

Memo

For: File 36-8735 Andresen Dairy LLC

From: Sandy Hemenway

Date: 4/20/2011

REF: Review for Licensing

On 6/29/1994, 37-08767 (part A) was **amended** from a groundwater source diverted from SWSE, S32, T05S, R18E for irrigation of 6.5 acres during 4/1-10/31 within SESE, S32, T05S, R18E; to a groundwater source diverted from SWNW, S03, T09S, R17E for year round use of 0.13 cfs for stockwater of 600-milker's & 100 non-milker's and 0.13 cfs for commercial use on a dairy (total of 0.13 cfs) located within SWNW, S03, T09S, R17E. In conjunction with transfer 72393, this permit was amended to add a second well (in the same quarter-quarter as the other one) and to add the NWNW and the SENW to the place of use. The Amendment was for the purpose of changing the POD, POU, nature of use, and period of use. Upon approval, this right was **renumbered to 36-8735**.

Ownership was confirmed via Tax Lot Information that was updated on 5/6/2009. An ownership change was received on 4/28/2008 with attached Warranty Deed showing the new owner as Andresen Dairy, LLC. The Idaho Secretary of State shows ownership as Andresen Dairy, LLC, with the current registered agent as Tim Andresen 2332 E 3700 N., Filer, ID 83328 (208) 326-6451.

A **field exam** conducted on 5/19/2007, with 2 groundwater sources each having a submersible 7.5 Hp (A0017718 south well, and A0017719 north well). Both wells are plumbed together, buried line (unknown location) to barns, homes, corrals, and on-site uses. The following **PODs overlap** with both the North and South Wells of 36-8735 are: 36-8215, and 36-16281. The following water rights **overlap the POU** with 36-8735 are: 36-8215 (domestic, stockwater/commercial), and 36-16381 (stockwater/commercial).

Measuring Device Condition & Well Upgrade Fee

The well upgrade fee was taken care of with approval of Transfer 72393 (approved 9/18/2007). On 4/14/2011, Bill Glitner/previous owner, was contacted at (208) 539-5750. He stated that the North well is the one drilled on 11/15/1995, and the South well is the one drilled on 12/9/1976.

On 4/13/2011 Cindy Yenter/WD130 stated that Andresen Dairy LLC had installed a single magnetic meter for both wells, and that they currently have complete monitoring records for 2 years, and 1 year of partial monitoring records. This fulfills the measuring device and annual reporting conditions on the approved permit. Transfer 72393 will allow the watermaster to upgrade measuring devices.

CFS

Field Exam 5/10/2007, polysonic flow meter calculations:

North well: 24 gpm, 0.053 cfs

South well: 24 gpm, 0.053 cfs

Total Discharge: 0.106 cfs = 0.11 cfs

IDWR, Table 1 Recommended Diversion Rates for Stockwater:

501 - 600 dairy = 0.39 cfs

Theoretical for each well:

$7.5 \times 8.8 \times 0.7 / [230 + (50 \times 2.31)] = 0.11 \text{ cfs}$ (0.22 total for north + south wells)

Water right 36-8735 was to supplement 36-8215. Water right 36-8215 has individual and nonadditive diversion rates for commercial (0.07 cfs) and stockwater (0.06 cfs) with a total diversion rate of 0.07 cfs. Commercial and stockwater represent their "dairy use," so for this reason 0.07 cfs will be used to represent 36-8215. The Dairy Use Spreadsheet rate of 0.09 cfs will not be used, since a physical measurement was collected during the 5/10/2007 Beneficial Use Field Exam (0.11 cfs). **Using the 0.11 cfs (capacity of the system) – 0.07 cfs (36-8215 dairy use) = 0.04 cfs (36-8735)**
RECOMMEND: 0.04 cfs

Volume

Dean E. Falk, Extension, Dairy Specialist, U of I, Fresh Water Needs for Dairy Farms states: Milking parlors and holding pens average 19.9 +/- 14 gallons per cow per day through 47.1 +/- 17.7 gallons per cow per day. Water needs for lactating cow consumption and milking center cleaning range from an average of 40 - 50 gallons per cow per day. With this wide of a range, the spreadsheet is an estimate (a tool).

Amendment of Permit limited the volume to 26.5 af (original permit was associated with irrigation use at 4.0 af/acre, changing use to commercial & stockwater for a dairy). Volume Limit of 26.5 af for this water right.

Permit: 600 dairy, + 100 dry; Proof of B/U: 700 head total

Vir: (600 dairy head X 35 gpd X 365 days)/325,850 = 23.5 af for dairy head

Vdr = 0.11 cfs X 365 X 1.9835 = 79.64 = 79.6

Vir: (100 dry head X 14 gpd X 365 days)/325,850 = 1.568 = 1.6 af for dry head

V: 23.5 + 1.6 = 25.1 af (this is not including additional water for cleaning, parlors, etc)

Dairies: Water Use Worksheet

Total Consumptive Use 29.4 af (Permit: 600 dairy, + 100 dry; Proof of B/U: 700 head total). 29.4 af – 10.4 af (36-8215 commercial 5.8 af, stockwater 4.6 af) = 19.0 af

RECOMMEND for 36-8735:

19.0 af Commercial, and 19.0 af Stockwater

19.0 af Total Volume

FILE NUMBER No 36-8735
REVIEWER S. Hemenway
DATE April 14, 2011

DAIRIES: WATER USE WORKSHEET

REQUIRED DAIRY DATA

NUMBER OF MILKING CATTLE 600
NUMBER OF DRY CATTLE 100
NUMBER OF REPLACEMENT CATTLE 0-2 MONTHS 0
3-4 MONTHS 0
5-8 MONTHS 0
9-12 MONTHS 0
13-15 MONTHS 0
16-24 MONTHS 0
ENTER 1 FOR MANUAL COW WASHING, 2 FOR AUTOMATIC COW WASHING,
OR 3 IF SPRINKLERS ARE USED TO FLUSH HOLDING PEN AND WASH COWS 2
IF SPRINKLERS ARE USED NUMBER OF SPRINKLERS IN HOLDING PEN 35
NOZZLE DISCHARGE (USE 5.0 GPM IF UNKNOWN) 5.00
TOTAL OPERATION TIME OF SPRINKLERS (MIN/DAY) 20
NUMBER OF MILKINGS PER DAY 2
AVG. LBS. OF MILK PRODUCED PER DAY PER ANIMAL (IDAHO AVG IS 70 LBS.) 70
ARE THERE SEPARATE PUMPS FOR COMMERCIAL AND STOCKWATER USES? N
IF SO: HOW MANY HOURS PER DAY DOES THE STOCKWATER PUMP RUN? 0.0
HOW MANY HOURS PER DAY DOES THE COMMERCIAL PUMP RUN? 0.0
IF ONLY ONE PUMP, HOW MANY TOTAL HOURS PER DAY DOES IT RUN? 12.0
IS A PLATE COOLER USED? N
IS PLATE COOLER WATER LATER RECYCLED FOR OTHER USES? (IF NO PLATE
COOLER, LEAVE BLANK) N
ARE CORRAL MISTERS USED IN HOLDING PEN? N
IF USING CORRAL MISTERS: NUMBER OF MISTERS (IF UNKNOWN,
ASSUME 1 MISTER FOR EVERY 5 COWS) 0
NOZZLE DISCHARGE (USE 5 GPH IF UNKNOWN) 0.00
SPRAY INTERVAL (EX - 2 MIN ON EVERY 5 MIN = 2/5) #
OPERATION TIME OF MISTERS (HRS/DAY) 0
DAYS PER YEAR MISTERS ARE USED 0
ENTER A TOTAL VOLUME IN GPD FOR MISCELLANEOUS WATER USES NOT
INDIVIDUALLY CALCULATED BELOW (EX - RESTROOMS, WASHING MACHINES) 10

CALCULATIONS

DIVERSION RATE (CFS):

STOCKWATER
MILKING CATTLE (BASED ON MILK PRODUCTION) ****
DRY CATTLE @ 17.0 GPD/HD ****
REPLACEMENT CATTLE ****
TOTAL 0.09

COMMERCIAL
TOTAL 0.09

TOTAL DIVERSION RATE 0.09

DIVERSION VOLUME (AFA):

STOCKWATER
MILKING CATTLE 19.4
DRY CATTLE 1.5
REPLACEMENT CATTLE 0.0
TOTAL 20.9

COMMERCIAL
WASHING OF BULK TANK AND RELATED EQUIPMENT 0.4
BACKFLUSH 0.7
PARLOR/MILKHOUSE/HOLDING PEN CLEANUP 2.0
CATTLE WASHING BASED UPON METHOD OF WASHING 5.4
PLATE COOLER 0.0
CORRAL MISTERS 0.0
MISCELLANEOUS USES 0.0
TOTAL 8.5

TOTAL DIVERSION VOLUME 29.4

CONSUMPTIVE USE VOLUME (AFA)(assuming 100% consumptive):

STOCKWATER 20.9
COMMERCIAL 8.5
TOTAL CONSUMPTIVE USE 29.4

THEORETICAL FLOW ESTIMATION WORKSHEET

REQUIRED PUMP INFORMATION

	PUMP 1	PUMP 2	PUMP 3	PUMP 4	PUMP 5
PUMP HORSEPOWER (HP)	7.50	7.50	0.00	0.00	0.00
PUMP EFFICIENCY (%)	70	70	70	70	70
LIFT (FT)	230	230	0	0	0
DISCHARGE PRESSURE (PSI)	50	50	0	0	0
FRICTION LOSSES (FT)	3.0	3.0	0.0	0.0	0.0
HOURS PER DAY PUMP OPERATES	12.0	12.0	0.0	0.0	0.0

CALCULATIONS

THEORETICAL FLOW RATE (CFS) *	0.13	0.13	0.00	0.00	0.00
DIVERSION VOLUME (AFA) **	48.0	48.0	0.0	0.0	0.0

* IF PUMP EFFICIENCY IS UNKNOWN, 70% MAY BE ASSUMED

** DIVERSION VOLUME IS THE ABSOLUTE MAXIMUM VOLUME BASED ON THE
THEORETICAL FLOW RATE ASSUMING PUMP RUNS EVERY DAY OF THE YEAR

EVALUATION OF EQUIVALENT IRRIGATED ACREAGE

IRRIGATION RIGHT (BEFORE CHANGE)

DIVERSION RATE	0.13 CFS
ACRES OF IRRIGATION	6.5 ACRES
DIVERSION VOLUME	4.0 AC-FT/AC
CONSUMPTIVE USE VOLUME	3.0 AC-FT/AC
IRRIGATION IS BEING CONVERTED FOR WHICH PORTION OF THE DAIRY OPERATION - STOCKWATER (S), COMMERCIAL (C), OR BOTH (B)?	
B	

CALCULATIONS

IRRIGATION DIVERSION RATE PER ACRE	0.020 CFS/AC
REDUCTION OF IRRIGATION BASED ON DIVERSION RATE	4.5 ACRES
REDUCTION OF IRRIGATION BASED ON DIVERSION VOLUME	7.4 ACRES
REDUCTION OF IRRIGATION BASED ON CONSUMPTIVE USE	9.8 ACRES

Permit is for 600 milking + 100 dry
Proof of B/U was for 700 head
Permit limit is 26.5 AFA
* Recommend 26.5 AFA

Additional information on nozzles, & no misters, obtained
from 36-8215 field exam (washing room: 3/64" nozzle, 35 heads,
30 psi, 10 run @ 1 time), milking room, dairy building, misc.
water use; 3000 gallon storage tank, 2" line, pressure tank, valves &



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ANDRESEN DAIRY, LLC

2332 E 3700 N
FILER, ID 83328

Type of Business: LIMITED LIABILITY COMPANY

Status: ADMIN DISSOLVED, ADMIN DISSLV 06 Jan 2009

State of Origin: IDAHO

Date of 10 Oct 2006

Origination/Authorization:

Current Registered Agent: TIM ANDRESEN
2332 E 3700 N
FILER, ID 83328

File Number: W55191

Date of Last Annual Report: 12 Mar 2008

Original Filing:

Filed 10 Oct 2006 ARTICLES OF
ORGANIZATION

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