

From: Bachman, Ernest D [EBachman@usbr.gov]
Sent: Tuesday, June 26, 2012 5:28 PM
To: Edl, Michele
Cc: McGarry, Elizabeth G
Subject: RE: 65-22723 additional request
Attachments: Hydrogenerator Installation Plan View.9-07-Model.pdf; Hydrogenerator Installation Section View.9-07-Model.pdf

Michele, Please see my responses below in bold text.

Thanks and let me know if you need additional information.

Ernie Bachman

From: Edl, Michele [<mailto:Michele.Edl@idwr.idaho.gov>]
Sent: Tuesday, June 26, 2012 1:25 PM
To: Bachman, Ernest D
Cc: McGarry, Elizabeth G
Subject: 65-22723 additional request

Mr. Bachman,

I am drafting the beneficial use report for Deadwood Dam's hydro power permit 65-22723. I need a little more information and I believe that you are the best person to provide it. If not, please forward this request to the most appropriate personnel.

1) The field exam report requires that I attach a "Delivery System Diagram" and "indicate all major components and distances between components."

As you know I have IDWR's copy of the SOP manual for Deadwood Dam. And I have your impromptu sketch of the system piping. I had hoped I would be able to use one of the drawings in the SOP (maybe 3-D-403 on II 4) as a basis to sketch the water path from the intake, through the piping and hydroturbine to the discharge point. However, my memory of the explanation you gave with your sketch is gone. Please refresh my memory by repeating yourself.

I attached two design sketches I did for the installation, to give you a better idea of the piping and location of the hydroturbine.

2) What is the dump load heater size? 50 kW? **It's a 25 KW unit.**

3) I want to list the names and titles of all the folk who met with me last week. I apologize for not collecting it at that time. Can you assist me with that too?

Vicki Hoffman, Supervisory General Engineer, Operation and Maintenance, Middle Snake Field Office, MSFO-3100

Gail McGarry, Program Manager, Water Rights & Acquisitions, PN Region Office, PN-3100

Ernie Bachman, Mechanical Engineer, Operation and Maintenance, Middle Snake Field Office, MSFO-3108

Sincerely,

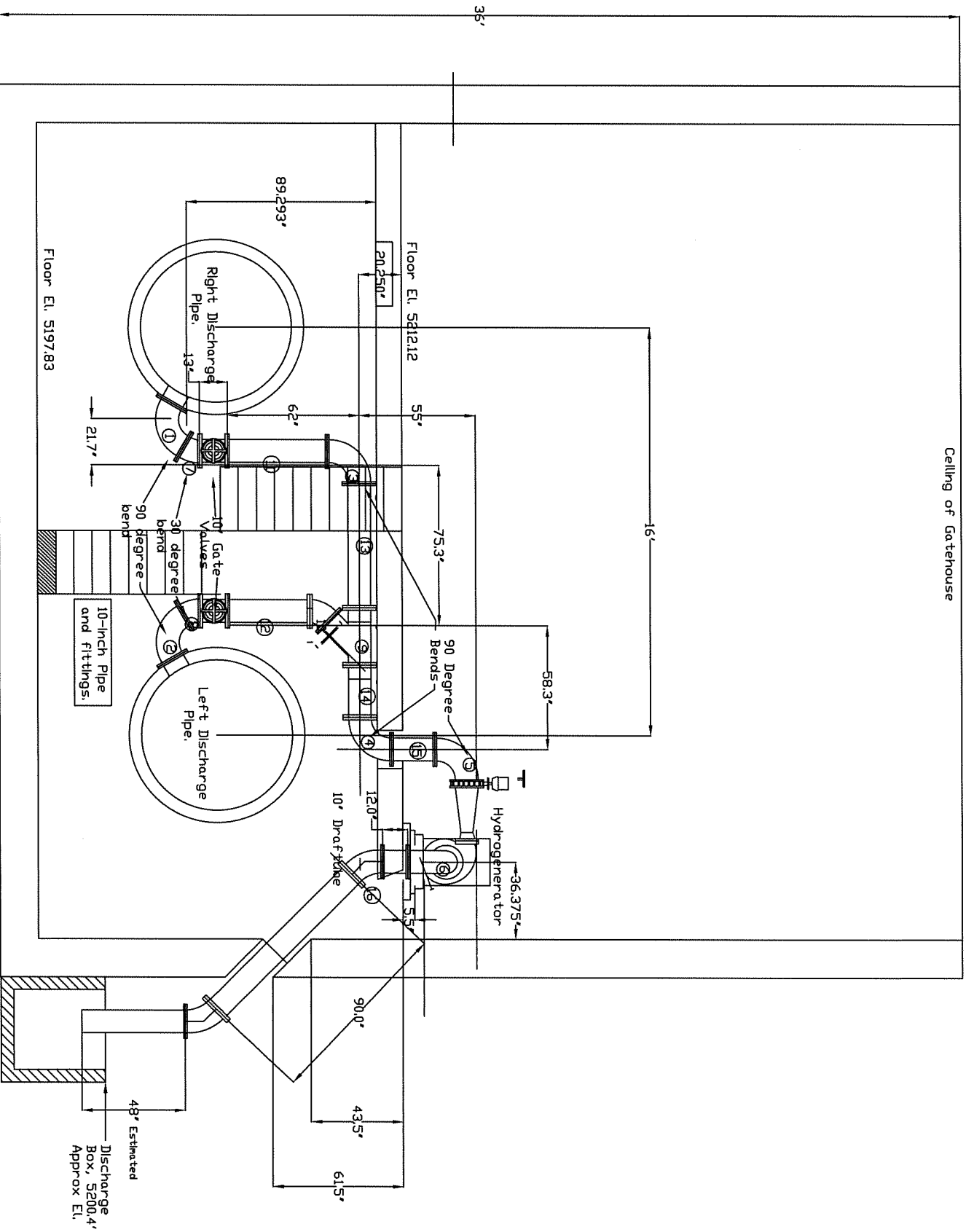
Michele Edl

Associate Engineer

Water Rights Section

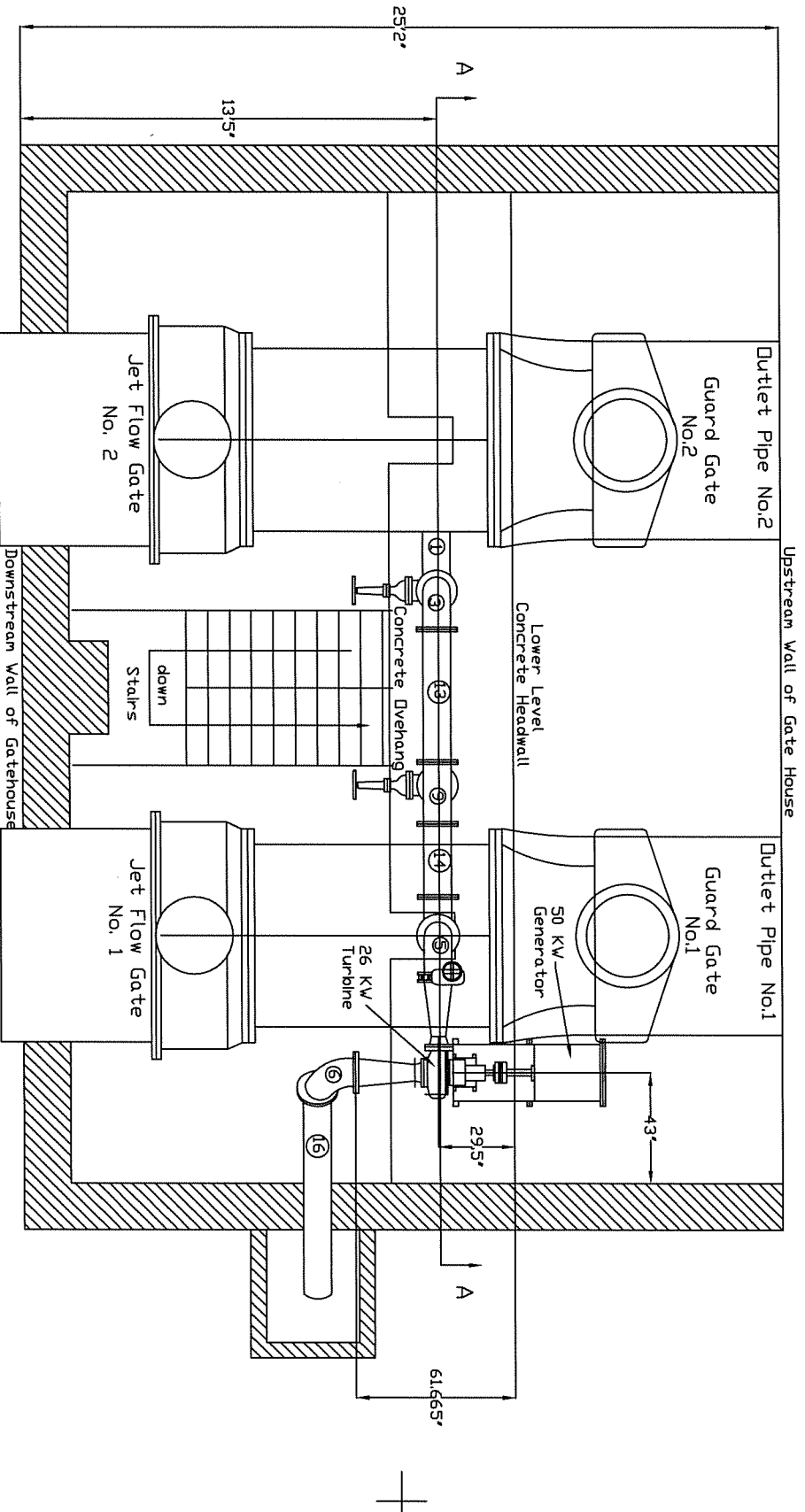
IDWR

Boise ID



Section A-A

Plan View Outlet Works Gate House



Deadwood Hydrogenerator Installation - 2007

Edl, Michele

From: DTL Hydro [sales@dtlhydro.com]
Sent: Monday, June 25, 2012 6:38 PM
To: Edl, Michele
Subject: Re: turbine info request

Hi Edl,
We did not find the serial number unless we look up the old invoices.
Will the model number work?
Marathon Lima SER 441SDL0112, Synchronous, 50 kw @ 80 C R/R
Regards,
Robert
DTL

----- Original Message -----

From: Edl, Michele
To: DTL Hydro
Sent: Monday, June 25, 2012 4:39 PM
Subject: RE: turbine info request

Mr. Prior,
Your response help to resolve the conflicting flow rate and elevation information I had been given.

Do you have a serial number for the generator available in your records?

Sincerely,
Michele Edl

From: DTL Hydro [mailto:sales@dtlhydro.com]
Sent: Monday, June 25, 2012 3:55 PM
To: Edl, Michele
Subject: Re: turbine info request

Hi Michele,
The turbine is a fixed flow pump so the flow can not change except throttling with the turbine inlet valve.
Our records show that at maximum head of 40 meters (131.2') the flow would be 89 l/s (3.1 cfs) and at minimum head of 29 meters (95') the flow would be 76 l/s (2.68 cfs).
The pump is a Paco 5015-7, delivered in March 2007.
I hope this helps.
Regards,
Robert Prior
DTL

----- Original Message -----

From: Edl, Michele
To: sales@dtlhydro.com
Sent: Monday, June 25, 2012 1:36 PM
Subject: turbine info request

As you may be able to tell from the return address on this message, I work for the Idaho Department of Water Resources. I have been assigned to review the water right file for a small,hydropower facility located at the US Bureau of Reclamation's Deadwood Dam site. Bureau personnel provided me with a photo of the turbine nameplate which shows Dependable Turbine Ltd as the manufacturer. It is paired with a AC synchronous generator and would have been installed before July 2009.

I understand that this turbine can accommodate a modest variation in flow. The permit is limited to 5 cfs but the maximum flow possible through the turbine appears to be less than that. I have no information about the design minimum.

Here is my information request:

If there a serial number or other identifier associated with the turbine, can you provide it to me?

Can you provide me with a spec sheet or design parameters or a system curve? I am interested in the max and min flow rates that the turbine could accommodate.

Thank you.

Michele Edl

Associate Engineer

Water Rights Section

Idaho Department of Water Resources

322 E Front St

Boise ID 83720