

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 2-10576
Exam Date: 12/27/2024

1. Current Owner:
DESERT FARMS REAL ESTATE LLC 8222 DESERT DR MARSING ID 83639-8264
2. Accompanied by: Dale Van Es
Phone No: 208-250-0478
Address: 8222 Desert Dr. Marsing, ID 83639
Relationship to permit Holder: Owner

3. **SOURCE:**
SNAKE RIVER

Tributary
COLUMBIA RIVER

Method of Determination: ArcMap, Field Examination

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
57-11673	Groundwater	Stockwater/Commercial	Permit
2-10465	Snake River	Stockwater	Permit
2-10243	Snake River	Irrigation	License
2-10242	Snake River	Irrigation	License
2-10241	Snake River	Irrigation	License
2-10240	Snake River	Irrigation	License
2-10239	Snake River	Irrigation	License
2-10238	Snake River	Irrigation	License
57-2254	Groundwater	Irrigation	Decreed

Comments: Above listed water rights or permits are partial or full overlaps in place of use to this water right and are currently owned by Desert Farms Real Estate LLC. Gem Irrigation District also has some permits and rights that partially overlap the place of use. These do not interfere with this water right since the nature of use differs.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
2-10238	Snake River	Irrigation (0.72 cfs)	License
2-10239	Snake River	Irrigation (3.28 cfs)	License
2-10240	Snake River	Irrigation (0.49 cfs)	License
2-10241	Snake River	Irrigation (2.20 cfs)	License
2-10242	Snake River	Irrigation (0.71 cfs)	License
2-10243	Snake River	Irrigation (4.76 cfs)	License
2-10465	Snake River	Stockwater (3.59 cfs)	License
2-10334	Snake River	Irrigation (0.66 cfs)	License (not Van Es)

Comments: The diversion rates for 2-10238, 2-10239, 2-10240, 2-10241, 2-10242, and 2-10243 combined irrigate up to 918 (6 acres POU for irrigation rights are GW only) acres with no combined diversion limit. The rights total 12.16 cfs while Department standard of 0.02 per acre for 918 acres totals 18.36 cfs. Right 2-10576 is conditioned with X02, stating that stockwater is for 3200 milkers and 1800 replacements. No combined diversion rate was placed for 2-10576 and 2-10465. 2-10576 established 5400 milkers and 800 dry dairy cattle during the development period, entailing an appropriate stockwater diversion rate of 3.69 cfs.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

SNAKE RIVER L1 (NW¼ NW¼), Sec. 23, Twp 02N, Rge 04W, B.M. OWYHEE County

43.50081, -116.78838

Method of Determination: OnX GPS, Proof of Beneficial Use, In-Person Field Exam

PLACE OF USE: STOCKWATER

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N	04W	29			X										X	X		X	
02N	04W	28									X	X	X						

Method of Determination: Field examination, ArcMap satellite imagery

 X Delivery System Diagram Attached (required). Indicate all major components and distances between components.
 X Indicate weir size/pipe as applicable.

 X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be
 X 1:24,000 or greater.

 NA Aerial Photo Attached (required for irrigation of 10+ acres).

 X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Motor #1	US Electric	250	Z11Z296R034R-5	NA	NA
Motor #2	US Electric	250	G01-BF85A-1-D	NA	NA
Motor #3	General Electric	200	CHJ315111	NA	NA
Motor #4	Westinghouse	350	I-5V8166	NA	NA

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NA	NA	NA	NA	NA	NA	NA

2. Measurements: No flow measurements were collected during this field examination. The distribution system includes a buried mainline.

E. FLOW CALCULATIONS**Permitted rate: 2.48cfs****Per AP Memo 3:**

5400 milkers * 0.00065 = 3.51 cfs

800 dry * 0.00022 = 0.18 cfs

3.51 + 0.18 = 3.69 cfs

Theoretical Point of Diversion Output:

Four pumps are used at this point of diversion with a collective 1,050hp. The system runs at 230psi, according to the owner, and has a lift of 10 feet from the water surface to the motors. Efficiency is assumed to be 70% across the four motors and a theoretical calculation is provided below, demonstrating the system potential of producing 11.95cfs.

$$Q = \frac{8.8 * 0.70 * 1050 \text{ hp}}{10 \text{ ft} + (230 \text{ psi} * 2.31)} = 11.95 \text{ cfs}$$

Theoretical Storage Pond Pump Output:

$$Q = \frac{8.8 * 0.60 * 25 \text{ hp}}{10 \text{ ft} + (80 \text{ psi} * 2.31)} = 0.67 \text{ cfs}$$

All surface water is temporarily stored in a 3.7 AF capacity pond with groundwater under WR 57-12006. Theoretical flow calculation includes pump capacity from a pump which is used to divert stockwater from pond to trough.

F. VOLUME CALCULATIONS

Volume Calculations for Stockwater:

5400 milkers * 0.0391 = 211.1 AFA

800 dry * 0.0134 = 10.7 AFA

211 AFA + 11 AFA = 222 AFA

Stockwater calculation is derived from standardized volumes, measured in gallons per day, for both dairy and dry cattle from table 6 of the Field Examiners Handbook. This information is shown in figure 25. The stock count was provided by owner during field exam.

24-hour fill allowance:

Pond capacity:

0.62-acre surface area * 0.4 * 15ft maximum depth = 3.72 AF

Surface water 24-hour diversion under WR 2-10576 and 2-10465 combined: 3.69 cfs * 1.9835 = 7.32 AF/day

G. NARRATIVE/REMARKS/COMMENTS

A field examination was conducted on December 27, 2024, for water right 2-10576 for stockwater from the Snake River. This appointment was accompanied by Dale Van Es, the permit holder and owner of Desert Farms LLC. The permit was issued on August 26, 2019 and allowed for 2.48 cfs for stock water to allow for expansion of the dairy. Proof of Beneficial Use was submitted to the department on July 18, 2024. This permit was obtained alongside WR 57-12006 which utilizes 0.10 cfs from groundwater for commercial and stockwater.

A storage pond is located within the system (figure 4), for surface water used for rights 2-10576 and 2-10465, which is directed to stockwater troughs from the storage pond. Located on the west end of the pond, a 25hp pump directs stored water to the 42 watering troughs that are dispersed throughout 14 corrals. Mainlines were not mapped out during the field examination or represented in the system diagrams (Figure 2 and 3) since they are subsurface and exact locations are unknown. Stockwater storage is not necessary for this system 24-hour rule and a calculation for justification is provided in Item F.

The purpose of this permit was to supplement WR 2-10465, which licensed a volume of 227 AFA for 7500 head dairy stock. The additional volume was for the expansion of the dairy, later expanding the dairy to 5400 milkers and 800 dry cattle. Item F shows a calculation using the maximum total of cattle from the development period of this permit, totaling 222 AFA. Water Right 2-10465 has a licensed volume of 227 AFA. Since WR 2-10465 authorizes the annual volume higher than the volume necessary for 2-10576, I recommend a volume of 222 AFA. Rights 2-10576 and 2-10465 should be limited to a combined annual volume of 227 AFA. Right 2-10465, the only overlapping right at the point of diversion for the same beneficial use, includes a diversion rate of 3.59 cfs. The dairy has expanded under the beneficial use development period, requiring a diversion rate of 3.69cfs. This is represented in Item E, per Application Processing Memo 3. I recommend a licensed diversion rate of 0.10cfs, with a combined diversion rate for 2-10465 and 2-10576 of 3.69cfs.

Condition 121 was replaced with 103 per Department standards. Conditions 26A, X02, 082, and 106 were dropped as they are no longer necessary. Rights 2-10238, 2-10239, 2-10240, 2-10241, 2-10242, 2-10243, 2-10465, and 2-10576 when combined should not exceed a total diversion rate of 12.82cfs under condition X35. Rights 2-10465 and 2-10576 when combined should not exceed a total annual diversion volume of 227af under condition X35. Rights 2-10465, 2-10576, 57-11673, and 57-12006 when combined should not exceed a total diversion rate of 3.85cfs and a total annual maximum diversion volume of 334 af under condition X35.

Have Conditions of approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Volume</u>
STOCKWATER	01/01 to 12/31	0.10 CFS	222 AFA
<u>Totals:</u>		0.10 CFS	222 AFA

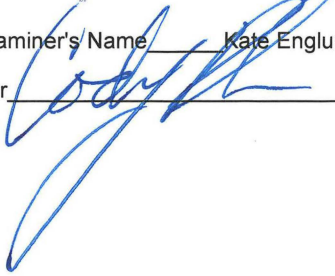
2. Recommended Amendments

_____ Change P.D. as reflected above _____ Add P.D. as reflected above X None

_____ Change P.U. as reflected above _____ Add P.U. as reflected above X None

I. AUTHENTICATION

Kate Englund - Water Resource Agent

Field Examiner's Name Kate Englund Date September 25, 2025Reviewer  Date 10-24-25

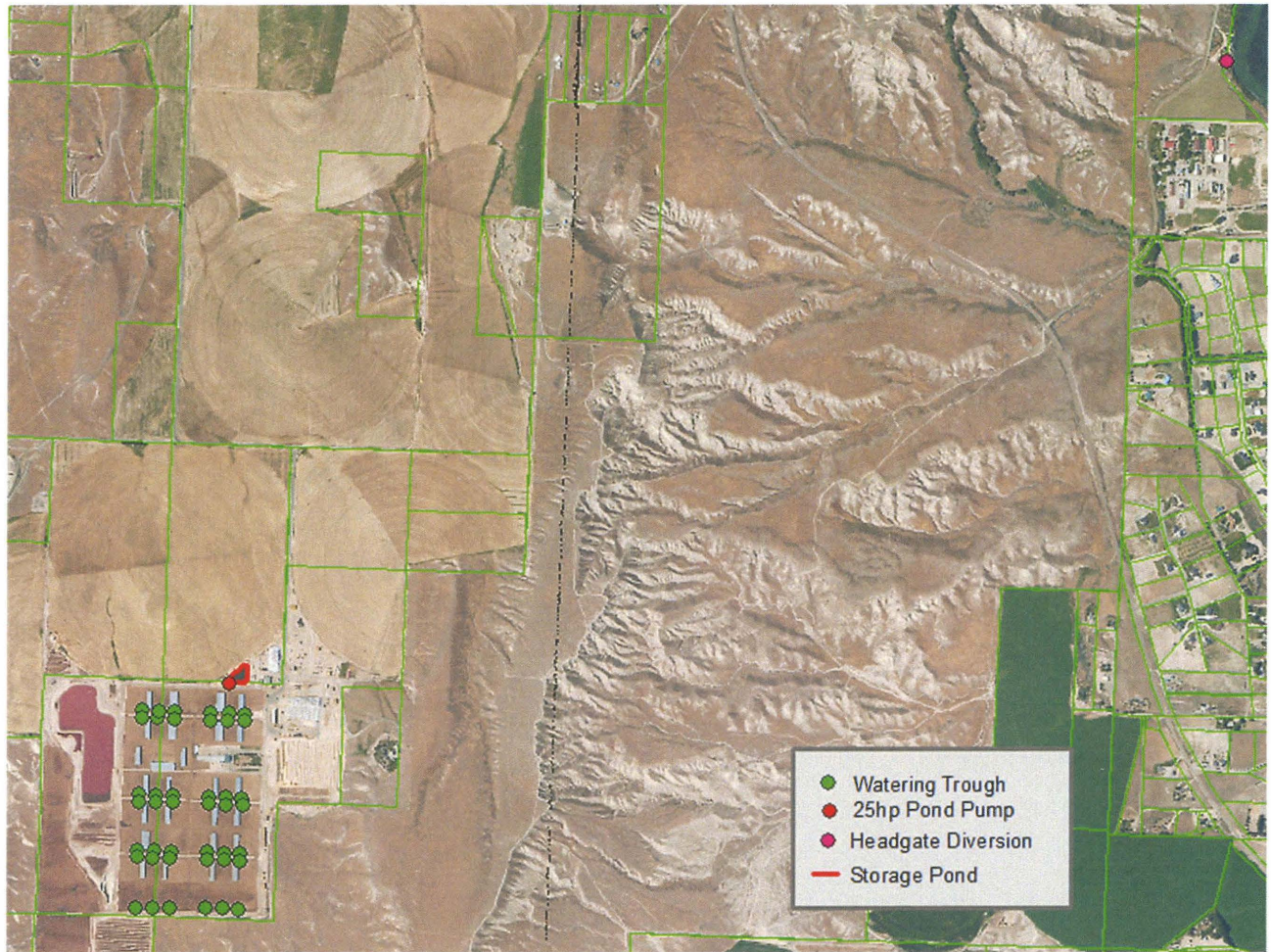


Figure 1 System diagram showing POD location, water trough locations, and storage pond.

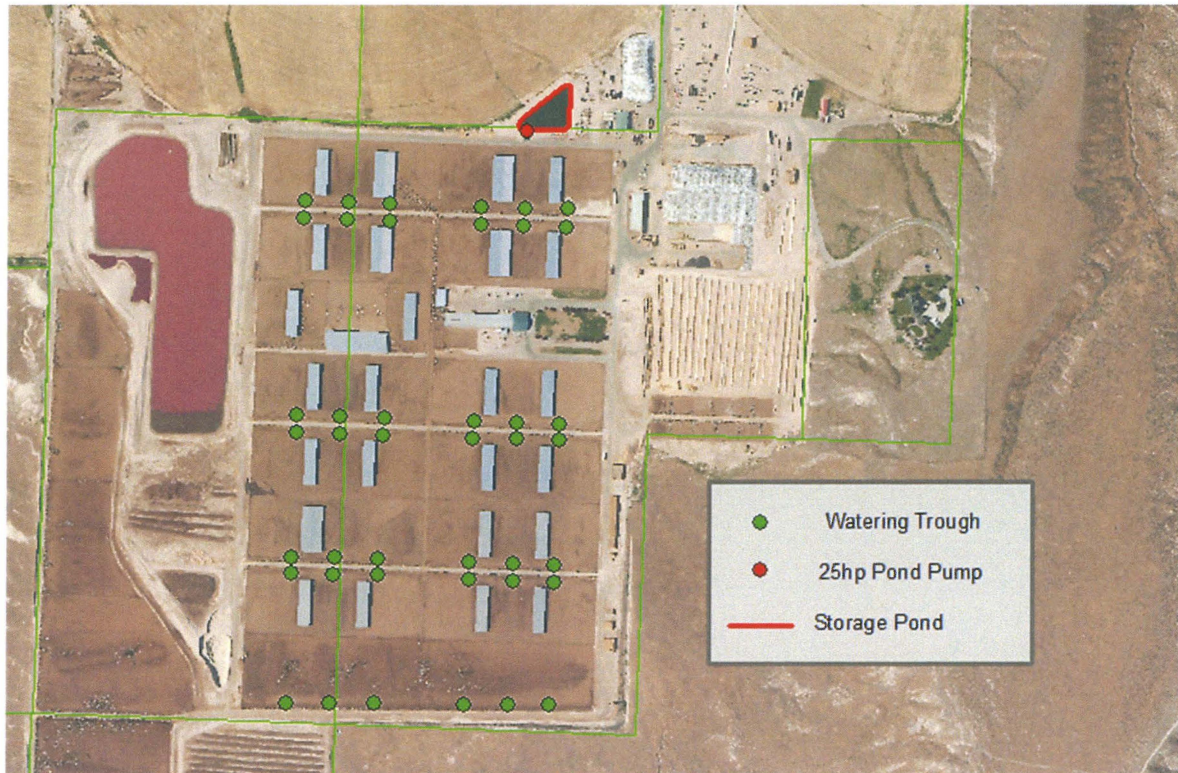


Figure 2 System diagram showing water trough locations, storage pond, and pond pump. Photo excludes the headgate to show a clear view of the place of use.



Figure 3 Point of diversion including four pumps to divert stockwater from the Snake River.

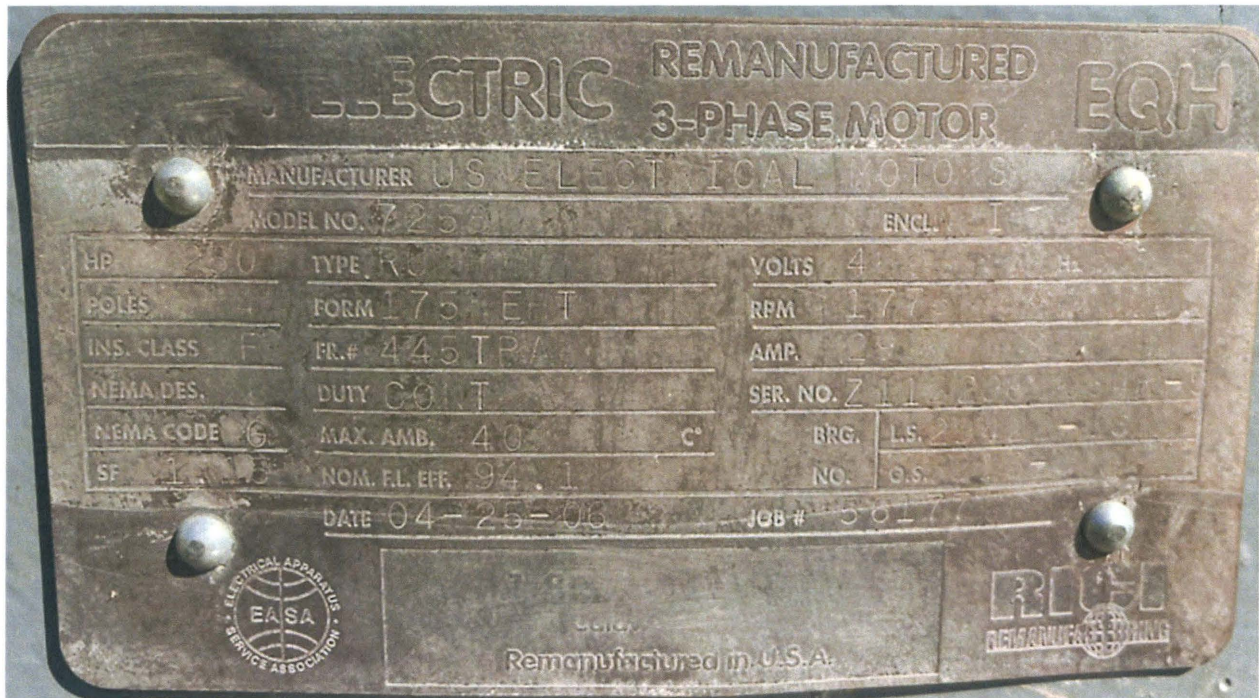


Figure 4 250 hp pump from US Electric with serial number Z11Z296R034R-5.

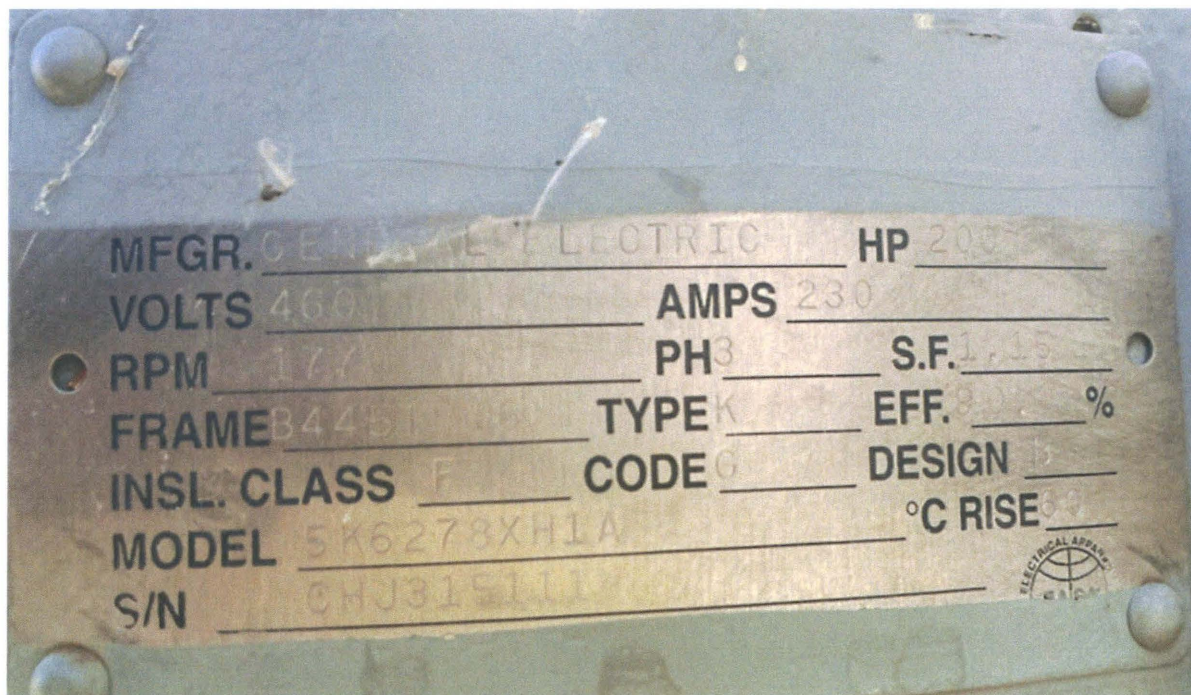


Figure 5 200 hp pump from General Electric with motor serial number CHJ315111.



Figure 6 350 hp pump from Westinghouse with motor serial number I-5V8166.

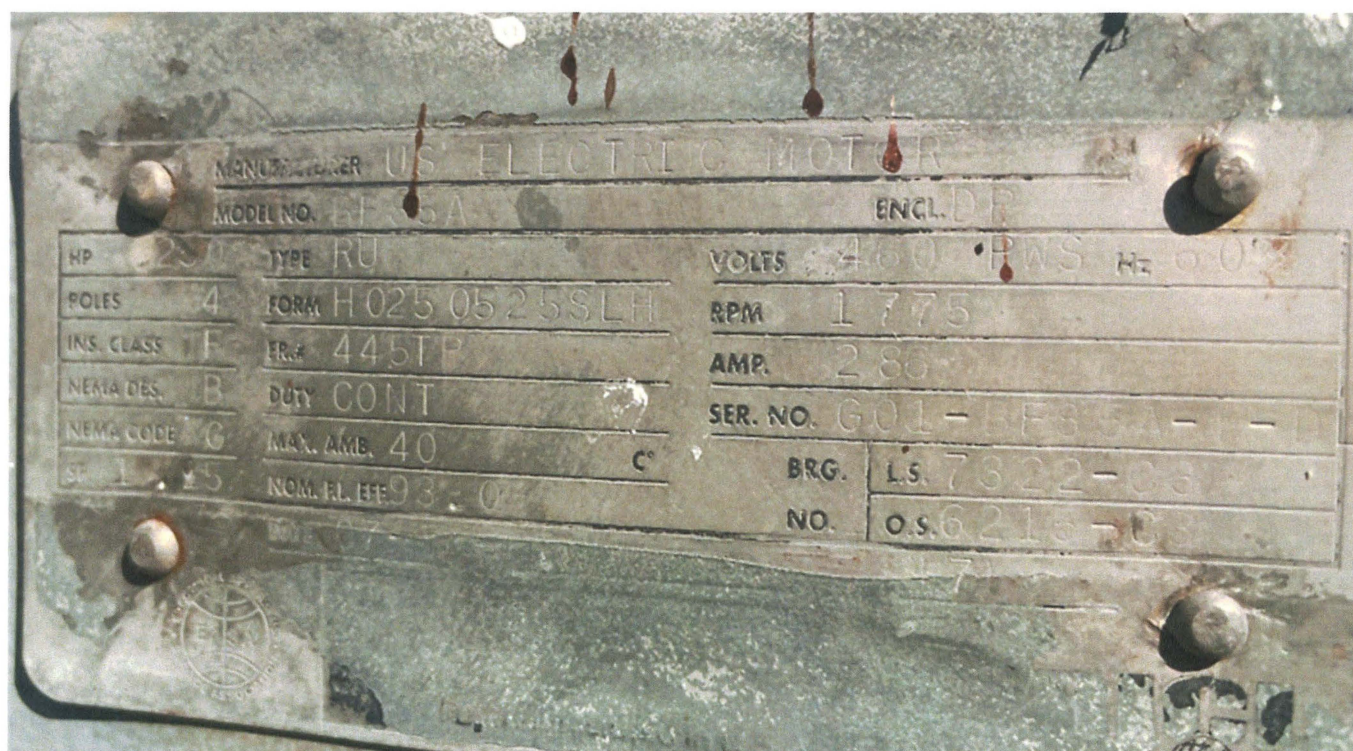


Figure 7 250 hp pump from US Electric with motor serial number G01-BF85A-1-D.



Figure 8 Storage pond located in 02N 04W SWNW $\frac{1}{4}$ of Section 28. Pond stores both ground and surface water.

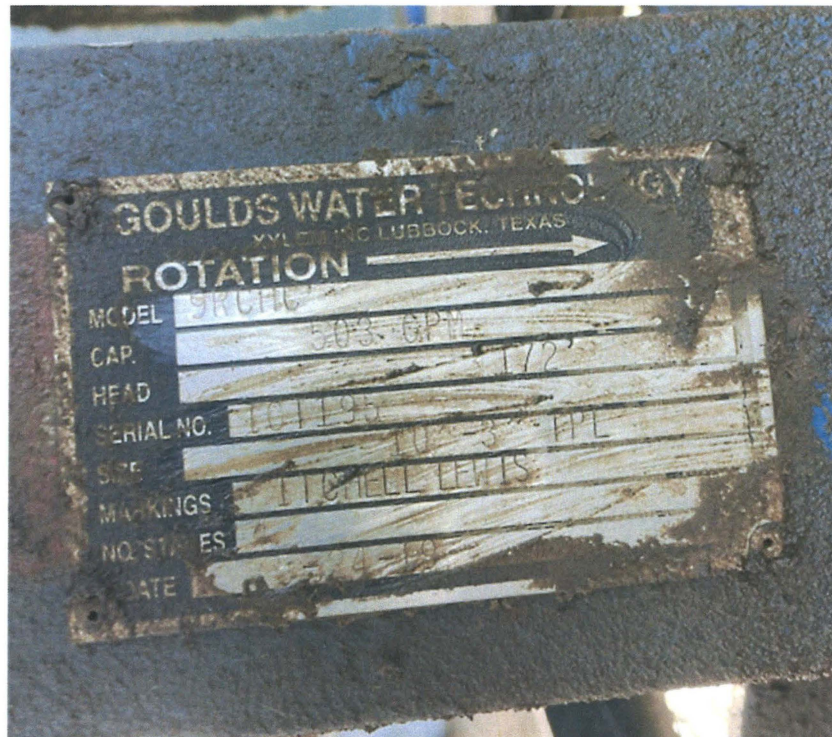


Figure 9 Pump motor tag for pump located at outlet of storage pond.



Figure 10 Pump tag for 25hp pump associated with storage pond.

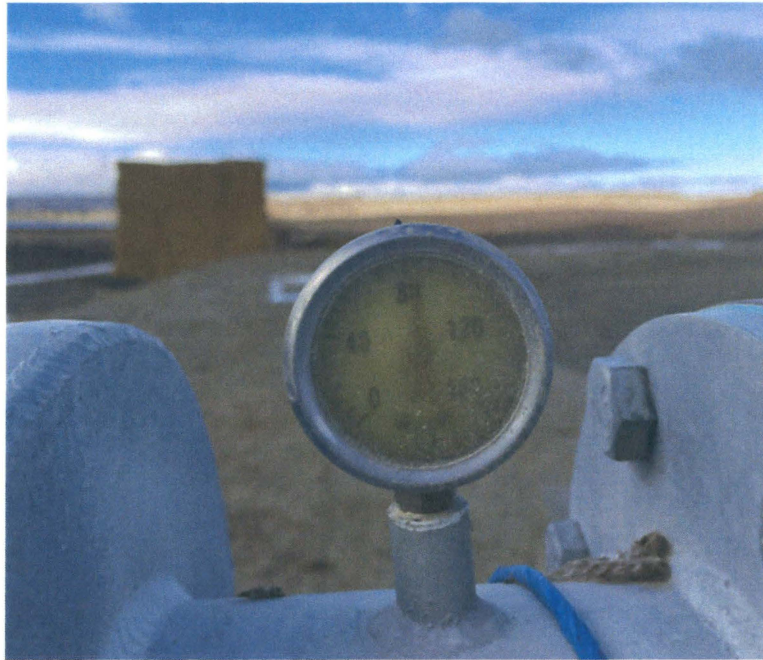


Figure 11 Pressure gage showing a current pressure of 80 psi on storage pond pump.

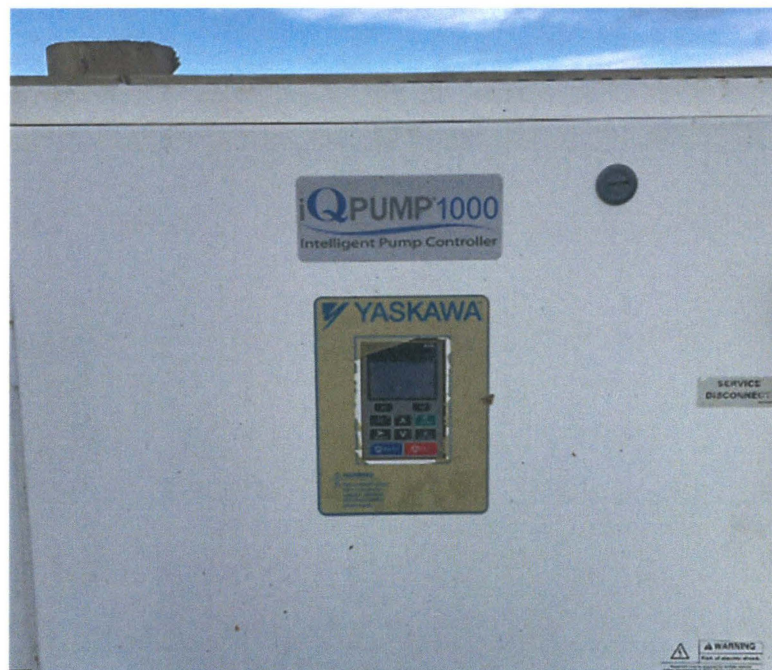


Figure 12 Yaskawa iQpump 1000 pressure controller for storage pond pump.



Figure 13 A 3' x 9' water trough. There are 42 identical troughs located throughout the dairy, all of which are represented in figures 2 and 3.

Model 9RCHC 1000 GPM

GOULDS PUMPS

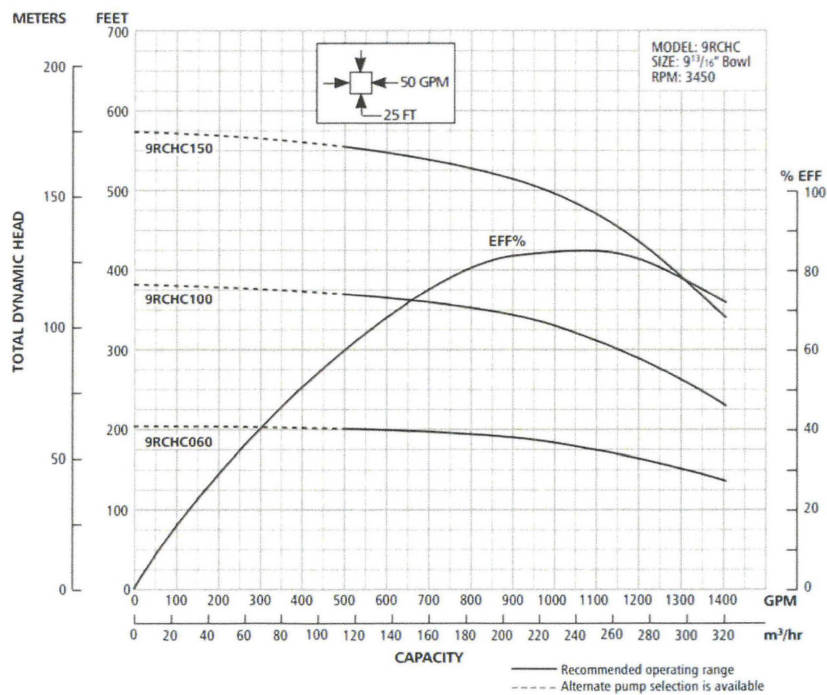


Figure 14 Pump curve for Goulds 9RCHC showing 60% efficiency for 500 gpm capacity, used for theoretical calculation in item E.