedures indicate evidence of a release.

25. Corrective Action

A Corrective Action Program (CAP) to remediate released wastes from the Facility may be required pursuant to Sections 20385 and 20430, Title 27 CCR, should results of an EMP warrant a CAP.

26. Closure and Post-Closure Maintenance

Once the Facility is no longer in use, it shall be closed as a land treatment unit (LTU) under Section 21420 of Title 27 California Code of Regulations. This Order requires the Discharger to prepare: (a) discrete plans for initiating and completing closure and post-closure maintenance activities; and (b) lump sum estimates of the costs to carry out the actions specified in the plans.

27. Reasonably Foreseeable Release

Pursuant to Section 20080 (a)(a) of Title 27, the Discharger is required to provide financial assurance for remediation of a reasonably foreseeable release. This Order requires the Discharger to prepare: (a) a plan for initiating and completing corrective action for a known or reasonably foreseeable release from the facility; and (b) a lump sum estimate of the costs to carry out the actions necessary to perform the corrective action.

28. Financial Assurance

This Order requires that evidence of financial assurance be annually submitted to Board staff along with updated closure cost estimates. In accordance with Section 22510, Chapter 7, Title 27, California Code of Regulations, the Discharger shall provide for adequate funding to pay for the cost of closure, post-closure maintenance, and remediation of the reasonably foreseeable release.

29. California Environmental Quality Act

The Project is a new project under CEQA and is subject to the provisions of the CEQA (Public Resources Code, Section 21000 et seq.) in accordance with Title 14, Section 15301, CCR. The Regional Board is the lead agency for this project under the California Environmental Quality Act (Public Resources Code section 21000 et seq.).

An Initial Study describing the project was prepared by CH2M Hill on behalf of the Regional Board and PG&E. It was circulated under State Clearinghouse No. 2004051114 to satisfy CEQA with the Regional Board as Lead Agency. The Initial Study indicates the intent of the Regional Board to consider a Mitigated Negative Declaration.

In a public meeting on June 27, 2004, the Regional Board adopted a Resolution: certifying the Initial Study stating that the effects on the environment from the Project are not significant as mitigated; adopting a Mitigated Negative Declaration and a Mitigation Monitoring and Reporting Plan to satisfy CEQA; authorizing the Executive Officer to sign the Certificate of Fee Exemption and to transmit it to the California Department of Fish and Game in lieu of payment of the CDFG filing fee; and authorizing Regional Board staff to send a Notice of Determination to the State Clearinghouse.

The discharge described in these WDRs is consistent with the Negative Declaration and no new significant impacts are expected from the discharge allowed by these WDRs.

30. Notification of Interested Parties

The Regional Board has notified the Discharger and all known interested parties of its intent to adopt new WDRs for the project.

31. Consideration of Interested Parties

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that the Discharger shall comply with the following:

I. DISCHARGE SPECIFICATIONS

A. Discharge Limitations

1. The discharge to the Facility shall be limited to the extracted ground water from the Project extraction wells at the Desert View Dairy.
2. The maximum volume of discharge to the LTU in the months of September through May shall not exceed 0.432 million gallons in a 24-hour period (mgd).
3. The maximum volume of discharge to the LTU in the months of June through August shall not exceed 0.648 mgd.

B. Receiving Water Limitation

The peak discharge from the LTU is not expected to reach the ground water for about eight years according to unsaturated zone transport predictions produced by the Discharger's consultants.

The discharge of waste shall not cause a violation of any applicable water quality standards with the exception of TDS and nitrate for receiving water adopted by the Regional Board or the State Water Resources Control Board (SWRCB). The discharge shall not cause the presence of the following substances or conditions in ground waters of the Middle Mojave River Valley Ground Water Basin.

The ground water quality, as a result of the discharge, shall not exceed the following:

1. Prior to September 1, 2012, TDS of 1,000 mg/L;
2. After September 1, 2012, TDS of 1,400 mg/L; and
3. The nitrate (as N) of 9.5 mg/L.

These limits are based on an average of all samples analyzed in a 12-month period.

4. Chemical Constituents - Ground waters shall not contain concentrations of chemical constituents (with the exception of TDS and nitrate) in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following

provisions of Title 22 of the CCR (with the exception of TDS and nitrate): Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64431-B of Section 64431 (Fluoride), Table 6444-A of Section 64444 (Organic Chemicals), Table 64449-A of Section 64449 (SMCLs - Consumer Acceptance Limits), and Table 64449-B of Section 64449 (SMCLs - Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect. Waters designated as Agricultural Supply shall not contain concentrations of chemical constituents with the exception of TDS in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).

Ground waters shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

5. Radioactivity - Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food chain to an extent that it presents a hazard to human, plant, animal, or aquatic life. Waters shall not contain concentrations of radionuclides in excess of limits specified in the CCR, Title 22, Chapter 15, Article 5, Section 64443.
6. Taste and Odors - Ground waters shall not contain taste or odor-producing substances other than from TDS in concentrations that cause nuisance or that adversely affect beneficial uses. For ground waters designated as Municipal or Domestic Supply at a minimum, concentrations shall not exceed adopted SMCLs specified in Table 64449-A of Section 64449 (SMCLs - Ranges), and Table 64449-B of Section 64449 (SMCLs - Ranges) of Title 22 of the CCR, including future changes as the changes take effect.
7. Any presence of toxic substances in concentrations that individually, collectively, or cumulatively cause detrimental physiological response in humans, plants, animals, or aquatic life is prohibited.
8. The presence of hexavalent chromium and total chromium in concentrations that statistically exceed background levels is prohibited.

C. Water Quality Protection Standard

1. Monitoring Parameters

The monitoring parameters for the Facility are: total chromium Cr(T), hexavalent chromium Cr(VI), nitrate (as N) and TDS.

2. Monitoring Points

The monitoring points for the Land Treatment Unit are the lysimeters located five and twenty feet below ground surface grade, as shown on Attachment "B", and random sampling points for near surface soil.

3. Point of Compliance

The point of compliance as defined in Section 20164, Title 27, California Code of Regulations (Title 27) for the land treatment unit for Cr(T) and Cr(VI) is a horizontal surface located five feet below ground surface grade. The discharge of Cr(T) and Cr(VI) from the bottom of the LTU cannot exceed the concentration limits established in the Section I.C.5 at the point of compliance.

4. Vadose Zone Evaluation Point

The predicted concentrations of nitrate and TDS in ground water as a result of the Project are presented in Finding 11. TDS and nitrate concentrations in the soil pore fluids below the LTU will be monitored at an evaluation point 20 feet below ground surface. Unsaturated zone transport calculations for this project indicate the soil pore water liquid will not exceed the following concentrations for the constituents indicated below.

<u>Monitoring Parameter</u>	<u>Matrix</u>	<u>Concentration Limit</u>	<u>Reporting Limit</u>	<u>Recommended Analytical Method</u>
Nitrate (as N)	Liquid <sup>1</sup>	75 mg/L	0.5 mg/L	EPA 300
Total Dissolved Solids (TDS)	Liquid <sup>1</sup>	20,000 mg/L	0.1 mg/L	EPA 160.1

If TDS and nitrate concentrations exceed the predicted values in the table below, the discharger shall begin evaluation monitoring to assess whether continued LTU operation will threaten ground water quality and if cessation of the LTU is required. The Discharger shall provide a report explaining the findings to the Regional Board.

5. Concentration Limits

The concentration limits for the monitoring parameters located at the monitoring points for the Facility are the following:

<u>Monitoring Parameter</u>	<u>Matrix</u>	<u>Concentration Limit</u>	<u>Reporting Limit</u>	<u>Recommended Analytical Method</u>
Hexavalent Chromium Cr(VI)	Liquid <sup>2</sup>	0.021 mg/L <sup>3,5</sup>	0.001 mg/L	EPA 7199

<sup>1</sup> Soil pore liquid collected from lysimeters at 20 feet bgs

<sup>2</sup> Soil pore liquid collected from lysimeters at 5 feet bgs

<sup>3</sup> USEPA Integrated Risk Information System (IRIS) Reference Dose as a Drinking Water Level

<sup>4</sup> California Primary Maximum Contaminant Level (MCL)

<sup>5</sup> Based on the 95% upper confidence limit (UCL) of the median value for all lysimeters per quarterly sampling event

<sup>6</sup> USEPA Region IX 2002 Preliminary Remedial Goals (PRGs) for Residential Soil

Total Chromium Cr(T)	Liquid <sup>2</sup>	0.05	mg/L <sup>4,5</sup>	0.005	mg/L	EPA 6020
Hexavalent Chromium Cr(VI)	Soil	30	mg/kg <sup>6</sup>	0.2	mg/kg	EPA 3060A/7199
Total Chromium Cr(T)	Soil	210	mg/kg <sup>6</sup>	0.2	mg/kg	EPA 3060A/7199

**D. General Requirements and Prohibitions**

1. Surface flow or visible discharge of waste to land surface, surface waters, or surface water drainage courses is prohibited.
2. The discharge shall not cause a pollution as defined in Section 13050 of the California Water Code (CWC), or a threatened pollution.
3. Neither the treatment nor the discharge shall cause a nuisance as defined in Section 13050 of the CWC.
4. The discharge of waste except to the authorized disposal site is prohibited.
5. The discharge of waste, as defined in the CWC, which causes a violation of any narrative water quality objective (WQO) contained in the Basin Plan including the Nondegradation Objective, with the exception of nitrate and TDS, is prohibited.
6. The integrity of the LTU shall be maintained throughout the life of Project, and shall not be diminished as a result of any maintenance operation.
7. The discharge of waste which, causes a violation of any numeric WQO contained in the Basin Plan, with the exception of nitrate and TDS, is prohibited.
8. Where any numeric or narrative WQO contained in the Basin Plan is already being violated, the discharge of waste which causes further degradation or pollution is prohibited.
9. The Discharger shall remove and relocate or otherwise mitigate any wastes, which are discharged not in accordance with these WDRs.
10. LTU and containment structures shall be designed and constructed to limit ponding, inundation, erosion, slope, failure, washout and overtopping which could be caused by a 100 year, 24-hour precipitation event.
11. Hazardous waste as defined under Article 1, Chapter 11, Division 4.5 (§66261.3 et seq.) of Title 22 CCR shall not be disposed and/or treated at the Facility.

12. The discharge to the ground of any chemicals stored in tanks at the Facility is prohibited.
13. At closure, the Facility shall be closed in accordance with a final Closure and Post-Closure Maintenance Plan approved by the Regional Board.
14. Verbal notification shall be made to the Regional Board within 24-hours whenever there is leachate containing chromium greater than the concentration limits, as established in the Monitoring and Reporting Program, detected below the five-foot treatment zone. A report containing written confirmation shall follow within 14 days of receipt of the last laboratory report(s). The report shall include the agencies contacted, date(s) that leachate was found in the lysimeters, corrective action taken, and measures taken to ensure a similar leachate event will be avoided.
15. Discharge of solid waste to the Facility is prohibited.
16. The Facility shall be delineated by using at least four permanent markers certified by a California Registered Land Surveyor or a Civil Engineer to define the area containing extracted ground water undergoing treatment.
17. If either the presence of hexavalent chromium or total chromium is detected at a level exceeding the concentration limits established in the Monitoring and Reporting Program in the native soil beneath the five-foot treatment zone, the Discharger shall immediately cease using the LTU and begin evaluation monitoring.

E. Required Programs

The Discharger shall conduct a monitoring and response program pursuant to Section 20385 of Title 27 for the Facility as follows.

1. Detection Monitoring Program

The Discharger shall maintain a Detection Monitoring Program (DMP) under Section 20420 of Title 27 as required in Section 20385(a)(1) of Title 27.

2. Evaluation Monitoring Program

The Discharger shall establish an Evaluation Monitoring Programs (EMP) under Section 20425 of Title 27 as required in Sections 20385(a)(2) or 20385(a)(3) of Title 27 whenever there is evidence of a release from the Facility.

3. Corrective Action Program

The Discharger shall institute a Corrective Action Program (CAP) under Section 20430 of Title 27 when required pursuant to Section 20385(a)(4) of

Title 27.

II. PROVISIONS

A. Standard Provisions

The Discharger shall comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment "D," which is made a part of this Order.

B. Monitoring and Reporting

1. Pursuant to California Water Code Section 13267(b), the Discharger shall comply with Monitoring and Reporting Program No. R6V-2004-0034 as specified by the Executive Officer.
2. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of the Monitoring and Reporting Program.

C. Closure and Post-Closure Maintenance Plan

The preliminary closure and post-closure maintenance plan shall be updated if there is a substantial change in operations or a substantial change in costs for closure. A report shall be submitted annually indicating conformance with existing operations. The report indicating conformance with existing operations may be included in the annual report required in the Monitoring and Reporting Program. A final plan shall be submitted at least 180 days prior to beginning any partial or final closure activities or at least 120 days prior to discontinuing the use of the site for waste treatment, storage or disposal, whichever is greater. The final plan shall be prepared by or under the supervision of either a California Certified Engineering Geologist or a California Registered Civil Engineer.

D. Financial Assurance

Beginning with the first Annual Report, the Discharger shall annually submit reports, prepared by or under the supervision of either a California Certified Engineering Geologist or a California Registered Civil Engineer, providing evidence that adequate financial assurance pursuant to the requirements of the WDRs has been provided for closure, post-closure, and for potential releases. Evidence shall include the total amount of money available in the fund developed by the Discharger. In addition, the Discharger shall either provide evidence that the amount of financial assurance is still adequate or revise the amount of financial assurance by the appropriate amount. An increase may be necessary due to inflation, a change in regulatory requirements, a change in the approved closure plan, or other unforeseen events.

E. Claim of Copyright or Other Protection

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the Discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the Discharger as if the task had not been completed.

III. TIME SCHEDULE

A. Submittal of Technical Reports and Financial Assurance Documents

1. Preliminary Closure and Post-Closure Maintenance Plan

By August 30, 2004, or 30 days prior to discharge, whichever comes first, the Discharger shall submit a Preliminary Closure and Post-Closure Maintenance Plan (PCPCMP) for the Facility in accordance with the requirements in Title 27. The PCPCMP shall contain a proposal to either clean close the Facility or close the Facility as a land treatment unit. The PCPCMP shall include a cost estimate to implement the plan. The PCPCMP and cost estimate to implement the PCPCMP shall be prepared by, or under the supervision of, either a California Certified Engineering Geologist or a California Registered Civil Engineer.

2. Reasonably Foreseeable Release Plan

By August 30, 2004 or 30 days prior to discharge, the Discharger shall submit a plan for addressing a reasonably foreseeable release from the Facility in accordance with the requirements in Title 27. The CAP shall include a cost estimate to implement the plan. The CAP and cost estimate to implement the CAP shall be prepared by, or under the supervision of, either a California Certified Engineering Geologist or a California Registered Civil Engineer.

PACIFIC GAS & ELECTRIC CO.  
INTERIM PLUME CONTAINMENT  
AND HEXAVALENT CHROMIUM TREATMENT  
San Bernardino County

-15- BOARD ORDER NO R6V-2004-0034  
WDID NO. 6B360303001

3. Financial Assurance Documents.

By ~~August 30, 2004~~ or 30 days prior to discharge, whichever comes first, the Discharger shall submit Instruments of Financial Assurance acceptable to the Regional Board and adequate to cover the costs of Closure, Post-Closure Maintenance and all Known and Reasonable Foreseeable Releases for the Facility.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on July 27, 2004.

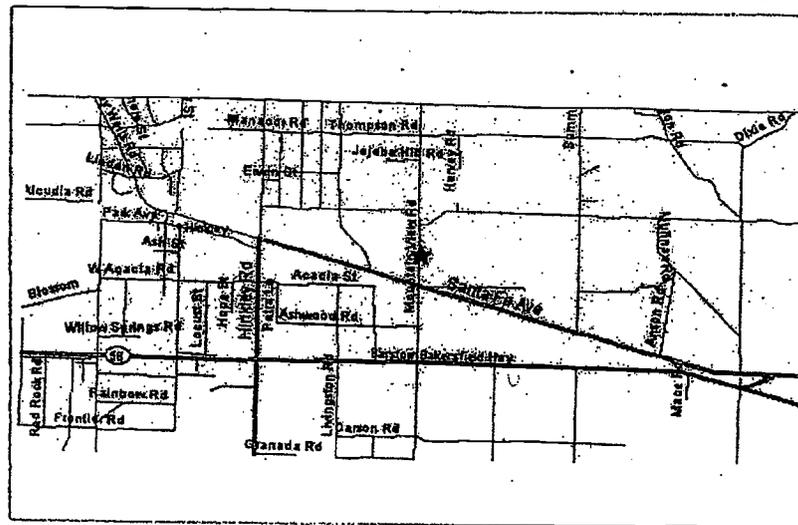
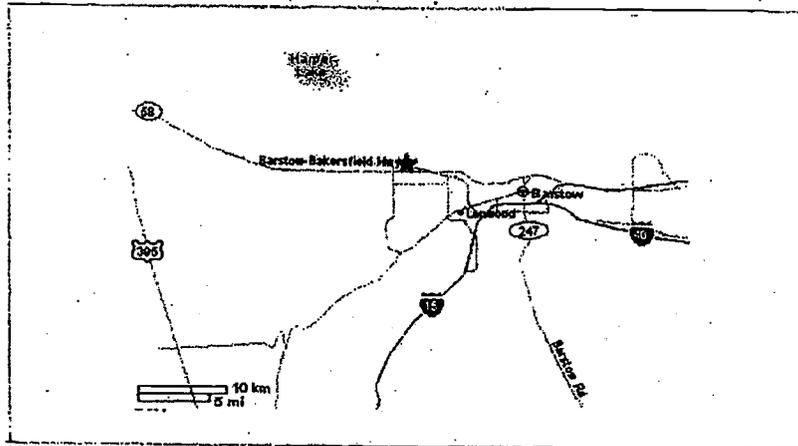
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HAROLD J. SINGER  
EXECUTIVE OFFICER

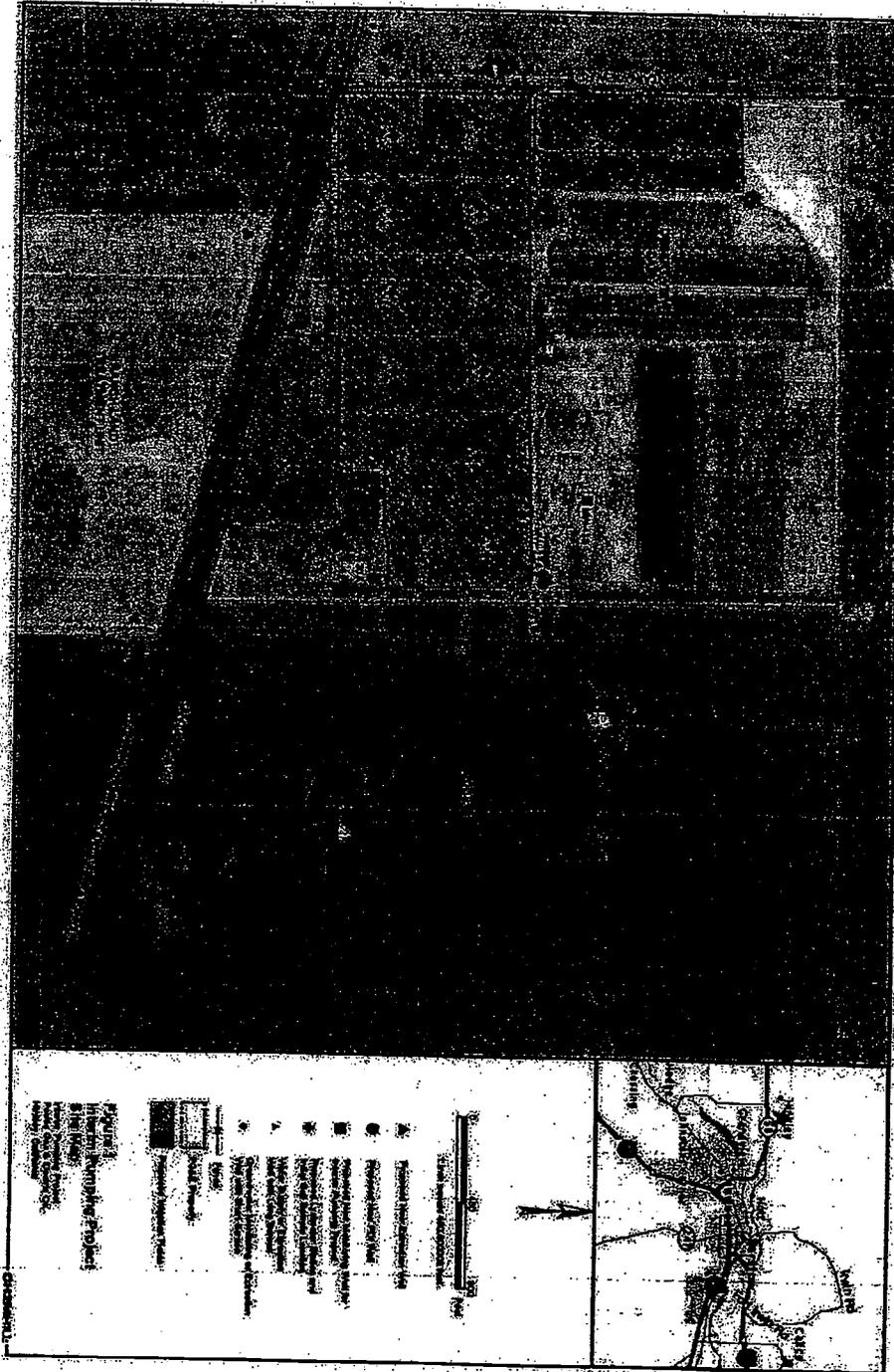
Attachments: A. Location Map  
B. Irrigation Sites  
C. References  
D. Standard Provisions for Waste Discharge Requirements

JK/trp (PG&E WDR FINAL)

Attachment A



Attachment B



### Attachment C. References

#### Bibliography for Interim Plume Containment and Hexavalent Chromium Treatment Project Report of Waste Discharge Documents

- CH2M HILL. 2004. *Draft Extraction Well Field Design Work Plan, Interim Pumping Project, Desert View Dairy, Hinkley, California*, January 9.
- CH2M HILL. 2004. *Project Description, Interim Pumping Project at the Desert View Dairy, Pacific Gas & Electric, Hinkley, California*. January 12.
- CH2M HILL. 2004. Response to LRWQCB Comments on Application for Report of Waste Discharge for Interim Pumping Project at Desert View Dairy - *Dr. Bruce James's Report on Evaluation of Cr(VI) Reduction and Cr(III) Oxidation in Soils*. January 12.
- CH2M HILL. 2004. *Draft Detection Monitoring Program Interim Pumping Project, Desert View Dairy*, January 14.
- CH2M HILL. 2004. *Draft Construction Drawings, Interim Pumping Project, Desert View Dairy*, January 14.
- CH2M HILL. 2004. Technical Memorandum: *DVD Interim Pumping Project: Evaluation of LTU Operation on Nitrate in Groundwater* February 5.
- CH2M HILL. 2004. Water Balance Model Documentation and Output. February 6.
- CH2M HILL. 2004. *Response to Comments on Project Description and Response to the Regional Board Staff Comments*, March 5.
- CH2M HILL. 2004. *Desert View Dairy Land Treatment Unit Potential Future Scenarios*, May 11.
- James, Dr. Bruce. 2003. *Evaluation of Potential Chromium(VI) Reduction and Chromium(III) Oxidation in Soils Used for Subsurface Irrigation with Groundwater Containing Chromium(VI), Hinkley, California*, University of Maryland (James Report). July 22.
- Pacific Gas and Electric Company (PG&E) 2003. Application for Report of Waste Discharge for Waste Discharge Requirements (WDR) for the Interim Pumping Project at the PG&E Compressor Station, Hinkley, San Bernardino County, for the proposed Interim Pumping Project located on the Desert View Dairy (DVD) at 37501 Mountain View Road, Hinkley, California. August 4.
- PG&E. 2004. *Addendum to Application / Report of Waste Discharge for Waste Discharge Requirements for the Interim Pumping Project at the Desert View Dairy, PG&E Company, Hinkley California, dated August 4, 2003*. Letter from Linda M. Gonsalves, P.E. Senior Project Manager to Harold Singer, Executive Director of the LRWQCB, January 12.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**STANDARD PROVISIONS**  
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

- e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.
- f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

- a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.
- b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

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

**MONITORING AND REPORTING PROGRAM NO. R6V-2004-0034  
WDID NO. 6B360303001**

FOR

**PACIFIC GAS AND ELECTRIC COMPANY  
INTERIM PLUME CONTAINMENT AND HEXAVALENT CHROMIUM  
TREATMENT PROJECT**

San Bernardino County

**I. MONITORING**

**A. Flow and Extracted Ground Water**

The following shall be conducted and reported in graphic and tabular form accordingly as specified:

**1. Volumes of Extracted Ground Water**

The volumes of extracted ground water discharged to the land treatment unit from each well shall be recorded in a permanent log book. (i.e., maximum, total and average daily pumping rate in gallon per minute(gpm), total monthly and cumulative total volumes for each extraction well). Flows will be recorded on a daily basis during the start-up and optimization period. Once routine operations are established, flows will be recorded weekly. The information shall be reported quarterly.

**2. Water Applied to the Land Treatment Unit (LTU)**

Samples of combined extracted ground water shall be collected every two weeks for the first three months during system startup and optimization and analyzed for total chromium Cr(T), hexavalent chromium Cr(VI), nitrate (as nitrogen) and total dissolved solids (TDS). The results of sampling shall be reported after the system startup and optimization is complete.

During the routine operation (after first three months for system startup and optimization), grab samples of combined extracted ground water shall be collected quarterly for the four monitoring parameters listed above. The results of sampling shall be reported quarterly.

**B. Detection Monitoring**

The Discharger is required, pursuant to Section 20385, Title 27, to establish a detection monitoring program for a land treatment unit. A detection monitoring program has been proposed by the Discharger pursuant to Article 1, Subchapter 3, Chapter 3, Division 2, Title 27. The detection monitoring program includes:

- a. Site monitoring for the LTU condition;
- b. Unsaturated zone monitoring for soil pore liquid quality;
- c. Soil monitoring for soil loading for chromium;
- d. Ground water monitoring for ground water quality;
- e. Plant tissue monitoring for plant tissue uptake of chromium; and
- f. Aquifer characteristics from upgradient and downgradient wells.

The detection monitoring program shall be completed and reported quarterly as follows:

1. Site Monitoring

Daily, the land treatment unit shall be visually inspected and the following recorded in a permanent log book:

- a. condition of runoff control facilities;
- b. condition of perimeter site fencing;
- c. condition of drainage control facilities;
- d. any sign of surface runoff leaving the land treatment unit; and
- e. any sign of the presence of ponded water.

2. Unsaturated (Vadose) Zone Monitoring System

Sixteen lysimeter stations shall be installed in the irrigated fields. Each station consists of a lysimeter at five and twenty feet below ground surface (bgs). These specific locations of the lysimeter station shall be proposed in the Sampling and Analysis Plan (SAP). Lysimeters are to be capable of extracting soil pore liquid under unsaturated soil conditions.

Quarterly, soil pore liquid samples, if a sufficient quantity is encountered, shall be collected from the lysimeters at five feet bgs for Cr(T) and Cr(VI) analyses and at twenty feet bgs for nitrate and TDS.

3. Soil Monitoring

Monthly, for the first six months, soil samples shall be collected at depths to be proposed in the SAP at 5 feet below surface at locations within the land treatment area and analyzed for Cr(VI) and Cr(T) (in units of mg/kg). The random sampling approach and the numbers of samples shall be proposed in the SAP required in Section G.1.

During the routine operation (after the first six months), soil samples shall be collected at 5 feet below the ground surface at random locations proposed in the SAP required in Section G.1. within the land treatment area on a quarterly frequency soil samples shall be analyzed for Cr(VI) and Cr(T)

and reported in units of mg/kg. The random sampling approach shall be specified in a Sampling and Analysis Plan (SAP) required in Section G.1. If results of sample analysis indicate Cr(VI) and Cr(T) concentrations greater than the concentration limits established in the Board Order (Tentative) Section I.C.5, the Discharger shall establish a concentration gradient below the LTU. Soil samples shall be collected at one foot intervals until laboratory analytical results show that concentrations are less than the concentration limit identified in Section I.C.5. If Cr(VI) and Cr(T) concentrations above the concentration limits are found below the five-foot treatment zone, the Discharger shall report evidence of a release.

4. Ground Water Monitoring

Quarterly, ground water samples will be collected at ten proposed monitoring wells for Cr(T), Cr(VI), nitrate (as N) and TDS analyses. The ground water monitoring shall be detailed in a Sampling and Analysis Plan (SAP) required in Section G.1.

5. Plant Tissue Monitoring

Semi-annually, representative samples of crop tissue irrigated by the extracted ground water shall be sampled and analyzed for Cr(VI) and Cr(T). The SAP shall propose the plant tissue sample collection methodology. The units for monitoring parameters reported shall be in mg/kg (dry weight) of plant tissue.

6. Aquifer Characteristics

Quarterly, the parameters listed below shall be determined from proposed monitoring wells.

<u>Field Parameter</u>	<u>Units</u>
Depth to ground water	feet bgs
Static water level	feet above mean sea level
Electrical conductivity	micromhos/cm
pH	pH units
temperature	deg. F or C
Slope of ground water gradient	ft/ft

7. Summary

Sampling Frequency for Detection Monitoring

Monitoring	Frequency
Site Monitoring	Daily <sup>2</sup> Weekly <sup>3</sup>
Unsaturated Zone Monitoring - Soil Pore Liquid	Quarterly
Soil Monitoring	Monthly <sup>1,2</sup> Quarterly <sup>1,3</sup>
Ground Water Monitoring	Quarterly
Plant Tissue Monitoring	Semi-Annually <sup>1</sup>
Aquifer Characteristics	Quarterly

Note: Results shall be reported quarterly

II. DATA ANALYSIS

A. Statistical Analysis Method

The Discharger shall propose a descriptive statistics (i.e., sample mean, sample variation) for sample analysis of liquid collected from the lysimeters and soil samples from the land treatment units to indicate evidence of a release. The Executive Officer may approve proposed statistical methods which are different than the method in this Monitoring and Reporting Program provided that such methods are capable of determining statistically significant evidence of a release from the Facility.

B. Nonstatistical Method

In accordance with the WDRs, evaluation monitoring will be initiated without statistical verification if there is significant physical evidence of a release. Physical evidence can include time series plots, vegetation loss, or unusual soil discoloration. Each annual report shall comment on these physical elements.

<sup>1</sup> Analyses only for hexavalent chromium [Cr(VI)] and total chromium [Cr(T)] in unit of mg/kg

<sup>2</sup> For the first six months after startup of the operation

<sup>3</sup> After first six months after startup of the operation if consistent compliance has been demonstrated for the first 6 months of operation.

### III. REPORTING REQUIREMENTS

#### A. Scheduled Reports To Be Filed With The Regional Board

The following periodic reports shall be submitted to the Regional Board pursuant to Section 13267 of the California Water Code (CWC) as specified below.

##### Detection Monitoring Reports

1. Results of sampling and laboratory analysis of samples collected from the Facility. The semi-annual report must include a map showing the locations where pore liquid and soil samples were collected during the previous semester.

The results of sample analysis of monitoring parameters for the extraction wells and extracted ground water samples shall be reported in tabular and graphic form. Each graph prepared for ground water data shall be plotted with raw data at a scale appropriate to show trends or variations in water quality. For graphs showing the trends of similar constituents, the scale shall be the same.

2. A transmittal letter summarizing the essential points in each report shall accompany each semi-annual report. The letter shall include a discussion of any requirement violations found since the last report was submitted, and shall describe actions taken or planned for correcting those violations.

The transmittal letter shall also include a discussion of any violations of the WDRs and a description of action(s) taken to correct those violations. If no violations have occurred since the last report, this shall be stated in the transmittal letter. Monitoring reports and the transmittal letters shall be signed by a principal executive officer at the level of vice-president, or higher, or their designated representative who is responsible for the overall operation of the facility. The letter shall contain a statement that, under penalty of perjury, to the best of their knowledge the report is true, complete, and correct.

3. If the Discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting this schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal.

4. The results of sampling conducted in accordance with the approved Sampling and Analysis Plan for the Facility.

**B. Unscheduled Reports To Be Filed With The Regional Board**

The following reports shall be submitted to the Regional Board pursuant to Section 13267 of the CWC as specified below.

**1. Notice of Evidence of a Release**

Should the appropriate statistical or non-statistical data analysis indicate, for a given monitoring parameter and/or constituent of concern, that there is evidence of a release, the Discharger shall:

- a. Immediately notify the Regional Board verbally as to the monitoring point(s) and constituent(s) or parameter(s) involved;
- b. Provide written notification by certified mail within seven days of such determination (Section 2550.8(j)(1), Article 5, Chapter 15, Title 23, California Code of Regulations). The notification should indicate the Discharger's intent to conduct verification sampling, initiate evaluation monitoring procedures, or demonstrate that a source other than the Facility is responsible for the release.
- c. If the Discharger chooses to attempt to demonstrate that a source other than the Facility is responsible for the release, the Discharger shall submit a supporting technical report within 90 days of detection of the release.

**2. Evaluation Monitoring**

The Discharger shall, within 90 days of verifying a release, submit a technical report pursuant to Section 13267(b) of the California Water Code proposing an Evaluation Monitoring Program. If the Discharger decides not to conduct verification procedures, or decides not to make a demonstration that a source other than the Facility is responsible for the release, the release will be considered verified.

**3. Engineering Feasibility Study Report**

The Discharger shall, within 180 days of verifying the release, submit an Engineering Feasibility Study (Section 2550.8(k)(6) of Article 5) to preliminarily propose methods for corrective action.

C. General Provisions

The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made a part of this Monitoring and Reporting Program.

D. Submittal Periods

Beginning **October 30, 2004**, the Discharger shall submit quarterly monitoring reports to the Regional Board on the 30th day of the month following the monitoring period. All daily and monthly reporting requirements shall be summarized and reported with the quarterly report. Any reporting required for mitigation monitoring during construction shall be reported in the next quarterly report.

E. Annual Report

On or before **July 30, 2004**, and every year thereafter the Discharger shall submit an annual report to the Regional Board. This report shall include the items described in the General Provisions for Monitoring and Reporting.

F. Mitigated Measures Monitoring and Reporting

Mitigation Measures Monitoring and Reporting are required as described in Attachment "A." Monitoring and Reporting of Air Quality Measures (items 1 through 4) are required monthly until construction is complete. Monitoring and Reporting of Hazards and Hazardous Materials and Hydrology and Water Quality Measures (items 6 through 16) are required for the project duration. The daily logs prepared by the construction superintendent and PG&E representative shall be kept in a permanent onsite log or record. The first report is due **August 30, 2004** and future reports to be submitted on a monthly basis thereafter, until notice is provided by an authorized representative of PG&E that construction activities are completed. Following construction, quarterly reports shall be submitted. All reports shall be signed by an authorized representative of PG&E.

G. Time Schedule

1. Sampling and Analysis Plan

Pursuant to General Provision No. 1D of the General Provisions for Monitoring and Reporting, the Discharge shall submit to the Regional Board by **August 30, 2004**, or 30 days prior to initiating a discharge or whichever occurs first, a Sampling and Analysis Plan (SAP). The SAP shall be updated and re-submitted as appropriate. The SAP shall include a detailed description of procedures and

techniques for:

- a. Sample collection, including sampling techniques, sampling equipment, and decontamination of sampling equipment;
  - b. Sample preservation and shipment;
  - c. Analytical procedures;
  - d. Chain of custody control;
  - e. Quality assurance/quality control (QA/QC);
  - f. Proposed ground water monitoring and locations of monitoring well; and
  - g. Random sampling approach for soil monitoring.
2. Statistical Analysis Method

The Discharge shall submit a proposed statistical analysis method for soil-pore liquid and soil samples from the LTU to indicate evidence of a release by August 30, 2004.

Ordered by: \_\_\_\_\_

HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated: July 27, 2004

Attachments: A Mitigation Monitoring and Reporting Plan  
B General Provisions for Monitoring and Reporting

KD/tp p/PGE (PG&E MRP)

**Attachment A**  
**Mitigation Monitoring and Reporting Plan**

Air Quality	Mitigation Measure	Monitoring	Reporting
1.	Comply with the requirements of the MDAQMD including Rule 403.2 to mitigate the impact of dust and PM10 emission. The requirements of Rule 403.2 for the proposed project are: a) use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emission; b) take actions sufficient to prevent project-related trackout onto paved surfaces; c) cover loaded haul vehicles while operating on publicly maintained paved surfaces; d) stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days; e) cleanup project-related trackout or spills on Publicly Maintained paved surfaces within twenty-four hours; and f) reduce non-essential earth-moving activity under high wind conditions.	<ul style="list-style-type: none"> <li>▪ The onsite construction superintendent is responsible to ensure daily logs reflect monitoring compliance with MDAMD requirements.</li> <li>• Information regarding construction activity shall be recorded in a permanent log book. Such information will include but is not limited to the time construction started and ended for the day and any unusual condition that may have occurred during the construction period.</li> </ul>	A summary of the Daily Logs will be submitted to the Regional Board in the Monthly Reports as required in MRP until construction is complete.
2.	During construction, all dust generating activities shall be restricted to periods of low wind (less than 25 miles per hour) to reduce dust emission.	<ul style="list-style-type: none"> <li>• Wind conditions shall be monitored onsite or from local information representative of the site.</li> <li>• The onsite construction superintendent is responsible to cease construction activities during a high wind condition.</li> <li>• The onsite construction superintendent is responsible to ensure daily logs reflect wind speed conditions, construction activity violations, and any corrective actions.</li> </ul>	See above.
3.	All dust generating activities shall be halted whenever local wind speeds exceed 25 miles per hour.	<ul style="list-style-type: none"> <li>• See Monitoring for No. 2, above.</li> </ul>	See above.
4.	Construction speed on unpaved roads is limited to 25 miles per hour to minimize vehicle-related dust emission.	<ul style="list-style-type: none"> <li>▪ The onsite construction superintendent is responsible to ensure daily logs reflect construction equipment driving speeds, any violations, and any corrective actions.</li> <li>• See Monitoring for No. 4, above.</li> </ul>	See above.
5.	Speed-limit signs will be posted.	<ul style="list-style-type: none"> <li>• See Monitoring for No. 4, above.</li> </ul>	See above.
6.	No chemicals will be stored onsite.	<ul style="list-style-type: none"> <li>▪ The PGE site representative will ensure compliance and record results of a site inspection at least monthly in a permanent log book.</li> </ul>	A Summary of the PGE Permanent Log will be submitted to the Regional Board in the Quarterly Reports as required in

Mitigation Measure	Monitoring	Reporting
		MRP. This summary will include a Certification that no chemicals such as hydrogen peroxide and citric acid were stored on site.
7. Chemical ingredients for irrigation drip line cleaning will be completely consumed during each periodic maintenance.	<ul style="list-style-type: none"> <li>▪ See Monitoring for No. 6, above.</li> <li>▪ The volume of the chemicals applied and duration of application for citric acid and hydrogen peroxide will be recorded.</li> <li>▪ The soil field moisture content will be recorded during each chemical application.</li> </ul>	A Summary of the PGE Permanent Log will be submitted to the Regional Board in the Quarterly Reports as required in MRP. This summary will include a Certification that all chemical ingredients were completely consumed. This summary will also include information on the volume and duration of chemical treatments and field soil moisture.
8. The offsite 750-gallon tank used for mixing the citric acid solution will be double-walled. Curbing must be placed along the perimeter of the concrete pad for containment of the full-volume.	<ul style="list-style-type: none"> <li>▪ See Monitoring for No. 6, above.</li> <li>▪ An Emergency Response Plan will be prepared, implemented and retained onsite and available to PGE staff and shown to regulatory staff if requested.</li> </ul>	A Summary of the PGE Permanent Log will be submitted to the Regional Board in the Quarterly Reports as required in MRP. This summary will include a Certification that all tanks are double-walled in the first monthly report after installation.
9. Hydrogen peroxide totes will be placed on a containment pallet to provide containment in the event of a leak.	<ul style="list-style-type: none"> <li>▪ See Monitoring for No. 6, above.</li> </ul>	A Summary of the PGE Permanent Log will be submitted to the Regional Board in the Quarterly Reports as required in MRP. This summary will include a Certification that containment pallets were used.
10. Herbicides may be used only if mowing does not provide sufficient weed control through a grass cover. If any herbicides are used, the application will be in accordance with the product label recommendations.	<ul style="list-style-type: none"> <li>▪ See Monitoring for No. 6, above.</li> <li>▪ PGE will maintain photograph documentation of the soil grass cover.</li> <li>▪ PGE will record the type and amount of any herbicides used.</li> </ul>	A Summary of the PGE Permanent Log will be submitted to the Regional Board in the Quarterly Reports as required in MRP. This summary will include a Certification that no herbicides were used or a summary of the type and amount applied.
11. The operation of the LTU will be evaluated and the distribution of crops as fodder will cease if monitoring data of plant tissue exceed 100 mg/kg of Cr(T) or indicate a threat to human health or the environment. The reasonable Cr(T) threshold concentration in crop (alfalfa) harvested for use as cattle feed presented no human health risk at concentrations below 1000	<ul style="list-style-type: none"> <li>▪ A LTU monitoring program is established in the MRP and will include soil and plant tissue testing to assess the concentrations of chromium.</li> <li>▪ The monitoring program includes data evaluation to assess whether there is a threat to human health or the environment.</li> </ul>	Separately, as required by the MRP

Mitigation Measure	Monitoring	Reporting
<p>mg/kg. It is conservative to apply a plant tissue concentration (100 mg/kg) for grasses other than alfalfa using 10 percent of the maximum threshold concentration of Cr(T).</p> <p><b>Hydrology and Water Quality</b></p>	<ul style="list-style-type: none"> <li>The criteria to stop LTU use is based on information published in the Public Health Assessment.</li> </ul>	
<p>12. Subsurface drip irrigation systems will be used to distribute extracted ground water so that natural processes can reduce the Cr(VI) to Cr(III).</p>	<ul style="list-style-type: none"> <li>PGE will collect photograph documentation as irrigation systems are installed.</li> </ul>	<p>Separately, as required by the MRP. Certification will be provided in the first report after installation that drip lines were used.</p>
<p>13. Grasses will be planted to provide nitrogen uptake.</p>	<ul style="list-style-type: none"> <li>The LTU monitoring program established in the MRP includes soil moisture sampling and analysis for nitrogen migrating past the root zone.</li> </ul>	<p>Separately, as required by the MRP</p>
<p>14. During summer and most of the fall, the irrigation system will be operated at agronomic rates to prevent percolation below the LTU.</p>	<ul style="list-style-type: none"> <li>PGE will ensure that the plan is implemented and effective.</li> <li>Each month the amount of water applied versus agronomic requirements of the crop will be established and recorded in acre feet/acre/month</li> </ul>	<p>Separately, as required by the MRP</p>
<p>15. The LTU operations will be operated to have not ponded water or ground water on the surface of the ground.</p>	<ul style="list-style-type: none"> <li>The LTU will be inspected daily during the start-up and optimization period. The inspection will look for ponded water or visible signs of ponding on ground surface. When optimization is complete and routine operation are established, the LTU will be inspected weekly.</li> <li>The PGE site representative will ensure compliance and record results of a site inspection in a permanent log book</li> </ul>	<p>Separately, as required by the MRP</p>
<p>16. The pumping of ground water will remain within the 656 acre feet/year allowed under the Mojave River Ground Water Adjudication.</p>	<ul style="list-style-type: none"> <li>The total volume of water extracted per year for the project as compared to the total adjudication of 656 acre ft/year</li> </ul>	<p>Information to be reported for the prior year in the first submitted monitoring report of the year.</p>

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**GENERAL PROVISIONS**  
**FOR MONITORING AND REPORTING**

**I. SAMPLING AND ANALYSIS**

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
  - i. Standard Methods for the Examination of Water and Wastewater
  - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

**2. OPERATIONAL REQUIREMENTS****a. Sample Results**

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

**b. Operational Log**

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

**3. REPORTING**

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.

b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship, by the proprietor; or

- iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
  - i. Name and telephone number of individual who can answer questions about the report.
  - ii. The Monitoring and Reporting Program Number.
  - iii. WDID Number.
- f. Modifications
  - This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.

x:PROVISIONS WDRS

file: general pro mrp

# Exhibit E

Table 1  
**FUTURE COST PREDICTION**  
 DVD-Hinkley

TASK	ESTIMATED COST	2011	2012	2013	2014	2015
<b>Current On-going Tasks</b>						
Residential Well Monitoring-semi annual, April/October	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Reporting, letters to residents and semi-annual reports to Waterboard	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
General Compliance (annual est. cost)	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
<b>Upcoming Tasks</b>						
Alternative Water Supply-Communal well	\$ 140,000	\$ 140,000				
Hydraulic Packer Testing	\$ 5,000	\$ 5,000				
Groundwater Investigation-well installation as proposed	\$ 40,000	\$ 40,000				
On-going sampling/reporting	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Changes per New CAO-additional wells	\$ 175,000	\$ 175,000				
<b>Possible Future Tasks</b>						
Expansion of Groundwater monitoring network	\$ 60,000	\$ 60,000				
Monitoring and reporting	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Expansion of permanent water supply to 4 additional homes	\$ 82,000	\$ 82,000.0	\$ 41,000	\$ 41,000	\$ 41,000	
Groundwater containment/irrigation Remedy System O&M (annual)	\$ 390,000	\$ 390,000			\$ 100,000	\$ 100,000
Monitoring and Reporting (annual)	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000

	2011	2012	2013	2014	2015
\$	549,000	\$ 170,000	\$ 571,000	\$ 281,000	\$ 240,000

Total Estimated Cost/year:

1 Gregory S. Mason, # 148997  
2 McCormick, Barstow, Sheppard,  
3 Wayte & Carruth LLP  
4 P.O. Box 28912  
5 5 River Park Place East  
6 Fresno, CA 93720-1501  
7 Telephone: (559) 433-1300  
8 Facsimile: (559) 433-2300  
9 Email: greg.mason@mccormickbarstow.com

(SPACE BELOW FOR FILING STAMP ONLY)

6 Attorneys for Petitioner  
7 PAUL RYKEN and ESTATE OF NICK VAN VLIET

8 BEFORE THE  
9 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

11 In the Matter of the Estate of Nick Van  
12 Vliet and Paul Ryken's Petition for Review  
13 of Action and Failure to Act by the  
14 California Regional Water Quality Control  
15 Board, Lahontan Region, in Issuing  
16 Cleanup and Abatement Order No. R6V-  
17 2008-0034A3.,

Case No.

**DECLARATION OF RONALD FREHNER  
IN SUPPORT OF PETITION FOR  
REVIEW, REQUEST FOR STAY, AND  
REQUEST FOR A HEARING**

[Cal. Water Code §13320, 13221;  
Cal. Code Reg. Title 23, §2053]

18 I, Ronald Frehner, do hereby declare:

19 1. I submit this declaration in Support of the Estate of Nick Van Vliet and Paul  
20 Ryken's (herein referred to collectively as "Desert View Dairy") Petition for Review, Request for  
21 Stay, and Request for a Hearing by the California State Water Resources Control Board (herein  
22 referred to as "State Board"). The basis for this Petition is derived from the action taken by the  
23 California Regional Water Quality Control Board for the Lahontan region (herein referred to as  
24 "Regional Board") within its February 24, 2011 Cleanup and Abatement Order No. R6V-2008-  
25 0034A3, which served to modify its Investigative Order No. R6V-2010-0005 (herein referred to  
26 collectively as "Amended Order").

27 2. I am familiar with the following information and base it upon my personal  
28 knowledge, except as to those matter upon which I base upon information and belief. If called

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1 upon as a witness in this matter, I could and would competently testify to the matters contained  
2 herein.

3 3. I have Bachelor and Masters Degrees in Civil Engineering from the University of  
4 Waterloo, Waterloo, Canada and I am Vice President at Conestoga-Rovers & Associates (herein  
5 "CRA").

6 4. Attached hereto as **Exhibit A** is a true and correct copy of my *curriculum vitae*  
7 which accurately states my educational and professional background. As it is discussed in greater  
8 detail in my *curriculum vitae*, I have 28 years of training and experience with environmental  
9 issues, including groundwater investigations.

10 5. CRA has been retained by Desert View Dairy as a consultant in regard to the  
11 groundwater issues that are the subject of the Regional Board's Cleanup and Abatement Orders  
12 and Investigative Orders, which are the basis for the above referenced Petition, Request for a  
13 Stay, and Request for a Hearing by the State Board.

14 6. After the 2008 Order was issued, Desert View Dairy complied with the Order by  
15 undertaking the following work: prepared and submitted a groundwater investigation work plan,  
16 performed a groundwater investigation which included sampling residential and monitoring wells,  
17 prepared and submitted a letter report on waste storage and application practices, prepared and  
18 submitted a data summary report on residential and monitoring well sampling, implemented long-  
19 term residential well monitoring, provided bottled water to Thompson Road residents,  
20 implemented and interim water supply (water truck deliveries), prepared and submitted a long-  
21 term water supply evaluation report, prepared and submitted a groundwater investigation work  
22 plan involving the installation of additional monitoring wells. All of these documents were  
23 submitted to the Water board between 2008 and 2010 and are on file.

24 7. Attached hereto and incorporated herein by reference as **Exhibit B** is a true and  
25 correct copy of the March 2011 report prepared by CRA, under my supervision, which evaluated  
26 the existing data of the groundwater related to Desert View Dairy. Within the report, my firm  
27 came to the conclusion that:

28 a. There are a number of sources of nitrate and total dissolved solids

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unrelated to the current Desert View Dairy Operations.

b. PG&E has contributed significantly to the elevated nitrate levels in the ground water.

Also attached to the report is a chart demonstrating the spike in Nitrate over the years since PG&E has begun performing its hexavalent chromium project. Notably, in 2005, just a year after the Regional Board permitted the project in the area, the chart shows a significant increase.

8. Finally, attached hereto and incorporated herein by reference as **Exhibit C** is a true and correct copy of a letter CRA sent to the Regional Board on behalf of Desert View Dairy on March 23, 2011 explaining why the long-term water replacement option that was preferred by the Regional Board was not feasible and why the stringent deadlines it had placed were difficult to comply with.

I declare under the penalty of perjury under the law of the State of California that the foregoing is true and correct. I executed this declaration on March 25 2011 in Ramsey County, Minnesota.

  
Ronald Frehner

# Exhibit A

# RONALD FREHNER, P.E.

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## EDUCATION

M.A.Sc. University of Waterloo, Civil Engineering, 1985  
B.A.Sc. University of Waterloo, Civil Engineering, 1982

## EMPLOYMENT

1992- Present Principal/Vice President  
Conestoga-Rovers & Associates  
1987-92 Associate, Conestoga-Rovers & Associates  
1982-87 Project Engineer, Conestoga-Rovers & Associates

## AFFILIATIONS

Professional Engineer - Georgia, Idaho, Illinois, Kansas, Minnesota, New Jersey, North Dakota, Ohio, Oklahoma, South Dakota, Wisconsin

## PROFILE OF PROFESSIONAL ACTIVITIES

- Decommissioning/Demolition of former manufacturing building. Voluntary site remediation of PCB and BTEX, Chicago Heights, Illinois
- Decommissioning/Demolition of former manufacturing building. Voluntary site remediation of PCB and VOCs, Pottstown, Pennsylvania
- Brownfield development of soccer fields on former landfill, Glenview, Illinois
- Brownfield development of soccer fields on former landfill, Woodstock, Illinois
- Response to Urea Ammonium Nitrate spill in Ohio for Cargill. Monitoring of soil and surface water. Develop cleanup plan. Liaison with OEPA
- Response to Anhydrous Ammonia spill in Iowa for Koch Pipeline. Monitoring soil and surface water. Assist in cleanup of soil and surface water. Liaison with Iowa DNR
- Design and implementation of drum removal and wetland remediation for PCB and lead contamination in Detroit area
- Evaluation of remediation and brownfield development of farm railyard in Minneapolis for Jefferson Bus Lines
- Phase II Investigation of former rail shop in Joliet, Illinois
- RD/RA for soil and groundwater contamination by VOCs at former Thiokol facility in Rockaway Borough, New Jersey
- RD/RA for soil and groundwater contamination by VOCs at former Thiokol facility in Denville, New Jersey
- Natural attenuation study of groundwater at 3M facility, Woodbury, Minnesota
- Landfill cap construction at Fultz Landfill Superfund Site, Byesville, Ohio

- Landfill cap design and construction oversight in Joliet, Illinois
- Soil and groundwater evaluation of petroleum contamination at industrial facility, York, Pennsylvania
- Soil and groundwater evaluation of nitrate contamination at former fertilizer plant, Maysville, Kentucky
- Landfill cap design in Necedah, Wisconsin
- Evaluation of closure and post-closure costs at 18 landfills throughout the United States
- Site investigation, cap design, and construction oversight, Brockman Landfill, Ottawa, Illinois
- Site evaluation and peer review of remediation for cleanup of petroleum contaminated soil, Roseville, Minnesota
- Site evaluation for jet fuel spill, Lakeland, Minnesota
- Site evaluation and development of remedial plan for UST sites in Indiana and Illinois
- Site Assessment and Evaluation of remedial alternatives for VOC groundwater contamination in Skokie, Illinois
- Site Assessment and review of remedial alternatives for former USTs and industrial facility in Chicago, Illinois
- Peer review of steam injection with SVE recovery of diesel contaminated soil and groundwater, Minneapolis, Minnesota
- Site investigation for VOC remediation and operating industrial facility in Pennsylvania
- Site assessment of VOC contamination and peer review of SVE remediation at former industrial facility, Chicago, Illinois
- Predesign Investigation, Remedial Design for landfill cap and groundwater remediation at the Woodstock Landfill Superfund Site, and Record of Decision Amendment, Woodstock, Illinois
- Conduct Site Investigation, evaluation of remedial alternatives at former gasoline station, and secured No Further Action letter from MPCA, Golden Valley, Minnesota
- Preparation of Feasibility Study for impoundment and groundwater remediation at 180-acre former petroleum terminal in Heath, Ohio
- Investigation and RD/RA at former DDT disposal area; investigation of lead and arsenic discharge area in Selma, North Carolina
- Investigation of former creosote wood treatment site in Indianapolis, Indiana
- Site Investigation, evaluation of remedial alternatives for VOC contaminated soil and groundwater in Hopkins, Minnesota
- Site Investigation, evaluation of remedial alternatives for VOC contaminated soil and groundwater, and secured a No Further Action letter in Eden Prairie, Minnesota
- RD/RA for emergency removal of PCB, lead and dioxin contaminated soils at scrap yard in Elgin, Illinois
- Technical Trustee for Potential Responsible Party (PRP) Group during RD/RA of VOC groundwater remedy in East Bethel, Minnesota
- Site Investigation and RD/RA for PCB and diesel fuel contamination at former fill disposal area in St. Paul, Minnesota
- Site Investigation, remedial alternative analysis for VOC groundwater contamination at closed landfill and landfill closure in River Falls, Wisconsin

- Site Investigation and evaluation of remedial alternatives for VOCs in soil and groundwater, 3M, Woodbury, Minnesota
- Site Investigation of pentachlorophenol and CCA contamination at wood treating site, Bell Pole, Carseland, Alberta
- Technical assistance to PRP group during good faith negotiations, Fultz Landfill Superfund Site, Byesville, Ohio
- Technical assistance to PRP group during good faith negotiations and RD/RA for PCB, PAH, and lead contamination at scrap yard, South Andover Superfund Site, Andover, Minnesota
- Site Investigation of creosote contamination at former wood treating site, Bell Pole, Lumby, British Columbia
- Site Investigation, Feasibility Study and Remedial Plan preparation for PCB contamination at a scrap yard, Peoria, Illinois
- Peer review of RI/FS and RD/RA, American Chemical Service Site, Griffith, Indiana
- Technical Review of Site Conditions at former rocket test site in Morris County, New Jersey
- Technical Review of USEPA ROD and Proposed Plan, Rockaway Borough, New Jersey
- Technical Representation for Uniroyal on Elmira Aquifer remediation and alternative water supply negotiations, Elmira, Ontario
- Feasibility Study and Remedial Plan for remediation of 26,000 C.Y. of buried wastes containing VOCs, chlorophenols, pesticides, herbicides and dioxins at Uniroyal Chemical, Elmira, Ontario
- Project management of groundwater extraction/treatment using ultraviolet oxidation/carbon adsorption at Uniroyal Chemical, Elmira, Ontario
- Site Investigation of gasoline contamination for Ultramar Canada, Port Stanley, Ontario
- Peer Review of Groundwater Remediation program for trichloroethylene, Scottsdale Water Supply, Scottsdale, Arizona
- Site Investigation and RD/RA for pentachlorophenol soil and groundwater contamination, Bell Pole, Lumby, British Columbia
- Technical representation in consent order negotiations, Feasibility Study for the Hassayampa Superfund site in Buckeye, Arizona
- Design and Implementation of RI/FS and Ultraviolet Oxidation Treatability Study at Jadco-Hughes Superfund site in Gaston County, North Carolina
- Site Investigation, RAP and expert testimony at criminal investigation in Scott County, Minnesota
- Construction administration of water treatment plant in Hanover, Ontario
- Construction Administration and performance evaluation of bioremediation of oil tar facility in Port Stanley, Ontario
- Site investigation of pentachlorophenol at a wood treating site in Siren, Wisconsin
- Site investigation and conceptual design of groundwater recovery and treatment system of creosote at a wood treating site in Bangor, Wisconsin
- Preparation of hazardous waste management report (Part B permit application) for Schenectady Chemicals and FMC Corporation in New York State
- Design and Implementation of Groundwater Investigation and IRMs for groundwater recovery and treatment for VOC contaminated groundwater at Synertek facilities in Santa Clara, California
- Design and Implementation of RI/FS and IRM for creosote and pentachlorophenol groundwater contamination in New Brighton, Minnesota

- Design of Remedial Facility Investigation (RFI) in Rochester, Minnesota
- Design and Implementation of RI at a landfill in Burnsville, Minnesota
- Design and Implementation of RI/FS, IRM and RD/RA for vinyl chloride and VOC groundwater contamination, representation at public meetings, Highway 96 Dump, White Bear Township, Minnesota
- Design and Implementation of Scrap Removal Program, RI/FS and RD/RA for PCB, lead, and dioxin contaminated soil, Agate Lake Scrap Yard, Brainerd, Minnesota
- Design and Implementation of RI/FS, IRM, RAP, representation at public meetings and post closure permit application for remediation of PCB and lead contamination at the Union Compressed site in Duluth, Minnesota
- Construction Administration of the Boundary Groundwater Recovery System TCAAP, Minnesota
- Design and Implementation of a Hydrogeologic Investigation over an 18 square mile area, preparation of a Groundwater Remedial Program Plan for TCAAP, Minnesota
- Design and Implementation of RI/FS and RAP for remediation for sewer contamination, TCAAP, Minnesota
- Design and Implementation of RI/FS, RAP and NPDES monitoring for Volatile Organic Compound (VOC) remediation, TCAAP, Minnesota
- Design and Implementation of RI/FS, and Remedial Action Plan (RAP) for PCB remediation at the Twin Cities Army Ammunition Plant (TCAAP), Minnesota
- Participation in Consent Order negotiations, Design and Implementation of Remedial Investigation (RI), preparation of Feasibility Study (FS), conceptual design of interim remedial measures (IRMs), representation at public meetings, implementation of remedial design/remedial action (RD/RA) and administration of Interim Remedial Measures for Wauconda Landfill Superfund site, Wauconda, Illinois
- Pre-purchase Environmental Audit of eyeglass manufacturing facility in Minneapolis, Minnesota
- Environmental Audit of resin, varnish and paint manufacturing facility in Schenectady, New York
- Site Assessment and Operating Plan for a Sanitary Landfill in Lucan, Ontario
- Project Management of water works program including 1.5 MGD water treatment plant and watermain installations for Southampton, Ontario

#### **EXPERT WITNESS EXPERIENCE**

- Expert witness on soil and groundwater contamination by arsenic and other chemicals at former herbicide blending facility, North Kansas City, Missouri
- Expert witness on solid waste landfill tipping fee costs, Minnesota
- Expert witness on remedy selection at pipeline terminal for Williams Pipeline, Des Moines, Iowa
- Expert witness on consistency with National Contingency Plan for a Response Action in Louisiana
- Expert witness testimony on methane migration at Old State Street Dump for Port Authority, St. Paul, Minnesota
- Expert Testimony for PCB and lead contamination remediation in Mahtomedi, Minnesota
- 2001 - 2002 expert witness on PCB contamination issues at former Westinghouse Transformer Repair Shop in Minneapolis
- Expert witness on compliance with the National Contingency Plan, Louisiana

- Expert witness on landfill gas migration, White Bear Township, Minnesota
- Expert witness on sources of PCE contamination, Sacramento, California
- Expert witness on cost allocation, BJ Carney site, Minnesota

**LIST OF PUBLICATIONS/PRESENTATIONS**

- Frehner, R. 1995. Technical Considerations Under Superfund, Clean Water Act and Toxic Substances Control Act. Presented at the Environmental Regulation Course by Executive Enterprises, Minneapolis, Minnesota. June 1995 (and on several other occasions in 1993 and 1994 for Superfund)
- Guy, B.T., Watson, T.A. and Frehner, R. 1993. Site Remediation at a Wood Preservation Facility in Central British Columbia, Canada. Paper presented at Second USA/CIS Joint Conference on Environmental Hydrology and Hydrogeology, Washington, D.C. May 1993
- Frehner, R. 1992. Wastewater Treatment/Effluent Options Under the Clean Water Act. Presented at Environmental Regulation Course by Executive Enterprises, Minneapolis, Minnesota. July 1992
- Warith, Mostafa A., Frehner, Ronald and Yong, Raymond N. 1990. Bioremediation of Organic Contaminated Soil at a Former Oil Gasification Site. Paper submitted to the Canadian Geotechnical Journal. January 1990
- Frehner, Ronald. 1989. Hazardous Substances in Sanitary Landfills. Sanitary Landfill Leachate and Gas Management Seminar, University of Wisconsin. December 4-7, 1989

## Exhibit B

**TECHNICAL EVALUATION OF EXISTING DATA  
DESERT VIEW DAIRY  
MARCH 2011**

Conestoga-Rovers and Associates (CRA) has reviewed existing data that has been obtained through publicly available records that relate to the Desert View Dairy (DVD)<sup>1</sup> property and dairy operation and the regional groundwater remediation being completed by Pacific Gas and Electric (PG&E). Based on our review we have come to two conclusions:

1. There are a number of sources of nitrate and total dissolved solids (TDS) unrelated to the current DVD operations.
2. The Land Treatment Units (LTU) operated by PG&E have contributed significantly to elevated nitrate levels in groundwater.

Each of these items is discussed in detail below.

**THERE ARE A NUMBER OF SOURCES OF NITRATE AND TDS UNRELATED TO THE CURRENT DVD OPERATIONS**

The entire area surrounding DVD has been used extensively for agricultural purposes since at least 1952. There were at least four other livestock operations up-gradient of DVD along with agricultural cropland and irrigation ponds. These locations are shown on the aerial photos included as Attachment 1. A summary of these aerials is discussed below:

**HISTORICAL AERIAL PHOTO REVIEW**

CRA obtained copies of aerial photos from the 1950's to present (specifically 1952, 1970, 1984, 1994 and 2005) that extended 0.5 miles north and south and 1 mile east and west from the Site. These aerial photos were obtained through Historical Information Gatherers, Inc. The purpose of this aerial photo review was to determine what other sources of nitrates may have contributed to the groundwater impact currently being seen in the area. In general, the entire area has been used for agricultural purposes at least since 1952. In addition to the large number of acres fertilized and irrigated for crop production, several livestock/dairy operations are noted throughout this time period. Each aerial photo is summarized below:

**1952 Aerial Photo**

This aerial shows that the entire area was extensively used as cropland. There are numerous ponds (presumably irrigation ponds) across the area. There also appears to be small livestock operations to the south and southwest of the site with the largest livestock operation located where the Nelson Dairy is currently located. This cropland soil would have required extensive

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<sup>1</sup> The term DVD in the context of this technical evaluation refers to the 27-acre irrigation field which is part of the current Dairy operation.

irrigation and fertilization in order to support the crops being grown. It should be noted that irrigation is occurring directly up-gradient of the Thompson Road properties.

#### 1970 Aerial Photo

This aerial photo shows a smaller area of agricultural cropland than before. The majority of the fields are centered around the site. There are still numerous ponds visible and the Nelson Dairy area has expanded in size and a storage pond is evident. There appear to be two livestock operations west of Nelson Dairy approximately 1/4 and 1/2 mile to the west.

#### 1984 Aerial Photo

This aerial photo shows the site developed as a dairy operation with heavy irrigation and cropland surrounding it. The western field does not appear to be cropland and appears stained or wet. The Gorman irrigation pivot is evident along with heavy irrigation in the southern part of that field. The area south of the Site was also heavily irrigated and was presumed to be part of Nelson Dairy which tripled in size compared to the 1970's. The livestock operation 1/4 mile west of Nelson Dairy remained about the same in 1984 while the operation 1/2 mile west (along Serra Road) has doubled in size with what appears to be a storage pond and solid manure stockpiles (this is the Dairy Mr. Ryken stated was owned and operate by the Lyerely's). Another livestock/dairy operation is evident along Hinkley Road and Highway 58 which also has a storage pond and what appears to be solid manure piles. This operation would be up-gradient of the western residential wells. There also appears to be a small operation with irrigation at the site of one of the residential wells along Thompson Road (22875 Thompson Road). Further west on Thompson Road was another heavily irrigated area that was presumed to be cropland but is located near 22726 Thompson Road. Both of these residential wells had higher elevations of nitrates than the surrounding neighbors as measure in October 2008.

#### 1994 Aerial Photo

The 1994 aerial photo showed a continued decrease in agricultural cropland as well as irrigation. The dairies to the west were present but the land around those dairies did not appear to be heavily irrigated. The area along Thompson Road continued to be heavily irrigated. It should be noted that the 1994 photo is black and white; hence, the contrast between active agricultural operations (irrigation) and inactive was difficult to determine.

#### 2005 Aerial Photo

The 2005 aerial photo showed a continued decrease in agricultural cropland as well as irrigation. The only land that appeared to be in production are the fields that were irrigated as part of the chromium groundwater treatment which are immediately up-gradient of Desert View Dairy. The dairies to the west were present but the land around those dairies does not appear to be irrigated. There appeared to be a large stockpile of manure immediately south of Nelson Dairy, which was there for several years according to Mr. Ryken. The area along Thompson Road continues to be heavily irrigated as well.

Another source of nitrates is the western field on the DVD site. The prior operator of the Site (Flameling Dairy) used the western field as a storage site for both solid and liquid dairy waste since 1981. This area is considered a significant source of nitrates because Mr. Ryken has stated

that it was heavily impacted by manure prior to DVD operations in 1994. This field has been used as a land application area for PG&E's groundwater remedy since 2004.

In addition to the aerial photo review, CRA examined nitrate and TDS data in groundwater which was provided by CH2MHill. Figure 1 shows the maximum TDS concentrations, which exceeded the State TDS standard of 1,000 mg/L (upper secondary maximum contaminant level). The general groundwater flow pattern is northerly with minor influences due to pumping at irrigation and water supply wells. This means that areas to the south of DVD are upgradient of DVD. Wells, both up-gradient and down-gradient of DVD, are over the secondary drinking water standard for TDS. Figure 2 shows the nitrate exceedences from the same data base. There are a significant number of wells up-gradient of DVD that are over the State nitrate standard of 45 mg/l (maximum contaminant level).

The fact that nitrate and TDS exceedences in groundwater are present upgradient (south) of DVD shows that contaminant sources, other than DVD, exist and are impacting groundwater.

#### **PG&E'S LAND TREATMENT UNITS (LTU) HAVE CONTRIBUTED SIGNIFICANTLY TO NITRATES IN GROUNDWATER**

The groundwater discharge being performed by PG&E on land located south and west of DVD involves the application of groundwater which is part of the PG&E chromium remediation project. There are currently several active extraction wells that pump an average of 400,000 gallons per day<sup>2</sup>, which is discharged to an 80-acre parcel of land. This extraction/discharge system has been in operation since August 2004 and the historical concentrations of nitrate in the discharged water range from 9.15 to 12.9 mg/L nitrate as N. If these values are converted to nitrate as nitrate, the concentration ranges from 40.5 to 57.1 mg/L. Applying the highest concentration of 57.1 mg/L and the estimated volume of water being discharged (400,000 gallons/day), PG&E is applying 2.4 pounds of nitrate/acre/day (as of 2010).

In contrast, DVD discharges much less nitrate compared to PG&E. The washwater from DVD is run through a solids separator, the solids are transported off-site for use as fertilizer by other agricultural operations. The liquids are contained in concrete tanks for land application as irrigation water. The water is applied daily to approximately 27 acres of cropland through a center pivot spray gun. DVD estimates that approximately 45,000 gallons of water are currently being applied on a daily basis to this field. The sampling data provided by DVD show a nitrate concentration in the range of ND to 4 mg/L nitrate as N. If these values are converted to nitrate as NO<sub>3</sub>, the concentration range is ND to 17.7 mg/L. Assuming the highest concentration (17.7 mg/L nitrate as NO<sub>3</sub>) and 45,000 gallons per day discharged to the 27-acre irrigation field, DVD is applying approximately 0.25 pounds of nitrate/acre/day (as of 2010).

Given the above, PG&E and DVD discharges/show that the PG&E remedy discharges approximately ten times the mass of nitrate per acre compared to current DVD operations. The continuous pumping and discharge may have also affected the nitrate concentrations in the

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<sup>2</sup> CH2MHill 2007 Annual Monitoring Report

area. Not only is the PG&E discharge more significant than the DVD discharge, the PG&E discharge is applied to the western field, which received heavy manure application prior to DVD.

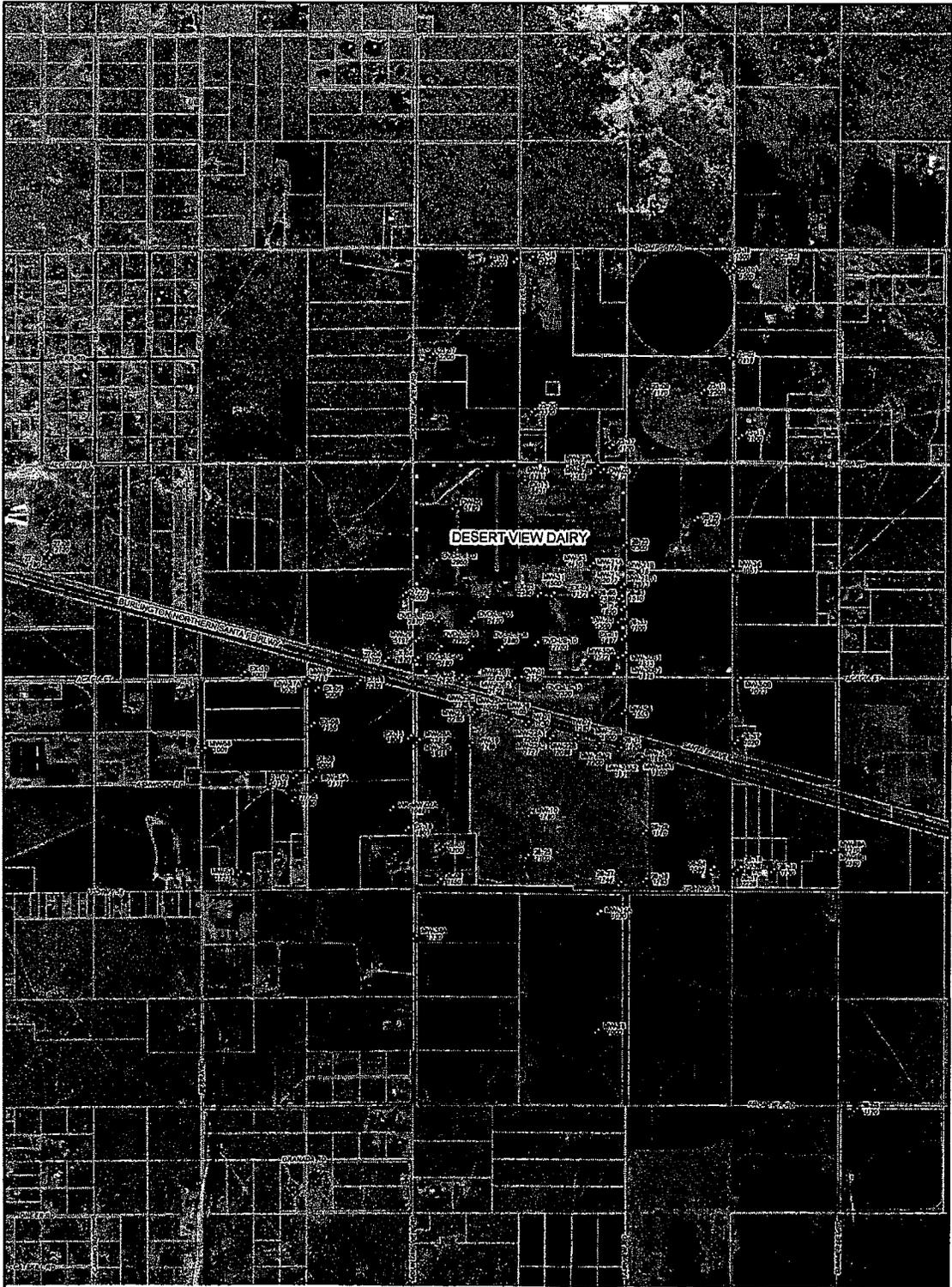
CRA has also concluded that the PG&E discharge of water to the LTU has flushed nitrate out of the soil and into the groundwater based on the following evaluation.

In the 2005 Annual Monitoring Report dated July, 2005 it was stated that the percolation of discharged groundwater should not reach the water table aquifer for several years. However, CRA was unable to locate any data to support this statement. CRA plotted the nitrate data provided for on-site monitoring wells DW-01, DW-02 and DW-03 and the nitrate data for lysimeters DVD-LS-02, 03, 04, 05, 10 and 15. These graphs are presented in Attachment 2. In both cases the nitrate concentrations increased shortly after PG&E began discharging water to the LTU (August 2004). The lysimeter data peaked then decreased (as you would expect after the initial flush of the unsaturated soil) and the monitoring wells (DW-01, 02 and 03) continued to increase. This increase was noticed in the lysimeters approximately 12 months after discharge began then in the monitoring wells approximately 16 to 24 months after discharge began. These data suggest a much faster infiltration rate than originally predicted and could be much less than the several year estimate given by PG&E.

### CONCLUSIONS

Given the above, CRA has come to two conclusions:

1. There are a number of sources of nitrate and total dissolved solids (TDS) unrelated to the current DVD operations.
2. The Land Treatment Units (LTU) operated by PG&E have contributed significantly to elevated nitrate levels in groundwater.



SOURCE: USDA - NATIONAL AGRICULTURE IMAGERY PROGRAM

**LEGEND**

◆ WELL WITH DRINKING WATER STANDARD EXCEEDANCE (1000 mg/L)

1034 MAXIMUM TOTAL DISSOLVED SOLIDS CONCENTRATION (mg/L)

▭ DESERT VIEW DAIRY

▭ COUNTY PARCELS

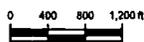
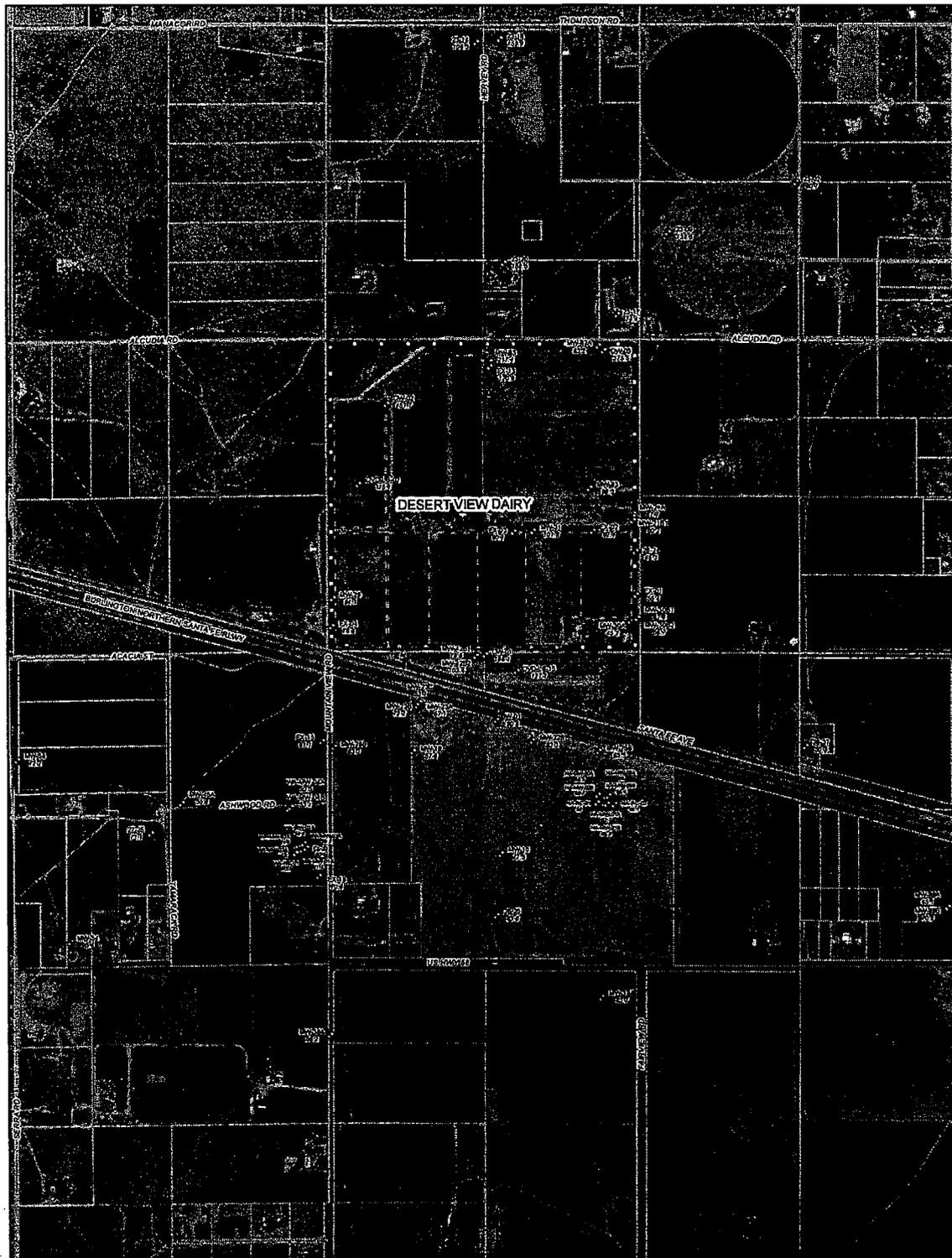


figure 1

**TOTAL DISSOLVED SOLIDS (TDS) DRINKING WATER STANDARD EXCEEDANCES**  
**DESERT VIEW DAIRY**  
*Hinkley, California*



SOURCE: USDA - NATIONAL AGRICULTURE IMAGERY PROGRAM

**LEGEND**

- WELL WITH DRINKING WATER STANDARD EXCEEDANCE (45 mg/L)
- 44.4 MAXIMUM NITRATE-NO<sub>3</sub> CONCENTRATION (mg/L)
- ▭ DESERT VIEW DAIRY
- PLOT BOUNDARY
- ▭ COUNTY PARCELS

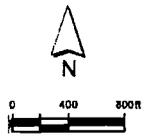


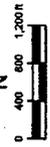
figure 2  
 NITRATE-NO<sub>3</sub> DRINKING WATER  
 STANDARD EXCEEDANCES  
 DESERT VIEW DAIRY  
 Hinkley, California

ATTACHMENT 1  
AERIAL PHOTOGRAPHS

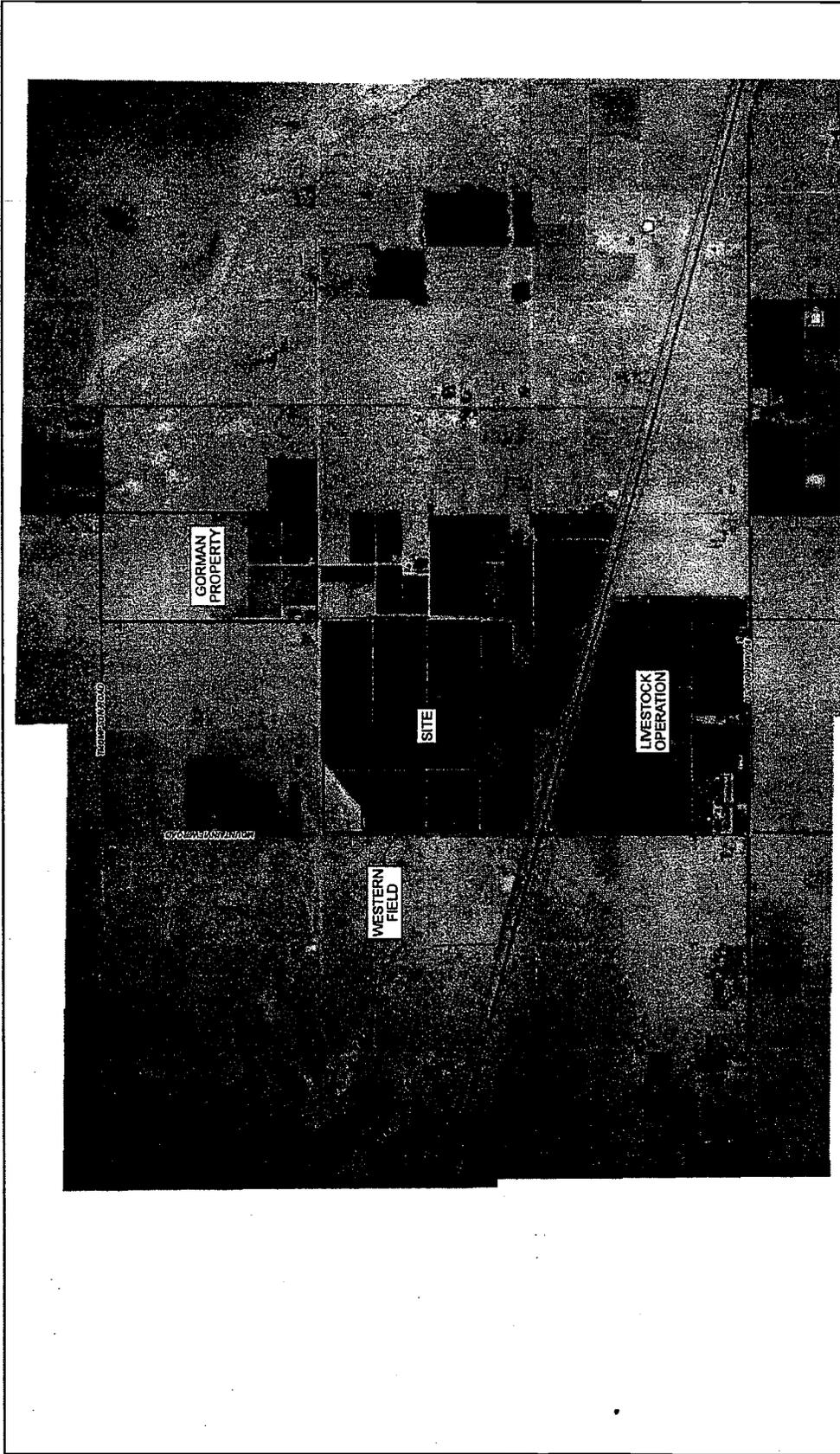


NOTE: DARK AREAS ARE IRRIGATED LAND

1952 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



06-0041-06(MISC02)GIS-SP005 JUL 21/2010



NOTE: DARK AREAS ARE IRRIGATED LAND



1970 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



654041-06(MISC002)6IS-SP004 JUL 21/2010



NOTE: DARK AREAS ARE IRRIGATED LAND



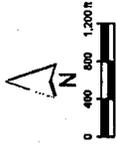
1984 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



05-4041-06(MISC002)GIS-SP003 JUL 21/2010



NOTE: DARK AREAS ARE IRRIGATED LAND



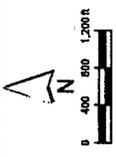
1994 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



654041-06(MISC002)GIS-SP002 JUL 21/2010



2005 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



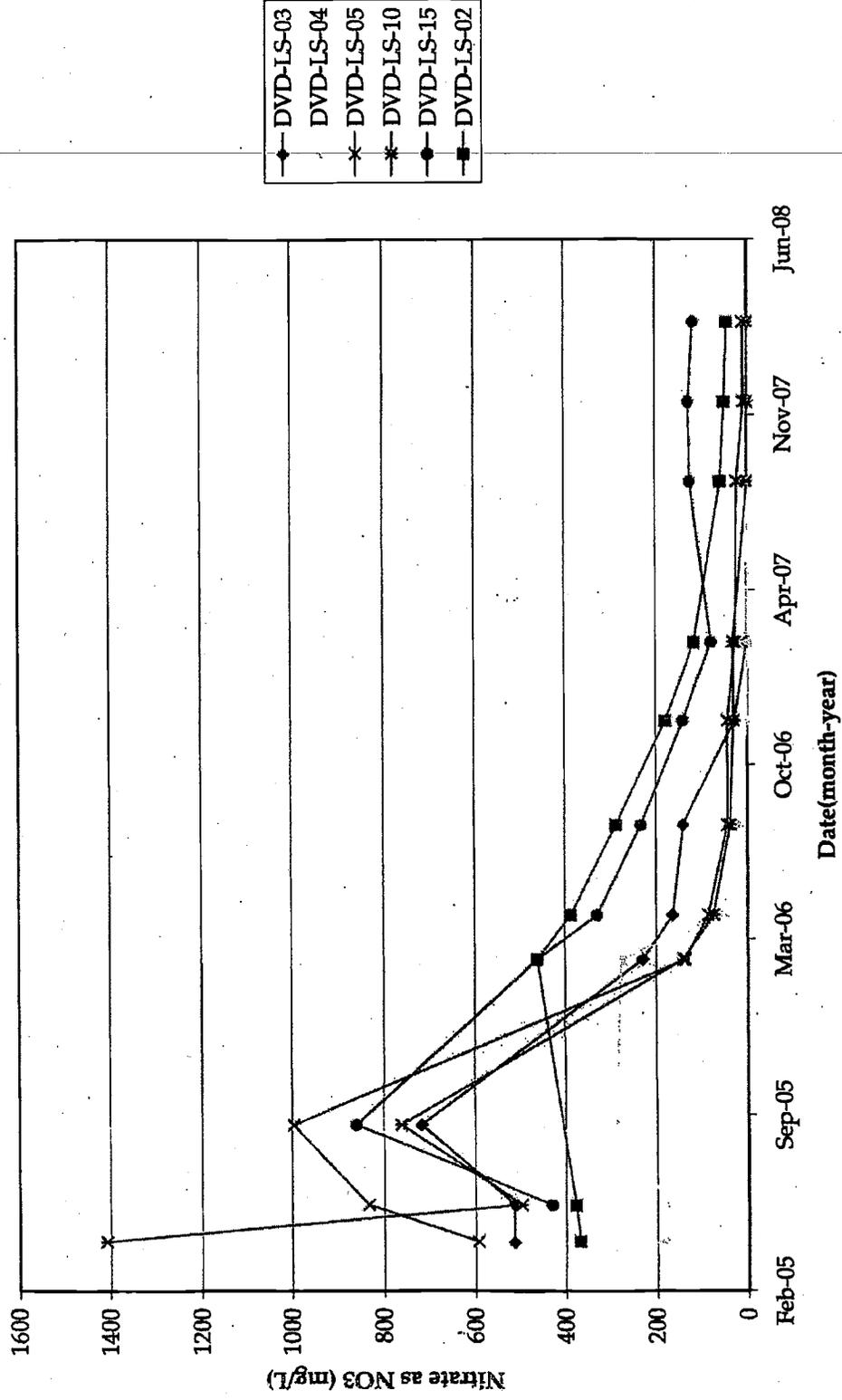
NOTE: DARK AREAS ARE IRRIGATED LAND



05-4041-06(MISC)02GIS-SP001 JUL 21/2010

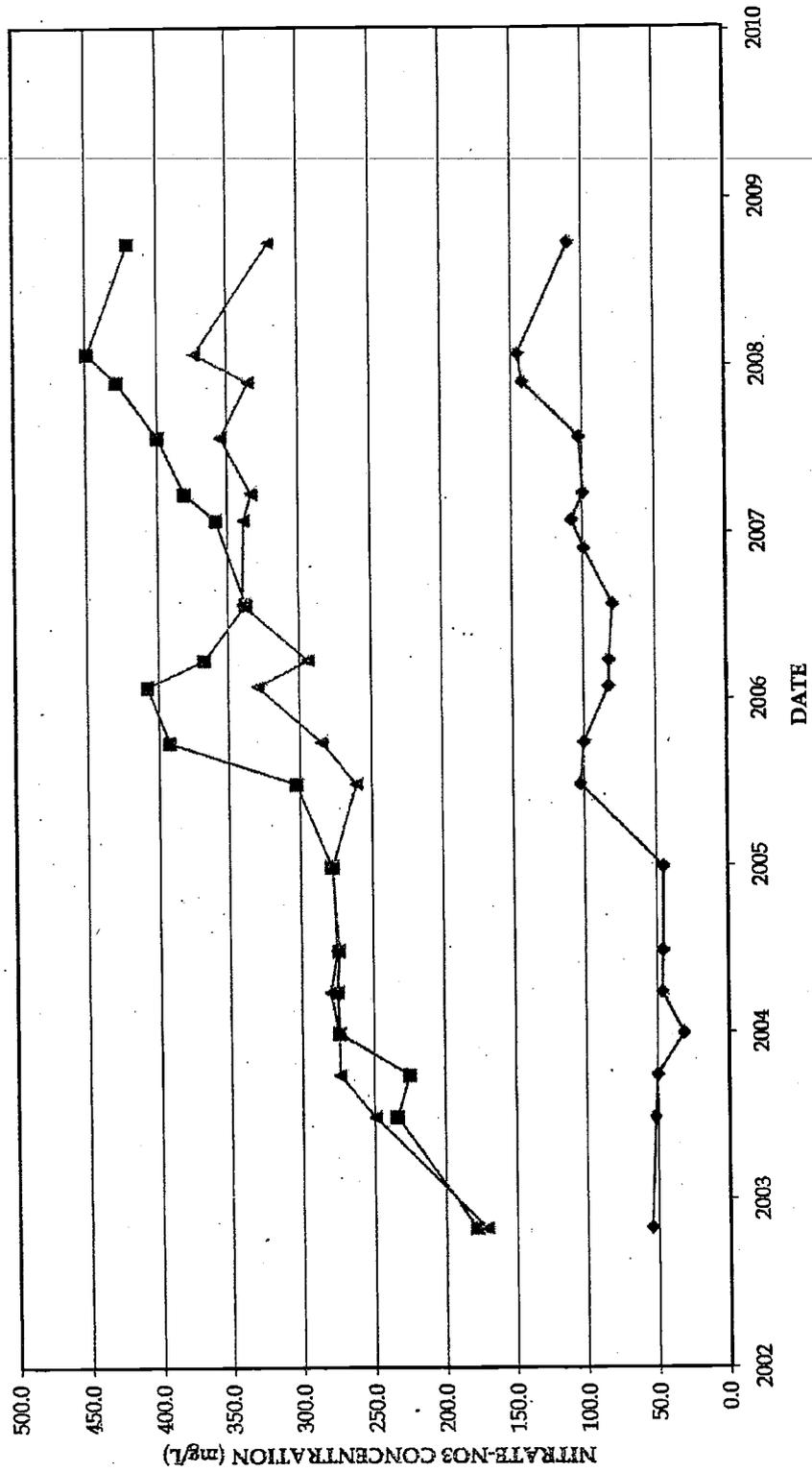
ATTACHMENT 2  
LYSIMETER AND MONITORING WELL GRAPHS

# Lysimeter Samples



NITRATE-NO3 CONCENTRATIONS  
 DESERT VIEW DAIRY  
 HINKLEY, CALIFORNIA

◆ DW-01    ■ DW-02    ▲ DW-03



**EXHIBIT C**



**CONESTOGA-ROVERS  
& ASSOCIATES**

1801 Old Highway 8 Northwest, Suite 114, St. Paul, Minnesota 55112  
Telephone: 651-639-0913 Facsimile: 651-639-0923  
www.CRAworld.com

March 23, 2011

Reference No. 054041-06

Ms. Lisa Dernbach, PG, CHG, CEG  
California Regional Water Quality Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150

Dear Ms. Dernbach:

Re: Amended Cleanup and Abatement Order (CAO) No. R6V-2008-0034A3  
Long-Term Replacement Water Supply Plan  
Desert View Dairy - Hinkley, California

This letter is written by Conestoga-Rovers & Associates (CRA) on behalf of Desert View Dairy (DVD) and provides written notification to the Water Board that DVD could not reach an agreement with Pacific Gas and Electric Company (PG&E) on Option 2b (provision of water from the PG&E forcemain) by the March 23, 2011 deadline.

Immediately upon receipt of the Amended CAO, DVD began evaluating the long-term water supply options in the context of the CAO priorities. CRA met on site with DVD during the week of March 14, 2011 to assist DVD with the evaluation of alternatives as well as an evaluation of groundwater monitoring requirements (a separate requirement of the CAO). Written Communication between DVD and PG&E on the feasibility of Option 2b led to a conference call on March 21, 2011 which was attended by Paul Ryken (DVD), Greg Mason and Chris Hall (McCormick Barstow), Steve Mockenhaupt and Ron Frehner (CRA), Bob Doss (PG&E), Drew Page (JDP Law).

The March 21, 2011 conference call identified that the estimated water need for the four Thompson Road residents is approximately 10 gallons per minute (gpm) per resident for a total of 40 gpm. Water demand could be as low as 10 gpm if the existing residential water tanks continue to be used in order to buffer demand. PG&E stated that the existing PG&E forcemain, which is currently used for remediation purposes (including freshwater injection), may not have the physical capacity to serve the needs of the Thompson Road residents. In addition, the well supplying the forcemain is fully utilized and would not have excess capacity to serve the residents. Although it may have been possible to reach an agreement in the future, the tight deadline of March 23, 2011 requires DVD to notify the Water Board that Option 2b cannot move forward and that the feasibility of Option 2a (a communal water supply well on Thompson Road) will now be pursued.

Upon review of the CAO it was not clear what the specific issues were that prompted the Water Board to completely eliminate Option 4 (continued water supply using the existing water delivery). Page 2 states that: "interim replacement water provided by the Discharger does not

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**CONESTOGA-ROVERS  
& ASSOCIATES**

March 23, 2011

Reference No. 054041-06

-2-

meet all of their domestic needs". However the issues are not articulated. It is our understanding that the past issues, such as frozen piping and insufficient hot water, have been resolved. It would be appreciated if the Water Board could identify if there are any new issues being raised, so that DVD can address them.

Looking forward to the feasibility of Option 2a, we note that PG&E has a monitoring well nest (MW85) in the immediate vicinity of the proposed communal well. There are also two additional wells up-gradient (MW83 and MW89). Based on the data from these wells in both the upper sand and lower sand there will likely be a need for treatment that may be part of the Option 2a evaluation.

Please let us know if you require any additional information or have any questions.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Steve Mockenhaupt  
Project Manager

SM/ma/21

cc: Mike Plaziak, Lahontan Regional Water Quality Board  
Lauri Kemper, Assistant Executive Officer, Water Board  
Paul Ryken, DVD (electronic)  
Greg Mason, McCormick Barstow (electronic)  
Robert Doss, PG&E (electronic)  
Drew Page, Law Offices of J. Drew Page (electronic)

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Gregory S. Mason, # 148997  
McCormick, Barstow, Sheppard,  
Wayte & Carruth LLP  
P.O. Box 28912  
5 River Park Place East  
Fresno, CA 93720-1501

(SPACE BELOW FOR FILING STAMP ONLY)

Telephone: (559) 433-1300  
Facsimile: (559) 433-2300  
Email: greg.mason@mccormickbarstow.com

Attorneys for Petitioner  
PAUL RYKEN and ESTATE OF NICK VAN VLIET

BEFORE THE  
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Estate of Nick Van Vliet and Paul Ryken's Petition for Review of Action and Failure to Act by the California Regional Water Quality Control Board, Lahontan Region, in Issuing Cleanup and Abatement Order No. R6V-2008-0034A3.,

Case No.  
**DECLARATION OF STEPHEN MOCKENHAUPT IN SUPPORT OF PETITION FOR REVIEW, REQUEST FOR STAY, AND REQUEST FOR A HEARING**  
[Cal. Water Code §13320, 13221;  
Cal. Code. Reg. Title 23, §2053]

I, Stephen Mockenhaupt, do hereby declare:

1. I submit this declaration in Support of the Estate of Nick Van Vliet and Paul Ryken's (herein referred to collectively as "Desert View Dairy") Petition for Review, Request for Stay, and Request for a Hearing by the California State Water Resources Control Board (herein referred to as "State Board"). The basis for this Petition is derived from the action taken by the California Regional Water Quality Control Board for the Lahontan region (herein referred to as "Regional Board") within its February 24, 2011 Cleanup and Abatement Order No. R6V-2008-0034A3, which served to modify its Investigative Order No. R6V-2010-0005 (herein referred to collectively as "Amended Order").

2. I am familiar with the following information and base it upon my personal knowledge, except as to those matter upon which I base upon information and belief. If called

18147/00000-1709133.v1

1 upon as a witness in this matter, I could and would competently testify to the matters contained  
2 herein.

3 3. I have a Bachelor of Science in Biology and Earth Sciences from the University of  
4 Wisconsin-River Falls and I am currently the Senior Project Manager at Conestoga-Rovers &  
5 Associates (herein "CRA").

6 4. Attached hereto as **Exhibit A** is a true and correct copy of my *curriculum vitae*  
7 which accurately states my educational and professional background. As it is discussed in greater  
8 detail in my *curriculum vitae*, I have 26 years of training and experience with environmental  
9 issues, including groundwater investigations.

10 5. CRA has been retained by Desert View Dairy as a consultant in regard to the  
11 groundwater issues that are the subject of the Regional Board's Cleanup and Abatement Orders  
12 and Investigative Orders, which are the basis for the above referenced Petition, Request for a  
13 Stay, and Request for a Hearing by the State Board.

14 6. After the 2008 Order was issued, Desert View Dairy complied with the Order by  
15 undertaking the following work: prepared and submitted a groundwater investigation work plan,  
16 performed a groundwater investigation which included sampling residential and monitoring wells,  
17 prepared and submitted a letter report on waste storage and application practices, prepared and  
18 submitted a data summary report on residential and monitoring well sampling, implemented long-  
19 term residential well monitoring, provided bottled water to Thompson Road residents,  
20 implemented and interim water supply (water truck deliveries), prepared and submitted a long-  
21 term water supply evaluation report, prepared and submitted a groundwater investigation work  
22 plan involving the installation of additional monitoring wells. All of these documents were  
23 submitted to the Water board between 2008 and 2010 and are on file.

24 7. Attached hereto and incorporated herein by reference as **Exhibit B** is a true and  
25 correct copy of the March 2011 report prepared by CRA, under my supervision, which evaluated  
26 the existing data of the groundwater related to Desert View Dairy. Within the report, my firm  
27 came to the conclusion that:

28 a. There are a number of sources of nitrate and total dissolved solids

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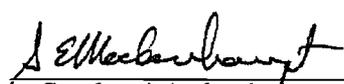
unrelated to the current Desert View Dairy Operations.

b. PG&E has contributed significantly to the elevated nitrate levels in the ground water.

Also attached to the report is a chart demonstrating the spike in Nitrate over the years since PG&E has begun performing its hexavalent chromium project. Notably, in 2005, just a year after the Regional Board permitted the project in the area, the chart shows a significant increase.

8. Finally, attached hereto and incorporated herein by reference as Exhibit C is a true and correct copy of a letter CRA sent to the Regional Board on behalf of Desert View Dairy on March 23, 2011 explaining why the long-term water replacement option that was preferred by the Regional Board was not feasible and why the stringent deadlines it had placed were difficult to comply with.

I declare under the penalty of perjury under the law of the State of California that the foregoing is true and correct. I executed this declaration on March 25, 2011 in Ramsey County, Minnesota.

  
Stephen Mockenhaupt

# Exhibit A

## STEPHEN E. MOCKENHAUPT, B.S.

---

### EDUCATION

B.S. Biology and Earth Science, University of Wisconsin-River Falls

Other

Courses: First Aid/CPR Certified

OSHA Certified

### EMPLOYMENT

2001- Senior Project Manager

Present Conestoga-Rovers & Associates

1996-2001 Project Manager, Remediation Division, Dustcoating Inc.

1993-96 Project Manager, Conestoga-Rovers & Associates

1984-93 Project Engineer, Conestoga-Rovers & Associates

### PROFILE OF PROFESSIONAL ACTIVITIES

- Senior Project Manager for Conestoga-Rovers & Associates. Responsibilities include: project management of current construction and remediation projects, scheduling, contract review and negotiation, construction oversight, project-specific health and safety, liaison with regulatory agencies, budget preparation, and project development
- Project Manager for the Agricultural Services Group. Responsibilities include managing current State and Federal programs with NRCS, Department of Agricultural, FSA and local trade organizations. Work hands o with various producers to design, upgrade, and implement conservation practices
- Project Manager on ten MGP site remediations using on-site thermal desorption as the treatment technology. These sites were located in Minnesota, Wisconsin, and Iowa. On-site activities included demolition, hazardous waste segregation, and de-listing, permitting, contract oversight, liaison for utility clients with Agencies and general public, preparation of all documents, and general project oversight
- Project Manager on a Remedial Investigation/Feasibility Study at a large former manufactured gas plant in Minnesota. Completed a multi-step Interim Response Action dealing with excavation and removal of coal gasification by-products
- Project Coordinator on a Phase I and Phase II Site Investigation at six former manufactured gas plants
- Project Engineer/Coordinator on a former residential and industrial dump site. Design and construction of a Groundwater Extraction System and a Drum Investigation, Removal, and Disposal Operation
- Project Engineer/Coordinator at a large industrial manufacturing facility. Completed extensive Groundwater Investigation and Multi-well Groundwater Extraction System
- Project Coordinator on a Site Investigation at a 120-acre wood treating facility in Wisconsin. The Investigation focused on environmental impacts from past disposal practices

- Project Coordinator at a CERCLA listed, former scrap yard. Completed a Remedial Investigation/Feasibility Study and several Interim Response Actions dealing with PCB and heavy metal contaminated materials
- Project Engineer/Coordinator at a manufacturing facility in Wisconsin. Successfully negotiated "No Further Action" with the regulating agency
- Project Biologist at a large truck manufacturing facility. Involved in an Ecological Risk Assessment on the effects of industrial manufacturing on a small aquatic ecosystem
- Field Engineer at a high priority CERCLA Site. Supervised the construction and implementation of a Multi-Well Extraction System
- Project Engineer/Coordinator at a former industrial sludge disposal site. Completed a Remedial Investigation and Disposal Cell Characterization
- Project Engineer at a printed circuit manufacturing facility. Completed a Remedial Investigation/Feasibility Study and assisted in the design and implementation of a Multi-well Groundwater Extraction and Treatment System
- Project Engineer at a former nuclear power plant. Completed a Waste Disposal Investigation to determine if buried waste was present on the property
- Field Engineer on a CERCLA Landfill Site. Completed a Remedial Investigation/Feasibility Study and a Buried Drum Investigation at a hazardous waste disposal cell

## Exhibit B

**TECHNICAL EVALUATION OF EXISTING DATA  
DESERT VIEW DAIRY  
MARCH 2011**

Conestoga-Rovers and Associates (CRA) has reviewed existing data that has been obtained through publicly available records that relate to the Desert View Dairy (DVD)<sup>1</sup> property and dairy operation and the regional groundwater remediation being completed by Pacific Gas and Electric (PG&E). Based on our review we have come to two conclusions:

1. There are a number of sources of nitrate and total dissolved solids (TDS) unrelated to the current DVD operations.
2. The Land Treatment Units (LTU) operated by PG&E have contributed significantly to elevated nitrate levels in groundwater.

Each of these items is discussed in detail below.

**THERE ARE A NUMBER OF SOURCES OF NITRATE AND TDS UNRELATED TO THE CURRENT DVD OPERATIONS**

The entire area surrounding DVD has been used extensively for agricultural purposes since at least 1952. There were at least four other livestock operations up-gradient of DVD along with agricultural cropland and irrigation ponds. These locations are shown on the aerial photos included as Attachment 1. A summary of these aerials is discussed below:

**HISTORICAL AERIAL PHOTO REVIEW**

CRA obtained copies of aerial photos from the 1950's to present (specifically 1952, 1970, 1984, 1994 and 2005) that extended 0.5 miles north and south and 1 mile east and west from the Site. These aerial photos were obtained through Historical Information Gatherers, Inc. The purpose of this aerial photo review was to determine what other sources of nitrates may have contributed to the groundwater impact currently being seen in the area. In general, the entire area has been used for agricultural purposes at least since 1952. In addition to the large number of acres fertilized and irrigated for crop production, several livestock/dairy operations are noted throughout this time period. Each aerial photo is summarized below:

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<sup>1</sup> The term DVD in the context of this technical evaluation refers to the 27-acre irrigation field which is part of the current Dairy operation.

irrigation and fertilization in order to support the crops being grown. It should be noted that irrigation is occurring directly up-gradient of the Thompson Road properties.

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This aerial photo shows a smaller area of agricultural cropland than before. The majority of the fields are centered around the site. There are still numerous ponds visible and the Nelson Dairy area has expanded in size and a storage pond is evident. There appear to be two livestock operations west of Nelson Dairy approximately 1/4 and 1/2 mile to the west.

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This aerial photo shows the site developed as a dairy operation with heavy irrigation and cropland surrounding it. The western field does not appear to be cropland and appears stained or wet. The Gorman irrigation pivot is evident along with heavy irrigation in the southern part of that field. The area south of the Site was also heavily irrigated and was presumed to be part of Nelson Dairy which tripled in size compared to the 1970's. The livestock operation 1/4 mile west of Nelson Dairy remained about the same in 1984 while the operation 1/2 mile west (along Serra Road) has doubled in size with what appears to be a storage pond and solid manure stockpiles (this is the Dairy Mr. Ryken stated was owned and operate by the Lyerely's). Another livestock/dairy operation is evident along Hinkley Road and Highway 58 which also has a storage pond and what appears to be solid manure piles. This operation would be up-gradient of the western residential wells. There also appears to be a small operation with irrigation at the site of one of the residential wells along Thompson Road (22875 Thompson Road). Further west on Thompson Road was another heavily irrigated area that was presumed to be cropland but is located near 22726 Thompson Road. Both of these residential wells had higher elevations of nitrates than the surrounding neighbors as measure in October 2008.

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The 1994 aerial photo showed a continued decrease in agricultural cropland as well as irrigation. The dairies to the west were present but the land around those dairies did not appear to be heavily irrigated. The area along Thompson Road continued to be heavily irrigated. It should be noted that the 1994 photo is black and white; hence, the contrast between active agricultural operations (irrigation) and inactive was difficult to determine.

#### 2005 Aerial Photo

The 2005 aerial photo showed a continued decrease in agricultural cropland as well as irrigation. The only land that appeared to be in production are the fields that were irrigated as part of the chromium groundwater treatment which are immediately up-gradient of Desert View Dairy. The dairies to the west were present but the land around those dairies does not appear to be irrigated. There appeared to be a large stockpile of manure immediately south of Nelson Dairy, which was there for several years according to Mr. Ryken. The area along Thompson Road continues to be heavily irrigated as well.

Another source of nitrates is the western field on the DVD site. The prior operator of the Site (Flameling Dairy) used the western field as a storage site for both solid and liquid dairy waste since 1981. This area is considered a significant source of nitrates because Mr. Ryken has stated

that it was heavily impacted by manure prior to DVD operations in 1994. This field has been used as a land application area for PG&E's groundwater remedy since 2004.

In addition to the aerial photo review, CRA examined nitrate and TDS data in groundwater which was provided by CH2MHill. Figure 1 shows the maximum TDS concentrations, which exceeded the State TDS standard of 1,000 mg/L (upper secondary maximum contaminant level). The general groundwater flow pattern is northerly with minor influences due to pumping at irrigation and water supply wells. This means that areas to the south of DVD are upgradient of DVD. Wells, both up-gradient and down-gradient of DVD, are over the secondary drinking water standard for TDS. Figure 2 shows the nitrate exceedences from the same data base. There are a significant number of wells up-gradient of DVD that are over the State nitrate standard of 45 mg/l (maximum contaminant level).

The fact that nitrate and TDS exceedences in groundwater are present upgradient (south) of DVD shows that contaminant sources, other than DVD, exist and are impacting groundwater.

#### **PG&E'S LAND TREATMENT UNITS (LTU) HAVE CONTRIBUTED SIGNIFICANTLY TO NITRATES IN GROUNDWATER**

The groundwater discharge being performed by PG&E on land located south and west of DVD involves the application of groundwater which is part of the PG&E chromium remediation project. There are currently several active extraction wells that pump an average of 400,000 gallons per day<sup>2</sup>, which is discharged to an 80-acre parcel of land. This extraction/discharge system has been in operation since August 2004 and the historical concentrations of nitrate in the discharged water range from 9.15 to 12.9 mg/L nitrate as N. If these values are converted to nitrate as nitrate, the concentration ranges from 40.5 to 57.1 mg/L. Applying the highest concentration of 57.1 mg/L and the estimated volume of water being discharged (400,000 gallons/day), PG&E is applying 2.4 pounds of nitrate/acre/day (as of 2010).

In contrast, DVD discharges much less nitrate compared to PG&E. The washwater from DVD is run through a solids separator, the solids are transported off-site for use as fertilizer by other agricultural operations. The liquids are contained in concrete tanks for land application as irrigation water. The water is applied daily to approximately 27 acres of cropland through a center pivot spray gun. DVD estimates that approximately 45,000 gallons of water are currently being applied on a daily basis to this field. The sampling data provided by DVD show a nitrate concentration in the range of ND to 4 mg/L nitrate as N. If these values are converted to nitrate as NO<sub>3</sub>, the concentration range is ND to 17.7 mg/L. Assuming the highest concentration (17.7 mg/L nitrate as NO<sub>3</sub>) and 45,000 gallons per day discharged to the 27-acre irrigation field, DVD is applying approximately 0.25 pounds of nitrate/acre/day (as of 2010).

Given the above, PG&E and DVD discharges/show that the PG&E remedy discharges approximately ten times the mass of nitrate per acre compared to current DVD operations. The continuous pumping and discharge may have also affected the nitrate concentrations in the

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<sup>2</sup> CH2MHill 2007 Annual Monitoring Report

area. Not only is the PG&E discharge more significant than the DVD discharge, the PG&E discharge is applied to the western field, which received heavy manure application prior to DVD.

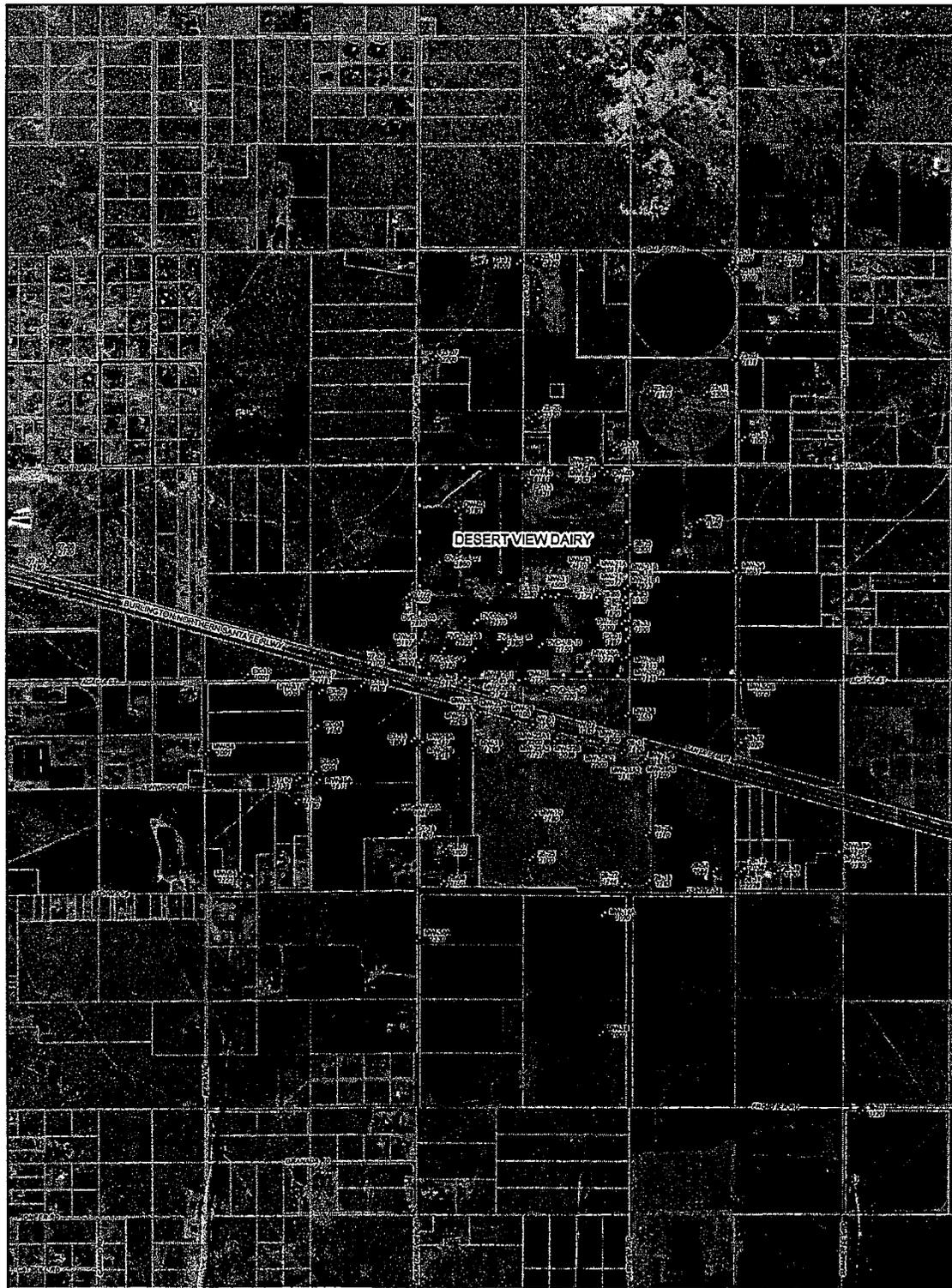
CRA has also concluded that the PG&E discharge of water to the LTU has flushed nitrate out of the soil and into the groundwater based on the following evaluation.

In the 2005 Annual Monitoring Report dated July, 2005 it was stated that the percolation of discharged groundwater should not reach the water table aquifer for several years. However, CRA was unable to locate any data to support this statement. CRA plotted the nitrate data provided for on-site monitoring wells DW-01, DW-02 and DW-03 and the nitrate data for lysimeters DVD-LS-02, 03, 04, 05, 10 and 15. These graphs are presented in Attachment 2. In both cases the nitrate concentrations increased shortly after PG&E began discharging water to the LTU (August 2004). The lysimeter data peaked then decreased (as you would expect after the initial flush of the unsaturated soil) and the monitoring wells (DW-01, 02 and 03) continued to increase. This increase was noticed in the lysimeters approximately 12 months after discharge began then in the monitoring wells approximately 16 to 24 months after discharge began. These data suggest a much faster infiltration rate than originally predicted and could be much less than the several year estimate given by PG&E.

### CONCLUSIONS

Given the above, CRA has come to two conclusions:

1. There are a number of sources of nitrate and total dissolved solids (TDS) unrelated to the current DVD operations.
2. The Land Treatment Units (LTU) operated by PG&E have contributed significantly to elevated nitrate levels in groundwater.



SOURCE: USDA - NATIONAL AGRICULTURE IMAGERY PROGRAM

**LEGEND**

- ◆ WELL WITH DRINKING WATER STANDARD EXCEEDANCE (1000 mg/L)
- 1034 MAXIMUM TOTAL DISSOLVED SOLIDS CONCENTRATION (mg/L)
- DESERT VIEW DAIRY
- COUNTY PARCELS

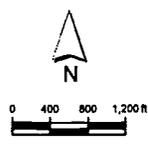
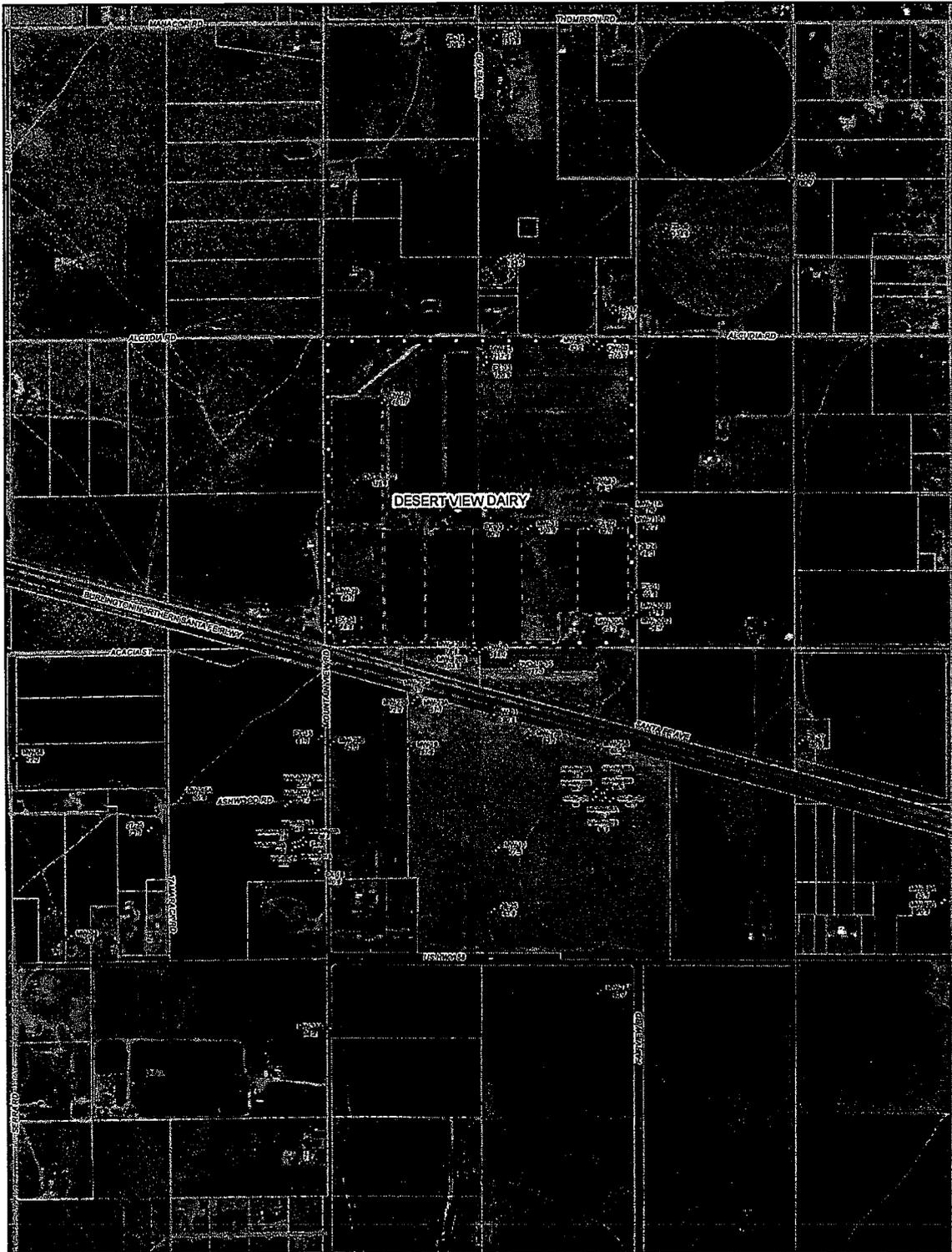


figure 1  
**TOTAL DISSOLVED SOLIDS (TDS) DRINKING WATER STANDARD EXCEEDANCES**  
**DESERT VIEW DAIRY**  
*Hinkley, California*



SOURCE: USDA - NATIONAL AGRICULTURE IMAGERY PROGRAM

**LEGEND**

- 
 WELL WITH DRINKING WATER STANDARD EXCEEDANCE (45 mg/L)
- 
 MAXIMUM NITRATE-NO<sub>3</sub> CONCENTRATION (mg/L)
- 
 DESERT VIEW DAIRY
- 
 PLOT BOUNDARY
- 
 COUNTY PARCELS

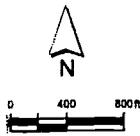
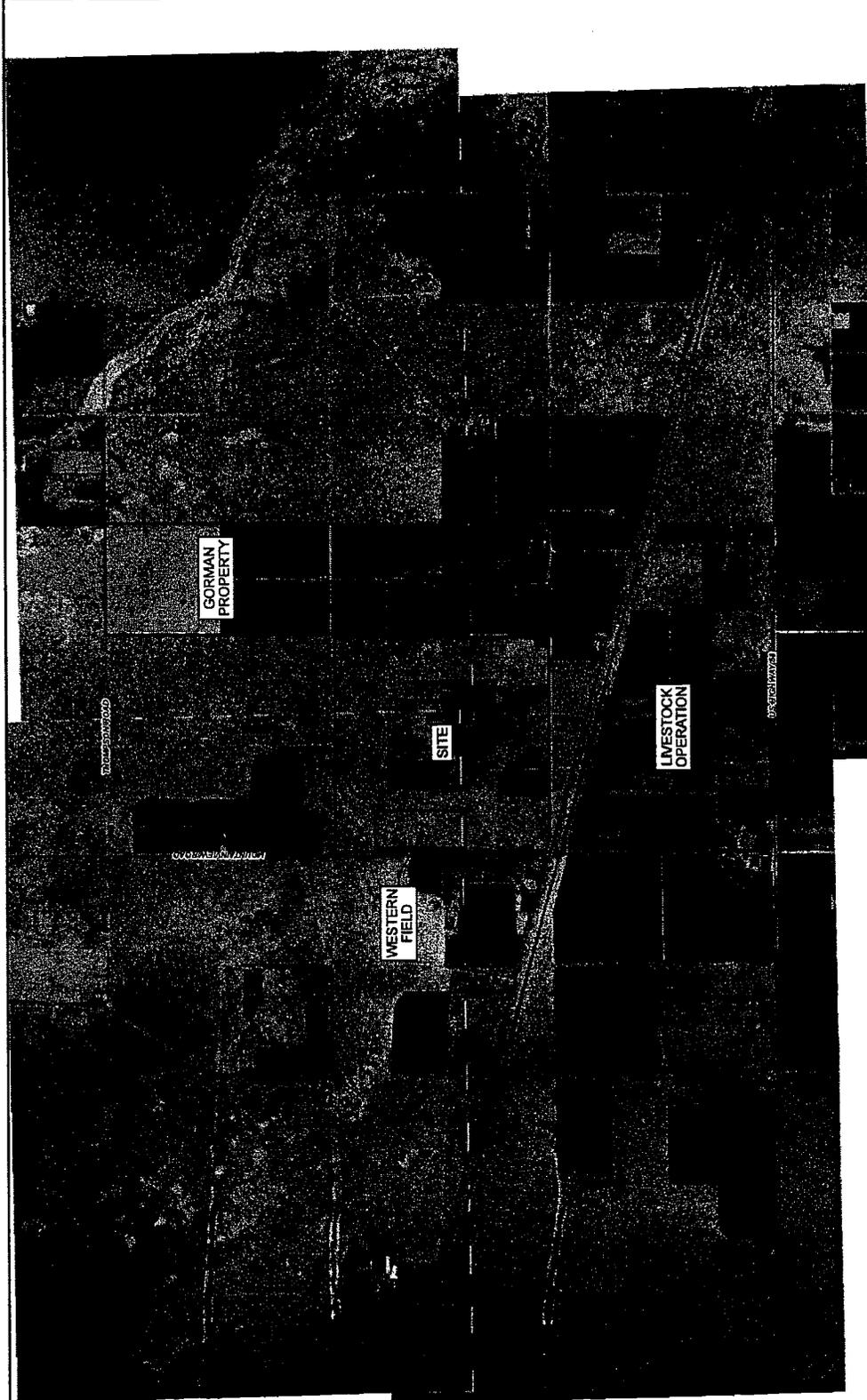


figure 2  
 NITRATE-NO<sub>3</sub> DRINKING WATER  
 STANDARD EXCEEDANCES  
 DESERT VIEW DAIRY  
 Hinkley, California

**ATTACHMENT 1**  
**AERIAL PHOTOGRAPHS**



1952 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California

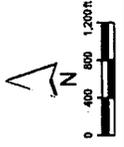
NOTE: DARK AREAS ARE IRRIGATED LAND



05/04/06(MSC/D2)GIS-SP005 JUL 21/2010



1970 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



NOTE: DARK AREAS ARE IRRIGATED LAND

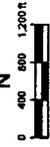


054041-06(MISC002)GIS-SP004 JUL 21/2010



1984 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California

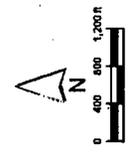
NOTE: DARK AREAS ARE IRRIGATED LAND



05/04/96(MISC002)GIS-SP003 JUL 2 12/2010



1994 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California



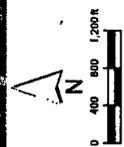
NOTE: DARK AREAS ARE IRRIGATED LAND



054041-06(MISC02)/GIS-SP002 JUL 21/2010



NOTE: DARK AREAS ARE IRRIGATED LAND



2005 AERIAL PHOTO  
DESERT VIEW DAIRY  
37501 MOUNTAINVIEW ROAD  
Hinkley, California

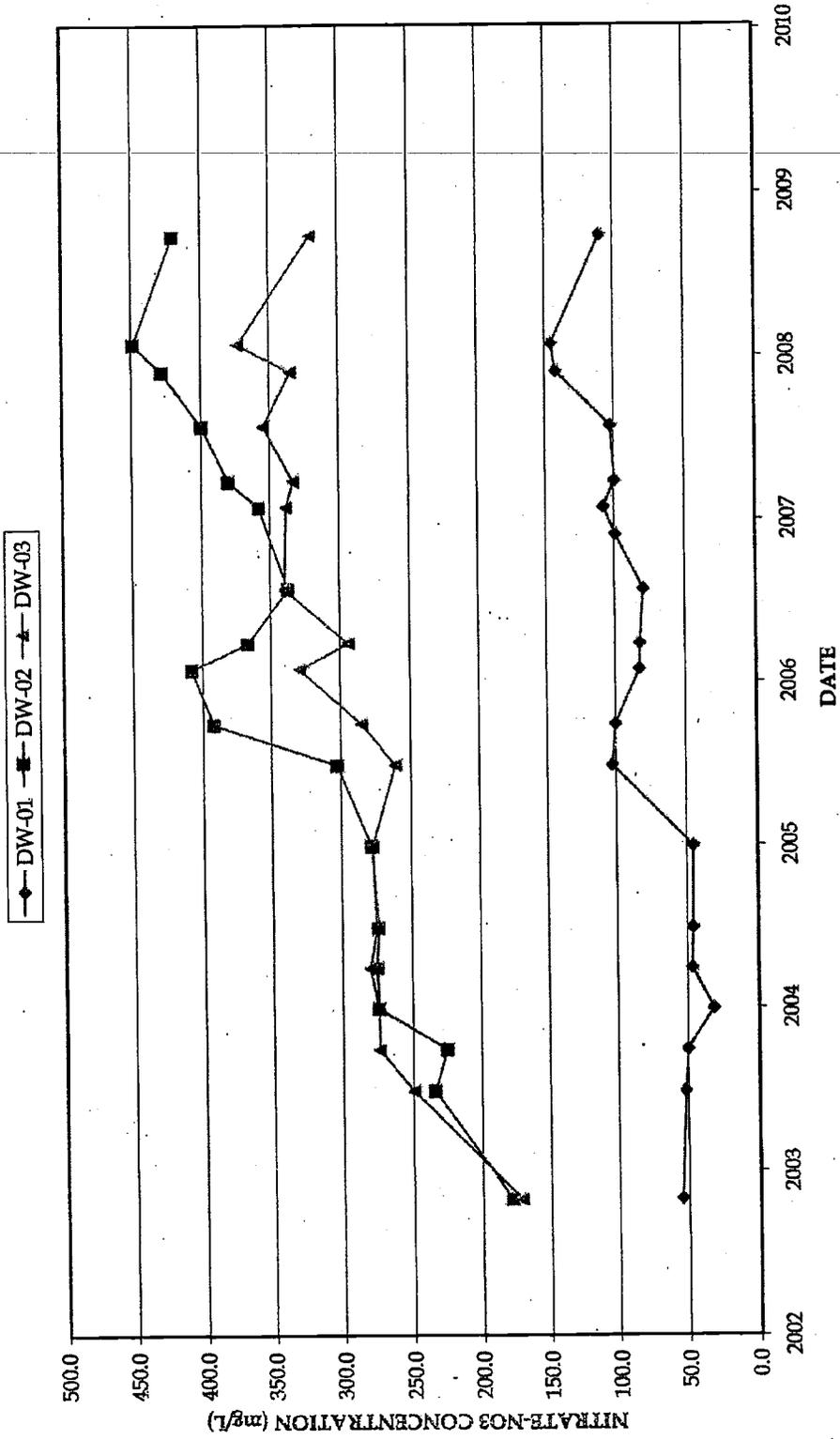


05-4041-1-06 (MISC002) GIS-SP001 JUL 21/2010

**ATTACHMENT 2**  
**LYSIMETER AND MONITORING WELL GRAPHS**



NITRATE-NO3 CONCENTRATIONS  
 DESERT VIEW DAIRY  
 HINKLEY, CALIFORNIA



**EXHIBIT C**



**CONESTOGA-ROVERS  
& ASSOCIATES**

1801 Old Highway 8 Northwest, Suite 114, St. Paul, Minnesota 55112  
Telephone: 651-639-0913 Facsimile: 651-639-0923  
www.CRAworld.com

March 23, 2011

Reference No. 054041-06

Ms. Lisa Dernbach, PG, CHG, CEG  
California Regional Water Quality Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150

Dear Ms. Dernbach:

Re: Amended Cleanup and Abatement Order (CAO) No. R6V-2008-0034A3  
Long-Term Replacement Water Supply Plan  
Desert View Dairy - Hinkley, California

This letter is written by Conestoga-Rovers & Associates (CRA) on behalf of Desert View Dairy (DVD) and provides written notification to the Water Board that DVD could not reach an agreement with Pacific Gas and Electric Company (PG&E) on Option 2b (provision of water from the PG&E forcemain) by the March 23, 2011 deadline.

Immediately upon receipt of the Amended CAO, DVD began evaluating the long-term water supply options in the context of the CAO priorities. CRA met on site with DVD during the week of March 14, 2011 to assist DVD with the evaluation of alternatives as well as an evaluation of groundwater monitoring requirements (a separate requirement of the CAO). Written Communication between DVD and PG&E on the feasibility of Option 2b led to a conference call on March 21, 2011 which was attended by Paul Ryken (DVD), Greg Mason and Chris Hall (McCormick Barstow), Steve Mockenhaupt and Ron Frehner (CRA), Bob Doss (PG&E), Drew Page (JDP Law).

The March 21, 2011 conference call identified that the estimated water need for the four Thompson Road residents is approximately 10 gallons per minute (gpm) per resident for a total of 40 gpm. Water demand could be as low as 10 gpm if the existing residential water tanks continue to be used in order to buffer demand. PG&E stated that the existing PG&E forcemain, which is currently used for remediation purposes (including freshwater injection), may not have the physical capacity to serve the needs of the Thompson Road residents. In addition, the well supplying the forcemain is fully utilized and would not have excess capacity to serve the residents. Although it may have been possible to reach an agreement in the future, the tight deadline of March 23, 2011 requires DVD to notify the Water Board that Option 2b cannot move forward and that the feasibility of Option 2a (a communal water supply well on Thompson Road) will now be pursued.

Upon review of the CAO it was not clear what the specific issues were that prompted the Water Board to completely eliminate Option 4 (continued water supply using the existing water delivery). Page 2 states that: "interim replacement water provided by the Discharger does not



Worldwide Engineering, Environmental, Construction, and IT Services



**CONESTOGA-ROVERS  
& ASSOCIATES**

March 23, 2011

Reference No. 054041-06

-2-

meet all of their domestic needs". However the issues are not articulated. It is our understanding that the past issues, such as frozen piping and insufficient hot water, have been resolved. It would be appreciated if the Water Board could identify if there are any new issues being raised, so that DVD can address them.

Looking forward to the feasibility of Option 2a, we note that PG&E has a monitoring well nest (MW85) in the immediate vicinity of the proposed communal well. There are also two additional wells up-gradient (MW83 and MW89). Based on the data from these wells in both the upper sand and lower sand there will likely be a need for treatment that may be part of the Option 2a evaluation.

Please let us know if you require any additional information or have any questions.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Steve Mockenhaupt  
Project Manager

SM/ma/21

cc: Mike Plaziak, Lahontan Regional Water Quality Board  
Lauri Kemper, Assistant Executive Officer, Water Board  
Paul Ryken, DVD (electronic)  
Greg Mason, McCormick Barstow (electronic)  
Robert Doss, PG&E (electronic)  
Drew Page, Law Offices of J. Drew Page (electronic)