

August 3, 2012



Mr. Berhan Keffelew
Colorado Division of Reclamation Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Permit Number M-2004-031 – Hazeltine Mine, Revision No. TR-01

Dear Mr. Keffelew:

As requested during the Division's May 15, 2012 site visit at the Hazeltine Mine with regard to Aggregate Industries' technical revision request as referenced above, this letter and the enclosed documents are submitted to address verification of approvals and/or agreements with various entities with whom AI has been coordinating to implement the TR-01 project and any permitting requirements with other agencies.

I do not believe that AI received a report from the Division regarding the May 15 site visit, however in accordance with my notes you requested that the following items be addressed prior to Division approval of the technical revision and AI's construction of the system proposed to reduce surface water levels at the site to pre-mining conditions:

1. New discharge point to First Creek needs to be added to NPDES permit.

Enclosed is a copy of the permit modification request submitted to CDPHE Water Quality Control Division for moving a currently permitted discharge point to the First Creek discharge point. It is anticipated that approval of this modification will be received prior to completion of construction of the system and any discharge to First Creek.

2. Amendment to substitute water supply plan and/or well permit may be needed to address the pumping.

The system proposed by the technical revision is for drainage and control of surface water elevation to reduce surface water levels to pre-mining conditions. Surface drainage will be directed to a wetwell that does not have a connection

**AGGREGATE INDUSTRIES
WESTERN REGION**

1707 Cole Blvd., Suite 100
Golden, CO 80401
Telephone (303) 985-1070
Facsimile (303) 716-5295
www.aggregate-us.com

An Equal Opportunity Employer

An AGGREGATE INDUSTRIES company



with groundwater prior to discharge and therefore an amendment to AI's substitute water supply plan and/or well permit is not necessary.

3. Verification of approvals and/or agreements with Denver Water, Fulton Ditch, Xcel and United Power.

Please see enclosed technical memorandum, dated August 3, 2012, from AI's engineers at Tetra Tech regarding the status of the various approvals and/or agreements. Copies of Tetra Tech e-mail communications with Xcel and Fulton Ditch are also enclosed, which verify their approvals.

The system plans, as submitted with the technical revision request, were developed in consultation with and approved by Denver Water, and upon their review of the legal description, Denver Water will provide a license agreement to AI for execution.

4. Operation/maintenance costs for running pump.

Included with enclosed Tetra Tech memorandum.

Please advise us if you have any questions or need additional information to facilitate Division approval of the technical revision. As I will be out of town commencing August 8, I would appreciate your copying any requests for additional information and/or Division approval to Mike Refer at Aggregate Industries, 1707 Cole Blvd., Suite 100, Golden, CO 80401 (email – mike.refer@aggregate-us.com) and Jeff Butson, TetraTech, 1900 S. Sunset St., Suite 1-F, Longmont, CO 80501 (email - Jeff.butson@tetrattech.com).

Very truly yours,

A handwritten signature in blue ink that reads "Connie N. Davis".

Connie N. Davis
Land Advisor

Enclosures

cc: Aggregate Industries – Mike Refer
Tetra Tech – Juff Butson, Gary Linden

STATE OF COLORADO

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado
<http://www.cdphs.state.co.us>

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090



Colorado Department
of Public Health
and Environment

DIVISION USE ONLY WQCD Division Initiated Modification

Requested by _____

Date requested _____

Date entered _____

MODIFICATION APPLICATION

Please print or type all information. All items must be filled out completely and correctly. If the form is not complete, it will be returned. All modification dates are established by the Division. This form is for modifying an established permit or certification. Terminations, Change of Contacts, Transfer of Permit, and Withdrawal of Permit Application and/or modification requests must be submitted on the appropriate form:

MAIL ORIGINAL FORM WITH INK SIGNATURES TO THE FOLLOWING ADDRESS:

Colorado Dept of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Dr South WQCD-P-B2
Denver, CO 80246-1530

FAXED or EMAILED FORMS WILL NOT BE ACCEPTED.

- PART A. IDENTIFICATION OF PERMIT** Please write the permit number to be modified

PERMIT NUMBER COG-500361

- PART B. PERMITEE INFORMATION** (application must be signed by the legal contact listed here)

Company Name Aggregate Industries WCR
Mailing Address 1707 Cole Blvd Suite 100
City Golden State CO Zipcode 80401
Legal Contact Name Wes Stearns Phone Number 303-985-1070
Title Operations General Manager Email Doug.Hess@aggregate-us.com

- PART C. FACILITY/PROJECT INFORMATION**

Facility/Project Name Cooley Reservoir and Fulton Wildlife Area
Location (address) 9991 Old Brighton Road
City Henderson County Adams
Local Contact Name Doug Hess Phone Number 303-716-5225
Title Environmental Advisor Email Doug.Hess@aggregate-us.com

COLORADO WATER QUALITY CONTROL DIVISION MODIFICATION APPLICATION
www.coloradowaterpermits.com

• **PART D. DESCRIPTION OF MODIFICATION REQUESTED:**

Discharge Point 006 is currently permitted in the southeast corner of the site and to discharge into the Bull Seep prior to the Platte River. Additionally it is permitted at an estimated flow rate of 0.3 MDG.

We need to move this point (006) to the northeast corner of the current mining pit (Hazeltine Pit) (see map) where it will discharge into First Creek prior to flowing into the Platte River. We also need to increase the flow rate to 1.8 MGD.

• **PART E. CERTIFICATION Required Signatures**

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

"I understand that submittal of this application is for coverage under the State of Colorado Discharge Permit System until such time as the application is amended or the certification is transferred, inactivated, or expired."



Signature of Legally Responsible Party

Wes Stearns

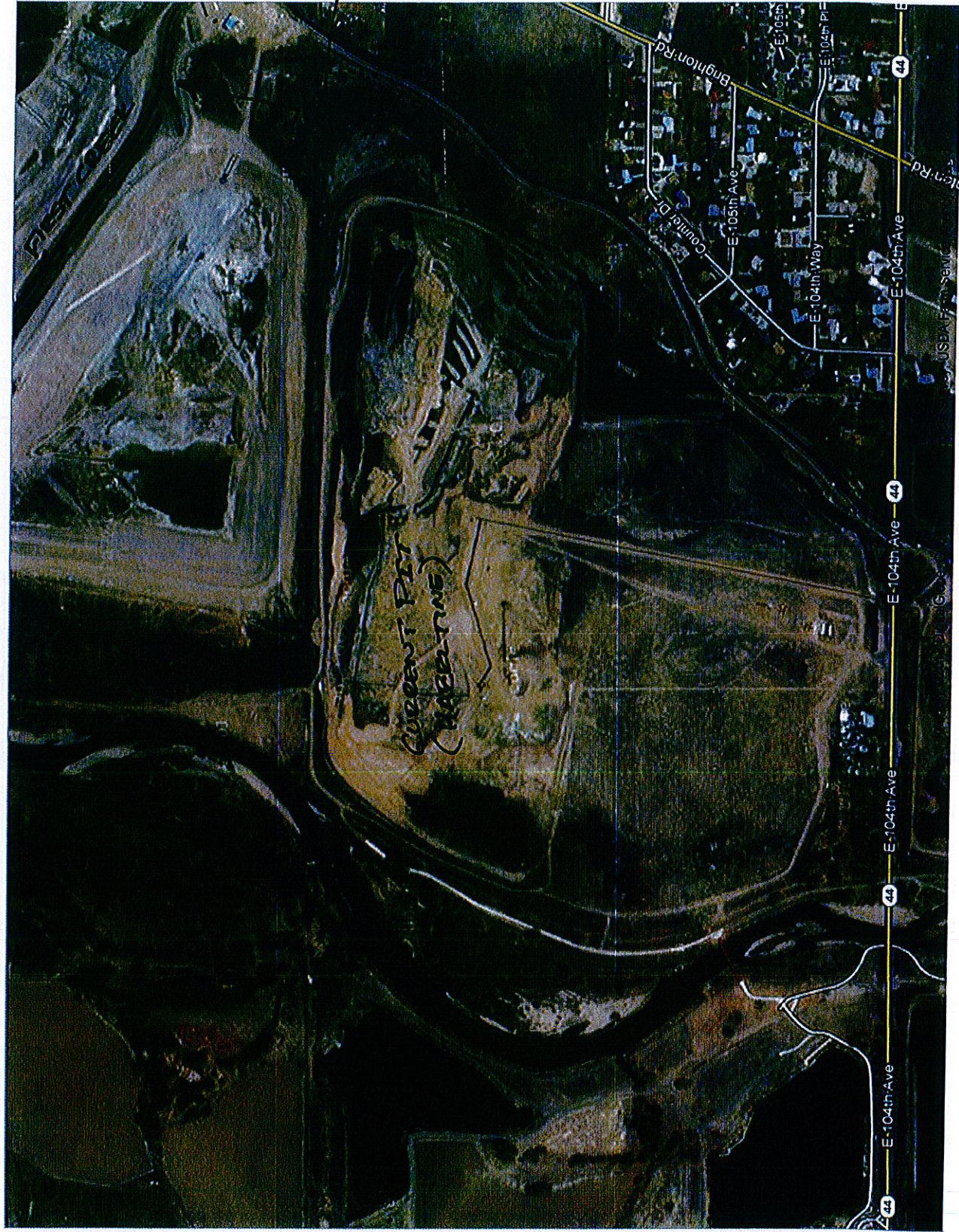
Name (printed)

July 26th 2012

Date Signed

Operations General Manager

Title



Hazeltine Reservoir

Surface Water Dewatering Pump Station

Adams County, Colorado

PREPARED FOR: Mike Refer, Aggregate Industries
Connie Davis, Aggregate Industries

PREPARED BY: Jeffrey Butson, P.E., Tetra Tech

DATE: August 3, 2012

Introduction

This memorandum outlines our status to date on the various requests required for the construction of the proposed Hazeltine surface dewatering pump station.

This is the status of our requests:

Denver Water – The license agreement request, including the required legal description, has been submitted for consideration by the property management department of Denver Water. Meetings conducted with the engineering department were positive and we do not expect significant delays for engineering questions. A copy of the legal description is attached.

Xcel Energy – Xcel has informed us that a license/encroachment agreement is needed to cross the high pressure gas lines. This agreement will be processed as quickly as possible. The engineering department indicated that there are some minor conditions they would like us to observe during construction, as shown in the attached e-mail.

Fulton Ditch Irrigation Company – Written approval of our plan was granted after a site meeting with the ditch company. This written approval is attached.

United Power – United Power has confirmed that they are responsible for the power to the handhole as indicated in the plans. United Power is currently verifying that the existing line has sufficient capacity to power the pump station.

Estimated Cost of Operations and Maintenance – The estimated costs of operating and maintaining the dewatering pump station is \$2,516 per year. The calculations are attached.

Attachments

**BULL SEEP DITCH
FORCE MAIN EASEMENT
LEGAL DESCRIPTION**

A REVOKABLE 30 FOOT FORCE MAIN EASEMENT FOR THE BULL SEEP DITCH LOCATED IN THE NORTHEAST QUARTER OF SECTION 9, TOWNSHIP 2 SOUTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF ADAMS, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST ONE-QUARTER CORNER OF SAID SECTION 9, WHENCE THE CENTER-EAST ONE-SIXTEENTH CORNER OF SAID SECTION 9 BEARS SOUTH 89°46'11" WEST, A DISTANCE OF 1324.67 FEET, SAID LINE FORMING THE BASIS OF BEARING FOR THIS DESCRIPTION; BEING MONUMENTED ON THE EAST END BY A 3 1/4 INCH ALUMINIUM CAP MARKED PLS 16398 PER THE MONUMENT RECORD, AND ON THE WEST END BY A 3 1/4 INCH ALUMINIUM CAP MARKED PLS 7361 PER THE MONUMENT RECORD; THENCE ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 SOUTH 89°46'11" WEST 1054.88 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING ALONG SAID SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 9 SOUTH 89°46'11" WEST 47.51 FEET;
THENCE LEAVING SAID SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 9, NORTH 50°36'35" EAST, A DISTANCE OF 76.00 FEET;
THENCE NORTH 22°46'15" EAST, A DISTANCE OF 347.75 FEET;
THENCE NORTH 40°03'45" EAST, A DISTANCE OF 205.94 FEET;
THENCE SOUTH 49°56'15" EAST, A DISTANCE OF 30.00 FEET;
THENCE SOUTH 40°03'45" WEST, A DISTANCE OF 201.38 FEET;
THENCE SOUTH 22°46'15" WEST, A DISTANCE OF 350.62 FEET;
THENCE SOUTH 50°36'35" WEST, A DISTANCE OF 46.60 FEET,
TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINS 18,425 SQUARE FEET OR 0.423 ACRES, MORE OR LESS.

SURVEYOR'S CERTIFICATE

I, Karl Philip Thullen, a duly registered Professional Land Surveyor in the State of Colorado do hereby certify that the above easement description was prepared by me or under my direct supervision and is in accordance with the applicable standards of practice and is accurate based upon my knowledge, information and belief.

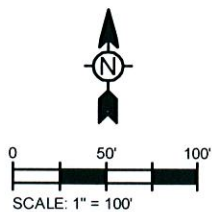
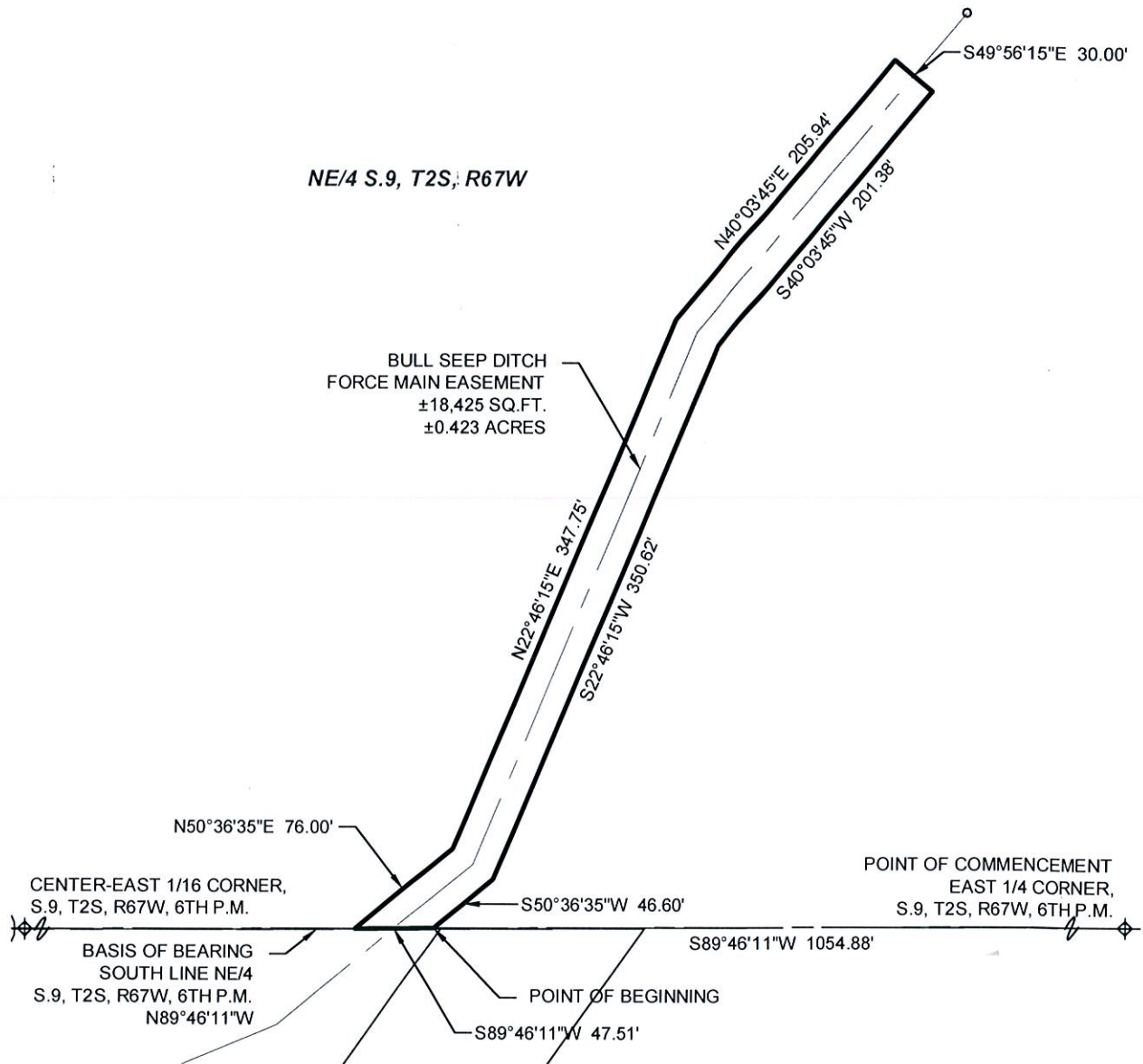
Karl Philip Thullen Colorado P.L.S. No. 38006

Dated this 3 day of August, 2012.

NOTE: The word "certify" or "certification" as used herein is understood to be an expression of professional opinion by the surveyor, based upon his best knowledge, information, and belief. As such, it does not constitute a guarantee, nor a warranty, expressed or implied.

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of certification shown hereon.

7/9/2012 12:30:45 PM - P:\23514\133-23514-12003\CAD\SHEETFILES\EASEMENT\EXHIBIT.DWG - ANDRYAUSKAS, JEREMY



NOTE: THIS EXHIBIT DOES NOT
REPRESENT A MONUMENTED LAND
SURVEY. IT IS ONLY INTENDED TO
DEPICT THE ATTACHED DESCRIPTION.

AGGREGATE INDUSTRIES

BULL SEEP DITCH
FORCE MAIN

EASEMENT EXHIBIT

Project No.: 133-23514-12003

Date: 7/9/2012

Designed By: JJA

Sheet

2 of 2

Bar Measures 1 inch

Butson, Jeff

From: Griego, Matthew S <Matthew.S.Griego@xcelenergy.com>
Sent: Thursday, August 02, 2012 12:14 PM
To: Butson, Jeff
Subject: Howe Reservoir

Jeff,

Sorry it took me a while to get back to you.

A crossing of our 10 and 16 inch transmission lines would be acceptable per the previously discussed conditions:

- The crossing be a close to perpendicular as possible and go under the gas pipelines
- It maintains 4 feet of clearance vertical and horizontal from both lines
- Locates are called in so a monitor can be on site during excavation near the line

You will still need to get a license/encroachment agreement from our ROW department which may have further conditions but these are the big ones. Let me know if you have any questions.

Matthew S. Griego

Xcel Energy | Responsible By Nature

Project Planner, Gas Transmission Engineering

1123 W. 3rd Ave, 2nd Floor Denver, CO 80223

P: 303-571-3220 F: 303-571-3166

E: Matthew.S.Griego@xcelenergy.com

XCELENERGY.COM

Please consider the environment before printing this email

This email is covered by the Electronic Communications Privacy Act, 18 USC Sections 2510-2521. This email, and any attachments, may contain **confidential, private and/or privileged** material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by others is strictly prohibited. If you are not the intended recipient (or authorized to receive for the recipient), please contact the sender by reply mail and delete all copies of this message and any attachments.

Butson, Jeff

From: Brice Steele <brice@steelepc.com>
Sent: Thursday, August 02, 2012 2:49 PM
To: Butson, Jeff
Cc: jody@steelepc.com
Subject: RE: Bull Seep Dewatering Pump Station

Jeff,

Fulton appreciates Al's willingness to meet on site to explain the dewatering project in more detail. Under the circumstances Fulton does not have any objection to the installation of the well point as planned. If the plans change substantially from those previously presented to Deer and Ault for review please let me know.

If you're going to be working on the ditch road for any reason I ask that you contact Mr. McDonald in advance of any operations.

Let me know if you need anything else.

Brice

From: Butson, Jeff [mailto:Jeff.Butson@tetrattech.com]
Sent: Monday, July 30, 2012 10:34 AM
To: Brice Steele (brice@steelepc.com)
Subject: Bull Seep Dewatering Pump Station

Brice,

I'm just following up on the meeting that was conducted this past month. It sounds like we are squared away with the Fulton Ditch Company. Do we need to obtain any written permission from you or the ditch company to make it official?

Thanks,

Jeffrey A. Butson, P.E., CFM | Project Engineer
Main: 303.772.5282 | FAX: 303.772.7039
Jeff.butson@tetrattech.com

Tetra Tech | Engineering & Architecture Services
1900 South Sunset Street, Suite 1-F | Longmont, CO 80501 | www.tetrattech.com

PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

Client: Aggregate Industries Job No.: _____ Sheet 1 of 3Description: Calculated annual Designed By: Faukner Date: 8/3/2012operation & maintenance cost for Checked By: GL Date: 8-3-12Pump

Annual pump operating cost estimate:

Assumption: Pump comes on every 8 minutes and runs for 2 minutes continuously, determine annual pump operating cost at \$0.0636 / kWhr - Pump is located in Colorado (5,000 ft)

• Assume whp per manufacturer's curve is 7.5 hp.

• Determine brake horse power when efficiency is 83.5%

$$bhp = \frac{7.5 \text{ hp}}{0.835} = 8.9 \text{ hp}$$

• Determine minimum motor horsepower using a Service factor of 1.15

$$mhp = 8.9 \text{ hp} \times 1.15 = 10.3 \text{ hp}$$

• Altitude adjustment factor: $\frac{1\%}{250 \text{ ft}} (5000 \text{ ft} - 3300 \text{ ft}) = 5.15\%$

$$mhp = 10.3 \text{ hp} \times 1.0515 = \underline{\underline{10.8 \text{ hp}}}$$

• Assume 180 cycles per day for pump:

Calculate number of cycles annually:

$$\text{Cycles} = \frac{180 \text{ cycles}}{\text{day}} (\cancel{365 \text{ days}}) = 65,700 \text{ cycles/yr}$$

Calculate number of minutes per yr when pump runs for 2 minutes continuously.

$$\# \text{ of minutes} = \frac{65,700 \text{ cycles}}{\text{yr}} \times \frac{2 \text{ min}}{\text{cycle}} = 131,400 \frac{\text{min}}{\text{yr}}$$

$$\text{In hr/yr} = 131,400 \frac{\text{min}}{\text{yr}} \left(\frac{\text{hr}}{60 \text{ min}} \right) = 2,190 \text{ hr/yr}$$



Client: Aggregate Industries Job No.: _____ Sheet 2 of 3
Description: Calculated annual operation Designed By: Faukner Date: 8/3/2012
\$ maintenance cost for pump Checked By: GL Date: 8-3-12

- Calculate kW for a 10.8 hp motor:

$$kW = 10.8 \text{ hp} \times \left(\frac{1 \text{ kW}}{0.746 \text{ hp}} \right) = 14.47 \text{ kW} \text{ (Power to pump)}$$

- Calculate kW.hr.

$$\frac{2190 \text{ hrs}}{\text{yr}} \times 14.47 \text{ kW} = \frac{31705 \text{ kW.hr}}{\text{yr}}$$


- If Cost is \$0.0636/kW.hr, Calculate annual cost:

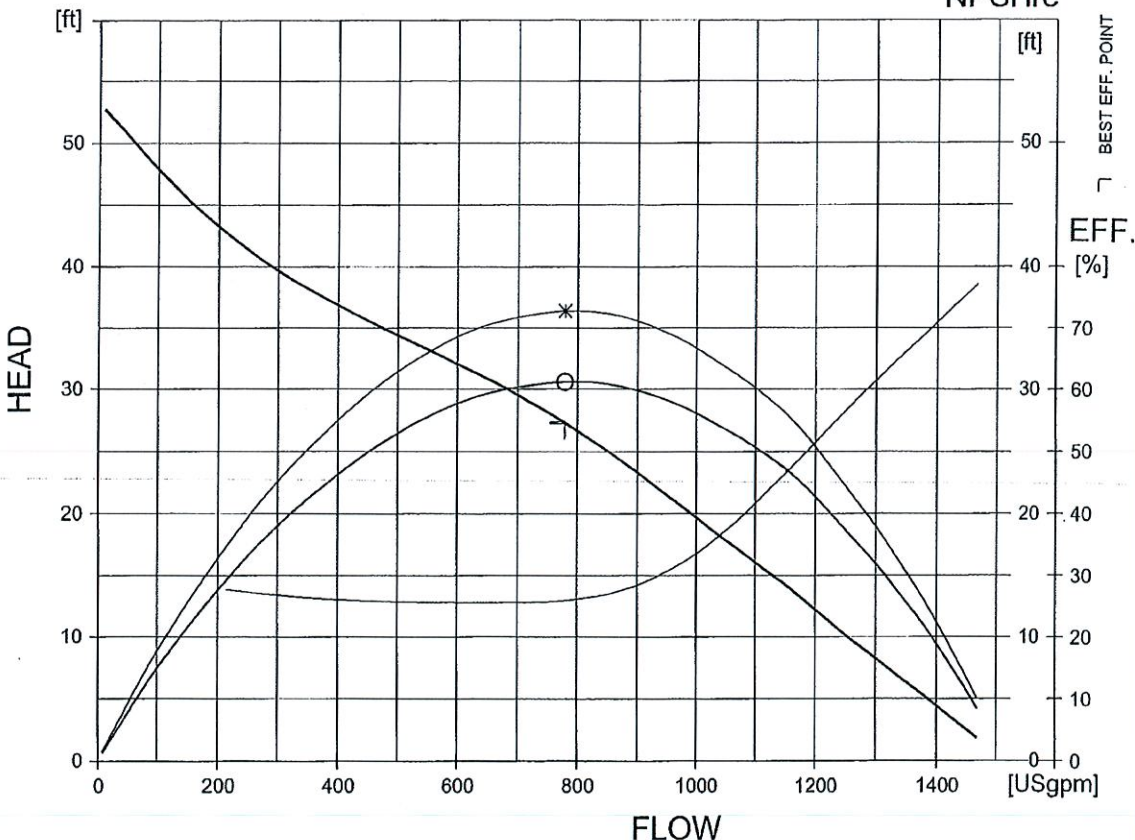
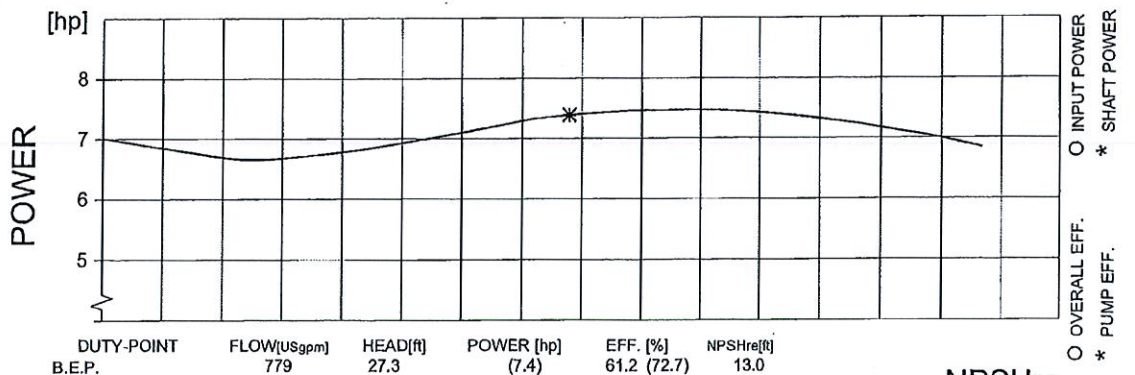
$$\text{Annual Cost} = \frac{31705 \text{ kW.hr}}{\text{yr}} \times \frac{\$0.0636}{\text{kW.hr}} = \$2,016/\text{yr.}$$

- Maintenance cost per yr. per Jeff Butson = \$500/yr

- Total estimated operation & maintenance cost per yr

$$C = \$2,016 + \$500 = \underline{\underline{\$2516/\text{yr}}}$$

				PERFORMANCE CURVE				PRODUCT NP3127.181			TYPE LT	
DATE 2010-08-02				PROJECT FLYGT US Catalog				CURVE NO 63-422-00-2201			ISSUE 5	
POWER FACTOR		1/1-LOAD 0.89	3/4-LOAD 0.87	1/2-LOAD 0.81	RATED POWER	10	hp	IMPELLER DIAMETER 188 mm				
EFFICIENCY		83.5 %	85.0 %	84.5 %	STARTING CURRENT ...	64	A	MOTOR # 21-12-4AL		STATOR 12YSER	REV 11	
MOTOR DATA		---	---	---	RATED CURRENT ...	13	A	FREQ.	PHASES 3	VOLTAGE 460 V	POLES 4	
COMMENTS NEMA Code Letter: F				INLET/OUTLET -/ 6 inch	RATED SPEED	1735	rpm	GEARTYPE	RATIO			
				IMP. THROUGHLET ---	TOT.MOM.OF INERTIA ...	0.050	kgm2	NO. OF BLADES 2	---	---		



FLYPS 3.1.6.3 (20060531)

NPSHre = NPSH3% + min. operational margin
Performance with clear water and ambient temp 40 °C

FLYGT

CURVE