



PIPE USERS GROUP Northern California

MINUTES
May 17th, 2005

Attendees:

Cindy Preuss	Harris & Associates	cpreuss@harris-assoc.com
Jennifer Glynn	Brown & Caldwell	jglynn@brwncald.com
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Stan Shogren	Kennedy/Jenks Consultants	stanshogren@kennedyjenks.com
Joel Nonnweiler	Sacramento Regional County Sanitation District	nonnweilerj@saccounty.net
Allen Law	City of Oakland	atlaw@oaklandnet.com
Alan Chan	City of Oakland	achan@oaklandnet.com
David Ng	City of Oakland	dng@oaklandnet.com
Jing Lin	City of Oakland	jlin@oaklandnet.com
Chris Lyne	P&F Distributors	chris@pfdistributors.com

Presentation: *Direct Bury of HDPE Pipe*, by Chris Lyne from P&F Distributors.

Intro: The direct bury use of HDPE pipe has been increasing greatly in recent years. Reasons for this include the material's leak free joint, excellent flow characteristics, chemical and corrosion resistance, toughness and full range of pipe sizes, fittings, and pressure capabilities.

Handouts: Chris brought the most recent version of Performance Pipe CD's for all attendees. The CD's have an engineering manual, fusion procedures and field handbook, miscellaneous literature and technical notes, and a program that will calculate flow, water hammer, thermal expansion, deflection, and pull strength, among other things. Also available to attendees was a McElroy Fusion Catalog and Reference Guide and other associated literature.

Miscellaneous Highlights:

- Sizes for HDPE currently max out at 54-inch diameter, although larger sizes up to 63-inches are soon to come to the plant.
- Fused joints are self-restrained.
- Fusion equipment may be remote-operated.
- If joining in a trench, a double trench width used to be required for fusion practices. Now there is equipment specifically available for in-trench applications, called "limited space fusion machines." These machines consist of a frame without the plate and planar connected (dropped in separately). Limiting factor is the amount of pressure that can be applied/achieved, especially with larger diameter pipe. Width of trench needs to be ~2 feet beyond the outside edge of pipe. These machines can typically fuse within four diameter pipe sizes using the same equipment.

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Secretary, Nor Cal PUG

- Flanged joints require a flange adapter and fitting ring. The ring fuses to the HDPE pipe, and the flange connects to the mating flange of the other pipe material.
- Fittings need a thicker wall due to concentrated stresses – their pressure rating is based upon the rating of the host pipe.
- Can connect HDPE to valve with mechanical joint. Can tap hot or cold using electrofusion couplings or mechanical fittings that work with HDPE pipe.
- Electrofusion patch will repair up to 2-inch diameter hole (for point repairs). Planar attached to the pipe, then is spun and scrapes exterior of the two pieces of pipe.
- SDR 17 or thicker pipe should be used if want mechanical coupling to join two HDPE pipe ends together. Stiffener needs to be installed within pipe if mechanical coupling is installed – note is not a restrained joint.
- HDPE has an excellent bend radius.
- Can fuse any lengths for staging of pipeline.
- PVC versus HDPE: PVC allows velocity of 2 fps (unless is C905) unless is de-rated, whereas HDPE allows 5 fps. Long-term maintenance possibly better than PVC.
- There are multiple colors available for coding, although they are extruded with the pipe in a stripe. Smaller quantities may have problems being striped since striped piping isn't stocked; instead, is done on a project-by-project basis.
- Need to watch the trench backfill since need to limit deflection in the trench to <math><5^\circ</math>.

Notable Installations:

- 65,000 linear feet of 10" to 24" DR 26/11 for the Monterey County Water Res.
- 12,000 DR 11 for a faultline application
- 26,000 linear feet 8" to 10" DR 7 for San Lorenzo Valley Water District
- In Carlsbad, Caltrans allowed HDPE to be used as casing and slipline material to make a tight bending radius under the Interstate 5 freeway.

Many other details and issues were presented; only a few points are included in these minutes.

Discussion of Current Projects:

Stan Shogren has an HDPE direct-bury project in Yosemite. Pipeline to be replaced is a 16-inch diameter ductile iron sewer going into a pump station then getting pumped out of the Park. Replacing the ductile iron will be HDPE, and there will be a 3-mile above-ground HDPE bypass pipeline while the buried pipeline is being replaced.

Steve Krautheim has an 8" HDPE horizontal directional drilling project to be constructed beneath a clay pipe with a poor grade and 2-feet of cover. The work will be bundled with other cut and cover work ranging in size from 6"-30" diameter. Also includes HDPE manholes.

Allen Law has a project where the concrete manholes specified were changed out to polyethylene manholes to save money. In the end, they did save money but didn't use the solid wall fabricated manholes that are commonly more expensive.

Executive:

Treasury status is such that Harris will be taking over the PUG accounts until non-profit status (and tax id #) is received. Quickbooks will be purchased by Harris on PUG's behalf and will track PUG finances (within initial startup information given by Michael Penny or Allen Law). Eventually the software and accounting activities will be transferred to Allen Law, who just recently purchased a laptop for use by the PUG Treasury.

New member applications to be sent following June's meeting. Renewal applications to be sent to attendees of the seminar, as well as the other email lists used to announce the seminar (BAWWA, BACWA, etc.)

Website Development:

The website developer is still non-responsive after multiple attempts at reaching him. Harris' IT department is trying to facilitate, although they too need input from the developer to get through certain snags. Cindy will continue trying to push the process along.

General Discussion:

Jennifer Glynn is currently on the Board of Directors for the Western Regional Chapter of NASTT (North American Society for Trenchless Technology), and announced there will be a mini No-Dig held sometime later this year in Phoenix. Locally based papers that were presented at the National No-Dig Conference last February will be chosen for the regional conference. There will also be tabletop vendor exhibits. Aside from the mini No-Dig conference there will be classes on pipe bursting, horizontal direction drilling, and cast-in-place pipe, with the locations of the classes yet to be determined. The western region includes California, Nevada, Arizona and Mexico.

Next Meeting:

Our next meeting will be held **TUESDAY, JUNE 21, 2005** at the offices of Brown and Caldwell. The topic will be on utility coordination and avoiding conflicts. Please call (925)-210-2307 or e-mail Jennifer Glynn (jglynn@brwncald.com) to RSVP.