WORLDWIDE DEMAND FOR MEMBRANES CONTINUES TO GROW WITH A CURRENT INSTALLED CAPACITY OF 19.8 BILLION US GALLONS PER DAY (78.4 MILLION M³/D).

As global population and the demand for quality water continues to grow, the use of membrane-based water and wastewater treatment systems has become a significant trend. This demand is driven by advancements in membrane technologies to comply with strict water quality and discharge regulations and the rising need for water reuse, particularly in dry regions.

To meet these challenges, membrane systems must be more efficient, produce the highest quality water possible and maximize system uptime. As technology has evolved, these required efficiencies are accomplished using specialty formulated chemistry’s developed for membrane applications.

Avista Technologies Inc. was established in 1999 to develop and produce those chemistries and is now a globally recognized and trusted supplier of water treatment chemicals and expert process support for membrane systems. These systems include reverse osmosis (RO), microfiltration/ultrafiltration (MF/UF) and membrane pretreatment equipment including multimedia filtration (MMF).

Avista’s hands-on approach provides customers with smart solutions for the challenges presented by diverse membrane applications and challenging feed waters. Expert analysis, high performance products and state-of-the-art technology separate Avista as a world leader in membrane treatment.
AVISTA PRODUCTS

Avista Technologies develops products that enhance the life, performance, reliability and recovery rate of membrane systems worldwide. The resulting products are the industry’s most effective Antiscalants, Biocides, Cleaners, Coagulants, Flocculants and support products. Avista also provides a line of green antiscalants and cleaners that adhere to discharge restrictions while protecting membranes and the environment.

THE COMPLETE LIST OF AVISTA PRODUCT FAMILIES INCLUDE:

ROQUEST®
RoQuest® membrane compatible coagulants improve the efficiency of MMF equipment by increasing particulate removal and providing a higher quality feedwater to downstream membrane systems.

AVISTACLEAN® MF
The AvistaClean® MF line is formulated to remove common foulants and can replace or enhance generic cleaners.

ROCLEAN AND AVISTACLEAN®
RoClean and AvistaClean® are proprietary, membrane compatible formulations that provide efficient and cost-effective removal of all common foulants.

VITEC®
Vitec® antiscalants are multicomponent formulations that allow higher RO system recovery and reduce cleaning frequency.

ANTICHLOR
AntiChlor formulations remove free and combined chlorine from RO system feedwaters to protect membranes from oxidation damage.

ROCIDE®
RoCide® is a line of non-oxidizing, membrane compatible biocides used to reduce biological fouling in non-potable membrane systems.

SAFEGUARD
SafeGuard chemicals are designed to minimize bacterial growth during membrane storage or plant shutdown and are safer than other commonly used chemicals.

PHOENIX
Phoenix re-sizing agents improve salt rejection and extend the useful life of partially oxidized or damaged RO polyamide membranes.

VICOAT
V-Coat provides a coating to downstream piping to protect against corrosive RO permeate.

VITHERM
Vitherm prevents scale in thermal distillation systems at low application rates and is effective over a full range of operating temperatures.

AVISTA SERVICES

Avista Technologies offers an array of technical and support services, which can be effective tools in improving the performance of membranes. To ensure longevity and ongoing membrane effectiveness, Avista’s, fully equipped laboratories perform a variety of troubleshooting and technical support services. Avista’s services include membrane autopsies, foulant studies, coagulant recommendation studies and cleaning trials.

THE COMPLETE LIST OF AVISTA’S SERVICES INCLUDES:

MMF – LAB FILTRATION STUDIES
Helps determine the most efficient and cost-effective dosage of RoQuest® coagulant for site-specific feedwaters.

MMF – FIELD SUPPORT
Avista application experts are available to conduct on-site audits, troubleshooting, pilot studies, system optimization and training to ensure that your MMF system is operating at peak efficiency.
MMF – ANALYTICAL TOOLS
Avista Advisor software uses site specific feedwater characteristics to simplify recommended coagulant dosing in MMF systems.

MMF – CHEMICAL APPLICATION RECOMMENDATIONS
A feedwater particle analysis is combined with filtration study results to identify the most efficient and cost-effective application of RoQuest® coagulants.

MF/UF – LAB CLEANING STUDIES
Lab cleaning studies validate the effectiveness of various cleaning regimens and allow Avista to create and evaluate custom formulations for a particular application or a site specific foulant.

RO / MF/UF – MEMBRANE AUTOPSY
Uses a variety of proven analytical tests, including Chromatic Elemental Imaging and cleaning studies, to identify site-specific membrane fouls, restore performance and increase plant productivity.

MF/UF – CHEMICAL APPLICATIONS RECOMMENDATIONS
Feedwater particle analysis and MF/UF cleaning studies identify the most effective AvistaClean® MF product for your systems and determine its use as either a replacement for generic cleaners or as a recovery cleaner between generic cleanings.

RO – LAB SERVICES
Avista offers a complete array of laboratory support services to enhance membrane performance, increase efficiency and develop new formulations for unique applications.

RO – MEMBRANE CLEANING STUDIES
Lab cleaning studies validate the effectiveness of various cleaning regimens and allow Avista to create and evaluate custom formulations for a particular application or a site specific foulant.

RO – MEMBRANE CLEANING AND RESTORATION (OSCAR)
Off-Site Cleaning and Restoration (OSCAR) is available when cleaning on site is not practical or possible. Membranes are pretested, cleaned and post tested with the goal of restoring performance to original factory specifications.

RO – ANALYTICAL TOOLS/AVISTA ADVISOR
Avista Advisor software uses site specific feedwater analysis and membrane manufacturer data to optimize chemical dose rates and consumption for antiscalants, coagulants, biocides, dechlorination chemistries and cleaners.

RO – ANALYTICAL TOOLS/NORMRO
NormRO is an online normalization service that allows operators to input and review data remotely with Avista technical support personnel for ongoing system optimization and troubleshooting.

RO – FIELD SUPPORT
Avista application experts are ready to provide your facility with everything you need to keep your system running smoothly including system audits, recommendations, training and technical support.

RO – ON-SITE SUPERVISION
Avista’s highly qualified technical experts are available to provide on-site supervision during membrane cleaning, chemical start-up, and other related tasks.

RO – ON-CALL MEMBRANE SYSTEM TROUBLESHOOTING SUPPORT
Avista technical personnel are available to provide immediate RO troubleshooting assistance over the phone to minimize downtime.

RO – ONGOING SYSTEM FOLLOW-UP
Avista customers receive the highest level of technical support including data monitoring and normalization, to help ensure consistent and reliable system performance.

RO – CHEMICAL APPLICATION RECOMMENDATIONS
By combining unique laboratory services, technical experience and system operating parameters, Avista can offer site specific chemical recommendations for optimal performance.

CHROMATIC ELEMENTAL IMAGING (CEI)
Avista’s laboratory team introduced Chromatic Elemental Imaging (CEI) as a proprietary technique to identify the distinct elements in a mixed foulant sample containing a number of inorganic deposits. CEI produces a high-resolution, color image of foulants in their exact locations and concentrations in a mixed foulant sample, so clients know what it is and where it’s hiding.
LEADERSHIP TEAM

AVISTA TECHNOLOGIES, US

DAVE WALKER
President & CEO
As one of the original founders of Avista Technologies, David Walker's expertise and leadership have established Avista as a leader in providing specialty chemicals to the membrane separation industry. Dave was Director of Sales for Argo Scientific Inc. and Regional Sales Manager for Polymetrics Inc. With almost 30 years of experience in the reverse osmosis and high purity water treatment industry, Dave's experience compliments the Walker family legacy which includes his father, Don Walker, who is a recognized Pioneer in membrane separations.

KAREN LINDSEY
Vice President of Operations
Karen Lindsey is one of the original founders of Avista and serves as Vice President of Operations. With more than 25 years of experience in the membrane separations industry, Karen is recognized for managing an RO point of use membrane element manufacturer and for establishing key distributors in territories throughout Latin America while working for Purification Products and Argo Scientific respectively. In 2013, she received the Presidential Award for significant contributions to the American Membrane Technology Association (AMTA).

DAN COMSTOCK
Vice President of Research & Development
Dan Comstock is the Vice President of Research and Development and a co-founder of Avista Technologies. He began his career in water treatment in 1967 as a Research Engineer at Burnes and Roe, an architectural and engineering firm. In the late 1970’s he took a position with Neptune Microfloc researching membrane fouling mechanisms. He worked for Desalination Systems and then as R&D Director of Argo Scientific where he formulated specialty chemicals for reverse osmosis membranes. In 1999 he co-founded Avista and is responsible for all of the chemical formulations as well as the R&D department and laboratory.

DOUG EISBERG
Director of Business Development
Doug Eisberg is a water treatment applications veteran and Avista's Business Development Director. His responsibilities include identifying new business opportunities and developing strategic collaborative relationships. Prior to joining Avista, Doug worked for Energy Recovery Inc (ERI) as a Product director where he created the ERI pump strategy resulting in the purchase of Pump Engineering LLC (PEI). For 17 years Doug worked at Advanced Structures Inc., the makers of CodeLine (Pentair Water) membrane housings, where he was instrumental in the design of many composite housing features now considered industry standards and holds several related international patents. In addition, Doug was the founder and President of PROTEC (Bekaert Progressive Composites) membrane pressure vessels.

Doug currently serves as the Chairman of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code Section X Subcommittee. He is also an active Director of the American Membrane Technology Association (AMTA) and serves as a board member for the International Desalination Association (IDA).
LEE DURHAM
Director of Technical Services

Lee Durham is Director of Technical Services for Avista Technologies and has over 33 years experience in the membrane separations industry. He began in 1980 working for Desalination Systems (DSI), then worked in the specialty chemical field with the newly founded Argo Scientific. Lee’s tenure at Koch Membrane Systems and Toray Membrane as Global Product Line Manager for Specialty Separations provided experience in a variety of water treatment applications including; municipal waste water and membrane technologies including Reverse Osmosis, Ultra filtration, Nano filtration, Hollow Fiber Micro Filtration, and Membrane Bioreactor (MBR) development and design.

AVISTA TECHNOLOGIES, UK

MIKE JEFFERIES
Managing Director

Mike Jefferies is the Managing Director of Avista Technologies UK Ltd. He has over 25 years experience in industrial water treatment as both a system designer and chemical supplier. As a Process Engineer, he applies his diverse knowledge of water treatment applications to provide customers with technical support including analyzing system performance data, visiting sites to supervise membrane cleanings, and troubleshooting systems.

NEIL LOVE
Operations Director

Neil Love is the Operations Director for Avista Technologies (UK) Ltd and has over 25 years of experience in membrane chemical field service and operations. He began his career working for a general chemical distributor then moved into membrane chemical supply, providing products and onshore and offshore membrane cleaning and support for RO and sulfate removal membrane systems. He now manages the chemical manufacture and distribution of the UK operation for customers throughout Europe, Africa and the Middle East.

FIONA FINLAYSON
Technical Sales Manager

Fiona Finlayson is a Chemical Engineer, providing technical support to Avista Technologies customers. She has over 20 years experience in industrial water treatment as both a system designer and a chemical supplier and has carried out plant commissioning and operator training. Fiona supports clients both onshore and offshore by analyzing system data and works on-site to supervise cleaning and provide technical improvement programs and troubleshooting where necessary.

CERTIFICATIONS AND AWARDS

• ANSI/NSF Standard 60 certification
• American Membrane Technology’s Outstanding Member Award – 2013 AMTA/AWWA Annual Membrane Conference
• 2013 President Award – Karen Lindsey, American Membrane Technology Association
• 2013 Community Partner’s Perpetual Award – Home of Guiding Hands
• 2013 President’s Recognition Award – John Bailey, Southeast Desalting Association (SEDA)
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With headquarters in San Diego, California and the United Kingdom, Avista operates internationally with distribution networks around the world.

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