

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-34851
Exam Date: 03/19/2025

1. Current Owner:
IDAHO MATERIALS AND CONSTRUCTION 924 N SUGAR ST NAMPA ID 83687-6816
2. Accompanied by: Ed Hass
Phone No: (208) 573-3099
Address: 19752 Simplot Blvd, Caldwell, ID (POU Parcel Address)
Relationship to permit Holder: Representative / Plant Manager
3. **SOURCE:**
GROUND WATER

Method of Determination: GARMIN MAP76 GPS, GIS imagery

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
63-4022 (Held By IMC)	WEST END DRAIN	IRRIGATION	DECREED 2009
63-2529 (Held By Pioneer Irr Dist)			

Comments: Right 63-4022 and Right 2529 are not used for irrigation in any area overlapping the permitted POU. The pond north of the permitted POU at least partially incidental groundwater encountered during aggregate mining conducted on site by IMC.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: There are no rights sharing the well point of diversion (POD).

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

GROUND WATER SW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 23, Twp 04N, Rge 04W, B.M. CANYON County

GPS COORDINATES: N 43.67012° W 116.78954°.

Method of Determination: GARMIN MAP76 GPS, GIS imagery

PLACE OF USE: COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	04W	23							X										

Method of Determination: GIS NAIP Imagery, Canyon County tax parcel data, and Google Earth PRO.

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.

Well or Diversion ID Tag No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0084510	Pentek	20	M0919Z510020	Pentek	300 GPM

D. FLOW MEASUREMENTS

1.

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

2. Measurements: The 3" pipeline to the well is buried and the configuration of the system is not conducive to measurement with a closed conduit flowmeter, instead a theoretical calculation was made based on system information and the well driller's report details.

Additional Computation Sheets Attached

E. FLOW CALCULATIONS

Measured Method: The pump is a Pentek XE-6 6PM20-4, with a 460 volt, 60Hz motor. The permit holder asserts that it is rated at 300 GPM, which explains the applied for / permitted rate. However, I was unable to find a pump curve or specifications detailing the discharge rate.

(max pump head 170') + (artesian head 27')= 197' total head

Friction Head Loss Calculator		Read Me		Table 1	
Hazen-Williams Method				Hazen Williams Roughness Coefficients*	
$h_f = \frac{10.44(L)(Q)^{1.85}}{(C)^{1.85}d^{4.8655}}$				Index No.	Design Value
Required Input L = 197 feet (length of pipe) Q = 300 gpm (flow rate) d = 7.5 inches (inside diameter of pipe)				1	steel, welded and seamless 100
Select Pipe Material Type steel, welded and seamless				2	concrete 100
C = 100 unitless (Hazen-Williams Roughness Coeff.)				3	cement-asbestos 140
Output h _f = 0.87 feet (frictional head loss) or h _f = 0.38 psi (frictional head loss)				4	vitricified clay 110
				5	brick sewer 100
				6	cast iron, plain 100
				7	cast iron, tar (asphalt) coating 100
				8	copper or brass 130
				9	wood stave 110
				10	lead, tin, glass 130
				11	plastic (PVC or ABS) 130
				12	fiberglass 150
				*Values taken from Lindeburg (1999) CE Reference Manual, Ap. 17.A	

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-34851
 Examiner: Bob Hove
 Date of Field Exam: 3/19/2025

	Option 1	OPTION 2	OPTION 3
P/D No.:			
PUMP HORSEPOWER	20	0	0
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	0	0	0
DISCHARGE PRESSURE	76	0	0
FRICITION	0.87	0	0
RATE OF FLOW (cfs)	0.70	#DIV/0!	#DIV/0! AV.
(gpm)	313.4	#DIV/0!	#DIV/0! ####

The above calculates the formula = $Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$

Assumptions: %70 efficiency.

Examiners Notes:

The applicant provided information stating the pump motor model is capable of 300 gpm. The above calculations agree with that assessment. Additionally the well has artesian pressure, which the well driller's report quantified as +27ft head and approximately 60GPM, making this calculation a conservative estimate. Therefore, I will be recommending the full permitted rate a of 0.67 cfs or approximately 301 gpm.

Theoretical Calculation= 0.70cfs

Permit allowed = 0.67cfs

Recommendation= **0.67cfs**

Comments: Based on a theoretical rate calculation using the friction loss based on the total head (including the artesian head, and artesian rate of flow as observed on the well driller's report. The well is sealed to a depth of 105', well into an impermeable blue clay layer not encountering water again until depth greater than 138ft with welded steel casing to 205' and screening from 150' to 215'. Making it likely that artesian pressure would not be acting against the flow of water in an open discharge setting. The operational maximum system pressure observed at the VFD (Photo 3) was 76 psi.

PENTEK 6" AND 8" SUBMERSIBLE MOTORS																								
MOTOR PERFORMANCE AND DIMENSIONAL DATA																								

TOTAL ANNUAL VOLUME: 10,706,895 Gal = 32.9 AF annually

G. NARRATIVE/REMARKS/COMMENTS

The Department received the Proof of Beneficial Use for permit 63-34851 on January 22, 2025. On March 19, 2025, a field examination was conducted to document the Commercial use developed, escorted by Ed Hass, plant manager. The commercial use is a new concrete batch plant for Idaho Materials and Construction (IMC) near Greenleaf Idaho. The commercial operation uses a 8" artesian well point of diversion for batching concrete, truck washing, and dust abatement on site. The appurtenant parcel and facility are owned and operated by Idaho Material & Construction (permit holder). The permitted use had a development period from February 2020 (date permitted) to January, 2025 (date Proof of Beneficial use received).

The place of use (POU) located on the northside of Simplot Blvd, about 4 ½ miles west of Caldwell, ID, includes the batch plant, boiler building, control room, 2 truck wash stations, a wash out area, and a staging area for aggregate, which is mined just north of the facility. Several unlined ponds maintained year-round due to a high groundwater table are located within the western extent of the POU. The north end of the ponds is a truck washout area and acts as a settling pond for the slurry from the barrel of the concrete trucks. The plant manager stated that IMC hopes to eventually set up the unlined settling ponds for additional truck wash usage, but this is not currently developed. Large ponds north of the POU are incidental groundwater due to the aggregate mining operation.

The plant manager, Ed Hass, stated that during the development period a maximum of 5 mixer trucks and a water truck have been in operation at the batch plant. IMC batch plants operate Monday through Friday every week with one Saturday every 3rd week, and it is closed for 9 holidays annually (operating approximately 270 days/yr). Ed stated that the operational hours of the plant are stated in the employee handbook and the company keeps records of the number of batches each mixer delivers. In advance of the field examination, I emailed a questionnaire seeking written information needed to assess the developed uses. At the examination the plant manager provided handwritten responses to the questions asked (Figure 3 and Section F) which were discussed in person for clarification.

In the southwest of the POU an 8" diameter artesian well delivers water to the boiler room and chiller via a 3" galvanized pipe, which is reduced to a 2" flex line when it emerges in the structure. A VFD unit in the back of the control room skid has a operating limit of 76psi. A control valve on the boiler tank opens when the water level drops and closes when the vessel is filled, causing a spike in the system pressure and triggering the VFD to shut off the well pump (20 Hp, 300 GPM Pentek submersible pump). Water is pumped from the boiler tank and chiller with a 15 Hp booster pump through a 3" galvanized pipe to a buried valve box north of the boiler room. From the valve box a 3" galvanized pipe supplies the batch tower and a 2" hose conveys water across the tower to a buried 2" galvanized pipeline supplying water to the truck wash.

East of the batch plant a steel structure with an elevated walkway, 2 hose bibs, and 2 elevated steel fill pipes, all operated by manual valves are used as the truck washing stations. Hand valves allow drivers to fill the barrel of mixer trucks (approximately capacity 3,000Gal) with the elevated fill pipes and wash off the trucks using the hoses and hydrochloric acid. The truck washing station is also used for additional batching water to adjust the slump as needed. The plant manager stated that slump adjustment is figured into the average 45-Gal per yard assessed for batching concrete, as detailed in the written questionnaire response.

A water truck with a 3,500-gallon capacity and are filled at the truck wash stations to be used for dust abatement throughout the approximately 23-acre facility on average twice a day. The plant manager stated that environmental guidelines provided to IMC by the DEQ require continuous dust abatement during operation.

The usage information provided by the plant manager during the field examination was sufficient to calculate the annual

volume used for concrete batching, truck washing, and dust abatement at the facility. Based on the annual volume calculations in section F of this report I recommend that the license is issued for an annual volume of 32.9 AF. The rubberized flex line used on the exposed parts of the diversion from the well head to the boiler tank will not conduct a signal for rate measurement using a Panametric PT878 used in the field by IDWR. However, the plant manager provided adequate system information including the make/model and set depth of the pump, allowing for a theoretical calculation that supports the full permitted rate. I recommend the license be issued with a maximum instantaneous rate of 0.67cfs, as determined in Section E of this report.

I recommend the license be issued with conditions 01M, 103, and the commercial use description condition used on the permit. Condition 046 and 26A should be removed for licensing, according to current guidance. Condition 121 should be replaced by condition 103 for the license, per current guidance.

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

H. RECOMMENDATIONS

1. Recommended Amounts

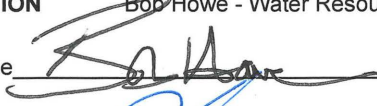
<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume (AF)</u>	
COMMERCIAL	01/01 to 12/31	(Permitted 0.67 CFS)	32.9	AF
Totals:		0.67 CFS	32.9	AF

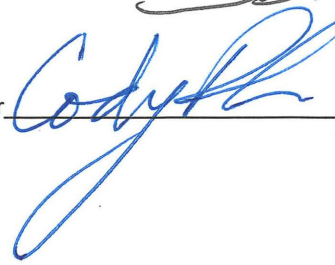
2. Recommended Amendments

☐ 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 ☒ None

I. AUTHENTICATION

Bob Howe - Water Resource Agent, Sr.

Field Examiner's Name  Date 3/10/25

Reviewer  Date 12-10-25

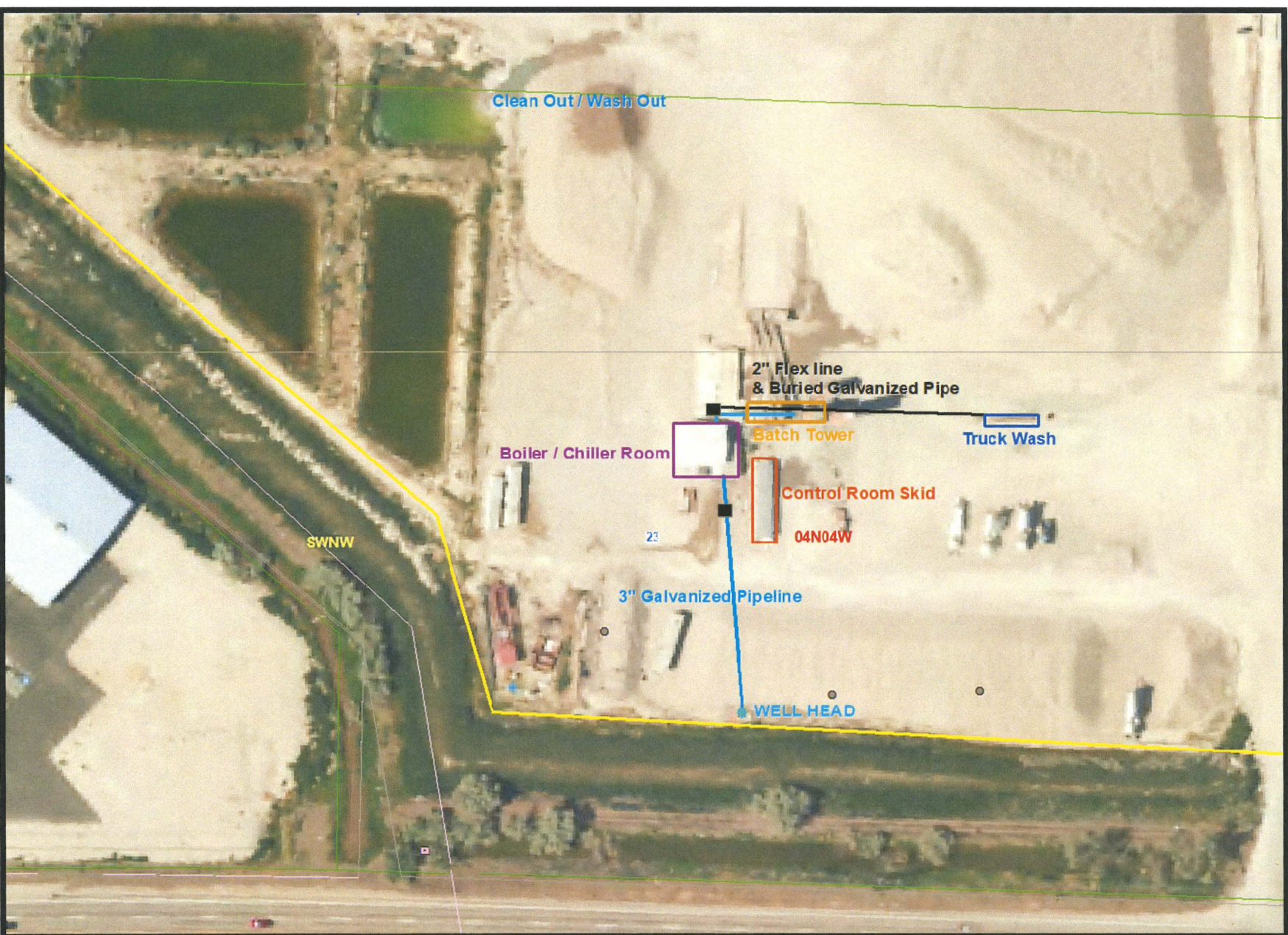


Figure 2-System Diagram



Photo 1- In the southeast corner of the POU facing west. The control room skid, boiler/chiller room, batch plant, and truck wash can be seen in frame from left to right respectively.



Photos 2 & 3- Well head in the southwest corner of the POU. A pipe with a hand valve is welded to the casing allowing for artesian flow to be cracked open to prevent freezing. The well head is also covered with a insulated blanket in the winter to protect it from low temperatures.

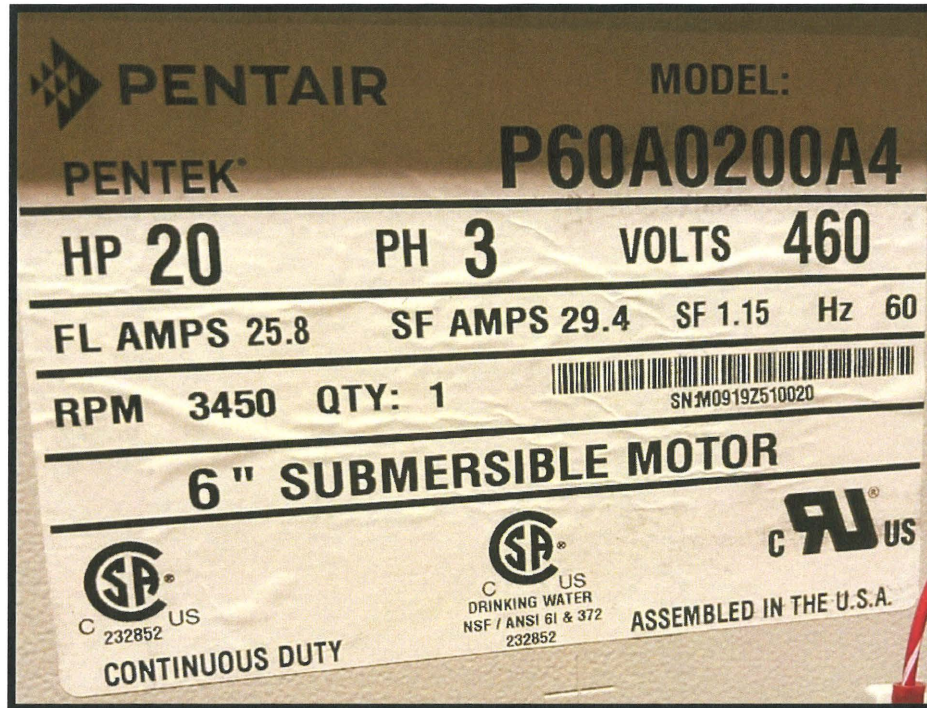
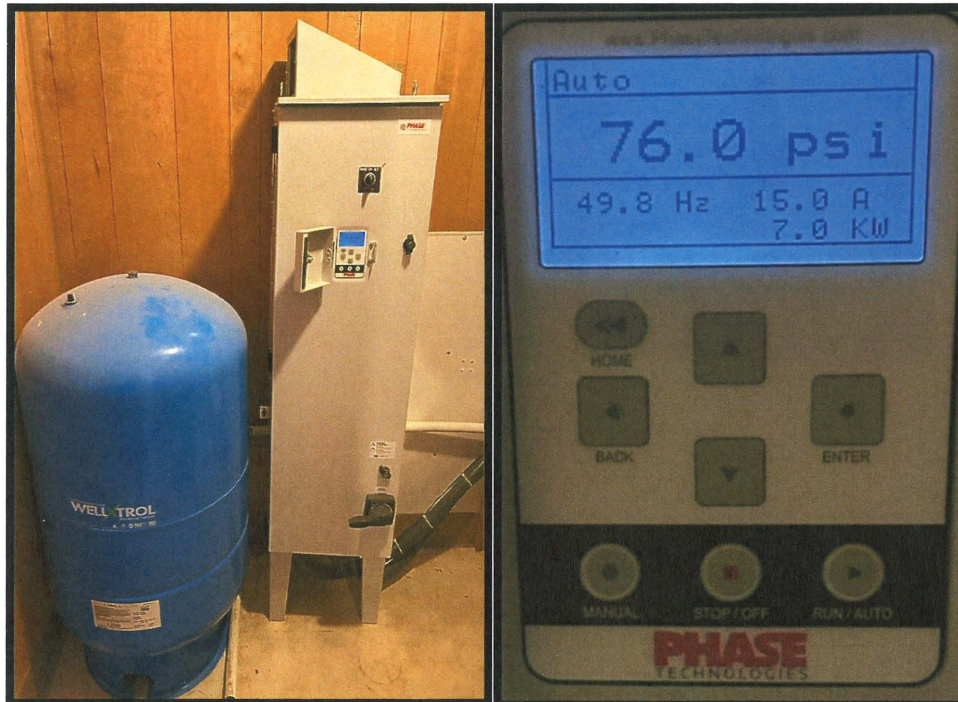


Photo 4- Pump label found inside the VFD panel located in the back of the control room skid.



Photos 5 & 6- VFD- Located in the back of the control room skid. Image on the right taken after charging the system.



Photo 7- Facing north between the well head and boiler room.

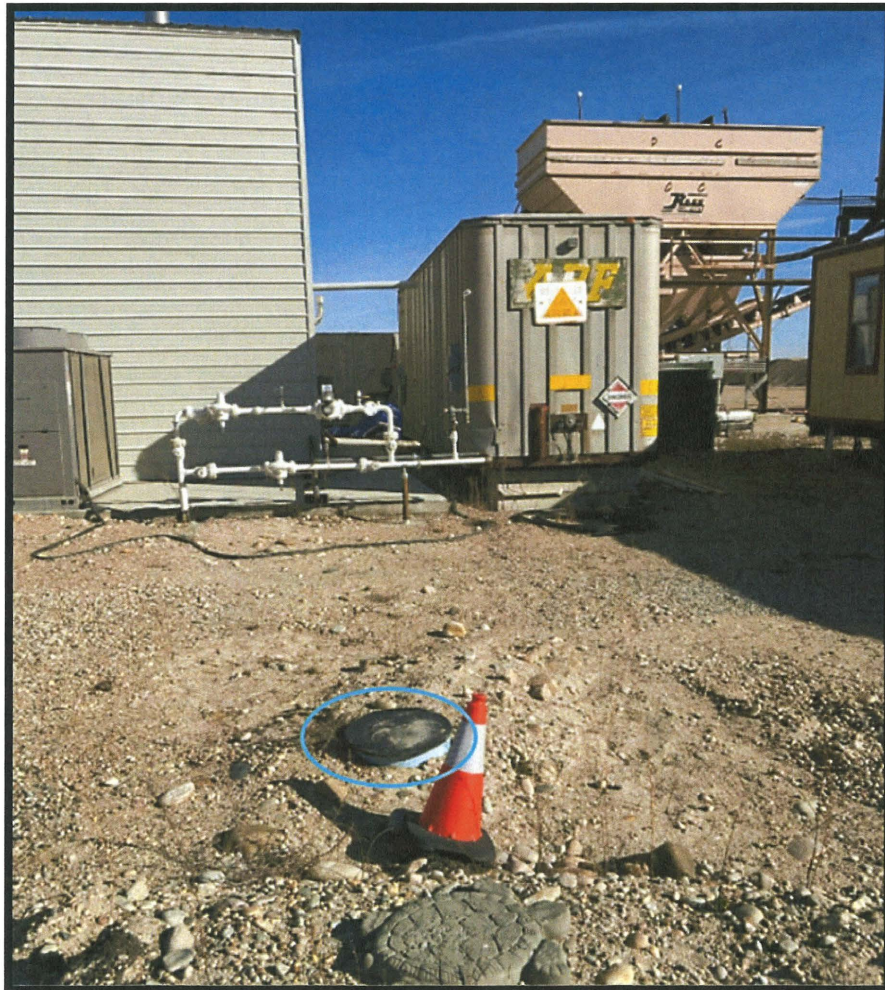


Photo 8- Shut off valve (circled in blue) for 3" galvanized pipeline.

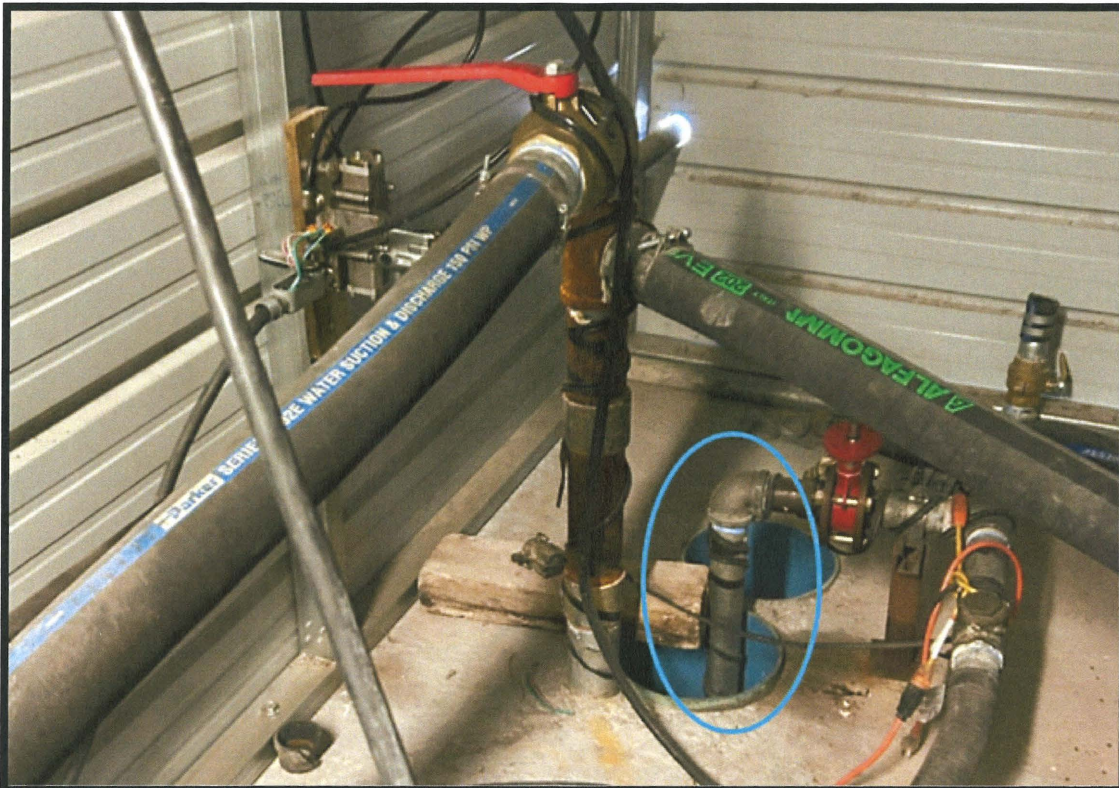


Photo 9- Galvanized 2" pipeline from well head to flex line on the right. The 3" galvanized line with 2 flex lines from the boiler and chiller can be seen on the left where it exits through the floor to the buried valve box north of the boiler room.



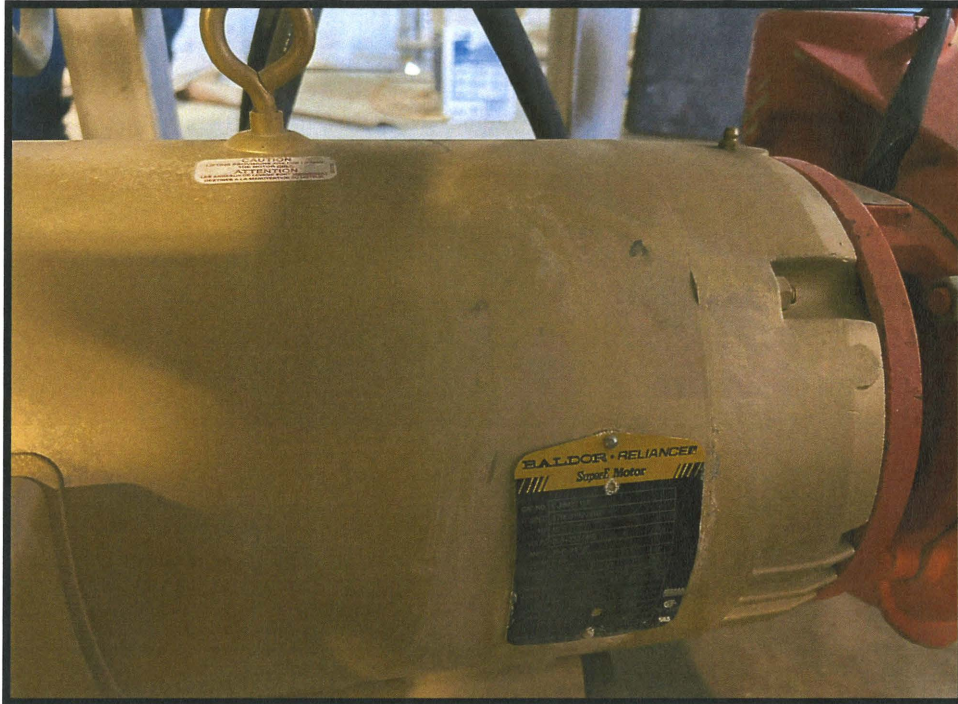
Photo 10- The boiler storage tank on the south end of the boiler room with its own 15Hp booster pump.



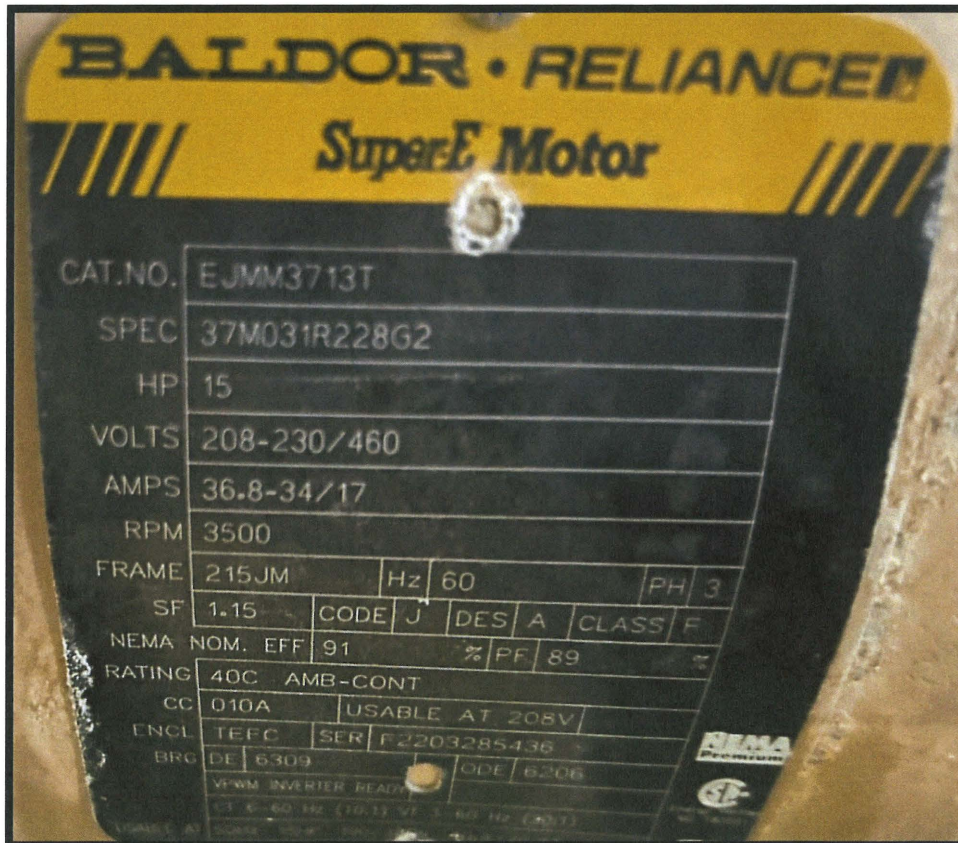
Photo 11- Water heater "boiler" and chiller system with intake manifold in image behind the control panel.



Photo 12- 2" flex line attached to the manifold (circled in blue). The servo actuated control valve can be seen to the left.
The booster pump is in front of the manifold in the lower left of the image.



Photos 13 & 14-(above and below) Chiller/water heater "boiler" booster pump (15Hp Baldor)





Photos 15 & 16- Valve box located north of the pump house. The galvanized line to the batch tower and the 2" flex line to the truck wash can be seen in the lower image. An additional hose is attached to the manifold for cleanup under the batch tower.

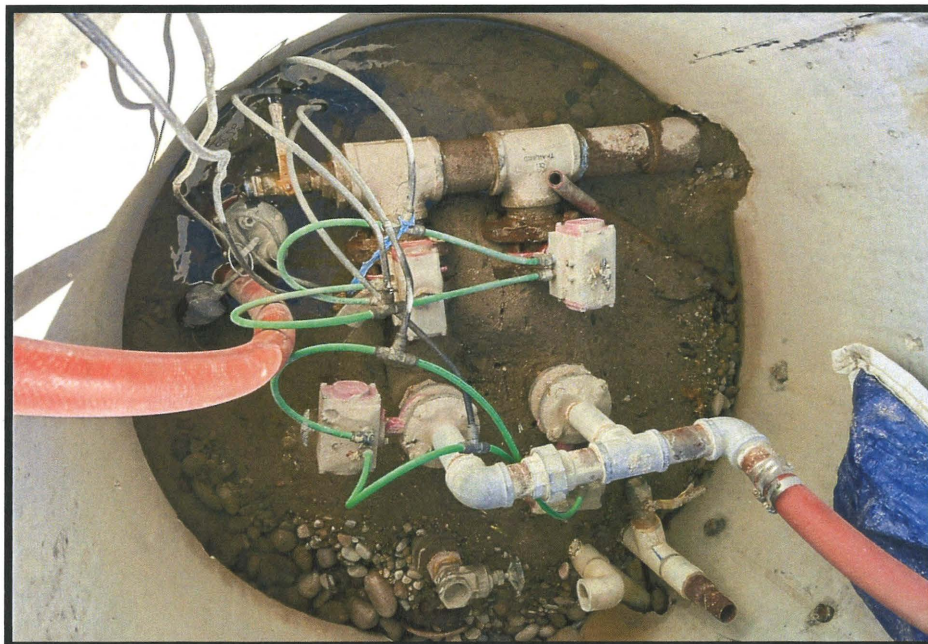




Photo 17- 3" galvanized and 2" flex line ramping up along the frame to the top of the batch tower.



Photo 18- Control valve and flowmeter sensor box for metering water according to batch requirements.

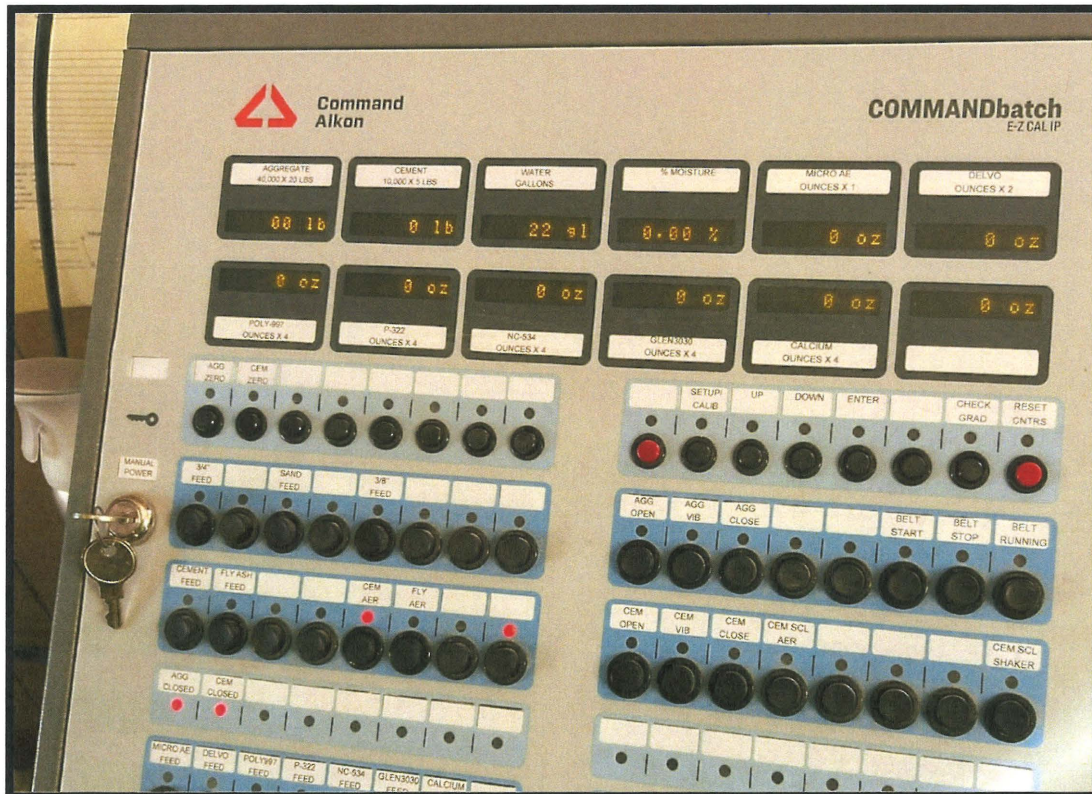


Photo 19- Batch control center located in the north end of the control center skid. Third gauge from the left on the top monitors gallons of water added to the mix at the batch tower.



Photo 20- 2" flex line attached to the riser for the buried 2" galvanized pipe delivering water to the truck wash in the background.



Photo 21- Facing west with the elevated walkway between the two truck wash stations in the foreground. The fill lines and hoses for cleaning trucks can be seen on either side.



Photo 22- Hand valve for manually filling the barrel of mixers using the fill pipe (same on either side of the walk way).



Photos 23 (left) Hose bibs on either side of the elevated walk way. Photo 24 (right) Hydrochloric acid for scrubbing and loosening hardened slurry off of truck barrels.

RECEIVED

MAR 19 2025

Hass, Ed (Idaho Materials & Construction)

From: Howe, Bob <Bob.Howe@idwr.idaho.gov>
Sent: Monday, March 17, 2025 10:53 AM
To: Hass, Ed (Idaho Materials & Construction)
Cc: Parker, Cody
Subject: [EXT] Field Examination for Permit 63-34851 Information Requested for Processing
Attachments: Permit 63-34851.PDF; Well Drillers Report.PDF

WATER RESOURCES
WESTERN REGION

You don't often get email from bob.howe@idwr.idaho.gov. [Learn why this is important](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and know the contents are safe. If you believe this email may be phishing or malicious, please use the Report Phish button.

Good Morning Ed,

I am sending this email and calling you as a reminder of the field examination scheduled for this Wednesday, March 19, 2025 at 10:00AM. Please note, we will need access to document the use developed including any flow measurements possible to support the permitted rate of diversion. In addition to measurement and photos documentation providing specific data for use in determining the maximum annual volume will be requested for the permitted Commercial Use, which includes a concrete batch processing plant, truck washing, and dust control. The information needed to assess the volume to be licensed should be provided in written form, and should include (at minimum) the following information to complete the examination report:

Diversion System Info:

Pump set depth (if submersible): 170FT
Pump Make/Model, Pump Hp: 20hp 300gal/min
Pump Curve (if possible):

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: NA
2. Volume Calculations for Beneficial Use: **Commercial Use**
(Information needed from permit holder.)

Information for development period Feb 28, 2020 to January 22, 2025 to include:

Total Days of Operation Annually: 270
Range Max to Min. Batch Size (GAL H2O): 450 - 45
Total Number batches per day(For Max. Annually): 2500 batches @ 8yd @ 20,000 per yr
Annual Number of batches (for development period Feb 28, 2020 to January 22, 2025): 3953 Average 8yd loads
Gallons Max per Truck Wash: 3000
Number of Truck Washes Annually (range, ok): 2 per day
Method of Dust Control: water truck
If Dust Control by Water Truck, Truck Size (Gal) and Max # of Fills per day: 3,500 2 per day

If the information cannot be provided during the field examination please provide it at your earliest possible convenience, as it is necessary to process your water right license.

Please reach out to me via email or phone at (208) 605-4628 for additional information, or if you need to reschedule this examination.

Regards,

Bob Howe



IDAHO DEPARTMENT OF
WATER RESOURCES

Bob Howe | Water Resource Agent, Sr.

2735 W Airport Way, Boise, ID 83705-5082

(208) 605-4628 | www.idwr.idaho.gov

ATTENTION: Ce courriel vient de l'exterieur de l'entreprise. Ne cliquez pas sur les liens, et n'ouvrez pas les pièces jointes, à moins que vous ne connaissiez l'expéditeur du courriel et savez que le contenu est sécuritaire. Si vous pensez qu'il s'agit d'un courriel d'hameçonnage ou malveillant, veuillez cliquer sur le bouton Signaler une tentative d'hameçonnage.

Volume - 2020 = 4,856
2021 = 391 X 45 = 1,423,125 gal
2022 = 29
2023 = 15,931
2024 = 10,418
31,625

Field Examination for Permit 63-34851 Information Requested for Processing

From Howe, Bob <Bob.Howe@idwr.idaho.gov>
Date Mon 3/17/2025 10:52 AM
To ed.hass@idahomaterials.com <ed.hass@idahomaterials.com>
Cc Parker, Cody <Cody.Parker@idwr.idaho.gov>

 2 attachments (911 KB)

Permit 63-34851.PDF; Well Drillers Report.PDF;

Good Morning Ed,

I am sending this email and calling you as a reminder of the field examination scheduled for this Wednesday, March 19, 2025 at 10:00AM. Please note, we will need access to document the use developed including any flow measurements possible to support the permitted rate of diversion. In addition to measurement and photos documentation providing specific data for use in determining the maximum annual volume will be requested for the permitted Commercial Use, which includes a concrete batch processing plant, truck washing, and dust control. The information needed to assess the volume to be licensed should be provided in written form, and should include (at minimum) the following information to complete the examination report:

Diversion System Info:

Pump set depth (if submersible):

Pump Make/Model, Pump Hp:

Pump Curve (if possible):

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: NA

2. Volume Calculations for Beneficial Use: **Commercial Use**

(Information needed from permit holder.)

Information for development period Feb 28, 2020 to January 22, 2025 to include:

Total Days of Operation Annually:

Range Max to Min. Batch Size (GAL H2O):

Total Number batches per day(For Max. Annually):

Annual Number of batches (for development period Feb 28, 2020 to January 22, 2025):

Gallons Max per Truck Wash:

Number of Truck Washes Annually (range, ok):

Method of Dust Control:

If Dust Control by Water Truck, Truck Size (Gal) and Max # of Fills per day:

If the information cannot be provided during the field examination please provide it at your earliest possible convenience, as it is necessary to process your water right license.

Please reach out to me via email or phone at (208) 605-4628 for additional information, or if you need to reschedule this examination.

Regards,

Bob Howe

 IDAHO DEPARTMENT OF
WATER RESOURCES
Bob Howe | Water Resource Agent, Sr.
2735 W Airport Way, Boise, ID 83705-5082
(208) 605-4628 | www.idwr.idaho.gov

Scheduling Field Examination at Batch Plant for Permit 63-34851

From Howe, Bob <Bob.Howe@idwr.idaho.gov>

Date Tue 2/18/2025 12:58 PM

To ed.hass@idahomaterials.com <ed.hass@idahomaterials.com>

 2 attachments (2 MB)

Permit 63-34851.PDF; Proof of Beneficial Use & Supporting Documents - 63-34851.pdf;

From: Howe, Bob

Sent: Tuesday, February 18, 2025 11:03 AM

To: ed.haas@idahomaterials.com <ed.haas@idahomaterials.com>

Subject: Scheduling Field Examination at Batch Plant for Permit 63-34851

Good Morning Ed,

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **over the next 3 weeks**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes **0.67 CFS** from a **Ground Water** (Well) for **Commercial** use. **If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.** The attached permit states in condition #5 that Commercial use is for concrete batch processing plant, truck washing, and dust control. To quantify the volume used for these uses specific information will be needed. For example, records indicating the number of batches processed within a year (with max volume per batch or actual), records or a stated conservative estimate of the number of trucks washed within a year, and the method and frequency of use for dust abatement within a year (including water truck size, etc). Please note information quantifying the yearly usage during the development is necessary to process a license that allocates enough water to allow yearly use without a concern of exceeding the elements of the right, and to prevent any compliance issues in the future. Feel free to reach out if you have any documents you think would provide adequate operational information.

Please contact me within the next thirty (30) days at (208) 605-4628 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,

Regards,

Bob Howe



IDAHO DEPARTMENT OF
WATER RESOURCES

Bob Howe | Water Resource Agent, Sr.

2735 W Airport Way, Boise, ID 83705-5082

(208) 605-4628 | www.idwr.idaho.gov