

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-8245

Exam Date: 7/10/2012

1. Current Owner: PLANT FOODS INC
C/O RALPH DENTON
PO BOX 727
FILER ID 83328
(208)733-4072
2. Accompanied by: Bill Lewis (Company Representative)

3. **SOURCE**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

NW1/4SE1/4

Sec. 10, Twp 10S, Rge 16E, B.M.

TWIN FALLS County

Method of Determination: GPS 2453897/1263137

2. **PLACE OF USE:** COMMERCIAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
10S	16E	10														X	X		

Method of Determination:

3. ☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
☒ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
_____	_____	_____	_____	_____	_____

D. FLOW MEASUREMENTS

1. Measurements: 300 gallon tank and stopwatch
100 gallons – 35.09 = 171.0 gpm = 0.381 cfs
200 gallons – 1:09.28 = 173.2 gpm = 0.386 cfs
300 gallons – 1:43.68 = 173.6 gpm = 0.387 cfs

Average measured flow rate = 0.385 cfs

Permitted flow rate = **0.33 cfs**

2. Measurements: Sprinkler head used to water down arena

Measured Method: Pitot tube for irrigation. Pressure at nozzles was 47 psi

Using equation: $Q(\text{gpm}) = 30.0 \times D(\text{in})^2 \times P(\text{psi})^{0.5}$

Where:

D=.47 in

P=47 psi

$$Q(\text{gpm}) = 30.0 \times .47\text{in}^2 \times 47\text{psi}^{0.5} = \mathbf{45\text{gpm}}$$

E. FLOW CALCULATIONS

Measured Method:

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: None

3. Volume Calculations for Other Uses:

- a. Fertilizer production:

$$8,000 \text{ gpd} \times 80 \text{ days/year} = 640,000 \text{ gallons} = \mathbf{1.96 \text{ afa}}$$

- b. Fill fertilizer trucks:

$$4,000 \text{ gpd} \times 70 \text{ days/year} = 280,000 \text{ gallons} = \mathbf{0.86 \text{ afa}}$$

- c. Water down arena:

$$45 \text{ gpm} \times 60 \text{ min} \times 3.5 \text{ hours} \times 20 \text{ times/year} = 189,000 \text{ gallons} = \mathbf{0.58 \text{ afa}}$$

$$\mathbf{\text{Total annual volume} = 1.96 + 0.86 + 0.58 = 3.4 \text{ afa}}$$

G. NARRATIVE/REMARKS/COMMENTS

Water right 47-8245 was originally filed for the beneficial use of 'cooling' associated with the production of fertilizer. When proof of beneficial use was filed the use was identified as 'commercial – making fertilizer'. The field exam found that the use is a commercial use for the making of fertilizer, filling of trucks with fertilizer and watering down an arena. The applicant has filed an amendment to correct the nature of use, point of diversion, and place of use.

During the field exam it was shown that the system had the capacity to flow at a rate of 0.38 cfs, the permit allows for 0.33 cfs. The annual volume associated with the right was calculated based on the companies past records which were calculated to be 3.4 afa.

It is recommended that the right be licensed for 0.33 cfs and 3.4 afa.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
COMMERCIAL	01/01 to 12/31	0.330 CFS	3.4 AF
<u>Totals:</u>		0.330 CFS	3.4 AF

2. Recommended Amendments

☒ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☒ Add P.U. as reflected above ☒ Other: Change nature of use

I. AUTHENTICATION

Field Examiner's Name Nathan Erickson Date 9/28/12

Reviewer [Signature] Date 10/19/12

