



MEETING MINUTES

June 14, 2022

In-Person Meeting

Attendees:

Name of Attendee(s)	Company / Agency Name	Email Address
Adam Brown	West Yost	abrown@westyost.com
Alexandra Watson	HydroScience Engineers	awatson@hydrosience.com
Casey Smith	SAK Construction, LLC	csmith@sakcon.com
Cecilio Rodriguez	Central Contra Costa Sanitary District	cerodriguez@centralsan.org
Celia Kitchell	Delta Diablo	celiak@deltadiablo.org
Dru nielson	McMillen Jacobs Associates	nielson@mcmjac.com
Edgar Benitez	Rinker	Edgar.Benitez@rinkerpipe.com
Glen H	Mission Clay	GlenH@MissionClay.com
Hamed	PEC Solution	hamed@pecsolution.org
Jennifer Wright	Mott MacDonald	jennifer.wright@mottmac.com
Jimmy Dang	Oro Loma Sanitary District	jdang@oroloma.org
Kevin Morales	CCCSD	kmorales@centralsan.org
Kevin Yoshiki	Central San	kyoshiki@centralsan.org
Kurt Chirbas	GeoTree Solutions	kchirbas@cs-nri.com
Kyle Gourley	Carollo Engineers	kgourley@carollo.com
Mikayla Valdez	Mott MacDonald	Mikayla.Valdez@mottmac.com
Nancy McWilliams	Solano Irrigation District	nmcwilliams@sidwater.org
Nealsen Cayanan	Central San	ncayanan@centralsan.org
Rowena Patenaude	Westlake Pipe & Fittings	rpatenaude@westlakepipe.com
Sasha Mestetsky	CCCSD	smestets@centralsan.org
Simon Kobayashi	Delta Diablo	simonk@deltadiablo.org
Tammy Dirker	AqueoUS Vets	tdirker@aqvets.com
Vern Philips	Harris & Associates	vern.phillips@weareharris.com

Announcements:

PUG Board Nominations for 2022 to 2024

PUG Board Nominations Complete.

Dan Rodriguez with Black and Veatch was nominated for the At-Large Representative position. Jimmy Dang will be retiring from PUG with many thanks for his years of service. I will be moving to the Past Chair position. Nancy McWilliams will be graduating to Chair position. Dustin La

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Vallee will be Vice Chair. Alexandra Watson will be Treasurer. Adam Brown will be Secretary. James Kohne will be Communications Officer. The new board positions will be active in July.

PUG Membership Renewal

Please renew your membership.

The PUG new year started in June, this month. Please double-check that your organization has been renewed for this new year.

PUG Presentations

Future Presentations for Monthly Meetings

For future meetings, PUG is open to presentations for future topics. We are booked through July. We have August, November, and December open.

In Person PUG Monthly Meetings

The Board has reserved Centre Concord for in person PUG meetings starting on June 14. Lunch will be provided by Morucci's. The speakers have been notified and are on board for the in-person presentations.

As you can see, Centre Concord is a lovely facility located at 5298 Clayton Road in Concord at the Clayton Fair Shopping Center at the corner of Balhan Drive and Clayton Road. Plenty of parking at the Centre Concord facility, on Balhan Drive, and at Clayton Valley Bowl.

Brown and Caldwell Meeting Location

Bernadette Visitacion received approval from Brown and Caldwell management to host PUG meetings during the second Tuesday of each month. The Board will need to discuss this with Centre Concord and Brown and Caldwell, but we are looking forward to meeting at Brown and Caldwell again. Details later.

CA/NEV AWWA Spring Conference

The Spring Conference was held on April 11-14, 2022, at the Disneyland® Hotel in Anaheim, CA. The conference theme was "Sustainable Water through the Millennium: Leading, Education, Serving." Dustin will give us a summary at the June meeting.

NASTT 2022

The No-Dig Show was held Live on April 10-14, 2022 in Minneapolis, MN.
If anyone attended, could they give us a quick summary?

May 23-25, 2022

6th Annual NASTT-SC Texas/Oklahoma Trenchless Technology Conference – Arlington, TX.

The conference included three days of trenchless presentations and networking with reception, continental breakfast, lunch, and refreshment breaks. Was anyone able to attend?

October 17-19, 2022

No-Dig North 2022 – Toronto, ON

NASTT and the Canadian Chapters are pleased to announce No-Dig North 2022!

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The event will take place at the Beanfield Centre from in Toronto, ON, Canada on October 17-19, 2022. The show will consist of two days of technical paper presentations and industry exhibits in the trenchless technology field. Pre-event technical courses will also be available on Monday, October 17, 2022.

WEFTEC 2022

October 8-12 WEFTEC 2022 Conference – LIVE

New Orleans Memorial Convention Center, New Orleans, LA.

PUG/NASTT Training

November 7-8, 2022

PUG and the Western Chapter of NASTT (WESTT) will be working together to provide an in-person training course. The course will be located at the Concord Hilton. Kate Wallin, Vice President with WESTT, indicated that the NASTT Good Practices Course would be presented on Day 2 of the Fall Mini-No Dig Conference. Details to follow.

UESI PIPELINES 2022 CONFERENCE

Registration Opens January 26, 2022

Early Bird Registration closes on May 18, 2022. Dates July 31 – August 3 LIVE Indianapolis, IN

General:

May 2022 Meeting Minutes: An overview of the March meeting minutes presented (Alexandra Watson)

Financial Update: The current total in the organization account as of May 31, 2022, is \$76,398.73 (Dustin La Vallee).

Project Discussions:

Central San

Bid project Walnut creek 11,000 feet of 6-inch to 8-inch sewer pipeline installation open cut and pipe bursting, CIPP bid opening May 12. District received 8 bids, \$5.1 M engineering estimate, and the lowest estimate was \$4.1 was selected. There were new contractors in the bid opening that have not participated in bid openings for the district before.

Inflated cost of resin to produce CIPP and HDPE

- High demand for styrene free resin
- Recommend when using geopolymers recommends engineers to provide 2 products for alternatives on the design and specification.

Harris and Associates (Vern Philips)

- Chula vista, Southern California project has 2 parallel HDPE pipeline force main 16-inch O.D.
- \$ 2 million dollars project.
- HDPE is a good material for the soils in the area, environmental issues.
- Water separation issues with the water district, project cause delayed during design.

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- Project will go to bid July 2022.

Edgar Benitez announced Rinker acquired Napa Forterra. Forterra in Sacramento will remain as Forterra. Same product line with the acquisition.

Presentation: "UV Cured Glass Reinforced Pipeline (UVGRP)" Presenter: Ryan Klachko, Reline America.

Overview:

The purpose of this presentation is to educate engineering firms, municipalities, and contractors to learn best practices and specifications for UV GRP.

Highlights from the presentation include:

Background:

- Reline America is the manufacture of the UV liner and equipment.
- It has over 3 million linear feet of successfully manufactured and installed liner in North America.
- UV GRP manufactured in Virginia since 2006
- Better for pipes larger than 18" to 24" in diameter

UV GRP Liner Composition

- Inner film (membrane blocking the air).
 - Resin is protected by the inner film protective coating from washing out and/or leaching when high water table or during transportation.
 - After curing inner film is removed after installation.
- Over inner film is a protective wear layer spiral bound fiberglass
- Load bearing composite structure layer
- Outer layer is a resin-rich back wall in contact with the host pipe.

The basic installation Terms of UV GRP Liner

- Slip sheet:
 - slip and slide, protects liner during installation
 - slip sheet at the bottom of the liner
- Pulling liner into place
 - Liner is not inverted; it is pull into place and inflated when inserted.
 - No refrigeration needed (6-month shelf life)
 - If liner is not used within six months, the lab will be assessing the product quality
 - Smaller footprint during installation.
 - Inflate liner prior to the light train insertion.
- Light Train
 - Light Train used to cure the liner
 - Light Train will emit UV light on each bulb. The bulbs will penetrate in the uncured liner
 - UV light will activate the initiators on the resin to begin the cure process.

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- The light train will monitor the exothermic reaction of the resin. Check the Bell curve of the curing process and senses heat w/ sensor to monitor & cure
- Pulling speed varies by the thickness of the liner.
- The light train will create a cure report and an operator is monitoring the curing process assuring the resin is not too hot
- Rate of installation 2-ft per min+/-
- Inspect line w/ light train; then turn on light to cure
- Cure Truck
 - Specifically built for the needs of the contractor and there will be an operator monitoring the cure.
- Cure Log
 - Contractor cannot change the outputs and inputs of report
 - The sensors provide a cure report every 20 seconds
 - Trenchless technology, if field problems arise, there is a number the contractor can call, and the manufactures expert will be able to assist with any issues via VPN and will check the cure log.
- Pipe shall be clean and televise prior to liner installation
- Laterals reinstallation: use robot cutters/remove coupon.

UV GRP Liner

- Every produce is custom specific for the project.
- 2 weeks +/- normal procurement time.
- Emergency liner can be manufactured in 24 hours (high price).
- USA manufactures up to 60" diameter UV GRP liner.
- 72" diameter liners manufactured overseas.

Industry Standards

- ASTM F2019-20 (installation of UV GRP Liner)
- ASTM D5813 (CIPP Resin Chemical Resistance Strength Test)
- ASTM D2990 (Long Term Properties "Creep Test")
- ASTM D790 (Flexural Properties Testing 3" Point Load")
- ISO 9001: 2015 (Quality Management System)
- APS Standard (Porosity Test)
- DIN 19523 (Jetting Resistance Test)
- DARMSTADT Tipping Trough (Abrasion Resistance)
- Greenbook Certification for 2021
- Working on the White Book Certification for San Diego County
- Conditional use on the Brown Book - LA County

What is UV GRP?

- Highly engineered, proprietary designs allow UV GRP to be

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- the strongest CIPP option available,
- Highest Creep Retention Value
- Least impactful option to the environment
- No VOC/ styrene released during cure
- Small footprint during construction
- Rehab pipes any material and shape

Advantages of UV GRP

- Strong CIPP
- No release of Styrene/VOC during installation of the liner and no resin leaching
- Consistent and uniform cure
- Quality assurance built into installation
 - Pre-cure inspection
 - Live data monitoring bulbs and temperature
- Quality tracker system
 - Tamper proof cure log available to the client
- Start stop anytime
- Rehab Pipes of any material and shape from 6" to 72" and more than 1,000-ft
 - Shipping: Liner can be very heavy a 72" liner can weight around 220 lb./ft.
- Minimal shrink rate (smaller annular space due to the glass reinforcement fibers)
- No refrigeration needed
- Quality assurance
- Brought to the US in 2006 by Reline America

Why choose Alpha liner

- Alpha liner (Trade name)
- Significant amount of highly engineered proprietary technology in both liners and equipment
- Stores a piece of every liner for a year and able to lab test within a year.
- Alpha liner spiral-wound resin saturated fiberglass creates a mor uniform wall thickness
- Strong liner
- 50 + years life span
- Negligible footprint
- Quality tracker system

Questions:

1. What is the curing time?
 - Curing time depends on the thickness and diameter of the liner.
 - Under 42-inch diameter is approximately (1.5 ft to 2 ft)/ minute.
 - Inner film is selected for the diameter of the pipe, contractor needs to check the I.D. of the existing host pipe prior to manufacture the liner.
2. What is the lead time?
 - Two weeks.
3. What is the largest size that Reline America can produce?

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- Reline America does up to 60-inch
- 61 to 72-inch difficult to cure with UV light due to liner thickness.
 - Half UV cure half steam cure with large diameters
- 4. Felt is better at bends than fiberglass liner and cable can rub and damage the liner.
 - It is at contractor discretion for the contractor to go through bends and
 - Repair required at the angles specifically at the invert flow line.
- 5. Does Reline America have a pressure liner?
 - No yet, waiting for approval of the NSF approval for the water. Expecting approval at the end of the year.
- 6. What contractors do you have in California?
 - Two contractors located in San Diego (Down Stream Services) and Los Angeles
- 7. What is the preparation of the pipe prior to installation?
 - The pipe shall be dry and clean prior to installation and bypass of the system is required.

Thank you to Ryan Klachko, Reline America for a great presentation and contribution to PUG monthly meeting.

Next Meeting:

The next general meeting is scheduled for Tuesday, July 12, 2022 **"114-Year-Old Structurally Compromised Large Diameter Combined Truck Sewer in California's Capital Revived using CIPP"**
Presenter: Jennifer Glynn, Woodard & Curran.

Live event at the Centre Concord located at 5298 Clayton Road in Concord.

Please call Alexandra Watson at 925-332-5221 or email pugnorcal@gmail.com for additional information on this month's meeting minutes.