



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

October 21, 2013

CHING CREEK LLC
2633 E 105 N
IDAHO FALLS ID 83401

RE: License No. 31-7654

Issuance of License

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance with your permit. Please be sure to thoroughly review the conditions of approval and remarks listed on your license. Also enclosed is a copy of the approved application for amendment.

The license 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.

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 208-287-4916.

Sincerely,

Craig L. Saxton
Water Rights Supervisor

Enclosure(s)

CERTIFICATE OF SERVICE

I hereby certify that on October 22, 2013, I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER (Approved License) to the person(s) listed below:

RE: WATER RIGHT NO.

31-7654

**CHING CREEK LLC
2633 E 105 N
IDAHO FALLS ID 83401**



**Darla Block
Technical Records Specialist**

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. **Note: the petition must be received by the department within this fourteen (14) day period.** 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 service date 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.

State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. 31-07654

Priority: February 16, 1999

Maximum Diversion Rate: 3.20 CFS

It is hereby certified that CHING CREEK LLC
2633 E 105 N

IDAHO FALLS ID 83401 has complied with the terms and conditions of
the permit, issued pursuant to Application for Permit dated February 16, 1999; and has submitted Proof of
Beneficial Use on March 09, 2004. An examination confirms water is diverted from:

SOURCE

CHING CREEK

Tributary: CAMAS CREEK

and a water right has been established as follows:

BENEFICIAL USE

POWER

PERIOD OF USE

01/01 to 12/31

DIVERSION RATE

3.20 CFS

LOCATION OF POINT(S) OF DIVERSION:

CHING CREEK SE1/4NW1/4 Sec. 3, Twp 13N, Rge 39E, B.M.

CLARK County

PLACE OF USE: POWER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13N	39E	3								X									

CONDITIONS OF APPROVAL

1. Use of water under this right shall be non-consumptive.
2. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.
3. The right holder shall maintain a measuring device and lockable controlling works of a type approved by the Department in a manner that will provide the watermaster suitable control of the diversion(s).
4. Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At the time of this approval, this water right is within State Water District No. 31.

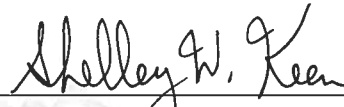
State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. 31-07654

5. The term of this right shall extend to December 31, 2024. Prior to the expiration of the term, the Director may issue an order canceling all or any part of the use authorized herein, may establish a new term, or may revise, delete, or add conditions under which the right may be exercised. The order shall take effect on the date the current term expires. If the director does not issue such an order, the term shall automatically extend to a length equal to the project's prior term and any prior conditions on the water right shall remain in effect.
6. A fish screen of 1/4 inch or smaller mesh shall be installed and maintained at the point of diversion.
7. The approach velocity at the point of diversion shall not exceed 0.5 feet per second.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed this 11th day of October, 2013.


for GARY SPACKMAN
Director

State of Idaho
Department of Water Resources
APPLICATION FOR AMENDMENT
(For Licensing Purposes)
WATER RIGHT NO. 31-07654

FOR DEPARTMENT USE ONLY

Preliminary check by _____ Fee = 100.00 Received by HP # C097765 Date 9-19-13

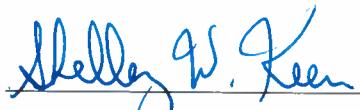
ACTION OF THE DEPARTMENT OF WATER RESOURCES

I, GARY SPACKMAN, of the Department of Water Resources hereby approve the
above Application for Amendment for Permit No. 31-07654 with the following:

CONDITIONS OF APPROVAL

1. Use of water under this right shall be non-consumptive.
2. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.
3. The right holder shall maintain a measuring device and lockable controlling works of a type approved by the Department in a manner that will provide the watermaster suitable control of the diversion(s).
4. Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At the time of this approval, this water right is within State Water District No. 31.
5. The term of this right shall extend to December 31, 2024. Prior to the expiration of the term, the Director may issue an order canceling all or any part of the use authorized herein, may establish a new term, or may revise, delete, or add conditions under which the right may be exercised. The order shall take effect on the date the current term expires. If the director does not issue such an order, the term shall automatically extend to a length equal to the project's prior term and any prior conditions on the water right shall remain in effect.
6. A fish screen of 1/4 inch or smaller mesh shall be installed and maintained at the point of diversion.
7. The approach velocity at the point of diversion shall not exceed 0.5 feet per second.

Witness my hand this 11th day of October, 2013.


for GARY SPACKMAN
Director

State of Idaho
Department of Water Resources
APPLICATION FOR AMENDMENT
(For Licensing Purposes)
WATER RIGHT NO. 31-07654

RECEIVED

SEP 19 2013

DEPARTMENT OF
WATER RESOURCES**Date of Priority:** February 16, 1999**Maximum Diversion Rate:** 3.20 CFS

Comes now CHING CREEK LLC

2633 E 105 N

IDAHO FALLS ID 83401

and represents to the Director of the Idaho Department of Water Resources that he is the owner and holder of Permit to appropriate the Public Waters of the State of Idaho No. 31-07654, and requests that the permit be changed as follows:

Source: CHING CREEK**Tributary:** CAMAS CREEK**BENEFICIAL USE****PERIOD OF USE****RATE OF DIVERSION**

POWER

01/01 to 12/31

3.20 CFS

LOCATION OF POINT(S) OF DIVERSION:

CHING CREEK SE1/4NW1/4 Sec. 3, Twp 13N, Rge 39E, B.M.

CLARK County

PLACE OF USE: POWER

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13N 39E 3								X									

Permit holder asserts that no one will be injured by such change and that such change will be made at permit holder's own risk. Signed this 16th day of SEPTEMBER, 2013

Gregory Reck
(Signature)

MEMORANDUM

Date: October 11, 2013
To: Water Right File 31-7654
From: medl
Re: local public interest conditions

This right authorizes the diversion and use of water for power purposes from Ching Creek. The project is entirely contained within the permit holder's property. All the electricity generated will be used in a private cabin which is isolated from any electric utility's power grid. Therefore, this project is outside of the jurisdiction of both the FERC and the IPUC and not subject to the review and the conditions that those agencies can impose on the use as a result of that review.

However, Idaho Code and Water Appropriation Rules require that IDWR ensure that a proposed use will not be in conflict with the local public interest. So at the time the application was being reviewed, IDWR solicited and received comments from IDF&G. IDF&G requested that Permit 31-7654 be issued with conditions to protect unspecified fish and wildlife habitat. Permit 31-7654 was issued with 3 conditions to address IDF&G concerns. Those conditions are 13, 14 and 15 reproduced below.

13. A fish screen of ¼ inch or smaller mesh shall be installed and maintained at the point of diversion.
14. The approach velocity at the point of diversion shall not exceed 0.5 feet per second.
15. The Director retains jurisdiction to require a bypass flow for maintenance of fish, wildlife and aquatic habitat.

Conditions 13 and 14 are consistent with the conditions imposed on uses from the Salmon/Clearwater Moratorium areas. Ching Creek is within the Eastern Snake River Plain Moratorium area but unlike the Salmon and Clearwater moratorium areas, neither the species targeted for protection nor their abundance, is known to IDWR. The field exam and my review of supplemental information, shows that diversion was in compliance with these two conditions and demonstrates that the permit holders have made a commitment to protect the fish and wildlife resources in the area.

This power project was designed to take only a portion of the flow of Ching Creek. That portion is a percent of the estimated low flow. However, Ching Creek is not gauged and the low flow has not been independently confirmed. This hydro project may have the potential to dewater Ching Creek in the reach between the diversion and the point of return, but in its years of operation there is no evidence that it has. The permit holder has complied with the fish screen and approach velocity conditions. Phone conversations with the designer, Mr. Peck repeatedly assured me that the diversion has only ever diverted a small portion of the total flow and that he and the other members of Ching Creek LLC. are committed to responsible environmental stewardship.

Mr. Peck originally designed the system to operate year-round. However, in practice he found that in the winter months, slush accumulates on the fish screen and blocks flow. The powerplant would not be operating during the typical period of lowest flow of each year. Mr. Peck stated that it is usually not operated from December through May.

I consulted the equipment contractor for this project and was given 2.6 cfs as the absolute minimum flow rate required to operate the P.A.T. The project configuration does not ensure that when Ching Creek drops to 2.6 cfs or lower, the flow will bypass the powerhouse. Instead, even low flow insufficient to generate power will enter and fill the power channel and penstock until a backwater effect forces the creek to stay in its channel.

I also consulted the assistant water master for WD31 who estimated the low flow of Ching Creek at 4 to 5 cfs. He confirmed that the fish species intended for protection would be trout and minnow.

Researching the literature for commercial production of trout, I found recommendations for minimum flow rates. If the reach between the diversion and the discharge were a raceway used for trout propagation, approximately 500 gpm or 1.11 cfs would be required. However, IDWR is not the appropriate authority to set a fishery maintenance flow and at the time that this application was reviewed, the IDF&G chose not to specify a bypass flow requirement for this hydropower project.

This license will be issued with a term date. At that time, the Director can review all the conditions and may find it appropriate to add a condition which specifies a bypass flow.

MEMORANDUM

Date: October 7, 2013
To: Water Right File 31-7654
From: medl
Re: license review

Applicant

The permit was assigned from Great Northern Adventures, LLC. to Ching Creek, LLC. in 2000. Both were registered with the IDSOS as foreign limited liability companies. Great Northern Adventures completed an affidavit for power purposes form but there is no record in the water right file that a like form was completed by Ching Creek, LLC..

According to available Clark County taxlot records, the point of diversion from Ching Creek, the place of use, and the point of discharge back to Ching Creek are all on property now owned by Ching Creek, LLC. There is no irrigation entity in the area. Any irrigation system components are likely owned and operated by Ching Creek, LLC.

A review of the IDSOS records shows that Mr. Gregory Peck is the authorized agent for Ching Creek LLC. (IDSOS W9800; active status). He was also the authorized agent for Great Northern Adventures, LLC. (IDSOS W8219; cancelled status). Mr. Peck designed the project. He signed the application for permit, the only affidavit for power purposes, the assignment from Great Northern Adventures to Ching Creek and the proof of beneficial use statement. Therefore, I consider the sole affidavit for power purposes to be sufficient.

Source and POD

The source of water for this hydro project is Ching Creek. The design diversion rate for this hydropower use is a portion of Ching Creek's estimated low flow. The permit holder does not intend to dewater the ~1/4 mile stretch of the creek between the diversion point and the point of return but there is no requirement that creek flows must bypass the turbine if they fall below a certain level.

There are no other diversions from Ching Creek between the point of diversion and the point where the turbine discharge is returned to the creek.

The chicken-wire, box screen located at the headgate is not the screening required by conditions of the permit. That box screen is the trash rack which excludes larger floating debris from the diversion channel. The IF&G required ¼ inch or smaller screen openings and 5 fps or less approach velocity. Those requirements are met in the building that the permit holder called the filter house. The filter house encloses the headwater stilling pool and screens all the water destined for the penstock. A perforated metal filter transects the stilling pool upstream of the penstock intake. The examiner provided pictures of the filter house/pool house and the screen but did not identify or discuss the screen in his narrative.

Water right overlap

There are no other water rights sharing either the point-of-diversion or place-of-use. The examiner mistakenly identified a stockwater right as an overlapping right. Ching Creek LLC. does have a decreed stockwater right, 31-11370, but it does not interfere with this power use.

Water Use

The field examiner did not make flow measurements or record readings from any of the power system components. However, the gage face of the AC controller is shown in an exam photo. It indicates that the hydro was generating power at the time of the photo. Beneficial use was confirmed by that photo.

The Ching Creek hydro-turbine is a Cornell pump which has been configured to work in reverse as a turbine. Pumps are usually operated at constant speed, head and flow. Similarly, pumps used as turbines are optimized to work at a specific flow rate. They do not have the flexible range of operation that true turbines can have. The Ching Creek hydro could be forced to accept more water than the design rate if needed. But the permit holder stated that they have only used the flowrate originally set by the installer. Therefore there is no evidence that the permit holder ever used more water than the design flow.

This system generates AC power which can be used directly by standard household appliances. The P.A.T. (pump as turbine) and the generator would use water and generate electricity at a constant rate even though the utilization of that electricity would not be constant.

Power use in a household has a diurnal cycle. The maximum power demand on this system or any power generation system is unlikely to occur at the time of the exam. To protect the system during those times when the electricity used is less than the electricity generated, these systems typically also serve one or more electrical resistance heater. The heaters are called dump, ballast or shunt loads and they are sized to accept the full generation capacity. They are activated when the system cannot use all the power generated and are a measure of the beneficial use. The examiner doesn't mention a dump load in his narrative and none are shown in the exam photos.

Additional information provided by the permit holder included more photos of the system. In one of those supplemental photos, four resistance heaters are shown mounted to walls of the garage. Mr. Peck stated that the capacity of those heaters is 5500 Watts. Therefore, this system can generate as much as 5.5 kW. Phone conversations with contractor, Canyon Hydro, confirmed that the Ching Creek hydro system was expected to generate approximately 5.5 kW and was designed to operate at 27 feet of head and 3.2 cfs. It is not sufficient to provide all the electrical demand for year-round occupancy. A propane heater is used as the main heat source.

The examiner based his flow recommendation on a theoretical calculation of the carrying capacity of the open channel, power canal rather than on the turbine capacity. The calculated rate was very generous and limited only by the proof of beneficial use statement. I disagree with the examiner's rate recommendation. For licensing I am recommending the design rate, 3.2 cfs.

This hydro project is an off-stream diversion with insignificant storage (e.g. less than 24 hours worth). Although the project not an on-stream, run-of-river project, it is designed to operate in run-of-river mode. A license volume is not required.

Place of use

The examiner found the place-of-use in a different location than the permit authorized. An amendment will be needed.

The examiner created the place-of-use shape and the permit holder confirmed it was correct.

Conditions

The point-of-diversion, place-of-use and point-of-discharge are located on the permit holders' property. And all the electricity generated is used by the permit holder. Therefore, neither IPUC nor FERC have jurisdiction over this powerplant.

The term limit is based on the expected equipment life.

The approach velocity and screening conditions have been met. (See attached calculation.) The License will retain those conditions.

Approach velocity is calculated not measured.							
Q = v x A the flowrate to velocity relationship							
0.5	fps	required approach velocity					
3.2	cfs	recommended flowrate					
6.4	ft^2	required open area to meet the approach velocity constraint					
the screen							
3.833333	ft	height					
6.75	ft	length					
25.875	ft^2	total screen area					
the open area of the screen							
		permit holder states that openings are no larger than 1/4 inch					
0.4		enlarged photo supports an estimated 40% open area					
10.35	ft^2	actual open area of the screen (25.875 ft^2 x .4 = 10.35 ft^2))					
10.35 ft^2 is greater than the necessary 6.4 ft^2 of open area							
Therefore, this screen meets the approach velocity requirement							
Reference: Freshwater Intake End-of-Pipe Fish Screen Guide							
	Department of Fisheries and Oceans						
	Ottawa, Ontario 1995						

Edl, Michele

From: GREGORY PECK [ucongpeck@msn.com]
Sent: Monday, September 16, 2013 7:04 PM
To: Edl, Michele
Subject: RE: Greg Peck Hydro Project Amendment
Attachments: a4453c51_66628.jpg; 29039e58_148313.jpg; 6ebd8856_152804.jpg; eabbad70_145299.jpg; Hydro intake screen closeup.JPG

Michele,

Here are the pictures again. If they do not work for you, please let me know and I will take some more when I go up to the ranch again (probably this week). I added a picture of the turbine.

Greg

Subject: RE: Greg Peck Hydro Project Amendment
Date: Mon, 16 Sep 2013 17:19:59 -0600
From: Michele.Edl@idwr.idaho.gov
To: ucongpeck@msn.com

Mr. Peck,
Thank you for these images. They are close to meeting my need. However, sometimes technology is not our friend. You sent me thumbnails. They are so small that I lose all definition when I try to enlarge. Could you to send me the full size images?
I want to print them out for insertion into the file for this water right.
Best Regards
Michele Edl

From: GREGORY PECK [<mailto:ucongpeck@msn.com>]
Sent: Monday, September 16, 2013 3:12 PM
To: Edl, Michele
Subject: Greg Peck Hydro Project Amendment

Michele,

As you requested, I am sending some pictures showing the location, size, and type of screening we have used for the hydro project associated with permit #31-07654 located at Twp 13N, Rge 39E, Sec 3, NWSE, near Kilgore, Idaho.

One picture shows the outside of what we call the filter house. It is located near the diversion point. The water flow into the filter house is controlled by a headgate at the entrance to the house. The water enters a concrete pit that is split along the center by the filter screen required in our permit by the Fish and Game Department.

There is a picture showing the inside of the filter house. I am cleaning leaves off of the screen which can be seen just below the net I am using. You can see how the screen splits the pit forcing all water to pass through the screen before entering the penstock pipe located at the bottom and far side of the pit. There is also a picture of the material that the screen is manufactured from. The holes are 1/4 " as specified. The overall

dimensions of the rectangular screen are: 6'-9" X 3'-10".

The other picture shows the controls for the hydro system which are located in the garage of our cabin. You can see the bank of resistance heaters we use as a dump load along with the governor, relays, and switch boxes associated with the system. Since we had discussed these dump loads, I thought you may like to have a picture for your file.

I trust this will answer any questions you have, but if not, please let me know and I will help out any way I can.

I am sending the signed amendment sheets along with a check for \$100.00 for payment of the associated fee.

Thank you for your effort in finalizing this licensing process.

Gregory Peck
Authorized Agent
Ching Creek LLC
208-523-5306
2633 E 105 N
Idaho Falls, ID 83401
ucongpeck@msn.com

Edl, Michele

From: GREGORY PECK [ucongpeck@msn.com]
Sent: Monday, September 16, 2013 3:12 PM
To: Edl, Michele
Subject: Greg Peck Hydro Project Amendment
Attachments: 2b5fbc67_155909filter screen cleaning.jpg; b447ebbd_154351hydro controls in garage.jpg; eabbad70_145299 filter house.jpg; Hydro intake screen closeup.JPG

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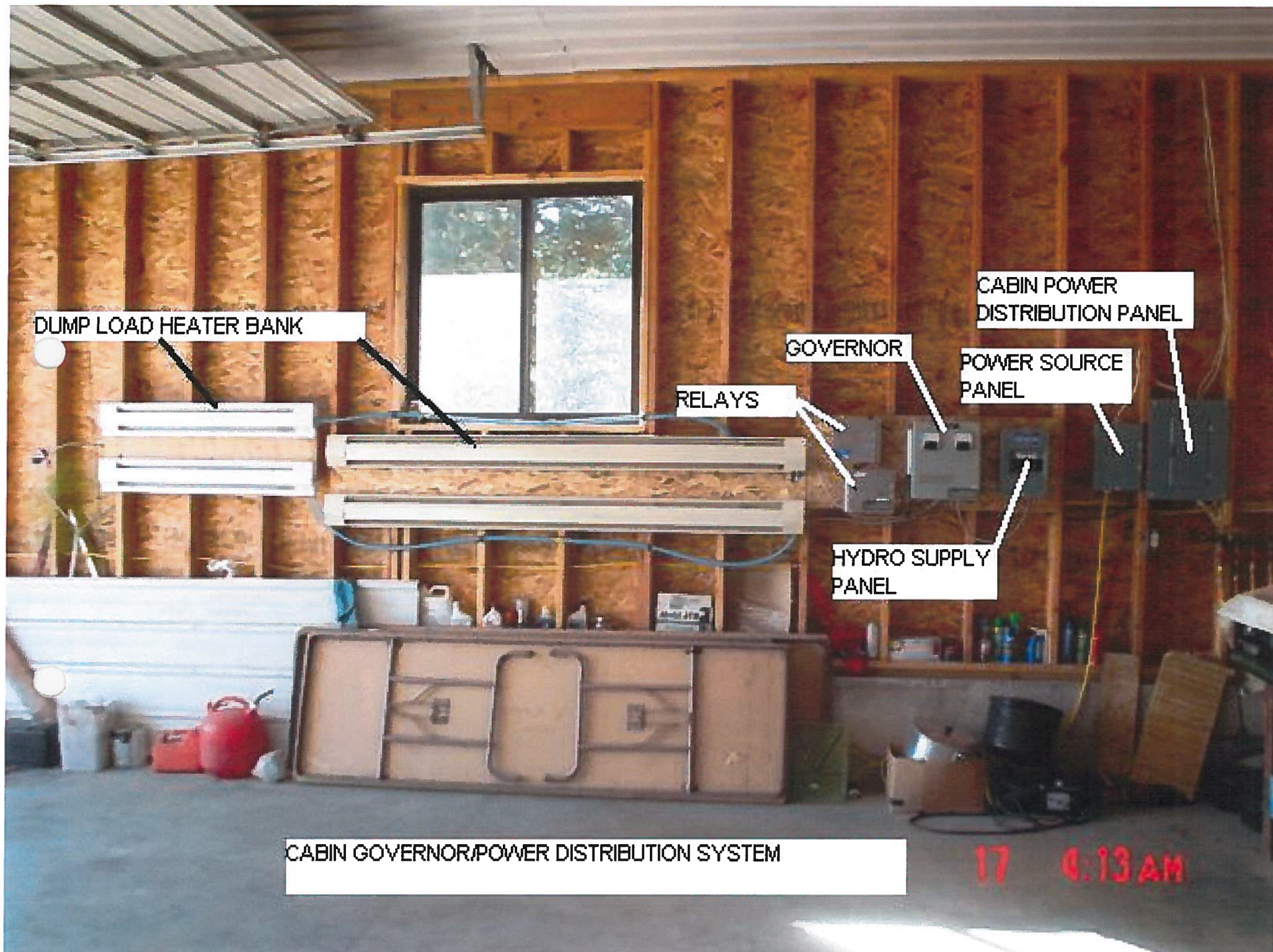
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Thank you for your effort in finalizing this licensing process.

Gregory Peck
Authorized Agent
Ching Creek LLC
208-523-5306
2633 E 105 N
Idaho Falls, ID 83401
ucongpeck@msn.com



04453C51-66628.jpg

hydro controls in aprage.jpg

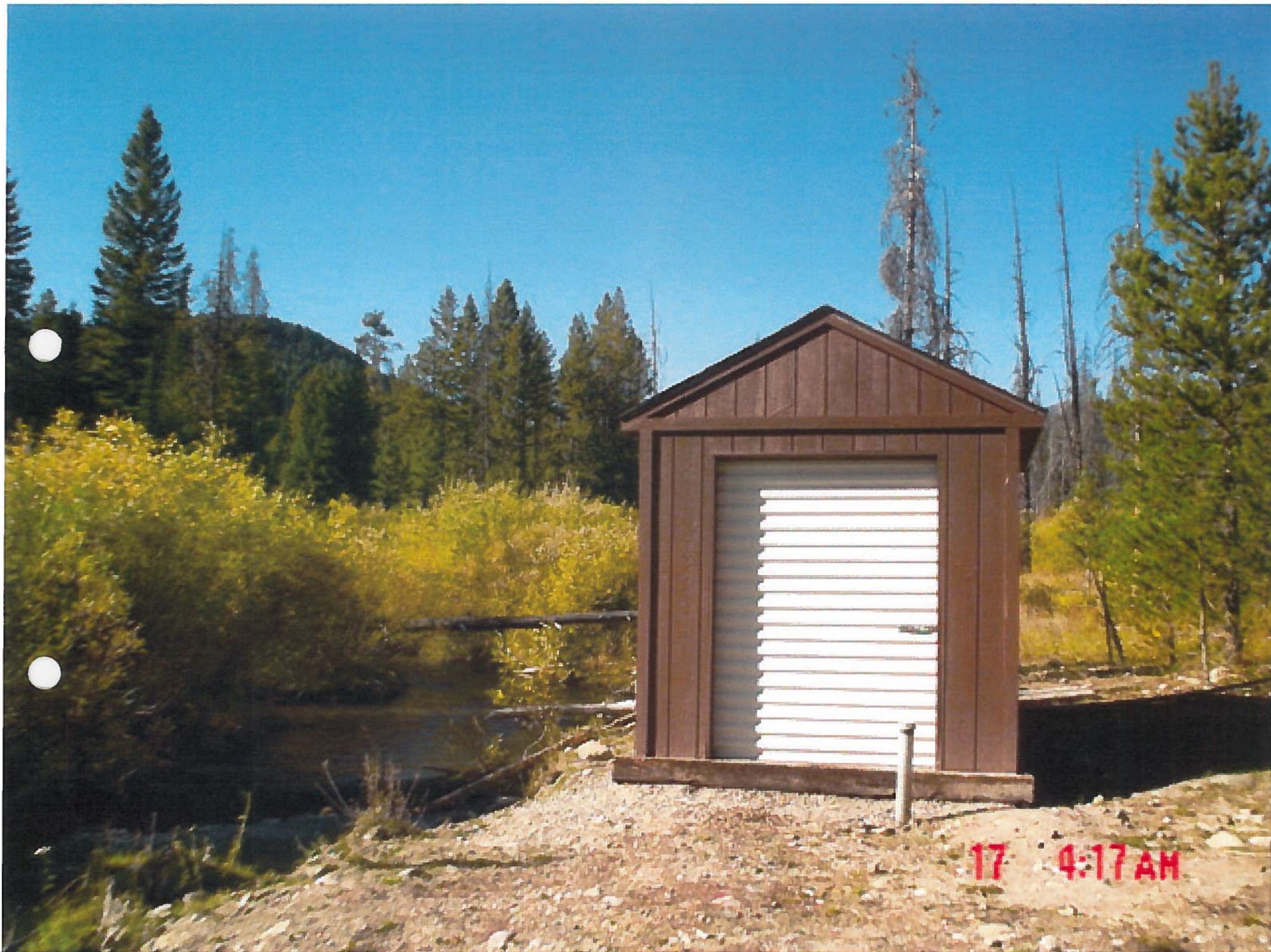


17 4:18 AM

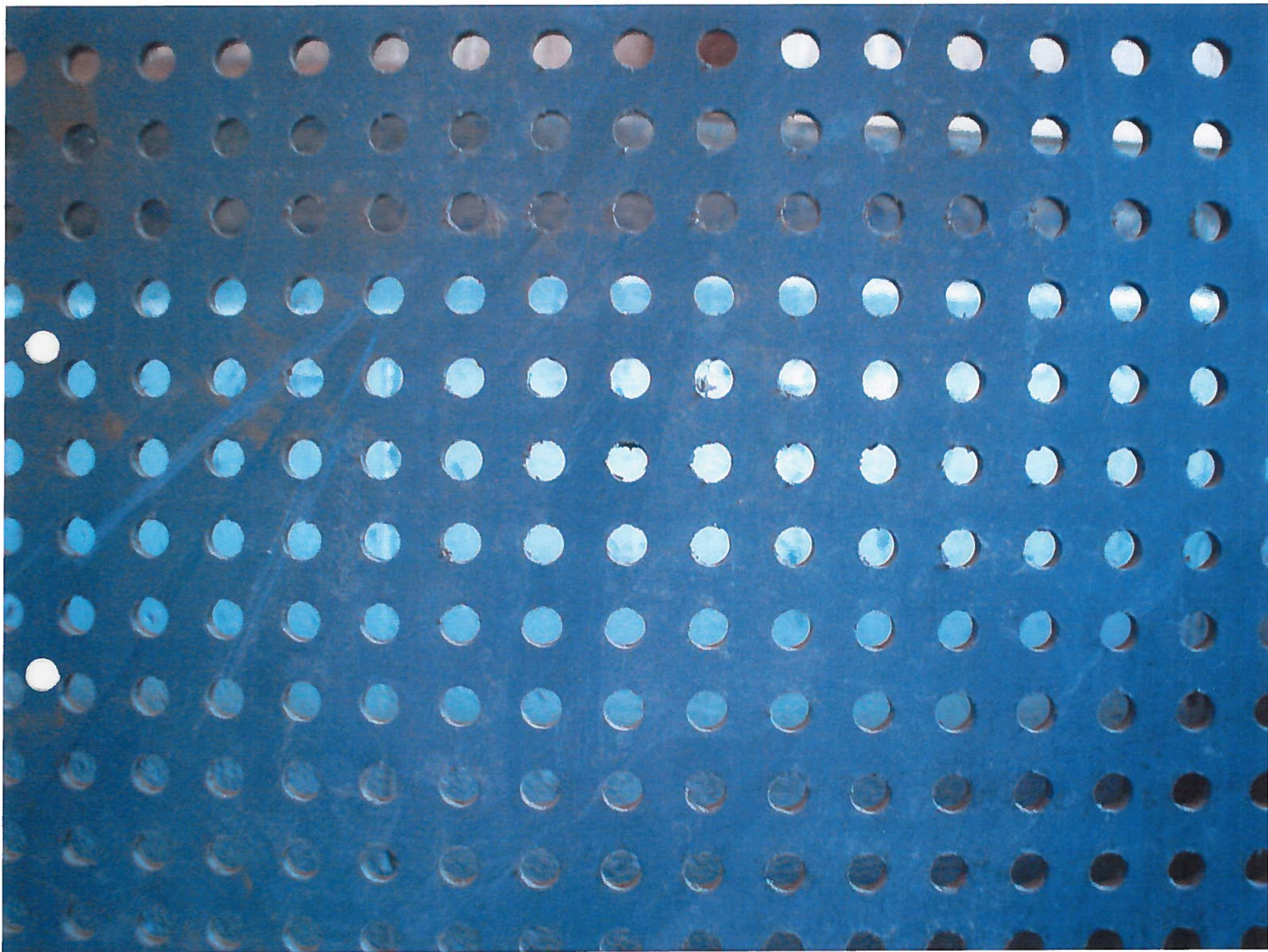
29039058 148313.m 211.1 cm in cleaning to



nehd8856-152804.ipa (pump as turbine)



on hmd 70 145799 100 filter hmd 100



Hydro intake screen closeup. JPG



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

GARY SPACKMAN
Director

C.L. "BUTCH" OTTER
Governor

September 10, 2013

CHING CREEK LLC
2633 E 105 N
IDAHO FALLS ID 83401

RE: Water Right Permit No. 31-07654

Dear Permit Holder(s):

The Department of Water Resources is reviewing the permit referenced above prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit. The examiner who verified your water use reported that certain elements of the permit have been developed differently than described on your permit. Changes that do not increase the authorized use of water under the permit can be requested and approved in accordance with Section 42-211, Idaho Code. Before a license can be issued, your permit must be amended to depict your water use as it was actually developed.

Based on the examiner's report, the following elements were developed differently than described on your permit:

☐ Point(s) of Diversion

☒ Place(s) of Use

☒ Other

The place of use authorized by the permit was to be located in NESW of section 3 in Township 13 North, Range 39 East. The examiner reported that the powerhouse has been constructed in the SENW. For your reference, I have enclosed an aerial photo which is overlaid by the place-of-use location that was created for our database by the field examiner.

Condition 13 of the permit required ¼ inch mesh screen be installed and maintained at the point of diversion. Condition 14 required that the approach velocity at the point of diversion not exceed 0.5 fps. The only screening shown in the field exam report is the chicken-wire box screen positioned at the headgate. This does not meet the screening requirement of the permit. If there is an additional screen at the entrance to the penstock pipe, the examiner's report does not show it. Appropriate screens can automatically create the necessary, reduced approach velocity.

IDWR cannot issue a license if the permit conditions have not been met. There are at least two options for addressing the permit requirements. One option is to submit documentation demonstrating that you have complied with the conditions by installing the required screen.

The second option is to send IDWR a written request for removal of the screening and approach velocity requirements. If you choose the second option, please attach documentation which shows that you have discussed the need for the fish protection devices with the Idaho Department of Fish and Game and that they have no objection to the removal of the requirements. The IDF&G Regional office nearest to you is:

Idaho Fish & Game
Upper Snake Region
4279 Commerce Circle
Idaho Falls ID 83401

Only after you provide the information requested above, can I can resume processing your water right. However, because the field examiner may have simply missed seeing the required screens, I am providing you a copy of the form which will advance this permit to the next stage.

The enclosed Application for Amendment form depicts the elements of the water right as they will appear on the license when it is issued. Please review the amendment form carefully. If you concur with the information presented, please sign the form and return it with the \$100.00 filing fee.

To summarize:

Please inform IDWR in writing, within thirty (30) days, which option you intend to pursue to demonstrate your project is compliance with the permit requirements. If you need time to install screening devices, please indicate how quickly you can complete construction.

Even if you are already compliance and the field examiner either didn't recognize and document that compliance, or you complied with the permit requirements after the field examination took place, then you will still need to amend your permit to correct the place-of-use location.

If you have any questions, please call me at 208-287-4946, or email me at michele.edl@idwr.idaho.gov.

Sincerely,



Michele Edl
Associate Engineer

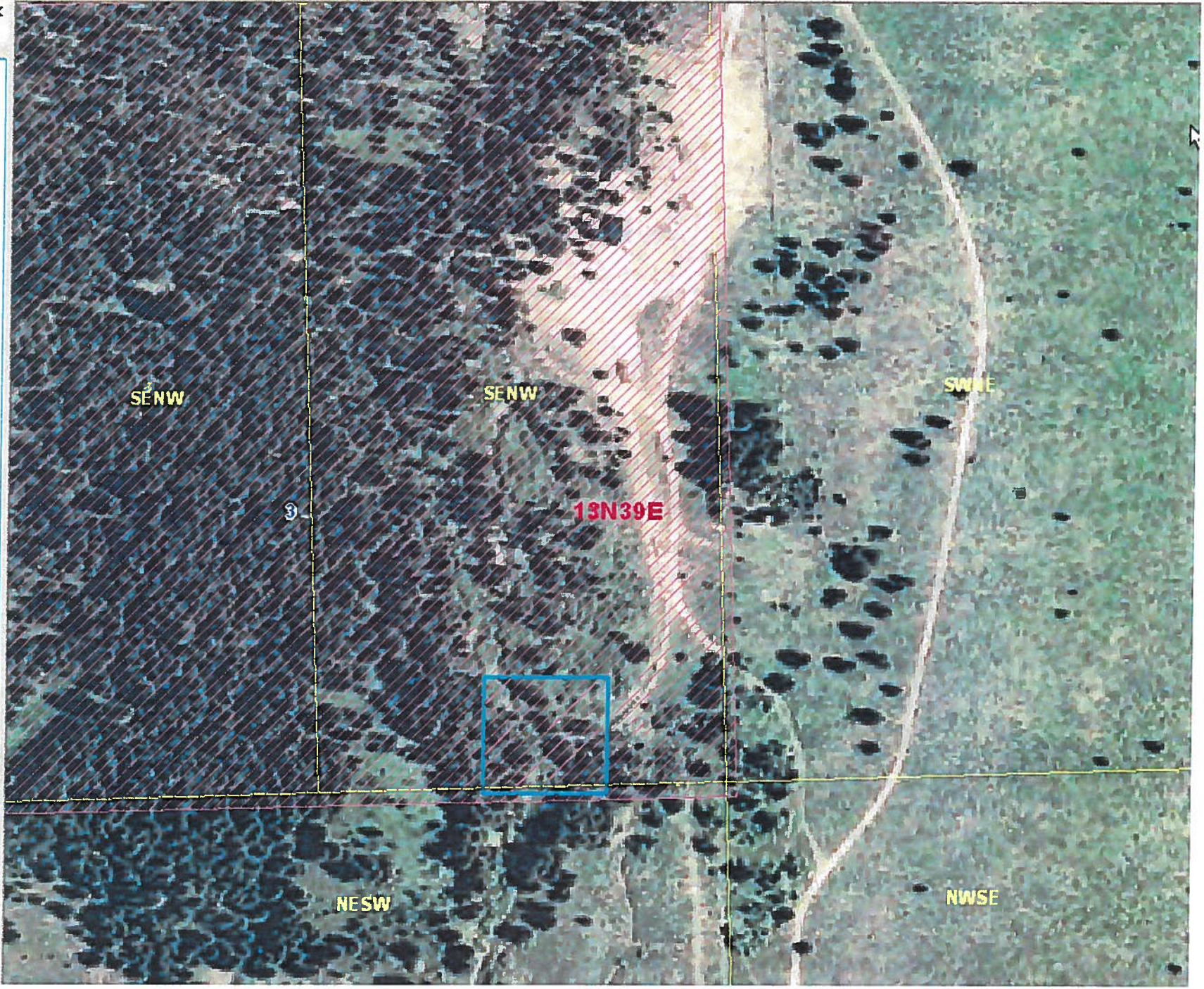
Enclosure(s)



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 - ☐ SpatialData
 - ☐ Water Right POD
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 - ☒ Township/Range
 - ☒ Sections
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 - ☒ Imagery
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 - ☐ 1992-2000 (1 meter)
 - ☐ esri Imagery (1 foot)
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 - ☐ 2006 (2 meter)
 - ☐ 2006 (1 meter)
 - ☐ 2004 (1 meter)



MEMORANDUM

Date: September 9, 2013
To: Water Right File 31-7654
From: medl
Re: phone log

I spoke with Mr. Gregory Peck earlier today. Mr. Peck represents Ching Creek LLC., the permit holder. I explained that I had been assigned to review the water right file and if possible to issue a license for the Ching Creek, LLC. hydropower project. I also explained that although IDWR personnel had completed the field confirmation of the project, the examiner had not collected enough information about the turbine. I asked if he could provide me the turbine design specs or the nameplate information. Mr. Peck told me he could, but that Canyon Hydro had put the entire system together for Ching Creek, LLC., and he recommended that I contact them for a quicker response.

I phoned Canyon Hydro and requested the information I needed. I spoke with Mr. Rob James. The system was designed to operate at 3.2 cfs not at the 3.8 cfs stated in the proof of beneficial use. Mr. James followed up on our conversation and my information request with an email. The attachments to that message document the design. Among the attachments are the Cornell pump selection criteria and the pump performance curves.

After receiving the information from Canyon Hydro I phoned Mr. Peck again and briefly interviewed him about the use. I explained that I had been able to collect the design information and asked him if he had required the hydro to operate outside of the design point. He said no. They have always operated it at the design flow.

Edl, Michele

From: Rob James [rob.james@canyonhydro.com]
Sent: Monday, September 09, 2013 2:57 PM
To: Edl, Michele
Subject: Ching Creek Hydro
Attachments: Cornell data.pdf

Hello Miss Edl,

Please find the attached data document describing the design characteristics of the Ching Creek Hydro pump turbine.

This pump as turbine was designed for 27 feet net head and 1437 gpm (3.2 cfs) flow.

Please do not hesitate to contact me if you require additional information.

Best Regards,

Rob James
Canyon Industries, Inc.
5500 Blue Heron Lane
Deming, WA 98244
(360) 592-5552

CORNELL PUMP COMPANY

2323 S.E. Harvester Drive
Portland, Oregon 97222
(503) 653-0330

Prepared For: Canyon Industries

ATTN: Brett

Pump Assembly	Seal	Volute Type	Sleeve
6TRJ-F16K Horizontal Mount	SINGLE	Double	A15574 2.50" O.D.

Design Point							
Impeller Diameter	RPM	Differential Head	GPM	%Eff	HP	Specific Gravity	BEP
11.00" 0	900	27-Ft.	1437	70	14.00	1.00	2064

Thrust @ Impeller		Imp. Wt.	Total	Belt Drive
Axial	102-LB.		102-LB.	Standard Pump Sheave 10 P.D.
Radial	0-LB.	34-LB.	34-LB.	

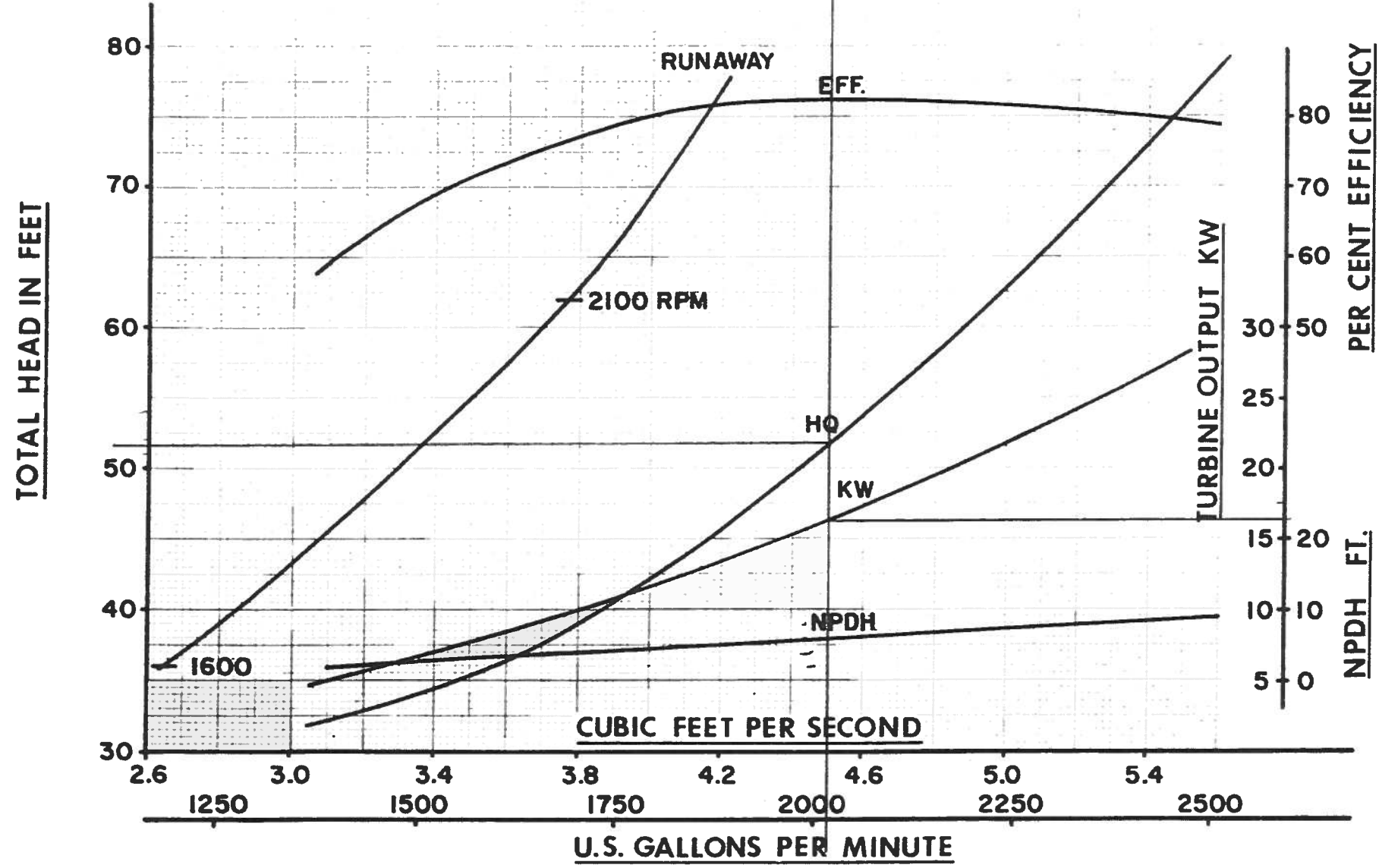
Frame Bearings			Shaft: B3164, 1040		
Bearing No.	Pump End 6313	Opp. Pump End 6313	Deflection @ Suction Wear Ring	Fatigue Safety Factors	
Thrust	Axial&Radial	Radial Only		Sleeve Shoulder	@Hub
B10 Life Hrs	>300000	>300000	0.0010-in	9.40	6.98

Fatigue Stress Details	Bending	Tension	Shear	Torsional Shear	Combined Fatigue
@ Sleeve Shoulder	896	8283	11	1098	10288
@ Hub Shoulder	651	12039	18	2104	14811

adjust this point for expected net head, operate @ 900 rpm

INLET = 6.0 IN.	$N_s = 2900$	SPEED = 1230 RPM	TURBINE MODEL - 6 TRI
EXHAUST = 10.0 IN.			

NEW PAGE



MARCH 1986

82-401

CANYON INDUSTRIES, INC. FAX FORM

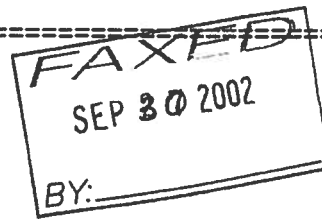
CANYON INDUSTRIES, INC.
5500 BLUE HERON LANE
DEMING, WA 98244

PHONE: 360-592-5552
FAX: 360-592-2235

=====

DATE: 9/30/2002
ATTN: Steve Hess
COMPANY: Cornell Pump Co.
FAX: 503-653-0338
FROM Brett W. Bauer
NO. OF PAGES: 2
Regarding: 6TR1, our PO 9353-023056

=====



Steve,

Please take a look at the attached sketch and let us know your comments.

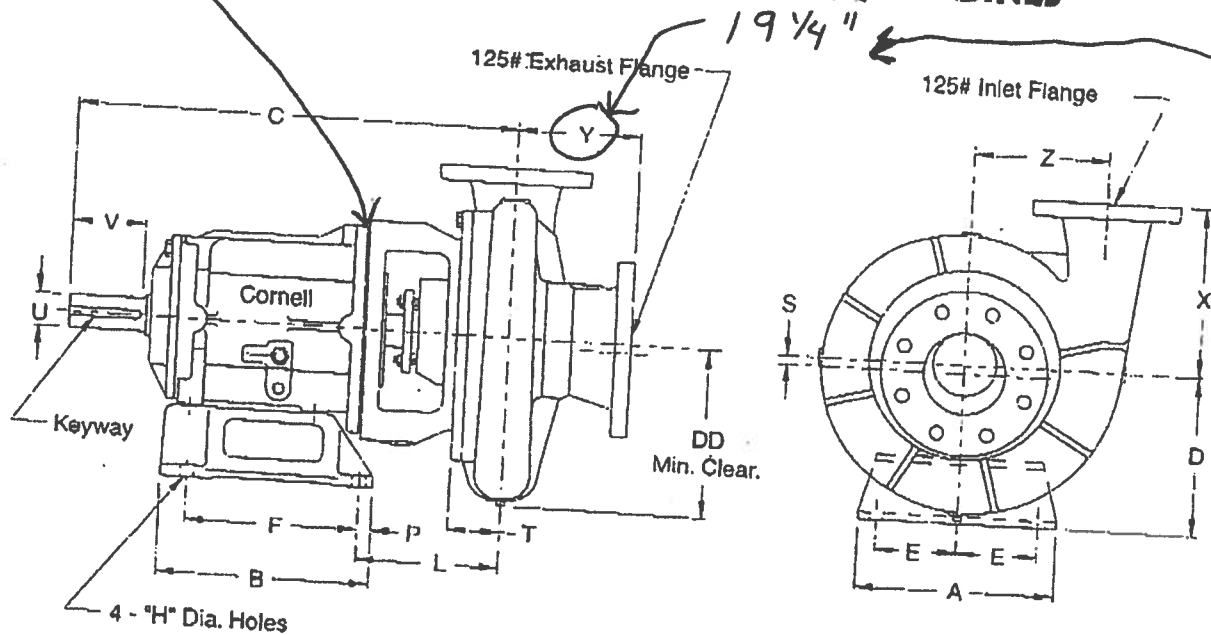
Thank you,

A handwritten signature in cursive script that reads "Brett".

Brett Bauer

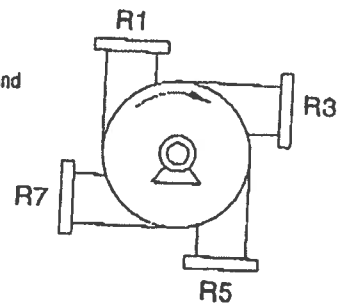
can we unbolt he to rotate inlet Flange orientation?

HORIZONTAL FRAME MOUNTED (F) TURBINES



"V" dimension is maximum useable shaft.
Mounting foot distance is 0.62" on F5, 0.75 on F16 and F18.

Inlet positions
viewed from drive end
Consult factory for
availability of other
inlet positions



Do not use for construction unless certified.
Flange connections can vary by ± 0.12 inch

TURBINE DIMENSIONS																						
TURBINE MODEL	FRAME	CONNECTION			A	B	C	D	DD	E	F	H	L	P	S	T	U	V	X	Y	Z	KEYWAY
		INLET	EXHAUST	TYPE																		
1.25 TR1	F 5	1.25	2	THRD	7.50	7.30	18.62	5.50	7.38	2.62	4.50	0.56	8.69	1.38		2.62	1.25	3.00	5.75	3.50	5.38	25X.12
1.5 TR1	F 5	1.5	2	THRD	7.50	7.30	18.62	5.50	7.38	2.62	4.50	0.56	8.69	1.38		2.62	1.25	3.00	6.50	3.50	5.50	25X.12
2 TR1	F 5	2	2.5	THRD	7.50	7.30	18.62	5.50	7.75	2.62	4.50	0.56	8.69	1.38		2.62	1.25	3.00	5.75	4.00	5.75	25X.12
2.5 TR1	F 16	2.5	3	FLG	12.00	12.88	25.88	9.75	8.12	5.12	10.38	0.81	8.00	0.88		2.62	2.00	4.50	7.50	4.28	5.62	50X.25
3 TR1	F 16	3	4	FLG	12.00	12.88	27.88	9.75	8.50	5.12	10.38	0.81	10.00	0.88		2.38	2.00	4.50	7.00	5.38	6.50	50X.25
4 TR1	F 16	4	5	FLG	12.00	12.88	28.38	9.75	9.00	5.12	10.38	0.81	10.50	0.88	0.69	2.38	2.00	4.50	8.75	6.09	6.12	50X.25
5 TR1	F 16	5	8	FLG	12.00	12.88	28.88	9.75	11.62	5.12	10.38	0.81	11.00	0.88	1.38	3.38	2.00	4.50	10.50	9.00	7.50	50X.25
5 TR1A	F 16	5	8	FLG	12.00	12.88	26.97	9.75	13.12	5.12	10.38	0.81	9.09	0.88	0.44	3.72	2.00	4.50	8.00	10.28	9.00	50X.25
6 TR1	F 16	6	10	FLG	12.00	12.88	30.69	10.50	14.75	5.12	10.38	0.81	12.31	0.88	1.00	4.31	2.50	4.50	9.50	10.41	9.50	62X.31
10 TR1	F 18 DB	10	10	FLG	12.00	12.88	30.75	10.50	18.25	5.12	10.38	0.81	12.38	0.88		4.38	2.50	4.50	11.00	10.66	12.50	82X.31

Dimensions are the same for grease and oil (K) lubricated frames

Dimensions are the same for grease and oil (K) lubricated frames



Cornell Pump Company • Portland, Oregon