

MEMORANDUM

Date: October 6, 2008
To: Water Right File 1-7011
From: Michele Edl
Re: license review

Place of Use

I created the two powerhouse place-of-use shapes based on 1992 aerial photography, the field exam and personal knowledge. The field examiner placed the turbine at the dam (unit #3 or the bypass turbine), in the SENE of section 29. However, it is located it on the north abutment of the dam which puts it in the NESE of section 29.

Twin Falls County taxlot information indicates that the permit holders do not own the land at either place-of-use. The Bureau of Land Management administers the land at the dam on which the bypass turbine is built. Idaho Power Company owns the land on which the main powerhouse is built. There is an active easement agreement between the State Board of Land Commissioners and Idaho Power Company and Milner Dam Inc. which was signed in 1995 and will expire with the FERC license.

Source and POD

I created the two point-of-diversion shapes based on 1992 aerial photography and the field exam. The two penstocks at the main powerhouse divert water from the Twin Falls Main Canal and discharge it into the Snake River approximately 1 mile below Milner Dam. I located that POD near the head of the canal at Milner Lake.

The generating unit sited on the north abutment of Milner Dam (unit #3) diverts water from Milner Lake and discharges it into the Snake River at the spillway of the dam. I located its point of diversion in Milner Lake near the dam.

Applicant

IDWR permit to appropriate water #1-7011 for the Milner project is held by two canal companies: North Side Canal Company Ltd and Twin Falls Canal Company.

The FERC license #2899 for the Milner project was issued on 12/15/1988 to two licensees: Twin Falls Canal Company and North Side Canal Company Ltd. It expires on 11/30/2038. On May 2, 1989 the original licensees successfully petitioned FERC to add Idaho Power Company as third licensee. Recent FERC orders have been issued to Idaho Power Company and Milner Dam Inc. Although both are registered as business entities with the Idaho Secretary of State's office, neither Idaho Power Co nor Milner Dam Inc, are permit holders. An ownership change may need to be processed at or after licensing.

There were no lienholder documents in the permit backfile, but a security instrument may exist on this project. Securities and Exchange Commission (SEC) documents reference a Guaranty Agreement between New York Life Insurance Company and Idaho Power Co for Milner Dam Inc note which is valid until 2017. I requested and received a copy of the Guaranty Agreement between Idaho Power Company and New York Life Insurance Co from IDACORP Shareholder Services. However, the note agreement was not included in or appended to the guaranty agreement.

Department database does not have a connector in place for the co-applicants. Because the amended application for permit was signed by both canal presidents, I assumed that the connector should be AND and I entered that connector on 9/25/08. I also added the Boise office of Barker, Rosholt, and Simpson

LLP, as the attorney to receive correspondence related to this right.

Water Use

When water in excess of the canal company irrigation needs is available, it is used to generate power. FERC approved the amended project license and as-built drawings June 29, 1993 and the Beneficial Use field exam was conducted on October 26, 1993 by Charles E. Brockway, P.E. The examiner failed to recommend an annual volume. The Department's Beneficial Use Examination Rules require that an annual volume be determined for all water uses except municipal use and fire protection. 1992 would have been the nearest calendar year prior to the exam and the preferred choice for volume analysis of water data associated with this project. However, both 1992 and 1993, were low water years. 1996 was the nearest year after proof was submitted, that provided more normal water and is the year I chose to analyze for a volume determination.

For a complete set of water data for the Milner project, information from two USGS stations must be collected. One station is the Snake River Gaging Station at Milner USGS #13087995. This station is located 0.4 mile below Milner dam and flows in this rated section of the Snake River represent discharge to the river which has passed through Milner Dam.

The other station is Lower Milner Power Plant at Milner, Idaho USGS #13087505. Flow data from this station represents water that has been diverted from the Twin Falls Main canal, passed through power plant and discharged into the Snake River approximately one mile below Milner dam. The Lower Milner Power Plant consists of two turbine-generator units. The USGS maintains ultrasonic flow meters in each penstock just upstream of each turbine. Flow from each penstock is summed for the total flow at the power plant.

When correctly installed ultrasonic flow meters may be accurate within +/- 0.5% of the true flow. The field examiner was onsite during efficiency testing of the two main power plant turbines. He recommended the maximum flow rate achieved by the two units during that test as the flow rate for the power plant. The precision of his recommendation is unusual and understandable given the perceived accuracy of the flow meters. However, Department policy directs me to use a maximum of three significant figures for the purpose of this right.

The maximum diversion rate for this water right is based on a sum of flow rates from both stations; an average daily flow measured at the Snake River Gaging Station plus the maximum flow measured at the Lower Milner Power Plant.

In order to calculate an annual volume, I retrieved approved daily average flow data for 1996 from the USGS web page from both stations. The FERC requirement for a minimum flow of 200 cfs in the reach of the Snake River below Milner Dam is within the operation range of the auxiliary turbine, (unit #3), at the dam. If the unit is online and power is generated coincident to meeting the flow requirement, a portion of the flow measured at the Snake River Gaging Station would be beneficial hydropower use and the related volume can be added to the total annual volume for the project license. Flows outside the operation range of the turbines or flow that could not be confirmed by generation data were considered spill and excluded them from the volume calculation. *On October 1, 2008, I submitted a written request to Idaho Power for daily average generation data from unit 3 in 1996. As of this review memo I have not received data confirming hydropower generation through that turbine. The volume calculation for the license includes data from the main powerhouse only.* See attached spreadsheets for my volume calculation

# ----- WARNING -----									
# The data you have obtained from this automated U.S. Geological Survey database									
# have not received Director's approval and as such are provisional and subject to									
# revision. The data are released on the condition that neither the USGS nor the									
# United States Government may be held liable for any damages resulting from its use.									
# Additional info: http://waterdata.usgs.gov/id/nwis/help/?provisional									
#									
# File-format description: http://waterdata.usgs.gov/nwis/?tab_delimited_format_info									
# Automated-retrieval info: http://waterdata.usgs.gov/nwis/?automated_retrieval_info									
#									
# Contact: gs-w_support_nwisweb@usgs.gov									
# retrieved: 2008-09-24 13:30:19 EDT									
#									
# Data for the following site(s) are contained in this file									
# USGS 13087505 LOWER MILNER POWER PLANT AT MILNER ID									
# -----									
#									
# Data provided for site 13087505									
# DD parameter statistic Description									
# 01 00060 00003 Discharge, cubic feet per second (Mean)									
#									
# Data-value qualification codes included in this output:									
# A Approved for publication -- Processing and review completed.									
# e Value has been estimated.									
#									
agency_cd site_no datetime 01_00060_00003 01_00060_00003_cd									
5s	15s	15s	16d	14n	10s	Q			no Q above unit1+unit2
agency	site no		date			Q(cfs)		duplicate	Q below 150cfs is zeroed
USGS	13087505		1/1/1996			3450 A		3450	
USGS	13087505		1/2/1996			3450 A		3450	
USGS	13087505		1/3/1996			3450 A		3450	
USGS	13087505		1/4/1996			3400 A		3400	
USGS	13087505		1/5/1996			3340 A		3340	
USGS	13087505		1/6/1996			3350 A		3350	
USGS	13087505		1/7/1996			3530 A		3530	
USGS	13087505		1/8/1996			4070 A		4070	
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USGS	13087505		1/11/1996			4120 A		4120	
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USGS	13087505	9/17/1996	6.16	A		0			
USGS	13087505	9/18/1996	0	A		0			
USGS	13087505	9/19/1996	0	A		0			
USGS	13087505	9/20/1996	0	A		0			
USGS	13087505	9/21/1996	0	A		0			
USGS	13087505	9/22/1996	0	A		0			
USGS	13087505	9/23/1996	0	A		0			
USGS	13087505	9/24/1996	0	A		0			
USGS	13087505	9/25/1996	0	A		0			
USGS	13087505	9/26/1996	0	A		0			
USGS	13087505	9/27/1996	0	A		0			
USGS	13087505	9/28/1996	0	A		0			
USGS	13087505	9/29/1996	0	A		0			
USGS	13087505	9/30/1996	0	A		0			
USGS	13087505	10/1/1996	0	A		0			
USGS	13087505	10/2/1996	0	A		0			
USGS	13087505	10/3/1996	0	A		0			
USGS	13087505	10/4/1996	0	A		0			
USGS	13087505	10/5/1996	0	A		0			
USGS	13087505	10/6/1996	0	A		0			
USGS	13087505	10/7/1996	0	A		0			
USGS	13087505	10/8/1996	0	A		0			
USGS	13087505	10/9/1996	0	A		0			
USGS	13087505	10/10/1996	0	A		0			

USGS	13087505	10/11/1996	0	A		0		
USGS	13087505	10/12/1996	0	A		0		
USGS	13087505	10/13/1996	0	A		0		
USGS	13087505	10/14/1996	0	A		0		
USGS	13087505	10/15/1996	0	A		0		
USGS	13087505	10/16/1996	0	A		0		
USGS	13087505	10/17/1996	0	A		0		
USGS	13087505	10/18/1996	0	A		0		
USGS	13087505	10/19/1996	0	A		0		
USGS	13087505	10/20/1996	0	A		0		
USGS	13087505	10/21/1996	0	A		0		
USGS	13087505	10/22/1996	0	A		0		
USGS	13087505	10/23/1996	0	A		0		
USGS	13087505	10/24/1996	0	A		0		
USGS	13087505	10/25/1996	0	A		0		
USGS	13087505	10/26/1996	0	A		0		
USGS	13087505	10/27/1996	0	A		0		
USGS	13087505	10/28/1996	0	A		0		
USGS	13087505	10/29/1996	251	A		251		
USGS	13087505	10/30/1996	487	A		487		
USGS	13087505	10/31/1996	2390	A		2390		
USGS	13087505	11/1/1996	2270	A		2270		
USGS	13087505	11/2/1996	2230	A		2230		
USGS	13087505	11/3/1996	2230	A		2230		
USGS	13087505	11/4/1996	2080	A		2080		
USGS	13087505	11/5/1996	2010	A		2010		
USGS	13087505	11/6/1996	2020	A		2020		
USGS	13087505	11/7/1996	1970	A		1970		
USGS	13087505	11/8/1996	2340	A		2340		
USGS	13087505	11/9/1996	2600	A		2600		
USGS	13087505	11/10/1996	2700	A		2700		
USGS	13087505	11/11/1996	2870	A		2870		
USGS	13087505	11/12/1996	2870	A		2870		
USGS	13087505	11/13/1996	2460	A		2460		
USGS	13087505	11/14/1996	1940	Ae		1940		
USGS	13087505	11/15/1996	2070	A		2070		
USGS	13087505	11/16/1996	2180	A		2180		
USGS	13087505	11/17/1996	2210	A		2210		
USGS	13087505	11/18/1996	2240	A		2240		
USGS	13087505	11/19/1996	1850	A		1850		
USGS	13087505	11/20/1996	1500	A		1500		
USGS	13087505	11/21/1996	1430	A		1430		
USGS	13087505	11/22/1996	1330	A		1330		
USGS	13087505	11/23/1996	1250	A		1250		
USGS	13087505	11/24/1996	1200	A		1200		
USGS	13087505	11/25/1996	1170	A		1170		
USGS	13087505	11/26/1996	1220	A		1220		
USGS	13087505	11/27/1996	1290	A		1290		
USGS	13087505	11/28/1996	1620	A		1620		
USGS	13087505	11/29/1996	1650	A		1650		
USGS	13087505	11/30/1996	1710	A		1710		
USGS	13087505	12/1/1996	1910	A		1910		

USGS	13087505	12/2/1996	1450	A		1450			
USGS	13087505	12/3/1996	1090	A		1090			
USGS	13087505	12/4/1996	1110	A		1110			
USGS	13087505	12/5/1996	1790	A		1790			
USGS	13087505	12/6/1996	2540	A		2540			
USGS	13087505	12/7/1996	2660	A		2660			
USGS	13087505	12/8/1996	2740	A		2740			
USGS	13087505	12/9/1996	1590	A		1590			
USGS	13087505	12/10/1996	1090	A		1090			
USGS	13087505	12/11/1996	1090	A		1090			
USGS	13087505	12/12/1996	2580	A		2580			
USGS	13087505	12/13/1996	3200	Ae		3200			
USGS	13087505	12/14/1996	3800	Ae		3800			
USGS	13087505	12/15/1996	3800	Ae		3800			
USGS	13087505	12/16/1996	3800	Ae		3800			
USGS	13087505	12/17/1996	3500	Ae		3500			
USGS	13087505	12/18/1996	3300	Ae		3300			
USGS	13087505	12/19/1996	3300	Ae		3300			
USGS	13087505	12/20/1996	3370	A		3370			
USGS	13087505	12/21/1996	3980	A		3980			
USGS	13087505	12/22/1996	4350	A		4350			
USGS	13087505	12/23/1996	4570	A		4570			
USGS	13087505	12/24/1996	4940	A		4940			
USGS	13087505	12/25/1996	4740	A		4740			
USGS	13087505	12/26/1996	4680	A		4680			
USGS	13087505	12/27/1996	4870	A		4870			
USGS	13087505	12/28/1996	5220	A		5220			
USGS	13087505	12/29/1996	4900	A		4900			
USGS	13087505	12/30/1996	4670	A		4670			
USGS	13087505	12/31/1996	4800	A		4800			
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convert fac	1.9835	1cubic foot/sec=1.983471099 acre foot/day				2,221,443			
round to 3 sigfig						2,220,000	afa		