RESOLUTION NO. R14-35

A RESOLUTION AUTHORIZING THE MAYOR TO SIGN CHANGE ORDER NO. 2 WITH WILLIAMS BROTHERS CONSTRUCTION FOR THE WASTEWATER TREATMENT PLANT PROJECT IN THE AMOUNT OF $17,264.42.

WHEREAS, the City Council of the City of Laurel previously authorized the Mayor to approve a contract with Williams Brothers Construction for the Wastewater Treatment Plant Upgrade Project through Resolution No. R13-38 on June 18, 2013; and

WHEREAS, the original contract price was $6,369,000.00 to complete the project; and

WHEREAS, previously approved Change Order No. 1 to the contract with Williams Brothers Construction to reduce the cost of the project by $4,528.85; and

WHEREAS, additional work and compensation is required to finish the project as described in the attached Change Order; and

WHEREAS, Great West Engineering and City Staff reviewed Change Order No. 2 and determined that it was correct, reasonable and necessary to complete the project and recommend the Council's approval of the same.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Laurel, Montana, that the Mayor is authorized to sign Change Order No. 2 a copy of which is attached, to increase the contract amount by $17,264.42 for a total contract price of $6,381,735.57.

Introduced at a regular meeting of the City Council on June 17, 2014, by Council Member Eaton.

PASSED and APPROVED by the City Council of the City of Laurel this 17th day of June, 2014.

APPROVED by the Mayor this 17th day of June, 2014.

CITY OF LAUREL

Mark A. Mace, Mayor

ATTEST:

Shirley Ewan, Clerk/Treasurer

Approved as to form:

Sam S. Painter, Civil City Attorney

"Healthy environment, healthy people"

Montana Department of
ENVIRONMENTAL QUALITY

Steve Bullock, Governor
Tracy Stone-Manning, Director

P. O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • Website: www.deq.mt.gov

July 1, 2014

Honorable Mark Mace, Mayor
City of Laurel
P.O. Box 10
Laurel, MT 59044

Re: City of Laurel, Change Order No. 2 Approval, Biological Nutrient Removal Upgrade and Expansion of the Laurel Wastewater Treatment Plant (WWTP), Phase 2A2, WPCSRF No. C301241

Dear Mayor Mace:

Change Order No. 2 for the above-referenced project has been reviewed. Therefore, by the authority provided in the Montana Water Quality Act and Title VI of the Clean Water Act, the Montana Department of Environmental Quality hereby approves the change order.

The current contract amount has been increased by $17,264.42 through this change order to $6,381,735.57. Of this amount, $6,381,735.57 remains loan-eligible. The approved substantial completion contract time has been increased by 47 days and is now set at 497 days.

Change Order No. 2 addresses (1) recaulking of weirs on the secondary clarifiers, (2) additional controls on the discharge side of the thickened sludge rotary lobe pumps, (3) increased grating thickness over the ultraviolet (UV) channel, (4) raising the grade on the sidewalk to the UV building, (5) additional time and materials to complete the tie-in of the new SL line from the thickener building, (6) an additional 120V circuit in the UV building, and (7) provision of Chemline guage isolators for the sodium hypochlorite switches.

The enclosed original approved Change Order No. 2 should be kept secure with the other project contract documents for future reference by personnel from this office during inspection activities.

Sincerely,

Michele Marsh

Michele Marsh, P.E.
Environmental Engineer
Technical & Financial Assistance Bureau

Encl: Approved Change Order No. 2

cc: Chad Hanson, PE, Great West Engineering
Kurt Markegard, Public Works Director, City of Laurel

Change Order

No. 2

Date of Issuance: May 22, 2014 Effective Date: _____

Project: WWTP Improvements – BNR Upgrade	**Owner:** City of Laurel, MT
Contract:	**Date of Contract:** July 7, 2013
Contractor: Williams Brother Construction LLC	**Engineer's Project No.:** 2-07128, TO 16

The Contract Documents are modified as follows upon execution of this Change Order:

See attached summary of changes to work.

Attachments (list documents supporting change):

Summary of changes to work and cost estimates for each change.

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price:	Original Contract Times: ☐ Working days ☒ Calendar days
$ 6,369,000.00	Substantial completion (date): November 5, 2014
	Ready for final payment (date): February 3, 2015
Increase from previously approved Change Orders No. 1 to No. 1:	Increase from previously approved Change Orders No. 1 to No. 1:
$ (4,528.85)	Substantial completion (days): 0
	Ready for final payment (days): 0
Contract Price prior to this Change Order:	Contract Times prior to this Change Order:
$ 6,364,471.15	Substantial completion (date): November 5, 2014
	Ready for final payment (date): February 3, 2015
Increase of this Change Order:	Increase of this Change Order:
$ 17,264.42	Substantial completion (days): 47
	Ready for final payment (days): 0
Contract Price incorporating this Change	Contract Times with all approved Change Orders:
$ 6,381,735.57	Substantial completion (date): December 22, 2014
	Ready for final payment (date): March 22, 2015

RECOMMENDED:

By: _____
Engineer (Authorized Signature)

Date: 05/27/14

Approved by Funding Agency (if applicable):

_____

Date: _____

ACCEPTED:

By: _____
Owner (Authorized Signature)

Date: 5-28-14

Montana Department of Environmental Quality

These plans and specifications have been reviewed and are in compliance with applicable rules and regulations promulgated and/or administered by the Montana Department of Environmental Quality and are hereby approved. These plans and specifications employ sound engineering design principles. All engineering details and operations performance are the responsibility of the engineer and the owner.

_____
Authorized Signature

5-28-14
Date

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

CHANGE ORDER No. 2 SUMMARY

	Change to Work	Change to Contract Cost
2-A	The Owner requested a quote to recaulk the weirs on the secondary clarifiers.	$ 1,879.51
2-B	Additional controls on the discharge side of the rotary lobe pumps for the thickened sludge are necessary to prevent the pumps from running dry.	$ 7,872.46
2-C	Increase grating over UV channel from 1½" to 2" thickness to meet loading requirements.	$ 945.00
2-D	The Owner requested the grade on the sidewalk to the UV building to be raised and agreed to pay for the work based upon time and materials.	$ 1,357.77
2-E	The existing SL pipe alignment is sinuous and crossed over the sewer line (labeled "S" on the plans) requiring additional time and materials to complete the tie in of the new SL line from the thickener building.	$ 3,669.03
2-F	RFI 15: An additional 120V circuit will be required in the UV building to reuse the existing effluent flow meter.	$ 615.00
2-G	RFI 16: Chemline gauge isolators need to be provided for the sodium hypochlorite switches.	$ 765.00
	Subtotal: Change Order 2	**$ 17,103.77**
	Total Change Orders	**$ 12,574.92**

should be $1,105.65

should be $17,264.42

Change Order

No. 2

Date of Issuance: May 22, 2014 Effective Date: _____

Project: WWTP Improvements – BNR Upgrade	**Owner:** City of Laurel, MT
Contract:	**Date of Contract:** July 7, 2013
Contractor: Williams Brother Construction LLC	**Engineer's Project No.:** 2-07128, TO 16

The Contract Documents are modified as follows upon execution of this Change Order:

See attached summary of changes to work.

Attachments (list documents supporting change):

Summary of changes to work and cost estimates for each change.

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price:	Original Contract Times: ☐ Working days ☒ Calendar days
$ 6,369,000.00	Substantial completion (date): November 5, 2014
	Ready for final payment (date): February 3, 2015
Increase from previously approved Change Orders No. 1 to No. 1:	Increase from previously approved Change Orders No. 1 to No. 1:
$ (4,528.85)	Substantial completion (days): 0
	Ready for final payment (days): 0
Contract Price prior to this Change Order:	Contract Times prior to this Change Order:
$ 6,364,471.15	Substantial completion (date): November 5, 2014
	Ready for final payment (date): February 3, 2015
Increase of this Change Order:	Increase of this Change Order:
$ 17,264.42	Substantial completion (days): 47
	Ready for final payment (days): 0
Contract Price incorporating this Change	Contract Times with all approved Change Orders:
$ 6,381,735.57	Substantial completion (date): December 22, 2014
	Ready for final payment (date): March 22, 2015

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Date: 05/27/14	Date: 6/17/2014	Date: 5-28-14

Approved by Funding Agency (if applicable):

_____ Date: _____

CHANGE ORDER No. 2 SUMMARY

	Change to Work	Change to Contract Cost
2-A	The Owner requested a quote to recaulk the weirs on the secondary clarifiers.	$ 1,879.51
2-B	Additional controls on the discharge side of the rotary lobe pumps for the thickened sludge are necessary to prevent the pumps from running dry.	$ 7,872.46
2-C	Increase grating over UV channel from 1½" to 2" thickness to meet loading requirements.	$ 1,105.65
2-D	The Owner requested the grade on the sidewalk to the UV building to be raised and agreed to pay for the work based upon time and materials.	$ 1,357.77
2-E	The existing SL pipe alignment is sinuous and crossed over the sewer line (labeled "S" on the plans) requiring additional time and materials to complete the tie in of the new SL line from the thickener building.	$ 3,669.03
2-F	RFI 15: An additional 120V circuit will be required in the UV building to reuse the existing effluent flow meter.	$ 615.00
2-G	RFI 16: Chemline gauge isolators need to be provided for the sodium hypochlorite switches.	$ 765.00
	Subtotal: Change Order 2	**$ 17,264.42**
	Total Change Orders	**$ 12,735.57**

GreatWest engineering ®

115 N Broadway, Suite 500
Billings, MT 59101

PHONE: 406.652.5000
FAX: 406.248.1363
www.greatwesteng.com

LETTER OF TRANSMITTAL

To: Kurt Markegard
Of: City of Laurel
Address: PO Box 10
Laurel, MT 59044
Phone:

Date: 5-29-14
Project: Laurel WWTP
Project No.: 2-07128 TO 16
Subject: Change Order #2
Fax:

We transmit: ☐ As requested ☐ Attached ☐ Under separate cover

Via: ☐ Mail ☐ e-Mail ☐ Courier ☐ Overnight delivery ☐ Fax

# of Copies	Description
3	Change Order #2

Our action: ☐ Reviewed ☐ Not approved ☐ Approved ☐ See remarks

Action requested: ☐ Review and comment ☐ Approve / Accept
☐ Make corrections noted ☐ Revise and resubmit
☐ For your information and use

Remarks: Please sign all three change orders where indicated. Retain the change order with the attachment and return the other two change orders back to us. If you have any questions, please let us know. Thank you,

From: Ilene Neudick e-mail address: ineudick@greatwesteng.com
Phone: 406-652-5000 cc: Project file,

If enclosures are not as noted, please notify the sender immediately.

LAUREL WWTP
Seal Secondary Clarifier Baffles

BWC
Date: 3-25-14

Materials

Description		Unit	Quantity	Cost (NWP)
Sikaflex 1A	$4.25	ea	10	$42.50
Sikaflex 2C SL	$55.00	gal	5	$275.00

Labor

Description		Unit	Quantity	Cost
Pressure wash and wire brush and caulk				
Carpenter	$43.32	hr	14	$606.48
Laborer	$34.46	hr	14	$482.44

Equipment

Description		Unit	Quantity	Cost
Pressure Washer	$25.00	hr	8	$200.00

Sub- Contractors

Description		Unit	Quantity	Cost

Subtotal	$1,606.42
Markup	$273.09
TOTAL	**$1,879.51**

QUALITY ISO 9001 9002 ACHIEVEMENT

Sikaflex®-1a

8/01

One part polyurethane, elastomeric sealant/adhesive

DESCRIPTION

Sikaflex-1a is a premium-grade, high-performance, moisture-cured, 1-component, polyurethane-based, non-sag elastomeric sealant. Meets Federal specification TT-S-00230C, Type II, Class A. Meets ASTM C-920, Type S, Grade NS, Class 25; Canadian standard CAN/CGSB 19.13-M87.

WHERE TO USE

- Designed for all types of joints where maximum depth of sealant will not exceed ½ in.
- Excellent for small joints and fillets, windows, door frames, reglets, flashing,and many construction adhesive applications.
- Suitable for vertical and horizontal joints; readily placeable at 40 F.
- Has many applications as an elastic adhesive between materials with dissimilar coefficients of expansion.

ADVANTAGES

- Eliminates time, effort, and equipment for mixing, filling cartridges, pre-heating or thawing, and cleaning of equipment.
- Fast tack-free and final cure times.
- High elasticity - cures to a tough, durable, flexible consistency with exceptional cut and tear-resistance.
- Stress relaxation.
- Excellent adhesion - bonds to most construction materials without a primer.
- Excellent resistance to aging, weathering.
- Proven in tough climates around the world.
- USDA-approved.
- Odorless, non-staining.
- Jet fuel resistant.
- NSF-approved for potable water contact.
- Urethane-based; suggested by EPA for radon reduction.
- Paintable with water-, oil- and rubber-based paints.
- Capable of ±25% joint movement.
- Sealant, Waterproofing and Restoration Institute (SWRI) validated.

COVERAGE

10.3 fl. oz. cartridge seals 12.4 lineal ft. of ½ x ¼ in. joint.
20 fl. oz. uni-pac sausage seals 24 lineal ft. of ½ x ¼ in. joint.

PACKAGING

Disposable 10.3 fl. oz., moisture-proof composite cartridges, 24/case; and uni-pac sausages, 20 fl. oz., 20/carton.

TYPICAL DATA FOR SIKAFLEX-1a
(Material and curing conditions @ 73F (23C) and 50% R.H.)

SHELF LIFE	10.3 fl.oz. cartridges 20 fl.oz. uni-pac sausages	15 months 15 months
STORAGE CONDITIONS	Store at 40-95F (4-35C). **Condition material to 65-75F before using.**	
COLORS	White, colonial white, aluminum gray, limestone, black, dark bronze, capitol tan. Special architectural colors on request.	
APPLICATION TEMPERATURE	40 to 100F. Sealant should be installed when joint is at midrange of its anticipated movement.	
SERVICE RANGE	-40 to 170F	
CURING RATE	Tack-free time Tack-free to touch Final cure	4 hours (TT-S-00230C) 3 hours 4 to 7 days
TEAR STRENGTH (ASTM D-624)		50 lb./in.
SHORE A HARDNESS (ASTM D-2240)		
21 day	40±5	
TENSILE PROPERTIES (ASTM D-412)		
21 day	Tensile Stress Elongation at Break Modulus of Elasticity 25% 50% 100%	200 psi (1.37MPa) 500% 35 psi (0.24 MPa) 60 psi (0.41 MPa) 85 psi (0.59 MPa)

ADHESION IN PEEL (TT-S-00230C, ASTM C 794)

Substrate	Peel Strength	Adhesion Loss
Concrete	20 lb	0%
Aluminum	20 lb	0%
Glass	20 lb	0%

WEATHERING RESISTANCE	Excellent
CHEMICAL RESISTANCE	Good resistance to water, diluted acids, and diluted alkalines. Consult Technical Service for specific data.

HOW TO USE

SURFACE PREPARATION

Clean all surfaces. Joint walls must be sound, clean, dry, frost-free, and free of oil and grease. Curing compound residues and any other foreign matter must be thoroughly removed. Install bond breaker tape or backer rod to prevent bond at base of joint.

PRIMING

Priming is not usually necessary. Most substrates only require priming if testing indicates a need or where sealant will be subjected to water immersion after cure. Consult Sikaflex Primer Technical Data Sheet or Technical Service for additional information on priming.

APPLICATION

Recommended application temperatures: 40-100 F. For cold weather application, condition units at approximately 70 F; remove prior to using.
For best performance, Sikaflex-1a should be gunned into joint when joint slot is at midpoint of its designed expansion and contraction.

Place nozzle of gun into bottom of the joint and fill entire joint. Keep the nozzle in the sealant, continue on with a steady flow of sealant preceding the nozzle to avoid air entrapment.
Avoid overlapping of sealant to eliminate entrapment of air. Tool as required. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio,
For use in horizontal joints in traffic areas, the absolute minimum depth of the sealant is ½ in. and closed cell backer rod is recommended. Tool as necessary, dry or with clean water.

LIMITATIONS

- Allow 1-week cure at standard conditions when using Sikaflex-1a in total water immersion situations and prior to painting.
- When overcoating with water, oil and rubber based paints, compatibility and adhesion testing is essential.
- Avoid exposure to high levels of chlorine. (Maximum continuous level is 5ppm of chlorine.)
- Maximum depth of sealant must not exceed ½ in.; minimum depth is ¼ in.
- Maximum expansion and contraction should not exceed 25% of average joint width.
- Do not cure in the presence of curing silicone sealants.
- Avoid contact with alcohol and other solvent cleaners during cure.
- Do not apply when moisture-vapor-transmission condition exists from the substrate as this can cause bubbling within the sealant.
- Use opened cartridges and uni-pac sausages the same day.
- When applying sealant, avoid air-entrapment.
- Since system is moisture-cured, permit sufficient exposure to air.
- White color tends to yellow slightly when exposed to ultra-violet rays.
- The ultimate performance of Sikaflex-1a depends on good joint design and proper application with joint surfaces properly prepared.
- The depth of sealant in horizontal joints subject to traffic is ½ in.
- Do not tool with detergent or soap solutions.

CAUTION

COMBUSTIBLE

Keep away from open flames and high heat. Contains xylene; avoid breathing vapors. Use with adequate ventilation.

IRRITANT

Avoid skin and eye contact. Use of NIOSH/MSHA approved organic vapor respirator, safety goggles, and chemical-resistant gloves recommended. Remove contaminated clothing and shoes.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. Wash clothing before re-use. Discard contaminated shoes.

CLEAN UP

Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect, absorb, and dispose of in accordance with current, applicable local, state, and federal regulations.

Linear Feet of Sealant per Gallon

Width (Inches)	Depth ¼	½	¾	1	1¼	1½
¼	308.0					
½	154.0	77.0				
¾	102.7	51.3	34.2			
1	77.0	38.5	25.7	19.3		
1¼	61.6	30.8	20.5	15.4	12.3	
1½	51.3	25.7	17.1	12.8	10.3	8.6

Product Code 431. Sika and Sikaflex are registered trademarks. Made in USA. Printed in USA.Aug., 2001.

KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Sika warrants its products to be free from manufacturing defects and to meet Sika's current published properties when applied in accordance with Sika directions and tested in accordance with ASTM and Sika Standards. User determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product and excludes labor or the cost of labor. Any claim for breach of this warranty must be brought within one year of the date of purchase.

NO OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY WARRANTY OF MERCHANTIBILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. SIKA SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND, RESULTING FROM ANY CLAIM OF BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE OR ANY LEGAL THEORY. SIKA ASSUMES NO LIABILITY FOR USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANOTHER'S PATENT.

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Regional Information and Sales Centers
For the location of your nearest Sika sales office, contact your regional center.

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Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Corregidora, Queretaro
C.P. 76920 A.P. 136
Phone: 52 42 25 0122
Fax: 52 42 25 0537

Quality Certification Numbers: Lyndhurst: 93-062B, Marion: 93-086B, Kansas City: 94-258B, Santa Fe Springs: 94-195C

Product Data Sheet
Edition 3.2004
Identification no. 465
Sikaflex-2c SL

Construction

Sikaflex®-2c SL

Two-component, self-leveling, polyurethane elastomeric sealant

Description	Sikaflex-2c SL is a 2-component, premium-grade, polyurethane-based, elastomeric sealant. It is principally a chemical cure in a self-leveling consistency. Meets ASTM C-920, Type M, Grade P, Class 25, use T, NT, M, G, A, O, I and Federal Specification TT-S-00227E, Type 1, Class A.
Where to use	■ Intended for use in all properly designed working joints with a minimum depth of 1/4 inch. ■ Ideal for horizontal applications. ■ Placeable at temperatures as low as 40°F. ■ Adheres to most substrates commonly found in construction. ■ Submerged conditions, such as canal and reservoir joints.
Advantages	■ True self-leveling properties. ■ Capable of ±50% joint movement. ■ Chemical cure allows the sealant to be placed in joints exceeding 1/2 in. in depth. ■ High elasticity with a tough, durable, flexible consistency. ■ Exceptional cut and tear resistance. ■ Exceptional adhesion to most substrates without priming. ■ Available in 40 architectural colors. ■ Color uniformity assured via Color-pak system. ■ Available in pre-pigmented Limestone Gray (no Color-pak needed). ■ Self-leveling consistency. easy to apply in horizontal joints. ■ Easy to mix. ■ Paintable with water-, oil-, and rubber-base paints. ■ Jet fuel resistant. ■ USDA approved. ■ No color-pak needed in pre-pigmented Limestone.
Coverage	1 gal. yields 231 cu. in. or 154 lin. ft. of a 1/2 in. X 1/4 in. joint.
Packaging	1.5 gal. unit. 3 gal. units. Color-pak is purchased separately. Limestone Gray color available pre-pigmented.

Typical Data *(Material and curing conditions 73°F (23°C) and 50% R.H.)*

Shelf life	One year in original, unopened containers.
Storage Conditions	Store dry at 40°-95°F (4°-35°C). **Condition material to 65°-75°F before using.**
Colors	A wide range of architectural colors are available. Special colors available on request.
Application Temperature	40° to 100°F, ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.
Service Range	-40° to 170°F (-40°-75°C).
Curing Rate (ASTM C-679)	
Tack-free Time	6-8 hrs.
Final Cure	3 days
Application Life	TT-S-00227E 4 hrs.
Tear Strength	ASTM D-624 100 lb./in.
Shore A Hardness	ASTM D-2240 40 ± 5
Tensile Properties (ASTM D412)	
Tensile Strength at Break	175 psi
Tensile Elongation	650%
100% Modulus	100 psi

Adhesion in Peel (Fed Spec. TT-S-00227E)

Substrate	Peel Strength	% Adhesion Loss
Concrete	30 lb.	Zero

Weathering Resistance	Excellent
Chemical Resistance	Good resistance to water, diluted acids, diluted alkalines, and residential sewage. Consult Technical Service for specific data.

Construction

How to Use

Surface Preparation

All joint-wall surfaces must be clean, sound, and frost-free. Joint walls must be free of oils, grease, curing compound residues, and any other foreign matter that might prevent bond. Ideally this should be accomplished by mechanical means.

Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.

Linear Feet of Sealant per Gallon

Width (Inches)	Depth ¼	½	¾	1	1¼	1½
¼	308.0					
½	154.0	77.0				
¾	102.7	51.3	34.2			
1	77.0	38.5	25.7	19.3		
1¼	61.6	30.8	20.5	15.4	12.3	
1½	51.3	25.7	17.1	12.8	10.3	8.6

Priming

Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed.

Consult Technical Service or Sikaflex Primer Technical Data Sheet for additional information on priming.

Mixing

Pour entire contents of Component 'B' into pail of Component 'A'. Add entire contents of Color-pak into pail and mix with a low-speed drill (400-600 rpm) and Sikaflex paddle. * Mix for 3-5 minutes to achieve a uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing.

Color-pak must be used with tint base.

Note: When mixing 3 gal. unit, two containers of Component B and two color-paks must be used.

*For pre-pigmented Limestone base, just mix with low speed drill and Sikaflex paddle (no Color-pak needed).

Application

Recommended application temperatures 40°-100°F. Pre-conditioning units to approximately 70°F is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application.

Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex-2c should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.

To place, pour or extrude the SL grade in one direction and allow it to flow and level as necessary. If extruding, load mixed sealant directly into bulk gun or use follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Tool as required. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio.

Limitations

- The ultimate performance of Sikaflex-2c, depends on good joint design and proper application.
- Minimum depth in working joint is 1/4 in.
- Maximum expansion and contraction should not exceed 50% of average joint width.
- Do not cure in the presence of curing silicones.
- Avoid contact with alcohol and other solvent cleaners during cure.
- Allow 3 day cure before subjecting sealant to total water immersion.
- Avoid exposure to high levels of chlorine. (Maximum level is 5 ppm).
- Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant.
- Avoid over-mixing sealant.
- Light color shades tend to yellow over time when exposed to ultraviolet rays.
- When overcoating: an on-site test is recommended to determine actual compatibility.
- The minimum depth of sealant in horizontal joints subject to traffic is 1/2 inch.
- Do not tool with detergent or soap solution.

Caution

Component 'A'; Irritant - Avoid contact. Product is a skin, respiratory and eye irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded. Use with adequate ventilation.

Component 'B'; Combustible; Sensitizer; Irritant - Contains Xylene. Keep away from heat, sparks and open flame. Use with adequate ventilation. Product is a respiratory and skin sensitizer. Avoid contact. Product is an eye, skin, and respiratory irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded.

First Aid

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. For respiratory problems, remove to fresh air. Wash clothing before re-use. Discard contaminated shoes.

Clean Up

Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect, absorb, and dispose of in accordance with current, applicable local, state, and federal regulations.

KEEP CONTAINER TIGHTLY CLOSED — KEEP OUT OF REACH OF CHILDREN
NOT FOR INTERNAL CONSUMPTION — FOR INDUSTRIAL USE ONLY
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Visit our website at www.sikaconstruction.com — **1-800-933-SIKA NATIONWIDE**

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
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Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537

QUALITY ISO 9001 9002 ACHIEVEMENT

Quality Certification Numbers: Lyndhurst: FM 69711 (ISO 9000), FM 70421 (QS 9000), Marion: FM 69715, Kansas City: FM 69107, Santa Fe Springs: FM 69408

LAUREL WWTP

Pressure Meters for Pumps P-4401 & P-4402

BWC

Date: 3-26-14

Materials

Description	Unit	Quantity	Cost (NWP)
Service saddle,nipple,ball valve	$105.00	2	$210.00

Labor

Description		Unit	Quantity	Cost
Drill pipe and install saddle and valve	Fitter	$55.65	4	$222.60

Equipment

Description	Unit	Quantity	Cost
Misc.	$15.00	1	$15.00

Sub- Contractors

Description		Unit	Quantity	Cost
CEI	$6,281.00	LS	1	$6,281.00

Subtotal	$6,728.60
Markup	$1,143.86
TOTAL	**$7,872.46**

TETRA TECH

MEMO

To: Chad Hanson, PE, Great West Engineering

Cc: Neil DeZort, Great West Engineering, Scott Ritter, Ritter Engineering

From: Ben Johnson and Mark Maxwell

Date: February 18, 2014

Subject: City of Laurel WWTP BNR Upgrade Project – Proposed Work Change Directive

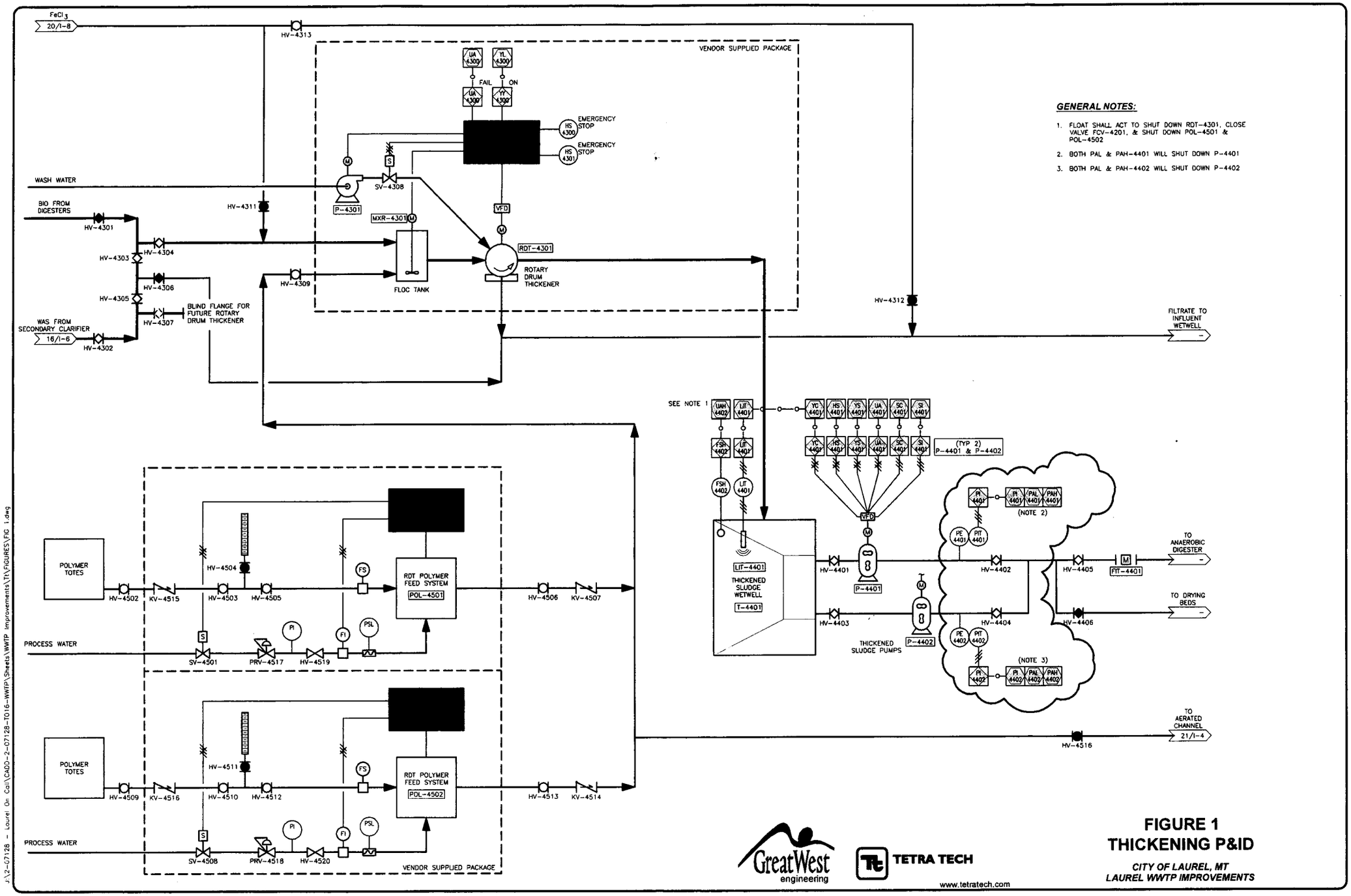
Tetra Tech would like to propose a change in the Work for the instrumentation and control at the Thickened Sludge Pumps. In order to provide additional protection for the rotary lobe pumps to prevent them from running dry, Tetra Tech proposes to install capacitative pressure meters on the discharge side of both pumps. The meters will be per paragraph 2.6.A. of Section 13400 of the specifications. The meters will communicate with the plant SCADA system, and will include low level and high level alarms. Additional SCADA programming will be required to provide the alarms and pressure indication. The meters will have to be field wired as well.

The changes are indicated in the bubbled area of the attached Figure 1. Figure 1 is a modification or Sheet I-9 from the original construction documents.

Please let me know if you need additional information.

Tetra Tech IMR

Tel [illegible] Fax [illegible] tetratech.com



GENERAL NOTES:

1. FLOAT SHALL ACT TO SHUT DOWN RDT-4301, CLOSE VALVE FCV-4201, & SHUT DOWN POL-4501 & POL-4502
2. BOTH PAL & PAH-4401 WILL SHUT DOWN P-4401
3. BOTH PAL & PAH-4402 WILL SHUT DOWN P-4402

GreatWest engineering

TETRA TECH

www.tetratech.com

FIGURE 1
THICKENING P&ID

CITY OF LAUREL, MT
LAUREL WWTP IMPROVEMENTS

J:\2-07128 - Laurel On Call\CAD\2-07128-T016-WWTP\Sheets\WWTP Improvements\TA\FIGURES\FIG 1.dwg

Check Valves

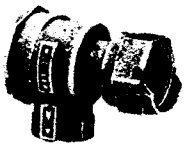
In-line & Angle Check Valves

Straight Dual Check Valves (H-14243)

- FIP inlet
- FIP outlet

Part #	Mfg #	Description	Price
2103155	H14243	3/4"	52.62
2103157	H14243	1"	90.48

Angle Dual Check Valves (H-14244)



- Meter swivel nut inlet
- FIP outlet

Part #	Mfg #	Description	Price
2103160	H14244	5/8" x 3/4" x 3/4"	50.90

Service Saddles

H13000 Series Bronze Service Saddles

- For PVC plastic pipe
- Two piece
- For use on cast iron OD PVC pipe made to ANSI/AWWA C900 standard
- NSF 61 certified

Mueller Service Saddles for AWWA C900 PVC Pipe

Part #	Mfg #	Description	Price
2125332	H13440	4" x 3/4" CC	70.28
2125334	H13440	4" x 1" CC	70.28
2125335	H13441	6" x 3/4" CC	96.02
2125336	H13441	6" x 1" CC	96.02
2125338	H13441	6" x 1-1/2" CC	181.12
2125339	H13441	6" x 2" CC	181.12
2125340	H13442	8" x 3/4" CC	134.36
2125342	H13442	8" x 1" CC	134.36
2125344	H13442	8" x 1-1/2" CC	206.72
2125346	H13442	8" x 2" CC	206.72
2125360	H13444	12" x 3/4" CC	391.24
2125361	H13444	12" x 1" CC	391.24
2125363	H13444	12" x 1-1/2" CC	391.24
2125364	H13444	12" x 2" CC	391.24
2125910	H13491	6" x 3/4" IPS	96.02

Mueller Service Saddles for Iron Pipe Size PVC Pipe

Part #	Mfg #	Description	Price
2124804	H13420	2" x 1" CC	41.46
2124934	H13425	3" x 1" CC	54.70
2125120	H13428	4" x 3/4" CC	64.34
2125138	H13428	4" x 1" CC	66.72
2125140	H13428	4" x 1-1/2" CC	138.58
2125242	H13431	6" x 3/4" CC	96.02
2125402	H13470	2" x 1" IPS	41.46
2125444	H13475	3" x 1" IPS	54.70
2125604	H13478	4" x 1" IPS	64.34

BR2B Series Bronze Double Strap Service Saddles

- For use on A-C pipe, cast iron or ductile iron pipe and cast iron OD PVC pipe
- 200 psig maximum working pressure
- Brass body, flattened silicon bronze straps
- Meets all applicable parts of ANSI/AWWA C800
- NSF 61 certified

Mueller Service Saddles with AWWA taper thread

Part #	Mfg #	Description	Price
2128966	BR 2 B 0474 CC	4" x 3/4" CC	173.10
2128974	BR 2 B 0474 CC	4" x 1" CC	173.10
2128990	BR 2 B 0474 CC	4" x 1-1/2" CC	201.88
2129006	BR 2 B 0474 CC	4" x 2" CC	219.86
2129208	BR 2 B 0684 CC	6" x 3/4" CC	203.84
2129216	BR 2 B 0684 CC	6" x 1" CC	203.84
2129232	BR 2 B0684CC150	6" x 1-1/2" CC	233.08
2129240	BR 2 B0684CC200	6" x 2" CC	256.24
2129388	BR 2 B0899CC075	8" x 3/4" CC	252.38
2129396	BR 2 B0899CC100	8" x 1" CC	252.38
2129400	BR 2 B0899CC125	8" x 1-1/4" CC	265.66
2129418	BR 2 B0899CC150	8" x 1-1/2" CC	265.66
2129426	BR 2 B0899CC200	8" x 2" CC	289.56
2129564	BR 2 B1104CC075	10" x 3/4" CC	312.66
2129572	BR 2 B1104CC100	10" x 1" CC	312.66
2129598	BR 2 B1104CC150	10" x 1-1/2" CC	343.36
2129602	BR 2 B1104CC200	10" x 2" CC	368.90
2129694	BR 2 B1314CC075	12" x 3/4" CC	366.00
2129708	BR 2 B1314CC100	12" x 1" CC	366.00
2129724	BR 2 B1314CC150	12" x 1-1/2" CC	412.82

Apollo Bronze Ball Valves

Apollo 94A-100/200 Series Brz 2-Pc Ball Valves

- Full port thru 2"
- Rated 600 psig CWP and 150 psig SWP
- Machined solid chrome-plated ball
- Multi-fill PTFE seats & seals
- Adjustable packing
- Blow-out proof stem design
- American made bronze castings
- Vacuum service to 29" Hg

Standard Design - Threaded FNPT

Part #	Mfg #	Size	Price
2511105	94A-101-01	1/4"	8.50
2511108	94A-102-01	3/8"	7.98
2511112	94A-103-01	1/2"	9.60
2511115	94A-104-01	3/4"	15.38
2511118	94A-105-01	1"	23.26
2511121	94A-106-01	1-1/4"	36.40
2511124	94A-107-01	1-1/2"	50.86
2511127	94A-108-01	2"	71.44
2511130	94A-109-01	2-1/2"	185.32
2511133	94A-100-01	3"	221.50
2511136	94A-10A-01	4"	440.46

Standard Design - Sweat

Part #	Mfg #	Size	Price
2511143	94A-203-01	1/2"	9.04
2511149	94A-204-01	3/4"	14.16
2511152	94A-205-01	1"	22.46
2511155	94A-206-01	1-1/4"	38.66
2511158	94A-207-01	1-1/2"	49.52
2511161	94A-208-01	2"	67.10
2511164	94A-209-01	2-1/2"	155.80
2511167	94A-200-01	3"	205.04
2511170	94A-20A-01	4"	403.42

CEI ELECTRICAL CONTRACTORS

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FAX: (406) 748-3135

March 19, 2014

Williams Bros Construction

RE: Laurel WWTP – WCD 021814 Add Pressure Switches

Attn: Barry Curtis

CEI would like to submit the following change order request for the supply and installation of one pressure switch each for pumps P-4401 and P-4402.

Quote:

	Labor Hrs	Labor $	Material	Equipment	Subtotal	MU	Totals
New Work	28	$1,960	$1,300	$200	$3,460	$346	$3,806
			Subcontract				
REI			$2,250		$2,250	$225	$2,475
						Total	$6,281

Notes:

1) Price is valid for 30 days.
2) Proposal is based off straight time rates.
3) Proposal may impact project duration.

If you have any further questions please call me at 406-656-4365.

Respectfully,

Wade Smith
PM/Estimator

Model S-20
High Performance Pressure Transmitter for General Industrial Applications

Model S-20 Pressure Transmitter

Applications

- General industrial applications
- Demanding research and development applications
- Harsh industrial environments

Special Features

- Measuring ranges from 0...10 to 0...20,000 psi (0 ... 0.4 to 0 ... 1,600 bar)
- Non-linearity of up to 0.125 % B.F.S.L.
- Available output signals include 4 ... 20 mA, 0 ... 10 VDC, 1 ... 5 VDC and many others
- Industry standard electrical connections including DIN 175301-803A L- connector, cables, housings and many others
- Common USA and international process connections available

Description

The model S-20 pressure transmitter is the ideal solution for customers with demanding performance requirements in many industrial applications.

It features high accuracy, a robust design and is available with an exceptional number of options that make it suitable for an extremely broad range of pressure measurement applications.

High versatility

The model S-20 offers continuous measuring ranges between 0...10 psi and 0...20,000 psi (0 ... 0.4 and 0 ... 1,600 bar) in all common engineering units. Vacuum and compound ranges are also available.

These measuring ranges can be combined with virtually any standard industry output signal, common international process connections and a wide variety of electrical connections.
A large number of options are available including different accuracy classes, extended temperature ranges and customer specific pin assignments to provide compatibility with most industrial applications.

High quality

The rugged design makes the model S-20 a highly reliable transmitter that is not affected by most adverse environmental conditions. This transmitter meets most application performance requirements when exposed to very low outdoor temperatures, extreme shock and vibration and aggressive media.

Availability

Variations of the S-20 described in this data sheet are usually available with short lead times. Inventory of popular designs are usually available for particularly urgent requirements.

Data sheets showing similar products:
Pressure transmitter for general industrial applications; model A-10; see data sheet PE 81.60

Measuring ranges

Relative pressure ranges							
psi	0 ... 10	0 ... 15	0 ... 25	0 ... 30	0 ... 50	0 ... 60	0 ... 100
	0 ... 150	0 ... 160	0 ... 200	0 ... 250	0 ... 300	0 ... 400	0 ... 500
	0 ... 600	0 ... 750	0 ... 1,000	0 ... 1,500	0 ... 2,000	0 ... 3,000	0 ... 4,000
	0 ... 5,000	0 ... 6,000	0 ... 7,500	0 ... 10,000	0 ... 15,000	0 ... 20,000	
bar	0 ... 0.4	0 ... 0.6	0 ... 1	0 ... 1.6	0 ... 2.5	0 ... 4	0 ... 6
	0 ... 10	0 ... 16	0 ... 25	0 ... 40	0 ... 60	0 ... 100	0 ... 160
	0 ... 250	0 400	0 ... 600	0 ... 1,000	0 ... 1,600		

Absolute pressure ranges							
psi	0 ... 10	0 ... 15	0 ... 25	0 ... 30	0 ... 50	0 ... 60	0 ... 100
	0 ... 150	0 ... 160	0 ... 200	0 ... 250	0 ... 300	0 ... 400	0 ... 500
bar	0 ... 0.4	0 ... 0.6	0 ... 1	0 ... 1.6	0 ... 2.5	0 ... 4	0 ... 6
	0 ... 10	0 ... 16	0 ... 25	0 ... 40			

Vacuum and compound ranges					
psi	-30 inHg ... 0	-30 inHg ... +15	-30 inHg ... +30	-30 inHg ... +45	-30 inHg ... +60
	-30 inHg ... +100	-30 inHg ... +160	-30 inHg ... +200	-30 inHg ... +300	-30 inHg ... +500
bar	-0.4 ... 0	-0.6 ... 0	-1 ... 0	-1 ... +0.6	-1 ... +1.5
	-1 ... +3	-1 ... +5	-1 ... +9	-1 ... +15	-1 ... +24
	-1 ... +39	-1 ... +59			

The listed pressure ranges are also available in kg/cm2, kPa and MPa.
Special measuring ranges between 0 ... 10 and 0 ... 20,000 psi (0.4...1600 bar) are available on request.
Special pressure ranges may have reduced long-term stability and increased temperature errors.

Overpressure limit

The overpressure limit depends on the specific sensor element used for the selected pressure range. A reduction in the overpressure safety rating may occur depending on the specific process connection and seal selected. A higher overpressure limit may provide a greater temperature error.

Measuring range < 150 psi/10 bar	≥ 150 psi/10 bar
3 times (standard)	**2 times [1] (standard)**
5 times	3 times [2] [3]

1) Restriction: max. 60 bar/870 psi with absolute pressure
2) Only possible for relative pressure measuring ranges ≤ 400 bar or 5,800 psi
3) Only possible for absolute pressure measuring ranges < 16 bar or 220 psi

Vacuum resistance

Yes
(No damage to sensor when vacuum is applied)

Output signal

Signal type	Signal
Current (2-wire)	4 ... 20 mA
	20 ... 4 mA
Voltage (3-wire)	DC 0 ... 10 V
	DC 0 ... 5 V
	DC 1 ... 5 V
	DC 0.5 ... 4.5 V
	DC 1 ... 6 V
	DC 10 ... 0 V
Ratiometric (3-wire)	DC 0.5 ... 4.5 V

Other output signals on request.

Permissible load in Ω

- Current output (2-wire): ≤ (power supply - 7.5 V) / 0.023 A
  ≤ (power supply - 11.5 V) / 0.023 A (with optional settling time of 1 ms)
- Voltage output (3-wire): > maximum output voltage / 1 mA
- Ratiometric output (3-wire): > 4.5k

Optional output signal limits

- 4 ... 20 mA signal: Minimum zero point setting: 3.6 mA [1], 3.8 mA, 4.0 mA
  Maximum full scale setting: 20 mA, 21.5 mA, 23 mA
- DC 0 ... 10 V signal: Full scale: 10 VDC or 11.5 VDC

1) Not available with the zero point adjustment option

Voltage supply

Power supply

Maximum allowable power supply rating for cULus approval: 35 VDC (32 VDC with heavy-duty connector)

- Current output (2-wire)
  4 ... 20 mA: 8 ... 36 VDC (12 ... 36 VDC with optional 1 ms settling time)
  20 ... 4 mA (reverse output): 8 ... 36 VDC
- Voltage output (3-wire)
  0 ... 10 VDC: 12 ... 36 VDC
  0 ... 5 VDC: 8 ... 36 VDC
  1 ... 5 VDC: 8 ... 36 VDC
  0.5 ... 4.5 VDC: 8 ... 36 VDC
  1 ... 6 VDC: 9 ... 36 VDC
  10 ... 0 VDC: 12 ... 36 VDC
- 3-wire ratiometric output:
  0.5 ... 4.5 VDC: 5 VDC ±10 %

Power dissipation (loss)

- Current output (2-wire): 828 mW (22 mW/K derating of the power dissipation when ambient temperatures are ≥ 212 °F/100 °C)
- Voltage output (3-wire): 432 mW

Maximum current consumption

- Current output (2-wire): Current signal, max. 25 mA
- Voltage output (3-wire): max. 12 mA

Reference conditions (per IEC 61298-1)

Temperature
59...77°F (15...25°C)

Barometric pressure
860 ... 1,060 mbar

Humidity
45 ... 75 % relative

Power supply
- 24 VDC
- 5 VDC for ratiometric output

Mounting position
Calibrated in vertical position with pressure connection facing down

Response time

Signal type	Settling time per IEC 62594		Signal damping
	Standard [1]	Option 1 [2] [3]	Option 2
Current (2-wire)	**3 ms**	1 ms	10, 50, 100, 500, 1,000, 5,000 ms
Voltage (3-wire)	**2 ms**	1 ms	10, 50, 100, 500, 1,000, 5,000 ms
Ratiometric (3-wire)	**2 ms**	1 ms	10, 50, 100, 500, 1,000, 5,000 ms

1) 3 dB limit frequency: 500 Hz
2) 3 dB limit frequency: 1,000 Hz
3) Alternative specifications for 4 ... 20 mA output signal:
Load: ≤ (power supply - 11.5 V) / 0.023 A
Power supply: DC 12 ... 36 V

Switch-on time (from power up to output signal)
150 ms

Switch-on drift time
5 s to reach stated accuracy (60 s with optional 0.1 % zero point adjustment)

Accuracy data

Non-linearity (per IEC 61298-2) BFSL	Terminal method	Accuracy at calibration temperature
≤ ±0.5 % of span (standard)	**≤ ±1.0 % of span**	**≤ ±1.0 % of span**
≤ ±0.25 % of span	≤ ±0.5 % of span	≤ ±0.5 % of span
≤ ±0.125 % of span 1)	≤ ±0.25 % of span 1)	≤ ±0.25 % of span 1)

1) Restrictions for the non-linearity of 0.125 % BFSL or 0.25 % with terminal method:
Available output signals: 4 ...20 mA and DC 0 ... 10 V
Available measuring ranges: All measuring ranges specified in the data sheet
For further output signals or measuring ranges, please ask the manufacturer

Calibration temperature
15 ... 25 °C (standard)
4 °C ±5 °C
40 °C ±5 °C
60 °C ±5 °C
80 °C ±5 °C

Zero point adjustment
≤ ±0.2 % of span, factory setting (standard)
≤ ±0.1 % of span, factory setting 1)
±10 % of span, in 0.05 % increments, customer setting 2)

1) Restrictions for the optional factory set 0.1 % zero point adjustment:
Only available with 4 ...20 mA and 0 ... 10 VDC output signals
Available measurement ranges: All relative pressure ranges specified in the data sheet. Not available in combination with the optional calibration temperature.
2) The "optional zero point adjustment access" is not available with every electrical connection, see "Electrical connections" for details.

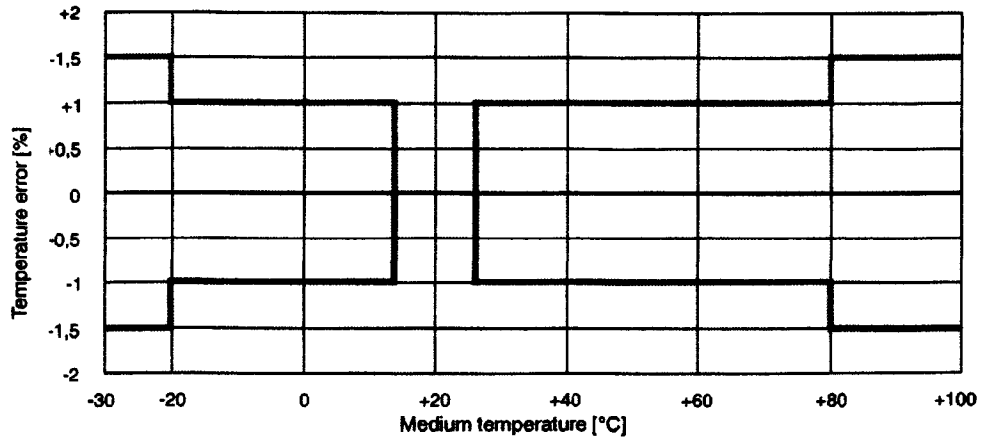
Effect of mounting position on zero offset
For measuring ranges < 15 psi (1 bar), an additional zero offset of up to 0.15 % applies

Non-repeatability
≤ ±0.1 % of span

Temperature hysteresis
0.1 % of span at > 176 °F (80 °C)

Long-term drift (per IEC 61298-2)
- ≤ ±0.1 % of span
- ≤ ±0.2 % of span (with special measuring ranges)

Temperature error (for calibration temperature of 59...77 °F (15 ... 25 °C))
For measuring ranges < 15 psi (1 bar), special measuring ranges and instruments with an increased overpressure limit the temperature error increases by 0.5 % of span



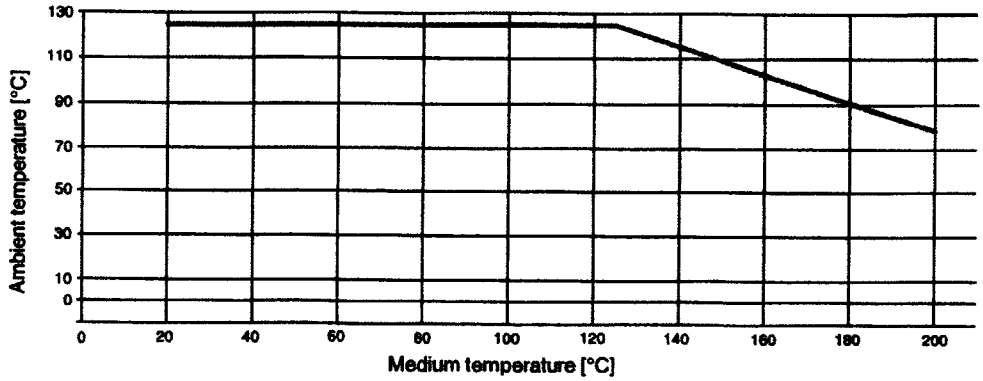
Operating conditions

Permissible temperature ranges

Medium	Ambient	Design	maximum permissible pressure
-30 ... +100 °C (standard)	**-30 ... +100 °C**	-	-
-40 ... +125 °C	-40 ... +125 °C	-	-
-40 ... +150 °C	-40 ... +125 °C [1]	with integrated cooling element	5800 psi (400 bar)
-40 ... +200 °C	-40 ... +125 °C [1]	with integrated cooling element	5800 psi (400 bar)
-20 ... +60 °C	-20 ... +60 °C	Oxygen applications	-

1) Derating curve and formula (see following diagram)

There may be other media and ambient temperature limitations depending upon the sealing material used with the process connection and the specific electrical connection selected.
For restrictions see "Process connections, sealings" and "Electrical connections".



Maximum permissible ambient temperature
T_{amb} (T_{med} < 125 °C) = 125 °C
T_{amb} (T_{med} ≥ 125 °C) = -0.62 x T_{med} + 202 °C

Maximum permissible medium temperature
T_{med} (T_{amb} < 80 °C) = 200 °C
T_{med} (T_{amb} ≥ 80 °C) = -1.61 x T_{amb} + 326 °C

T_{amb} = ambient temperature [°C]
T_{med} = medium temperature [°C]

Storage and transport conditions
- Permissible temperature range: -40...158° F (-40 ... +70 °C)
- Maximum humidity (per IEC 68-2-78): 67 % r.h. at 104 F (40 °C) (in accordance with 4K4H per EN 60721-3-4)

Vibration resistance (per IEC 68-2-6)
20 g, 10 ... 2,000 Hz, (40 g, 10 ... 2,000 Hz for heavy-duty connector)
For instruments with cooling elements a limited vibration resistance of 10 g applies (10 ... 2,000 Hz)

Continuous vibration resistance (per IEC 68-2-6)
10 g

Shock resistance (per IEC 68-2-27)
100 g, 6 ms (500 g, 1 ms for heavy-duty connector)

Service life
100 million load cycles (10 million load cycles for measuring ranges > 7,500 psi /600 bar)

Free-fall test (following IEC 60721-3-2)
- Individual packaging: 5 ft (1.5 m)
- Multiple packaging: 1.6 ft (0.5 m)
- PE bag: 1.6 ft (0.5 m)

Process connections

Available connections

Process connection per	Thread size	Maximum overpressure limit
EN 837	G ⅛ B	11,600 psi (800 bar)
	G ¼ B	20,300 psi (1,400 bar)
	G ¼ B female	20,300 psi (1,400 bar)
	G ½ B	26,100 psi (1,800 bar) (1.4404)
		46,400 psi (3,200 bar) (1.4542)
	G ⅜ B	20,300 psi (1,400 bar)
DIN 3852-E	G ¼ A	8700 psi (600 bar)
	G ½ A	8700 psi (600 bar)
	M14 x 1.5	8700 psi (600 bar)
ISO 228	M20 x 1.5	26,100 psi (1,800 bar) (1.4404)
		47,800 psi (3,300 bar) (1.4542)
	M12 x 1.5	8700 psi (600 bar)
SAE J514 E	7/16-20 UNF BOSS	8700 psi (600 bar)
	7/16-20 UNF J514 sealing cone 74°	15,900 psi (1,100 bar)
	9/16-18 UNF BOSS	8700 psi (600 bar)
ANSI/ASME B1.20.1	⅛ NPT	15,900 psi (1,100 bar)
	¼ NPT	21,700 psi (1,500 bar)
	¼ NPT female	21,700 psi (1,500 bar)
	½ NPT	21,700 psi (1,500 bar) (1.4404)
		40,600 psi (2,800 bar) (1.4542)
KS	PT ¼	23,200 psi (1,600 bar)
	PT ½	21,700 psi (1,500 bar)
	PT ⅜	20,300 psi (1,400 bar)
ISO 7	R ¼	23,200 psi (1,600 bar)
	R ⅜	21,700 psi (1,500 bar)
	R ½	20,300 psi (1,400 bar) (1.4404)
		41,200 psi (2,840 bar) (1.4542)

Other process connections available on request.

Pressure port diameter

Pressure port diameter	Available for thread sizes
2.5 mm (standard)	**all thread sizes**
0.3 mm	G ¼ A, G ½ A, ¼ NPT, ½ NPT, R ¼, 7/16-20 UNF BOSS
0.6 mm	G ¼ A, G ½ A, ¼ NPT, ½ NPT, R ¼, 7/16-20 UNF BOSS
6 mm*	G ¼ A, ¼ NPT, R ¼, 7/16-20 UNF BOSS
12 mm*	G ½ A, ½ NPT

*6 or 12 mm enlarged pressure port is only available for measuring ranges up to and including 0 ... 500 psi (0 ... 40 bar).

Sealing rings

Process connection per	Copper -40 ... +125 °C	Stainless steel -40 ... +125 °C	NBR -20 ... +100 °C	FKM -15 ... +125 °C
EN 837	Standard	Option	-	-
DIN 3852-E	-	-	Standard	Option
ISO 228	Standard	Option	-	-
SAE J514 E	-	-	Standard	Option

Electrical connections

Available connections

Electrical connection	Ingress protection	Wire cross-section	Cable Ø	Cable material	maximum permissible temperature
L-connector DIN 175301-803 A [1]	IP 65	-	-	-	-30 ... +100 °C
L-connector DIN 175301-803 C [1]	IP 65	-	-	-	-30 ... +100 °C
Circular connector M12 x 1 (4-pin) [1]	IP 67	-	-	-	-30 ... +100 °C
Circular connector M12 x 1 (4-pin, metallic)	IP 67	-	-	-	-40 ... +125 °C (cULus: +85 °C)
Bayonet connector (6-pin)	IP 67	-	-	-	-40 ... +125 °C
Field case	IP 6K9K	-	-	-	-25 ... +100 °C
Heavy-duty connector [2]	IP 68	-	-	-	-40 ... +125 °C
Cable outlet IP 67 [1]	IP 67	3 x 0.34 mm²	5.5 mm	PUR	-30 ... +100 °C
Cable outlet ½ NPT conduit	IP 67	6 x 0.35 mm²	6.1 mm	PUR	-30 ... +100 °C (cULus: +90 °C)
Cable outlet IP 68	IP 68	6 x 0.35 mm²	6.1 mm	PUR	-30 ... +125 °C (cULus: +90 °C)
Cable outlet IP 68, FEP	IP 68	6 x 0.39 mm²	5.8 mm	FEP	-40 ... +125 °C (cULus: +105 °C)
Cable outlet IP 6K9K	IP 6K9K	6 x 0.35 mm²	6.1 mm	PUR	-30 ... +125 °C (cULus: +90 °C)

1) Customer zero point adjustment available as an option.
2) max. DC 32 V with cULus approval

Other connections on request.

Assembly configurations of the mating connectors

Mating connector for electrical connection	Ingress protection	Wire cross-section	Cable Ø	Cable material	max. permissible temperature	Cable ends
L-connector DIN 175301-803 A						
■ Mating connector	IP 65	max. 1.5 mm²	6 ... 8 mm	-	-40 ... +125 °C	-
■ Mating connector (conduit)	IP 65	max. 1.5 mm²	-	-	-40 ... +125 °C	-
■ Mating connector with molded cable	IP 65	3 x 0.75 mm²	6 mm	PUR	-40 ... +125 °C (cULus: -25 ... +85°C)	no finishing
■ Mating connector with molded cable, shielded	IP 65	6 x 0.5 mm²	6.8 mm	PUR	-25 ... +85 °C	End splices
L-connector DIN 175301-803 C						
■ Mating connector	IP 65	max. 0.75 mm²	4.5 ... 6 mm	-	-40 ... +125 °C	-
■ Mating connector with molded cable	IP 65	4 x 0.75 mm²	5.9 mm	PUR	-25 ... +85 °C	no finishing
Circular connector M12 x 1 (4-pin)						
■ Mating connector, straight, with molded cable	IP 67	3 x 0.34 mm²	4.3 mm	PUR	-25 ... +80 °C	no finishing
■ Straight mating connector, with molded cable, shielded	IP 67	3 x 0.34 mm²	4.3 mm	PUR	-25 ... +80 °C	no finishing
■ Mating connector, angled, with molded cable	IP 67	3 x 0.34 mm²	5.5 mm	PUR	-25 ... +80 °C	no finishing
Heavy-duty connector						
■ Mating connector with cable	IP 68	6 x 0.14 mm²	6.5 mm	PUR	-40 ... +125 °C (cULus: -30 ... +90°C)	no finishing

Assembly configurations of the cable outlets

Electrical connection	Unfinished wire ends	Tinned wire ends	with end splices
Cable outlet IP 67	Standard	Option	Option
Cable outlet ½ NPT conduit	-	Option	Standard
Cable outlet IP 68	-	Option	Standard
Cable outlet IP 68, FEP	-	Option	Standard
Cable outlet IP 6K9K	-	Option	Standard

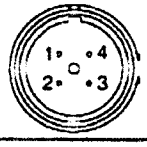
Cable lengths of 6 ft, 15 ft, 2 m or 5 m are available, other cable lengths on request.

Connection diagrams

L-connector DIN 175301-803 A

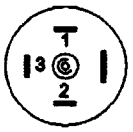
	2-wire	3-wire
U_+	1	1
U_-	2	2
S_+	-	3
Shield (option)	4	4

Heavy-duty connector



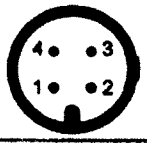
	2-wire	3-wire
U_+	1	1
U_-	2	2
S_+	-	3
Shield	Case	Case

L-connector DIN 175301-803 C



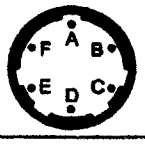
	2-wire	3-wire
U_+	1	1
U_-	2	2
S_+	-	3
Shield (option)	4	4

Circular connector M12 x 1 (4-pin)



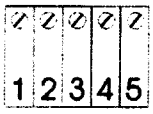
	2-wire	3-wire
U_+	1	1
U_-	3	3
S_+	-	4
Shield (option)	Case	Case

Bayonet connector (6-pin)



	2-wire	3-wire
U_+	A	A
U_-	B	B
S_+	-	C
Shield	Case	Case

Field case



	2-wire	3-wire
U_+	1	1
U_-	2	2
S_+	-	3
Shield	5	5

Cable outlet
Incl. mating connector with molded cable

	2-wire	3-wire
U_+	brown (BN)	brown (BN)
U_-	blue (BU)	blue (BU)
S_+	-	black (BK)
Shield	grey (GY)	grey (GY)

Cable outlet
(US code)

	2-wire	3-wire
U_+	red (RD)	red (RD)
U_-	black (BK)	black (BK)
S_+	-	white (WH)
Shield	grey (GY)	grey (GY)

Other pin assignments on request.

Electrical protection

The electrical protection measures below do not apply to ratiometric output signals.

- Short-circuit protection: S_+ vs. U_-
- Reverse polarity protection: U_+ vs. U_-
- Overvoltage protection: 40 VDC
- Insulation voltage: 750 VDC

Materials

Wetted parts

- Relative measuring ranges:
  - Measuring ranges ≤ 150 psi / 10 bar: 316L
  - Measuring ranges > 150 psi / 10 bar: 316L + 13-8 PH
- Absolute pressure measuring ranges:
  - Measuring ranges ≤ 10,000 psi / 1,000 bar: ASTM 630 and 13-8 PH
  - Measuring ranges > 10,000 psi / 1,000 bar: 316L + 13-8 PH
- Sealing materials: see "Process connections"

Non-wetted parts

- Case: 316 Ti
- Zero point adjustment ring: PBT/PET GF30
- Electrical connections:

L-connector DIN 175301-803 A:	PBT/PET GF30
L-connector DIN 175301-803 C:	PBT/PET GF30
Circular connector M12 x 1 (4-pin):	PBT/PET GF30
Circular connector M12 x 1 (4-pin, metallic):	316L
Bayonet connector (6-pin)	316L + Al
Field case:	316L, 316Ti
Heavy-duty connector:	316L
Cable outlet IP 67:	PA66
Cable outlet ½ NPT conduit:	316L
Cable outlet IP 68:	316L
Cable outlet IP 68, FEP:	316L
Cable outlet IP 6K9K:	316L

Pressure transmission fluid

Synthetic oil (for measuring ranges < 150 psi / 10 bar relative and absolute pressure)

Options for specific media

Medium	Option	
Food	Food-compatible transmission fluid	
Oil and grease free	Residual hydrocarbon: < 1,000 mg/m²	
	Packaging: Protection cap on the process connection	
Oxygen, oil and grease free	Residual hydrocarbon (measuring range < 30 bar):	< 500 mg/m²
	Residual hydrocarbon (measuring range > 30 bar):	< 200 mg/m²
	Packaging: Protection cap on the process connection, instrument sealed in a PE bag	
	Maximum permissible temperature -20 ... +60 °C	
	Elastomer sealing: oly FKM possible, max. -15 ... +60 °C and max. 30 bar measuring range.	
	Not possible with process connections with female thread	
Hydrogen	**On request**	
	Measuring ranges:	from 25 bar relative
	Wetted parts:	316L and Elgiloy® (2.4711)
	Maximum permissible temperature:	-30 ... +30 °C

CE conformity

Pressure equipment directive
97/23/EC

EMC directive
2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (industrial application)

EM field
30 V/m (80 ... 1,000 MHz)

RoHS conformity
Directive 2002/95/EC

Performance level (per EN ISO 13849-1:2008)

- Performance level: PL = C
- Category: Cat. = 1
- Diagnostic coverage: DC = none
- MTTF: > 100 years

Certificates (optional)

Available certificates	
2.2 test report	State-of-the-art manufacturing Wetted metallic parts Confirmation of the class and indication accuracy
3.1 inspection certificate	Wetted metallic parts Wetted metallic parts with suppliers' certificate Confirmation of the class and indication accuracy List of single measured values
DKD/DAkkS calibration certificate	

Approvals and certificates, see website

Scope of delivery

Test report

- Non-linearity 0.5 % (B.F.S.L.) 3 points
- Non-linearity 0.25 % (B.F.S.L.) 5 points
- Non-linearity 0.125 % (B.F.S.L.) 5 points

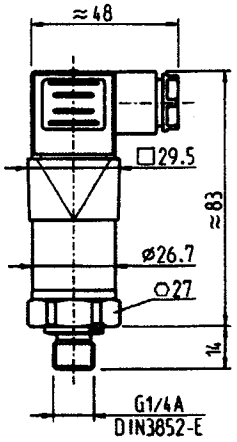
Packaging
Individual packaging (standard) Multiple packaging (up to 20 pieces)

Instrument labeling
WIKA laser-etched label (standard) Customer-specific label on request

Dimensions in mm

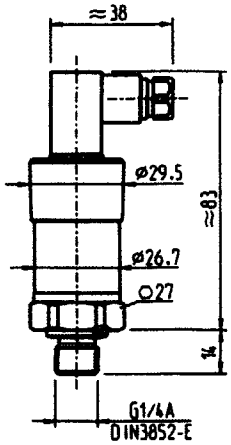
Pressure transmitter model S-20

with L-connector DIN 175301-803 A



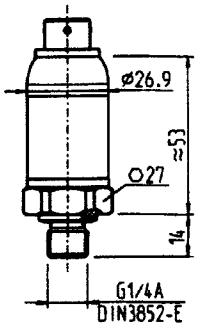
Weight: approx. 150 g

with L-connector DIN 175301-803 C



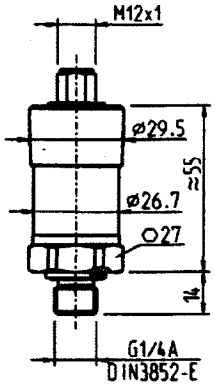
Weight: approx. 150 g

with bayonet connector (6-pin)



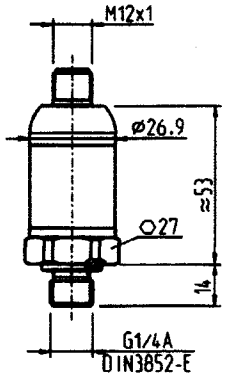
Weight: approx. 150 g

with circular connector M12 x 1 (4-pin)



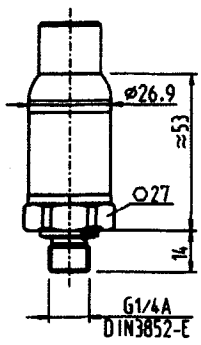
Weight: approx. 150 g

with circular connector M12 x 1 (4-pin, metallic)



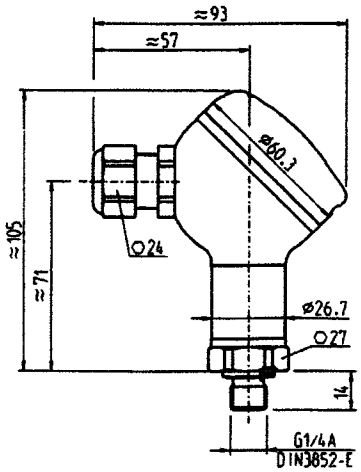
Weight: approx. 150 g

with heavy-duty connector



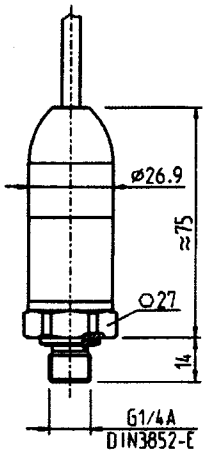
Weight: approx. 150 g

with field case



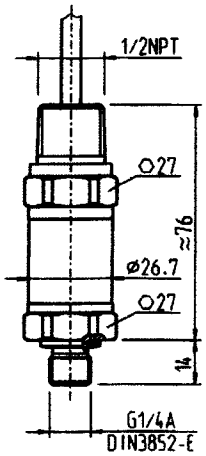
Weight: approx. 290 g

with cable outlet IP 68, FEP, IP 6K9K



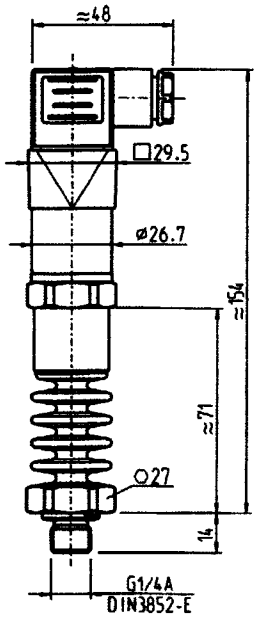
Weight: approx. 220 g

with cable outlet ½ NPT conduit



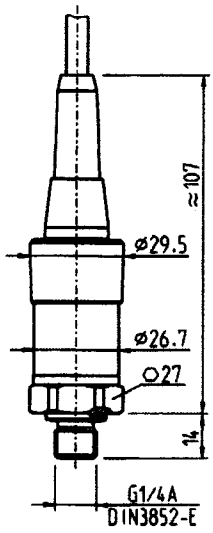
Weight: approx. 220 g

with L-connector DIN 175301-803 A and cooling element



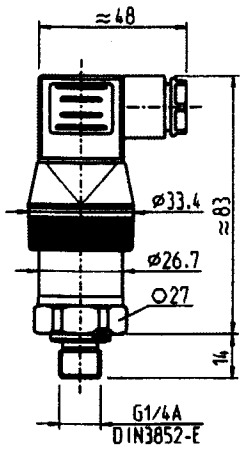
Weight: approx. 360 g

with cable outlet IP 67



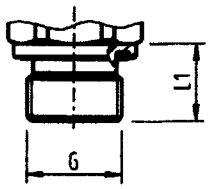
Weight: approx. 150 g

with L-connector DIN 175301-803 A and zero point adjustment

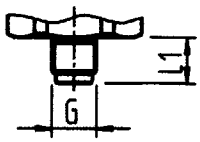


Weight: approx. 150 g

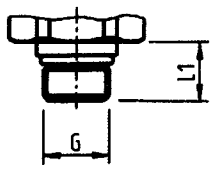
Process connections



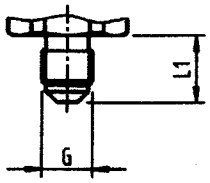
G	L1
G ¼ A	14
G ½ A	17
M14 x 1.5	14



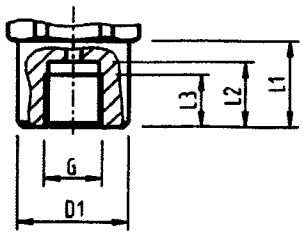
G	L1
G ⅛ B	10



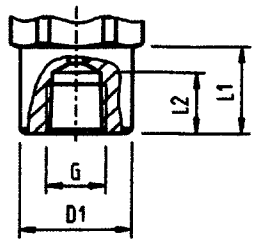
G	L1
7/16-20 UNF BOSS	12.06
9/16-18 UNF BOSS	12.85



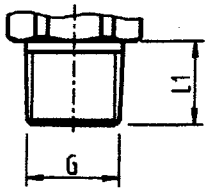
G	L1
7/16-20 UNF J514 sealing cone 74°	15



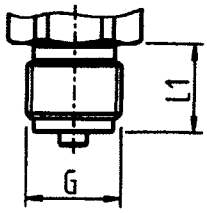
G	D1	L1	L2	L3
G ¼ B female	25	20	13	10



G	D1	L1	L2
¼ NPT female	25	20	14



G	L1
⅛ NPT	10
¼ NPT	13
½ NPT	19
PT ¼	13
PT ½	19
PT ⅜	15
R ¼	13
R ½	19
R ⅜	15



G	L1
G ¼ B	13
G ½ B	20
G ⅜ B	16
M12 x 1.5	15
M20 x 1.5	20

For information on tapped holes and welding sockets, see Technical information IN 00.14 at www.wika.com.

Accessories and spare parts

Mating connector

Designation	Order number			
	without cable	with 2 m cable	with 5 m cable	with 2 m cable, shielded
L-connector DIN 175301-803 A				
■ with gland, metric	11427567	11225793	11250186	2242656
■ with gland, conduit	11022485	-	-	-
L-connector DIN 175301-803 C	1439081	11225823	11250194	-
Circular connector M12 x 1 (4-pin)				
■ straight	-	11250780	11250259	14056584
■ angled	-	11250798	11250232	-

Sealings for mating connectors

Mating connector	Order number	
	Blue (WIKA)	Brown (neutral)
L-connector DIN 175301-803 A	1576240	11437902
L-connector DIN 175301-803 C	11169479	11437881

Sealings for process connection

Thread size	Order number			
	Copper	Stainless steel	NBR	FKM
G ⅛ B	11251051	-	-	-
G ¼ B	11250810	11250844	-	-
G ½ B	11250861	11251042	-	-
G ⅜ B	14065101	-	-	-
M12 x 1.5	11250810	11250844	-	-
M20 x 1.5	11250861	11251042	-	-
G ¼ A	-	-	1537857	1576534
G ½ A	-	-	1039067	1039075
M14 x 1.5	-	-	1537857	1576534
7/16-20 UNF BOSS	-	-	14057554	11472022
9/16-18 UNF BOSS	-	-	14057555	2063240

Ordering information

Model / Measuring range / Overpressure limit / Output signal / Non-linearity / Calibration temperature / Zero point adjustment / Process connection / Pressure channel / Sealing / Electrical connection / Assembly / Cable length / Shielding / Certificates / Packaging / Instrument labeling / Accessories and spare parts

WIKA Instrument, LP
1000 Wiegand Boulevard
Lawrenceville, GA 30043-5868
Tel: 888-WIKA-USA • 770-513-8200
Fax: 770-338-5118
E-Mail: info@wika.com
www.wika.com

LAUREL WWTP
Revised Grating at UV

BWC
Date: 3-31-14

Materials

Description		Unit	Quantity	Cost (NWP)
Grating	$945.00	LS	1	$945.00

Labor

Description	Unit	Quantity	Cost

Equipment

Description	Unit	Quantity	Cost

Sub- Contractors

Description	Unit	Quantity	Cost

Subtotal	$945.00
Markup	$160.65
TOTAL	**$1,105.65**

INTERMOUNTAIN INDUSTRIAL INC.

7105B Lolo Creek Road
Lolo, Montana 59847
Phone: (406) 728-6097
Fax: (406) 829-0748

March 28, 2014

To: Williams Brother Construction

Attn: Barry Curtis

Re: Laurel WWTP BNR Upgrade Project

Replace 1 ½" Grating with 2" Grating per RFI #2 Response

Scope:

Replace 1 ½" Grating for UV Disinfection Channel with 2" Grating

Change 149 SF of 1 ½" grating to 2" grating as required by Engineer's response to RFI #2

Change in Cost for Above Listed Change in Material FOB Jobsite: $945.00

Contractor certifies the above listed material has been changed from what was originally shown in the contract documents. The material listed above is approved as an additive change order and amount quoted will be added to the contract amount if the change is accepted.

ACCEPTED:

Williams Brother Construction

By: _____

Date: _____

INTERMOUNTAIN INDUSTRIAL INC.

Request for Information

RFI No: 2
Date: 9-27-13
Job No. 287

Originator: Mike Cook Project Name: Laurel WWTP BNR Upgrade

Drawing Reference: S-18 Specification Reference: 05100

Attachments: S-18 and grating load table Location/Area: UV Building Grating

Problem: On drawing S-18 structural note 5 requires 2" grating over the narrow short span trench in the UV area. Structural note 6 requires 1 ½" grating over the larger areas with long spans. The 1 ½" grating does not meet the loading requirements for the long spans.

Solution:
It looks as if the structural notes for the grating may have been reversed and 2" grating should be supplied where note 6 specifies 1 ½" grating. Please verify the grating depths on drawing S-18 with respect to the structural notes and what is required for loading.

Engineer's Solution:
Note 6 on Sheet S-18 is incorrect. All grating shall be 2", both in the long span areas and the short span areas over the UV channel. Disregard all areas of the UV channel drawings that call out 1 1/2" grating. Adjust the height of the angle support welded to the beam to insure 2" grating is flush with the top of beam/concrete elevation.

Action: ☐ Change Order ☐ Request for Quote ☐ Clarification Only

Reviewed By: NJD Date: 10/9/2013

Approved By: _____ Date: _____

Cc: Job File

Aluminum Bar Grating

RECTANGULAR BAR SWAGE-LOCKED 1-3/16" C/C Bearing Bars

19-SR-4

Cross Rods 4" C/C

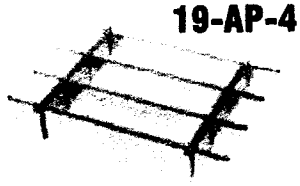
19-SR-2

Cross Rods 2" C/C

NON-SERRATED & SERRATED

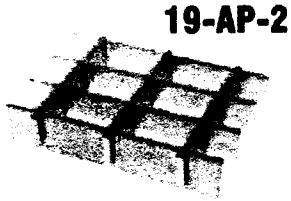
PRESS-LOCKED 1-3/16" C/C Bearing Bars

19-AP-4



Cross Bars 4" C/C

19-AP-2



Cross Bars 2" C/C

LOAD & DEFLECTION TABLE

Bar Size	Symbol				SPAN (Direction of Bearing Bar)													
					2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'
3/4" x 1/8"	19-SR-4	1.4		U	237	152	105	77										
	19-SR-2	1.6		D	0.192	0.300	0.432	0.588										
Non-Serrated Only	19-AP-4	1.5	0.118	C	237	189	158	135										
	19-AP-2	1.8		D	0.154	0.240	0.346	0.470										
3/4" x 3/16"	19-SR-4	1.9		U	355	227	158	116										
	19-SR-2	2.1		D	0.192	0.300	0.432	0.588										
Non-Serrated Only	19-AP-4	2.2	0.178	C	355	284	237	203										
	19-AP-2	2.7		D	0.154	0.240	0.346	0.470										
1" x 1/8"	19-SR-4	1.7		U	421	269	187	137	105									
	19-SR-2	1.9		D	0.144	0.225	0.324	0.441	0.576									
	19-AP-4	1.8	0.211	C	421	337	281	241	211									
	19-AP-2	2.2		D	0.115	0.180	0.259	0.353	0.461									
1" x 3/16"	19-SR-4	2.5		U	632	404	281	206	158	125								
	19-SR-2	2.7		D	0.144	0.225	0.324	0.441	0.576	0.729								
	19-AP-4	2.8	0.316	C	632	505	421	361	316	281								
	19-AP-2	3.3		D	0.115	0.180	0.259	0.353	0.461	0.583								
1-1/4" x 1/8"	19-SR-4	2.1		U	658	421	292	215	164	130								
	19-SR-2	2.3		D	0.115	0.180	0.259	0.353	0.461	0.583								
	19-AP-4	2.4	0.329	C	658	526	439	376	329	292								
	19-AP-2	2.8		D	0.092	0.144	0.207	0.282	0.369	0.467								
1-1/4" x 3/16"	19-SR-4	3.1		U	987	632	439	322	247	195	158							
	19-SR-2	3.3		D	0.115	0.180	0.259	0.353	0.461	0.583	0.720							
	19-AP-4	3.5	0.493	C	987	789	658	564	493	439	395							
	19-AP-2	4.2		D	0.092	0.144	0.207	0.282	0.369	0.467	0.576							
1-1/2" x 1/8"	19-SR-4	2.5		U	947	606	421	309	237	187	152							
	19-SR-2	2.7		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600							
	19-AP-4	2.8	0.474	C	947	758	632	541	474	421	379							
	19-AP-2	3.2		D	0.077	0.120	0.173	0.235	0.307	0.389	0.480							
1-1/2" x 3/16"	19-SR-4	3.7		U	1421	909	632	464	355	281	227	188						
	19-SR-2	3.9		D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726						
	19-AP-4	4.1	0.711	C	1421	1137	947	812	711	632	568	517						
	19-AP-2	4.8		D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581						
1-3/4" x 3/16"	19-SR-4	4.2		U	1934	1238	860	632	484	382	309	256	215	183				
	19-SR-2	4.4		D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869				
	19-AP-4	4.7	0.967	C	1934	1547	1289	1105	967	860	774	703	645	595				
	19-AP-2	5.3		D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695				
2" x 3/16"	19-SR-4	4.8		U	2526	1617	1123	825	632	499	404	334	281	239	206			
	19-SR-2	5.0		D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882			
	19-AP-4	5.3	1.263	C	2526	2021	1684	1444	1263	1123	1011	919	842	777	722			
	19-AP-2	5.9		D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706			
2-1/4" x 3/16"	19-SR-4	5.4		U	3197	2046	1421	1044	799	632	512	423	355	303	261	200		
	19-SR-2	5.6		D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024		
	19-AP-4	5.8	1.599	C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	799		
	19-AP-2	6.5		D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819		
2-1/2" x 3/16"	19-SR-4	5.9		U	3947	2526	1754	1289	987	780	632	522	439	374	322	247	195	
	19-SR-2	6.1		D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166	
	19-AP-4	6.4	1.974	C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	987	877	
	19-AP-2	7.1		D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737	0.933	

U = safe uniform load, psf

C = safe concentrated load, psf

D = deflection, inches

E = modulus of elasticity, 10,000,000 psi

F = fiber stress, 12,000 psi

Material: ASTM B-221, 6063 or 6061

Deflection: Spans and loads to the right of the bold line exceed 1/4" deflection for uniform load of 100 psf which provides safe pedestrian comfort. These can be exceeded for other types of loads with engineer's approval.

Serrated Bars: For serrated grating, the depth of grating required for a specified load is 1/4" deeper than that shown in the table.

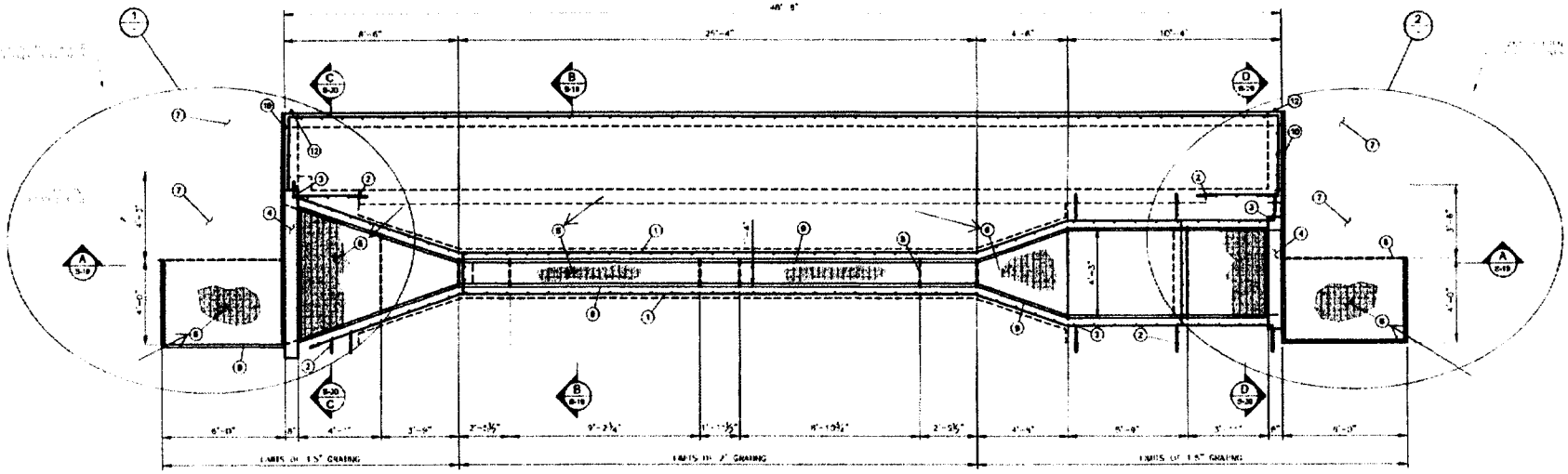
General: Loads and deflections are theoretical and based on static loading.

Finish: Mill finish unless otherwise specified.

SR/AP-19 PANEL WIDTH (inches)

Note: Includes 1/4" (1/8" each side) for extended cross rods on swage-locked (SR) and extended cross bars on press-locked (AP).

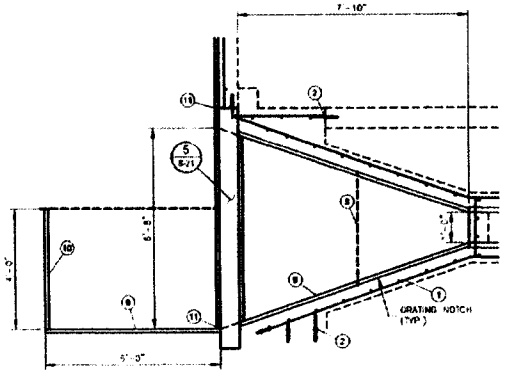
No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/8" Bar	$1\frac{5}{16}$	$2\frac{1}{2}$	$3\frac{11}{16}$	$4\frac{7}{8}$	$6\frac{1}{16}$	$7\frac{1}{4}$	$8\frac{7}{16}$	$9\frac{5}{8}$	$10\frac{13}{16}$	12	$13\frac{3}{16}$	$14\frac{3}{8}$	$15\frac{9}{16}$	$16\frac{3}{4}$	$17\frac{15}{16}$
3/16" Bar	$1\frac{3}{8}$	$2\frac{9}{16}$	$3\frac{3}{4}$	$4\frac{15}{16}$	$6\frac{1}{8}$	$7\frac{5}{16}$	$8\frac{1}{2}$	$9\frac{11}{16}$	$10\frac{7}{8}$	$12\frac{1}{16}$	$13\frac{1}{4}$	$14\frac{7}{16}$	$15\frac{5}{8}$	$16\frac{13}{16}$	18
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/8" Bar	$19\frac{1}{8}$	$20\frac{5}{16}$	$21\frac{1}{2}$	$22\frac{11}{16}$	$23\frac{7}{8}$	$25\frac{1}{16}$	$26\frac{1}{4}$	$27\frac{7}{16}$	$28\frac{5}{8}$	$29\frac{13}{16}$	31	$32\frac{3}{16}$	$33\frac{3}{8}$	$34\frac{9}{16}$	$35\frac{3}{4}$
3/16" Bar	$19\frac{3}{16}$	$20\frac{3}{8}$	$21\frac{9}{16}$	$22\frac{3}{4}$	$23\frac{15}{16}$	$25\frac{1}{8}$	$26\frac{5}{16}$	$27\frac{1}{2}$	$28\frac{11}{16}$	$29\frac{7}{8}$	$31\frac{1}{16}$	$32\frac{1}{4}$	$33\frac{7}{16}$	$34\frac{5}{8}$	$35\frac{13}{16}$



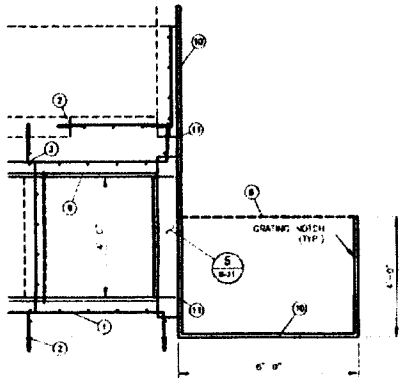
UV DISINFECTION STRUCTURAL PLAN

UV STRUCTURAL NOTES:

1. #5 REBAR 12" O.C. EACH WAY, CENTERED IN WALL/SLAB.
2. #5 REBAR DOWEL 12" O.C. DRILL AND EPOXY (MIN. 4" EMBEDMENT) AT ALL CONNECTIONS BETWEEN EXISTING AND NEW CONCRETE WALLS/SLABS (TYP).
3. #5 REBAR 12" O.C. WITH STANDARD HOOK. SEE DETAIL 3 SHEET S-21.
4. DEMOLISH AND REMOVE EXISTING GRATING AND GRATING SUPPORT. SEE DETAIL 7 SHEET S-21.
5. FURNISH AND INSTALL 2" DEEP GRATING PER SPECIFICATIONS.
6. FURNISH AND INSTALL 1½" DEEP GRATING.
7. MODIFY OR REPLACE EXISTING GRATING TO FIT STRUCTURE MODIFICATIONS.
8. [illegible]
9. PROVIDE GRATING SUPPORT NOTCH IN NEW WALLS/SLAB ADJACENT TO NEW GRATING. SEE DETAIL 4 SHEET S-21.
10. FURNISH AND INSTALL GRATING SUPPORT ANGLE ON EXISTING WALLS/SLAB ADJACENT TO NEW AND EXISTING MODIFIED GRATING SEE DETAIL 6 SHEET S-21.
11. FURNISH AND INSTALL WATER STOP AT ALL JOINTS CONNECTING EXISTING WALLS/SLAB TO NEW WALLS/SLAB. SEE DETAIL 2 S-XX TO S-21.
12. MODIFY EXISTING GUARDRAIL AS NECESSARY TO CONNECT TO EXISTING STRUCTURE. PROVIDE FITTINGS AS REQUIRED. SEE DETAIL 1 SHEET S-21.
13. UV PANELS AND MISCELLANEOUS SYSTEM CONTROL MODULES NOT SHOWN FOR CLARITY.



1 **UV DISINFECTION STRUCTURAL DETAIL**
SCALE: 1/4" = 1'-0"



2 **UV DISINFECTION STRUCTURAL DETAIL**
NOT TO SCALE

NO	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 2017.25 | DESIGNED EHC | DRAWN LMW | CHECKED DMA | APPROVED CSH | DATE 1/8/2018

TETRA TECH
www.tetratech.com
1673 Sherman Street, Suite 100, Denver, Colorado 80203
Ph 303.425.8800 Fax 303.425.8842

GreatWest engineering
111 E. Broadway, Suite 301, Bozeman, MT 59715
(406)582-0400

CITY OF LAUREL, MONTANA

WWTP BNR UPGRADE PROJECT

UV DISINFECTION CHANNEL IMPROVEMENTS
STRUCTURAL PLAN AND DETAILS

SHEET NO.
S-18
57 OF 153

LAUREL WWTP
Field Directive 1

BWC
Date: 5-9-14

Materials

3" Pit Run Gravel	$6.25	YD	18	$112.50
6" sch 80 PVC	$18.04	ft	16	$288.64
4000 psi Concrete	$86.00	YD	0.25	$21.50

Labor

Carpenter	$43.32	hr	9	$389.88
Operator	$41.47	hr	4	$165.88
Superintendant	$45.00	hr	2	$90.00

Equipment

Komatsu 50	$22.83	hr	1	$22.83
Komatsu 380	$54.26	hr	1	$54.26
Wacker Plate	$15.00	hr	1	$15.00

Sub- Contractors

Subtotal	$1,160.49
Markup	$197.28
TOTAL	**$1,357.77**

Work Change Directive

No. 1

Date of Issuance: 3/19/14 Effective Date: 3/19/14

Project: WWTP BOW UPGRADE	Owner: City of Laurel	Owner's Contract No.:
Contract:		Date of Contract:
Contractor: Williams Bros Construction		Engineer's Project No.: 207128

Contractor is directed to proceed promptly with the following change(s):

Item No.	Description
1	Change Sour Landing at Man Door for W Building. Eliminate steps and grade SIDEWALK Below Replaced Due to damage to FF B/EV Extra work consists of placing and compacting additional Fill and Reforming one side of S.W and Install Drain Stem Fill to be Paid with T&M including Reforming one side. No additional payment will be made for concrete or any work considered to be part of the original Contract

Attachments (list documents supporting change):

Purpose for Work Change Directive:

Authorization for Work described herein to proceed on the basis of Cost of the Work due to:

- ☐ Nonagreement on pricing of proposed change.
- ☒ Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

Estimated change in Contract Price and Contract Times:

Contract Price $ _____ (increase/decrease) Contract Time _____ days (increase/decrease)

Recommended for Approval by Engineer:	Date 3/19/14
Authorized for Owner by:	Date
Received for Contractor by:	Date
Received by Funding Agency (if applicable):	Date:

LAUREL WWTP
SL Line Time & Material

BWC
Date: 5-9-14

Materials

3" Pit Run Gravel	$6.25	YD	24	$150.00
1" Bedding Gravel	$7.45	YD	8	$59.60
6" sch80 PVC	$18.04	FT	6	$108.24
6" mj solid sleeves	$62.02	EA	2	$124.04
6" mega-lug	$38.35	EA	6	$230.10
6" mj 45	$55.47	EA	1	$55.47

Labor

Superitendant	$45.00	HR	5	$225.00
Carpenter	$43.32	HR	16	$693.12
Laborer	$34.46	HR	8	$275.68
Operator	$41.47	HR	6	$248.82

Equipment

Komatsu 300 Excavator	$116.08	HR	5	$580.40
Komatsu 50 Excavator	$22.83	HR	5	$114.15
Komatsu 380 Loader	$54.26	HR	5	$271.30

Sub- Contractors

Subtotal	$3,135.92
Markup	$533.11
TOTAL	**$3,669.03**

Williams Bro Construction / Time & Material Sheet

Date	Work Description	Craft	Hours	Equipment	Hours	Materials
4/2/2014	6" SL Tie into existing 6" SL from	Superintendent	5	Komatus 300 Exec	5	3" Pit Run (24cy)
	pot holed 9-12-13 went off drawing C-12.	Carpenter	16	Komatus PC 50	5	1" Bedding (8 cy)
	The lines in the pot hole are actually	Operator	8	Komatus 380 Loader	5	6" Sch 80 Pvc (6')
	switched the S Line is the SL Line they	Laborer	6			6" Solid Sleeve Dressers (2 Each)
	crossed lines when installed in the 80's.					6" Mega Lugs (6 Each)
						45 Fitting (1 Each)
	City of Laurel noticed the tie in and told us					
	we are in the wrong line around 12:45pm.					
	We repaired line with 2 each 6" Solid Sleeve					
	Dressers and 6' of Sch 80 Pvc.					
	We will have to excavate line back to 45					
	roll 45 excavation will have to be deeper.					
	We were within a foot of final grade					
	will have to backfill and bed pipe again for					
	about 25'. Tie in will have to be hand					
	excavated now.					
	We had to 45 off of existing line and which should have tied straight in to the existing line this took extra time and materials both days.					
	The above work was done on 4/2/14 and 4/3/14. (The original tie in was at 4'-8' when it ended up being 6'-10.)					
	During pot-holing per contract on 9-12-13 this line was identified as an 6" SL line.					

Notes:

This Time and Material for this extra work due to line not being in the right location

Chad Hanson

From: Barry Curtis [barrywbcbillings@gmail.com]
Sent: Thursday, May 01, 2014 4:42 PM
To: Chad Hanson; Neil Dezort
Cc: 'Clay Pipinich'; 'Tawnya'
Subject: Laurel WWTP
Attachments: CCF05012014_0002.pdf

The cost for RFI 15 and 16 will be $615 and $765 respectfully. This includes our mark-up.

CEI ELECTRICAL CONTRACTORS

6131 Homestead Blvd
PO Box 1934
Colstrip, MT 59323
TEL: (406) 748-4048
FAX: (406) 748-3135
cei@cei-online.com
www.cei-online.com

2675 Overland Ave.
Billings, MT 59102
TEL: (406) 656-4365
FAX: (406) 656-4534

2401 S. Greely Hwy
Cheyenne, WY 82003
TEL: (307) 426-4258
FAX: (307) 426-4259

4105 S. Broadway
Minot, ND 58701
TEL: (701) 500-1007
FAX: (406) 748-3135

May 1, 2014

Williams Bros Construction

RE: Laurel WWTP – CEI COR 8: Add Circuit to Existing Effluent Flow Meter per RFI 15

Attn: Barry Curtis

CEI would like to submit the following pricing change:

Quote:

	Labor Hrs	Labor $	Material	Equipment	Subtotal	MU	Totals
New Work	6	$420	$50	$47	$517	$52	$569
						Total	$569

Notes:

1) Price is valid for 30 days.
2) Proposal is based off straight time rates.
3) Proposal may impact project duration.

If you have any further questions please call me at 406-656-4365.

Respectfully,

Wade Smith
PM/Estimator

MEMORANDUM

Date: April 25, 2014

To: Barry Curtis – Williams Brother's Construction, LLC

From: Neil DeZort, EI

Subject: Request For Information #15

Question: Drawing E-23 note 1 addresses the existing effluent flow meter located in the UV building as being loop powered. The one that is currently installed appears to be 120 V powered with a loop. Please clarify if this is the correct meter and/or if there may be a need for a power circuit to be added.

This is the correct meter. Upon further investigation, it appears that this meter does require a 120V power source. Sheet E-23 shows a spare 1-inch conduit running from the existing effluent ultrasonic flowmeter to the SCADA panel SCP-SOLIDS (see tag "X"). The power shall be run in this spare conduit using two (2) - #14 AWG conductors and one (1) #14 – AWG ground. Clint Camper indicated he would install an additional fuse block in panel SCP-SOLIDS to feed the circuit.

ATTACHMENTS:

- RFI#15

REQUEST FOR INFORMATION

PROJECT: LAUREL WWTP BNR UPGRADE

RFI NO.: 015

GREAT WEST ENGINEERING

WBC PROJECT NO.: 1387

DATE: 4-23-14

REQUEST : Electrician is requesting a question on the existing effluent flow meter in the UV building.

_____ _____ Owner B Curtis Contractor

Great West Engineering
Signature

REPLY:

DATE:

ELECTRICAL
CONTRACTORS

Request For Information

8260 — Laurel WWTP

RFI Subject : UV Building Existing Ultrasonic Flow Power Circuit

To

Barry Curtis
Williams Brothers Construction, LLC.
1031 Cerise Road
Billings, MT 59101
406-259-9365
barrywbcbillings@gmail.com

RFI Number : 6
RFI Revision Number : 0
RFI Date 4/23/2014
Type Original RFI

Return To

Wade Smith
CEI
647 South 18th Street West
Billings, Montana 59102-7450
(406) 656-4365
(406) 656-4534 (FAX)
wsmith@cei-online.com

Clarification Requested

Drawing E-23 note 1 addresses the existing effluent flow meter located in the UV building as being loop powered. The one that is currently installed appears to be 120v powered with a loop. Please clarify if this is the correct meter and/or if there may be a need for a power circuit to be added

Schedule / Cost Impact

To mitigate schedule delay, return by **4/28/2014**
This problem is possibly impacting our progress
This problem is possibly impacting our costs (other than schedule costs)

Please provide a written directive on how to proceed. Descriptions of materials and methods should be accompanied by drawings, sketches and specifications if not covered by applicable contract documents. Please re-review relevant submittals referenced above

Signed By: Wade Keith Smith

Dated: 4/23/2014

Wade Keith Smith
Project Manager
Answer To Clarification

CEI ELECTRICAL CONTRACTORS

6131 Homestead Blvd
PO Box 1934
Colstrip, MT 59323
TEL: (406) 748-4048
FAX: (406) 748-3135
cei@cei-online.com
www.cei-online.com

2675 Overland Ave.
Billings, MT 59102
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FAX: (307) 426-4259

4105 S. Broadway
Minot, ND 58701
TEL: (701) 500-1007
FAX: (406) 748-3135

May 1, 2014

Williams Bros Construction

RE: Laurel WWTP – CEI COR 9: Provide and Gauge Isolators per RFI #16

Attn: Barry Curtis

CEI would like to submit the following pricing change:

Quote:

	Labor Hrs	Labor $	Material	Equipment	Subtotal	MU	Totals
New Work	6	$420	$165	$59	$644	$64	$708
						Total	$708

Notes:

1) Price is valid for 30 days.
2) Proposal is based off straight time rates.
3) Proposal may impact project duration.

If you have any further questions please call me at 406-656-4365.

Respectfully,

Wade Smith
PM/Estimator

MEMORANDUM

Date: April 28, 2014

To: Barry Curtis – Williams Brother's Construction, LLC

From: Neil DeZort, EI

Subject: Request For Information #16

Question: We sent pressure switches PSH 5101C and 5102C to be installed with the hypochlorite equipment. The vendor states that 316 SS diaphragm seals cannot be used with sodium hypochlorite. These are the ones approved per the spec and submittals. Please advise.

For the sodium hypochlorite switches, provide Chemline gauge isolators. Please see attached.

ATTACHMENTS:

- Chemline gauge isolator cut sheet
- RFI#16

Gauge Isolators

CHEMLINE Plastics Limited

Your Pipeline To Quality

Chemline SG Series Gauge Isolators allow inexpensive pressure gauges, or any other pressure instrument to be used in corrosive services. The upper chamber (gauge side) is filled with a stable fluid such as glycol or glycerine‡. A diaphragm separates it from the lower chamber which receives the media under pressure.

The 1/2" gauge connection allows use of the popular 4" and 4-1/2" diameter gauges. Pressure switches or transmitters may also be installed. Customers can easily fill isolators and install their own gauges.

PVC, PP, PVDF

SERIES: SG

INLET CONNECTION: 1/4" or 1/2" Threaded†

INSTRUMENT CONNECTION: 1/4" or 1/2" Threaded

DIAPHRAGM: Teflon®

Isolate Pressure Instruments from Corrosive Media

Teflon• Diaphragm

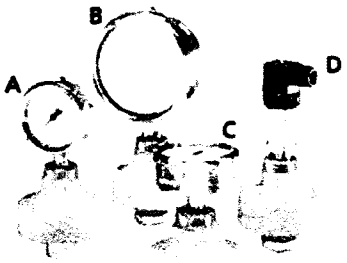
Features

Easy to Mount Gauges
- It is easy to fill an isolator and field mount a gauge. No special equipment is required.
- Will accept popular 4" and 4-1/2" diameter gauges

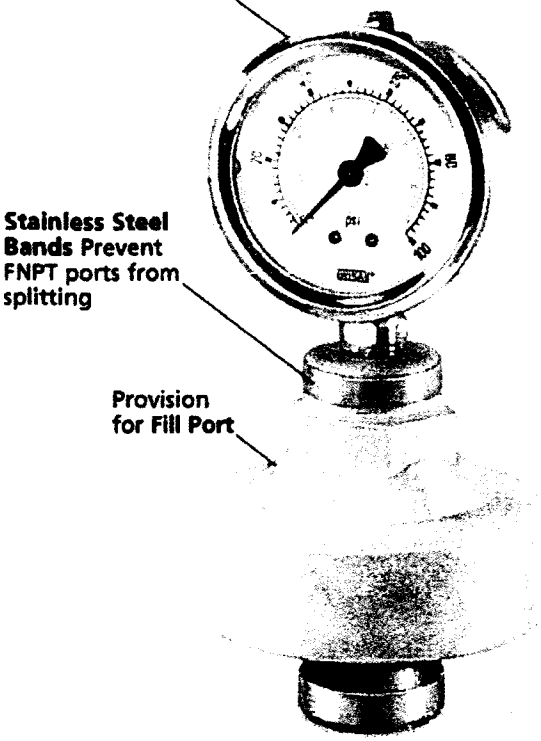
Provision for Fill Port
- Housing may be drilled and tapped by Chemline or customer for a threaded fill port. This is used for filling isolator using a vacuum filling station

High Chemical Resistance
- Choice of body materials for a wide range of applications
- Teflon® PTFE bonded EPDM dished diaphragm for high chemical resistance and sensitivity

Heavy Duty Design for Safety
- PPG* top chamber
- Heavy wall connection ports



Optional Gauge Isolators are available alone or with gauge mounted and prefilled with glycol‡



A With 2" gauge
B With 4-1/2" gauge
C With 2" back mount gauge
D With pressure transmitter

† Other available inlet connections are 1/2" socket or 1/2" to 1" flanged.
‡ Other fluids are available for special applications such as chlorine service.
* Glass reinforced polypropylene.

REQUEST FOR INFORMATION

PROJECT: LAUREL WWTP BNR UPGRADE

RFI NO.: 016

GREAT WEST ENGINEERING

WBC PROJECT NO.: 1387

DATE: 4-23-14

REQUEST : Electrician is requesting direction on seals for the high pressure switches on the sodium hypochlorite system.

_____ _____ Owner B Curtis Contractor

Great West Engineering
Signature

REPLY:

DATE:

ELECTRICAL
CONTRACTORS

Request For Information

8260 — Laurel WWTP RFI Subject : Pressure Switch PSH 5101C and PSH 5102C Diaphram Seals

To
Barry Curtis
Williams Brothers Construction, LLC.
1031 Cerise Road
Billings, MT 59101
406-259-9365
barrywbcbillings@gmail.com

RFI Number : 7
RFI Revision Number : 0
RFI Date : 4/23/2014
Type : Original RFI

Return To
Wade Smith
CEI
647 South 18th Street West
Billings, Montana 59102-7450
(406) 656-4365
(406) 656-4534 (FAX)
wsmith@cei-online.com

Clarification Requested

We sent pressure switches PSH 5101C and 5102C to be installed with the hypochlorite equipment. The vendor states that 316 SS diaphragm seals cannot be used with sodium hypochlorite. These are the ones approved per the spec and submittals. Please advise.

Schedule / Cost Impact

To mitigate schedule delay, return by **4/28/2014**
This problem is possibly impacting our progress
This problem is possibly impacting our costs (other than schedule costs)

Please provide a written directive on how to proceed. Descriptions of materials and methods should be accompanied by drawings, sketches and specifications if not covered by applicable contract documents. Please re-review relevant submittals referenced above.

Signed By: Wade Keith Smith **Dated:** 4/23/2014

Wade Keith Smith
Project Manager
Answer To Clarification

WILLIAMS BROTHER CONST., LLC
1123 CERISE ROAD, BILLINGS, MT 59101
P.O. BOX #1459, BILLINGS, MT 59103
PHONE: 406-259-9395 FAX: 406-248-6695

May 22, 2014

Great West Engineering
115 North Broadway
Suite 500
Billings, MT 59101

Re: Laurel BNR Upgrade weather delay

Chad,
Due to the all-time record snow fall and cold weather we are request a time extension to the contract for lost time. The attached daily reports are for lost days for certain portions of the critical path tasks as well as tasks that were delayed but had no impact as to the finish date.

These Days were incorporated into the contract schedule, incorporating delays to each tasked that was delayed. The schedule was allowed to expand for each structure that was affected and the resulting finish date is now December 22, 2014.

We are requesting that this time be incorporated into pending change order 2.

Thank you. Call or e-mail me if you have any questions or comments.

Sincerely,

Barry Curtis- Project Mgr.

WILLIAMS BRO CONSTRUCTORS

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 10/3/2013

Day: Thursday

Weather Conditions [ ] Bright Sun [ ] Clear..... [X] Overcast. [X] Rain..... [ ] Snow — Rained about 2"

Temperature ..... [ ] to 31..... [ ] 32-49..... [X] 50-69..... [ ] 70-84 ..... [ ] 85 - Up

Wind Conditions..... [ ] Still ..... [X] Moderate.. [ ] High **Humidity**..... [ ] Dry.... [ ] Moderate.. [X] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours	Work Item		Name / Craft	Hours	Work Item
1	Scott McDonald	3	Uv Form Oil Slab	9			
2	Ed Sable	2	Uv Form Oil Slab	10			
3	Jake Prevel	3	Uv Form Oil Slab	11			
4	Nick Bowen	3	Uv Form Oil Slab	12			
5				13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	1	Unloaded Rebar	7			
2				8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Corr
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Formed up Oil Pit salb rained out left early around 9:00am

Harris Rebar... Dan unloaded a semi load of rebar with our grad-al

River Ranch... No Work Onsite

GreatWest... Not onsite today

Colstrip Electric... Not onsite today

DAILY FIELD REPORT

Prepared By: Clay Pipinich
Job No. / Name: 1387/Laurel WWTP
Page: 1 of 2
Date: 11/21/2013
Day: Thursday

Weather Conditions [ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [ ] Snow — 5 below morning
Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up — 13 for a high
Wind Conditions..... [ ] Still ..... [X] Moderate.. [ ] High **Humidity**..... [ ] Dry.... [X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705
VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	6	Equip Maintained	9			
2	Ed Sable	10	Miles City	10			
3	Jake Prevel	0	Exec Gen Pad/Form	11			
4	Nick Bowen	6	Equip Maintained	12			
5	Colter Day	0	Exec Gen Pad/Form	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0	Weather Cold	7			
2	CEI	0	Weather Cold	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... hauled mini truck and mule to the yard will not run, loaded blankets up from yard and unloaded Uv Equipment today also

Harris Rebar... No Work

Colstrip Electric... No Work

GreatWest... Onsite today on nothing going on

WILLIAMS BRO. CONSTRUCTION, LLC

Prepared By: Clay Pipinich — **DAILY FIELD REPORT** — Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP — Date: 11/22/2013 — Day: Friday

Weather Conditions — Bright Sun [ ] | Clear..... [ ] | Overcast. [X] | Rain..... [ ] | Snow [ ]

Temperature ..... to 31..... [X] | 32-49..... [ ] | 50-69..... [ ] | 70-84 ..... [ ] | 85 - Up [ ] — 5 below morning

Wind Conditions..... Still ..... [ ] | Moderate.. [X] | High [ ] | **Humidity**..... Dry.... [ ] | Moderate.. [X] | Humid [ ] — 13 for a high

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

WBC CREW

	Name / Craft	Hours	Work Item
1	Scott McDonald	6	Equip Maintained
2	Ed Sable	0	Miles City
3	Jake Prevel	0	Exec Gen Pad/Form
4	Nick Bowen	6	Equip Maintained
5	Colter Day	0	Exec Gen Pad/Form
6			
7			
8			
9			
10			
11			
12			
13			
15			
16			

SUBCONTRACTORS

	Name	# of Imp	Work
1	Harris Rebar	0	Weather Cold
2	CEI	0	Weather Cold
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

EQUIPMENT

	Type	Model	Status
1	PC 50 Komatus Mini		
	380 Komatus Loader		
3	New Holland Skid steer		
4	Cat Blade		
5	Ford Water Truck		
6	2000 Chevy 3/4 Ton		
7	Kawasaki Mules		2 each
8	Miller Welder		
9	Rs8 Gehl Grad-al		
10			

MATERIALS RECEIVED / INSPECTED (use back for additional information)

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

SUMMARY

	Work Item	Progress	Station / % Corr
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

DAILY FIELD REPORT - CONTINUED **1387 - Laurel WWTP** **DATE 11-22-13 / Friday 2 of 2**

Wbc... Equipment main, loaded blankets up from yard

Harris Rebar... No Work

Colstrip Electric... No Work

GreatWest...

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 12/2/2013

Day: Monday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[X] Rain.....	[ ] Snow	Rained all day			
Temperature	[ ] to 31.....	[X] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up				
Wind Conditions.....	[ ] Still	[X] Moderate..	[ ] High	**Humidity**.....	[ ] Dry....	[ ] Moderate..	[X] Humid		

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Thickener Heat & Cover	9			
2	Ed Sable	6 1/2	Thickener Heat & Cover	10			
3	Jake Prevel	9	Uv Metal Building	11			
4	Nick Bowen	5 1/2	Uv Metal Building	12			
5	Colter Day	9	Uv Metal Building	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Rained all day job site is really muddy, now it going to freeze tomorrow ho JOY!

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Building heat and cover tent over Thickener Slab because Ironworker did not finish rebar last week now we are delayed and will have t
until weather changes, working on Uv Building trims for walls panels, lifted rebar mat with crane and replaced Dobie's

Columbia Basin Rebar... No work onsite

Colstrip Electric... No work onsite

GreatWest... Onsite off and on site today

WILDCAT PIPE CONSTRUCTION LLC

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Job No. / Name: 1387/Laurel WWTP

Date: 12/3/2013

Day: Tuesday

Weather Conditions	[ ]	Bright Sun	[ ]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[X]	Snow
Temperature	[X]	to 31.....	[ ]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up
Wind Conditions.....	[ ]	Still	[X]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....

Cold

[ ] Moderate.. [X] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	8	Thk Brick Ledge	9			
2	Ed Sable	0	No Work / Weather	10			
3	Jake Prevel	8	Thk Brick Ledge	11			
4	Nick Bowen	0	No Work / Weather	12			
5	Colter Day	8	Thk Brick Ledge	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Building brick ledge for the Thickener walls in shop

Columbia Basin Rebar... No work onsite

Colstrip Electric... No work onsite

GreatWest... No work onsite

DAILY FIELD REPORT

Prepared By: Clay Pipinich
Job No. / Name: 1387/Laurel WWTP
Page: 1 of 2
Date: 12/4/2013
Day: Wednesday

Weather Conditions [ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [X] Snow — Cold
Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up — Snowed 10" / 5 below
Wind Conditions..... [ ] Still ..... [X] Moderate.. [ ] High **Humidity**..... [ ] Dry.... [ ] Moderate.. [X] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705
VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	8	Misc shop	9			
2	Ed Sable	8	Misc shop	10			
3	Jake Prevel	8	Misc shop	11			
4	Nick Bowen	0	No Work / Weather	12			
5	Colter Day	8	Misc shop	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Misc Shop to cold at the job

Columbia Basin Rebar... No work onsite

Colstrip Electric... No work onsite

GreatWest... No work onsite

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 12/5/2013

Day: Thursday

Weather Conditions		Bright Sun		Clear.....	X	Overcast.		Rain.....		Snow
Temperature	X	to 31.....		32-49.....		50-69.....		70-84		85 - Up
Wind Conditions.....		Still	X	Moderate..		High	**Humidity**.....			Dry....

Cold: 8 below

	Moderate..	X	Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	8	Misc shop	9			
2	Ed Sable	8	Misc shop	10			
3	Jake Prevel	8	Misc shop	11			
4	Nick Bowen	0	No Work / Weather	12			
5	Colter Day	8	Misc shop	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Misc Shop to cold at the job, drop ceiling in office

Columbia Basin Rebar... No work onsite

Colstrip Electric... No work onsite

GreatWest... No work onsite

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 12/9/2013

Day: Monday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold			
Temperature	[X] to 31.....	[ ] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	25 below with the wind			
Wind Conditions.....	[ ] Still	[ ] Moderate..	[X] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid		

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	3	Heat and Cover Thickener	9			
2	Ed Sable	9	Misc shop	10			
3	Jake Prevel	2 1/2	Heat and Cover Thickener	11			
4	Nick Bowen	2 1/2	Heat and Cover Thickener	12			
5	Colter Day	2 1/2	Heat and Cover Thickener	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Left at 12:00 noon to cold with the wind

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

WILLIAMS BRO. CONSTRUCTION, LLC

Prepared By: Clay Pipinich — **DAILY FIELD REPORT** — Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP — Date: 12/6/2013 — Day: Friday

Weather Conditions: [ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [ ] Snow
Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up — Cold
Wind Conditions..... [ ] Still ..... [X] Moderate.. [ ] High — **Humidity.....** [ ] Dry.... [ ] Moderate.. [X] Humid — 8 below

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

WBC CREW

	Name / Craft	Hours	Work Item
1	Scott McDonald	8	Misc shop
2	Ed Sable	8	Misc shop
3	Jake Prevel	8	Misc shop
4	Nick Bowen	0	No Work / Weather
5	Colter Day	8	Misc shop
6			
7			
8			
9			
10			
11			
12			
13			
15			
16			

SUBCONTRACTORS

	Name	# of Imp	Work
1	Harris Rebar	0	
2	CEI	0	
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

EQUIPMENT

	Type	Model	Status
1	PC 50 Komatus Mini		
2	380 Komatus Loader		
3	New Holland Skid steer		
4	Cat Blade		
5	Ford Water Truck		
6	2000 Chevy 3/4 Ton		
7	Kawasaki Mules		2 each
8	Miller Welder		
9	Rs8 Gehl Grad-al		
10			

MATERIALS RECEIVED / INSPECTED (see back for additional information)

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformer / R = Reject

SUMMARY

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

DAILY FIELD REPORT - CONTINUED **1387 - Laurel WWTP** **DATE 12-6-13 / Friday 2 of 2**

Wbc... Misc Shop to cold at the job, drop ceiling in office

Columbia Basin Rebar... No work onsite

Colstrip Electric... No work onsite

GreatWest... No work onsite

Wbc... Covering up Thickener slab for heat and cover, to windy will have to wait until tomorrow and we will start heating slab

Columbia Basin Rebar... No work onsite

Colstrip Electric... No work onsite

GreatWest... No work onsite, working in the main office

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 1/6/2014

Day: Monday

Weather Conditions [ ] Bright Sun [X] Clear..... [X] Overcast. [ ] Rain..... [ ] Snow — Blown snow

Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up — 25 below with the wind

Wind Conditions..... [ ] Still ..... [ ] Moderate.. [X] High **Humidity**..... [ ] Dry.... [X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	8 1/2	Blower Bld Demo	9			
2	Ed Sable	0	No Work	10			
3	Jake Prevel	8 1/2	Blower Bld Demo	11			
4	Nick Bowen	8 1/2	Blower Bld Demo	12			
5	Colter Day	8 1/2	Blower Bld Demo	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Corr
1	See Attached		
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EVENTS:

Wind 20 mph up to 35 mph gusts - (20 to 28 below with the wind)

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... working on demo in the Blower Building of everything we can and went over items with the Plant Operators (to windy to work out side)
Columbia Basin Rebar... No work onsite
Colstrip Electric... No work onsite
GreatWest... onsite today office work, Eng asked if we talked to the COL about salvage of misc equipment. We did before Christmas break th pulled aside everything they wanted

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 1/7/2014

Day: Tuesday

Weather Conditions		Bright Sun	X	Clear.....	X	Overcast.		Rain.....		Snow	
Temperature		to 31.....	X	32-49.....		50-69.....		70-84		85 - Up	
Wind Conditions.....		Still	X	Moderate..		High	**Humidity**.....	Dry....	X	Moderate..	Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Blower Demo/UV Roof	9			
2	Ed Sable	0	No Work	10			
3	Jake Prevel	9	Blower Demo/UV Roof	11			
4	Nick Bowen	9	Blower Demo/UV Roof	12			
5	Colter Day	9	Blower Demo/UV Roof	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Corr
1	See Attached		
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7			
8			

EVENTS:

Went over with Rob/COL operator for demo Blower Building plan he had no problems, wanted to keep 4 valves and Air Pump

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... working on demo in the Blower Building we are far as we can go, working on UV Metal Building roof system
took ground heater off of Thickener Slab Ironworker said he would have a crew here tomorrow for wall steel

Columbia Basin Rebar... No work onsite

Colstrip Electric... onsite shut power off and disconnected Air pump to Sec Clarifiers, will not be onsite until next week

GreatWest... onsite today office work

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 1/10/2014

Day: Friday

Weather Conditions	[ ]	Bright Sun	[ ]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[ ]	Snow	
Temperature	[ ]	to 31.....	[X]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up	
Wind Conditions.....	[ ]	Still	[X]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....	[X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	4 1/2	Thickener Form Walls	9			
2	Ed Sable	4 1/2	Thickener Form Walls	10			
3	Jake Prevel	4 1/2	Thickener Form Walls	11			
4	Nick Bowen	4 1/2	Thickener Form Walls	12			
5	Colter Day	4 1/2	Thickener Form Walls	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	2	Rebar @ Thickener Walls	7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
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6			
7			
8			

EVENTS:

Can work on Uv Roof due to high wind warnings we have to be careful with roof insulation and panels

On 17th of Jan will one month Genie lift rental from T&E

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... went to yard and got forms for brick ledge and forming walls for Thickener walls

Columbia Basin Rebar... onsite tying rebar for Thickener walls, they will have to cut down all the vertical bars they tied them in to tall

Colstrip Electric... will not be onsite until next week

GreatWest... onsite today office work

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 1/13/2014

Day: Monday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Extremely high winds 45 to 60 mpl		
Temperature	[ ] to 31.....	[ ] 32-49.....	[X] 50-69.....	[ ] 70-84	[ ] 85 - Up			
Wind Conditions.....	[ ] Still	[ ] Moderate..	[X] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid	

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Thickener Form Walls	9			
2	Ed Sable	9	Thickener Form Walls	10			
3	Jake Prevel	9	Thickener Form Walls	11			
4	Nick Bowen	9	Thickener Form Walls	12			
5	Colter Day	9	Thickener Form Walls	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	1	Rebar @ Thickener Walls	7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
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8			

EVENTS:

Can not work on Uv Roof due to high wind warnings we have to be careful with roof insulation and panels

Wind gusts up to 60 mph I hope the building is standing in the morning

On 17th of Jan will one month Genie lift rental from T&E

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... forming walls for Thickener, could not work on the roof because of the wind

Columbia Basin Rebar... onsite tying rebar for Thickener walls, cut wall bars down left about 2:00pm

Colstrip Electric... will not be onsite, I called CEI and asked about block outs they said they would send something over today

GreatWest... onsite today office work, complaining about rebar, brick ledge etc...

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 1/14/2014

Day: Tuesday

Weather Conditions	☐ Bright Sun	☐ Clear.....	☒ Overcast.	☐ Rain.....	☐ Snow	Snowed last night about 2"		
Temperature	☐ to 31.....	☒ 32-49.....	☐ 50-69.....	☐ 70-84	☐ 85 - Up	Stopped snowing around 11:00am		
Wind Conditions.....	☐ Still	☒ Moderate..	☐ High	**Humidity**.....	☐ Dry....	☒ Moderate..	☐ Humid	

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours	Work Item		Name / Craft	Hours	Work Item
1	Scott McDonald	9	Thickener Form Walls	9			
2	Ed Sable	0	Dentist Appointment	10			
3	Jake Prevel	9	Thickener Form Walls	11			
4	Nick Bowen	9	Thickener Form Walls	12			
5	Colter Day	9	Thickener Form Walls	13			
6				14			
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
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EVENTS:

Can not work on Uv Roof due to high wind warnings we have to be careful with roof insulation and panels

Wind picked up around 11:30am gusts up to 30 mph

32 degrees with the wind

On 17th of Jan will one month Genie lift rental from T&E

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... forming walls for Thickener, could not work on the roof because of the wind and snowed last night about 2 to 3 inches
we are trimming out opening for pipe penetrations and block outs, working on Thickener concrete to windy for UV roofing
unloade alum handrail from MTS and called them to come and pick up trailer
Columbia Basin Rebar... they are still not done they need to clean up and finish tying upper rebar on Thickener walls
Colstrip Electric... will not be onsite, I called CEI and asked about block outs they said they would send something over today
Boride texted us a drawing
GreatWest... onsite today office work, complaining about rebar, brick ledge was fine

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 1/15/2014

Day: Wednesday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	High Gusty Winds		
Temperature	[ ] to 31.....	[X] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up			
Wind Conditions.....	[ ] Still	[ ] Moderate..	[X] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid	

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Thickener Form Walls	9			
2	Ed Sable	9	Thickener Form Walls	10			
3	Jake Prevel	9	Thickener Form Walls	11			
4	Nick Bowen	9	Thickener Form Walls	12			
5	Colter Day	9	Thickener Form Walls	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
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4			
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6			
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EVENTS:

Can not work on Uv Roof due to high wind warnings we have to be careful with roof insulation and panels
Wind picked up around 11:30am gusts up to 50 mph
40 degrees with the wind

On 17th of Jan will one month Genie lift rental from T&E

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... forming walls for Thickener, could not work on the roof because of the wind

we are trimming out opening for pipe penetrations and block outs, working on Thickener concrete to windy for UV roofing

Tried to work on Uv roof way to windy

Columbia Basin Rebar... they are still not done they need to clean up and finish tying upper rebar on Thickener walls

Colstrip Electric... Not onsite today

GreatWest... onsite today office work, he went to Bridger Pre-Con today

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Job No. / Name: 1387/Laurel WWTP

Date: 1/16/2014

Day: Thursday

Weather Conditions		Bright Sun	X	Clear.....	X	Overcast.		Rain.....		Snow	
Temperature		to 31.....		32-49.....	X	50-69.....		70-84		85 - Up	
Wind Conditions.....		Still	X	Moderate..		High	**Humidity**.....			Dry.... X Moderate..	Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours	Work Item		Name / Craft	Hours	Work Item
1	Scott McDonald	9	Thickener Form Walls	9			
2	Ed Sable	9	Thickener Form Walls	10			
3	Jake Prevel	9	Fusion Traning	11			
4	Nick Bowen	9	Thickener Form Walls	12			
5	Colter Day	9	Fusion Traning	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
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8			

EVENTS:

Can not work on Uv Roof due to high wind warnings we have to be careful with roof insulation and panels

On 17th of Jan will one month Genie lift rental from T&E

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... forming walls for Thickener, could not work on the roof because of the wind

we are trimming out opening for pipe penetrations and block outs, working on Thickener concrete to windy for UV roofing

Columbia Basin Rebar... they are still not done they need to clean up and finish tying upper rebar on Thickener walls

Colstrip Electric... Not onsite today

GreatWest... onsite today office work

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Job No. / Name: 1387/Laurel WWTP

Date: 1/17/2014

Day: Friday

Weather Conditions	[ ]	Bright Sun	[X]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[ ]	Snow	
Temperature	[ ]	to 31.....	[X]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up	
Wind Conditions.....	[ ]	Still	[X]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....	[X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	2	Thickener Form Walls	9			
2	Ed Sable	2	Thickener Form Walls	10			
3	Jake Prevel	0	No Work	11			
4	Nick Bowen	0	No Work	12			
5	Colter Day	0	No Work	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
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8			

EVENTS:

Can not work on Uv Roof due to high wind warnings we have to be careful with roof insulation and panels

On 17th of Jan will one month Genie lift rental from T&E

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... forming walls for Thickener building, could not work on the roof because of the wind

Columbia Basin Rebar... they are still not done they need to clean up and finish tying upper rebar on Thickener walls

Colstrip Electric... Not onsite today

GreatWest... onsite today office work

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/3/2014

Day: Monday

Weather Conditions	[ ]	Bright Sun	[ ]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[X]	Snow
Temperature	[X]	to 31.....	[ ]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up
Wind Conditions.....	[ ]	Still	[X]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....

Cold Morning

[X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	2	Dewater Wells	9			
2	Ed Sable	0	No Work	10			
3	Jake Prevel	3	Dewater Wells	11			
4	Nick Bowen	2	Dewater Wells	12			
5	Colter Day	2	Dewater Wells	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	2	Uv Electrical	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
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8			

EVENTS:

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Exc for dewatering well had to send everybody home no body would deliver gravel and is to cold will shut down for a week

No heat in our office trailer, CEI will have to replace a couple breakers

Columbia Basin Rebar... Not on site

Colstrip Electric... onsite working on Uv electrical for equipment etc...

GreatWest... Working in there down town office, no heat in office and weather shut down

DAILY FIELD REPORT

Prepared By: Clay Pipinich
Job No. / Name: 1387/Laurel WWTP
Page: 1 of 2
Date: 2/4/2014
Day: Tuesday

Weather Conditions [ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [X] Snow — Cold Morning
Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up — 22 below with wind
Wind Conditions..... [ ] Still ..... [X] Moderate.. [ ] High **Humidity**..... [ ] Dry.... [X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705
VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	0	Weather / No Work	9			
2	Ed Sable	4	Frp Pipe / Shop	10			
3	Jake Prevel	0	Weather / No Work	11			
4	Nick Bowen	0	Weather / No Work	12			
5	Colter Day	0	Weather / No Work	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	2	Uv Electrical	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
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4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
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7			
8			

EVENTS:

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Weather Day cold and blowing snow below zero, no gravel delivery

Columbia Basin Rebar... Not on site

Colstrip Electric... onsite working on Uv electrical for equipment etc...

GreatWest... Working in there down town office, no heat in office and weather shut down

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/5/2014

Day: Wedensday

Weather Conditions	[ ]	Bright Sun	[ ]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[X]	Snow
Temperature	[X]	to 31.....	[ ]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up
Wind Conditions.....	[ ]	Still	[X]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....

Cold Morning

30 below with wind

[X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	0	Weather / No Work	9			
2	Ed Sable	4	Frp Pipe / Shop	10			
3	Jake Prevel	0	Weather / No Work	11			
4	Nick Bowen	0	Weather / No Work	12			
5	Colter Day	0	Weather / No Work	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	2	Uv Electrical	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Weather Day cold and blowing snow below zero, no gravel delivery

Columbia Basin Rebar... Not on site

Colstrip Electric... onsite working on Uv electrical for equipment etc...

GreatWest... Working in there down town office, no heat in office and weather shut down

DAILY FIELD REPORT

Prepared By: Clay Pipinich
Job No. / Name: 1387/Laurel WWTP
Page: 1 of 2
Date: 2/6/2014
Day: Thursday

Weather Conditions: [ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [X] Snow — Cold Morning
Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up — 36 below
Wind Conditions..... [ ] Still ..... [X] Moderate.. [ ] High **Humidity.....** [ ] Dry.... [X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705
VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	0	Weather / No Work	9			
2	Ed Sable	8	Frp Pipe / Shop	10			
3	Jake Prevel	0	Weather / No Work	11			
4	Nick Bowen	0	Weather / No Work	12			
5	Colter Day	0	Weather / No Work	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	2	Uv Electrical	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Corr
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Weather Day cold and blowing snow below zero, no gravel delivery

I went to River rock wwtp fix pvc leak and installed actuator on valve Owen w/ Williams Plumbing helped about 1 hour

Columbia Basin Rebar... Not on site

Colstrip Electric... onsite working on Uv electrical for equipment etc...

GreatWest... Working in there down town office, no heat in office and weather shut down

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/7/2014

Day: Friday

Weather Conditions	[ ]	Bright Sun	[ ]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[X]	Snow
Temperature	[X]	to 31.....	[ ]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up
Wind Conditions.....	[ ]	Still	[X]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....

Cold Morning: 25 below

[X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	0	Weather / No Work	9			
2	Ed Sable	0	Weather / No Work	10			
3	Jake Prevel	0	Weather / No Work	11			
4	Nick Bowen	0	Weather / No Work	12			
5	Colter Day	0	Weather / No Work	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	2	Uv Electrical	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Shut down the Job to cold from 2-3 thru 2-7

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Weather Day cold and blowing snow below zero, no gravel delivery

Columbia Basin Rebar... Not on site

Colstrip Electric... onsite working on Uv electrical for equipment etc...

GreatWest... Working in there down town office, no heat in office and weather shut down

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/10/2014

Day: Monday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold				
Temperature	[X] to 31.....	[ ] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	12 below with the wind				
Wind Conditions.....	[ ] Still	[X] Moderate..	[ ] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid			

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Dewater Wells Bio	9			
2	Ed Sable	9	Uv Metal Building Trim	10			
3	Jake Prevel	9	Dewater Wells Bio	11			
4	Nick Bowen	9	Uv Metal Building Trim	12			
5	Colter Day	9	Dewater Wells Bio	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	1	Unloaded Manlift	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	2" Minus		Fisher	Fisher			Dewatering wells - Truck and p
2							3 loads (74.08 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

A lot of snow onsite from the week about 8" on the level, light snow morning

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... A lot of snow onsite, with the wind blowing was 12 below snowed this morning, working on digging wells in north of bio got one well in t

working on Oil Separator piping in pit, GreatWest don't cut existing weir south end of Uv

Columbia Basin Rebar... Dan on site he just checked in, we have nothing going on that requires rebar

Colstrip Electric... onsite unloaded manlift in Uv Building then left, they said they are waiting for so cord for temp power to Uv

GreatWest... Onsite today working in office

DAILY FIELD REPORT

Prepared By: Clay Pipinich
Job No. / Name: 1387/Laurel WWTP
Page: 1 of 2
Date: 2/11/2014
Day: Tuesday

Weather Conditions
Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up
Wind Conditions..... [ ] Still ..... [ ] Moderate.. [X] High **Humidity**..... [ ] Dry.... [X] Moderate.. [ ] Humid
[ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [ ] Snow
Cold
8 degrees above with the wind

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705
VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Dewater Wells Bio	9			
2	Ed Sable	9	Uv Metal Building Doors	10			
3	Jake Prevel	9	Dewater Wells Bio	11			
4	Nick Bowen	9	Uv Metal Building Doors	12			
5	Colter Day	9	Dewater Wells Bio	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0		8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	2" Minus		Fisher	Fisher			Dewatering wells - Truck and p
2							4 loads (111.46 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Wind blowing hard

Started snowing real hard around 2:00pm today

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... working on digging in wells north of bio placing pvc well casings and filling area with 2" minus
cleaning channels Uv Building and installing doors and frames
pumped out the first well sucked it dry to were the 2" pumps just slurps for water in about 2 hours
Columbia Basin Rebar... Not onsite
Colstrip Electric... Not onsite today, Wbc unloaded wire for temp power to Uv Building
GreatWest... Onsite today working in office, shooting grades to see if we have to cut weir at south end of UV

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/13/2014

Day: Thursday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold				
Temperature	[X] to 31.....	[ ] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	10 degrees above with the wind				
Wind Conditions.....	[ ] Still	[ ] Moderate..	[X] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid			

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours	Work Item		Name / Craft	Hours	Work Item
1	Scott McDonald	9	Dewater Wells Blo	9			
2	Ed Sable	9	Uv Metal Building Doors	10			
3	Jake Prevel	9	Dewater Wells Blo	11			
4	Nick Bowen	9	Uv Metal Building Doors	12			
5	Colter Day	9	Dewater Wells Blo	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	2	Uv for about 2 hours / left	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	2" Minus		Fisher	Fisher			Dewatering wells - Truck and p
2							3 loads (58.75 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Wind blowing hard, gusts up to 40 mph

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... working on digging in wells north of bio placing pvc well casings and filling area with 2" minus
still trimming out doors at Uv Building, cut weir south end of the channel 2 tenths per GreatWest, took doors off went to the shop and fixed holes, Kalmount will ship new closers today
Columbia Basin Rebar... Not onsite
Colstrip Electric... Cliff has been onsite all week misc items for COL, Onsite working at Uv Building electrical, went over misc items needed in
GreatWest... Onsite today working in office

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/17/2014

Day: Monday

Weather Conditions		Bright Sun		Clear.....	X	Overcast.		Rain.....		Snow	
Temperature	X	to 31.....		32-49.....		50-69.....		70-84		85 - Up	
Wind Conditions.....		Still		Moderate..	X	High	**Humidity**.....			Dry....	X Moderate..		Humid

OWNER / ENGINEER AT SITE: Chris Reed/GreatWest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	9	Thickener Backfill	9			
2	Ed Sable	9	Uv Metal Building Doors	10			
3	Jake Prevel	9	Thickener Backfill	11			
4	Nick Bowen	9	Thickener Backfill	12			
5	Colter Day	9	Thickener Backfill	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	1	Uv Temp Power	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	3" Minus Pit Run		Fisher	Fisher			Thickener Backfill - Truck and p
2							16 loads (454.59 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Wind blowing hard, gusts up to 40 mph

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... started backfilling with 3" minus import the onsite material we have is way to wet, finished up door hardware and Uv metal building trim using 300exc, 380loader and walk behind plate wackers

Columbia Basin Rebar... Not onsite

Colstrip Electric... Onsite working on temporary power to Uv Building, one man, not performing like I would like I hate when they wait until the last minute, no outlets for sampler or light, Boride said he wont be onsite until 12:00 noon

GreatWest... Onsite today working in office, doing compaction tests every thing passing

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Job No. / Name: 1387/Laurel WWTP

Date: 2/24/2014

Day: Monday

Weather Conditions [ ] Bright Sun [ ] Clear..... [X] Overcast. [ ] Rain..... [ ] Snow

Temperature ..... [X] to 31..... [ ] 32-49..... [ ] 50-69..... [ ] 70-84 ..... [ ] 85 - Up

Wind Conditions..... [ ] Still ..... [ ] Moderate.. [X] High **Humidity**..... [ ] Dry.... [X] Moderate.. [ ] Humid

Cold today

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	0	Weather / No Work	9			
2	Ed Sable	0	Weather / No Work	10			
3	Jake Prevel	2	Thickener Piping Outside	11			
4	Nick Bowen	0	Weather / No Work	12			
5	Colter Day	2	Thickener Piping Outside	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

A lot of snow 8 to 12 inches over the weekend

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Unloaded Clarifier grating, snow removal

Columbia Basin Rebar... Not onsite

Colstrip Electric... No show

GreatWest... Onsite today working in office

Start-Up;

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/25/2014

Day: Tuesday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold today			
Temperature	[X] to 31.....	[ ] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	10 degrees for a high			
Wind Conditions.....	[ ] Still	[ ] Moderate..	[X] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid		

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	10	6" Was To Blower Bld	9			
2	Ed Sable	0	Weather / No Work	10			
3	Jake Prevel	10	6" Was To Blower Bld	11			
4	Nick Bowen	10	6" Was To Blower Bld	12			
5	Colter Day	10	6" Was To Blower Bld	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Unloaded Clarifier bolts freight, snow removal, working on 6" Was from Thickener to Blower Building laying pipe having problems getting native materials to pass compaction, cored hole into Blower Bld walls, building clean outs in Blower Bld

Columbia Basin Rebar... Not onsite

Colstrip Electric... Wade onsite we went over misc items and he said he would get with Barry also

GreatWest... Onsite today working in office

Start-Up;

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 2/26/2014

Day: Wednesday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold today			
Temperature	[X] to 31.....	[ ] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	20 degrees below with the wind			
Wind Conditions.....	[ ] Still	[ ] Moderate..	[X] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid		

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours	Work Item		Name / Craft	Hours	Work Item
1	Scott McDonald	9	6" Was To Blower Bld	9			
2	Ed Sable	0	Weather / No Work	10			
3	Jake Prevel	9	6" Was To Blower Bld	11			
4	Nick Bowen	9	6" Was To Blower Bld	12			
5	Colter Day	9	6" Was To Blower Bld	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Real cold equipment hard starting, below zero with wind

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Working on 6" Was from Thickener to Blower Building laying pipe, real cold today

Columbia Basin Rebar... Not onsite

Colstrip Electric... Not Onsite

GreatWest... Onsite today working in office, Neil and Chris are doing some kinda of testing on the Uv System (water)
doing compactions tests also on 6" WAS line

Start-Up;

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Job No. / Name: 1387/Laurel WWTP

Date: 2/27/2014

Day: Thursday

Weather Conditions	[ ]	Bright Sun	[ ]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[ ]	Snow
Temperature	[X]	to 31.....	[ ]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up
Wind Conditions.....	[ ]	Still	[ ]	Moderate..	[X]	High	**Humidity**.....		[ ]	Dry....

Cold today: [X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	10	6" Was To Blower Bld	9			
2	Ed Sable	0	Weather / No Work	10			
3	Jake Prevel	10	6" Was To Blower Bld	11			
4	Nick Bowen	10	6" Was To Blower Bld	12			
5	Colter Day	10	6" Was To Blower Bld	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Corr
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Real cold equipment hard starting, below zero with wind

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Working on 6" Was from Thickener to Blower Building laying pipe done, cold today, stripping encasement at Thickener Bld tied up reba
and forming next pour 4" drain line in Thickener Bld, exc and installing 4" drain from Uv into 24" RCP Sewer Main
unloaded Clarifier drives today

Columbia Basin Rebar... Not onsite

Colstrip Electric... Not Onsite

GreatWest... Onsite today working in office, doing compactions tests also on 6" WAS line

Start-Up;

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 3/3/2014

Day: Monday

Weather Conditions	[ ] Bright Sun	[ ] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold Morning			
Temperature	[ ] to 31.....	[X] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	A lot of snow			
Wind Conditions.....	[X] Still	[ ] Moderate..	[ ] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid		

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	10	6" Filtrate Line	9			
2	Ed Sable	10	Thickener Pipe Encase	10			
3	Jake Prevel	10	6" Filtrate Line	11			
4	Nick Bowen	10	Thickener Pipe Encase	12			
5	Colter Day	0	No Work / Sick	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Deecription	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1							
2							
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Pipe Fuser is in town at Northwest Pipe

Snowed about 12 more inches last weekend

Real cold equipment hard starting, below zero with wind

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... Snow removal, tied rebar and formed up pipe encasements in the Thickener for drains, putting pipe rap on 6" dip and getting materials rounded up for 6" Filtrate line, sealing concrete floor with Densifier J13 a Dayton Superior

Columbia Basin Rebar... Not onsite

Colstrip Electric... Not Onsite

GreatWest... Onsite today working in office

Start-Up;

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 3/4/2014

Day: Tuesday

Weather Conditions	[ ] Bright Sun	[X] Clear.....	[X] Overcast.	[ ] Rain.....	[ ] Snow	Cold Morning			
Temperature	[ ] to 31.....	[X] 32-49.....	[ ] 50-69.....	[ ] 70-84	[ ] 85 - Up	A lot of snow			
Wind Conditions.....	[X] Still	[ ] Moderate..	[ ] High	**Humidity**.....	[ ] Dry....	[X] Moderate..	[ ] Humid		

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	10	6" Filtrate Line	9			
2	Ed Sable	10	Uv Seal Floors	10			
3	Jake Prevel	10	6" Filtrate Line	11			
4	Nick Bowen	10	6" Filtrate Line	12			
5	Colter Day	1	Seal Uv / Sick Left Early	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	3/4" Bedding		Fisher	Fisher			Pipe Bedding
2							(156.57 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Uloaded dewatering materials pipe and some misc fittings

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... putting pipe rap on 6" dip and getting materials rounded up for 6" Filtrate line, started Filtrate line from MH west of Headworks heading to Thickener Bid, sealing floors in the Uv Building 3 coats, the backfill material is really wet

Fisher hauled in 3/4" bedding today 6 loads truck and pup

Columbia Basin Rebar... Not onsite

Colstrip Electric... Not Onsite

GreatWest... Onsite today working in office

Start-Up:

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Job No. / Name: 1387/Laurel WWTP

Date: 3/5/2014

Day: Wednesday

Weather Conditions		Bright Sun	X	Clear.....	X	Overcast.		Rain.....		Snow	
Temperature		to 31.....	X	32-49.....		50-69.....		70-84		85 - Up	
Wind Conditions.....	X	Still		Moderate..		High	**Humidity**.....			Dry....	X Moderate..		Humid

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours			Name / Craft	Hours	Work Item
1	Scott McDonald	10	6" Filtrate Line	9			
2	Ed Sable	10	Miles City	10			
3	Jake Prevel	10	6" Filtrate Line	11			
4	Nick Bowen	10	6" Filtrate Line	12			
5	Colter Day	0	No Work / Sick	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	3" Minus		Fisher	Fisher			Structural Backfill
2							(219.39 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Meeting with the COL Greatwest, City of Laurel, Wbc

Snow is holding us up on Thickener Bld interior slab and pipe encasement

Had to rent a double drum roller and sent ours to T&E for repairs done wasting time with ours

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... putting pipe rap on 6" dip and getting materials rounded up for 6" Filtrate line, started Filtrate line from MH west of Headworks heading to Thickener Bld, sealing floors in the Uv Building 3 coats, the backfill material is really wet

Fisher hauled in 3/4" bedding today 6 loads truck and pup

Columbia Basin Rebar... Not onsite

Colstrip Electric... Not Onsite

GreatWest... Onsite today working in office, doing trench compaction tests

Start-Up:

Prepared By: Clay Pipinich

DAILY FIELD REPORT

Page: 1 of 2

Job No. / Name: 1387/Laurel WWTP

Date: 3/6/2014

Day: Thursday

Weather Conditions	[ ]	Bright Sun	[X]	Clear.....	[X]	Overcast.	[ ]	Rain.....	[ ]	Snow	
Temperature	[ ]	to 31.....	[X]	32-49.....	[ ]	50-69.....	[ ]	70-84	[ ]	85 - Up	
Wind Conditions.....	[X]	Still	[ ]	Moderate..	[ ]	High	**Humidity**.....		[ ]	Dry....	[X] Moderate.. [ ] Humid

OWNER / ENGINEER AT SITE: Chris Reed/Greatest (406) 581-7705

VISITORS TO JOB:

	Name / Craft	Hours	Work Item		Name / Craft	Hours	Work Item
1	Scott McDonald	10	6" Filtrate Line	9			
2	Ed Sable	10	Uv Sealing Floors	10			
3	Jake Prevel	10	6" Filtrate Line	11			
4	Nick Bowen	10	6" Filtrate Line	12			
5	Colter Day	0	No Work / Sick	13			
6							
7				15			
8				16			

	Name	# of Imp	Work		Name	#of Imp	Work
1	Harris Rebar	0		7			
2	CEI	0	No Show	8			
3				9			
4				10			
5				11			
6				12			

	Type	Model	Status		Type	Model	Status
1	PC 50 Komatus Mini			6	2000 Chevy 3/4 Ton		
2	380 Komatus Loader			7	Kawasaki Mules		2 each
3	New Holland Skid steer			8	Miller Welder		
4	Cat Blade			9	Rs8 Gehl Grad-al		
5	Ford Water Truck			10			

	Product Description	PO #	Shipper	Delivered by	Inspected by	Disposition	Notes / Remarks / Storage Area
1	3/4" Bedding		Fisher	Fisher			Pipe Bedding
2							(000.00 tons)
3							
4							
5							

Disposition = A = Accept / N = Nonconformist / R = Reject

	Work Item	Progress	Station / % Com
1	See Attached		
2			
3			
4			
5			
6			
7			
8			

EVENTS:

Snow is holding us up on Thickener Bld interior slab and pipe encasement

Had to rent a double drum roller and sent ours to T&E for repairs done wasting time with ours

This weather is really slowing things down, wind, temps and snow

a) Important Calls b) Important Conversations c) Extra Work d) Safety Evaluation e) Delays f) Changes in Work

Wbc... putting pipe rap on 6" dip and getting materials rounded up for 6" Filtrate line, started Filtrate line from MH west of Headwork's heading to Thickener Bld, sealing floors in the Uv Building 3 coats, the backfill material is really wet

poured 4" encasements with some extra mud from another pour Chris said that's fine

unloaded yard hydrants today

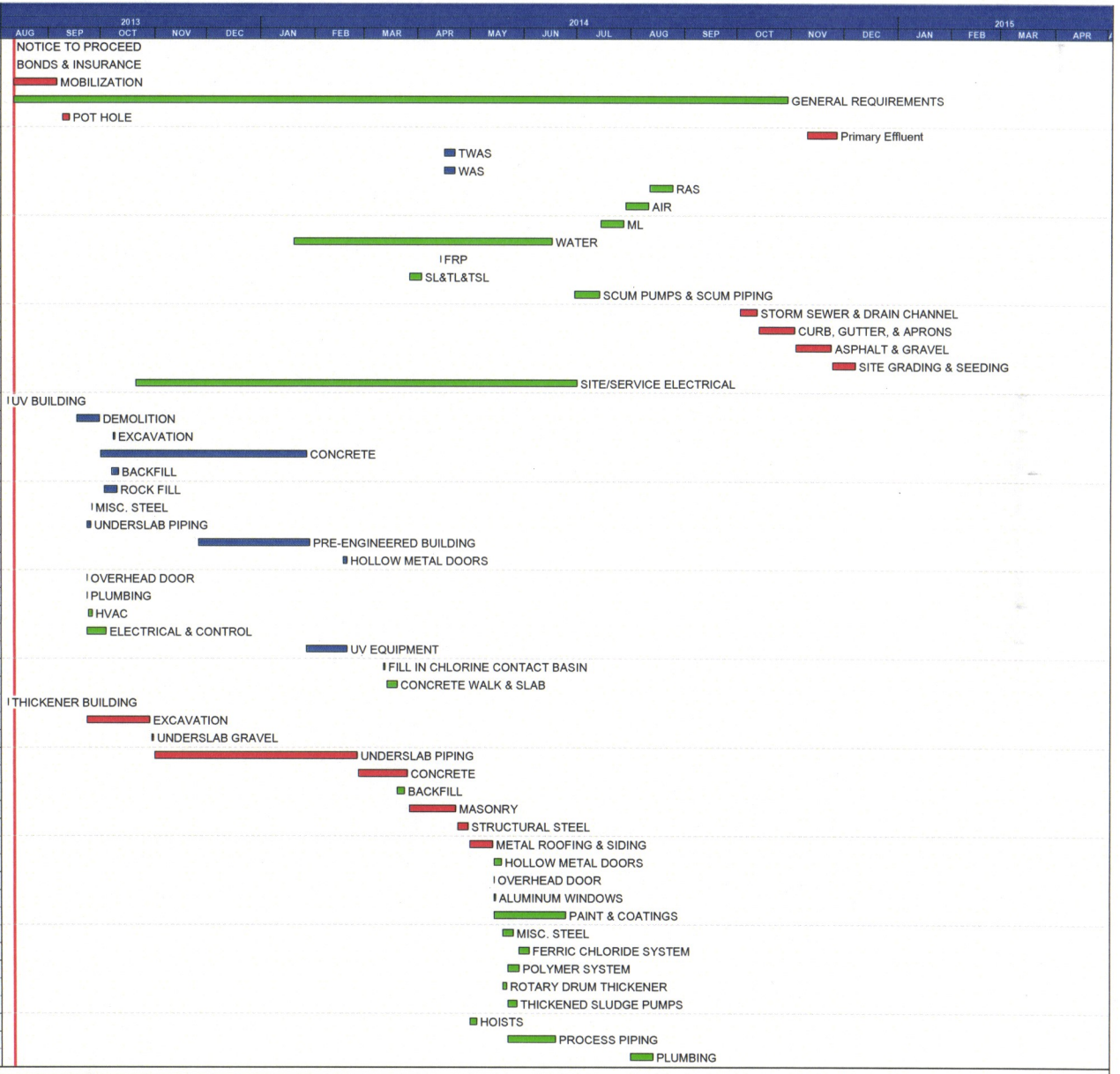
Columbia Basin Rebar... Not onsite

Colstrip Electric... Not Onsite

GreatWest... Onsite today working in office, doing trench compaction tests, they go on and off to check out the Bridger Job

Start-Up:

Act ID	Description	Orig Dur	Rem Dur	Early Start	Early Finish	Total Float	%	Budgeted Cost
1000	NOTICE TO PROCEED	1d	1d	12AUG13	12AUG13	317d	0	0
1010	BONDS & INSURANCE	1d	1d	12AUG13	12AUG13	317d	0	58,000
1020	MOBILIZATION	20d	20d	12AUG13	06SEP13	-35d	0	235,000
1030	GENERAL REQUIREMENTS	316d	316d	12AUG13	30OCT14	2d	0	225,000
1040	POT HOLE	5d	5d	09SEP13	13SEP13	-35d	0	23,600
1050	Primary Effluent	14d	14d	10NOV14	27NOV14	-18d	0	41,000
1051	TWAS	5d	0	16APR14 A	22APR14 A		100	24,500
1052	WAS	5d	0	16APR14 A	22APR14 A		100	36,000
1053	RAS	10d	10d	12AUG14	25AUG14	50d	0	34,000
1054	AIR	10d	10d	29JUL14	11AUG14	50d	0	53,000
1055	ML	10d	10d	15JUL14	28JUL14	50d	0	26,000
1056	WATER	190d	190d	20JAN14 A	17JUN14	98d	0	57,000
1057	FRP	14d	7d	16APR14 A	14APR14	144d	50	32,000
1058	SL&TL&TSL	14d	5d5h	27MAR14 A	03APR14	144d	60	42,500
1060	SCUM PUMPS & SCUM PIPING	10d	10d	30JUN14	14JUL14	50d	0	21,000
1070	STORM SEWER & DRAIN CHANNEL	7d	7d	03OCT14	13OCT14	-35d	0	13,000
1080	CURB, GUTTER, & APRONS	15d	15d	14OCT14	03NOV14	-35d	0	43,000
1090	ASPHALT & GRAVEL	15d	15d	04NOV14	24NOV14	-35d	0	106,400
1100	SITE GRADING & SEEDING	10d	10d	25NOV14	08DEC14	-35d	0	9,500
1110	SITE/SERVICE ELECTRICAL	200d	200d	21OCT13 A	01JUL14	88d	0	267,000
2000	UV BUILDING	0	0	12AUG13	09AUG13	88d	0	0
2010	DEMOLITION	3d	0	17SEP13 A	30SEP13 A		100	3,000
2020	EXCAVATION	3d	0	08OCT13 A	09OCT13 A		100	4,000
2030	CONCRETE	15d	0	01OCT13 A	27JAN14 A		100	70,000
2040	BACKFILL	5d	0	07OCT13 A	11OCT13 A		100	3,000
2050	ROCK FILL	5d5h	0	03OCT13 A	10OCT13 A		100	3,500
2060	MISC. STEEL	1d	0	26SEP13 A	26SEP13 A		100	20,000
2070	UNDERSLAB PIPING	3d	0	23SEP13 A	25SEP13 A		100	10,000
2080	PRE-ENGINEERED BUILDING	15d	0	26NOV13 A	29JAN14 A		100	68,000
2090	HOLLOW METAL DOORS	2d	0	17FEB14 A	19FEB14 A		100	2,000
2100	OVERHEAD DOOR	1d	0	23SEP13 A	23SEP13 A		100	2,000
2110	PLUMBING	1d	1d	23SEP13	23SEP13	284d	0	3,200
2120	HVAC	3d	3d	24SEP13	26SEP13	284d	0	4,400
2130	ELECTRICAL & CONTROL	10d	10d	23SEP13	04OCT13	278d	0	134,000
2140	UV EQUIPMENT	5d	0	27JAN14 A	19FEB14 A		100	168,000
2150	FILL IN CHLORINE CONTACT BASIN	2d	2d	12MAR14	13MAR14	161d	0	3,500
2160	CONCRETE WALK & SLAB	5d	5d	14MAR14	20MAR14	161d	0	8,000
3000	THICKENER BUILDING	0	0	12AUG13	09AUG13	318d	0	0
3010	EXCAVATION	27d	27d	23SEP13	29OCT13	-35d	0	11,000
3020	UNDERSLAB GRAVEL	2d	2d	30OCT13	31OCT13	-35d	0	6,400
3030	UNDERSLAB PIPING	81d	81d	01NOV13	25FEB14	-35d	0	28,000
3040	CONCRETE	21d	21d	26FEB14	26MAR14	-35d	0	175,300
3050	BACKFILL	3d	3d	20MAR14	24MAR14	24d	0	19,000
3060	MASONRY	20d	20d	27MAR14	23APR14	-35d	0	96,000
3070	STRUCTURAL STEEL	5d	5d	24APR14	30APR14	-35d	0	25,000
3080	METAL ROOFING & SIDING	10d	10d	01MAY14	14MAY14	-35d	0	37,000
3090	HOLLOW METAL DOORS	3d	3d	15MAY14	19MAY14	96d	0	4,000
3100	OVERHEAD DOOR	1d	1d	15MAY14	15MAY14	121d	0	5,000
3110	ALUMINUM WINDOWS	2d	2d	15MAY14	16MAY14	120d	0	3,000
3120	PAINT & COATINGS	30d	30d	15MAY14	25JUN14	92d	0	110,000
3130	MISC. STEEL	5d	5d	20MAY14	26MAY14	114d	0	35,000
3140	FERRIC CHLORIDE SYSTEM	5d	5d	29MAY14	04JUN14	107d	0	60,000
3150	POLYMER SYSTEM	5d	5d	23MAY14	29MAY14	111d	0	33,000
3160	ROTARY DRUM THICKENER	3d	3d	20MAY14	22MAY14	96d	0	107,000
3170	THICKENED SLUDGE PUMPS	4d	4d	23MAY14	28MAY14	107d	0	23,000
3180	HOISTS	3d	3d	01MAY14	05MAY14	129d	0	21,000
3190	PROCESS PIPING	20d	20d	23MAY14	19JUN14	96d	0	169,000
3200	PLUMBING	10d	10d	01AUG14	14AUG14	47d	0	16,000

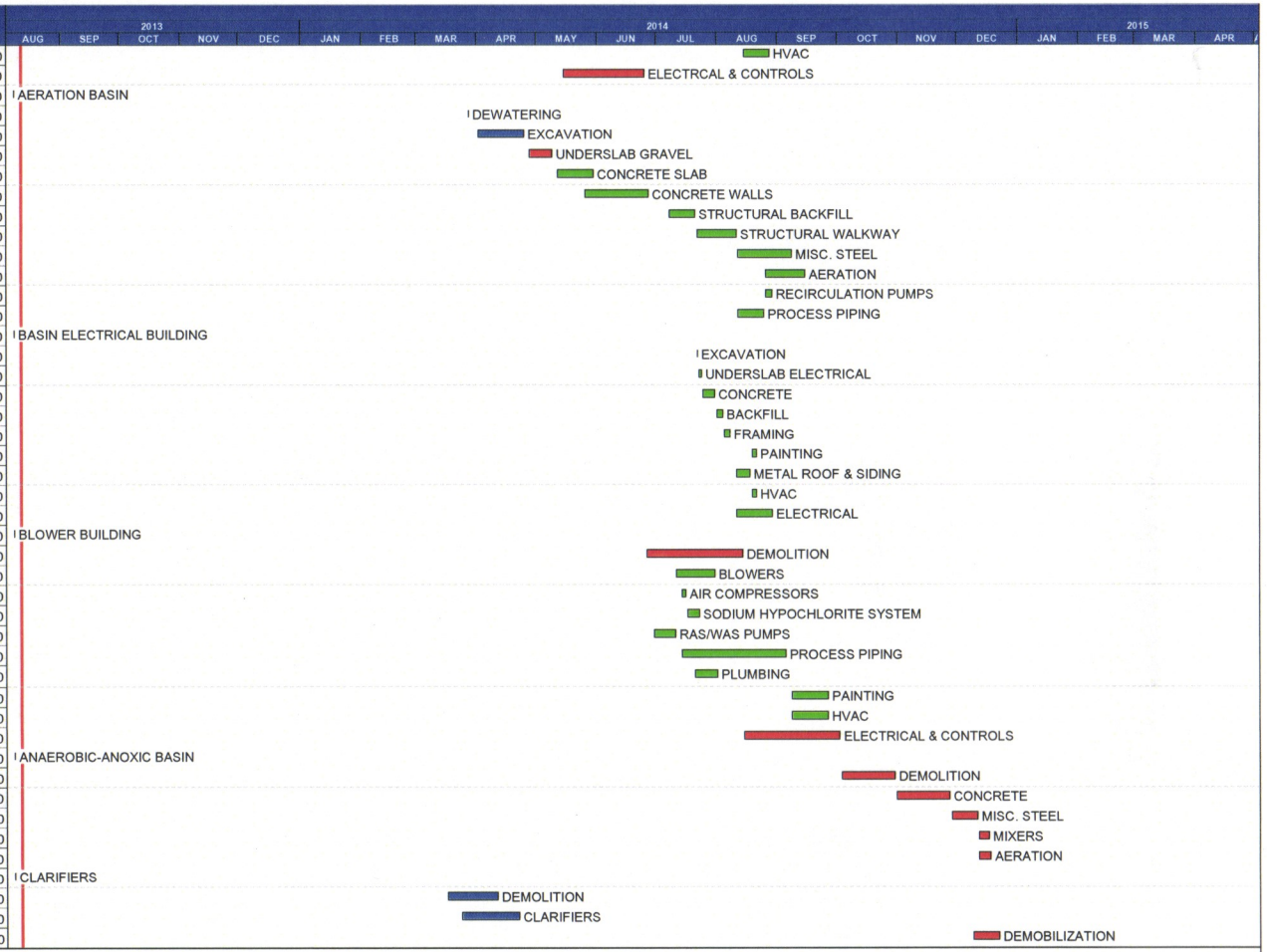


Start date	12AUG13
Finish date	22DEC14
Data date	12AUG13
Run date	28APR14
Page number	1A

Williams Bro. Construction, LLC
WWTP BNR Upgrade

Date	Revision	Checked	Approved
01AUG13	Preliminary		

Act ID	Description	Orig Dur	Rem Dur	Early Start	Early Finish	Total Float	%	Budgeted Cost
3210	HVAC	10d	10d	15AUG14	28AUG14	47d	0	35,000
3220	ELECTRCAL & CONTROLS	30d	30d	15MAY14	25JUN14	-35d	0	200,000
4000	AERATION BASIN	0	0	12AUG13	09AUG13	318d	0	0
4010	DEWATERING	20d	0	02APR14 A	28MAR14 A		100	110,000
4020	EXCAVATION	15d	0	02APR14 A	25APR14 A		100	68,000
4030	UNDERSLAB GRAVEL	10d	10d	28APR14 *	09MAY14	0	0	18,900
4040	CONCRETE SLAB	15d	15d	12MAY14	30MAY14	35d	0	96,000
4050	CONCRETE WALLS	25d	25d	26MAY14	27JUN14	35d	0	381,000
4060	STRUCTURAL BACKFILL	10d	10d	08JUL14	21JUL14	35d	0	60,000
4070	STRUCTURAL WALKWAY	15d	15d	22JUL14	11AUG14	35d	0	54,000
4080	MISC. STEEL	20d	20d	12AUG14	08SEP14	40d	0	45,000
4090	AERATION	15d	15d	26AUG14	15SEP14	35d	0	42,000
4100	RECIRCULATION PUMPS	4d	4d	26AUG14	29AUG14	46d	0	41,000
4110	PROCESS PIPING	10d	10d	12AUG14	25AUG14	35d	0	56,000
5000	BASIN ELECTRICAL BUILDING	0	0	12AUG13	09AUG13	318d	0	0
5010	EXCAVATION	1d	1d	22JUL14	22JUL14	46d	0	500
5020	UNDERSLAB ELECTRICAL	2d	2d	23JUL14	24JUL14	46d	0	6,000
5030	CONCRETE	5d	5d	25JUL14	31JUL14	46d	0	8,600
5040	BACKFILL	2d	2d	01AUG14	04AUG14	46d	0	2,000
5050	FRAMING	4d	4d	05AUG14	08AUG14	46d	0	8,500
5060	PAINTING	3d	3d	19AUG14	21AUG14	52d	0	1,000
5070	METAL ROOF & SIDING	6d	6d	11AUG14	18AUG14	52d	0	6,000
5090	HVAC	3d	3d	19AUG14	21AUG14	52d	0	7,400
5100	ELECTRICAL	15d	15d	11AUG14	29AUG14	46d	0	334,000
6000	BLOWER BUILDING	0	0	12AUG13	09AUG13	318d	0	0
6010	DEMOLITION	35d	35d	26JUN14	14AUG14	-35d	0	33,000
6020	BLOWERS	15d	15d	11JUL14	31JUL14	47d	0	440,000
6030	AIR COMPRESSORS	3d	3d	14JUL14	16JUL14	73d	0	47,000
6040	SODIUM HYPOCHLORITE SYSTEM	5d	5d	17JUL14	23JUL14	73d	0	30,000
6050	RAS/WAS PUMPS	9d	9d	30JUN14	11JUL14	26d	0	114,000
6060	PROCESS PIPING	40d	40d	14JUL14	05SEP14	26d	0	230,000
6070	PLUMBING	10d	10d	21JUL14	01AUG14	66d	0	35,900
6080	PAINTING	15d	15d	08SEP14	26SEP14	26d	0	76,000
6090	HVAC	15d	15d	08SEP14	26SEP14	26d	0	33,200
6100	ELECTRICAL & CONTROLS	35d	35d	15AUG14	02OCT14	-35d	0	334,000
7000	ANAEROBIC-ANOXIC BASIN	0	0	12AUG13	09AUG13	318d	0	0
7010	DEMOLITION	20d	20d	03OCT14	30OCT14	-33d	0	35,000
7020	CONCRETE	20d	20d	31OCT14	27NOV14	-33d	0	162,000
7030	MISC. STEEL	10d	10d	28NOV14	11DEC14	-33d	0	45,000
7040	MIXERS	4d	4d	12DEC14	17DEC14	-32d	0	53,000
7050	AERATION	5d	5d	12DEC14	18DEC14	-33d	0	3,000
8000	CLARIFIERS	0	0	12AUG13	09AUG13	318d	0	0
8910	DEMOLITION	14d	0	17MAR14 A	11APR14 A		100	7,200
8920	CLARIFIERS	10d	0	24MAR14 A	22APR14 A		100	145,000
9000	DEMOBILIZATION	10d	10d	09DEC14	22DEC14	-35d	0	55,000



Start date	12AUG13
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WWTP BNR Upgrade

Date	Revision	Checked	Approved
01AUG13	Preliminary		