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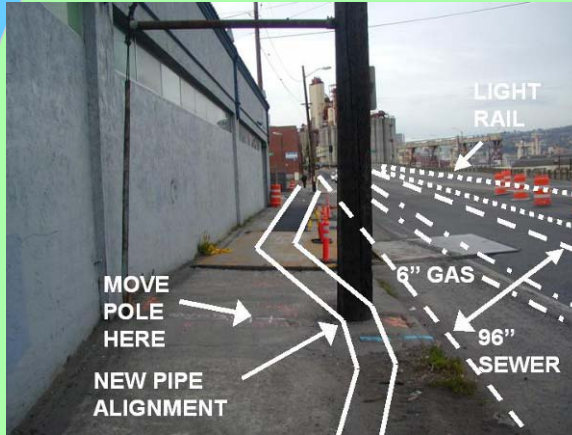
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Editors: Sophie J. Bullard & Bernard S. Covino Jr.

May 2006

Issue 6 Volume 1

Utilities Make Way for Light Rail



Utility relocation encumbered by congestion. Utilities are squeezed together on one side of a proposed light rail. The other side of the road is a bridge viaduct.

Stuart Greenberger, City of Portland's Corrosion Engineer, presented a talk on stray current corrosion in April 27 at the NW Natural Building. Fifteen NACE members attended the lunch meeting. Stuart pointed out that electric streetcar trolleys and light rails are once again popular. Their resurgence has a large impact on city streets which are traffic rights-of ways and utility corridors. He covered the fundamentals of stray current corrosion caused by electric rail transit systems,

their design for corrosion control, and their impact on utilities that neighbor the transit system. A portion of the electric current flowing from a direct current substation to the train returns to the substation through the soil. This "stray current" causes electrolytic corrosion of both the transit system and neighboring utilities at those locations where the current leaves a structure. Corrosion control design elements for electric rail include substation spacing and



Vertical offset of a 24-inch ductile iron water main to accommodate an existing 12-inch main.

grounding, track and track slab design, and construction acceptance criteria. The impacts of electric rail construction on underground utilities were discussed as direct physical interferences, maintenance access encroachments, stray current effects, and utility relocation design considerations. Construction issues included construction funding, construction sequencing, and post-construction monitoring and maintenance by the transit agency and by the utilities. This talk was based on an article titled "Electric Rail Stray Current Corrosion, Corrosion Control, and Utility Relocations" with co-author Teresa Elliott that will be published in the ASM Handbook *Volume 13C: Corrosion: Environments and Industries*, in 2006.

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NACE May 2006 MEETING

DATE: MAY 25, 2006

TIME: 11:30 AM

Presentation 1: XRF (X-Ray Fluorescent) Portable Metals Element Analyzers

Presenter: Jack Hanson; INNOV-X Systems

Presentation 2: The Power of Color Metallography

Presenter: Te-Lin Yau; Te-Lin Yau Consultancy Albany, OR

Place: NETL-Albany
Formerly Albany Research Center

Menu Selection – See attachment Lunch: \$10.00

Sub Box Lunch Includes any Quiznos small or regular sub, chocolate chip cookie and your choice of Classic Lay's, Harvest Cheddar Sun Chips or Miss Vickies Jalapeno chips

Salad Box Lunch Includes your choice of any Quiznos Salad and a chocolate chip cookie. Don't forget to order a drink.

Send choices to: Sophie J. Bullard Tel: 541 967-5989
e-mail: sophie.bullard@netl.doe.gov

Directions to NETL-Albany

From North : Get on I-5 South: to Salem, Albany; Merge onto OR-99E S / PACIFIC BLVD SE via EXIT 234B toward ALBANY; Keep RIGHT at the fork to continue on OR-99E S / PACIFIC BLVD SE.; Turn RIGHT onto QUEEN AVE SW; Right at NETL-Albany; 1450 Queen Ave SW, Albany, OR 97321,

Last NACE Portland Section Meeting for the Year 05/06

Barbecue lunch compliments of the NACE Portland Section

June 22, 2006 Corrosion Sensors for Natural Gas Pipelines at NETL-Albany

Upcoming NACE Courses

NACE International course schedule:

<http://www.nace.org/nace/content/Education/courses/CourseSchedule.asp>

Coast to Coast NDE Training Schedule www.coastnde.com

June 19 - 21 - Magnetic Particle Level I & II

June 22 - 23 - Liquid Penetrant Level I & II

June 19 - 23 - Ultrasonics Level I

June 19 - 21 - Pipeline Integrity and Soils

June 26 - 28 - Magnetic Particle Level I & II

June 29 - 30 - Liquid Penetrant Level I & II

June 26 - 30 - Ultrasonic Level II

ATI Wah Chang Courses www.wahchangelabs.com

For Questions: Steve Sparkowich steve.sparkowich@wahchang.com

Date	Title
July 18-20, 2006	Reactive Metals 2006 Welding Seminar
August 1-3, 2006	Reactive Metals 2006 Welding Seminar
October 6, 2006	The Fundamentals of Titanium Workshop

Celebrate
Memorial Day
May 29, 2006



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Awards Corner

Your Awards Chairman needs YOUR help in bringing recognition back to Local Section members. Please nominate someone (even yourself) or some company that you think has done some outstanding work. The deadline is June 2 for NACE International awards (eg, Technical Achievement, Distinguished Service, Fellow, Distinguished Company, etc). Check out the following link for more information on NACE Association awards and then contact Bernie at bernard.covino@netl.doe.gov with your ideas on awards.

<http://www.nace.org/nace/content/awards/summaryindex.asp>

NACE Foundation Student Academic Scholarships:

In 2006, the NACE Foundation will Award over \$30,000 in Academic Scholarships to deserving students around the world. These scholarships are targeted at students (both graduate and undergraduate) interested in pursuing an education in the field of corrosion science and engineering. If you know of a student who qualifies for any of these scholarships (must be a NACE student member), we strongly urge you to have them apply immediately

Membership Corner ~ Invite a Friend to Join NACE ~

Individual membership \$130 for one year, \$250 for two years.

Applications: <http://www.nace.org/nace/content/Membership/ContentMembership.asp>

News from NACE Portland Section Members

Cascade Corrosion Consulting Service, Inc. Moved

George Richards, Cascade Corrosion Consulting Service, Inc. (CCCS), moved from McMinnville to Keizer. CCCS provides these types of services: material selection, cathodic protection, and coating systems for new and existing systems, including failure analysis, upgrades, designs, specifications, and service during construction.

Currently George is performing some work in Kauai, Hawaii helping the Department of Water inspectors with the interior and exterior re-coating of two 1-MG water tanks plus the upgrades of the tanks cathodic protection systems. George also performed the designs and specifications for the coating and cathodic protection systems. Below are photographs of the work George has been performing in Kauai, Hawaii.



"Before" picture taken in 05

The tank on the left is about 15 years older than the one on the right, which shows the importance of having a good coating specification and installer. The roof, center support column, and all interior roof I-beams, on the tank on the right had to be replaced due to corrosion. The design for the new parts was performed by CH2M HILL, Inc.

Contributor: George Richards



"After" picture taken in 06

Coating of the interior portion of the tank on the right is in progress and should be completed by the end of May.

To contact George, use these new addresses and e-mail. The new office address is: 1908 Chemawa Rd. NE Keizer, OR 97303. The new mailing is: P.O. Box 20432 , Keizer, OR 97307. New Phone Nos: Office: 503 / 463-9409 Fax: 503 / 463-9413 New e-mail address: george.richards6@msn.com

Coast to Coast – Direct Assessment Partners Merger

Wilsonville, Oregon - April 3rd, 2006 - Coast to Coast NDE Services and Direct Assessment Partners announced the consolidation of their services. This merger provides Coast NDE with a comprehensive pipeline integrity package to offer to the pipeline industry.

Benefits of the merger include:

1. **Direct Assessment Training, Manual, and Course** –In-house and web-based training will be provided to each of our employees, third-party integrity inspectors and clients.
2. **Industry Leading Data Acquisition and Reporting Software** – Coast NDE now owns the Direct Assessments Software and will improve and customize it to meet the client's needs. This includes an overall management system for all pipeline excavations for both storing and integration of all resultant data.
3. **Risk Based Soils Model** – Coast NDE has acquired a 50% interest in a risk based soils model for both types of SCC, external corrosion, and MIC being developed on an alliance basis with Kiefner and Associates, Inc. (KAI). This soils-based risk model can be used on a stand- alone basis, as part of the client's overall risk model, or as an integral part of KAI's risk based SCC Direct Assessment plan.
4. **Nova Probe** –Coast NDE has acquired exclusive world-wide rights to manufacture and market the handheld and the permanently buried Nova Probe technology. The handheld probe has recently been redesigned and now also measures the native potential of pipeline steel, thereby facilitating instantaneous de-polarization measurements. Coast NDE offers the Nova Probes to the open market as well as providing services installing and utilizing the buried probe.



More information on the Coast to Coast NDE Services and Direct Assessment Partners merger can be obtained from:

Jerald Baccari (503) 559-4935 (Jerald@coastnde.com) or
Duncan Dubé at (503) 551-6480 (Duncan@coastnde.com)

Contributor: Coast to Coast