



**MEETING MINUTES**  
**January 12, 2016**

**Attendees:**

Amanda Schmidt	CCCSD	ASchmidt@centralsan.org
Bijan Khamanian	Hobas Pipe USA	bkhamanian@hobaspipe.com
Bill Chavez	SRCSO	chavezb@Sacsewer.com
Bill Miller	City of Sacramento	bmiller@cityofsacramento.org
Bob Allen	CDM Smith	allenrob@cdmsmith.com
Bonneau Dickson	Bonneau Dickson	dickson.bonneau@gmail.com
Brennan Lunzer	Tric Tools	brennan.lunzer@trictools.com
Brian Danley	Anchor Engineering	bdanley@anchorcm.com
Brian Swift	SAK Construction	Bswift@sakon.com
Cindy Preuss	HydroScience Engineers	cpreuss@hydroscience.com
Courtney Hall	West Yost Associates	chall@westyost.com
Don Wible	Nor-Cal Pipeline	don@norcalpipe.com
Edgar Benitez	NOV Ameron Intl.	edgar.benitez@nov.com
George Selembo	InfoSense Inc.	gselembo@inforsenseinc.com
Gerry Andre	Gladding, McBean	Gerry.Andre@gladdingmcbear.com
Guo Ji Chiu	City and County of San Francisco, Public Utilities Commission WW Enterprise	GChiu@sflower.org
Iris Uresti	Brown and Caldwell	IUresti@BrwnCald.com
James Yorita	City of Sacramento	jyorita@cityofsacramento.org
Jill Sylvester	NV5	Jill.Sylvester@nv5.com
John Paoluccio	Inventive Resources Inc.	john@iriproducts.com
Justin Waples	CCCSD	jwaples@centralsan.org
Kevin Widmer	CUES Inc.	kwidmer@cuesinc.com
Kyle Carbert	Harris and Associates	kcarbert@harris-assoc.com
Landon Lochrie	Castro Valley Sanitary District	landon@cvsan.org
Michael Heaton	Black & Veatch	HeatonMI@bv.com
Michael Lien	Tric Tools	Michael.Lien@trictools.com
Michael Purcell	EBMUD	mpurcell@ebmud.com
Mike Jaeger	The Covello Group	mjaeger@covellogroup.com
Mike Johannessen	V&A	mjohannessen@vaengineering.com
Nancy McWilliams	West Yost Associates	hnsk@comcast.net
Nasim Shojaei	West Yost Associates	nasim.shojaei@gmail.com
Nick Lazarakis	Kennedy/Jenks	nicklazarakis@kennedyjenks.com
Pam Hopkins	EBMUD	phopkins@ebmud.com
Ron Caceres	CCCSD	rcaceres@centralsan.org
Rosa Millino	City of Sacramento	rmillino@cityofsacramento.org
Stu Williams	City of Sacramento	swilliams@cityofsacramento.org
Will Grant	CCCSD	wgrant@centralsan.org

**Presentation:** “Odor Control Challenges in a Combined Sewer Collection System with Manhole Inserts” by Guo Ji Chiu, City and County of San Francisco, Public Utilities Commission Wastewater Enterprise and John Paoluccio with Inventive Resources Inc.

***Highlights from the presentations include:***

Minutes by: Bob Allen, CDM Smith  
 Acting Secretary, Nor Cal PUG

Page 1 of 4

SFPUC has over 1,000 miles of pipelines greater than 4 inches in diameter.

The portion of the Channel T/S Box (CHT) along Berry Street in San Francisco has been associated with a number of issues related to odor emissions mainly due to hydraulic drops, use of portions of the collection system to store flow to equalize flow into SEP, and being located in close proximity to residential buildings, pedestrian walkways and traffic.

The purpose of this Combined system Manhole Insert (CSMI) Evaluation Study was to evaluate a combined sewer system manhole insert from Inventive Resources, Inc. (IRI) for not only its effectiveness in reducing H<sub>2</sub>S emissions from the sewer to street levels, but also its ability to maintain the ventilation capability of vented manholes where inserts are installed.

The CSMI evaluation study was conducted from August 2014 to November 2015 and was divided into three tests:

Test 1 was conducted for evaluating the CSMI's effectiveness in reducing vapor-phase H<sub>2</sub>S concentrations at three selected manholes. Baseline data was also collected at the beginning of Test 1. Results have shown that the first two CSMI locations (MH1 and MH2) exhibited an average of 100% H<sub>2</sub>S concentration reduction, and the third location (MH3) exhibited an average of 99% reduction.

Test 2 was conducted for evaluating the CSMI's effectiveness in reducing vapor-phase H<sub>2</sub>S concentrations at each manhole when a 4" bypass valve is used. The overall removal efficiency for Test 2 (CSMI4) was 98.5%. Several higher H<sub>2</sub>S readings in exhausted air were detected in early May 2015. These higher readings were likely due to H<sub>2</sub>S gas that escaped through the 4" bypass valve due to sewer pressure release.

Test 3 was conducted for comparing the air pressure relief capabilities of two CSMI configurations: (1) CSMI with a 4" bypass valve (CSMI4), and (2) CSMI with a 10" bypass valve (CSMI10). Vapor-phase H<sub>2</sub>S removal efficiencies were also evaluated. Both CSMIs (CSMI4 and CSMI10) performed well with 99% H<sub>2</sub>S removal efficiency. Differential pressures for both the CSMI4 and CSMI10 were extremely low, almost negligible. This means that both CSMIs are able to provide sufficient ventilation capacities.

Replacing spent carbon media in the CSMI is straightforward. CSMI media cartridges are expected to be replaced annually as recommended by the manufacturer. However, actual media life is still under evaluation. Semiannual maintenance includes removing trash and/or sediments accumulated on top of the insert.

Per IRI, the CSMI has a variable volume bladder which expands and contracts, creating a buffer between the sewer gas and the carbon to allow gases to be treated at peak flow condition increasing the life of the media. However, actual media life is still under evaluation by WWE.

CSMIs can not only help alleviate WWE's sewer odor problems along Berry Street, but their use may potentially save WWE approximately \$147,700 per year by eliminating the need to inject odor control chemical into the Channel T/S Box (CHT). However, a thorough economic evaluation will be needed and future studies will also evaluate corrosion issues inside the pipe.

**Handouts:** PDF of the presentation.

Thank you Guo Ji and John for the outstanding presentation! We appreciate your help with PUG.

Minutes by: Bob Allen, CDM Smith  
Acting Secretary, Nor Cal PUG

Page 2 of 4

**General:**

***December 8, 2015 Meeting Minutes:*** The meeting minutes were read and approved without comment.

Bill Chavez noted several recent articles in various publications and on-line sources:

The Conference Preview of the upcoming NASTT 2016 No-Dig Show highlighted the program for the March 20-24, 2016 conference at the Gaylord Texan Convention Center in Dallas, Texas.

**Announcements:**

***2015/2016 Membership:*** The 2015/2016 membership renewal forms are available and located on the PUG website: [www.norcalpug.com](http://www.norcalpug.com). Memberships cost is \$350 per entity. Membership has numerous benefits, such as discounts for courses and conferences, participation in raffles held at random monthly meetings, discounts on attending the annual seminar, etc. Get your renewals and/or new member applications in today. Payment options include Paypal or check.

***Financial Updates:*** The current total in the organization account is \$42,662.43.

***ASCE Continuing Education:*** ASCE has offered complete access to their on-demand webinars. For more information, you can go to [www.asce.org/on-demand-subscription](http://www.asce.org/on-demand-subscription).

***NASTT Webinars:*** NASTT hosts complimentary webinar series to bring you professional instruction from leading experts in the field of trenchless technology. They can be found at [www.nastt.org/webinars](http://www.nastt.org/webinars). The website offers access to several archived NASTT webinars including: Manhole Rehabilitation; Pipe Ramming; Build Your Trenchless Toolbox; Carbon Calculator; CIPP; Condition Assessment for Watermains; Pipe Bursting, HDD, and CIPP for the Gas Industry; Sliplining Sewer Laterals; Trenchless Rehabilitation Parts 1 and 2; and Trenchless New Installation Parts 1 and 2.

***NASTT National No-Dig in Dallas, Texas March 20-26, 2016.*** Watch for details for the Municipal and Public Utility scholarships.

***PUG 2016 Sharing Technologies Seminar.*** The 2016 Sharing Technologies Seminar will be held on February 18, 2016 at Hs Lordships in Berkeley, CA. The key note speaker will be Debbie Davis-Franco – the State of California Local Government Drought Liaison. Seven papers were selected for presentation. More information about the seminar will be provided in a flyer very soon...

***Raffles:*** No raffle was held at this meeting. Remember, raffles can happen at any meeting but you have to be in attendance to win a prize.

**Project Discussions:**

Cindy Preuss gave us an update on her project in Folsom that involves sliplining a 24" HDPE in a 30" RCCP pipe. Due to the extremely high groundwater, grouting the annular space is going to be difficult. The contractor is on the 7<sup>th</sup> resubmittal.

Minutes by: Bob Allen, CDM Smith  
Acting Secretary, Nor Cal PUG

Page 3 of 4

Bonneau Dickson asked if anyone had experience with oil-lubricated storm water pumps. He has a project where the pump will discharge into a slough. Bonneau was wondering if the pump would have to use food-grade oil.

**Next Meeting:**

The next general meeting is scheduled for Tuesday, March 8, 2016. The presentation topic is "The Art and Science of HDPE Fusion Welding in High Pressure Applications" by Vern Phillips, PE, and Kyle Carbert, PE, Harris & Associates. Please call Bob Allen at 925-296-8038 or email [allenrob@cdmsmith.com](mailto:allenrob@cdmsmith.com) for additional information on this month's meeting minutes.