

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-32103

Priority: April 20, 2004

Maximum Diversion Rate: 1.00 CFS

This is to certify, that **SORRENTO LACTALIS INC**
PO BOX 1280
NAMPA ID 83653

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
COMMERCIAL	01/01 to 12/31	1.00 CFS

LOCATION OF POINTS OF DIVERSION:

GROUND WATER	SW $\frac{1}{4}$ SW $\frac{1}{4}$	Sec. 8, Twp 03N, Rge 01W, B.M., CANYON County
GROUND WATER	SW $\frac{1}{4}$ SW $\frac{1}{4}$	Sec. 8, Twp 03N, Rge 01W, B.M., CANYON County

PLACE OF USE: COMMERCIAL

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N 01W 8											X	X					

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **June 01, 2010**.
2. Subject to all prior water rights.
3. Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which the permit holder had no control.
4. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
5. Water bearing zone to be appropriated is from 50 to 300 feet.
6. This right does not grant any right-of-way or easement across the land of another.
7. The well(s) constructed and used as point(s) of diversion for this right shall be no deeper than the blue clay layer located approximately 290 to 300 feet below ground surface.
8. Use of water under this right shall be non-consumptive.
9. Water diverted and used under this right shall be discharged into the Purdam Gulch Drain.
10. If the right holder cannot continue to discharge all the water diverted under this right into the Purdam Gulch Drain for any reason, the right holder shall cease diverting water under this right until the right holder implements an alternative mitigation plan that has been reviewed and accepted by the Department.

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-32103

11. Prior to diversion of water under this right, the right holder shall provide a means acceptable to the Department to measure and record the amount of ground water diverted in connection with this right and the amount of water being released from the commercial facility into Purdam Gulch Drain. The right holder shall measure and record the entire volume of water diverted under this right and the entire volume of water discharged to the Purdam Gulch Drain and shall make the records available to the Department for inspection at any time.
12. Prior to the diversion and use of water under this approval, the right holder shall comply with applicable water quality standards of the Department of Environmental Quality.
13. Commercial use is for a cheese making process.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 23rd day of June, 2005.


FOR KARL J DREHER, Director

JUN 10 2005

Ident. No. 63-32103 12/99

RECEIVED STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APR 20 2004

APPLICATION FOR PERMIT

**WATER RESOURCES
WESTERN REGION**

To appropriate the public waters of the State of Idaho

1. Name of Applicant Sorrento Lactalis, Inc. Phone (208) 467-4424
Mailing address PO Box 1280, Nampa, ID 83653
2. Source of water supply Ground water which is a tributary of NA
3. Location of point of diversion is Township 3N Range 1W Sec. 8, in the _____ ¼,
SW ¼, SW ¼, Govt. Lot _____, B.M., Canyon County;
additional points of diversion if any: SWSW of Section 8, T3N R1W
4. Water will be used for the following purposes:
Amount 1.0 cfs for commercial purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated is (a) 1.0 and/or (b) _____
cubic feet per second acre feet per annum
6. Proposed diverting works:
a. Describe type and size of devices used to divert water from the source One existing 8" well and one future
12" well. Both with electric pumps.
b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total
reservoir capacity _____ acre-feet
c. Proposed well diameter is 12" inches; proposed depth of well is 300 feet
d. Is ground water with a temperature of greater than 85°F being sought? No
e. If well is already drilled, when? 1972; Drilling firm Witt and Sons;
Well was drilled for (well owner) Swiss Cheese Inc.; Drilling Permit No. _____
7. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year)
8. Description of proposed uses (if irrigation only, go to item 9):
a. Hydropower; show total feet of head and proposed capacity in kW. _____
b. Stockwatering; list number and kind of livestock. _____
c. Municipal; show name of municipality. _____
d. Domestic; show number of households. _____
e. Other; describe fully. Commercial use; water used during the cheese making process

9. Description of place of use:

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.

b. If water is used for other purposes, place a symbol of the use (example: *D* for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	1W	8										C	C						

Total number of acres to be irrigated _____

10. Describe any other water rights used for the same purposes as described above. NA

11. a. Who owns the property at the point of diversion? Applicant

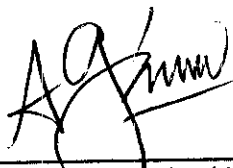
b. Who owns the land to be irrigated or place of use? Applicant

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____

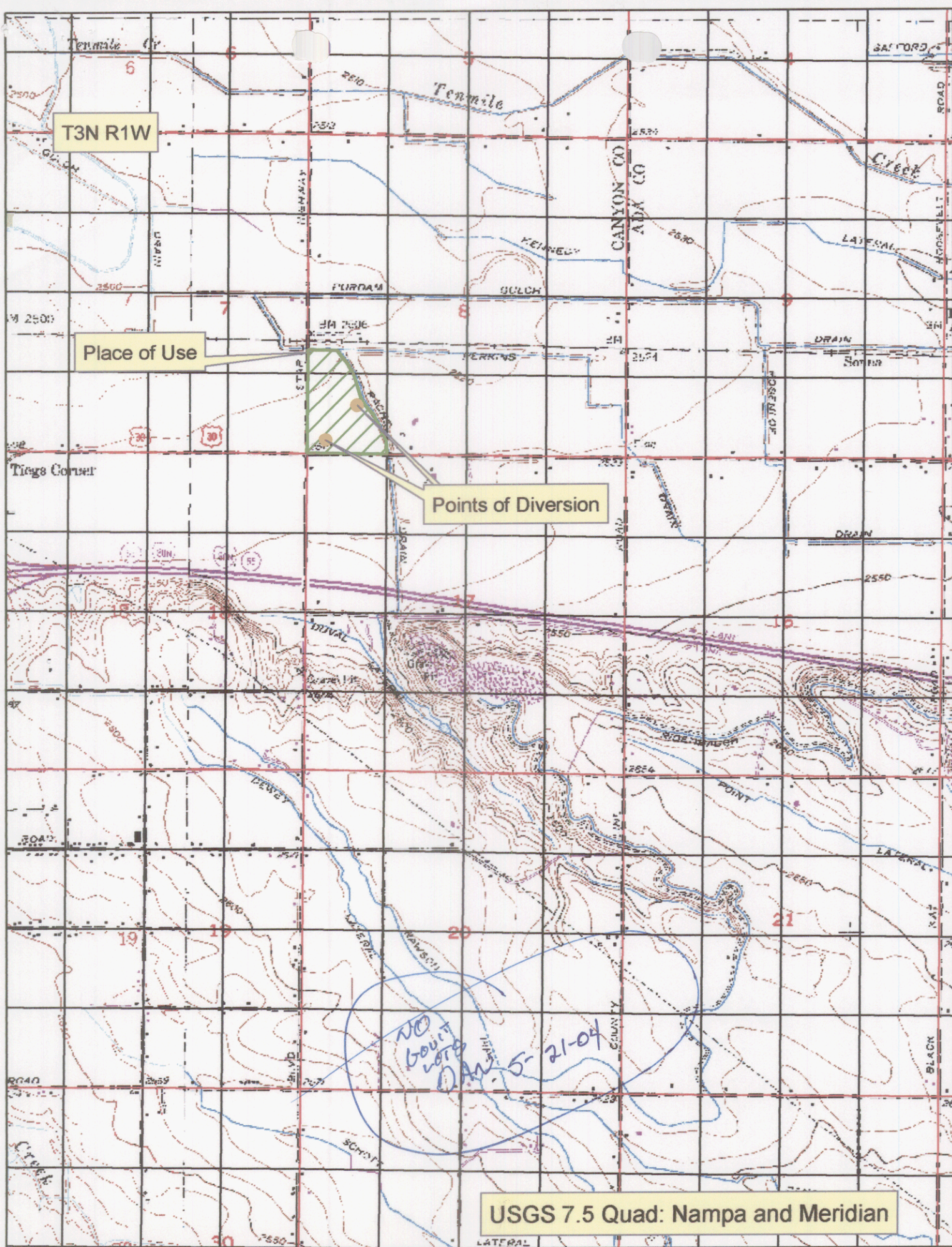
12. Remarks: See attached remarks

13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½"x11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. (A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.)

BE IT KNOWN that the undersigned hereby makes this application for permit to appropriate the public waters of the State of Idaho as herein set forth.


Plant Manager
 Signature of Applicant (and title, if applicable)

Received by KG Date 4/20/04 Time 2:25 Preliminary check by _____
 Fee \$ 250.00 Receipted by KG # W031571 Date _____
 Publication prepared by AK Date 5-19-05 Published in PRESS TRIBUNE
 Publication approved AK Date 6-7-05



Remarks. Sorrento Lactalis, Inc. (Sorrento) proposes appropriation of 1.0 cfs for commercial use at a cheese processing plant. Sorrento currently diverts 1.6 cfs and 400 afa under license 63-31628. In the past, all wastewater from the facility has been land applied. Sorrento is currently in the process of designing and permitting a wastewater treatment plant that will allow a portion of Sorrento's flow to be discharged to the Rachel Drain under an NPDES permit. The Rachel Drain is tributary to the Boise River, via the Purdam Gulch Drain and Mason Creek. The Rachel Drain and other local drains are perennial streams that receive discharge of shallow groundwater from the local aquifer system.

All groundwater appropriated under the proposed permit (i.e., diversion at rates of more than 1.6 cfs or annual diversion of more than 400 af) will be discharged as treated wastewater to the Rachel Drain. As a result, the new appropriation will be non-consumptive. The wastewater discharge will offset any depletion to groundwater inflow to the drain system resulting from groundwater pumping under the proposed permit. Therefore, no impacts to existing water rights are anticipated.

Water-bearing zone proposed for appropriation is 50 to 400 feet.

REQUEST TO PROCESS

COMPLETE REQUEST IF YOU WANT YOUR APPLICATION TO BE PROCESSED USING ONE OF THE
THREE ALTERNATIVES BELOW

Name of Applicant Sorrento Lactalis, Inc.
Mailing Address P.O. Box 1280
Nampa, ID 83653
Application No. _____
(if known)

IN LOCAL PUBLIC INTEREST

Yes, I want my application processed and before it is advertised, I will amend my application to demonstrate that the proposed appropriation is in the local public interest including the need to preserve flows in the Snake River during the migration periods of anadromous fish.

X PROPOSE MITIGATION NOW

Yes, I want my application processed and before it is advertised, I will amend my application to include proposed mitigation to offset anticipated depletions in the Snake River during periods of anadromous fish migration.

WILL AGREE TO MITIGATION IN THE FUTURE IF NECESSARY

Yes, I want my application processed at this time, and I will accept a condition of approval that will require mitigation should the Director of the Idaho Department of Water Resources determine that mitigation is necessary to offset depletions from this appropriation to flows in the Snake River during periods of anadromous fish migration. I understand that mitigation is not required now but may be needed in the future. I also understand that the Director will not require mitigation until I have an opportunity to review the process by which the need for mitigation is established and the amount of water required is quantified.

Signature _____

Date _____

Please return this form to:

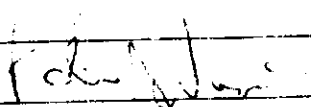
Idaho Dept. of Water Resources
Western Regional Office
2735 Airport Way
Boise, ID 83705-2062

04-20-04

No. C 13322. Return to: SECRETARY OF STATE 700 WEST JEFFERSON PO BOX 83720 BOISE, ID 83720-0080 NO FILING FEE IF RECEIVED BY DUE DATE	Due no later than April 1, 2005 Annual Report Form 1. Mailing Address - Correct in this box, if applicable SORRENTO LACTALIS, INC. 2376 S PARK AVE BUFFALO, NY 14220	2. Registered Agent and Office NC C T CORPORATION SYSTEM 300 NORTH 8TH STREET BOISE, ID 83702 3. New Registered Agent Signature
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4. Corporations: Enter Names and Business Addresses of President, Secretary and Directors.

<u>Office held</u>	<u>Name</u>	<u>Street or P O. Address</u>	<u>City</u>	<u>State</u>	<u>Zip</u>
President	Erick Boutry	2376 South Park Ave.	Buffalo	NY	142
VP Sales	John Alfieri	2376 South Park Ave.	Buffalo	NY	142
Secretary	David Chambers	2376 South Park Ave.	Buffalo	NY	142
Treas./VP	John Zielinski	2376 South Park Ave.	Buffalo	NY	142
VP Human Res.	Robert Woeppel	2376 South Park Ave.	Buffalo	NY	142

5. Organized Under the Laws of: DELAWARE C 133227	6.  Signature _____ Date <u>Feb 14/05</u> Name (Typed or Printed) <u>Robert Woeppel</u> Title <u>VP Human</u>
--	---

Issued 02/01/2005
Do Not Tape or Staple
20050400223

**NOW
STARTING
RIGHT
SIDE OF
FILE**



State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street, P.O. Box 83720, Boise, ID 83720-0098

Phone: (208) 287-4800 Fax: (208) 287-6700 Web Site: www.idwr.idaho.gov

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

June 24, 2005

SORRENTO LACTALIS INC
PO BOX 1280
NAMPA ID 83653

RE: Permit No. 63-32103

Permit Approval Notice

Dear Permit Holder:

The Department of Water Resources has issued the enclosed permit authorizing you to establish a new water right. Please be sure to thoroughly review the conditions of approval and remarks listed on your permit.

The permit is a PRELIMINARY ORDER issued by the Department pursuant to Section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

As a permit owner you must commence the excavation or construction of the diverting works within one year of the date the permit was issued, and you must proceed diligently until the project is completed. The date shown under condition no. 1 is the date when the project must be completed.

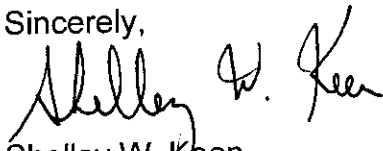
The Department will send you a 'Proof Due Notice' approximately 60 days prior to the above referenced date requesting you to file either a Proof of Beneficial Use form or a Request for Extension of Time form.

The right to drill a well is not a part of this permit to appropriate water. Beginning in July of 1987, a statute was enacted which requires a drilling permit for new well construction and deepening of existing wells. If the well(s) proposed for use under this water right permit were drilled or deepened after July 1, 1987, a separate drilling permit must be obtained from this Department. Please contact the Ground Water Protection Section located here at this office or our regional office nearest you.

Also, please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at 208-287-4947.

Sincerely,

A handwritten signature in black ink, appearing to read "Shelley W. Keen". The signature is fluid and cursive, with the first name "Shelley" being the most prominent part.

Shelley W. Keen

Water Rights Supervisor

SWK:klt

Enclosure(s)

cc: SPF WATER ENGINEERING LLC

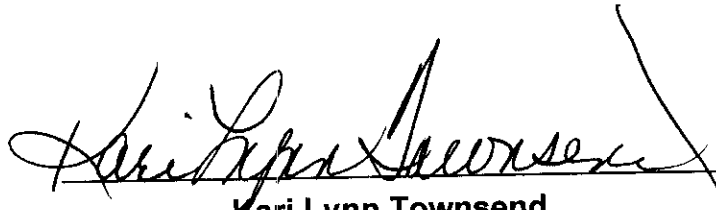
CERTIFICATE OF SERVICE

I hereby certify that on June 24, 2005 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER(Approved Permit) to the person(s) listed below:

RE: WATER RIGHT NO. 63-32103

**SORRENTO LACTALIS INC
PO BOX 1280
NAMPA ID 83653**

**SPF WATER ENGINEERING LLC
C/O TERRY SCANLAN
600 E RIVER PARK LN STE 105
BOISE ID 83706**



**Kari Lynn Townsend
Secretary**

**EXPLANATORY INFORMATION
TO ACCOMPANY A
PRELIMINARY ORDER**

(To be used in connection with actions when a hearing was not held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "**Preliminary Order**" issued by the department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below.

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) the petition for reconsideration is disposed of, or
- (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

Comment Report

63-32103

1. kwalker 6/13/2005 POD

Comment: Updated shape

2. kwalker 6/13/2005 POD

Comment: Updated shape

3. kwalker 6/13/2005 POU

Comment: Updated Shape

4. scurtis 5/4/2005 Legal Notice Remarks

Comment: Mitigation is proposed for consumptive use.

Water bearing zone to be appropriated is from 50 to 400 feet.

5. dnelson 5/4/2005 Comment/Analysis

Comment: This application is for commercial use in the Sorrento Lactalis, Inc. cheese factory. The applicant has proposed mitigation for the use of this water right, using treated wastewater from the cheese plant to replace the ground water being used for the factory operation as described in Terry Scanlans 9/18/2004 letter. The mitigation plan is supported by a ground water analysis written by Christian R. Petrich, Ph.D., P.E. in his 4/7/2005 letter. The water extracted from the milk adds to the general wastewater created by the factory. Therefore, there is more wastewater produced by the factory than amount of ground water used by the factory. The wastewater will be treated to drinking water standards, and then discharged into the Purdom Drain. The seepage from the drain will recharge the aquifer, and the water that doesnt seep into the ground will go directly to the Boise River. Several administrative staff has previewed the mitigation plan, and it seems to be acceptable. The well depth proposed is 300 feet, however, the mitigation plan and Mr. Petrichs letter suggests that there is a significant confining layer between 290 to 301 feet. I would suggest a condition that would limit the well depth to this clay layer, which is described in the well log for the other Sorrento well as being a blue clay layer between 290 and 301 feet. The measurement of the diversions to the factory, and the discharge from the waste treatment facility should also be required to ensure that adequate water is being returned to the system to mitigate the ground water being used.

6. kwalker 6/13/2005 Permit Review

Comment: Application does not fall within any problem areas. Use will be non-consumptive if they inject their waste water into Purdam Gulch as suggested. Recommend approval.

AFFIDAVIT OF PUBLICATION

RECEIVED

STATE OF IDAHO)

MAY 27 2005

County of Canyon)

) SS.

WATER RESOURCES
WESTERN REGION

Amanda K. Anderson
of Nampa, Canyon County, Idaho, being
first duly sworn, deposes and says:

1. That I am a citizen of the United States, and at all times hereinafter mentioned was over the age of eighteen years, and not a party to the above entitled action.
2. That I am the Principal Clerk of the Idaho Press-Tribune, a daily newspaper published in the City of Nampa, in the County of Canyon, State of Idaho; that the said newspaper is in general circulation in the said County of Canyon, and in the vicinity of Nampa and Caldwell, and has been uninterruptedly published in said County during a period of seventy-eight consecutive weeks prior to the first publication of this notice, a copy of which is hereto attached.
3. That the notice, of which the annexed is a printed copy, was published in said newspaper 2 time(s) in the regular and entire issue of said paper, and was printed in the newspaper proper, and not in a supplement.
4. That said notice was published the following:
05/19/2005, 05/26/2005

e0100285 04522683
1 Idaho Dept. of Water Resource
2735 Airport Way
BOISE ID 83705

LEGAL NOTICE

The following application(s) have
been filed to appropriate the public
waters of the State of Idaho:

63-32103 *sk*

SORRENTO LACTALIS INC
PO BOX 1280
NAMPA ID 83653

Point(s) of Diversion SWSW
S8 T03N R01W CANYON County
Source GROUND WATER

Point(s) of Diversion SWSW
S8 T03N R01W CANYON County
Source GROUND WATER

Use: COMMERCIAL
01/01 To 12/31 1 CFS
Total Diversion: 1 CFS

Date Filed: 04/20/2004

Place Of Use: COMMERCIAL

T03N R01W S8 NWSW SWSW

Remark: Mitigation is proposed for
consumptive use.

Water bearing zone to be appropri-
ated is from 50 to 400 feet.

Permits will be subject to all prior
water rights. Protests may be sub-
mitted based on the criteria of Sec
42-203A, Idaho Code.

Any protest against the approval of
this application must be filed with the
Director, Dept. of Water Resource,
Western Region, 2735 Airport Way,
Boise, ID 83705 together with a pro-
test fee of \$25.00 for each applica-
tion on or before 06/06/2005. The
protestant must also send a copy of
the protest to the applicant.

KARL J DREHER, Director

May 19, 26, 2005 04522683



Amanda K Anderson
STATE OF IDAHO)
County of Canyon)

On the 26th day of May in the year of 2005
before me, a Notary Public, personally appeared.

Amanda K. Anderson,
known or identified to me to be the person
whose name is subscribed to the within
instrument, and being by me first duly sworn,
declared that the statements therein are true, and
acknowledge to me that he/she executed the same.

Rebecca L Thompson
Notary Public for Idaho
Residing at Nampa
My commission expires April 19, 2008

Kreger (Taylor), Sue

From: Kreger (Taylor), Sue
Sent: Friday, May 13, 2005 9:31 AM
To: 'srae@deq.state.id.us'
Subject: COMMENT LETTERS

**IDAHO DEPARTMENT OF WATER RESOURCES
WESTERN REGION
2735 AIRPORT WAY
BOISE ID 83705**

May 13, 2005

ID DEPT ENV QUALITY
STEVE RAE
1445 N ORCHARD
BOISE ID 83706-2239

Re: Applications for Permit

Dear Mr. Rae:

Attached is a copy(s) of one or more applications that may be of interest to you and/or to a local District Health office should you choose to delegate review of the application(s) to that organization. Please contact the applicant if your agency and/or District Health have concerns about the application(s). It is not necessary to provide agency comments to the Idaho Department of Water Resources (IDWR), although your comments are welcome if you think IDWR would benefit from them.

If your agency and/or a local District Health office desires to file a formal protest against approval of any of these applications, a written protest along with the \$25.00 protest fee for each application protested must be received in this office by June 6, 2005. A copy of the protest must also be sent to the applicant.

If you have any questions regarding these applications, please contact this office at 334-2190.

Sincerely,



63-32103.pdf



63-32107.pdf

**IDAHO DEPARTMENT OF WATER RESOURCES
WESTERN REGION
2735 AIRPORT WAY
BOISE ID 83705**

May 12, 2005

Legal Notice Department
PRESS-TRIBUNE
PO BOX 9399
NAMPID 83652

RE: Application for Permit No. 63-32103 and 63-32107

Dear LEGAL NOTICE DEPARTMENT:

Enclosed you will find a legal notice which we wish to have published in your newspaper on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office before 06/06/2005. Your cooperation is appreciated.

Sincerely

Sue Kreger
Administrative Assistant

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

63-32103

SORRENTO LACTALIS INC
PO BOX 1280
NAMPA ID 83653

Point(s) of Diversion SWSW S8 T03N R01W CANYON County Source GROUND WATER

Point(s) of Diversion SWSW S8 T03N R01W CANYON County Source GROUND WATER

Use: COMMERCIAL 01/01 To 12/31 1 CFS

Total Diversion: 1 CFS

Date Filed: 04/20/2004

Place Of Use: COMMERCIAL

T03N R01W S8 NWSW SWSW

Remark: Mitigation is proposed for consumptive use.
Water bearing zone to be appropriated is from 50 to 400 feet.

Permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec 42-203A, Idaho Code.

Any protest against the approval of this application must be filed with the Director, Dept. of Water Resource, Western Region, 2735 Airport Way, Boise ID 83705 together with a protest fee of \$25.00 for each application on or before 06/06/2005. The protestant must also send a copy of the protest to the applicant.

KARL J DREHER, Director

Published in the Press Tribune on May 19 and 26, 2005.



RECEIVED

APR 13 2005

WATER RESOURCES
WESTERN REGION

April 7, 2005

Mr. Daniel A. Nelson
Senior Water Right Agent
Idaho Department of Water Resources
Western Region Office
2735 Airport Way, Boise, ID 83705-5082

Subject: Application for Permit – Sorrento Lactalis, Inc.

Dear Mr. Nelson,

Sorrento Lactalis, Inc. (Sorrento) has submitted an application for permit to increase ground water pumping at its Nampa facility. A mitigation plan was submitted with the application for permit to address potential impacts associated with the increased pumping and to allow the application to be processed. You expressed concern (see attached letter from October 18, 2004) that the proposed mitigation plan failed to mitigate for ground water withdrawals from below the first confining layer. The purpose of this letter is to respond to your concern and to provide a basis for continued processing of Sorrento's application for permit.

The existing Sorrento well, which also would serve as the point of diversion for the new permit, draws ground water from intermediate-depth aquifers. Clay layers separating these aquifers from overlying aquifers, while partially confining, do not appear to preclude a hydraulic connection with overlying strata. Water chemistry data indicate that the intermediate-depth aquifer from which the Sorrento well draws water is recharged by flow from local, shallow aquifers. As such, increased withdrawals from intermediate-depth aquifers will likely lead to increased recharge from shallow zones. Increased recharge from shallow zones will result in (1) increased seepage from surface channels and/or (2) decreased discharge from shallow aquifers to drains. I believe that the proposed mitigation plan, which will provide additional water to nearby surface channels and drains, addresses these hydrologic impacts. The basis for this assertion is outlined below.

Background

Sorrento Lactalis, Inc. (Sorrento) has proposed an appropriation of 1.0 cfs of ground water for commercial use at its cheese processing plant near Nampa. Sorrento currently diverts 1.6 cfs of ground water (with a limit of 400 afa) under license 63-31628. In the past, all wastewater from the facility has been land-applied. Sorrento is currently in the process of designing and permitting a wastewater treatment plant. The treatment plant will allow the majority of Sorrento's treated wastewater flow to be discharged to the Purdam Gulch Drain under an NPDES permit. Thus, all ground water appropriated under the proposed permit (i.e., diversion at rates of more than 1.6

cfs or annual diversion of more than 400 af) will be discharged as treated wastewater to the Purdam Gulch Drain. The Purdam Gulch Drain and other local drains are perennial streams that receive discharge from shallow aquifers. The Purdam Gulch Drain is tributary to the Boise River via Mason Creek.

Hydrogeology

The Treasure Valley sedimentary section reflects a history of lacustrine, deltaic, fluvial, and alluvial deposition. In general, basin sediments grade from coarser, more permeable sediments near the Boise Front to finer, less permeable sediments at the western part of the basin. In general, sediments grade finer with depth. Highly permeable deposits associated with deltaic and/or fluvial deposition are often sandwiched between lacustrine deposits of lower permeability.

Aquifers in these sediments can be loosely categorized as shallow, intermediate, and deep aquifers (Petrich and Urban, 2004). These aquifers, and corresponding ground water flow systems, are often separated by one or more fine-grained sediment zones (e.g., clay).

A transition from brown to underlying blue or gray sediments is noted in many drillers' reports for Treasure Valley wells. This transition, frequently referred to as the "blue clay" transition, is found at depths ranging from tens of feet to over 800 feet below ground surface. The bluish color likely reflects chemically-reducing conditions associated with a current or historical oxygen-poor environment. These sediments are present in many but not all parts of the valley. Although the bluish sediments are not consistent throughout the Treasure Valley, they have been used to help differentiate deep, confined aquifers from overlying aquifers (Neely, 2001; Neely and Crockett, 1998).

The geology of the Sorrento area consists of a layered sequence of lacustrine and alluvial sediments, overlain by a mantle of loess (wind deposited silt) and alluvial soils. Below the soil zone, a layer of Quaternary-aged alluvium (Snake River Group) extends to a depth of approximately 40 feet. The alluvium consists of coarse-grained sand and terrace gravels deposited within the floodplain of the ancestral Boise River. Beneath the alluvium are Tertiary-aged lacustrine (lake-bed) sediments of the Idaho Group. These sediments consist primarily of interbedded layers of sand and clay, grading finer with depth.

The Sorrento well, drilled in 1972, extends through silt, sand, and clay zones to a depth of 301 feet below ground surface (Attachment A). Four zones listed only as clay are all less than 10 feet thick. Blue clay is noted from 294 to 301 feet. The well is screened from a depth of 265 to 290 feet below ground surface and is completed above the blue clay.

Selected Treasure Valley Ground Water Chemistry Characteristics

The primary IDWR concern regarding the proposed Sorrento mitigation plan is that the Sorrento well draws water from intermediate-depth aquifers and that mitigation at ground surface or in shallow aquifers does not mitigate aquifers from which the Sorrento well draws water. This would especially be of concern if the Sorrento well were drawing water from the deep, regional Treasure Valley aquifer system (regional aquifer characteristics are described below). However, ground water chemistry data (primarily TDS data) from the Sorrento well indicate characteristics associated with shallow ground water. These data indicate that the Sorrento well draws water from aquifers that are recharged from shallow zones, not from the deep, confined, regional Treasure Valley ground water flow system.

Treasure Valley ground water chemistry characteristics were evaluated (Hutchings and Petrich, 2002a; Hutchings and Petrich, 2002b) as part of the Treasure Valley Hydrologic Project (TVHP). Several general conclusions were drawn from this effort. First, ground water in deep, regional aquifers in central and western portions of the valley is largely isolated from overlying aquifers, resulting in residence times ranging from thousands to tens of thousands of years. The proposed mitigation plan for the Sorrento well would not be effective if the well were drawing water from these deep, regional aquifers.

Second, specific conductance (and by inference, total dissolved solids) is greatest in shallow alluvial aquifers and generally decreases with depth. Low specific conductance in deep, regional aquifers indicates that ground water in deeper aquifers did not enter the ground water regime through the carbon-rich sediments found in Treasure Valley soils.

Third, tritium (a hydrogen isotope associated with nuclear testing during the 1950s and 1960s) was found to be virtually non-existent in samples from deeper, regional ground water, except where poor well construction may have allowed inter-aquifer mixing. However, tritium was found in shallow and intermediate-depth aquifers containing water that had entered the ground water flow systems (i.e., had been exposed to atmosphere) in the 1950s and 1960s.

TDS and tritium concentrations in wells penetrating the deep, regional Treasure Valley ground water flow system (Hutchings and Petrich, 2002a) are shown in Figure 1. Most of the wells completed in the deep, regional system had TDS concentrations less than 250 mg/L and tritium concentrations less than 10 pCi/L. Elevated TDS and tritium concentrations would indicate that at least some of the water has (1) encountered shallow valley sediments and (2) entered the ground water flow system during the last four to five decades.

Two of the wells sampled as part of the TVHP chemistry study and initially assumed to be part of the deep aquifer system are located between three and four miles from the Sorrento facility (Figure 2). The first well – Nampa No. 12 – was drilled to a depth

of 607 feet and is screened from 405 to 440 feet and 585 to 600 feet below ground surface. The second well is located at the Idaho State Hospital. It was drilled to a depth of 560 feet and is screened from 380 to 405 and 517 to 542 feet below ground surface. Both of these deep wells had water chemistry suggesting influence from shallow and/or intermediate-depth aquifers – both wells had elevated TDS values and tritium concentrations not indicative of the regional, deep aquifer system. These characteristics likely reflect chemistry of water entering the upper screened intervals of these wells. (Vertical borehole movement can also contribute to shallow-water characteristics in deep wells, but this is unlikely in the Nampa No. 12 well, which is grouted to a depth of 390 feet).

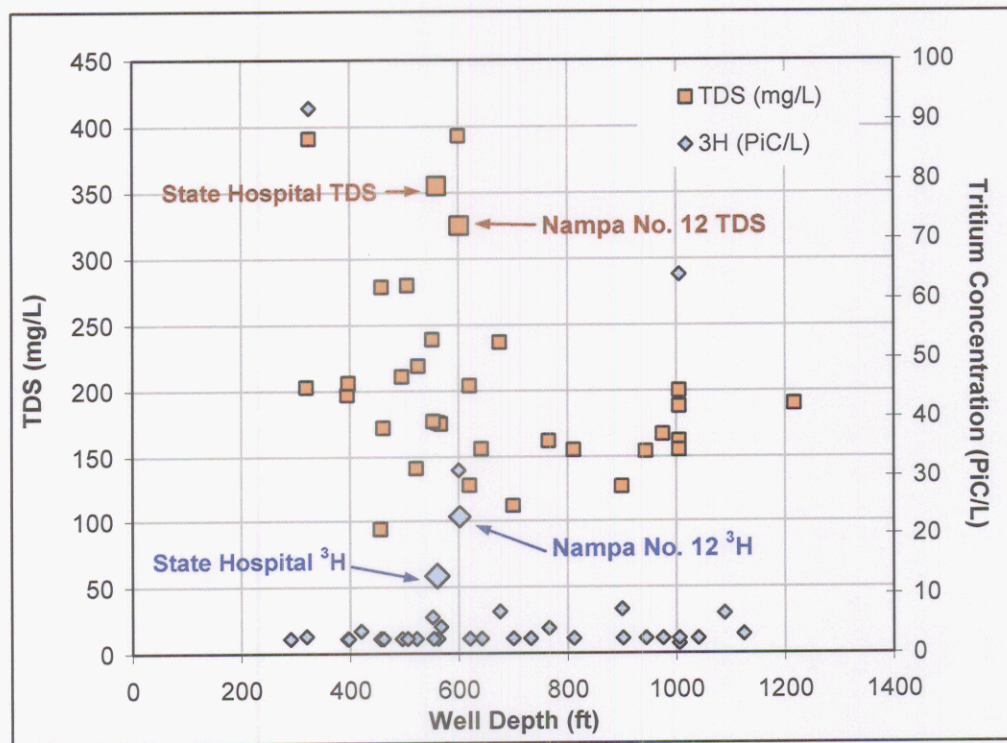


Figure 1: TDS and tritium concentrations versus well depth in deep, regional aquifer wells (Hutchings and Petrich, 2002a).

Ground water samples collected from wells within ¼ mile of the Sorrento facility (and including the Sorrento well) were analyzed as part of a well acceptability analysis (Scanlan Engineering, 1996). Most TDS concentrations were between 250 and 550 mg/L (Figure 3), indicating that at least some of the water in these wells had come into contact with shallow sediments. The TDS level in the Sorrento well (414 mg/L) was greater than in any of the TVHP study wells completed in the deep, regional

aquifer system, and was similar to TDS levels in the State Hospital and the Nampa No. 12 wells.

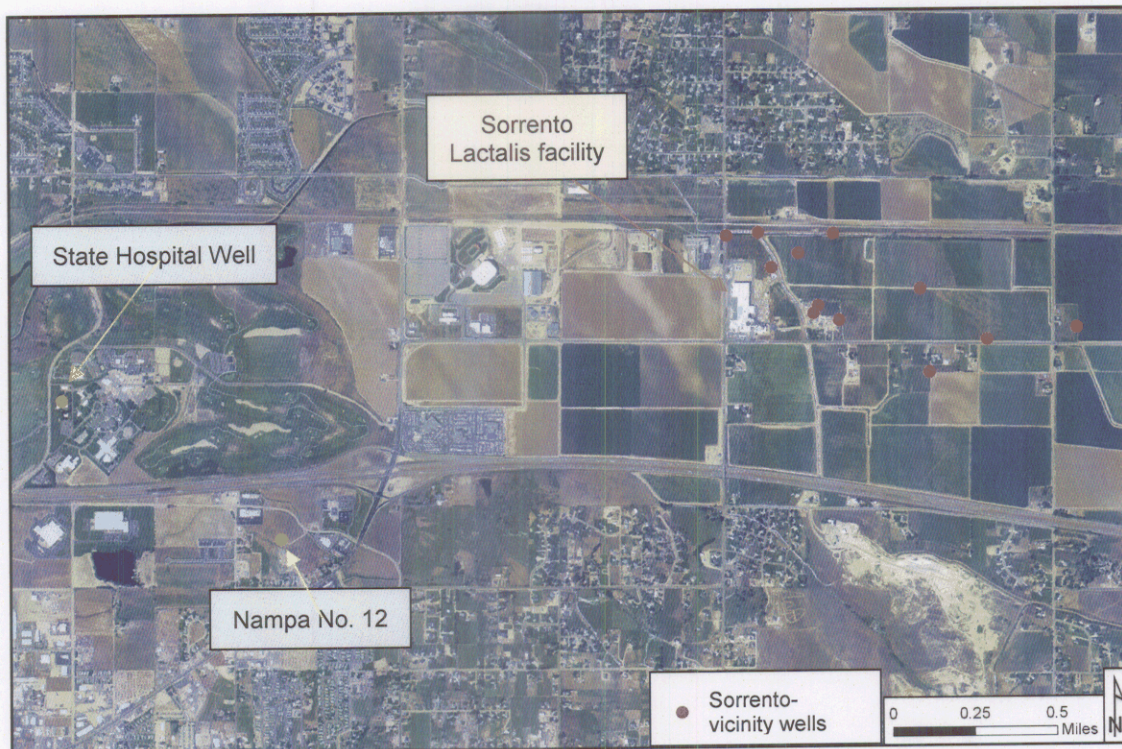
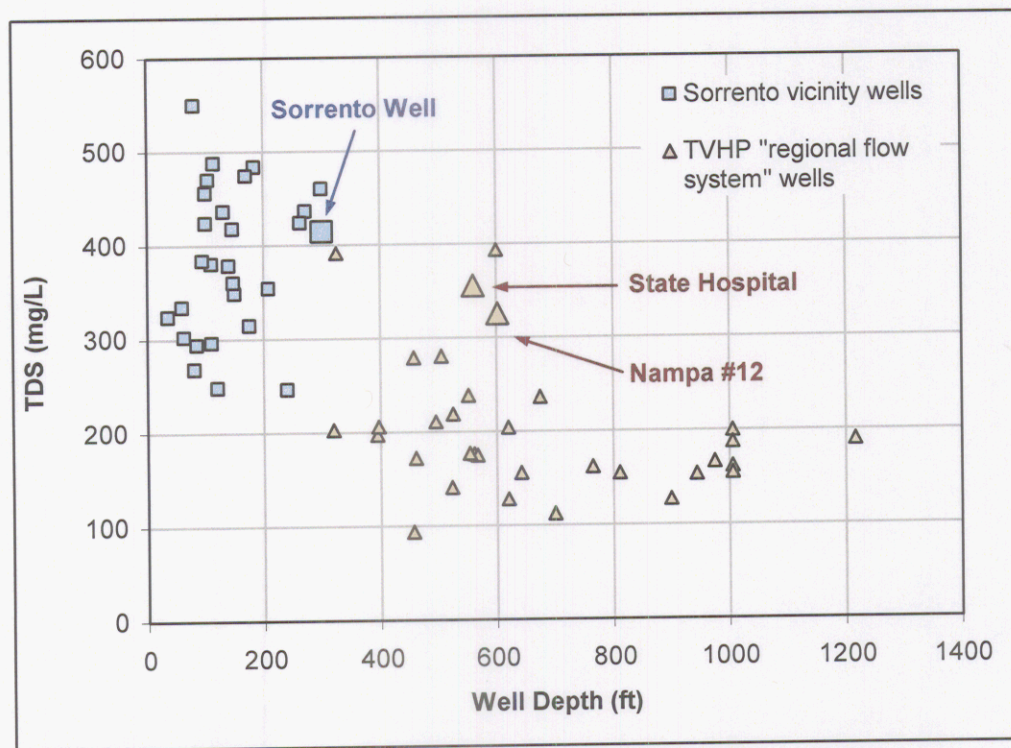


Figure 2: Map showing locations of wells in the vicinity of the Sorrento site.

Impact of Ground Water Withdrawals from Sorrento Well

Ground water in the Sorrento well and surrounding wells has TDS concentrations consistent with water that has encountered shallow sediments. The two deeper TVHP wells in the vicinity of the Sorrento well also have elevated TDS and tritium concentrations, which may reflect the influence of water from the same zones in which the Sorrento well is completed. Elevated TDS levels (in comparison to other Treasure Valley wells known to be part of the deep, regional aquifer system) suggest that clay zones present above the screened interval in the Sorrento well are not areally extensive, and that intermediate-depth aquifers in the Sorrento area are hydraulically connected with overlying shallow zones. Thus, increased drawdown associated with pumping from the Sorrento well will (1) induce increased recharge from the shallow aquifers or (2) decrease discharge to shallow aquifers. This in turn will result in (1) increased seepage from surface channels into shallow aquifers and/or (2) decreased discharge from shallow aquifers to surface channels.

The precise timeframe and distance over which this will occur is not known. However, presence of elevated tritium in nearby deeper wells suggests that the timeframe for ground water to reach the intermediate-depth aquifer in the Sorrento area is tens of years, not hundreds or thousands of years. Similarly, the distance associated with the Sorrento well impacts is likely on a scale of miles, not tens of miles.



(based on Hutchings and Petrich, 2002a; Scanlan Engineering, 1996)

Figure 3: TDS concentrations versus well depth in Sorrento vicinity and TVHP "regional flow system" wells.

Summary

Lithologic data from the Sorrento well indicates completion above the blue clay horizon that often (but not always) reflects a transition from intermediate to deep, confined aquifers. Water chemistry data collected by Sorrento (formerly the Simplot Dairy Products Division) have TDS values generally associated with shallow and intermediate-depth Treasure Valley aquifers. Elevated tritium concentrations in two deep wells located near the Sorrento facility reflect shallow ground water influence over the last several decades (this water is likely entering these wells from intermediate-depth zones). These observations suggest that water from shallow aquifers recharges the intermediate-depth aquifers in this area, despite the presence

of local, interbedded clay zones and upward hydraulic gradients in the vicinity of the Sorrento site.

Increased ground water withdrawals from the Sorrento facility will induce increased recharge from shallow zones. The time to achieve a steady-state hydraulic impact will likely be within tens of years. The distance of immediate hydraulic impact will likely be within miles, not tens of miles.

The proposed mitigation plan will result in an immediate contribution to the Purdam Gulch Drain commensurate with the increased amount of water withdrawn from the Sorrento well. Shallow ground water levels in all of the general area surrounding the Sorrento facility are controlled by surface channel elevations. Over a scale of miles, potential impacts to downgradient shallow ground water users and surface water users caused by withdrawals from the Sorrento well will be effectively mitigated by wastewater flows from the Sorrento facility to the Purdam Gulch Drain.

This suggests that the proposed mitigation is appropriate and is sufficient to address can your concern. With this information Sorrento believes that IDWR can proceed with processing the application for permit. Please contact me a your earliest convenience if this is not the case, or if I can provide you would like additional information.

In advance, thank you for your consideration of this analysis. Please feel free to call me if you have any questions.

Respectfully,



Christian R. Petrich, Ph.D., P.E.
Principal Engineer/Hydrologist

Attachments:

- A: October 18, 2004 letter from Mr. Daniel Nelson to SPF Water Engineering
- B: Driller's report for Sorrento Well
- C: Selected water chemistry data used in Hutchings and Petrich (2002a)
- D: Selected water chemistry data from Scanlan Engineering (1996)

CC: Mr. Gary Spackman, IDWR
Mr. Dusty Galliher, Sorrento Lactalis, Inc.
Mr. Mike Creamer, Givens Pursley LLP
Mr. Terry Scanlan, SPF Water Engineering, LLC

References

- Hutchings, J. and Petrich, C., 2002a. Ground water recharge and flow in the regional Treasure Valley aquifer system - geochemistry and isotope study, Idaho Water Resources Research Institute, Research Report IWRRI-2002-08 (http://www.idwr.idaho.gov/hydrologic/info/pubs/misc/tvhp/TVHP_Geochemistry-final.pdf).
- Hutchings, J. and Petrich, C., 2002b. Influence of canal seepage on aquifer recharge near the New York Canal, Idaho Water Resources Research Institute, Research Report IWRRI-2002-09 (http://www.idwr.idaho.gov/hydrologic/info/pubs/misc/tvhp/NYC_2002-final.pdf).
- Neely, K., 2001. Current status of ground water quality in the Treasure Valley - July, 2001, Idaho Department of Water Resources. http://www.idwr.state.id.us/planpol/techserv/gwmon/status_of_gwq_tv.pdf.
- Neely, K.W. and Crockett, J.K., 1998. Ground water quality characterization and initial trend analysis for the Treasure Valley shallow and deep hydrologic subareas. No. 50 Part 3, Idaho Department of Water Resources.
- Petrich, C. and Urban, S., 2004. Characterization of Ground Water Flow in the Lower Boise River Basin, Idaho Water Resources Research Institute and the Idaho Department of Water Resources, Research Report IWRRI-2004-01.
- Scanlan Engineering, 1996. Well Location Acceptability Analysis, consulting report prepared for the Simplot Dairy Products Division Nampa Plant.

Attachment A

**Letter from Mr. Daniel Nelson to Terry Scanlan, SPF Water
Engineering, LLC**



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

October 18, 2004

SPF WATER ENGINEERING LLC
ATTN TERRY SCANLAN
600 E RIVER PARK LANE STE 105
BOISE ID 83706

RE: APPLICATION FOR PERMIT -SORRENTO LACTALIS, INC.

Dear Mr. Scanlan:

On 5/27/2004 I wrote you a letter concerning the Sorrento Lactalis, Inc. application for permit's mitigation plan. In this letter I requested information that would show how the mitigation plan for this permit would compensate the withdrawal of ground water from the proposed water-bearing zone. You sent a reply to my request on 9/18/2004 by way of a letter and accompanying memo.

Due to the complexity of the issues in your proposal, I forwarded this information to the Western Region Supervisor, Steve Lester for further analysis. Mr. Lester then set up a meeting with Gary Spackman, Jeff Peppersack, John Westra, Shelley Keen, and himself to discuss the proposal. The general consensus of this group was that the mitigation plan addresses surface water and shallow ground water, but fails to address mitigation for pumping ground water below the first confining layer where the water will be drawn.

I will hold your application in my office for 30-days to give you the opportunity to re-work the mitigation plan. If an acceptable mitigation plan is not received within the 30-days, this permit will be held in our office's general files until processing in Basin 63 is resumed, or a mitigation plan is submitted that mitigates the withdrawals of water from the water-bearing zone described in the permit.

If you have any questions or concerns please contact me at the above address.

Respectfully,

Daniel A. Nelson
Sr. Water Right Agent

Attachment B

**Drillers' Reports for the Sorrento Lactalis, Nampa No. 12, and the
Idaho State Hospital Wells**

WELL DRILLER'S REPORT

RECEIVED

State law requires that this report be filed with the State Reclamation Engineer
within 30 days after completion or abandonment of the well.

JUN 16 1972

1. WELL OWNER

Box 280
Name SWISS CHEESE INC.
PAUL A. BROG.
Address R# 2 NAMPA, IDAHO
Owner's Permit No. 384-2215

7. WATER LEVEL

Department of Water Administration
Static water level _____ feet below land surface
Flowing? ☒ Yes ☐ No G.P.M. flow 70
Temperature 68° F. Quality 10 GRAINS
Artesian closed-in pressure 5 p.s.i.
Controlled by ☒ Valve ☒ Cap ☐ Plug

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe method of abandoning)

8. WELL TEST DATA

☐ Pump ☐ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
<u>200</u>	<u>20</u>	<u>3</u>

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☐ Test
☐ Municipal ☒ Industrial ☐ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 301 feet
Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
<u>32.2</u> inches	<u>8</u> inches	<u>0.4</u> feet	<u>265</u> feet
<u>250</u> inches	<u>6</u> inches	<u>255</u> feet	<u>265</u> feet
<u>250</u> inches	<u>6</u> inches	<u>270</u> feet	<u>301</u> feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

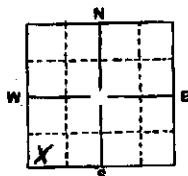
Was a packer or seal used? ☒ Yes ☐ No
Perforated? ☐ Yes ☐ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☒ Yes ☐ No
Manufacturer's name JOHNSON
Type STAINLESS Model No. _____
Diameter 8 Slot size 25 Set from 265 feet to 280 feet
Diameter 8 Slot size 15 Set from 280 feet to 290 feetGravel packed? ☐ Yes ☒ No Size of gravel _____
Placed from _____ feet to _____ feetSurface seal? ☒ Yes ☐ No To what depth 22 feet
Material used in seal ☒ Cement grout ☐ Pudding clay

6. LOCATION OF WELL

Sketch map location must agree with written location.

County CANYON
SW 1/4 SW 1/4 Sec. 8 T. 3 N. R. 1 E/W

10.

Work started 5/8/72 finished 6/15/72

11. DRILLER'S CERTIFICATION

This well was drilled under my supervision and this report is
true to the best of my knowledge.WILL AND SON'S 55
Driller's or Firm's Name Number
CALDWELL, IDAHO
Address
Kenneth Kitt 6/15/72
Signed By Date

Form 208
4/92

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES NOV 4 1992

USE TYPEWRITER OR
BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>City of Nampa</u> Address <u>411 Third Street South Nampa, ID 83650</u> Drilling Permit No. <u>63-92-W-597</u> Water Right Permit No. <u>63-11729</u>	7. WATER LEVEL Static water level <u>72</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian: closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F Quality _____ (Describe location of sample entry point below.)																																																																																																																																				
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase ☐ Modification ☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)	8. WELL TEST DATA ☒ Pump ☐ Bailor ☐ Air ☐ Other _____ <table border="1"> <thead> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Water Pumped</th> </tr> </thead> <tbody> <tr> <td>500</td> <td>115</td> <td></td> </tr> <tr> <td>1000</td> <td>155</td> <td></td> </tr> <tr> <td>1250</td> <td>155</td> <td></td> </tr> <tr> <td>1500</td> <td>186</td> <td>12</td> </tr> </tbody> </table>	Discharge G.P.M.	Pumping Level	Water Pumped	500	115		1000	155		1250	155		1500	186	12																																																																																																																					
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4. METHOD DRILLED ☒ Rotary ☐ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☒ Mud ☐ Other _____ (rockhoe, hydraulic, etc.)	10. Work started <u>8-2-92</u> finished <u>10-29-92</u>																																																																																																																																				
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="1"> <thead> <tr> <th>Thickness</th> <th>Diameter</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>37.5 inches</td> <td>20 inches</td> <td>0</td> <td>39 feet</td> </tr> <tr> <td>37.5 inches</td> <td>16 inches</td> <td>2</td> <td>390 feet</td> </tr> </tbody> </table> Was casing drive shoe used? ☐ Yes ☒ No Float shoe Was a packer or seal used? ☒ Yes ☐ No K-Packer Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation? _____ inches by _____ inches Number _____ From _____ To _____ _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet Well screen installed? ☒ Yes ☐ No Manufacturer <u>Johnson</u> Type <u>304</u> Top Packer or Headpipe <u>356</u> Bottom of Tailpipe <u>No Tail Pipe</u> Diameter <u>10</u> Slot size <u>460</u> Set from <u>405</u> feet to <u>460</u> feet Diameter <u>10</u> Slot size <u>460</u> Set from <u>285</u> feet to <u>600</u> feet Gravel packed? ☒ Yes ☐ No Size of gravel <u>8-12</u> Placed from <u>387</u> feet to <u>600</u> feet Surface seal depth <u>390</u> Material used in seal: ☒ Cement grout ☐ Bentonite ☐ Pudding clay ☐ _____ Sealing procedure used: ☐ Slurry pit ☐ Tamp surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between struts Describe access port: <u>2" Back Blue</u>	Thickness	Diameter	From	To	37.5 inches	20 inches	0	39 feet	37.5 inches	16 inches	2	390 feet	11. DRILLER'S CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Huddleston & Son. Firm Name <u>HSC</u> Firm No. <u>35</u> Rt. 3, Box 613-P Address <u>Min. Home, ID 83647</u> Date <u>10-29-92</u> Signed by Drilling Supervisor <u>[Signature]</u> and <u>[Signature]</u> (Operator) <u>Ken & Mark</u> (If different than the Drilling Supervisor)																																																																																																																								
Thickness	Diameter	From	To																																																																																																																																		
37.5 inches	20 inches	0	39 feet																																																																																																																																		
37.5 inches	16 inches	2	390 feet																																																																																																																																		
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>Canyon</u> Address of Well Site <u>Between Garrity and Flamingo</u> (give at least name of road) T. <u>3</u> N. <u>3</u> or S. <u>3</u> R. <u>55</u> E. <u>33</u> S. <u>4</u> E. <u>2</u> or W. <u>2</u>	USE ADDITIONAL SHEETS IF NECESSARY -- FORWARD THE WHITE COPY TO THE DEPARTMENT																																																																																																																																				

Date	4/12/05	# of pages	1
Post-it Fax Note	7671	From	SINGLE
To	CHRISTEN FERRILL	Co.	DOOR
Contact	SPF WATER	Phone #	287-4932
	383-4140	Fax #	287-6700
	383-4150		

APR 6 1976

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

Department of Water Resources

1. WELL OWNER

Name IDAHO STATE SCHOOL, HOSPITALAddress NAMPA, IDAHO

Owner's Permit No. _____

7. WATER LEVEL

Static water level 65 feet below land surfaceFlowing? ☐ Yes ☐ No G.P.M. flow _____Temperature 62 ° F. Quality _____

Artesian closed-in pressure _____ p.s.i.

Controlled by ☐ Valve ☐ Cap ☐ Plug

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement☐ Abandoned (describe method of abandoning)

8. WELL TEST DATA

☒ Pump ☐ Bailor ☐ Other

Discharge G.P.M.

Draw Down

Hours Pumped

108040 FT24 Hours

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type)☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

9. LITHOLOGIC LOG

029016

Hole Diam.	Depth		Material	Water	
	From	To		Yes	No
22	0	3	TOP SOIL		
22	3	10	HARD PAN		
22	10	30	LAVA		
22	30	40	LARGE GRAVEL		
16	40	81	SAND, GRAVEL		
16	81	90	SANDY CLAY		
16	90	96	SAND		
16	96	105	YELLOW CLAY		
16	105	120	SANDY CLAY		
16	120	154	SAND		
16	154	160	CLAY (YELLOW)		
16	160	190	SAND/SOME CLAY		
16	190	220	SANDY CLAY		
16	220	242	SAND (MEDIUM)		
16	242	285	CLAY SANDY		
16	285	299	SAND (MEDIUM)		
16	299	330	CLAY		
16	330	352	SANDY CLAY		
16	352	368	CLAY (STICKY)		
16	368	377	SANDY		
12	377	408	SAND CLEAN MEDIUM		
12	408	430	CLAY (DARK)		
12	430	442	SANDY CLAY		
12	442	455	CLAY (STICKY)		
12	455	469	SANDY CLAY		
12	469	495	CLAY		
12	495	522	SAND FINE (CLEAN)		
12	522	526	SAND CLAY (CLEAN)		
12	526	544	SAND (MEDIUM) CLEAN		
12	544	560	CLAY SANDY DRY		

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 16 inches Total depth 560 feetCasing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
<u>375</u> inches	<u>16</u> inches	<u>1</u> feet	<u>368</u> feet
<u>375</u> inches	<u>12</u> inches	<u>18</u> inches	<u>370</u> feet
<u>250</u> inches	<u>8</u> inches	<u>372</u> feet	<u>380</u> feet
<u>250</u> inches	<u>8</u> inches	<u>485</u> feet	<u>517</u> feet
<u>250</u> inches	<u>8</u> inches	<u>542</u> feet	<u>558</u> feet

Was casing drive shoe used? ☒ Yes ☐ NoWas a packer or seal used? ☐ Yes ☐ NoPerforated? ☐ Yes ☐ NoHow perforated? ☐ Factory ☐ Knife ☐ Torch

Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

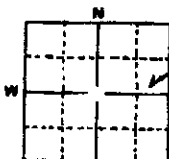
Vent screen installed? ☒ Yes ☐ NoManufacturer's name JANUSONType STAINLESS Model No. 308PS Diameter 2 Slot size 40 Set from 380 feet to 405 feetSD Diameter 40 Slot size 40 Set from 517 feet to 542 feetGravel packed? ☒ Yes ☐ No Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal depth 39 Material used in seal ☐ Cement grout☒ Fudding clay ☐ Well cuttingsSealing procedure used ☐ Slurry pit ☐ Temporary surface casing☒ Overbore to seal depth

6. LOCATION OF WELL

Sketch map location must agree with written location



Subdivision Name _____

Lot No. FWP

Block No. _____

County CANYONSE 1/4 NE 1/4 Sec. 14 T. 3 N. R. 2 W

10.

Work started 11/15/76 finished 3/26/76

11. DRILLERS CERTIFICATION

Firm Name WITT DRILLING Firm No. 55Address CALDWELL, IDAHO Date 3/27/76Signed by (Firm Official) Kenneth Wittand
(Operator) Kenneth Witt

Attachment C

Selected Water Chemistry Data used in Hutchings and Petrich (2002a)

Selected Water Chemistry Data Used in Hutchings and Petrich (2002a)

USGS Station Name	LATd	LATm	LATs	LONG	LONGm	LONGs	T	R	Sec	Total Depth (ft)	Top of Screened Interval (ft)	Bottom of Screened Interval (ft)	TDS (mg/L)	3H (pCi/L)	3H Precision (pCi/L)
Christiansen Replacement	43	31	50	116	6	18	02N	03E	09BAA2	522	504	514	141	2.5	1.9
Blacks Creek Rest Area	43	28	41	116	6	28	02N	03E	28CAC1	975	845	900	167	2.5	1.9
Blacks Creek Rest Area	43	28	41	116	6	28	02N	03E	28CAC1	975	845	900	162	2.5	1.9
Guyer-new deepened	43	31	39	116	6	34	02N	03E	09BCA2	620	570	620	128	2.5	1.9
Micron Shallow Monitor	43	31	37	116	8	43	02N	03E	07DBB1	561	555	561	176	2.5	1.9
Micron Deep Monitor	43	31	37	116	8	46	02N	03E	07DBB2	811	800	811	155	2.5	1.9
Micron No. 5	43	31	42	116	8	0	02N	03E	07ACD1	1217	598	1212	190	2.5	1.9
Tim Knox	43	30	50	116	8	50	02N	03E	18BAC1	642	503	642	156	2.5	1.9
BWC Market St.	43	33	34	116	11	6	03N	02E	35BAB1	944	510	912	154	2.5	1.9
BWC J.R. Flat Prod.	43	32	33	116	11	32	02N	02E	02BBC2	567	435	536	175	4.5	1.9
1333 Lk Hazel	43	32	43	116	11	45	02N	02E	03AAB2	395	368	392	197	2.5	1.9
UWID Cassia No. 1	43	35	47	116	12	53	03N	02E	16DAA1	1124	200	400	33	2.6	2.6
UWID Cassia No. 2	43	35	47	116	12	53	03N	02E	16DAA2	1124	850	1105	219	3.2	1.9
UWID Cassia Monitor	43	35	47	116	12	53	03N	02E	16DAA3	1088	525	605	204	6.7	1.9
BWC MAC	43	33	26	116	15	8	03N	02E	32BBC1	525	418	525	237	-0.3	3.8
BWC Sunset West	43	33	4	116	16	24	03N	01E	36DAD1	620	515	603	204	2.5	1.9
BWC Amity	43	33	40	116	16	54	03N	01E	36ABB1	675	519	670	237	7	1.9
BWC Westmoreland	43	38	21	116	16	11	04N	02E	31CBD1	900	310	901	127	7.4	8.3
BWC Goddard No. 1	43	38	43	116	17	16	04N	01E	36BAC1	1005	902	960	156	1.6	3.2
BWC Goddard No. 2	43	38	42	116	17	16	04N	01E	36BAC2	551	474	545	239	6.1	3.8
TVHP No. 1-zone 1	43	40	48	116	18	44	04N	01E	14CCB1	1005	300	340	162	2.5	1.9
TVHP No. 1-zone 2	43	40	48	116	18	44	04N	01E	14CCB2	1005	270	290	155	2.5	1.9
TVHP No. 1-zone 3	43	40	48	116	18	44	04N	01E	14CCB3	1005	210	250	200	2.5	1.9
TVHP No. 1-zone 4	43	40	48	116	18	44	04N	01E	14CCB4	1005	130	170	188	64	4.5
HP	43	39	22	116	19	2	04N	01E	27ADC1	700	580	700	112	2.5	1.9
S. Co. Braddock (Edgeview)	43	35	58	116	20	2	03N	01E	16ADDA1	495	412	477	211	2.5	1.9
S. Co. Braddock (Edgeview)	43	35	58	116	20	2	03N	01E	16ADDA1	495	412	477	208	2.5	1.9
St. Lukes Med. Ctr.-887	43	36	5	116	21	0	03N	01E	16BCA1	902	770	900	162	2.5	1.9
Meridian No. 15	43	37	3	116	24	48	03N	01W	11AADA1	765	465	765	172	4.2	1.9
Meridian No. 19-Test	43	37	30	116	25	0	03N	01W	03AAA2	1040	340	420	177	2.5	1.9
Meridian No. 19-Production	43	37	30	116	25	0	03N	01W	03AAA3	732	540	732	393	2.5	1.9
4410 N. Star Rd., Nampa	43	33	30	116	29	20	03N	01W	32BBD1	456	454	454	94	2.5	1.9
Nampa No. 12	43	35	47	116	31	10	03N	02W	13DBBD1	602	404	598	325	23	2.6
ID SS & State Hosp. No. 4	43	36	9	116	31	58	03N	02W	14ADA1	560	377	544	355	13	2.6
3212 S. Stanford	43	32	18	116	34	54	02N	02W	04DBB1	458	444	444	279	2.5	1.9
Nampa No. 9	43	36	2	116	36	38	03N	02W	17BCB1	461	368	460	172	2.5	1.9
Caldwell No. 16 (Valley View School)	43	37	24	116	40	54	03N	03W	03DBC2	553	420	535	177	2.5	1.9
Caldwell No. 15	43	38	23	116	41	25	04N	03W	34CB1	600	200	460	393	31	2.6
21381 Hwy 20-26	43	43	49	116	49	11	05N	04W	33ACBA1	290	290	290	203	2.5	1.9
SQW-Wright	43	42	25	116	49	31	04N	04W	04CDC1	420	387	387	203	3.8	1.9
25595 Don Lane	43	44	43	116	50	49	05N	04W	29BCAA1	320	310	310	280	2.5	1.9
Parma No. 10	43	47	33	116	56	15	05N	05W	04DCD1	505	245	479	391	2.5	1.9
23605 Rodeo Lane	43	42	52	116	56	30	04N	05W	04BDD1	325	317	317	206	92	5.9
Parma Research Sta.	43	48	5	116	56	30	05N	05W	04BDDA1	397	321	385	206	2.5	1.9

Attachment D

Selected Water Chemistry Data from Scanlan Engineering (1995)

**OWNERSHIP, CONSTRUCTION, AND SELECTED CHEMISTRY DATA FOR SELECTED WELLS LOCATED
WITHIN 1/4-MILE OF SIMPLOT DAIRY PRODUCTS NAMPA PLANT (See Scanlan Engineering, 1995, for complete data)**
(See Scanlan Engineering, 1995, for complete data)

Well No.	Well Site Address	Current Owner (Log Owner)	Well Data Source	Total Depth	1st Perf Depth	Static Depth	Year Drilled	TDS (mg/L)	NO3-N (mg/L)	Total Mn (mg/L)	Total Fe (mg/L)	Cl (mg/L)	SO4 (mg/L)
43	16562/88 Hemlock Ct	Kevin Robertson/Doug Howell	owner	140				378	1.9	<0.02	0.28	23.6	98.2
18	16427/29 N. McDermott	Jim Paul	owner	100				456	2.0	<0.02	<0.10	22.6	93.1
17	15861 S. McDermott	Steve Whittaker	owner	100				424	2.1	<0.02	0.11	13.6	73.9
10	4912 Garrity	Swiss Village Cheese Factory	log	301	265	flowing	72	414	1.3	<0.02	<0.10	23.2	88.9
24	16376 Star Road	Jim Baune	USGS	300			35	460	2.1	<0.02	<0.10	38.7	126
56	5063 Canary Lane	Bill Newbold	log	272	261	0	94	436	0.0	0.12	2.07	29.2	103
58	5117 Canary Lane	Myrna & Wayne Barress (Hull)	log	263	253	flowing	93	424	1.9	0.02	0.38	24.8	111
57	5089 Canary Lane	Ernie Corrigan	log	260	250	flowing	93		0.0				
15	950 North McDermott	Weldon Bastian	owner	240				246	0.0	<0.02	<0.10	11.7	34.4
1	6198 Treasure Valley Way	IdaCold LLC	log	220	203		95						
23	16265 Star Road	Aluma-Glass	log	208	182	8	92	354	0.0	0.12	0.1	22	79.3
20	4825/55 Wanz Lane	Jim Wanzer	log	184	177	6	94	484	2.4	0.03	0.34	27.9	123
53	16630 Mulberry	John McGuire	log	180	170	5	92						
44	16589 Hemlock Ct	Dave and Trish Shirts	log	175	169	7	93	314	1.1	0.12	0.33	20.5	75.8
5	4393 Garrity	Walt Wethered	log	170	160	11	93	474	2.1	<0.02	<0.10	26.5	106
33	4553 Hemlock Way	Michelle Higley	owner	150				348	1.8	<0.02	0.2	24.5	102
45	16601 Hemlock Ct	Mike McElroy (Cherry Ln)	log	148	139	1	93	360	1.6	0.08	0.38	27.8	93.9
34	4557 Hemlock Way	Jennifer Norman (Cherry Ln)	log	147	142	5	92	418	1.9	0.02	0.23	25.6	98.8
54	5047 Canary Lane	Bill Kendall (Artistry)	log	131	119	2	94	436	1.6	0.05	0.43	20.5	97.2
13	776 North McDermott	Mike Boyd	log	129	118	flowing	95						

Well No.	Well Site Address	Current Owner (Log Owner)	Well Data Source	Total Depth	1st Perf Depth	Static WL Depth	Year Drilled	TDS (mg/L)	NO3-N (mg/L)	Total Mn (mg/L)	Total Fe (mg/L)	Cl (mg/L)	SO4 (mg/L)
29	16574 Star Road	Frank Caruso	log	120	109		93	248	1.0	<0.02	<0.10	19.4	65.7
55	5051 Canary Lane	Mitch & Chris Thomas	log	115	102	3	94	488	2.1	0.03	0.92	26.4	122
31	4545 Hemlock Way	Kevin and Trina Tracy	log	110	100	5	92	380	1.8	<0.02	<0.10	23.8	92.1
41	4911? Hemlock Way	John Spencer	log	110	105	flowing	95	296	0.0	0.09	1.46	19.4	68.3
21	15918 Robinson	Donald Sedlacek	log	105	94	8	77	470	2.7	<0.02	<0.10	14.2	71.4
52	16520/16600 Mulberry	Stewart Coyier/Reilly	log	95	88	2	92	384	1.6	0.02	0.33	26.8	91
42	4921 Hemlock Way	Bob Young	log	85	78	1	94	294	1.3	<0.02	<0.10	21.6	74.5
25	16378 Star Road	Jim Baune	log	80	75	8	87	550	3.2	<0.02	<0.10	56.5	98.9
39	4897 Hemlock Way	Carolyn Pierce	owner	80			1977±	268	1.1	<0.02	<0.10	20.5	64.6
11	7074 South McDermott	Monty Bryant (C. Vincent)	log	63	58.5		89	302	2.7	<0.05	<0.3		
48	16547 Mahogany	Bruce Gilbert	owner	60				334	1.6	<0.02	0.18	21.6	83.6
40	4901 Hemlock Way	Rick and Karen Luther	owner	35				324	1.4	<0.02	0.48	26.3	82

Nelson, Dan

From: Nelson, Dan
Sent: Wednesday, March 30, 2005 10:39 AM
To: Spackman, Gary
Cc: Lester, Steve
Subject: Sorrento Lactalis Permit

Hello Gary,

Steve asked if I would call Mike Creamer, and get an update of on the Sorrento Lactalis permit. I spoke with Mr. Creamer today, and he told me that the additional information you requested is still being compiled by SPF Water Engineers. Mr. Creamer told me that Christian Peitrich is currently working on compiling the needed information to better show the hydraulic relationships in the area, but has been delayed due to ESPN legislative issues. Once Mr. Peitrich has compiled the information, Terry Scanlan will put the information into a package to be sent to us. Mr. Creamer told me he will let me know as soon as the package is ready.

If you need anything else, please let me know.

Dan Nelson
Western Region



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

October 21, 2004

AMY J VACLAVIK P E
MCMAHON ASSOCIATES INC
PO BOX 1025
NEENAH WI 54957-1025

Re: Sorrento Lactalis Wastewater Treatment Facility

Dear Ms. Vaclavik:

I am responding for the Idaho Department of Water Resources (IDWR) regarding your recent letter of October 11 in which you discussed the wastewater treatment proposal for the Sorrento Lactalis cheese facility in Nampa.

Sorrento Lactalis holds an existing water right and has filed an Application for Permit for a new water right for this facility. The existing and proposed water rights involve diversion of ground water for the operation. I understand that wastewater will be treated and discharged to surface water drains instead of being land applied.

Discharge of water to the drains probably requires consent from the owners/operators of those drains (irrigation delivery organizations). IDWR is not involved with that consent process.

Water quality issues will most likely be addressed by working with the Idaho Department of Environmental Quality (IDEQ). Please contact that agency at 208-373-0502 if you have not already initiated discussions with IDEQ.

IDWR does not require any permits in this matter except water right approval (Application for Permit) and an associated Application for Drilling Permit for any new well to be constructed. Sorrento Lactalis retained a local consultant to handle the water right and well drilling approval process. Additional IDWR comments are not necessary since Sorrento Lactalis is already seeking the necessary approvals from this agency.

Thank you for your recent letter in this matter. Please contact me 208-334-2190 if you need more information.

Sincerely,

Steve Lester
Water Rights Supervisor



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

October 18, 2004

SPF WATER ENGINEERING LLC
ATTN TERRY SCANLAN
600 E RIVER PARK LANE STE 105
BOISE ID 83706

RE: APPLICATION FOR PERMIT –SORRENTO LACTALIS, INC.

Dear Mr. Scanlan:

On 5/27/2004 I wrote you a letter concerning the Sorrento Lactalis, Inc. application for permit's mitigation plan. In this letter I requested information that would show how the mitigation plan for this permit would compensate the withdrawal of ground water from the proposed water-bearing zone. You sent a reply to my request on 9/18/2004 by way of a letter and accompanying memo.

Due to the complexity of the issues in your proposal, I forwarded this information to the Western Region Supervisor, Steve Lester for further analysis. Mr. Lester then set up a meeting with Gary Spackman, Jeff Peppersack, John Westra, Shelley Keen, and himself to discuss the proposal. The general consensus of this group was that the mitigation plan addresses surface water and shallow ground water, but fails to address mitigation for pumping ground water below the first confining layer where the water will be drawn.

I will hold your application in my office for 30-days to give you the opportunity to re-work the mitigation plan. If an acceptable mitigation plan is not received within the 30-days, this permit will be held in our office's general files until processing in Basin 63 is resumed, or a mitigation plan is submitted that mitigates the withdrawals of water from the water-bearing zone described in the permit.

If you have any questions or concerns please contact me at the above address.

Respectfully,

A handwritten signature in black ink, reading 'Daniel A. Nelson'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Daniel A. Nelson
Sr. Water Right Agent

MEMORANDUM

TO: Dan Nelson
FROM: Steve Lester 
DATE: October 18, 2004
RE: Sorrento Lactalis Application for Permit

I met with Gary Spackman, Jeff Peppersack, Shelley Keen and John Westra on October 15, 2004, to discuss the mitigation plan for this application. This was the result:

- Application Processing Memo #59, "Processing of Applications to Appropriate Water in the Lower Boise River Basin," provides the most current guidelines to apply to this application.
- The effect on surface water tributary to the Boise River below Star is not a problem.
- Ground water above the first confining layer has a somewhat "immediate" link to surface water. Pumping from this ground water zone is not a problem in this case because the surface water issue has been adequately addressed.
- Mitigation for pumping ground water from below the first confining layer has not been addressed.
- The application cannot be processed until mitigation for the deeper ground water has been adequately covered.

Please let me know if you have any questions or want any help discussing this with the consultant.

McMAHON ASSOCIATES, INC.

ENGINEERS ■ ARCHITECTS
PROJ. MGRS. ■ SURVEYORS

1445 McMahon Drive Neenah, WI 54956
Mailing Address: P.O. Box 1025 Neenah, WI 54957-1025
Tel: (920) 751-4200 Fax: (920) 751-4284
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October 11, 2004

RECEIVED

OCT 15 2004

WATER RESOURCES
WESTERN REGION

Mr. John Westra
Idaho Department Of Water Resources
Western Region
2735 Airport Way
Boise, ID 83705-5082

Re: Sorrento Lactalis
Wastewater Treatment Facility
- Environmental Review
McM. No. S0088-910171.00

Dear Mr. Westra:

We previously contacted your agency in late 2001 regarding a planned Wastewater Treatment Facility for the Sorrento Lactalis Cheese Manufacturing facility in Nampa, Idaho.

During the project review process, the U.S. Environmental Protection Agency (EPA) indicated the plant effluent could be discharged to the Purdam Drain instead of the Rachel Drain, as originally proposed. Therefore, we request you reconsider possible impacts that the project with effluent discharge to Purdam Drain could pose to the project area.

The proposed wastewater treatment plant will be capable of handling all of the facility's process wastewater and meeting current regulatory requirements. Enclosed is Figure #1, which shows the project location, and Figure #2, which shows the plant and discharge location. The point of discharge would be at 43°36'45" North latitude and 116°29'35" West longitude. The plant is located in Canyon County, Range 1 West, Township 2 North, Section 8. Purdam Drain flows into Mason Creek approximately 5-miles northwest of the plant. Mason Creek then flows into the Boise River, northwest of the City of Cadwell.

Please provide information that is available regarding environmental concerns within the project area that could potentially be impacted by the construction of the proposed Treatment Facility. Please advise us of any regulations or permits that would be required from your agency.

Page 2
October 11, 2004

Mr. John Westra
Idaho Department Of Water Resources
Western Region

If you need further information or wish to discuss this project, please call me at the telephone number listed above. Your prompt review and comments on this project will be greatly appreciated. Thank you for your consideration.

Very truly yours,

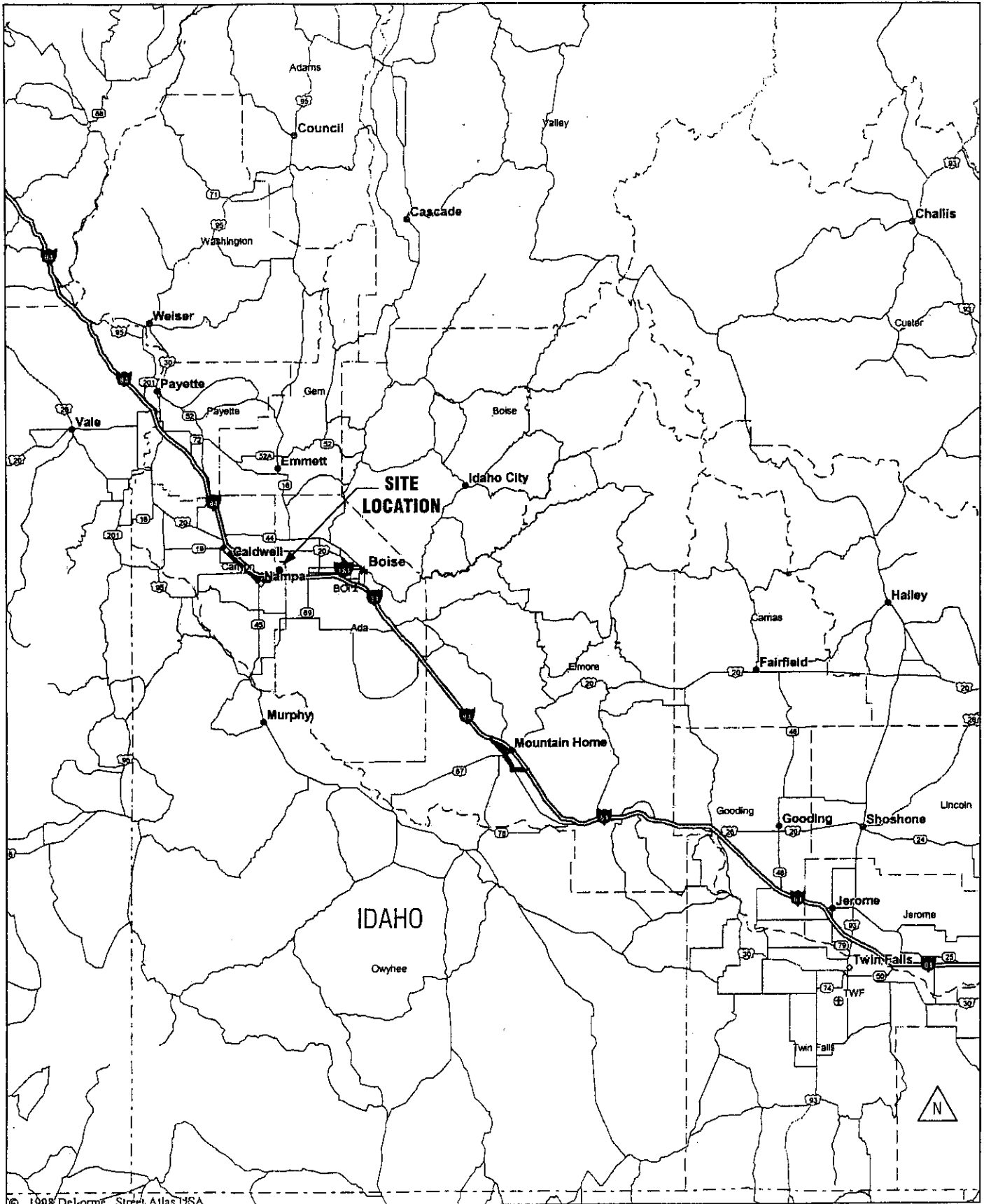
McMahon Associates, Inc.


Amy J. Vaclavik, P.E.
Associate

AJV:smdt

cc: Robert Planter - Sorrento Lactalis
Dusty Gilliher - Sorrento Lactalis

Enclosure: Figures #1 & #2



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McMAHON
ASSOCIATES, INC.

ENGINEERS ■ ARCHITECTS
PROJ. MGRS. ■ SURVEYORS

FIGURE 1 LOCATION MAP

SORRENTO LACTALIS USA
WASTEWATER TREATMENT FACILITY

MCM #S0088-910171 2/03

ID: ppt\2003\mcm wls\SORRENTO NAMPA.PPT

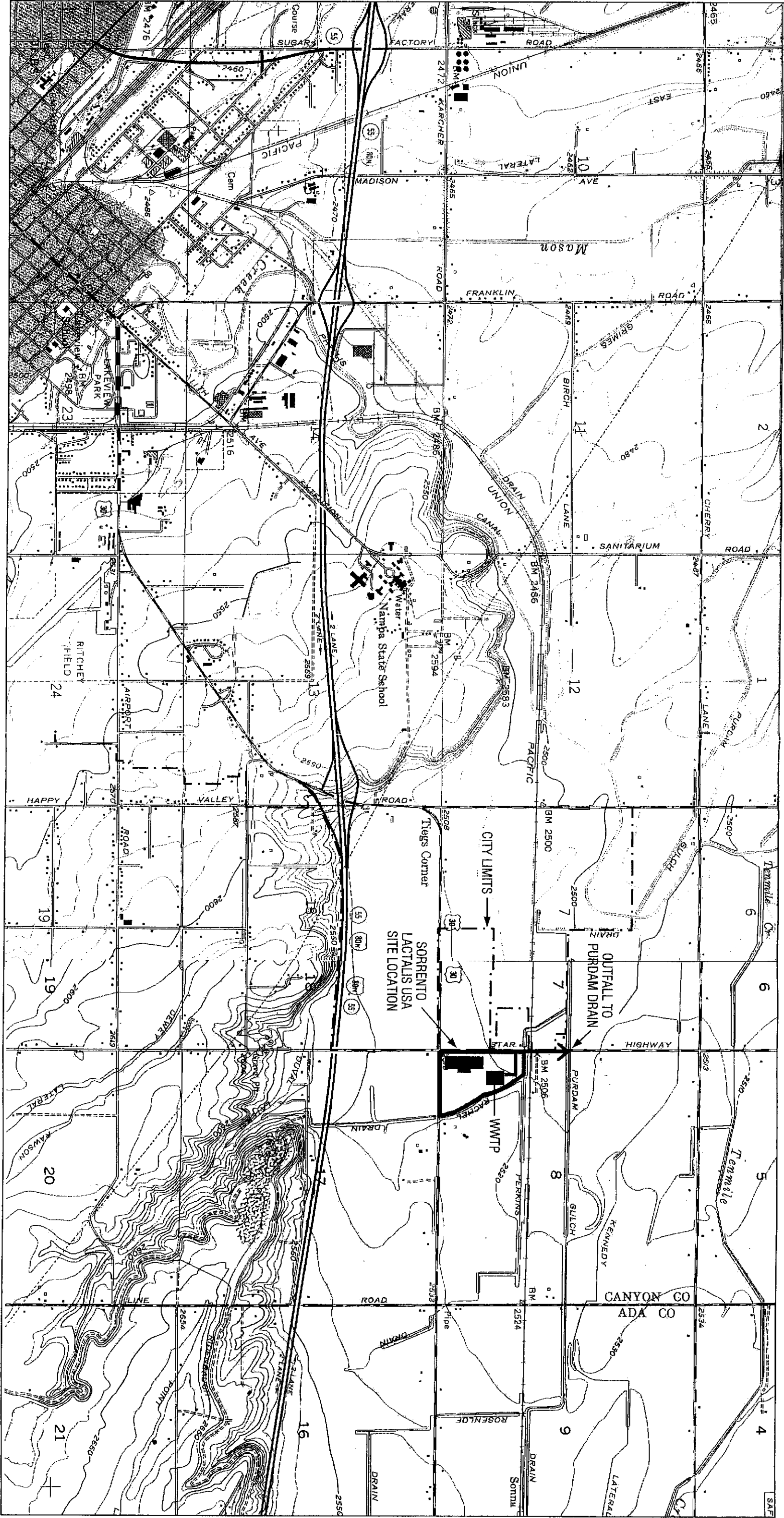


FIGURE 2
SITE MAP

SCALE: 1" = 2000'

SORRENTO LACTALIS USA
WASTEWATER TREATMENT FACILITY

MCM #S0088-9-10171 9/24/04
ID: pnt2004nrcm wbsorrento namr11x17.ppt



RECEIVED

SEP 22 2004

WATER RESOURCES
WESTERN REGION

September 18, 2004

Dan Nelson
Idaho Department of Water Resources
2735 Airport Way
Boise, ID 83705

Subject: Application for Water Right Permit – Sorrento Lactalis, Inc.

Dear Dan:

In response to your letter of May 27, 2004, I have enclosed revised remarks for attachment to Sorrento Lactalis' application for permit. The revised remarks include a mitigation plan that describes how the new groundwater appropriation by Sorrento will be mitigated by discharge of the water to the local drain ditch system.

Also enclosed is a memo describing the groundwater and surface water hydrology in the vicinity of the Sorrento Plant. The purpose of the memo is to support the mitigation plan.

Please contact me following your review of this information.

Sincerely,

Terry M. Scanlan, P.E.

Cc: Dusty Galliher – Sorrento Lactalis
Mike Creamer – Givens Pursley

Remarks and Mitigation Plan. Sorrento Lactalis, Inc. (Sorrento) proposes appropriation of 1.0 cfs of groundwater for commercial use at a cheese processing plant. Sorrento currently diverts 1.6 cfs of groundwater and 400 afa under license 63-31628. In the past, all wastewater from the facility has been land applied. Sorrento is currently in the process of designing and permitting a wastewater treatment plant that will allow the majority of Sorrento's treated wastewater flow to be discharged to the Purdam Gulch Drain under an NPDES permit. The Purdam Gulch Drain is tributary to the Boise River, via Mason Creek. The Purdam Gulch Drain and other local drains are perennial streams that receive discharge of shallow groundwater from the local aquifer system.

All groundwater appropriated under the proposed permit (i.e., diversion at rates of more than 1.6 cfs or annual diversion of more than 400 af) will be discharged as treated wastewater to the Purdam Gulch Drain. As a result, the new appropriation will be fully mitigated relative to the water supply in the Boise River Basin.

Aquifers in the Sorrento plant vicinity discharge to the local drain ditch system. We anticipate that groundwater pumping could eventually reduce discharge from the aquifer to the drains. However, the proposed wastewater discharge will increase flow in the drains by an amount greater than the amount pumped under this permit (because the discharge will include water produced under the proposed permit and up to 400 afa from license 63-31628), thereby offsetting any depletion to the drain system resulting from groundwater pumping under the proposed permit. Hydrographs for local wells in the area do not show substantial declines, even though groundwater pumping has increased in recent years as the area has developed. Therefore, negative impacts to existing surface water or groundwater rights are not anticipated.

Sorrento proposes monitoring the water produced under this permit and license 63-31628, and the wastewater discharge from the water treatment plant to the Purdam Gulch Drain. Sorrento proposes to annually report to the Department of Water Resources the monthly groundwater production and monthly wastewater discharge as a condition of approval for this permit.

Water-bearing zone proposed for appropriation is 50 to 400 feet.

**SPF**Water Engineering, LLC
water resource consultants**MEMO****RECEIVED****SEP 22 2004**WATER RESOURCES
WESTERN REGION**To:** Dan Nelson, Idaho Department of Water Resources**From:** Terry Scanlan, P.E., P.G. *TMS***Subject:** Characterization of Hydrology in The Vicinity of the Sorrento Lactalis Plant
Near Nampa, Idaho**Date:** September 18, 2004

This memo describes hydrogeology and hydrology in the vicinity of the Sorrento Lactalis Plant near Nampa, Idaho. The purpose of this characterization memo is to support a mitigation plan associated with Sorrento's pending application for permit. The mitigation plan involves discharge of treated wastewater to the Purdam Gulch Drain system to offset pumping from underlying aquifers.

LAND USE

The Sorrento facility is located at the northeast corner of the intersection of Star Road and Franklin Road in Canyon County (Figure 1). The area surrounding the plant has historically been utilized primarily for irrigated agriculture. In recent years, some of these surrounding lands have been converted to residential subdivisions and industrial facilities.

GEOLOGY

The geology of the area consists of a layered sequence of lacustrine and alluvial sediments, overlain by a mantle of loess (wind deposited silt) and alluvial soils. Site soils are typically fine-grained loams and silt loams which average five feet or more in thickness. These soils formed in loess or loess-like alluvium.

Below the soil, a layer of Quaternary-aged alluvium extends to a depth of approximately 40 feet. The alluvium consists of coarse-grained sand and terrace gravels deposited within the floodplain of the ancestral Boise River.

Beneath the alluvium are Tertiary-aged lacustrine (lake-bed) sediments of the Idaho Group. These sediments consist primarily of interbedded layers of sand and clay, which extend to an estimated depth of more than 2,000 feet. Rhyolitic tuff and basalt are sometimes interbedded within these sediments.

HYDROGEOLOGY AND GROUNDWATER OCCURRENCE

From a regional standpoint, the Boise River Valley overlies a multi-layered hydraulically interconnected aquifer system. On a local scale, this aquifer system can be subdivided into a shallow water-table aquifer zone that is underlain by progressively-more confined

aquifer zones. Review of groundwater quality and water-level data from Sorrento monitoring wells and nearby domestic wells demonstrates that, from a hydrogeochemical and hydraulic viewpoint, the aquifer can be loosely divided into three zones of interest in the upper 500 feet of sediments in the vicinity of the Sorrento plant.

- Groundwater is found in the shallow zone at depths ranging from less than five feet below ground surface in low-lying lands, to depths of approximately 15 feet in upland areas. The shallow aquifer zone extends to an average depth of about 40 feet. The shallow zone is found in the alluvial gravels and is typically unconfined, although it may be partially confined on a local basis by overlying fine-grained soils. The shallow zone may extend partially into the Idaho Group sediments, where Idaho Group sands underlie the alluvium. This aquifer is tapped by Sorrento Lactalis monitor wells and is characterized by a wide range of TDS and nitrate concentrations.
- The intermediate zone is tapped by most local domestic wells and many local irrigation wells. This aquifer extends from about 40 feet to perhaps 200 feet, and is characterized by moderate levels of both TDS and nitrate. Wells completed in the intermediate zone generally do not flow at land surface.
- The deep zone is tapped by the deeper domestic, industrial, and irrigation wells. It is generally found below 200 feet, and is characterized by low TDS and low nitrate concentrations. Wells completed in the deep zone often flow at the ground surface in the Sorrento Lactalis area. This artesian flow suggests greater hydraulic heads with depth

The aquifers zones in the Idaho Group sediments are confined or semi-confined, and generally separated from the shallow zone by clay or silt layers. Upward leakage of groundwater is likely occurring from the deep and intermediate aquifer zones into the shallow zone because of the upward hydraulic gradient in the area.

GROUNDWATER RECHARGE AND DISCHARGE

Recharge to the shallow groundwater system in the Boise Valley comes primarily from infiltration of irrigation water, both from applied irrigation and from canal leakage. Additional shallow groundwater recharge is derived from infiltration of precipitation, upward leakage of groundwater from deeper aquifers, and septic tank wastewater percolation. Discharge from the shallow groundwater system is primarily to surface channels, drainage ditches and shallow irrigation wells.

In the vicinity of the Sorrento plant, the Purdam Gulch Drain and tributary drains are the primary discharge points for groundwater. Scanlan Engineering measured flows of 45 cfs and 18 cfs in October and December 2003, respectively, in the Purdam Gulch Drain at a location approximately 3,000 feet northwest of the Sorrento Facility. The December flow measurement was taken during a dry period with no contribution from precipitation or irrigation. As a result, this 18 cfs flow rate is probably representative of typical post-

irrigation season groundwater discharge (i.e., baseflow) in the area. An 18 cfs discharge rate is equivalent to an annual discharge of approximately 13,000 acre feet of groundwater annually. The discharged groundwater flows through the Purdam Gulch system to Mason Creek. Mason Creek flows into the Boise River near Caldwell.

GROUNDWATER LEVELS

Groundwater levels in the shallow aquifer are controlled by drain ditches. The drains induce discharge of shallow groundwater, and are required to prevent water logging of soils in irrigated areas (with associated salinity increases) and septic system failures in residential areas. The water levels in the shallow aquifer zone fluctuate seasonally (primarily because of irrigation influences) but show no significant long-term trend upward or downward. Water levels in shallow monitoring wells in the plant vicinity have shown no long-term increase or decrease (other than annual fluctuations) since the early 1990s. Water level hydrographs from Sorrento monitoring wells are shown on Figure 2. A hydrograph for a 44-foot deep well (04N01W35AAA1) monitored by the USGS is shown on Figure 3. This well is located 4 miles northeast of the Sorrento site, and has been monitored since the early 1930s. The hydrograph shows no long-term change in water level.

Water levels in the intermediate and deep zones are influenced by groundwater withdrawals and hydraulic heads in shallow aquifer zones. Groundwater withdrawals have increased locally for municipal, irrigation, and domestic purposes due to urbanization in Nampa, Meridian, and surrounding areas. As a result, water levels, particularly in the deeper (more confined) aquifers zones, have shown minor declines. An expected effect of these minor declines would be less upward discharge to shallow zones, and less discharge of groundwater to drains. Water level hydrographs from local wells in the intermediate and deep zones are shown on Figures 3 and 4.

Appropriation of groundwater in the vicinity of the Sorrento plant may result in water level drawdown in the deep or intermediate aquifer zone beneath the plant. An impact of water level drawdown in the deep aquifer zone could be less upward leakage to the shallow aquifer zone. Less upward leakage to the shallow aquifer zone will result in less shallow groundwater discharge to drain ditches and surface channels.

SUMMARY

1. The shallow aquifer and surface water channels (drain ditches) are hydraulically connected in the vicinity of the Sorrento plant.
2. Pumping of groundwater from aquifers beneath the plant is anticipated to result in decreased groundwater discharge to the drain ditch system.
3. Discharge of treated groundwater to the drain ditch system under Sorrento's proposed water right permit, and also under Sorrento's existing water right license (63-31628), will offset any pumping induced depletions to the drain flows.

4. Localized drawdown associated with Sorrento's pumping under the proposed water right permit is not anticipated to injure existing water rights.

Figure 2: Sorrento Lactalis monitoring well hydrographs

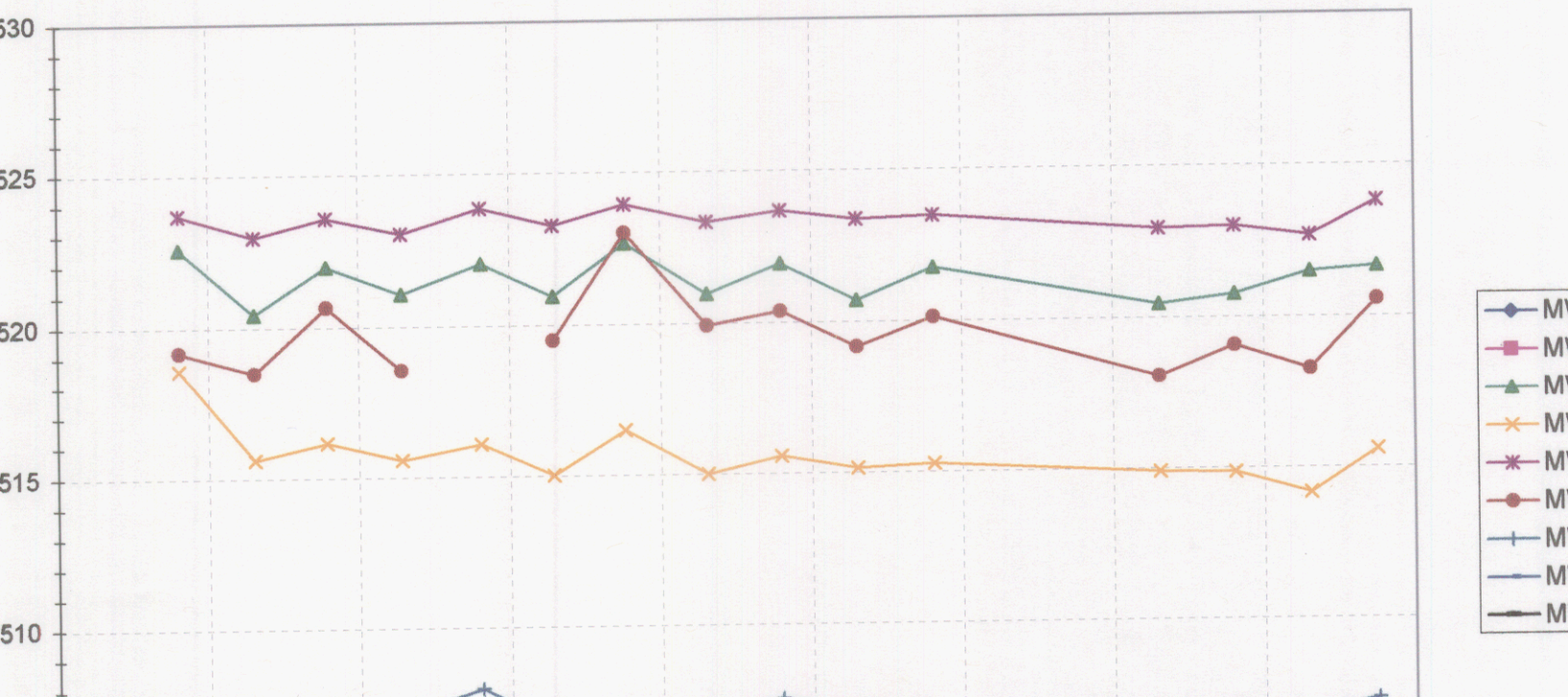


Figure 3: Group 1 hydrographs from wells in the vicinity of Sorrento Lactalis

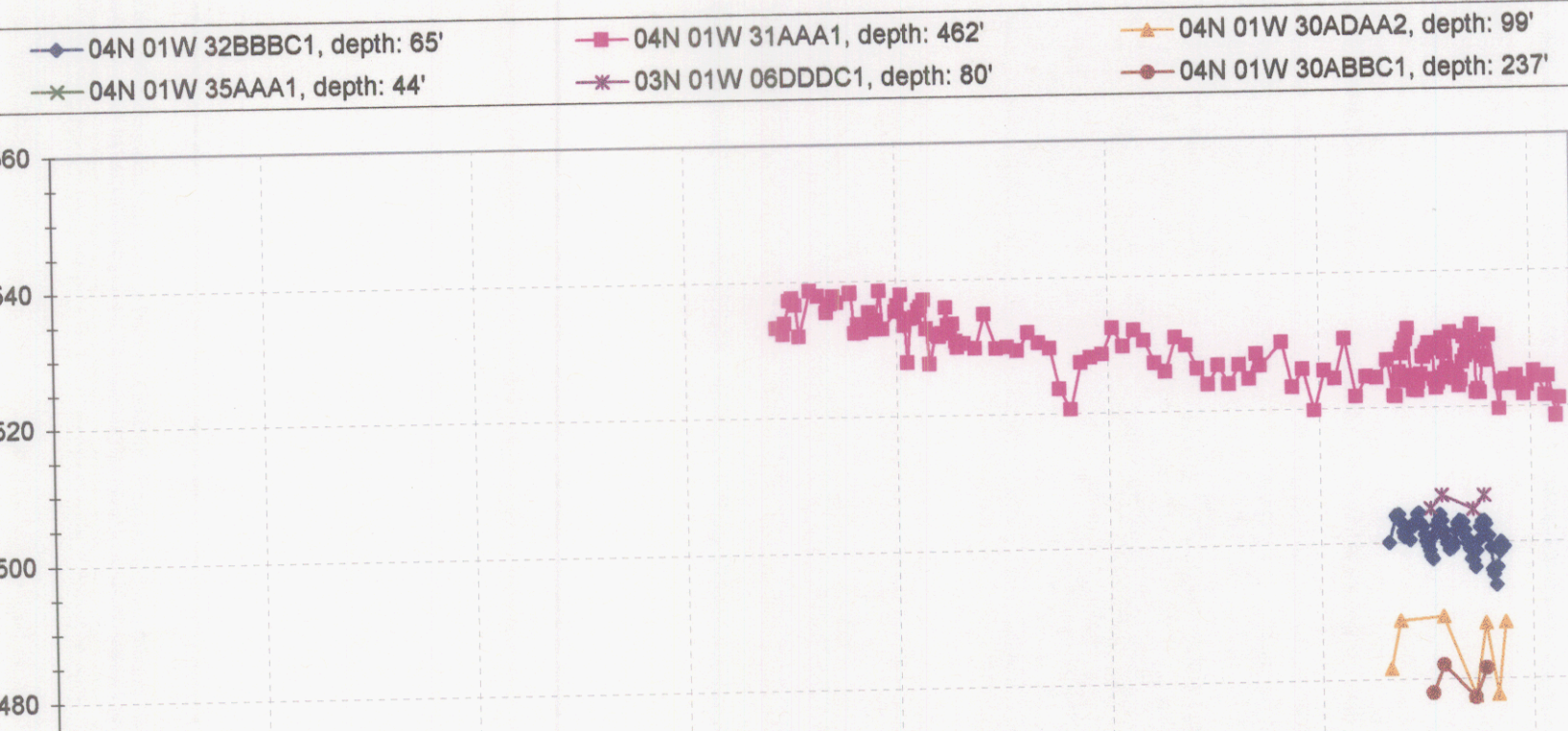
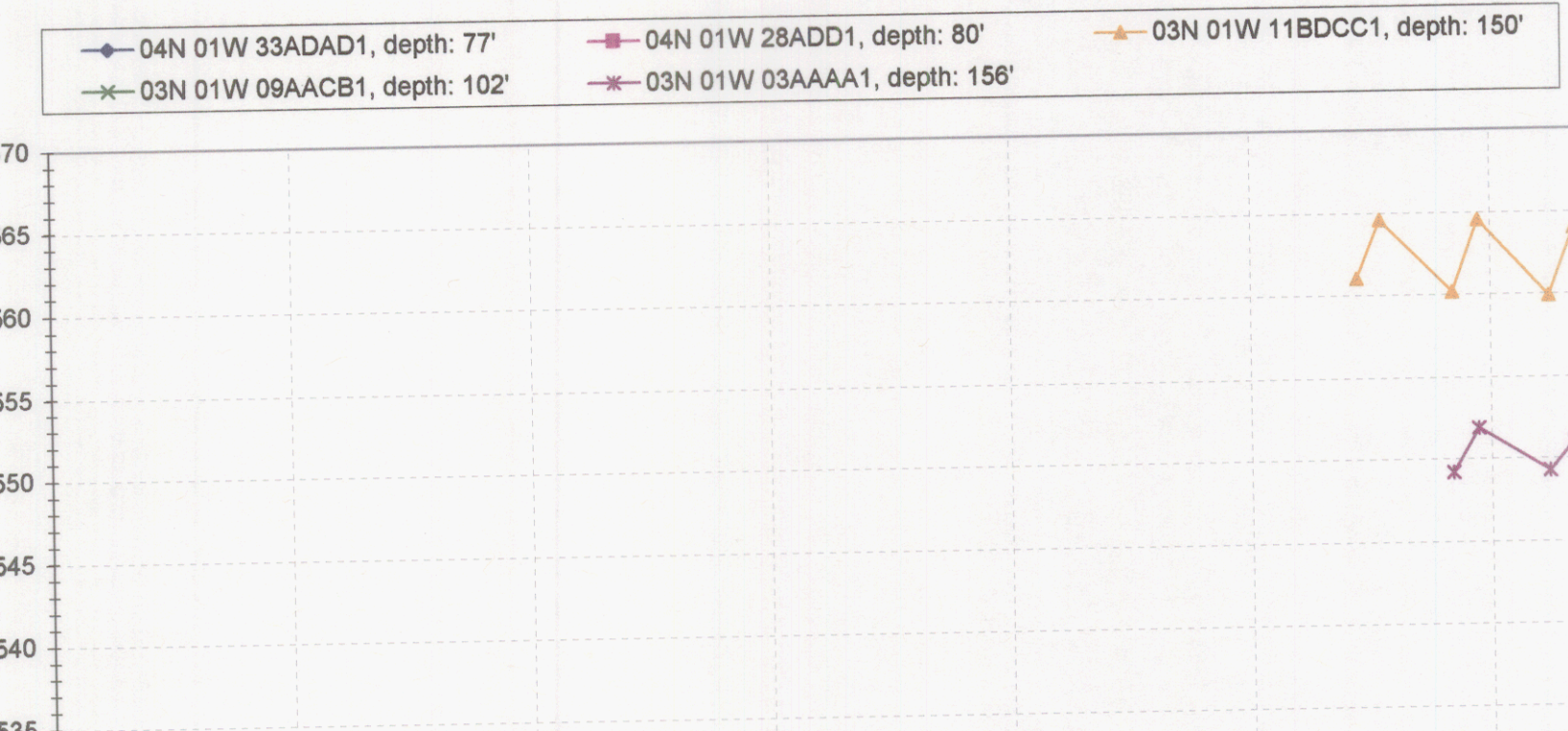


Figure 4: Group 2 hydrogrpahs from wells in the vicinity of Sorrento Lactalis



EXPLANATION

Monitoring wells in vicinity
of Sorrento Lactalis

- Wells associated with
group 1 - Figure 3
- Wells associated with
group 2 - Figure 4

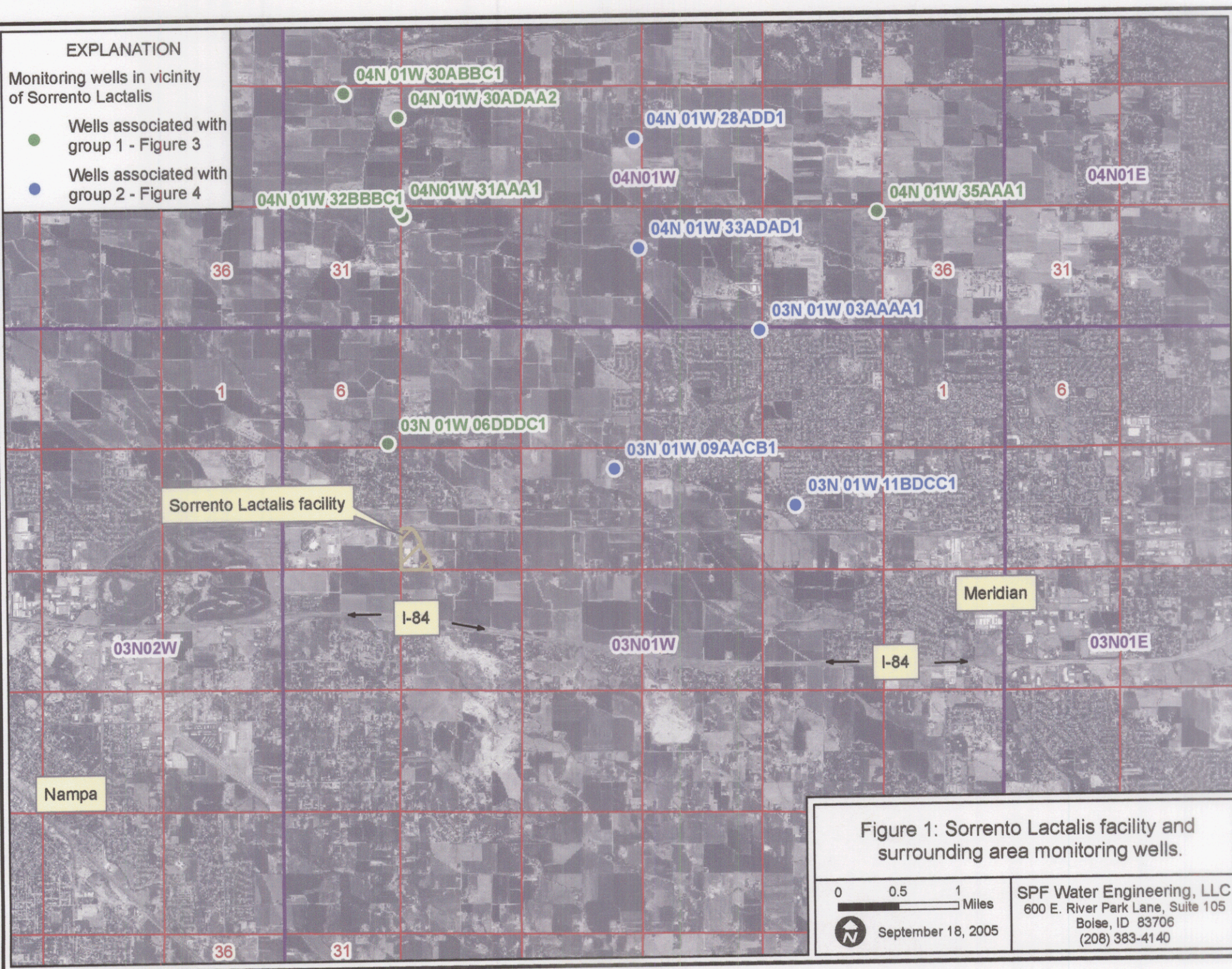


Figure 1: Sorrento Lactalis facility and
surrounding area monitoring wells.

Figure 2: Sorrento Lactalis monitoring well hydrographs

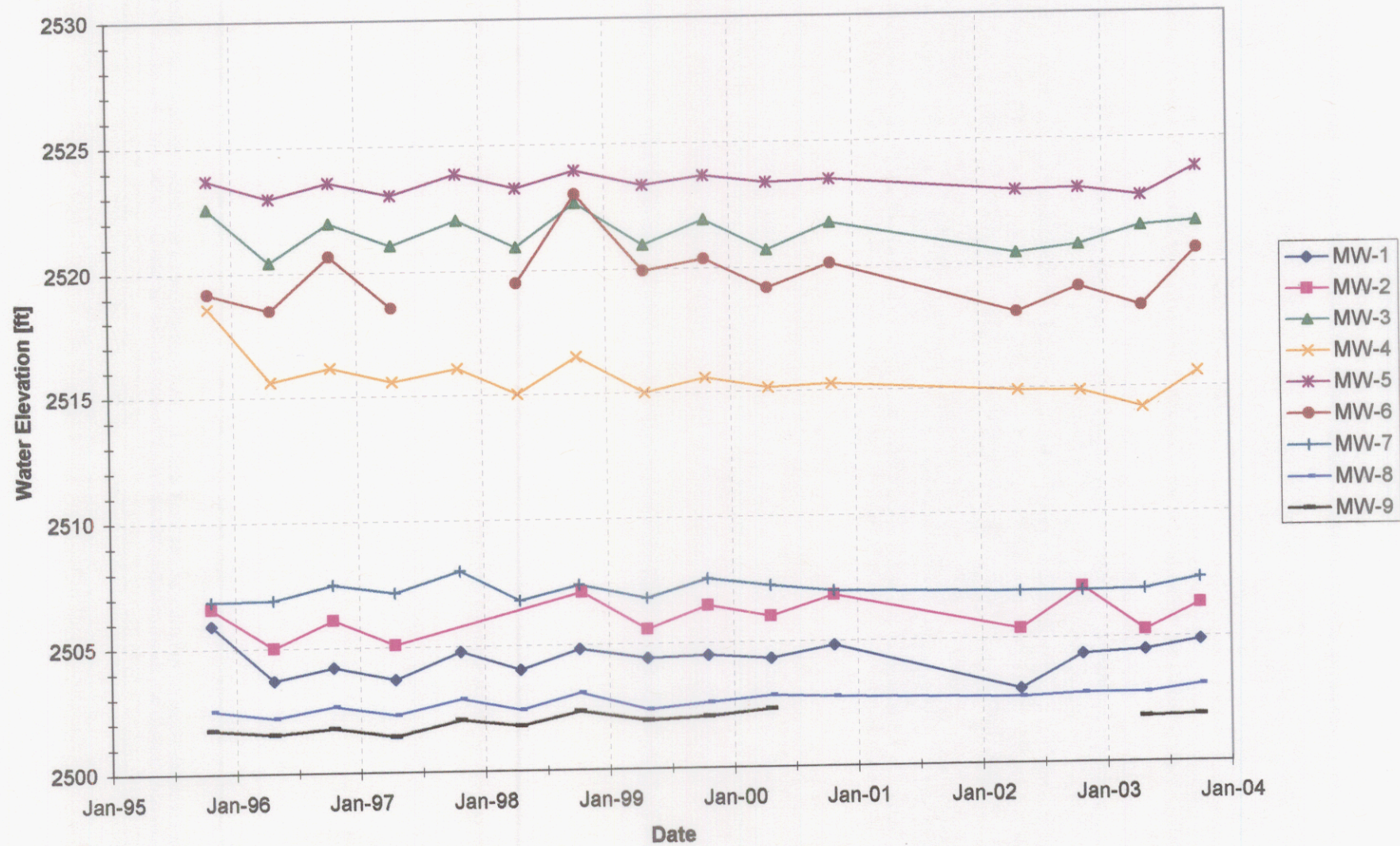


Figure 3: Group 1 hydrographs from wells in the vicinity of Sorrento Lactalis

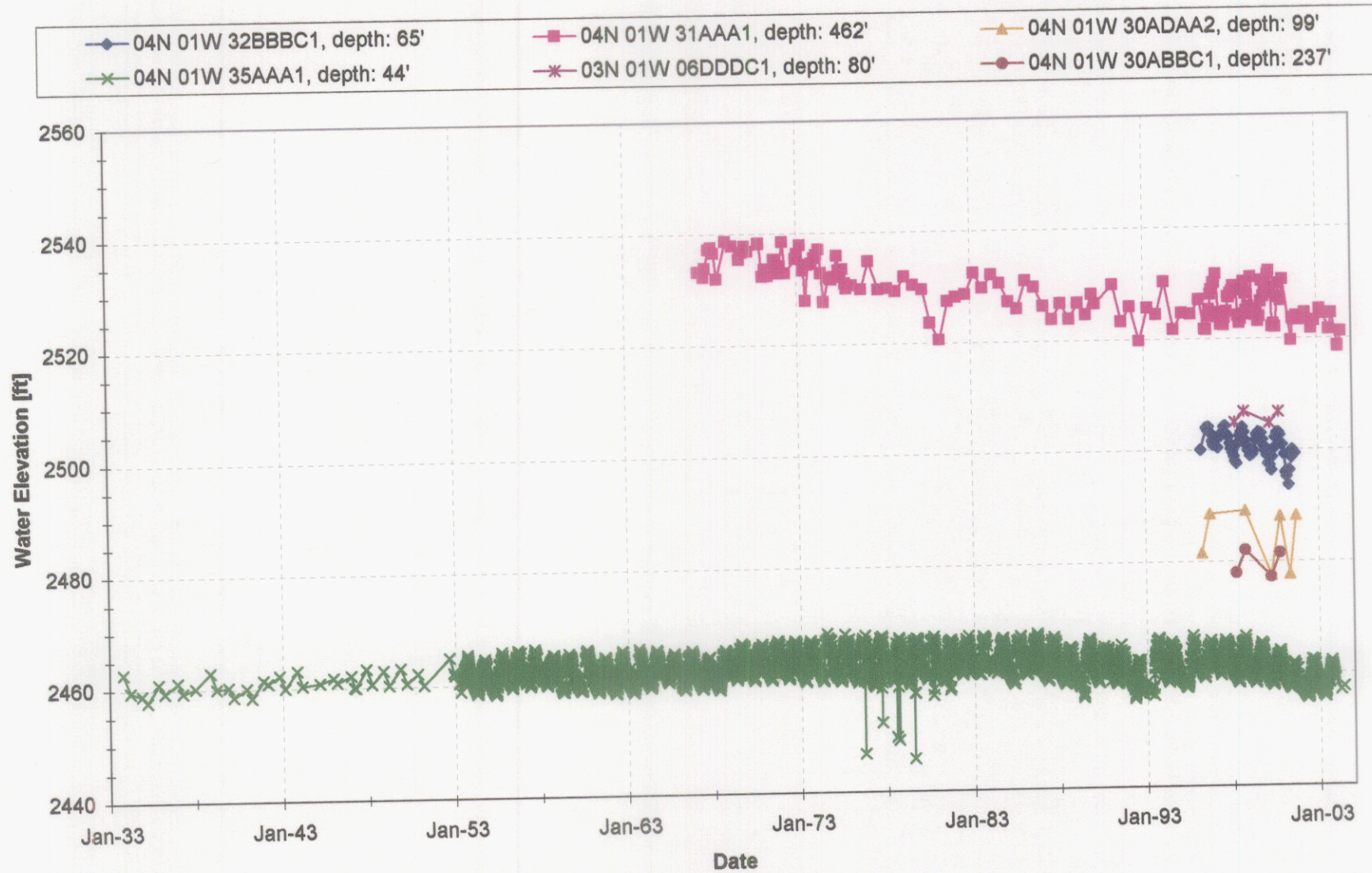


Figure 4: Group 2 hydrogrpahs from wells in the vicinity of Sorrento Lactalis

