

**KEVIN G. HARA**  
**Manager of Field Engineering**

**SPECIALIZED PROFESSIONAL COMPETENCE**

Experience in fossil power plant operations, maintenance procedures, performance, backfit engineering, and analysis. Developed performance training for power plant operators. Extensive experience in oil and gas combustion, power plant performance testing, and engineering cost analysis. Work experience includes direction of several major performance tests on power boilers, steam turbines, surface condensers, cooling towers, and feedwater heaters; development of utility boiler combustion testing program; performed economic analyses of power plant betterment projects, including reliability and availability improvement projects, low load modification impacts, and cost estimation and scheduling; developed extended lay up procedures for a utility power plant; developed training sessions for remaining useful life analysis; and analyzed power plant assets for future costs as part of utilities' divestiture sales.

Recent work includes managing remaining useful life analysis projects, analyzing combined cycle plant problems, developing advanced life extension techniques, evaluating cost impacts of boiler tube failure reduction programs, gas cofiring programs, managing and training for technology transfer of APTECH's oxide scale measurement technology, and asset evaluations for power plant divestitures. One of the main developers of superheater/reheater modeling techniques and analyses.

**EDUCATION AND PROFESSIONAL BACKGROUND**

- B.S. Mechanical Engineering, University of Illinois, Champaign Urbana (1979)
- Member of the American Society of Mechanical Engineers

**SELECTED REPORTS, PUBLICATIONS, AND INVITED LECTURES**

*Nondestructive Examination of the Boiler and Piping at Harding Street Station, Unit 6, APTECH Report AES 06036111-2-1 (June 2006).*

*High Energy Steam Piping and Header Examinations at North Omaha Generating Station, Units 2, 3, and 4, APTECH Report AES 06016046-2-1 (June 2006).*

*Nondestructive Examination of the Deaerator Storage Tank at Sikeston Station, Unit 1, APTECH Report AES 06026091-2-1 (June 2006).*

*Nondestructive Examination of Waterwall Deposit Thickness at Encina Power Station, Unit 4, with H. Vaillancourt, APTECH Report AES 06026073-2-1 (May 2006).*

*TubeAlert<sup>SM</sup> Examination of the Superheater Tubing at LaCygne Generating Station, Unit 2, APTECH Report AES 05126017-2-1 (May 2006).*

*Assessment of Waterwall Deposits at Eskom's Matla Generating Station, Unit 1, EPRI Project EP-P19418/C9587, APTECH Report AES 05095910-2-1 (April 2006).*

*Risk Ranking Study at AES Alamitos Station, Units 3 and 4, APTECH Report AES 05126014-2-1 (March 2006).*

*Main Steam and Hot Reheat Steam Piping Examination at Centralia Generating Station, Unit 1, with M. Cohn, APTECH Report AES 05025683-2-2 (November 2005).*

*Nondestructive Examination of Corrosion-Fatigue of Waterwall Tubing at Battle River Generating Station, Unit 4, APTECH Report AES 05075865-2-1 (November 2005).*

*TubeAlert Examination of Penthouse Superheater Tubing and Outlet Header Examination at Pirkey Generating Station, Unit 1, APTECH Report AES 05035728-2-1 (August 2005).*

*TransAlta's Sundance Station, Unit 6 TubeAlert Examination of Superheater and Reheater Tubing, APTECH Report AES 05065832-2-1 (August 2005).*

*Boiler and Piping System Nondestructive Examinations at Harding Street Generating Station, Unit 5, APTECH Report AES 05025678-2-1 (July 2005).*

*TubeAlert Examination of the Reheater Tubing and Outlet Header at Flint Creek Generating Station, Unit 1, APTECH Report AES 05045756-2-1 (July 2005).*

*TubeAlert Examination of Superheater and Reheater Tubing at Sheerness Generating Station, Unit 2, APTECH Report AES 05055784-2-1 (June 2005).*

*TubeAlert Examination of the Superheater Tubing at Sundance Generating Station, Unit 4, APTECH Report AES 05055783-2-1 (June 2005).*

*Boiler and Piping Nondestructive Examinations at Merom Station, Unit 2, APTECH Report AES 05035732-2-1 (May 2005).*

*Boiler and Piping Nondestructive Examinations at Merom Station, Unit 2, APTECH Report AES 05035730-2-1 (May 2005).*

*TubeAlert Examination of Superheater and Reheater Tubing at Antelope Valley Station, Unit 1, APTECH Report AES 05035733-2-1 (May 2005).*

*Waterwall Deposit Measurement Demonstration at the Mountaineer Plant, APTECH Report AES 04095523-2-1 (January 2005).*

*Analysis of CANSPEC Vestibule Data for Sundance Generating Station, Unit 4, APTECH Report AES 04115574-2-2 (December 2004).*

*TransAlta's Sundance Station, Unit 4 TubeAlert Examination of Reheater Tubing, APTECH Report AES 04115574-2-1 (December 2004).*

*TubeAlert Examination of the Superheater Tubing at Keephills Generating Station, Unit 2, APTECH Report AES 04105553-2-1 (November 2004).*

*TubeAlert Examination of Superheater Tubing at Clinch River Station, Units 1, 2, and 3, APTECH Report AES 04095516-2-1 (November 2004).*

*TubeAlert Examination of Superheater and Reheater Tubing at Genesee Generating Station, Unit 2, APTECH Report AES 04055421-2-1 (November 2004).*

*TubeAlert Examination of Superheater and Reheater Tubing at Sundance Generating Station, Unit 3, APTECH Report AES 04085494-2-1 (October 2004).*

*TubeAlert Survey at Keephills Generating Station, Unit 1 During the September Forced Outage, APTECH Report AES 04085503-2-1 (September 2004).*

*Genesee Superheater Reevaluation, APTECH Report AES 04065453-2-1 (July 2004).*

*Examination of High Temperature Piping Components at Nebraska City Power Plant, Unit 1, APTECH Report AES 04045385-2-1 (June 2004).*

*Nondestructive Examination at Merom Generating Station, Unit 2, APTECH Report AES 04055417-2-1 (June 2004).*

*Hoosier Energy Rural Electric Cooperative's Merom Station, Unit 1 Boiler and Piping Nondestructive Examinations, APTECH Report AES 04035359-2-1 (May 2004).*

*Waterwall Corrosion-Fatigue Examination at Battle River Station, Unit 5, APTECH Report AES 04035335-2-1 (May 2004).*

*TubeAlert Examination of the Superheater and Reheater Tubing at Wabamun Station, Unit 4, APTECH Report AES 04025318-2-1 (May 2004).*

*TubeMod Analysis of the High Temperature Superheater at the Glen Lyn Plant, Unit 6, APTECH Report AES 04035331-2-2 (May 2004).*

*Reexamination of Boiler and Piping Components at AES-IPALCO Eagle Valley Station, Unit 5, APTECH Report AES 04035354-2-1 (April 2004).*

*Examination of High Temperature Header Components at Yucca Power Plant, Unit 1, with J. Grover and M. Cohn, APTECH Report AES 03095159-2-1 (April 2004).*

*TubeMod Analysis of the High Temperature Superheater at the Glen Lyn Plant, Unit 6, with C. Lee, APTECH Report AES 04035331-2-1 (April 2004).*

Reexamination of Boiler and Piping Components at Eagle Valley Station, Unit 6, APTECH Report AES 04025301-2-1 (March 2004).

*TubeAlert Examination of the Superheater Tubing at American Electric Power's Glen Lyn Plant, Unit 6, APTECH Report AES 03115218-2-1 (December 2003).*

*Investigation of Stainless Steel Reheater Tube Failures at Bruce Mansfield Plan, with R. Moser, APTECH Report AES 03065105-2-1 (December 2003).*

*TubeAlert Examination of the Superheater Tubing at Genesee Station, Unit 1, APTECH Report AES 03075111-2-1 (October 2003).*

*TubeAlert Examination of Secondary Superheater Tubing at Keephills Generating Station, Unit 1, APTECH Report AES 03085135-2-1 (September 2003).*

*TubeAlert Examination of Primary and Secondary Superheater Tubing at Valero's Paulsboro Facility, Boiler C, APTECH Report AES 03065100-2-1 (September 2003).*

*Life Assessment Review of Final Superheater at Navajo Generating Station, Unit 3, APTECH Report AES 03085146-2-1 (September 2003).*

*TubeAlert Examination and TubeMod Evaluation of Reheat Superheater at OGE Energy Corporation Seminole Power Plant Unit 3, with T. Burnett, APTECH Report AES 03024986-2-1 (August 2003).*

*Omaha Public Power District's North Omaha Generating Station, Unit 5 High Energy Steam Piping Examination, APTECH Report AES 03045035-2-1 (June 2003).*

*Evaluation of Remaining Life of the Secondary Superheat Outlet Header at South Bay Power Plant, Unit 1, with J. Grover and R. Adams, APTECH Report AES 03035021-2-1 (May 2003).*

*EPCOR's Genesee Station, Unit 2 TubeAlert Examination of Superheater and Reheater Tubing, APTECH Report AES 03014955-2-1 (March 2003).*

*Sask Power's Poplar River Station, Unit 2 TubeAlert Examination of Secondary Superheater, Reheater Tubing, and Dissimilar Metal Weld Examination, APTECH Report AES 03024982-2-1 (March 2003).*

## **ADDITIONAL INFORMATION**

For more information regarding APTECH's personnel and services, please contact our Corporate Headquarters in Sunnyvale, California (USA) at 408/745-7000 or visit our website ([www.aptecheng.com](http://www.aptecheng.com)).