#### AGREEMENT FOR PROFESSIONAL SERVICES BY INDEPENDENT CONTRACTOR

THIS AGREEMENT FOR PROFESSIONAL SERVICES BY INDEPENDENT CONTRACTOR is made and effective as of the 6th day of June 2023, by and between the CITY OF BEAUMONT ("CITY") whose address is 550 E. 6<sup>th</sup> Street, Beaumont, California 92223 and Nalco Company, LLC, whose address is 1601 West Diehl Rd., Naperville, IL 60563 ("CONTRACTOR").

#### **RECITALS**

This Agreement is entered into on the basis of the following facts, understandings and intentions of the parties to this Agreement:

- A. CITY desires to engage CONTRACTOR to transport and deliver the desired chemicals and services; and
- B. CONTRACTOR has made a proposal ("Proposal") to the CITY to provide such goods and services, which Proposal is attached hereto as Exhibit "A" and incorporated herein by this reference; and
- C. CONTRACTOR agrees to provide such services pursuant to, and in accordance with, the terms and conditions of this Agreement, and represents and warrants to CITY that CONTRACTOR possesses the necessary skills, licenses, certifications, qualifications, personnel and equipment to provide such services.

#### AGREEMENT

NOW, THEREFORE, in consideration of the foregoing Recitals and mutual covenants contained herein, CITY and CONTRACTOR agree as follows:

- 1. <u>Term of Agreement</u>. This Agreement is effective as of the date first above written and shall continue until terminated as provided for herein. Notwithstanding anything in this Agreement to the contrary, this Agreement shall automatically terminate after three (3) year(s) unless extended by the parties with the approval of the City Council of the CITY.
- 2. <u>Services to be Performed.</u> CONTRACTOR agrees to provide the services ("Services") as follows: Supply and Delivery of desired chemicals per Exhibit "A". All Services shall be performed in the manner and according to the timeframe set forth in the Proposal. CONTRACTOR designates Julian L. Smith as CONTRACTOR'S professional(s) responsible for overseeing the Services provided by CONTRACTOR.
- 3. <u>Associates and Subcontractors</u>. CONTRACTOR may, at CONTRACTOR's sole cost and expense, employ such competent and qualified independent associates, subcontractors and consultants as CONTRACTOR deems necessary to perform the Services; provided, however, that CONTRACTOR shall not subcontract any of the Services without the written consent of CITY.

#### 4. Compensation.

- 4.01 CONTRACTOR shall be paid at the rates set forth in the Proposal and shall not increase any rate without the prior written consent of the CITY.
- 4.02 CONTRACTOR shall not be compensated for any Services rendered nor reimbursed for any expenses incurred in excess of those authorized unless approved in advance by the CITY, in writing.
- 4.03 CONTRACTOR shall submit to CITY, on or before the fifteenth (15<sup>th</sup>) of each month, itemized invoices for the Services rendered in the previous month. The CITY shall not be obligated to pay any invoice that is submitted more than sixty (60) days after the due date of such invoice. CITY shall have the right to review and audit all invoices prior to or after payment to CONTRACTOR. This review and audit may include, but not be limited to CITY's:
  - a. Determination that any hourly fee charged is consistent with this Agreement's approved hourly rate schedule;
  - b. Determination that the multiplication of the hours billed times the approved rate schedule dollars is correct;
  - c. Determination that each item charged is the usual, customary, and reasonable charge for the particular item. If CITY determines an item charged is greater than usual, customary, or reasonable, or is duplicative, ambiguous, excessive, or inappropriate, CITY shall either return the bill to CONTRACTOR with a request for explanation or adjust the payment accordingly, and give notice to CONTRACTOR of the adjustment.
- 4.04 If the work is satisfactorily completed, CITY shall pay such invoice within thirty (30) days of its receipt. Should CITY dispute any portion of any invoice, CITY shall pay the undisputed portion within the time stated above, and at the same time advise CONTRACTOR in writing of the disputed portion.

# 5. <u>Obligations of CONTRACTOR</u>.

- 5.01 CONTRACTOR agrees to perform all Services in accordance with the terms and conditions of this Agreement and the Proposal. In the event that the terms of the Proposal shall conflict with the terms of this Agreement, or contain additional terms that purport to bind the CITY other than the Services to be rendered and the price for the Services, the terms of this Agreement shall govern and said additional or conflicting terms shall be of no force or effect.
- 5.02 Except as otherwise agreed by the parties, CONTRACTOR will supply all personnel, materials and equipment required to perform the Services. CONTRACTOR shall provide its own offices, telephones, vehicles and computers and set its own work hours. CONTRACTOR will determine the method, details, and means of performing the Services under this Agreement.
  - 5.03 CONTRACTOR shall keep CITY informed as to the progress of the

Services by means of regular and frequent consultations. Additionally, when requested by CITY, CONTRACTOR shall prepare written status reports.

- 5.04 CONTRACTOR is responsible for paying, when due, all income and other taxes, fees and withholding, including withholding state and federal taxes, social security, unemployment and worker's compensation, incurred as a result of the compensation paid under this Agreement. CONTRACTOR agrees to indemnify, defend and hold harmless CITY for any claims, costs, losses, fees, penalties, interest, or damages suffered by CITY resulting from CONTRACTOR's failure to comply with this provision.
- 5.05 In the event CONTRACTOR is required to prepare plans, drawings, specifications and/or estimates, the same shall be furnished in conformance with local, state and federal laws, rules and regulations.
- 5.06 CONTRACTOR represents that it possesses all required licenses necessary or applicable to the performance of Services under this Agreement and the Proposal and shall obtain and keep in full force and effect all permits and approvals required to perform the Services herein. In the event CITY is required to obtain an approval or permit from another governmental entity, CONTRACTOR shall provide all necessary supporting documents to be filed with such entity.
- 5.07 CONTRACTOR shall be solely responsible for obtaining Employment Eligibility Verification information from CONTRACTOR's employees, in compliance with the Immigration Reform and Control Act of 1986, Pub. L. 99-603 (8 U.S.C. 1324a), and shall ensure that CONTRACTOR's employees are eligible to work in the United States.
- 5.08 In the event that CONTRACTOR employs, contracts with, or otherwise utilizes any CalPERS retirees in completing any of the Services performed hereunder, such instances shall be disclosed in advance to the CITY and shall be subject to the CITY's advance written approval.
- 5.09 Drug-free Workplace Certification. By signing this Agreement, the CONTRACTOR hereby certifies under penalty of perjury under the laws of the State of California that the CONTRACTOR will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code, Section 8350 et seq.) and will provide a drug-free workplace.
- 5.10 CONTRACTOR shall comply with all applicable local, state and federal laws, rules, regulations, entitlements and/or permits applicable to, or governing the Services authorized hereunder.
- 6. <u>Insurance</u>. CONTRACTOR hereby agrees to be solely responsible for the health and safety of its employees and agents in performing the Services under this Agreement and shall comply with all laws applicable to worker safety including but not limited to Cal-OSHA. Therefore, throughout the duration of this Agreement, CONTRACTOR hereby covenants and agrees to maintain insurance in conformance with the requirements set forth below. Attached hereto as **Exhibit "B"** are copies of Certificates of Insurance and endorsements as required by

- Section 7.02. If existing coverage does not meet the requirements set forth herein, CONTRACTOR agrees to amend, supplement or endorse the existing coverage to do so. CONTRACTOR shall provide the following types and amounts of insurance:
  - 6.01 Commercial general liability insurance in an amount of not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate; CONTRACTOR agrees to have its insurer endorse the general liability coverage required herein to include as additional insured's CITY, its officials, employees and agents. CONTRACTOR also agrees to require all contractors and subcontractors to provide the same coverage required under this Section 6.
  - 6.02 Business Auto Coverage in an amount no less than \$1 million per accident. If CONTRACTOR or CONTRACTOR's employees will use personal autos in performance of the Services hereunder, CONTRACTOR shall provide evidence of personal auto liability coverage for each such person.
  - 6.03 Workers' Compensation coverage for any of CONTRACTOR's employees that will be providing any Services hereunder. CONTRACTOR will have a state-approved policy form providing statutory benefits as required by California law. The provisions of any workers' compensation will not limit the obligations of CONTRACTOR under this Agreement. CONTRACTOR expressly agrees not to use any statutory immunity defenses under such laws with respect to CITY, its employees, officials and agents.
  - 6.04 Optional Insurance Coverage. Choose and check one: Required <u>08/</u>/Not Required \_\_\_\_; Errors and omissions insurance in a minimum amount of \$2 million per occurrence to cover any negligent acts or omissions committed by CONTRACTOR, its employees and/or agents in the performance of any Services for CITY.

# 7. <u>General Conditions pertaining to Insurance Coverage</u>

- 7.01 No liability insurance coverage provided shall prohibit CONTRACTOR from waiving the right of subrogation prior to a loss. CONTRACTOR waives all rights of subrogation against CITY regardless of the applicability of insurance proceeds and shall require all contractors and subcontractors to do likewise.
- 7.02. Prior to beginning the Services under this Agreement, CONTRACTOR shall furnish CITY with certificates of insurance, endorsements, and upon request, complete copies of all policies, including complete copies of all endorsements. All copies of policies and endorsements shall show the signature of a person authorized by that insurer to bind coverage on its behalf.
- 7.03. All required policies shall be issued by a highly rated insurer with a minimum A.M. Best rating of "A:VII"). The insurer(s) shall be admitted and licensed to do business in California. The certificates of insurance hereunder shall state that coverage shall not be suspended, voided, canceled by either party, or reduced in coverage or in limits, except after thirty (30) days' prior written notice has been given to CITY.
  - 7.04 Self-insurance does not comply with these insurance specifications.

CONTRACTOR acknowledges and agrees that that all insurance coverage required to be provided by CONTRACTOR or any subcontractor, shall apply first and on a primary, non-contributing basis in relation to any other insurance, indemnity or self-insurance available to CITY.

- 7.05 All coverage types and limits required are subject to approval, modification and additional requirements by CITY, as the need arises. CONTRACTOR shall not make any reductions in scope of coverage (e.g. elimination of contractual liability or reduction of discovery period) that may affect CITY's protection without CITY's prior written consent.
- 7.06 CONTRACTOR agrees to provide immediate notice to CITY of any claim or loss against CONTRACTOR or arising out of the Services performed under this Agreement. CITY assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve CITY.

# 8. Indemnification.

- 8.01 CONTRACTOR and CITY agree that CITY, its employees, agents and officials should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, defense costs, court costs or any other costs arising out of or in any way related to the performance of this Agreement by CONTRACTOR or any subcontractor or agent of either as set forth herein. Accordingly, the provisions of this indemnity are intended by the parties to be interpreted and construed to provide the fullest protection possible under the law to CITY. CONTRACTOR acknowledges that CITY would not enter into this Agreement in the absence of the commitment of CONTRACTOR to indemnify and protect CITY as set forth herein.
  - a. To the fullest extent permitted by law, CONTRACTOR shall defend, indemnify and hold harmless CITY, its employees, agents and officials, from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses, damages or costs of any kind, whether actual, alleged or threatened, actual attorneys' fees incurred by CITY, court costs, interest, defense costs, including expert witness fees and any other costs or expenses of any kind whatsoever without restriction or limitation incurred in relation to, as a consequence of or arising out of, or in any way attributable actually, allegedly or impliedly, in whole or in part to the performance of this Agreement. CONTRACTOR's obligation to defend, indemnify and hold harmless shall include any and all claims, suits and proceedings in which CONTRACTOR (and/or CONTRACTOR's agents and/or employees) is alleged to be an employee of CITY. All obligations under this provision are to be paid by CONTRACTOR as they are incurred by CITY.
  - b. Without affecting the rights of CITY under any provision of this Agreement or this Section, CONTRACTOR shall not be required to indemnify and hold harmless CITY as set forth above for liability attributable solely to the fault of CITY, provided such fault is determined by agreement between the parties or the

findings of a court of competent jurisdiction.

# 8A. Indemnification Design Professionals.

8A.01 In the event that CONTRACTOR is a design professional under California Civil Code Section 2782.8 this Section 8A shall apply instead of Section 8. To the fullest extent permitted by California law and in accordance with California Civil Code section 2782.8, CONTRACTOR shall indemnify, and hold harmless the City, its officers, employees, trustees and members ("Indemnified Parties") from any and all actions, assessments, counts, citations, claims, costs, damages, demands, judgments, liabilities (legal, administrative or otherwise), losses, notices, expenses, fines, penalties, proceedings, responsibilities, violations, attorney's and consultants' fees and causes of action including, but not limited to those for, injury to property or persons, including personal injury and/or death ("Claim(s)"), to the extent that the Claim(s) arises out of, pertains to, or relates to the negligence, recklessness, or willful misconduct of CONTRACTOR, its directors, officials, officers, employees and consultants arising out of, connected with, or resulting from the performance of the Services, the Project, or this Agreement. This indemnity excludes liability caused by the negligence or willful misconduct of any of the Indemnified Parties. The cost to indemnify, hold harmless, and defend charged to CONTRACTOR shall not exceed CONTRACTOR'S proportionate percentage of fault.

# 9. Additional Services, Changes and Deletions.

- 9.01 In the event CONTRACTOR performs additional or different services than those described herein without the prior written approval of the City Manager and/or City Council of CITY, CONTRACTOR shall not be compensated for such services. CONTRACTOR expressly waives any right to be compensated for services and materials not covered by the scope of this Agreement or authorized by the CITY in writing.
- 9.02 CONTRACTOR shall promptly advise the City Manager and Finance Director of CITY as soon as reasonably practicable upon gaining knowledge of a condition, event or accumulation of events which may affect the scope and/or cost of Services. All proposed changes, modifications, deletions and/or requests for additional services shall be reduced to writing for review and approval by the CITY and/or City Council.

#### 10. Termination of Agreement.

- 10.01 Notwithstanding any other provision of this Agreement, CITY, at its sole option, may terminate this Agreement with or without cause, or for no cause, at any time by giving twenty (20) days' written notice to CONTRACTOR.
- 10.02 In the event of termination, the payment of monies due CONTRACTOR for undisputed Services performed prior to the effective date of such termination shall be paid within thirty (30) business days after receipt of an invoice as provided in this Agreement. Immediately upon termination, CONTRACTOR agrees to promptly provide and deliver to CITY all original documents, reports, studies, plans, specifications and the like which are in the possession or control of CONTRACTOR and pertain to CITY.

#### 11. Status of CONTRACTOR.

- 11.01 CONTRACTOR shall perform the Services in CONTRACTOR's own way as an independent contractor, and in pursuit of CONTRACTOR's independent calling, and not as an employee of CITY. However, CONTRACTOR shall regularly confer with CITY's City Manager as provided for in this Agreement.
- 11.02 CONTRACTOR agrees that it is not entitled to the rights and benefits afforded to CITY's employees, including disability or unemployment insurance, workers' compensation, retirement, CalPERS, medical insurance, sick leave, or any other employment benefit. CONTRACTOR is responsible for providing, at its own expense, disability, unemployment, workers' compensation and other insurance, training, permits, and licenses for itself and its employees and subcontractors.
- 11.03 CONTRACTOR hereby specifically represents and warrants to CITY that it possesses the qualifications and skills necessary to perform the Services under this Agreement in a competent, professional manner, without the advice or direction of CITY and that the Services to be rendered pursuant to this Agreement shall be performed in accordance with the standards customarily applicable to an experienced and competent professional rendering the same or similar services in the same geographic area where the CITY is located. Further, CONTRACTOR represents and warrants that the individual signing this Agreement on behalf of CONTRACTOR has the full authority to bind CONTRACTOR to this Agreement.

# 12. Ownership of Documents; Audit.

- 12.01 All draft and final reports, plans, drawings, studies, maps, photographs, specifications, data, notes, manuals, warranties and all other documents of any kind or nature prepared, developed or obtained by CONTRACTOR in connection with the performance of Services performed for the CITY shall become the sole property of CITY, and CONTRACTOR shall promptly deliver all such materials to CITY upon request. At the CITY's sole discretion, CONTRACTOR may be permitted to retain original documents, and furnish reproductions to CITY upon request, at no cost to CITY.
- 12.02 Subject to applicable federal and state laws, rules and regulations, CITY shall hold all intellectual property rights to any materials developed pursuant to this Agreement. CONTRACTOR shall not such use data or documents for purposes other than the performance of this Agreement, nor shall CONTRACTOR release, reproduce, distribute, publish, adapt for future use or any other purposes, or otherwise use, any data or other materials first produced in the performance of this Agreement, nor authorize others to do so, without the prior written consent of CITY.
- 12.03 CONTRACTOR shall retain and maintain, for a period not less than four years following termination of this Agreement, all-time records, accounting records and vouchers and all other records with respect to all matters concerning Services performed, compensation paid and expenses reimbursed. At any time during normal business hours and as often as CITY may deem necessary, CONTRACTOR shall make available to CITY's agents for examination all of such records and shall permit CITY's agents to audit, examine and reproduce such records.

# 13. Miscellaneous Provisions.

- 13.01 This Agreement, which includes all attached exhibits, supersedes any and all previous agreements, either oral or written, between the parties hereto with respect to the rendering of Services by CONTRACTOR for CITY and contains all of the covenants and agreements between the parties with respect to the rendering of such Services in any manner whatsoever. Any modification of this Agreement will be effective only if it is in writing signed by both parties.
- 13.02 CONTRACTOR shall not assign or otherwise transfer any rights or interest in this Agreement without the prior written consent of CITY. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.
- 13.03 CONTRACTOR shall timely file FPPC Form 700 Conflict of Interest Statements with CITY if required by California law and/or the CITY's conflict of interest policy.
- 13.04 If any legal action or proceeding, including an action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, the prevailing party will be entitled to reasonable attorneys' fees and costs, in addition to any other relief to which that party may be entitled.
- 13.05 This Agreement is made, entered into and shall be performed in the County of Riverside in the State of California and shall in all respects be interpreted, enforced and governed under the laws of the State of California. The parties agree that venue in any litigation between them shall be in Riverside County, California.
- 13.06 CONTRACTOR covenants that neither it nor any officer or principal of its firm has any interest, nor shall they acquire any interest, either directly or indirectly, which will conflict in any manner or degree with the performance of their Services hereunder. CONTRACTOR further covenants that in the performance of this Agreement, no person having such interest shall be employed by it as an officer, employee, agent, or subcontractor.
- 13.07 CONTRACTOR has read and is aware of the provisions of Section 1090 et seq. and Section 87100 et seq. of the Government Code relating to conflicts of interest of public officers and employees. CONTRACTOR agrees that they are unaware of any financial or economic interest of any public officer or employee of the CITY relating to this Agreement. It is further understood and agreed that if such a financial interest does exist at the inception of this Agreement, the CITY may immediately terminate this Agreement by giving notice thereof. CONTRACTOR shall comply with the requirements of Government Code section 87100 et seq. and section 1090 in the performance of and during the term of this Agreement.
- 13.08 <u>Improper Consideration</u>. CONTRACTOR shall not offer (either directly or through an intermediary) any improper consideration such as, but not limited to, cash,

discounts, services, the provision of travel or entertainment, or any items of value to any officer, employee or agent of the CITY in an attempt to secure favorable treatment regarding this Agreement or any contract awarded by CITY. The CITY, by notice, may immediately terminate this Agreement if it determines that any improper consideration as described in the preceding sentence was offered to any officer, employee or agent of the CITY with respect to the proposal and award process of this Agreement or any CITY contract. This prohibition shall apply to any amendment, extension or evaluation process once this Agreement or any CITY contract has been awarded. CONTRACTOR shall immediately report any attempt by any CITY officer, employee or agent to solicit (either directly or through an intermediary) improper consideration from CONTRACTOR.

13.09 Severability. If any portion of this Agreement is declared invalid, illegal or otherwise unenforceable by a court of competent jurisdiction, the entire balance of this Agreement not so affected shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereby have made and executed this Agreement to be effective as of the day and year first above written.

CITY:	CONTRACTOR:
CITY OF BEAUMONT	NALCO COMPANY, LLC
By: Julio Martinez, III, Mayor	By:
	Print Name:
	Title:

EXHIBIT "A"

**PROPOSAL** 



April 27, 2023

City of Beaumont c/o Grace Wichert 550 E 6<sup>th</sup> Street Beaumont, CA 92223

To Whom It May Concern,

In response to your invitation to bid, RFP Wastewater Treatment Plant Chemical Supply & Deliver – Bid Item #1, R.O. Antiscalant, Nalco Company is looking to offer our PermaTreat PC-191T product.

PermaTreat PC-191T combines the product reliability of PermaTreat PC-191 with patented TRASAR™ Technology for advanced monitoring and control. PermaTreat PC-191T is a highly effective scale inhibitor whose active components were developed to treat reverse osmosis (RO) systems. PermaTreat PC-191 has shown for over 20 years excellent performance against the following scalants: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, silica and iron.

Enclosed are all the required documents including one Cover Letter, an Introduction to Nalco Water, a List of References, Cost Proposal, PC-191T Product Bulletin and PC-191T Safety Data Sheet. Also attached is a copy of Addendum 1.

Please be sure to send bid results and future bid information to my attention:

Julian Smith
Account Manager WL186
10521 Humbolt Street, Los Alamitos, CA 90720
310-924-5669 - Mobile
juliansmith@ecolab.com

Should you have any questions or comments, please feel free to contact me with the information above. Thanks!

Sincerely,

Julian L Smith ACCOUNT MANAGER - WL186



April 27, 2023

City of Beaumont c/o Grace Wichert 550 E 6<sup>th</sup> Street Beaumont, CA 92223

To Whom It May Concern,

In response to your invitation to bid, RFP Wastewater Treatment Plant Chemical Supply & Deliver – Bid Item #1, R.O. Antiscalant, Nalco Water is looking to offer our PermaTreat PC-191T product.

PermaTreat PC-191T combines the product reliability of PermaTreat PC-191 with patented TRASAR™ Technology for advanced monitoring and control. PermaTreat PC-191T is a highly effective scale inhibitor whose active components were developed to treat reverse osmosis (RO) systems. PermaTreat PC-191 has shown for over 20 years excellent performance against the following scalants: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, silica and iron.

#### **About Nalco Water**

Nalco Water is a global leader in water and process management solutions, Nalco Water, an Ecolab company, works with customers across a wide range of industries to help meet their specific sustainability and business goals. With a presence at more than 100,000 customer sites, our solutions combine connected chemistry, digital innovation and extensive expertise to minimize water and climate impacts while maximizing outcomes at an optimized total cost. Our network of more than 50,000 connected water performance systems fuels over 90 billion data points each year, allowing us to provide our customers with insights, actions and value across their entire operation. As an Ecolab company, we're aligned with our corporate ambition to make the world cleaner, healthier and safer by providing and protecting what's vital.

More information about Nalco Water, our Leadership, Locations, Industries Serviced and Businesses can be found at https://www.ecolab.com/nalco-water/about

#### **Scope of Services**

Nalco Water is your premier supplier for water pretreatment chemistry, equipment, services and products. We offer everything you need to achieve a specific water quality and quantity.

Nalco Water utilizes an expert team for field service engineers to assist customers with every day needs including water treatment solutions, chemical applications, asset protection, water testing and treatment



program support. This includes customer site and services visits to verify program effectiveness and value delivery.

Our team also designs, builds and services ion exchange, water filtration, DI and RO systems. Nalco Water is a provider of RO pre-treatment chemistry including dechlorination, anti-scalant, bio-control, cleaning (CIP/COP) and sanitization products. We also provide maintenance and exchange services, membrane autopsies, field cleanings and membrane optimization.

World-class engineers and scientists are passionate about solving problems: The vision and dedication come naturally. Our team's qualifications are among the best in the industry, so great service is just part of the difference you get when you partner with Nalco Water.

#### Service Schedule

In addition to routine evaluation of chemical applications and feed equipment, our program will include, at no additional charge, specific services targeting process improvement and system innovation. Routine service will occur on a monthly basis during the first 60 – 90 days, then we will review your on-going needs.

# **Nalco Antiscalant Chemistry**

Antiscalants prevent mineral deposits on membranes that cause fouling and reduce output. Our PermaCare antiscalants have a long track record of delivering superior performance for a wide variety of membrane installations, ranging from very large potable water plants to small and mid-sized industrial installations. Our proprietary TRASAR technology provides continuous in-line monitoring of antiscalant concentration and insures precise dosing regardless of variations in feed flow. Our PermaCare antiscalants:

- Meet the demands of most water types
- Protect against high levels of foulants
- Are NSF standard 60 approved

#### **Local Nalco Team**

The local Nalco Water support team in Southern California provides service, support and chemistry to many customers in this territory. Please find included your local primary contacts for support care:

Julian Smith - Account Manager WL186 310-924-5669 - Mobile juliansmith@ecolab.com



Haris Razvi – District Manager WL186 909-214-8435 – Mobile haris.razvi@ecolab.com

One of the many Nalco Water production facilities supporting North America in located in Carson, CA. The local business office is located at **10521 Humbolt St, Los Alamitos, CA 90720.** 

#### **Nalco Water Six Service Standards**

People Survey - Communication is a key element in the success of your water management plan. The People Survey identifies the key decision making individuals and individuals in authority. An effective and efficient communication plan can then be developed that will insure the proper implementation and control of the water management plan that will result in appropriate responses to any abnormal or out of control condition.

Plant / System Surveys - Another critical part of effective communication is speaking a common language. We will develop this common language by continuing to learn your system as well as your people. By doing this we will be able to continuously understand the key success factors of your business and identify areas in which we can provide training. This will continue to enhance your personnel's knowledge of what we are trying to accomplish in your plant.

Service Plans - Our ultimate goal is to provide you with a significant return on your investment. Mutually agreed upon projects and expectations will provide us with a tool to align our goals. Beginning our partnership with a common understanding of the desired results will allow us to work together towards the reduction of your total operating expense.

Training/Program Administration Manual - A comprehensive Program Administration Manual will be prepared for your facility. The manual contains program applications, troubleshooting guides, statistical process control diagnosis, proposed training topics, safety information, and program guidelines.

Personal Service Reports - Service reports will be left with you each time a Nalco Team Member visits your site. These reports will document progress on any projects we are working on as well as ensure that all key personnel are informed about what is going on within their area of responsibility.

Business Reviews - Periodic, formal discussion about direction and project completion is important to the success of any program. Equally important are regular meetings to address recurring variations or new projects that should be put on the "priority list".

Business Reviews are an opportunity for us to evaluate the Return on Investment that you are receiving from Nalco. Weekly or monthly staff meetings provide an opportunity to update your personnel about ongoing projects, and for you to give us feedback and direction on a timely basis.



Should you have any questions or comments, please feel free to contact me with the information above. Thanks!

Sincerely,

Julian L Smith ACCOUNT MANAGER - WL186

NALCO Water | An Ecolab Company 10521 HUMBOLT ST, LOS ALAMITOS, CA 90720 M 310.924.5669 E juliansmith@ecolab.com



April 27, 2023

City of Beaumont c/o Grace Wichert 550 E 6<sup>th</sup> Street Beaumont, CA 92223

To Whom It May Concern,

In response to your invitation to bid, RFP Wastewater Treatment Plant Chemical Supply & Deliver – Bid Item #1, R.O. Antiscalant, Nalco Water is looking to offer our PermaTreat PC-191T product. As requested in the bid, please see the references listed below:

#### Reverence #1

Customer Anheuser Busch – Van Nuys

15800 Roscoe Blvd, Van Nuys, VA 91406

Contact Alex Burke – Assistant Brewmaster

(636) 328-5081

Project Relationship Oversees daily production of 1.1MMGPD permeate water for

brewing process. Supervisor for the on-site RO membrane

treatment program.

Service Provided Supply of antiscalant, chlorine scavenger, 3DTrasar automation,

service visits, analytical services (water/membrane), water hygiene testing, safety training, project improvement and RO

performance support.

Personnel Julian Smith, Haris Razvi, Nalco Water ITCs

Project Status Ongoing Fees Paid \$155K/YR

#### Reference #2

Customer CDM Smith

810 Flower Ave, Glendale, CA 91201

Contact Charles Cron – Plant Manager

562-755-0905

Project Relationship Oversees daily process for 7 MMGPD well water for treatment and

remediation.

Service Provided Supply of scale & corrosion inhibitor, analytical services, water

quality monitoring, service visits, safety training, project

improvement and water hygiene support.





Personnel Julian Smith, Haris Razvi, Nalco ITCs

Project Status Ongoing Fees Paid \$225K/YR

#### Reference #3

Customer City of Fresno

6395 Floradora Ave, Fresno, CA 93727

Contact Russell Guilliams – Plant Manager

559-960-4372

Project Relationship Oversees daily operation of potable/wastewater treatment facilities

Service Provided Supply of wastewater and potable water treatment polymers,

safety training, process improvement discovery, service visits,

analytical services

Personnel Julian Smith, Haris Razvi, Nalco ITCs

Project Status Ongoing Fees Paid \$125K/YR

Should you have any questions or comments, please feel free to contact me with the information below. Thanks!

Sincerely,

Julian L Smith ACCOUNT MANAGER - WL186

NALCO Water | An Ecolab Company 10521 HUMBOLT ST, LOS ALAMITOS, CA 90720 M 310.924.5669 E juliansmith@ecolab.com

#### **MEMORANDUM OF INSURANCE**

**DATE** 29-Mar-2023

This Memorandum is issued as a matter of information only to authorized viewers for their internal use only and confers no rights upon any viewer of this Memorandum. This Memorandum does not amend, extend or alter the coverage described below. This Memorandum may only be copied, printed and distributed within an authorized viewer and may only be used and viewed by an authorized viewer for its internal use. Any other use, duplication or distribution of this Memorandum without the consent of Marsh is prohibited. "Authorized viewer" shall mean an entity or person which is authorized by the insured named herein to access this Memorandum via https://marshdigital.marsh.com/marshconnect/viewMOI.action?clientId=894. The information contained herein is as of the date referred to above. Marsh shall be under no obligation to update such information.

PRODUCER Marsh USA Inc. ("Marsh")	COMPANIES AFFORDING COVERAGE	
	co. A National Union Fire Ins Co of Pittsburgh PA	
INSURED Ecolab Inc., Nalco Company LLC 1 Ecolab Place St. Paul Minnesota 55102 United States	со. в AIU Insurance Company	
	co. c New Hampshire Ins. Co.	
	Co. D American International Group UK Ltd	
	Co. E American Home Assurance Company	
	Co. F	

#### COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS MEMORANDUM MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	LIM LIMITS IN USD UNLESS	
A	GENERAL LIABILITY Commercial General Liability Occurrence	3980263 3980264 (Products)	31-Dec-2022 31-Dec-2022	01-Dec-2023 01-Dec-2023	GENERAL AGGREGATE PRODUCTS - COMP/OP AGG PERSONAL AND ADV INJURY EACH OCCURRENCE  FIRE DAMAGE (ANY ONE FIRE) MED EXP (ANY ONE PERSON)	USD 5,000,000 USD 15,000,000 USD 2,000,000 USD 2,000,000 Prem / USD 5,000,000 Products USD 500,000
A A A	AUTOMOBILE LIABILITY Any Auto  EXCESS LIABILITY	4888773 (AOS) 4888775 (MA) 4888774 (VA) 62785848	31-Dec-2022 31-Dec-2022 31-Dec-2022	01-Dec-2023 01-Dec-2023 01-Dec-2023	COMBINED SINGLE LIMIT BODILY INJURY (PER PERSON) BODILY INJURY (PER ACCIDENT) PROPERTY DAMAGE  EACH OCCURENCE	USD 5,000,000 USD 10,000,000
B B B	WORKERS COMPENSATION / EMPLOYERS LIABILITY THE PROPRIETOR / PARTNERS / EXECUTIVE OFFICERS ARE Included	WC080880467 (AOS) (incl Stop Gap ND,WA,WY) WC080880468 (CA) WC080880466 (WI)	31-Dec-2022 31-Dec-2022 31-Dec-2022	01-Dec-2023 01-Dec-2023 01-Dec-2023	WORKERS COMP LIMITS EL EACH ACCIDENT EL DISEASE - POLICY LIMIT EL DISEASE - EACH EMPLOYEE	UDS 10,000,000  Statutory  USD 2,000,000  USD 2,000,000  USD 2,000,000

A	Excess Workers Compensation	XWC1647370 (OH)	31-Dec-2022	01-Dec-2023	WC Statutory Limits;	EL 1M/1M Excess of 1M SIR

The Memorandum of Insurance serves solely to list insurance policies, limits and dates of coverage. Any modifications here to are not authorized.

#### **MEMORANDUM OF INSURANCE**

**DATE** 29-Mar-2023

This Memorandum is issued as a matter of information only to authorized viewers for their internal use only and confers no rights upon any viewer of this Memorandum. This Memorandum does not amend, extend or alter the coverage described below. This Memorandum may only be copied, printed and distributed within an authorized viewer and may only be used and viewed by an authorized viewer for its internal use. Any other use, duplication or distribution of this Memorandum without the consent of Marsh is prohibited. "Authorized viewer" shall mean an entity or person which is authorized by the insured named herein to access this Memorandum via https://marshdigital.marsh.com/marshconnect/viewMOI.action?clientId=894. The information contained herein is as of the date referred to above. Marsh shall be under no obligation to update such information.

PRODUCER	INSURED	
Marsh USA Inc.	Ecolab Inc., Nalco Company LLC	
("Marsh")	1 Ecolab Place	
	St. Paul	
	Minnesota 55102	
	United States	

#### ADDITIONAL INFORMATION

Any person or organization are included as additional insured on the auto liability and general/product liability policies, where required by written contract executed prior to loss. Refer to the attached page "Additional Remarks Schedule" for the applicable additional insured, insurance as primary, waiver of subrogation, notice of cancellation and other endorsements that may apply, where required by written contract. All endorsements are issued on a blanket basis without having to specifically name individual customers or others on an endorsement.

Ecolab Inc.

December 31, 2022 - December 01, 2023

Certificate Description of Operations Language

Named Insured: coverage under the policies shown above apply to Ecolab Inc., its subsidiaries, and business units including but not limited to the following:

Ecolab Inc.

1 Ecolab Place

St. Paul, MN 55102

Bioquell Inc.

Chemstar Corporation

**Ecolab Production LLC** 

Ecolab USA

EcoSure

Ecovation, Inc.

Food Protection Services LLC

Food Safety Specialists, Inc.

FPS Region 3 LLC

Kay Chemical

Lobster Ink US, Inc

Microtek Medical, Inc.

Pest Elimination

Research Fumigation Co., LLC

Royal Pest Solutions, Inc.

Swisher

Purolite LLC

Nalco Company LLC 1601 West Diehl Road Naperville, IL 60563

Abednego Environmental Services, LLC

Cascade Water

ChemStaff

Nalco Industrial Outsourcing

Nalco Production LLC

Nalco U.S. 2 LLC

Nalco Water

Nalco Water Pretreatment Solutions, LLC

Quantum Technical Services, LLC

Additional Insured: Where required by written contract executed prior to loss, the certificate holder and any person or organization are included as additional insured on the auto liability and general liability policies. The following endorsements are attached to the policies shown above:

General Liability (Premises/Ongoing Operations) and General Liability (Products/Completed Operations)

Additional Insured-Vendors CG2015

Additional Insured-Primary Insurance 74434 (Premises/Ongoing Operations); 94955 (Products/Completed Operations)

General Liability (Premises/Ongoing Operations)

Additional Insured-Owners, Lessees or Contractors-Scheduled Person or Organization CG2010

Additional Insured-Managers or Lessors of Premises CG2011

Additional Insured-State of Governmental Agency or Subdivision or Political Subdivision-Permits or Authorizations CG2012

Additional Insured-Designated Person or Organization CG 20 26

Additional Insured-Lessor of Leased Equipment Automatic Coverage CG2034

Additional Insured-Owners, Lessees or Contractors-Automatic Status When Requirement in Construction Agreement with You CG2033

Additional Insured-Owners, Lessees or Contractors-Automatic Status for Other Parties When Required in Writing Construction Agreement CG2038

General Liability (Products/Completed Operations)

Additional Insured-Where Required Under Contract or Agreement 94954

Additional Insured-Owners, Lessees or Contractors-Completed Operations CG2037

Automobile Liability

Additional Insured-Where Required Under Contract or Agreement 87950

Lessor-Additional Insured and Loss Payee CA2001

Insurance Primary as to Certain Additional Insureds 74445

Waiver of Subrogation: Where required by written contract executed prior to loss, waiver of subrogation is granted on the auto liability, general liability and workers compensation and umbrella liability policies. The following endorsements are attached to the policies shown above:

General Liability (Premises/Ongoing Operations) and General Liability (Products/Completed Operations): Waiver of Transfer of Rights of Recovery Against Others to Us CG2404

Automobile Liability: Waiver of Transfer of Rights of Recovery Against Others to Us 62897

Workers Compensation & Employers Liability: Waiver of Our Right to Recover from Others WC000313

Notice of Cancellation: The following endorsements are attached to the policies shown above:

General Liability (Premises/Ongoing Operations), General Liability (Products/Completed Operations) and

Automobile Liability: Limited Advice of Cancellation to Scheduled Entities 108538

Workers Compensation & Employers Liability: Limited Advice of Cancellation Provided Via Email to Entities Other Than the Named Insured 108538

Pesticide or Herbicide Applicator Coverage CG2264 is attached to the general liability (premises) liability policy shown above

Blended Pollution Endorsement is attached to the general liability (premises) policy shown above

Waiver of Governmental Immunity Endorsement CG2414 is attached to the general liability (premises) policy shown above

Alternate Employer Endorsement WC000301, WC000301A are attached to the workers compensation policies shown above

Longshore and Harbor Workers Compensation Act Coverage Endorsement WC000106A is attached to the workers compensation policies shown above

Maritime Coverage Endorsement WC000201B (Jones Act) is attached to the workers compensation policies shown above.

Outer Continental Shelf Lands Act Coverage Endorsement WC000109C is attached to the workers compensation policies shown above.

Umbrella policy territory is WORLDWIDE. Coverage applies excess of retained amounts. This retained limit can be satisfied either through insurance of paid by Ecolab.

Limits shown are in US Dollars (USD)

The insurance evidenced herein and in the referenced policies is not intended to provide coverage beyond that required by written contract, beyond the Named Insured's indemnification obligations or at law.

The Memorandum of Insurance serves solely to list insurance policies, limits and dates of coverage. Any modifications hereto are not authorized.



#### PRODUCT DESCRIPTION AND APPLICATION

PermaTreat PC-191T combines the product reliability of PermaTreat PC-191 with patented TRASAR™ Technology for advanced monitoring and control. PermaTreat PC-191T is a highly effective scale inhibitor whose active components were developed to treat reverse osmosis (RO) systems. PermaTreat PC-191 has shown for over 20 years excellent performance against the following scalants: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, silica and iron.

Scaling and iron fouling of the RO membranes will reduce system performance and lead to premature membrane replacement. Precipitation of scale and deposits build up on the RO membrane, which leads to poor permeate quality, low permeate production, unscheduled downtime, increased water consumption and increased energy costs.

For RO units with a feedwater flowrate of 545m<sup>3</sup>/day (100 GPM) or less, the recommended product would be **PermaTreat PC-391T**.

**PermaTreat PC-191T** is used when the silica level in the brine is less than 185 mg/l at a brine pH of 7.5 and temperature 25°C (77°F). For higher silica levels, the recommended product is **PermaTreat PC-510T**.

#### PHYSICAL & CHEMICAL PROPERTIES

These properties are typical. Refer to the Safety Data Sheet (SDS) for the most current data.

Color	Yellow to Amber Green
Form	Liquid
Odor	Slight ammonia odor
Density	11.33 lb/gal
Specific Gravity @25C (77F)	1.36
pH (Neat)	10.5
Freeze Point	32F (0C)
Freeze-Thaw Recovery	Complete
Viscosity @ 25C (77F)	20 cp
Flash Point	None
VOC	0%
Shelf Life	1 year in an unopened container

#### **ACTIVE CONSTITUENTS**



**Proprietary Sequestering Agent** 

#### **REGULATORY APPROVALS**

Refer to the Regulatory Certifications & Registrations (RCR) document for the most recent information on approvals.

#### **MATERIALS OF COMPATIBILITY**

Material compatibility data are only valid for product storage and feed systems.

Compatible	Not Compatible
Stainless Steel 304	Mild Steel
Stainless Steel 316	Liner Epoxy Phenolic
CPVC Piping	
Polytetraflouroethylene	
Polyethylene (HDPE, LLDPE)	
Polypropylene	
Plasite 4300	
Plasite 7122	
Brass - Admirality	
Neoprene	

All membrane elements based on

Polyamide chemistries including

Thin Film Composite (TFC) membranes when used as directed

#### **DOSAGE AND FEEDING**

**PermaTreat PC-191T MUST** be fed continuously to minimize precipitation of scale and fouling of RO and nanofiltration membranes. The feed point location should be as close to the RO membrane as practical but one that ensures good mixing with the feedwater prior to entering the RO system. Typically, this is before the cartridge filters.

All new installations of PermaTreat PC-191T should begin with a 2 week monitoring phase during which current operating conditions should be maintained (i.e. setting pumps manually based on stroke length and frequency). After this evaluation period, TRASAR-based control of the system should be instituted using the recommended pump.

It is preferred to feed **PermaTreat PC-191T** neat via a closed feed system to prevent contamination from foreign material (a closed feed system being defined as a system in which fluid is moved from a closed storage vessel *into* a treated media without exposure to the atmosphere, except through normal venting or pressure relief devices).

<sup>\*</sup> O-rings are acceptable for static applications. If fitting is opened, O-ring must be replaced.



#### An Ecolab Company

PermaTreat PC-191T can be diluted using RO permeate (only) following these guidelines:

- 1. Use RO permeate for dilution.
- 2. Prepare a fresh antiscalant solution every 3-5 days.
- 3. Inspect the antiscalant day tank before adding the new solution. If needed, the antiscalant tank should be cleaned prior to filling.
- 4. Dilution rates up to a factor 10 are typically applied. Dilution factors higher than 10 will require more attention with respect to the condition of the antiscalant tank (cleaning) and preparation of a new solution (every 1-3 days).
- 5. NaOH can be added to the dilution to increase the pH to 10-11. This is especially recommended for warm environments to prevent bio-growth.

**PermaTreat PC-191T** dosage is dependent on feedwater chemistry, membrane type, and system operating parameters (e.g., recovery, temperature and pressure). These parameters determine the potential foulant that is likely to foul the membrane elements.

To determine the optimum product dosage for your system, it is recommended that you use the **RO Optimizer** chemical projection computer program. This program will select the appropriate scale inhibitor treatment program and calculate the recommended dosage based on the RO design and operation as well as feedwater or brine chemistry. This program will do all calculations for you easily and automatically.

#### **CONSEQUENCES OF OVERFEED**

Overfeed of PermaTreat PC-191T will result in higher chemical cost.

#### **CONSEQUENCES OF UNDERFEED**

Underfeed of **PermaTreat PC-191T** will result in poor scale inhibition. This will lead to fouled RO membranes, and reduced system performance and/or premature membrane replacement. In RO units, scaling is typically seen in the tail-end elements that have the highest reject concentration (4:1 for a 75% recovery system).

Consult your Nalco Water sales engineer for detailed dosage and feeding information.

### **ENVIRONMENTAL AND TOXICITY DATA**

Refer to of the Safety Data Sheet (SDS) for all available mammalian and aquatic toxicity information.

#### **SAFETY AND HANDLING**

Before using **PermaTreat PC-191T** please refer the Safety Data Sheet (SDS) for proper personal protective equipment (PPE) and for health effects.

#### **STORAGE**



# An Ecolab Company

**PermaTreat PC-191T** has a suggested in-plant storage limit of one year. The suggested maximum storage temperature is 100°F (38°C). Refer to the Safety Data Sheet (SDS), for the most current data.

#### **Concentration vs. Viscosity**

2%	0 cP
1%	0 cP
0.5%	0 cP

#### **REMARKS**

If you need assistance or more information on this product, please call your nearest Nalco Water representative.

For **Medical and Transportation Emergencies** involving Nalco Water products, please see the Safety Data Sheet for the phone number.

#### ADDITIONAL INFORMATION

Ecolab, Nalco Water, 3D-TRASAR, TRASAR, PermaTreat, PermaCare, NALCO and the Logo are trademarks of Ecolab USA Inc.

All other trademarks are property of their respective owners.

©2018 Ecolab USA Inc. All Rights Reserved.

#### NALCO Water, An Ecolab Company

ecolab.com/nalco-water

Ecolab, Nalco Water and the logos are Trademarks of Ecolab USA Inc.

©2018 Ecolab USA Inc. All Rights Reserved



# Responsible Care® In



As part of our commitment to Responsible Care the logistics processes are designed to ensure that our chemicals are transported in a manner that minimizes the risk of injury to people moving the goods, to people along the transportation route, and to the environment.

Many Nalco deliveries are made using our company-owned fleet of trucks operated by our Customer Delivery Specialists. Our Delivery Specialists undergo a rigorous initial training program with quarterly follow-up training and annual re-certification.

The third party companies we hire to carry Nalco's goods are expected to operate according to the principles of Responsible Care. Nalco evaluates carriers based on their safety performance and programs, inspection and maintenance procedures for equipment, and selection and training of drivers and support staff. If the carriers cannot meet our standards, they will not be hired. Employees of third party carriers, and people

living in communities along the transportation route, should have access to the same health and safety information as company employees.

We exercise care in planning the movement of Nalco products.

Transportation routes are chosen to minimize the exposure of people and environmentally sensitive areas to the potential hazards caused by chemicals and products.



Nalco Delivery Specialists receive 5 weeks of training with an emphasis on achieving zero defects when making a delivery.

# NALCO EMERGENCY RESPONSE SYSTEM

The goal of the Nalco Emergency Response System is to minimize the human and environmental impact of distribution incidents involving our products and to strive to prevent future incidents. Nalco's philosophy has always been to work closely and maintain open communication with local authorities to ensure that if an emergency response to a Nalco product or raw material spill should become necessary, a smooth response will be commonplace.

In Case of Emergency involving Nalco Products call:

#### United States

CHEMTREC 800-424-9300 or (703) 527-3887 24 hour numbers

#### Canada

1-800-463 3216 or 613-594-2717

(Continued on Reverse Side)

En Cas D'urgence concernant des produits chimiques Nalco, appeler

24 hour number 24 Heures Sur 24

To receive additional information on safe transportation of our products contact your local Nalco representative.

# ZERO DEFECT DELIVERY PROGRAM

Nalco has adopted a Zero Defect Delivery Program for all deliveries. Only the highest quality people, safety, transport and chemical transfer equipment are used to handle delivery to a customer site. Our fleet of Nalco trucks is operated by our Delivery Specialists, each of them highly motivated to carry out their responsibilities with military precision. Employees for the dedicated carriers we use in addition to our fleet have also undergone training in our Zero Defect Delivery Program.



Zero Defect Program means:

- 1. Delivering the **Right** product
- 2. In the **Right** quantity
- 3. Into the **Right** tank
- 4. At the **Right** time
- 5. Using the **Right** safety procedure
- 6. Following the **Right** security procedure
- 7. With **No** contamination
- 8. With No spills

Nalco is up for the challenge in obtaining Zero Defect Deliveries with a system of tank labels consistently displayed on the tanks themselves, bills of lading, and all associated documentation. During delivery, our Delivery Specialists triple-check these labels - if the numbers don't match, we don't unload chemical. We keep it simple; doing it by the numbers, and ensuring zero defects with every delivery.

Nalco, an Ecolab Company

North America: Headquarters – 1601 West Diehl Road • Naperville, Illinois 60563 • USA

Nalco Champion - 7705 Highway 90-A • Sugar Land, Texas 77478 • USA

Europe: Richtistrasse 7 • 8304 Wallisellen • Switzerland

Asia Pacific: 2 International Business Park • #02-20 The Strategy Tower 2 • Singapore 609930 Latin America: Av. das Nações Unidas 17.891 • 6° andar • São Paulo • SP • Brazil • CEP 04795-100

www.nalco.com



PRODUCT

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

# 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : PERMATREAT(R) PC-191T

APPLICATION: REVERSE OSMOSIS ANTISCALANT

COMPANY IDENTIFICATION : Nalco Company

1601 W. Diehl Road Naperville, Illinois 60563-1198

EMERGENCY TELEPHONE NUMBER(S): (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH: 0/1 FLAMMABILITY: 1/1 INSTABILITY: 0/0 OTHER:

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

# 2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

#### 3. HAZARDS IDENTIFICATION

### \*\*EMERGENCY OVERVIEW\*\*

#### **CAUTION**

May cause irritation with prolonged contact.

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE:

Eye, Skin

**HUMAN HEALTH HAZARDS - ACUTE:** 

**EYE CONTACT:** 

May cause irritation with prolonged contact.

SKIN CONTACT:

May cause irritation with prolonged contact.

**INGESTION:** 

May cause gastrointestinal irritation.



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

#### **INHALATION:**

May cause irritation of mucous membranes.

#### SYMPTOMS OF EXPOSURE:

Acute

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic:

A review of available data does not identify any symptoms from exposure not previously mentioned.

#### AGGRAVATION OF EXISTING CONDITIONS:

A review of available data does not identify any worsening of existing conditions.

#### **HUMAN HEALTH HAZARDS - CHRONIC:**

No adverse effects expected other than those mentioned above.

#### 4. | FIRST AID MEASURES

#### **EYE CONTACT:**

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If symptoms persist, call a physician.

#### SKIN CONTACT:

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

#### INGESTION:

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

#### **INHALATION:**

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

#### NOTE TO PHYSICIAN:

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

# 5. FIRE FIGHTING MEASURES

FLASH POINT: None

#### **EXTINGUISHING MEDIA:**

Use extinguishing media appropriate for surrounding fire. This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable.

#### FIRE AND EXPLOSION HAZARD:

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING:

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

# 6. ACCIDENTAL RELEASE MEASURES

#### PERSONAL PRECAUTIONS:

Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Do not touch spilled material. Ventilate spill area if possible.

#### METHODS FOR CLEANING UP:

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

#### **ENVIRONMENTAL PRECAUTIONS:**

Do not contaminate surface water., Do not allow material to contaminate ground water system., Prevent material from entering sewers or waterways.

# 7. HANDLING AND STORAGE

#### **HANDLING:**

Do not take internally. Ensure all containers are labeled. Keep the containers closed when not in use. Avoid eye and skin contact. Keep away from acids and oxidizing agents.

#### STORAGE CONDITIONS:

Protect product from freezing. Store the containers tightly closed.

#### SUITABLE CONSTRUCTION MATERIAL:

HDPE (high density polyethylene), Stainless Steel 304, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use., Polyethylene, Polypropylene, PVC, 100% phenolic resin liner, Epoxy phenolic resin

#### **UNSUITABLE CONSTRUCTION MATERIAL:**

Brass, Buna-N, EPDM, Neoprene, Polyurethane, Viton, Hypalon

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### OCCUPATIONAL EXPOSURE LIMITS:

This product does not contain any substance that has an established exposure limit.

#### **ENGINEERING MEASURES:**

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

#### **RESPIRATORY PROTECTION:**

If significant mists, vapors or aerosols are generated an approved respirator is recommended.



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

HAND PROTECTION:

Nitrile gloves, Butyl gloves, PVC gloves, Neoprene gloves

SKIN PROTECTION:

Wear standard protective clothing.

**EYE PROTECTION:** 

Wear chemical splash goggles.

#### **HYGIENE RECOMMENDATIONS:**

Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Keep an eye wash fountain available.

#### **HUMAN EXPOSURE CHARACTERIZATION:**

Based on our recommended product application and personal protective equipment, the potential human exposure is: Low

# 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid

APPEARANCE Clear Amber - Green

ODOR Ammoniacal

SPECIFIC GRAVITY 1.36
DENSITY 11.33 lb/gal
SOLUBILITY IN WATER Complete
pH (100 %) 10.5

VOC CONTENT 0 % Calculated

Note: These physical properties are typical values for this product and are subject to change.

#### 10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions.

HAZARDOUS POLYMERIZATION:

Hazardous polymerization will not occur.

**CONDITIONS TO AVOID:** 

Freezing temperatures.

MATERIALS TO AVOID:

Strong oxidizing agents Strong acids



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

HAZARDOUS DECOMPOSITION PRODUCTS:

Under fire conditions: Oxides of carbon, Oxides of nitrogen

# 11. TOXICOLOGICAL INFORMATION

The following results are for a similar product.

**ACUTE ORAL TOXICITY:** 

Species LD50 Test Descriptor Rat > 17,800 mg/kg Similar Product

Rating: Non-Hazardous

**ACUTE DERMAL TOXICITY:** 

Species LD50 Test Descriptor Rabbit > 15,800 mg/kg Similar Product

Rating: Non-Hazardous

PRIMARY SKIN IRRITATION:

Draize Score Test Descriptor 0.3 / 8.0 Similar Product

Rating: Slightly irritating

PRIMARY EYE IRRITATION:

Draize Score Test Descriptor

3.7 / 110.0 Product

Rating: Practically non-irritating

**SENSITIZATION:** 

This product is not expected to be a sensitizer.

#### **CARCINOGENICITY:**

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

# **HUMAN HAZARD CHARACTERIZATION:**

Based on our hazard characterization, the potential human hazard is: Low

# 12. ECOLOGICAL INFORMATION

#### **ECOTOXICOLOGICAL EFFECTS:**

The following results are for a similar product.

# **ACUTE FISH RESULTS:**

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	> 330 mg/l	Similar Product
Bluegill Sunfish	96 hrs	> 330 mg/l	Similar Product



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

Channel Catfish	96 hrs	1,212 mg/l	Similar Product
Sheepshead Minnow	96 hrs	8,132 mg/l	Similar Product

#### **ACUTE INVERTEBRATE RESULTS:**

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs		297 mg/l	Similar Product
Grass Shrimp	96 hrs	4,575 mg/l		Similar Product

#### **AQUATIC PLANT RESULTS:**

Species	Exposure	EC50/LC50	Test Descriptor
Green Algae (Selenastrum	96 hrs	20 mg/l	Similar Product
capricornutum)			

#### **CHRONIC FISH RESULTS:**

Species	Exposure	NOEC / LOEC	End Point	Test Descriptor
Rainbow Trout	60 Days	23 mg/l / 47.6 mg/l	Growth	Similar Product

#### CHRONIC INVERTEBRATE RESULTS:

Species	Test Type	NOEC / LOEC	End Point	Test Descriptor
Daphnia magna	3 Brood	25 mg/l / 50 mg/l	Reproduction	Similar Product

#### **AVIAN RESULTS:**

Species	Exposure	LC50	Test Descriptor
Bobwhite Quail	14 Days	> 2,510 mg/kg	Similar Product
Mallard Duck	14 Davs	> 2,510 mg/kg	Similar Product

#### **MOBILITY:**

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

The portion in water is expected to be soluble or dispersible.

#### **BIOACCUMULATION POTENTIAL**

This preparation or material is not expected to bioaccumulate.

# ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

Based on our recommended product application and the product's characteristics, the potential environmental

exposure is: Low



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

If released into the environment, see CERCLA/SUPERFUND in Section 15.

#### 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

# 14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT:

Proper Shipping Name: PRODUCT IS NOT REGULATED DURING

**TRANSPORTATION** 

AIR TRANSPORT (ICAO/IATA):

Proper Shipping Name: PRODUCT IS NOT REGULATED DURING

**TRANSPORTATION** 

MARINE TRANSPORT (IMDG/IMO):

Proper Shipping Name: PRODUCT IS NOT REGULATED DURING

TRANSPORTATION

#### 15. REGULATORY INFORMATION

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

NATIONAL REGULATIONS, USA:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302:

Notification of spills of this product is not required.



PRODUCT

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

#### SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

# SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

# SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product does not contain substances on the List of Toxic Chemicals.

#### TOXIC SUBSTANCES CONTROL ACT (TSCA):

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

This product has been certified as KOSHER/PAREVE for year-round use INCLUDING THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

#### **NSF INTERNATIONAL:**

This product has received NSF/International certification under NSF/ANSI Standard 60 in the reverse osmosis antiscalant category. The official name is "Miscellaneous Water Supply Products." Maximum product application dosage is: 15 mg/l.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances):

None of the substances are specifically listed in the regulation.

#### CALIFORNIA PROPOSITION 65:

This product does not contain substances which require warning under California Proposition 65.

#### MICHIGAN CRITICAL MATERIALS:

None of the substances are specifically listed in the regulation.

#### STATE RIGHT TO KNOW LAWS:

None of the substances are specifically listed in the regulation.

#### NATIONAL REGULATIONS, CANADA:



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

#### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS):

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### WHMIS CLASSIFICATION:

Not considered a WHMIS controlled product.

#### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

#### **AUSTRALIA**

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

#### **CHINA**

All substances in this product comply with the Chemical Control Law and are listed on the Inventory of Existing Chemical Substances China (IECSC).

#### **EUROPE**

The substance(s) in this preparation are included in or exempted from the EINECS or ELINCS inventories

#### JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Ministry of International Trade & industry List (MITI).

#### **KOREA**

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

#### **NEW ZEALAND**

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

#### **PHILIPPINES**

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

#### 16. OTHER INFORMATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

\* The human risk is: Low

\* The environmental risk is: Low



**PRODUCT** 

# PERMATREAT(R) PC-191T

EMERGENCY TELEPHONE NUMBER(S) (800) 424-9300 (24 Hours) CHEMTREC

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

#### REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By: Product Safety Department

Date issued: 06/10/2008 Version Number: 1.8



April 27, 2023

City of Beaumont c/o Grace Wichert 550 E 6<sup>th</sup> Street Beaumont, CA 92223

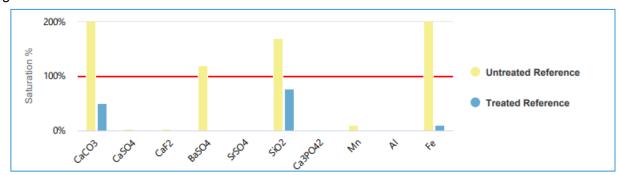
To Whom It May Concern,

In response to your invitation to bid, RFP Wastewater Treatment Plant Chemical Supply & Deliver – Bid Item #1, R.O. Antiscalant, Nalco Water is looking to offer our PermaTreat PC-191T product.

PermaTreat PC-191T combines the product reliability of PermaTreat PC-191 with patented TRASAR™ Technology for advanced monitoring and control. PermaTreat PC-191T is a highly effective scale inhibitor whose active components were developed to treat reverse osmosis (RO) systems. PermaTreat PC-191 has shown for over 20 years excellent performance against the following scalants: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, silica and iron.

Nalco Water's goal is to help customers improve permeate quality and meet production demands. An effective reverse osmosis (RO) chemical program consisting of antiscalants, cleaners and biocides, combined with the right pretreatment processes and chemistry, will enhance system performance while reducing energy and water costs. Adding our cleaning program and appropriate maintenance can also provide substantial returns by extending membrane life, resulting in less downtime and lower total cost of operations.

Nalco Water is proposing an RO feedwater anti-scalant treatment program based on provided operational information, collected water sample analysis and RO optimization modeling. The recommended product, under normal operations, will provide the necessary protection for RO membrane against scaling and fouling.



Please see the attached Nalco Water Reverse Osmosis Optimizer – System performance Report for detailed technical water chemistry information.



#### **Cost Details**

The proposed cost for antiscalant supply to the City of Beaumont is \$35,210/YR (\$3.50/LB @ 9,200 LB + 8.0% energy/fuel surcharge) + TAX, delivered FOB Beaumont, CA This proposed cost is based on an average flow of 1.9 MMGPD. This price does not include alkalinity control or 3DTrasar automation.

While the RFQ outlines an estimated usage of ten (10) totes per year, at ~250 GAL/Tote, our optimized chemical model predicts a much lower volume (820 GAL).

Should you have any questions or comments, please feel free to contact me with the information above. Thanks!

Sincerely,

Julian L Smith ACCOUNT MANAGER - WL186

NALCO Water | An Ecolab Company 10521 HUMBOLT ST, LOS ALAMITOS, CA 90720 M 310.924.5669 E juliansmith@ecolab.com



# **Reverse Osmosis Optimizer - System Performance Report**



Customer Name: CITY OF BEAUMONT

**Customer Contact:** 

Sold To/Ship To: 500111663/150459342

Location: BEAUMONT, USA

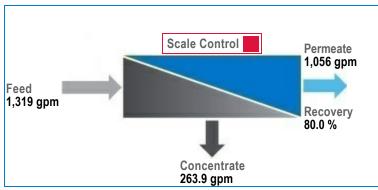
Project: Waste Water Reclaim RO

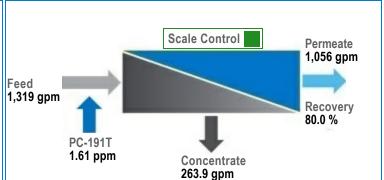
Asset: Waste Water Reclaim RO

System Type: **Brackish**Scenario: **Scenario 1** 

# **Untreated Reference**

# **Treated Reference**

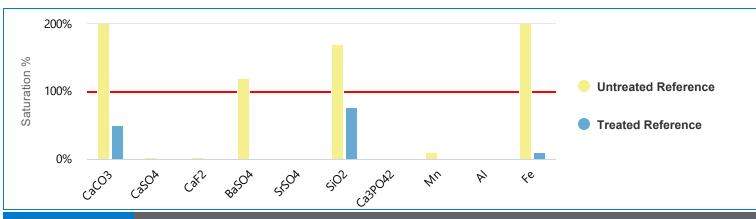




# **Program Summary**

System Parameters	Untreated Reference	Treated Reference			
System Recovery	80.0 %	80.0 %			
Temperature	75.0 °F	75.0 °F			
Product		PC-191T			
Product Dosage in Feed		1.61 ppm			
Product Usage		9,304 lb/year			
System Up Time	24 h/d, 365 d/y				

# **Performance Summary**



Saturation %	CaCO3	CaSO4	CaF2	BaSO4	SrSO4	SiO2	Ca3PO42	Mn	ΑI	Fe	LSI
Untreated Reference	8,800	3.67	3.50	120	0.509	170	0.00	11.0	0.00	200	2.05
Treated Reference	50.3	1.31	0.000583	0.798	0.0170	77.2	0.00	2.20	0.00	9.98	2.05



# **Reverse Osmosis Optimizer - System Performance Report**



Customer Name: CITY OF BEAUMONT

**Customer Contact:** 

Sold To/Ship To: 500111663/150459342 Location: BEAUMONT, USA Project: Waste Water Reclaim RO
Asset: Waste Water Reclaim RO

System Type: Brackish

Scenario: Scenario 1

Water Chamieter	Heite	Dow Motor	Untreated	d Reference	Treated Reference		
Water Chemistry	Units	Raw Water	Feed	Concentrate	Feed	Concentrate	
рН		8.50	8.50	8.28	8.50	8.28	
MAlkalinity	ppm as CaCO₃	240	240	1,170	240	1,170	
PAlkalinity	ppm as CaCO₃	4.14	4.14		4.14		
Ва	ppm	0.0210	0.0210	0.105	0.0210	0.105	
Ca	ppm	48.1	48.1	240	48.1	240	
Fe2	ppm	0.0200	0.0200	0.0998	0.0200	0.0998	
Mg	ppm	16.0	16.0	79.8	16.0	79.8	
Mn	ppm	0.0110	0.0110	0.0549	0.0110	0.0549	
Na	ppm	100	100	498	100	498	
K	ppm	18.0	18.0	89.6	18.0	89.6	
SiO2	ppm	28.0	28.0	140	28.0	140	
Sr	ppm	0.220	0.220	1.10	0.220	1.10	
CI	ppm	248	248	1,230	248	1,230	
F	ppm	0.430	0.430	2.14	0.430	2.14	
SO4	ppm	28.0	28.0	140	28.0	140	

# Program Details

	Untreated Reference					Treated Reference					
Product	Product	Dosage	Usage	Unit	Annual Price		Dosage	Usage	Unit	Annual Price	Difference
	Name	ppm	lb/year	USD/Ib	USD	Name	ppm	lb/year	USD/Ib	USD	USD
Antiscalant						PC-191T	1.61	9,300	3.5	32,600	-32,600
pH Control											

Water Cost		Untreate	d Reference	•					
	Flow	Usage	Cost	Annual Cost	Flow	Usage	Cost	<b>Annual Cost</b>	Difference
Water Cost	gpm	gal/y	USD/1000 gal	USD	gpm	gal/y	USD/1000 gal	USD	USD
Raw Water	1,319	694,000,000			1,319	694,000,000			
Concentrate	263.9	139,000,000			263.9	139,000,000			

# **Other Comments - Best Practices and Recommendations**

# EXHIBIT "B"

CERTIFICATES OF INSURANCE AND ENDORSEMENTS