



State of Alaska
Department of Environmental Conservation
Village Safe Water Program

555 Cordova Street
Anchorage, AK 99501
April.akers@alaska.gov

July 28, 2022

To: Vendor List

Re: Amendment 1
ITB 22-VSW-UNK-044
Unalakleet Water Source Project
ITB Due Date: August 11, 2022 @ 2:00 PM AST

The following changes are required:

1. The ITB due date is extended from August 4, 2022 to August 11, 2022 @ 2:00 PM AST.

The following are vendor questions and the department's response:

1. Vendor: My company are the Alaska reps for [REDACTED], and I have magnetic flowmeters that I'd like to propose as a prequalified equal replacement for the ABB Watermasters that are written into the spec for this project. I'm curious why reduced bore meters were specified for FIT-001 through -005? Can you advise if this might have been due to lack of straight pipe run into and out of the meters or was there another reason? Would it be possible to get the anticipated flow data for these applications to see if our sizing arrives at the same approximate meter sizes and materials as the ABB numbers given?

I also note a couple of discrepancies between the part numbers as they are laid out in the ABB data sheets and the numbers given in 40 90 00 2.1.J.

Department: The winning contractor may submit a substitution request with the appropriate backup after award of the contract in accordance with the ITB General Conditions. Substitutions will not be approved prior to bidding and award of contract.

2. Vendor: Is there a designated area for laydown and or stockpiling of materials for this project? If so, please identify if 1 area or multiple areas are available.

Department: The Contractor will work with the community to determine a laydown area.

3. Vendor: Can the location of “Barge unloading area” be identified in Unalakleet?

Department: Please see attached Barge unloading area picture.

4. Vendor: Where will the pre-purchased owner supplied materials be located? And will the materials still be in a bundle form?

Department: The materials will still be in bundle form at the barge landing area if they arrive before the Contractor is on-site.

5. Vendor: Will Contractor have to unload and stage pre-purchased owner supplied materials from barge? If so, what is the anticipated arrival date?

Department: The Contractor will need to unload and stage the pre-purchased material if it arrives while the Contractor is on site. The pipe is estimated to arrive September 2022, the well houses are expected to arrive in June 2023.

6. Vendor: Just verifying that all NSF and D-1 materials will all have to be imported for project, or is there a local pit that may be used if mined and screened?

Department: Unalakleet does have a gravel pit, coordinate with West Coast Construction for local pit-run material.

7. Vendor: Can an extension of the bid date be granted?

Department: See above required change, #1.

8. Vendor: Drawing E500 detail 2, Note1: Calls out to provide concrete encased footings. Can details for this be provided?

Department: 12” Diameter Sonotube. Minimum 5-feet deep. Minimum 2500 PSSI concrete.

9. Vendor: Drawing E500 detail 2, Note 2: Calls out to provide 2 Bollards. Can details for this be provided for bollards?

Department: Minimum 3” diameter Sch 80 steel pipe. Minimum 5’ embedment within 12” diameter sonotube. Minimum 2500 psi concrete.

10. Vendor: The Owner supplied “Well Houses” drawing E100. Will these well houses be supplied pre-wired with heater or do these come bare and all parts for this is in this contract is to supply and install?

Department: The well houses come bare, all parts will need to be supplied and installed.

11. Vendor: Drawing D201, Filter Media Replacement: Note 2 call out to provide Touch-up painting of coating systems that are damaged. What is contractor to estimate and or define how much of tank needs this done? Also please provide coating specifications for this tank.

Department: Existing filter vessels are near new and undamaged. The Contractor shall be responsible for repairing any damage incurred as a result of Contractor activities. Square footage requiring touch up paint depends upon Contractor's care in replacing the media. See attached TNEMEC product data sheets.

12. Vendor: Drawing D201m Filter Media Replacement: Details are needed for the (2) tanks in order to replace gaskets as sizing is not shown and drawing is not to scale.

Department: See attached West Coast Filter, Inc., Filter Details, sheet 1 and sheet 2 shop drawings for filter vessel.

13. Vendor: Can waste materials from project be disposed of at local landfill? Or does all waste need to be hauled out?

Department: The local landfill is owned and operated by the City of Unalakleet (City). Contact the City for additional information. A monofill permit may be needed to dispose of construction waste on-site.

14. Vendor: Drawing C501 details 1 & 2, both call out the "Well Casing" is existing. Question, is the 2" pit-less adapter, well pump w/rising piping, wiring and heat trace all installed by well installer and existing?

Department: The existing well casings have no improvements (no pitless, no pump/drop pipe, no heat trace, etc). The Contractor shall be responsible for installation of all improvements. The Contractor shall be responsible for thawing out the wells if necessary and keeping them thawed once improvements are installed.

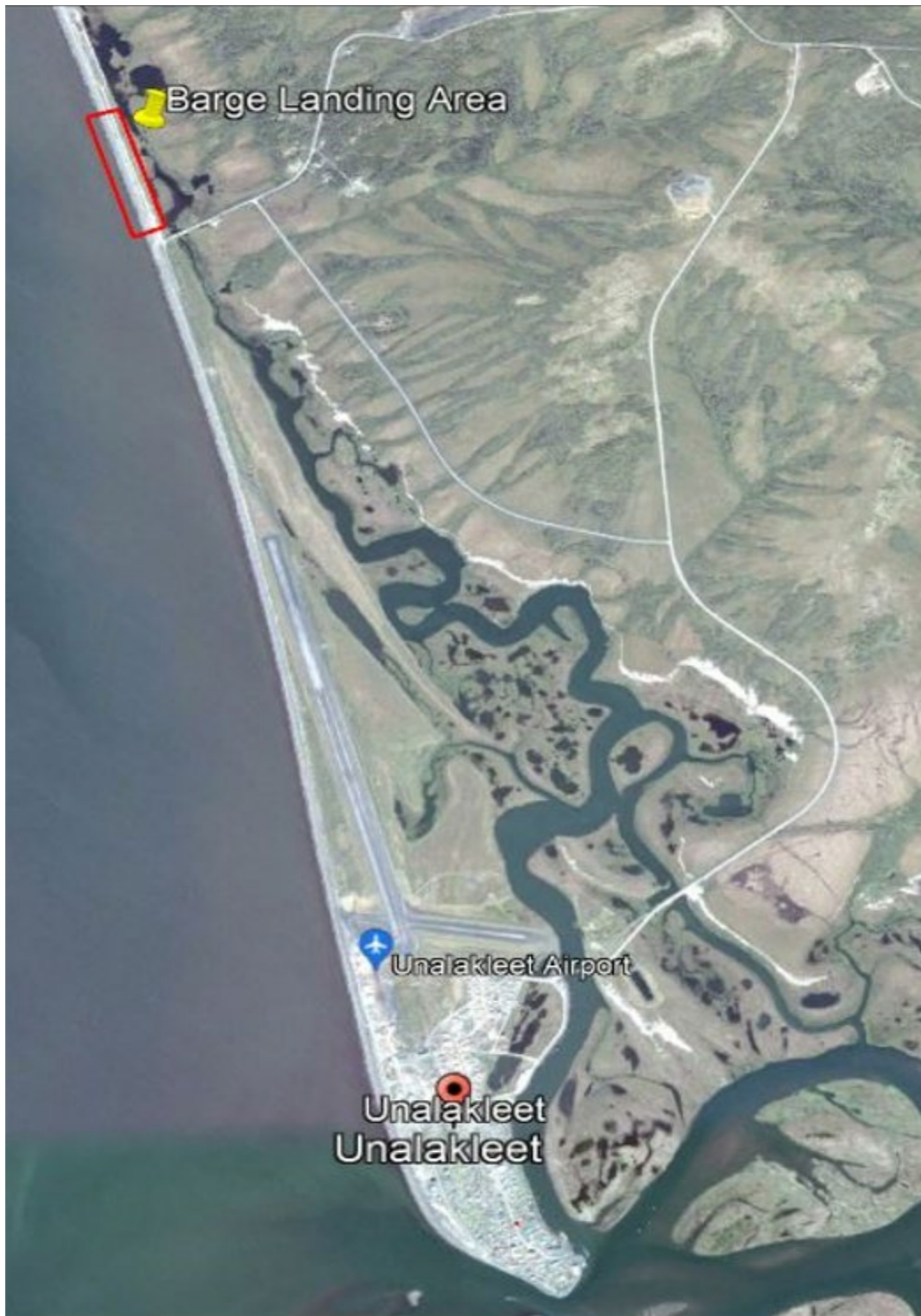
Evan Patterson



Procurement Specialist

Attachments:

1. Barge Unloading area.
2. TNEMEC product data sheets
3. West Coast Filter, Inc., Filter Details, sheet 1 and sheet 2 shop drawings.



PRODUCT PROFILE

GENERIC DESCRIPTION HDP Acrylic Polymer

COMMON USAGE Water-based, low VOC, High Dispersion Pure acrylic polymer coating providing excellent long term protection in both interior/exterior exposures. May be applied by spray, brush or roller over a variety of solvent and waterborne steel primers. May also be used over many aged coatings. It is mildew resistant and exhibits very good gloss and color stability. Application methods include "dry-fall" under certain conditions (See Application). **Note:** Series 1029's "dry-fall" characteristics help reduce the potential for overspray problems on buildings and surrounding property.

COLORS Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family (blue, gray, etc.), but noticeably different.

FINISH Low semi-gloss - **Note:** Final gloss level of topcoat can vary depending on number of coats applied. One coat will generally result in a lower sheen than two coats of the material.

COATING SYSTEM

PRIMERS **Wood:** Series 10-99W, V10-99W or 151-1051
Steel: Series 1, 10, 22, 30, 37H, 66, L69, L69F, N69, N69F, V69, V69F, 90-97, 90G-1K97, 91-H₂O, 94-H₂O, 113, 115, 135, L140, L140F, N140, N140F, V140, V140F, 141, 161, 287, 394. **Note:** Allow Series 10, V10 and 37H to cure three days before topcoating. Additionally, Series 1, 90-97, 90G-1K97, 91-H₂O, 94-H₂O and 394 must be exterior exposed for three days prior to topcoating. **Note:** This product exhibits direct-to-metal capabilities for dry interior environments. Contact Tnemec Technical Service for more information.
Aluminum & Galvanized: Series 66, L69, L69F, N69, N69F, V69, V69F, 115, 135
Concrete: Self-priming or Series 6, 54, 66, L69, L69F, N69, N69F, V69, V69F, 130, 151, 156, 180, 287, 1254
CMU: Series 54, 130, 1254
Drywall: Series 51, 151-1051, 287

TOPCOATS Series 1028, 1080, 1081

SURFACE PREPARATION

STEEL **Weather Exposed:** SSPC-SP6 Commercial Blast Cleaning.

Enclosed, Protected & Mild Environments: SSPC-SP2 Hand Tool or SSPC-SP3 Power Tool Cleaning.

GALVANIZED STEEL & ALUMINUM Surface preparation recommendations will vary depending on substrate and exposure conditions. Consult the latest version of Tnemec Technical Bulletin 10-78 or contact your Tnemec representative or Tnemec Technical Services.

PAINTED SURFACES Remove chalk and old paint not tightly bonded to the surface. Clean all visible rust using SSPC-SP3 Power Tool Cleaning (interior dry) or to bare metal using SSPC-SP11 Power Tool Cleaning to Bare Metal (weather exposed).

PRIMED SURFACES Must be clean, dry and free of dust, dirt, oil, grease and other contaminants. Existing water soluble stains in the substrate or upon the surface must be removed or sealed. Allow concrete to cure 28 days.

TECHNICAL DATA

VOLUME SOLIDS 40.0 ± 2.0% †

RECOMMENDED DFT 2.0 to 3.0 mils (50 to 75 microns) per coat.

CURING TIME

Temperature	To Touch	To Handle	To Recoat	To Resist Moisture
75°F (24°C)	30 minutes	2 hours	2 hours	6 hours

Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS **Unthinned:** 0.79 lbs/gallon (94 grams/litre)
Thinned 5%: 0.79 lbs/gallon (94 grams/litre) †

HAPS **Unthinned:** 0.31 lbs/gal solids
Thinned 5%: 0.31 lbs/gal solids

THEORETICAL COVERAGE 643 mil sq ft/gal (15.8 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS One

PACKAGING 5 gallon (18.9L) pails and 1 gallon (3.79L) cans.

NET WEIGHT PER GALLON 10.51 ± 0.25 lbs (4.77 ± .11 kg) †

STORAGE TEMPERATURE Minimum 35°F (2°C) Maximum 110°F (43°C)
 Protect from freezing.

TEMPERATURE RESISTANCE (Dry) Continuous 170°F (77°C) Intermittent 200°F (93°C)

SHELF LIFE 12 months at recommended storage temperature.

FLASH POINT - SETA N/A

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

ENDURATONE® | SERIES 1029

APPLICATION

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested	2.5 (65)	6.5 (165)	257 (23.9)
Minimum	2.0 (50)	5.0 (125)	321 (29.8)
Maximum	3.0 (75)	7.5 (190)	214 (19.9)

Allow for overspray and surface irregularities. Wet film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. †

MIXING

Stir to uniform consistency without creating air bubbles or foam. Avoid vigorous agitation, boxing or shaking.

THINNING

Thinning is not normally required, but when needed, thin up to 5% or 1/4 pint (190 mL) per gallon with clean tap water.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	60-75 psi (4.1-5.2 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.013"-0.017" (330-430 microns)	2000-3000 psi (138-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Note: On projects involving spray equipment being used over consecutive days, follow Cleanup Instructions below and then leave xylol in the system overnight, flushing thoroughly with clean water before each start-up.

Roller: Use 3/8" (6.4 mm) synthetic woven nap roller cover.

Brush: Use high quality nylon or synthetic bristle brushes.

Note: Floetrol may be used at up to 32 ounces per gallon for improved application properties. Dry-fall and cure properties may be affected. For more information, contact Tnemec Technical Service.

SURFACE TEMPERATURE

Minimum 40°F (4°C) Maximum 120°F (49°C)

The surface should be dry and at least 5°F (3°C) above the dew point.

CLEANUP

Flush and clean all equipment immediately after use with water, then use alcohol or Methyl Ethyl Ketone (MEK) on any dried portions.

CAUTION

Dry overspray can be wiped or washed from most surfaces. Satisfactory dry-fall performance depends upon height of work, weather conditions and equipment adjustment. Low temperature and high humidity are of particular concern. Test for each application as follows: Spray from 15 to 25 feet towards paint container. The material then should readily wipe off. **Note:** Heat can fuse-dry overspray to surfaces. Always clean dry overspray from hot surfaces before fusing occurs. Be aware that exterior surface temperatures can be higher than air temperature.

† Values may vary with color.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

PRODUCT PROFILE

GENERIC DESCRIPTION
COMMON USAGE

Aromatic Urethane, Zinc-Rich

A two-component, moisture-cured, zinc-rich primer for the interior and exterior of steel potable water tanks. Provides outstanding long-term corrosion resistance when used as a primer in conjunction with other Tnemec potable water tank coatings. It cures quickly and can be topcoated the same day at surface temperatures down to 35°F. Series 91-H₂O has no maximum recoat time, making it ideally suited as a primer for both sides of plate steel surfaces in water tank fabrication shops. Application methods include "dry-fall" under certain conditions (see Application). **Note:** When used in conjunction with cathodic protection, anodes or impressed current systems should **not** provide current demand more negative than -1.05 volts relative to a copper-copper sulfate reference electrode half-cell.

ZINC DUST CONTENT
COLOR

83% by weight in dried film

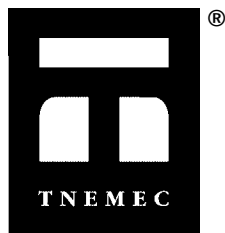
Greenish-gray

SPECIAL QUALIFICATIONS

Certified (with or without 44-710 Urethane Accelerator) in accordance with **ANSI/NSF Std. 61** for interior potable water tank applications. Topcoating with Std. 61 certified Tnemec coatings is recommended. Contact your Tnemec representative for specific recommendations. Meets zinc-rich primer requirements of **AWWA D102-97** Standard for **Inside System No. 3** and **Outside System No. 6**. Series 91-H₂O uses a zinc dust which meets the requirements of **ASTM D 520 Type III** and contains less than .002% lead.

PERFORMANCE CRITERIA

Extensive test data available. Contact your Tnemec representative for specific test results.



COATING SYSTEM

TOPCOATS

Please refer to Tnemec's Systems Guide for Water Storage Tanks for specific systems and additional information.

Interior: Series 20, FC20, N140**Exterior:** Series 27, 66, N69, 73, 161, 175, 700, 1074, 1075. **Note:** Certain topcoat colors may not provide one-coat hiding depending on method of application. Contact your Tnemec representative.

SURFACE PREPARATION

Wet Interior: SSPC-SP10/NACE 2 Near-White Blast Cleaning**Exterior or Dry Interior:** SSPC-SP6/NACE 3 Commercial Blast Cleaning

TECHNICAL DATA

VOLUME SOLIDS

63.0 ± 2.0% (mixed)

RECOMMENDED DFT

2.5 to 3.5 mils (65 to 90 microns)

CURING TIME

Without 44-710

Temperature	To Handle	To Recoat
75°F (24°C)	1 hour	4 hours
65°F (18°C)	1½ hours	5 hours
55°F (11°C)	2 hours	6 hours
45°F (7°C)	2½ hours	7 hours
35°F (2°C)	3 hours	8 hours

With 44-710

Curing time will vary with surface temperature, humidity and film thickness.

Reference the 44-710 Urethane Accelerator product data sheet.

Note: For cure times to immersion service, reference the specified Tnemec interior topcoat product data sheet.VOLATILE ORGANIC
COMPOUNDS

Unthinned

2.65 lbs/gallon
(318 grams/litre)

Thinned 2.5%

2.76 lbs/gallon
(331 grams/litre)

Thinned 10%

3.07 lbs/gallon
(368 grams/litre)

THEORETICAL COVERAGE

1,011 mil sq ft/gal (24.8 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS

Two: Part A and Part B

PACKAGING

Four-Gallon and One-Gallon Kits: Consist of one premeasured container of liquid (Part A) and one premeasured container of powder (Part B). When mixed, yields four gallons (15.1L) or one gallon (3.79L).

NET WEIGHT PER GALLON

23.94 ± 0.60 lbs (10.86 ± .27 kg)

STORAGE TEMPERATURE

Minimum 20°F (-7°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE

(Dry) Continuous 250°F (121°C) Intermittent 300°F (149°C)

SHELF LIFE

9 months at recommended storage temperature.

FLASH POINT - SETA

Part A: 78°F (26°C) Part B: NA

HEALTH & SAFETY

Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

APPLICATION

CAUTION! Dry overspray can be wiped or washed from most surfaces. Satisfactory dry-fall performance depends upon height of work, weather conditions and equipment adjustment. Low temperature is of particular concern. Test for each application as follows: Spray from 15 to 25 feet towards paint container. The material then should readily wipe off. **Note:** Heat can fuse-dry overspray to surfaces. Always clean dry overspray from hot surfaces before fusing occurs. Be aware that exterior surface temperatures can be higher than air temperature.

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested	3.0 (75)	5.0 (125)	337 (31.3)
Minimum	2.5 (65)	4.0 (100)	404 (37.5)
Maximum	3.5 (90)	5.5 (140)	289 (26.9)

Allow for overspray and surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

MIXING **Note:** It is important to always use the entire contents of A and B components. Use a mechanical mixer and keep material under constant agitation while mixing. Slowly sift the entire contents of Part B zinc powder into liquid (Part A).

-Do Not Reverse This Procedure- Adjust mixer speed to break up lumps and mix until the two components are thoroughly blended. Strain through a 35 to 50 mesh (300 to 600 microns) screen before using. For spray application, keep under low RPM agitation to prevent settling. For brush or roller application, stir frequently to prevent settling. Do not use mixed material beyond pot life limits.

POT LIFE 8 hours at 77°F (25°C) and 50% R.H.

Caution: This product cures with moisture acting as a catalyst. Incorporation of moisture or moisture laden air (humidity) during use will shorten pot life. Avoid continual agitation at high RPM. When feasible keep containers of mixed material covered during use.

THINNING For spray, thin up to 10% or ¾ pint (380 mL) per gallon with No. 2 Thinner if temperatures are below 80°F (27°C). Thin up to 10% or ¾ pint (380 mL) per gallon with No. 3 Thinner if temperatures are above 80°F (27°C). For brush or roller, thin up to 10% or ¾ pint (380 mL) with No. 3 Thinner. Do not thin more than 2.5% when air pollution regulations limit the atmospheric discharge of volatile organic compounds (VOC) in coatings to a maximum of 340 grams/litre (2.80 lbs/gal). **Caution:** Series 91-H₂O certification is based on thinning with No. 2 Thinner. Use of any other thinner voids ANSI/NSF Std. 61 certification.

SURFACE TEMPERATURE Minimum 35°F (2°C) Maximum 120°F (49°C) Maximum for Brush & Roller 100°F (38°C)

The surface should be dry and at least 5°F (3°C) above the dew point.

APPLICATION EQUIPMENT **Note:** When intermediate and finish coats are white or light colors, best hiding of this dark color primer can be achieved by spray application; or when roller applied, by using ¼" nap covers.

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss* MBC or JGA	E	78	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	40-50 psi (2.8-3.4 bar)	10-20 psi (0.7-1.4 bar)

* (with heavy mastic spring) Low temperatures or longer hoses will require additional pressure.

Use pressure pot equipped with an agitator and keep pressure pot at same level or higher than the spray gun. Compressed air must be dry.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.017"-0.021" (430-535 microns) Reversible Tip	2400-3000 psi (165-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Roller: Use a 1/4" or 3/8" (6.4 mm or 9.5 mm) synthetic nap cover. Stir material frequently or keep under agitation to prevent settling.

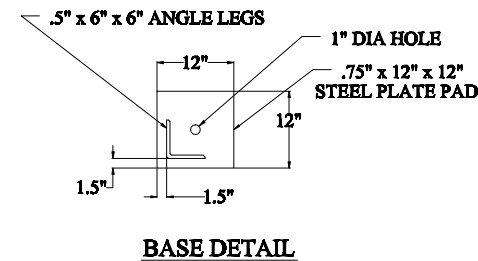
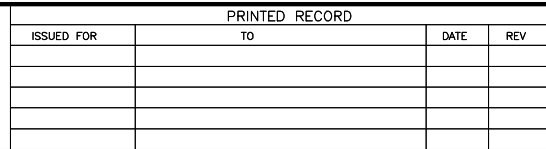
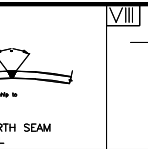
Brush: Use high quality natural or synthetic bristle brushes. Stir material frequently or keep under agitation to prevent settling.

CLEANUP Flush and clean all equipment immediately after use with the recommended thinner or xylene.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc.

THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating. **FOR INDUSTRIAL USE ONLY.**

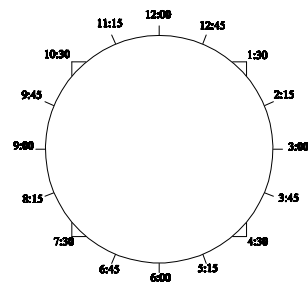
1. Drill and Tap 1/4" dia. Telltail hole in reinforcing pads.
2. Flange bolt holes to straddle principal center lines of vessel.
3. Inside edges of Nozzle Necks shall be rounded.
The radius of roundness 1/8" min. or one half the wall thickness if the pipe is less than 1/4".



FILTER #1 FRONT ELEVATION VIEW



THIS DRAWING IS THE PROPERTY OF WEST COAST FILTERS, AND CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATED, USED OR DISCLOSED OTHER THAN EXPRESSLY AUTHORIZED BY WEST COAST FILTERS



<u>OPENINGS</u>	<u>TANK #1</u>	<u>TANK #2</u>
UPPER MANWAY	9:00	3:00
LOWER MANWAY	9:00	3:00
INLET	6" CENTER TOP HEAD	6" CENTER TOP HEAD
OUTLET	6" CENTER LOWER HEAD	6" CENTER LOWER HEAD
FREEBOARD DRAIN	6:00	6:00
VIEW PORT WINDOW	7:30	4:30
LIFTING LUGS	9:00/3:00	9:00/3:00
ILLUMINATION PORT	4:30	7:30
MEDIA REMOVAL PORT	9:00	3:00

HAND HOLDS	
SIZE	.75" IRON BAR
LOCATION / ORIENTATION	6" ABOVE BOTH MAN HOLES

DESIGN	ASME SEC VIII	DIVISION I	2007 ADDITION
DESIGN CODE			
DESIGN OR M.A.W.P. (HOT AND CORRODED)	100 psi. AT	T	
OPERATING PRESSURE	100 psi. AT	F	
M.A.W.P. (HOT AND CORRODED) LIMITED BY			
RADIOGRAPH	N/A		
ADDITIONAL CODES			
CORROSION ALLOWANCE	.0625	in.	
HYDRO TEST (BASED ON M.A.W.P. NEW AND COLD)			
INSULATION THICKNESS		in.	
SERVICE	COLD WATER		
CAPACITY	180 CU. FT		
WEIGHTS: DRY	3108 LBS.		
OVERALL HEIGHT in.	118 in.		
SHELL	.375 in.		
HEADS	.508 in.		
HEADS TYPE	FLANGED DISH		
MIN THICKNESS			
PIPE	SCH. 40		
WELD FITTING	150 # ANNE		
COUPLINGS	3008 LBS.		
THREADED	3008 LBS.		
STUD BOLTS	HEX NUTS		
GASKETS	NEOPRENE		
REGISTERED IN THE PROVINCE/S			
C.R.N. NUMBER			
M.F.G. SERIAL NO.			

A	INLET	6.0" 150 # RF FLG.	☐ TOP HEAD
B	OUTLET	6.0" 150 # RF FLG.	☐ BOTTOM HEAD
C	VENT		
D	AIR SCOUR / DRAIN		

CONSULTANT: CRW ENGINEERING GROUP

West Coast Filters Inc.
British Columbia, Canada.

www.westcoastfilters.com
Toll Free North America 1-800-375-7744

**PROJECT: UNALAKLEET ALASKA
WATER TREATMENT PLANT**

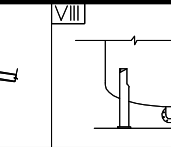
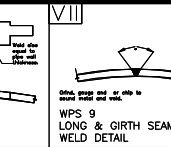
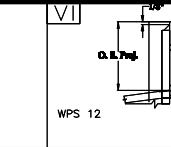
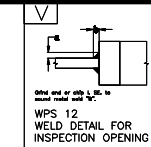
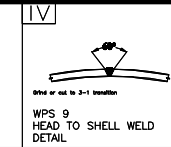
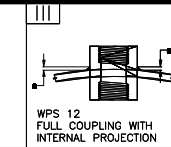
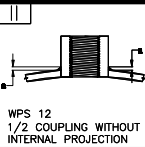
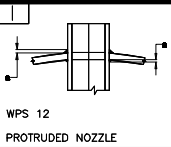
DRAWING: **FILTER DETAILS**

DRAWN DB	DESIGN RD	CHECKED	SHEET # 1
SCALE	DATE 12-05-25	APPROVED	

CUSTOMER NO.	DRAWING NO.	REV.
VSW 56288	WCF 12-05-25A	1

SHOP NOTES

1. Drill and Tap 1/4"dia. Teltail hole in reinforcing pads.
2. Flange bolt holes to straddle principal center lines of vessel.
3. Inside edges of Nozzle Necks shall be rounded. The radius of roundness 1/8" min. or one half the wall thickness if the pipe is less than 1/4".



PRINTED RECORD			
ISSUED FOR	TO	DATE	REV

NOTES

A: UNDERDRAIN
S.S WEDGEWIRE SCREEN-PROFILE #60
24 - 2.375" O.D. LATERALS
2.375" O.D. X .006" SLOT SS WEDGH WIRE SCREEN
B: FLOW RATE @ 2 G.P.M. / SQ.FT. = 55 U.S. G.P.M.
C: SURFACE AREA = 27.67 SQ. FT.

INT. LINING TNEMEC SERIES N 140 - 11WH
EXT. PAINT TNEMEC SERIES 1029 ENDURATONE 110 GN

HEADER LATERALS PVC ☐ SCH. 10 SS ☒
PVC ☐ 304 SS ☒
DIA 2.375" NOMINAL O.D.
QTY 24 PER TANK
SLOT .006"

FREEBOARD DRAIN
SIZE 4.0"
SLOT .006"
MATERIAL 316 L SS
ELEVATION 12" ϕ BELOW TOP SEAM

MANHOLE 2 PER TANK
SIZE 14" X 18" CLARK KENNEDY
LOCATION SEE DETAIL

VIEWPORT WINDOW
SIZE 4" x 18"
LOCATION / ORIENTATION SEE DETAIL

HAND HOLDS
SIZE .75" IRON BAR
LOCATION / ORIENTATION 6" ABOVE BOTH MAN HOLES

GENERAL NOTES

DESIGN	DESIGN CODE	ASME SSC V111	DIVISION 1 2007 ADDITION
	DESIGN OR M.A.W.P. (HOT AND CORRODED)	100 psi. AT	F
	OPERATING PRESSURE	100 psi. AT	F
	M.A.W.P. (HOT AND CORRODED) LIMITED BY		
	RADIOGRAPH	N/A	
	ADDITIONAL CODES		
	CORROSION ALLOWANCE	.0625 in.	
	HYDRO TEST (BASED ON M.A.W.P. NEW AND COLD)		
	INSULATION THICKNESS	N. A.	
	SERVICE	COLD WATER	
	CAPACITY	180 CU. FT	
	WEIGHTS: DRY	3100 LBS.	
	OVERALL HEIGHT in.	118 in.	
	SHELL	.375 in.	
	HEADS	.500 in.	
	HEADS TYPE	FLANGED DISH	
	MIN THICKNESS PIPE	SCH. 40	
	WELD FITTING	150 # ANSI	
	COUPLINGS	3000 LBS.	
	THREADED	3000 LBS.	
	STUD BOLTS	HEX NUTS	
	GASKETS	NEOPRENE	
	REGISTERED IN THE PROVINCE/S		
	C.R.N. NUMBER		
	M.F.G. SERIAL NO.		

A	INLET	6.0" 150 # RF FLG.	ϕ TOP HEAD
B	OUTLET	6.0" 150 # RF FLG.	ϕ BOTTOM HEAD
C	VENT		
D	AIR SCOUR / DRAIN		

CONSULTANT: CRW ENGINEERING GROUP

West Coast Filters Inc.
British Columbia, Canada.

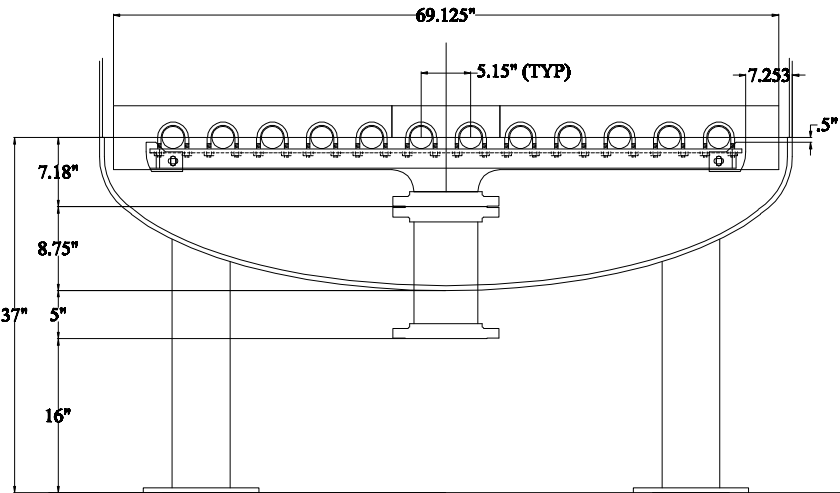
www.westcoastfilters.com
Toll Free North America 1-800-375-7744

PROJECT: UNALAKLEET ALASKA
WATER TREATMENT PLANT

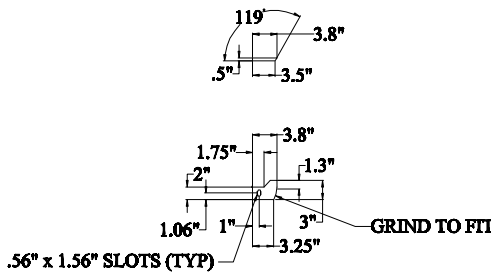
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DB	RD		
SCALE	DATE	APPROVED	
	12-05-25		

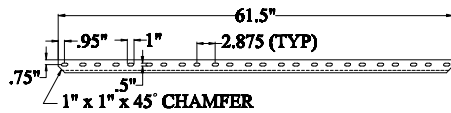
CUSTOMER NO.	DRAWING NO.	REV.
VSW 56288	WCF 12-05-25 A	1



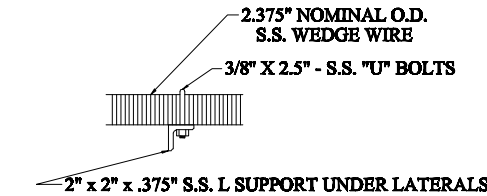
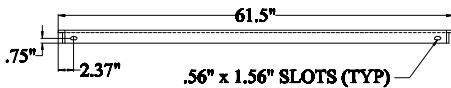
FILTER UNDERDRAIN SYSTEM - ELEVATION VIEW



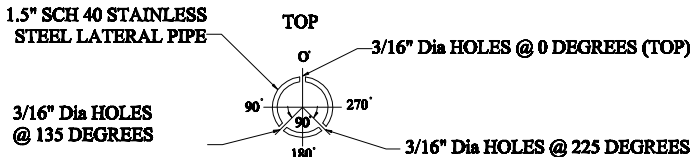
SUPPORT CLIP DETAILS



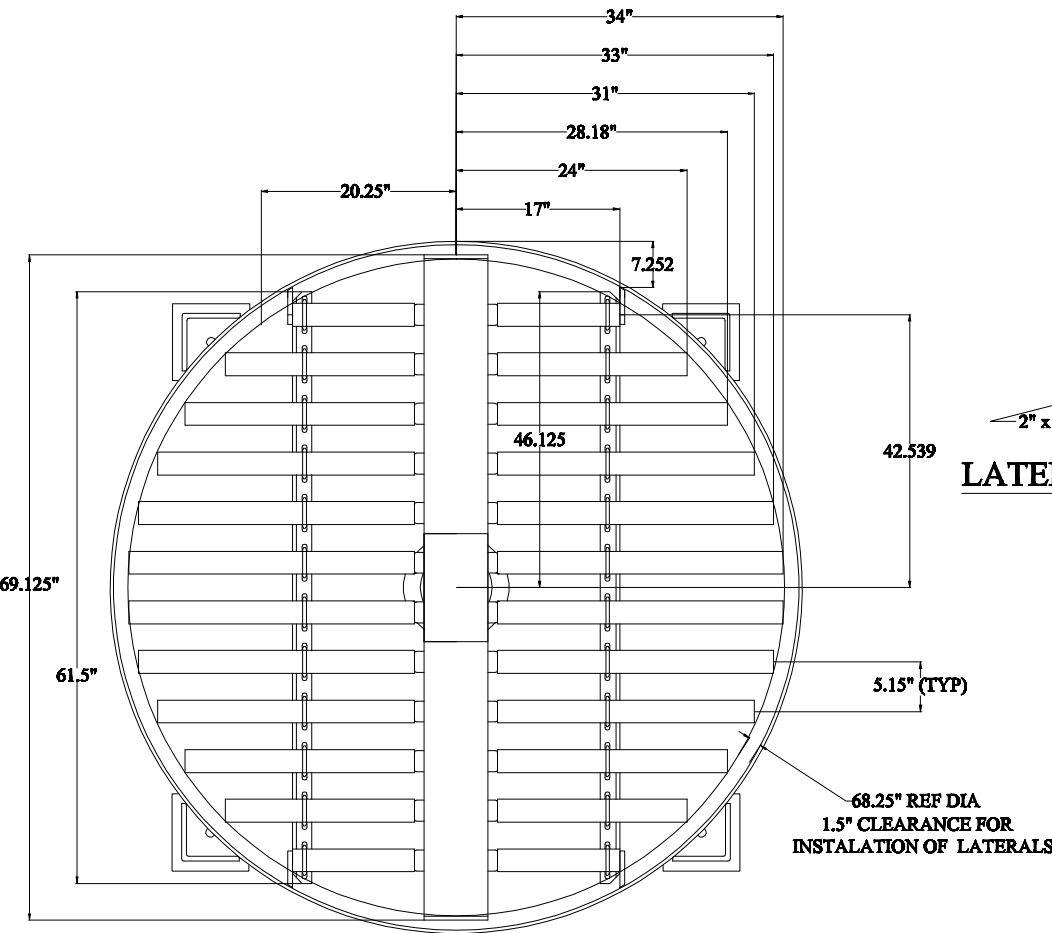
LATERAL SUPPORT DETAILS



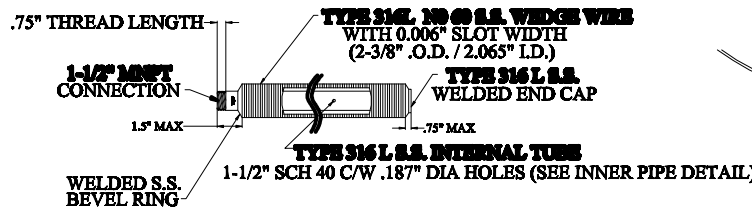
LATERAL SUPPORT DETAIL



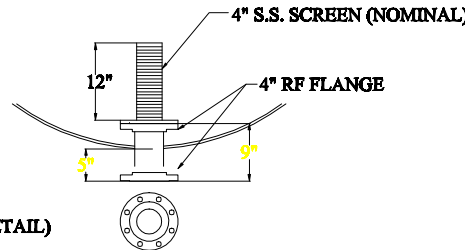
FILTER LATERAL PIPE DETAIL



HEADER AND LATERAL CONFIGURATION



WEDGE WIRE SCREEN DETAIL



FREEBOARD DRAIN DETAIL