

Oneida County Department of Public Works

Division of Buildings and Grounds
5999 Judd Road, Oriskany, New York 13424-3907

Request For Proposal
For

**WATER TREATMENT CONSULTANT
COOLING TOWERS, STEAM BOILERS & CLOSED LOOP SYSTEMS**

March 2022

REQUEST FOR PROPOSAL

1. Introduction

1.1. The County of Oneida (“County”) is soliciting proposals from qualified Consulting Firms (“Consultant”) with demonstrated experience in similar projects. This Request for Proposal (RFP) is for all Consulting Services required to maintain a reliable water treatment program for specified systems. Consultant shall be responsible for controlling scale, corrosion, and biological growth within all systems treated.

1.2. Responses to this RFP must be submitted electronically in Adobe PDF format. Proposals can be submitted via email to pcassidy@ocgov.net or via mail on a CD to:

Oneida County Department of Public Works

Division of Buildings and Grounds

5999 Judd Road

Oriskany, New York 13424

Attn: Patrick Cassidy, Deputy Commissioner

1.3. Packages containing proposals must be marked “Water Treatment Consultant”.

1.4. Proposals are due at the above address no later than 2:00 p.m. on Friday, April 8, 2022.

1.5. Contact Kevin Neiderer at 315-793-6211 to coordinate site visits/inspections.

1.6. Technical questions relating to this proposal should be directed to Patrick Cassidy at 315-793-6226.

2. Project Description

2.1. County requires the services of a Consultant for the treatment of cooling towers, steam boilers, and closed loop water systems.

2.2. The agreement will cover the treatment and quality control of the designated steam boilers, cooling towers, and closed loop systems. Systems can be added or removed at any time, if agreeable with both parties, to this Statement of Work.

2.3. Consultant will be responsible for maintaining a reliable water treatment program for the specified water systems. The Consultant shall control scale, corrosion and microbiological growth within all treated systems. All services shall be provided in compliance with and as required by New York State regulations and ASHRAE 188 standards.

3. Scope of Services

3.1. The Consultant shall provide chemicals and service by a dedicated water treatment technician on a monthly basis plus on an emergency basis. Consultant shall have immediate access to a full laboratory and technical support group.

3.2. The Consultant shall have a minimum of 10 years of experience in the water treatment business. In addition, the water treatment technician must have at least 5 consecutive years of employment with

consultant and be located no more than 90 miles from the Oneida County Office Building located at 800 Park Ave., Utica, NY 13501. There must also be an alternate water treatment technician assigned and familiar with the agreement.

3.3. Laboratory Requirements

3.3.1. Consultant shall have direct access to laboratory facilities capable of performing a complete range of analytical work to assist with monitoring, control, and troubleshooting of the facility's water and steam systems.

3.3.2. The laboratory facilities shall be equipped to run the following: water analyses, deposit analyses, corrosion coupon analyses, microbiological analyses, ion exchange resin analyses, and metallurgical analyses. Consultant shall submit a sample analytical report for each of the above.

3.3.3. Analytical laboratory capabilities shall include the following equipment as a minimum requirement: Atomic Absorption Spectrophotometer (AA), X-ray, Fluorescence, Spectrophotometer, High-Pressure Liquid Chromatograph (HPLC), Gas Chromatograph/Mass Spectrometer (GCMS), Infrared Spectrophotometer (IR), Scanning Electron Microscope-Energy Dispersive Spectroscopy (SEM-EDS), Nuclear Magnetic Resonance Spectrophotometer (NMR), Particle Size Analyzer, Microscopes. Consultant shall provide examples of analytical reports that demonstrate use of each of the above.

3.3.4. Treatment chemicals used shall meet the attached detailed chemical specifications for use in the specified systems. All chemicals used must meet all EPA regulations (local, state and federal) when used in proper dilution rates. All chemicals used must meet FDA and USDA requirements. Consultant shall demonstrate this in their proposal.

3.3.5. Consultant shall provide safety information, including Material Safety Data Sheets, for all chemicals used in the water treatment program. In addition, Consultant shall provide instructions for use and disposal of chemicals.

3.3.6. Consultant shall provide, at no charge, at the initiation of the water treatment program a complete computer generated report for the specified systems detailing water and makeup water analysis for hardness, chlorides, alkalinity, dissolved solids, pH, conductivity, and any special conditions. In addition, this report will detail control maximum and minimum ranges for cycles of concentration, chlorides, alkalinity, dissolved solids, pH, conductivity, microbial count, coupon or probe corrosion rate and chemical treatment residuals. It will also include maximum evaporation rate, blowdown rate and makeup rate. The computer report will detail maximum and minimum product usage ranges for guidelines.

3.3.7. The Consultant shall deliver chemicals in approved storage containers in compliance with local and state regulations. Empty drums and unused chemicals shall be picked up and disposed by

Consultant, at no additional cost. This will insure that products will be available when needed. In addition, Consultant will meet all County regulations on chemical handling and storage.

3.4. Feed Water Analysis

3.4.1. Feed water analyses shall be performed as specified in section 3.10 to determine and maintain proper chemical feed. This will maximize cycles of concentration to reduce the cost of energy & chemicals.

3.5. Cooling Systems

3.5.1. Consultant shall provide the following services not less than on a monthly basis unless otherwise agreed to in writing by Consultant and County.

3.5.1.1. Monthly testing of systems shall include, but is not limited to; system water analysis, feed water analysis, treatment recommendations, and any additional comments.

3.5.1.2. Determine and maintain the appropriate chemical feed, chemical residual, blowdown, and makeup water rates for all designated systems to insure proper operation.

3.5.1.3. Inspect water systems and provide chemical means to control biological growth within the water systems. This shall include a biocide or a combination of biocides, for both fungi and algae in cooling towers. The biocides used shall be EPA registered and shall meet the local city, county, state and federal disposal regulations when used at proper levels.

3.5.1.4. Monthly service inspection of systems shall include, but not be limited to: visual inspection, water analysis, treatment recommendation and any additional comments. During these service inspections, the equipment will be visually inspected and any mechanical or chemical related problem or potential problems will be reported to the necessary facility personnel. Also any recommendation for changes in equipment or service that will improve the system's efficiency will be reported to County. It will be County's responsibility to correct or repair mechanical and equipment malfunctions. Additional inspections can and will be performed when requested by County and agreed to by Consultant.

3.5.1.5. Check adjustment of cooling tower basin float valves and report malfunctions to County. County shall be responsible for adjustment and/or the replacement of defective valves and assemblies.

3.5.1.6. Perform tests listed in Section 3.10 on the water in each system.

3.5.1.7. Bacteriological test to determine bacteria level will be conducted as specified in Section 3.10.

3.5.1.8. Monitor tower water systems so that corrosive water conditions can be tracked to provide the most effective chemical activity with the least amount of corrosion exposure and damage. This

will be conducted by the use of the appropriate corrosion coupon as specified in Section 3.10. The Consultant's Analytical Laboratories will forward written reports.

3.5.1.9. If draining a tower system becomes necessary, Consultant shall advise on chemical or mechanical requirements necessary to maintain the integrity of the system.

3.5.1.10. If mechanical or automatic feeding devices and controls are used, Consultant shall not be held liable for damages as a result of such equipment malfunctioning.

3.5.1.11. Consultant water treatment technician shall maintain and track chemical usage. An alternate water treatment technician shall be familiar with all locations.

3.5.1.12. Consultant shall have material for contingency use to clean systems if operating problems develop due to fouling or biological growth.

3.5.1.13. Whenever the system being treated is to be inspected for any reason, Consultant water treatment technician will be available for the inspection, if notified by the County fourteen days in advance of the time the system will be open for inspection.

3.5.1.14. In addition to the above services, Consultant's water treatment technician shall provide recommendations for the following.

3.5.1.14.1. System treatment at shutdowns.

3.5.1.14.1.1. Brushing out and cleaning sump of debris. If scale is present, provide recommend chemical cleaning. Cleaning shall be performed by County.

3.5.1.14.1.2. Inspection of cooling towers for need of repair.

3.5.1.14.1.3. Inspection of towers for rust.

3.5.1.14.1.4. Unusual noises and vibrations of mechanical parts within the system.

3.5.1.14.1.5. Integrity of cooling tower sump at the fill up.

3.5.1.14.1.6. Spray nozzles and distribution plates.

3.5.1.14.1.7. Blowdown line and rate adjustment.

3.5.1.14.1.8. Insure proper operation during the high load season.

3.5.1.14.1.9. Main pump intake maintenance.

3.5.1.14.1.10. Development of rust or microbiological growth.

3.5.1.14.1.11. Cleaning towers semi-annually. Recommendations shall include de-scaling and removal of algae, dirt and debris. Cleaning shall be performed by County.

3.5.1.14.2. Proper tower shut down.

3.5.1.14.3. Chemical cleaning and flushing, if necessary, condensers and-or complete systems.

3.5.1.14.4. Cleaning and flushing tower sumps and towers.

3.5.1.14.5. Repair or replacement of tower or system parts that may affect chemical treatment.

3.5.1.14.6. Draining of tower and related systems where indicated.

3.5.1.14.7. Repairs to improve the efficiency of the system.

3.5.1.14.8. Recharging condenser system with treated water, if stored wet, to prevent formation of corrosion during shut down period.

3.5.2. Legionella Management and Maintenance Plan

3.5.2.1. Consultant shall provide all labor, materials, equipment, chemicals, schedules, testing, and chemical treatment plans in full compliance with New York State Department of Health regulations and in conformance with applicable ASHRAE standards.

3.5.2.2. Consultant shall review County's Legionella management and maintenance plan and make recommendations for general compliance and incorporation of water treatment program details. Reviews shall be performed annually and when regulatory changes are initiated. Consultant shall not be responsible for compliance.

3.6. Heating/Steam Producing Boiler Systems

3.6.1. Consultant shall provide the following service not less than on a monthly basis unless agreed to by Consultant and County in writing.

3.6.1.1. Monthly testing of systems shall include, but is not limited to; system water analysis, feed water analysis, treatment recommendations, and any additional comments.

3.6.1.2. 3.5.1.2. Determine and maintain the appropriate chemical feed, chemical residual, blowdown, and makeup water rates for all designated systems to insure proper operation.

3.6.1.3. Monthly service inspection of systems shall include, but not be limited to: visual inspection, water analysis, treatment recommendation and any additional comments. During these service inspections, the equipment will be visually inspected and any mechanical or chemical related problem or potential problems will be reported to the necessary facility personnel. Also any recommendation for changes in equipment or service that will improve the system's efficiency will be reported to County. It will be County's responsibility to correct or repair mechanical and equipment malfunctions. Additional inspections can and will be performed when requested by County and agreed to by Consultant.

3.6.1.4. Perform tests listed in Section 3.10 on the water in each steam system.

3.6.1.5. Monitor condensate steam lines so that normally corrosive water conditions can be tracked to provide the most effective chemical activity with the least amount of corrosion exposure and damage. This will be accomplished by the use of appropriate corrosion coupons when required by the results of vacuum deposit testing. Ferric type deposits are unacceptable and if present Consultant will make necessary corrections to their treatment program. Corrections must

be approved by County. Consultant's analytical laboratories will forward written reports. This shall be performed at no additional charge.

3.6.1.6. Consultant shall maintain inventory of a consistent and readily available supply of necessary chemicals, reagents, equipment, etc.

3.6.1.7. Provide water analysis as specified in Section 3.10 on makeup water to insure efficient chemical treatment.

3.6.1.8. County shall be responsible to replace and repair chemical feed equipment as needed.

3.6.1.9. Whenever the system being treated is to be inspected for any reason, Consultant water treatment technician will be available for the inspection, if notified by the County fourteen days in advance of the time the system will be open for inspection.

3.6.1.10. Consultant shall provide information and chemicals for preparation of heating systems for wet and dry standby or for "laying up" boilers for long periods of non-use.

3.7. Chemical Requirements

3.7.1. Consultant shall provide detailed summary of proposed treatment chemicals including MSDS sheets, application methods, application rates, equipment requirements, special handling requirements, and etcetera.

3.7.2. Chemicals shall be provided in sufficient quality and quantity to adequately control scale, corrosion and microbiological growth within all treated systems. Consultant shall provide, at no additional cost, alternate chemicals and chemical treatment methods if currently applied chemicals are ineffective.

3.7.3. Boiler and steam system treatment at 5999 Judd Road, Oriskany and 321 Main Street, Utica, shall be limited to BoilerShield-386 (MSDS sheet attached as **Exhibit H**) or equal.

3.8. Equipment Provision

3.8.1. Upon initiation of a consulting services agreement, Consultant shall supply all new or replacement chemical feed equipment required. Equipment may include, but not be limited to, computerized systems, digital controllers, chemical feed pumps, water meters with chemical feed hookup, and any other equipment related to water treatment. Cost of all equipment shall be included in monthly rate for initial contract term. County shall be responsible for maintenance, repair or replacement of all equipment currently installed or installed by Consultant.

3.8.2. Upon request, Consultant shall provide County test equipment and supplies including, but not limited to, nitrate test kit, conductivity meter/pen, refractometer, PH meter/pen, and bromine meter/pen. Consultant shall be reimbursed in accordance with unit prices established in **Exhibit F** attached hereto.

3.9. Additional Provisions

3.9.1. If required, County will provided an area on site designated as an "on-site field evaluation center". Running water and electricity shall be provided by County for use in conducting water analysis. Consultant will maintain the cleanliness of this area. Any safety standards established within the areas where work or storage is performed will be followed by County and Consultant.

3.9.2. All water samples for analysis will be drawn from the systems and all analysis shall be conducted by Consultant personnel on location for each facility.

3.9.3. Cost of providing and maintaining proper chemical treatment levels systems is based upon the absolute integrity of the systems. County shall be responsible for the integrity of the system.

3.9.4. If requested by County, The Consultant shall provide, at an additional charge, an inhibited acid and will provide at no charge the procedures required to chemically remove scale from the condensers of any cooling system designated for cleaning. Consultant shall closely monitor operations to insure that there will be no additional damage to any equipment as a result of the descaling operation.

3.9.5. County will inform Consultant of priority installation and start-up of the systems. Each system will be put in operation according to the designated priority.

3.9.6. Consultant will make recommendations for the purchase of additional necessary equipment that is not normally available from the Consultant.

3.9.7. No liability to the Consultant will result if recommended mechanical corrections of malfunctioning equipment or the maintenance of the water system bleed rate as determined and established by Consultant are not maintained by County. Normal wear and tear of machinery, weather related damages, etc., within each system will not be the liability of the Consultant.

3.9.8. The Consultant will conduct annual training programs for County personnel concerning the instituted water treatment program, the relationship and compatibility of the products in use and the importance of a dedicated water treatment program. These programs will be established and conducted at intervals agreed to by County. Programs will be provided at no additional charge.

3.9.9. The Consultant shall supply computer generated service reports and maintain trend analyses on all systems as specified in Section 3.10.

3.9.10. Trend reports shall be reviewed quarterly with County.

3.9.11. County shall provide eddy current testing if required.

3.10. Specified System Testing and Frequency

3.10.1. Make-up Water Testing

3.10.1.1. Conductivity/Monthly

3.10.1.2. Hardness/Monthly

3.10.1.3. Alkalinity/Monthly

3.10.1.4. Chlorides/Monthly

3.10.2. Cooling Tower Testing

3.10.2.1. Conductivity/Monthly

3.10.2.2. Scale-Corrosion Inhibitor/Monthly

3.10.2.3. Free Halogen/Monthly

3.10.2.4. Visual/Monthly

3.10.2.5. ORP/Monthly

3.10.2.6. Hardness/Monthly

3.10.2.7. Iron/Monthly

3.10.2.8. Bacterial Cultures/As required by New York State Department of Health Regulations.

3.10.3. Steam Boiler Testing

3.10.3.1. Conductivity/Monthly

3.10.3.2. Sulfite/Monthly

3.10.3.3. P-Alkalinity/Monthly

3.10.4. Feed Water, Condensate and Softener Systems

3.10.4.1. Conductivity/Monthly

3.10.4.2. Ph/Monthly

3.10.4.3. Hardness/Monthly

3.10.4.4. Iron/Monthly

3.11. Summary of Services Required as Part of Contract

3.11.1. Determination of the appropriate chemical feed, blowdown and makeup water rates for all designated systems to insure proper operation.

3.11.2. Service of the appropriate systems includes visual inspections plus a written report detailing the on-site system water analysis, suggested revised treatment recommendations, corrective actions needed or taken and detailing potential mechanical or chemical problems. Monthly trend analysis reports shall be maintained. Reports shall be reviewed with County.

3.11.3. Consultant shall assign a dedicated account manager.

3.11.4. Consultant will have an approved laboratory for analysis of makeup and system water plus analysis of sludge, scale sample, metallic samples, etc., on an as needed basis.

3.11.5. Test kits for monitoring designed system parameters shall be provided.

3.11.6. Biological testing as specified in Section 3.10.

3.11.7. Training will be performed annually to educate employees in the proper maintenance of both open and closed cooling water systems, steam boilers. Training shall include written certificates of attendance for employees who attend, at no charge.

3.11.8. Provide at no charge computer generated reports detailing makeup water conditions, system parameters, and interpreting this information to provide the most adequate and economically possible complete water treatment program for cooling water systems and steam boilers. Reports will be generated as needed to provide the continuance of this program as determined by County. Quarterly and Annual trend Analyses Reports shall be reviewed with County.

4. Terms and Conditions

4.1. The Projects outlined in this proposal shall be awarded by County.

4.2. County shall not be liable for costs incurred prior to the issuance of an executed written Agreement and/or written Notice to Proceed.

4.3. Consultants responding to this RFP may be designated for an interview with the County.

4.4. Contents of the successful Consultant's proposal may become part of the contractual obligations if deemed appropriate by the County.

4.5. County reserves the right to accept or reject any or all proposals when it is considered to be in the best interest of the County to do so.

4.6. Successful Consultant shall not discriminate against any individual in accordance with applicable federal, state or local laws.

4.7. Any Consultants and/or sub-consultants qualified and certified as Minority/Women Business Enterprises are encouraged to submit proposals. The awarded Consultant and/or sub-consultants shall make a good faith effort to ensure that M/MBE are given the maximum opportunity to compete for any sub-contracts.

4.8. Agreement entered into, as a result of this RFP, shall be between the selected Consultant and the County.

4.9. Consultant shall be required to enter into a Professional Services Agreement with the County, inclusive of insurance requirements, set forth herein, and any attachments thereto. The County reserves the right to modify the proposed Agreement before final execution.

4.10. Should County's proposed Agreement be unacceptable to Consultant, County reserves the right to select another Consultant.

4.11. Consultant shall comply with and certify that the proposal was made without collusion pursuant to General Municipal Law § 103-d, attached hereto as **Exhibit "A."**

4.12. Consultant shall comply with and certify that the proposal was made pursuant to General Municipal Law 103-G, Iranian Energy Divestment Sector, attached hereto as **Exhibit “B.”**

4.13. Consultant shall comply and certify the County’s Solid Waste Management Certification pursuant to Article 12 of the County’s Procurement Policy, attached hereto as **Exhibit “C.”**

5. Payment for Services

5.1. Consultant shall provide the services detailed in Section 2 and Section 3 at a fixed monthly charge for a three-year period. An annual percentage increase will be added each year equal to the lesser of previous year Consumer Pricing Index or 2.5%. Monthly charge shall include all labor, materials, equipment, chemicals, testing services, reporting, and any other expense associated with providing specified services.

5.2. There shall be no additional compensation for reimbursable expenses. The cost of all reimbursable expenses incurred shall be included in the fixed monthly charge.

6. Additional Services

6.1. Consultant shall provide the following additional services when requested by County.

6.1.1. Dip slides or heterotrophic plate count.

6.1.2. Legionella culture test.

6.1.3. 50 Gallon 35%/65% Glycol Mixture

6.1.4. Online cooling tower disinfection, including all materials, labor, and additional chemicals, per NYSDOH guidelines.

6.1.5. Online cooling tower decontamination, including all materials, labor, and additional chemicals, per NYSDOH guidelines.

6.1.6. Cooling tower system decontamination, including all materials, labor, and additional chemicals, per NYSDOH guidelines.

7. Term

7.1. Agreement term shall be 36 months and shall begin upon Agreement execution.

8. Termination

8.1. Any agreement reached by County and Consultant can be terminated with a 30 day written notice.

There will be no contractual requirements to fulfill or obligations to meet other than the normal expectations of this business transaction. County shall compensate Consultant balance due for the cost of installed equipment per paragraph 3.8.

9. Indemnification

9.1. Obligations of the Consultant under this section shall survive any expiration or termination of this Agreement, and shall not be limited by any enumeration herein of required insurance coverage.

9.2. Consultant agrees that it shall defend, indemnify and hold harmless the County from and against all liability, damages, expenses, costs, (including, without limitation, attorneys' fees and expenses) causes of actions, suits, claims or judgments arising, occurring or resulting from property damage, personal injuries or death to persons arising, occurring or resulting from or out of the Services of the Consultant and its sub consultants, agents, servants, or employees, and from any loss or damage arising, occurring or resulting from the acts or failure to act or any default or negligence by the Consultant or failure on the part of the Consultant to comply with any of the covenants, terms or conditions of this Agreement. The obligations of the Consultant under this Article shall survive any expiration or termination of this Agreement, and shall not be limited by any enumeration herein of required insurance coverage.

9.3. Consultant shall be solely responsible for all physical injuries or death to its agents, servants, volunteers, employees, sub consultants or to any other persons, or damage to any property sustained during its operations and work under this Agreement, resulting from any act of omission or commission or error in judgment of any of its officers, trustees, servants or independent sub consultants, and shall hold harmless and indemnify the County from liability upon any and all claims for injuries to persons or damages to property on account of any neglect, fault or default of the Consultant, its officers, trustees, agents, servants, volunteers or sub consultants. The Consultant shall be solely responsible for the safety and protection of all of its employees, volunteers, sub consultants or other agents whether due to the negligence, fault or default of the Consultant or not.

10. Insurance Requirements

10.1. As part of its obligation to indemnify, defend and hold harmless the County, its officers, agents, employees, as set forth above, the Consultant agrees to obtain and maintain in full force and effect, for the term of this Agreement, insurance coverage as described below.

10.2. Consultant shall purchase and maintain insurance of the following types of coverage and limits of liability with an Insurance carrier qualified and admitted to do business in New York State. The insurance carrier shall have at least an A- (excellent) rating by A.M. Best.

10.3. Consultant shall not commence Services until such insurance has been approved by the County. The certificates shall be on forms approved by the County. Acceptance of the certificates shall not relieve the Consultant of any of the insurance requirements, nor decrease the liability of the Consultant. The County reserves the right to require the Consultant to provide insurance policies for review by the County. The Consultant grants the County a limited power of attorney to communicate with the Consultant's insurance provider and/or agent for the express purpose of confirming the coverages required hereunder.

10.4. Certificates of Insurance: Attached to each certificate of insurance shall be a copy of the Additional Insured Endorsement that is part of the Consultant's Commercial General Liability Policy, Auto Liability

Policy, and Excess/Umbrella Policy. These certificates and the insurance policies required below shall contain a provision that coverage afforded under the policies will not be cancelled or allowed to expire until at least thirty (30) days prior written notice has been given to the County.

10.5. Commercial General Liability Insurance (CGL): The Consultant agrees that it will, at its own expense, at all times during the term of this Agreement, purchase and maintain in force a policy of insurance which will insure against liability for property damage and/or injury/death with regard to any property or persons. The liability and property damage coverage of such insurance shall not be less than One Million Dollars (\$1,000,000) per occurrence and such insurance shall not be less than Three Million Dollars (\$3,000,000) annual aggregate. The Consultant agrees to have the County added to said insurance policy and /or policies as a named additional insureds, on a primary, non-contributory basis, as their interest may appear. Coverage for the additional insureds shall apply as primary and non-contributing insurance before any other insurance or self-insurance, including any deductible or self-insured retention, maintained by or provided to, the additional insureds.

10.5.1. Coverage for the additional insureds shall include completed operations.

10.5.2. The CGL coverage shall include a General Aggregate Limit and such General Aggregate Limit shall apply separately to each Project, if applicable.

10.5.3. CGL coverage shall be written on ISO Occurrence form CG 00 01 1001 or a substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contracts, products- completed operations, XCU (explosion, collapse and underground coverage) and personal and advertising injury.

10.5.4. There shall be no exclusions to contractual liability for Employee Injuries (i.e. Labor Law Exclusions).

10.5.5. The Contactor shall maintain CGL coverage for itself and the additional insureds for the duration of the Project and maintain Completed Operations coverage for itself and each additional insured for at least 3 years after completion of the Services.

10.6. Auto Liability Insurance: The Consultant agrees that it will, at its own expense, at all times during the term of this Agreement, purchase and maintain in force a policy of Business Auto Liability Insurance in an amount equal to or greater than One Million Dollars (\$1,000,000) for the term of this Agreement. Business Auto Coverage must include coverage for liability arising out of all owned, leased, hired and non-owned automobiles. The Consultant agrees to have the County and the Consultant added to said insurance policy/policies as named additional insureds, on a primary, non-contributory basis, as their interests may appear.

10.7. Excess/Umbrella Liability Insurance: The Consultant agrees that it will, at its own expense, at all times

during the term of this Agreement, purchase and maintain in force a policy of Umbrella/Excess Liability Insurance in an amount not less than One Million Dollars (\$1,000,000) per occurrence and such insurance shall not be less than Three Million Dollars (\$3,000,000) annual aggregate. The Consultant agrees to have the County and the Consultant added to said insurance policy/policies as named additional insureds, on a primary, non-contributory basis, as their interests may appear. Umbrella coverage for such additional insureds shall apply as primary and non-contributing before any other insurance or self- insurance, including any deductible or self-insured retention, maintained by, or provided to, the additional insureds other than the CGL, Auto Liability, and Employers Liability maintained by the County.

10.8. Professional and Pollution Liability Insurance: The Consultant shall maintain a Professional and Pollution liability policy and will provide the County with proof of coverage in the amount of One Million Dollars (\$1,000,000) per claim and Three Million Dollars (\$3,000,000) annual aggregate.

10.9. Workers Compensation and Employers Liability Insurance: The Consultant agrees that it will, at its own expense, at all times during the term of this Agreement, purchase and maintain in force a policy of insurance, written by one or more insurance carriers licensed to do business in the State of New York, and having offices within the State of New York, which will insure against all claims under New York State Worker's Compensation Law.

10.10. Consultant shall require any sub consultants to procure and maintain insurance coverage of the same type and in the same amounts with the same endorsements required of the Consultant in the above Insurance Requirements paragraphs

10.11. WAIVER OF SUBROGATION The Consultant waives all rights against the County and the Consultant and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by Commercial Umbrella Liability, Business Auto Liability or Workers Compensation and Employers Liability Insurance maintained per requirements stated above.

11. Independent Contractor Status

11.1. It is expressly agreed that the relationship of the Consultant to the County shall be that of an Independent Contractor. The Consultant shall not be considered an employee of the County for any purpose including, but not limited to, claims for unemployment insurance, worker's compensation, retirement, or health benefits. The Consultant, in accordance with his status as an independent contractor, covenants and agrees that he will conduct himself in accordance with such status, that he will neither hold himself out as, nor claim to be, an officer or employee of the County by reason thereof and that he will not by reason thereof, make any claim, demand or application to or for any right or privilege applicable to an officer or employee of the County.

12. Choice of Law

12.1. This Agreement shall be construed and enforced in accordance with the laws of the State of New York.

13. Special Conditions

13.1. Qualification Statement - The Consultant shall be required to submit documentation describing the Consultant's single most relevant Project supporting that firm's belief that theirs is the best choice for the County. This may include specific "qualifying" information requested by the County and other documentation the firm considers relevant. You may also submit additional supporting written or visual materials, brochures, etc., if it helps to supplement the firm's credentials.

13.2. Project Proposals Shall Include

13.2.1. Understanding of the Scope of the Project.

13.2.2. All supporting information requested in this document.

13.2.3. Team members, their roles, and applicable work experience.

13.2.3.1. Name, Location, employment history, and qualifications of water treatment technician and designated alternate water treatment technician.

13.2.4. Consultant Qualifications.

13.2.5. Proposed project schedule, including major tasks and target completion dates.

13.2.6. Technical approaches in accomplishing the Work/Services.

13.2.7. Signed **Exhibit A** – Non Collusion Certification

13.2.8. Signed **Exhibit B** – Iran Divestment Act Certification

13.2.9. Signed **Exhibit C** – Solid Waste Certification

13.2.10. Signed **Exhibit D** – Tropical Hardwoods Certification

13.2.11. Signed **Exhibit E** – Sexual Harassment Certification

13.2.12. Signed **Exhibit F** – Equipment Unit Prices Proposal Sheet

13.3. **Exhibit G**, Standard Contract Conditions, attached hereto, shall become part of contract(s) with County.

13.4. **Exhibit H**, MSDS Sheet attached hereto, provided for reference.

14. Selection Process

14.1. The County shall review all proposals received and reserve the right to select Consultant(s) for further presentation and interview.

14.2. The following criteria shall be used in the selection process.

14.2.1. Approach to Project:

14.2.1.1. Understanding of Project scope

14.2.1.2. Understanding of implied or required activities

14.2.1.3. Reasonableness of proposed approach

14.2.1.4. Proposed Work/Services schedule

14.2.2. Experience/Qualifications of Project Personnel and Consultants:

14.2.2.1. Previous experience with governmental agencies.

14.2.2.2. Previous experience with similar projects.

14.2.2.3. Project staff experience with similar projects

14.2.2.4. Project management expertise.

14.2.3. Credentials of Consultant/Firm:

14.2.3.1. Reference/client assessment of previous performances

14.2.3.2. Demonstrated ability to keep projects on schedule

14.2.3.3. Firm's most significant relevant Project

14.2.4. Level of Effort

14.2.4.1. Commitment of assigned personnel to the project

14.2.4.2. Firm's current workload and availability

14.2.5. Proposal Fee

14.3. The County shall prepare the Agreement with the Consultant selected. Any further modifications/amendments to that Agreement shall be negotiated with the County.

14.4. Should the County's proposed Agreement be unacceptable to the firm selected, the County reserves the right to select another firm.

15. Responsibility of Consultant

15.1. All Consultants shall be responsible. If it is found that a proposer is irresponsible (e.g., has not paid taxes, is not a legal entity, submitted a proposal without an authorized signature, falsified any information in the proposal package, etc.), the proposal shall be rejected.

EXHIBIT A - PUBLIC CONTRACT NON COLLUSION STATEMENT

The following section is an excerpt from the General Municipal Law:

§103-d Statement of non-collusion in bids and proposals to political subdivision of the state.

1. Every bid or proposal hereafter made to a political subdivision of the state or any public department, agency or official thereof where competitive bidding is required by statute, rule, regulation or local law, for work or services preformed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under the penalties of perjury:
Non-collusive bidding certification.

(a) By submission of this bid, each bidder and each person signing on behalf of any bidder, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

(1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor:

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly to any other bidder or to any competitor:

(3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

(b) A bid shall not be consider for award nor shall any award be made where (A), (1), (2) and (3) above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. Where (A), (1), (2), and (3)

above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the Purchasing unit of the political subdivision, public department, agency or official thereof, to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price list, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price list for such items, or (c) has sold the same items to other customers at the same price being bid, does not constitute, without more, a disclosure within the meaning of subparagraph (A).

2. Any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a corporate bidder for work or services preformed or to be performed or good sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

This is to certify that we have not been disqualified to contract with any municipality and we are in a position to accept any contract subject to the provision of section 103-d of the General Municipal Law.

(s)

Legal name of person, firm or Corporation

By: _____

Title

Dated: _____

SIGN AND RETURN WITH PROPOSAL

EXHIBIT B
CERTIFICATION OF COMPLIANCE WITH THE IRAN DIVESTMENT ACT

Pursuant to New York State Finance Law § 165-a and New York General Municipal Law § 103-g the Office of General Services (OGS) is required to post on its web site <http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf> a list of persons who have been determined to engage in investment activities in Iran (“the List”) as defined in that Act.

By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each Bidder or Contractor, or any person signing on behalf of any Bidder or Contractor and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the OGS website, that to the best of its knowledge and belief, that each Bidder or Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to State Finance Law § 165-a(3)(b).

Additionally, Bidder or Contractor is advised that once the Prohibited Entities List is posted on the OGS website, any Bidder or Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to this solicitation must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

During the term of the Contract, should the County receive information that a Bidder or Contractor is in violation of the above-referenced certification, the County will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that he, she or it has ceased engagement in the investment which is in violation of the Iran Divestment Act of 2012 within ninety (90) days after the determination of such violation, then the County shall take such action as may be appropriate, including, but not limited to, imposing sanctions, seeking compliance, recovering damages or declaring the Bidder or Contractor in default.

The County reserves the right to reject any bid or request for assignment for a Bidder or Contractor that appears on the Prohibited Entities List prior to the award of a contract and to pursue a responsibility review with respect to any Bidder or Contractor that is awarded a contract and subsequently appears on the Prohibited Entities List.

Name (Print)	Title
Signature	Date

SIGN AND RETURN WITH P

EXHIBIT C
CONTRACTORS RECYCLING
AND
SOLID WASTE MANAGEMENT CERTIFICATION FORM
FOR ONEIDA COUNTY CONTRACTS

The Oneida County Board of Legislators at its May 26, 1999 meeting passed Resolution No. 249 dealing with the inclusion of recycling and solid waste management provision in Oneida County contracts. All waste and recyclables generated by the contracting party shall be delivered to the facilities of the Oneida-Herkimer Solid Waste Authority.

REGULATORY COMPLIANCE

- (a) The Contractor agrees to comply with all applicable Federal, State and Local Statutes, rules and regulations as some may from time to time be amended pursuant to law.

- (b) Pursuant to Oneida County Board of Legislator Resolution No. 249 of May 26, 1999, the Contractor agrees to deliver exclusively to the facilities of the Oneida-Herkimer Solid Waste Authority, all wastes and recyclables generated within the Authority's service area by performance of this Contract by Contractor and any subcontractors. Upon awarding of this Contract, and before work commences, the Contractor will be required to provide Oneida County with proof that Resolution No. 249 of 1999 has been complied with, and that all wastes and recyclables in the Oneida-Herkimer Solid Waste Authority's service area which are generated by the Contractor and any subcontractors in performance of this Contract will be delivered exclusively to Oneida-Herkimer Solid Waste Authority facilities.

CERTIFICATION STATEMENT

"I certify that I understand and agree to comply with the terms and conditions of the Oneida County Recycling and Solid Waste Management Program (R-249). I further agree to provide Oneida County proof of such compliance."

Name (Printed)

Title

Signature

Date

SIGN AND RETURN WITH PROPOSAL

EXHIBIT D

PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS

Pursuant to State Finance Law Section 165(2)(c)(ii), the following certification is mandatory in every bid proposal, solicitation, request for bid or proposal and contract for the construction of any public work, building maintenance or improvement.

Any bid, proposal or other response to a solicitation for bid or proposal which proposes or calls for the use of any tropical hardwood or wood product as defined by Section 165 of the State Finance Law in performance of the contract shall be deemed non-responsive.

This prohibition shall not apply to:

1. To bid packages advertised and made available to the public or any competitive and sealed bids received or entered into prior to August twenty-fifth, nineteen hundred ninety-one; or
2. To any amendment, modification or renewal of a contract, which contract was entered into prior to August twenty-fifth, nineteen hundred ninety-one, where such application would delay timely completion of a project or involve an increase in the total monies to be paid under that contract; or
3. Where the contracting officer finds that:
 - a. No person or entity doing business in the state is capable of performing the contract using acceptable non-tropical hardwood species; or
 - b. The inclusion or application of such provisions will violate or be inconsistent with the terms or conditions of a grant, subvention or contract with an agency of the United States or the instructions of an authorized representative of any such agency with respect to any such grant, subvention or contract; or
 - c. The use of tropical woods is deemed necessary for purposes of historical restoration and there exists no available acceptable non-tropical wood species.

Certification of the Prohibition on Purchase of Tropical Hardwoods

The Contractor certifies and warrants that all wood products to be used under this contract award will be acquired in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law (Use of Tropical Hardwoods), which prohibits purchase and use of tropical hardwoods, unless specifically exempted by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the sole responsibility of the Contractor to establish to meet with the approval of the County.

In addition, when any portion of this Contract involving the use of woods, whether for supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in Section 165 of the State Finance Law. Any such use must meet with approval of the County; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the sole responsibility of the Contractor to establish to meet with the approval of the County

Name (Print)

Title

Signature

Date

SIGN AND RETURN WITH BID SHEET

Exhibit E

BIDDER'S STATEMENT ON SEXUAL HARASSMENT

IN ACCORDANCE WITH NEW YORK STATE FINANCE LAW

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of Section 201-g of the Labor Law.

Name (Printed)

Title

Signature

Date

SIGN AND RETURN WITH BID SHEET

Exhibit F – Equipment Unit Prices Proposal Sheet

We submit the following fee proposal for Professional Consulting Services to complete all services identified in the **Project Description** and **Scope of Services** section of this Request for Proposal:

	System	Annual Cost			
		Equipment	Material*	Labor**	Sub-Total
800 Park Ave. Utica, NY	Chilled Water	\$	\$	\$	\$
	Hot Water	\$	\$	\$	\$
	Condensing Water & Cooling Towers	\$	\$	\$	\$
	Total Annual Cost				\$
200 Elizabeth St. Utica, NY	Chilled Water	\$	\$	\$	\$
	Hot Water	\$	\$	\$	\$
	Boilers & Steam	\$	\$	\$	\$
	Total Annual Cost				\$
321 Main Street Utica, NY	Chilled Water	\$	\$	\$	\$
	Hot Water	\$	\$	\$	\$
	Boilers & Steam	\$	\$	\$	\$
	Total Annual Cost				\$
235 Elizabeth St. Utica, NY	Chilled Water/Hot Water w/Glycol	\$	\$	\$	\$
	Condensing Water & Cooling Tower	\$	\$	\$	\$
	Total Annual Cost				\$
5999 Judd Rd. Oriskany, NY	Chilled Water	\$	\$	\$	\$
	Chilled Water w/Glycol	\$	\$	\$	\$
	Boilers & Steam	\$	\$	\$	\$
	Total Annual Cost				\$

301 W. Dominick St. Rome, NY	System	Annual Cost			
		Equipment	Material*	Labor**	Sub-Total
	Chilled Water	\$	\$	\$	\$
	Hot Water				
Total Annual Cost					\$
120 Airline St. Oriskany, NY	System	Annual Cost			
		Equipment	Material*	Labor**	Sub-Total
	Chilled Water	\$	\$	\$	\$
	Hot Water				
Condensing Water and Cooling Towers					
Total Annual Cost					\$
406 Elizabeth St. Utica, NY	System	Annual Cost			
		Equipment	Material*	Labor**	Sub-Total
	Boilers & Steam	\$	\$	\$	\$
Total Annual Cost					\$
4260 Lee Center Taberg Rd. Taberg, NY	System	Annual Cost			
		Equipment	Material*	Labor**	Sub-Total
	Hot Water				
Total Annual Cost					\$
8515 St. Rt. 28 Barneveld, NY	System	Annual Cost			
		Equipment	Material*	Labor**	Sub-Total
	Hot Water				
Total Annual Cost					\$

*- Material includes, but is not limited to; chemicals and all consumables (test kits, etc.)

**-Labor includes, but is not limited to; laboratory and all technical services

Total Annual Cost for All Locations	\$
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Additional Service and Equipment	Unit Price	Quantity
Dip slides or heterotrophic plate count	\$	Each
Legionella Culture Test	\$	Each
Online Cooling Tower Disinfection	\$	Each
Online Cooling tower Decontamination	\$	Each
Cooling Tower System Decontamination	\$	Each
Nitrate Test Kit	\$	Each
Conductivity Meter/Pen	\$	Each
Refractometer	\$	Each
PH Meter/Pen	\$	Each
Bromine Meter/Pen	\$	Each
35%/75% Propylene Glycol Mixture (55 Gallon Drum)	\$	Each

By signing below I hereby certify that I have the authority to offer this proposal to the County of Oneida for the above listed individual or company. I certify that I have the authority to bind myself/this company in an Agreement should I be successful in my proposal.

Submitted By

(Legal Name of Person, Firm or Corporation)

Name:

Title:

Signature:

Date:

(SIGN AND RETURN WITH PROPOSAL)

EXHIBIT G

Standard Contract Clauses Addendum

THIS ADDENDUM, between the County of Oneida, hereinafter known as COUNTY, and a contractor, subcontractor, vendor, vendee, licensor, licensee, lessor, lessee or any third party, hereinafter known as CONTRACTOR.

WHEREAS, COUNTY and CONTRACTOR have entered into a contract, license, lease, amendment or other agreement of any kind (hereinafter referred to as the "Contract"), and

WHEREAS, the Oneida County Attorney and the Oneida County Director of Purchasing have recommended the inclusion of the standard clauses set forth in this Addendum to be included in every Contract for which COUNTY is a party, now, thereafter,

The parties to the attached Contract, for good consideration, agree to be bound by the following clauses which are hereby made a part of the Contract.

1. Executory or Non-Appropriation Clause.

1.1. The County shall have no liability or obligation under this Contract to the Contractor or to anyone else beyond the annual funds being appropriated and available for this Contract.

2. Oneida County Board of Legislators: Resolution #249 Solid Waste Disposal Requirements.

2.1. Pursuant to Oneida County Board of Legislator Resolution No. 249 of May 26, 1999, the Contractor agrees to deliver exclusively to the facilities of the Oneida-Herkimer Solid Waste Authority, all waste and recyclables generated within the Authority's service area by performance of this Contract by the Contractor and any subcontractors. Upon awarding of this Contract, and before work commences, the Contractor will be required to provide Oneida County with proof that Resolution No. 249 of 1999 has been complied with, and that all wastes and recyclables in the Oneida-Herkimer Solid Waste Authority's service area which are generated by the Contractor and any subcontractors in performance of this Contract will be delivered exclusively to Oneida-Herkimer Solid Waste Authority facilities.

3. Certification Regarding Lobbying, Debarment, Suspension and other Responsibility Matters, and Drug-Free Workplace Requirements.

3.1. Lobbying. As required by Section 1352, Title 31 of the U.S. Code and implemented at 34 CFR Part 82 for persons entering into a grant or cooperative agreement over \$100,000, as defined at 34 CFR Part 82, Section 82.105 and 82.110, the Contractor certifies that:

3.1.1. No federal appropriated funds have been paid or will be paid, by or on behalf of the Contractor, to any persons for influencing or attempting to influence an officer or

employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any federal grant, the entering into of any cooperative agreement, and the tension, continuation, renewal, amendment, or modification of any federal grant or cooperative agreement.

3.1.2. If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal grant or cooperative agreement, the Contractor shall complete and submit Standard Form 111 "Disclosure Form to Report Lobbying," in accordance with its instructions.

3.1.3. The Contractor shall require that the language of this certification be included in the award documents for all subcontracts and that all subcontractors shall certify and disclose accordingly.

3.2. Debarment, Suspension and other Responsibility Matters. As required by Executive Order 12549, Debarments and Suspension, and implemented at 34 CFR Part 85, for prospective participants in primary covered transactions, as defined at 34 CFR Part 85, Sections 83.105 and 85.110,

3.2.1. The Contractor certifies that it and its principals:

3.2.1.1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

3.2.1.2. Have not within a three-year period preceding this Contract been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contracts under a public transaction, violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

3.2.1.3. Are not presently indicated or otherwise criminally or civilly charged by a Government entity (federal, state or local) with commission of any of the offenses enumerated in paragraph 1(b) of this certification; and

3.2.1.4. Have not within a three-year period preceding this Contract had one or more public transactions (federal, state, or local) for cause or default;

3.2.2. Where the Contractor is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this Contract.

3.3. Drug-Free Workplace (Contractors other than individuals). As required by the Drug-Free Workplace Act of 1988, and implemented at 34 CFR Part 85, Subpart F, for Contractors, as defined at 34 CFR Part 85, Sections 85.605 and 85.610:

3.3.1. The Contractor will or will continue to provide a drug-free workplace by:

3.3.1.1. Publishing a statement notifying employees that the manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

3.3.1.2. Establishing an on-going drug-free awareness program to inform employees about:

3.3.1.2.1. The dangers of drug abuse in the workplace;

3.3.1.2.2. The Contractor's policy of maintaining a drug-free workplace;

3.3.1.2.3. Any available drug counseling, rehabilitation, and employee assistance program; and

3.3.1.2.4. The penalties that may be imposed upon an employee for drug abuse violation occurring in the workplace;

3.3.1.3. Making it a requirement that each employee to be engaged in the performance of the Contract be given a copy of the statement required by paragraph (3.3.1.1) above;

3.3.1.4. Notifying the employee in the statement required by paragraph (3.3.1.1) that as a condition of employment under the Contract, the employee will:

3.3.1.4.1. Abide by the terms of the statement; and

3.3.1.4.2. Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five (5) calendar days after such conviction;

3.3.1.5. Notifying the County, in writing within ten (10) calendar days after having received notice under subparagraph (3.3.1.4.2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to: Director, Grants Management Bureau, State Office Building Campus, Albany, New York 12240. Notice shall include the identification number(s) of each affected contract.

3.3.1.6. Taking one of the following actions, within thirty (30) calendar days of receiving notice under subparagraph (3.3.1.4.2), with respect to any employee who is so convicted;

3.3.1.6.1. Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

3.3.1.6.2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state or local health, law enforcement, or other appropriate agency;

3.3.1.7. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (3.3.1.1), (3.3.1.2), (3.3.1.3), (3.3.1.4), (3.3.1.5), (3.3.1.6).

3.3.2. The Contractor may insert in the space provided below the site(s) for the performance of work done in connection with the specific contract.

3.3.3. Place of Performance (street, address, city, county, state, zip code).

3.4. Drug-Free Workplace (Contractors who are individuals). As required by the Drug-Free Workplace act of 1988, and implemented at 34 CFR Part 85, Subpart F, for Contractors, as defined at 34 CFR Part 85, Sections 85.605 and 85.610:

3.4.1. As a condition of the contract, the Contractor certifies that he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the Contract; and

3.4.2. If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any contract activity, the Contractor will report the conviction, in writing, within ten (10) calendar days of the conviction, to: Director, Grants Management Bureau, State Office Building Campus, Albany, NY 12240. Notice shall include the identification number(s) of each affected Contract.

4. Health Insurance Portability and Accountability Act (HIPAA). When applicable to the services provided pursuant to the Contract:

4.1. The Contractor, as a Business Associate of the County, shall comply with the Health Insurance Portability and Accountability Act of 1996, hereinafter referred to as "HIPAA," as well as all regulations promulgated by the Federal Government in furtherance thereof, to

assure the privacy and security of all protected health information exchanged between the Contractor and the County. In order to assure such privacy and security, the Contractor agrees to enact the following safeguards for protected health information:

4.1.1. Establish policies and procedures, in written or electronic form, that are reasonably designed, taking into consideration the size of, and the type of activities undertaken by, the Contractor, to comply with the Standards for Privacy of Individual Identifiable Health Information, commonly referred to as the Privacy Rule;

4.1.2. Utilize a combination of electronic hardware and computer software in order to securely store, maintain, transmit, and access, protected health information electronically; and

4.1.3. Utilize an adequate amount of physical hardware, including but not limited to, locking filing cabinets, locks on drawers, other cabinets, and office doors, in order to prevent unwarranted and illegal access to computers and paper files that contain protected health information of the County's clients.

4.2. This agreement does not authorize the Contractor to use or further disclose the protected health information that the Contractor handles in treating patients of the County in any manner that would violate the requirements of 45 CFR § 164.504(e), if that same use or disclosure were done by the County, except that:

4.2.1. The Contractor may use and disclose protected health information for the Contractor's own proper management and administration; and

4.2.2. The Contractor may provide data aggregation services relating to the health care operations of the County.

4.3. The Contractor shall:

4.3.1. Not use or further disclose protected health information other than as permitted or required by this contract or as required by law;

4.3.2. Use appropriate safeguards to prevent the use or disclosure of protected health information other than as provided for in this Contract;

4.3.3. Report to the County any use or disclosure of the information not provided for by this Contract of which the Contractor becomes aware;

4.3.4. Ensure that any agents, including a subcontractor, to whom the Contractor provides protected health information received from, or created or received by the Contractor on behalf of, the County agrees to the same restrictions and conditions that apply to the Contractor with respect to such protected health information;

4.3.5. Make available protected health information in accordance with 45 CFR § 164.524;

4.3.6. Make available protected health information for amendment and incorporate any amendments to protected health information in accordance with 45 CFR § 164.528;

4.3.7. Make available the information required to provide an accounting of disclosures in accordance with 45 CFR § 164.528;

4.3.8. Make its internal practices, books, and records relating to the use and disclosure of protected health information received from, or created or received by the Contractor on behalf of, the County available to the Secretary of Health and Human Services for purposes of determining the County's compliance with 45 CFR § 164.504(e)(2)(ii); and

4.3.9. At the termination of this Contract, if feasible, return or destroy all protected health information received from, or created or received by the Contractor on behalf of, the County that the Contractor still maintains in any form and retain no copies of such information or, if such return or destruction is not feasible, extend the protections of this Contract to such information and limit further uses and disclosures to those purposes that make the return or destruction of the information infeasible.

4.4. The Contractor agrees that this contract may be amended if any of the following events occurs:

4.4.1. HIPAA, or any of the regulations promulgated in furtherance thereof, is modified by Congress or the Department of Health and Human Services;

4.4.2. HIPAA, or any of the regulations promulgated in furtherance thereof, is interpreted by a court in a manner impacting the County's HIPAA compliance; or

4.4.3. There is a material change in the business practices and procedures of the County.

4.5. Pursuant to 45 CFR § 164.504(e)(2)(iii), the County is authorized to unilaterally terminate this Contract if the County determines that the Contractor has violated a material term of this Contract.

5. Non-Assignment Clause. In accordance with Section 109 of the General Municipal Law, this Contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the County's previous written consent, and attempts to do so are null and void. The Contractor may, however, assign its right to receive payments without the County's prior written consent unless this Contract concerns Certificates of Participation pursuant to Section 109-b of the General Municipal Law.

6. Worker's Compensation Benefits. In accordance with Section 108 of the General Municipal Law, this Contract shall be void and of no force and effect unless the Contractor shall provide

and maintain coverage during the life of this Contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

Z. Non-Discrimination Requirements. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other state and federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, sexual orientation, age, disability, genetic predisposition or carrier status, or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a Contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this Contract shall be performed within the State of New York, the Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this Contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 of the Labor Law, the Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this Contract. The Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this Contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

g. Wage and Hours Provisions. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 of the Labor Law, neither the Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said Articles, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, the Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of

payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the County of any County-approved sums due and owing for work done upon the project.

9. Non-Collusive Bidding Certification. In accordance with Section 103-d of the General Municipal Law, if this Contract is awarded based upon the submission of bids, the Contractor affirms, under penalty of perjury, as to its own organization, under penalty of perjury, that to the best of its knowledge and belief: (1) the prices in this bid have been arrived at independently, without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; and (2) unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and (3) no attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition. The Contractor further affirms that, at the time the Contractor submitted its bid, an authorized and responsible person executed and delivered to the County a non-collusive bidding certification on the Contractor's behalf.

10. Records. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertaining to performance under this Contract (hereinafter, collectively, "the Records"). The Records shall include, but not be limited to, reports, statements, examinations, letters, memoranda, opinions, folders, files, books, manuals, pamphlets, forms, papers, designs, drawings, maps, photos, letters, microfilms, computer tapes or discs, electronic files, e-mails (and all attachments thereto), rules, regulations and codes. The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The County Comptroller, the County Attorney and any other person or entity authorized to conduct an audit or examination, as well as the agency or agencies involved in this Contract, shall have access to the Records during normal business hours at an office of the Contractor within the County or, if no such office is available, at a mutually agreeable and reasonable venue within the County, for the term specified above for the purposes of inspection, auditing and copying. The County shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (a) the Contractor shall timely inform an appropriate County official, in writing, that said records should not be disclosed; (b) said records shall be sufficiently identified; and (c) in the sole

discretion of the County, designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the County's right to discovery in any pending or future litigation. Notwithstanding any other language, the Records may be subject to disclosure under the New York Freedom of Information Law, for other applicable state or federal law, rule or regulation.

11. Identifying Information and Privacy Notification.

11.1. Identification Number(s). Every invoice or claim for payment submitted to a County agency by a payee, for payment for the sale of goods or service or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number includes any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Where the payee does not have such number or numbers, the payees, on its invoice or claim for payment, must state with specificity the reason or reasons why the payee does not have such number or numbers.

11.2. Privacy Notification. (i) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the County is mandatory. The principle purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their liabilities and to generally identify persons affected by the taxes administered by the New York State Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (ii) The personal information is requested by the County's purchasing unit contracting to purchase goods or services or lease the real or personal property covered by this Contract.

12. Conflicting Terms. In the event of a conflict between the terms of the Contract (including any and all attachments thereto and amendments thereof) and the terms of this Addendum, the terms of this Addendum shall control.

13. Governing Law. This Contract shall be governed by the laws of the State of New York except where the Federal Supremacy Clause requires otherwise.

14. Prohibition on Purchase of Tropical Hardwoods.

14.1. The Contractor certifies and warrants that all wood products to be used under this Contract award will be acquired in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law (Use of Tropical Hardwoods), which prohibits purchase and use of tropical hardwoods, unless specifically exempted by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the sole responsibility of the Contractor to establish to meet with the approval of the County.

14.2. In addition, when any portion of this Contract involving the use of woods, whether for supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in Section 165 of the State Finance Law. Any such use must meet with approval of the County; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the sole responsibility of the Contractor to meet with the approval of the County.

15. Compliance with New York State Information Security Breach and Notification Act. The Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa).

16. Gratuities and Kickbacks.

16.1. Gratuities. It shall be unethical for any person to offer, give, or agree to give any County employee or former County employee, or for any County employee or former County employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard; rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim, or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor.

16.2. Kickbacks. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime Contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

17. Audit.

17.1. The County, the State of New York, and the United States shall have the right at any time during the term of this agreement and for the period limited by the applicable statute of limitations to audit the payment of monies hereunder. The Contractor shall comply with any demands made by the County to provide information with respect to the payment of monies hereunder during the period covered by this paragraph. The Contractor shall maintain its books and records in accordance with generally accepted accounting principles or such other method of account which is approved in writing by the County prior to the date of this agreement. The revenues and expenditures of the Contractor in connection with this agreement shall be separately identifiable. Each expenditure or claim for payment shall be fully documented. Expenditures or claims for payment which are not fully documented may be disallowed. The Contractor agrees to provide to, or permit the County to examine or obtain copies of, any documents relating to the payment of money to the Contractor or expenditures made by the Contractor for which reimbursement is requested to be made or has been made to the Contractor by the County. The Contractor shall maintain all records required by this paragraph for 7 years after the date this agreement is terminated or ends.

17.2. If the Contractor has expended, in any fiscal year, \$300,000.00 or more in funds provided by a federal financial assistance program from a federal agency pursuant to this agreement and all other contracts with the County, the Contractor shall provide the County with an audit prepared by an independent auditor in accordance with the Single Audit Act of 1984, 31 U.S.C. §§ 7501, et seq., as amended, and the regulations adopted pursuant to such Act.

18. Certification of compliance with the Iran Divestment Act.

18.1. Pursuant to Section 103-g of the General Municipal Law, by submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each bidder or Contractor, or any person signing on behalf of any bidder or Contractor, and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the Office of General Services (hereinafter "OGS") website, that to the best of its knowledge and belief, that each bidder or Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to State Finance Law § 165-a(3)(b).

18.2. Additionally, the bidder or Contractor is advised that once the Prohibited Entities List is posted on the OGS website, any bidder or Contractor seeking to renew or extend a Contract

or assume the responsibility of a Contract awarded in response to this solicitation must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

18.3. During the term of the Contract, should the County receive information that a bidder or Contractor is in violation of the above-referenced certification, the County will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that he, she or it has ceased engagement in the investment which is in violation of the Iran Divestment Act of 2012 within ninety (90) days after the determination of such violation, then the County shall take such action as may be appropriate, including, but not limited to, imposing sanctions, seeking compliance, recovering damages or declaring the bidder or Contractor in default.

18.4. The County reserves the right to reject any bid or request for assignment for a bidder or Contractor that appears on the Prohibited Entities List prior to the award of a Contract and to pursue a responsibility review with respect to any bidder or Contractor that is awarded a Contract and subsequently appears on the Prohibited Entities List.

19. Prohibition on Tobacco and E-Cigarette use on County Property.

19.1. Pursuant to Local Law No. 3 of 2016, the use of tobacco and e-cigarettes are prohibited on Oneida County property, as follows:

19.1.1. For the purposes of this provision, the “use of tobacco” shall include:

19.1.1.1. The burning of a lighted cigarette, pipe, cigar or other lighted instrument for the purpose of smoking tobacco or a tobacco substitute;

19.1.1.2. The use of tobacco and/or a substance containing tobacco or a tobacco substitute by means other than smoking, including: chewing; holding in the mouth; or expectoration of chewing tobacco.

19.1.2. For the purposes of this provision, “e-cigarette” shall mean an electronic device composed of a mouthpiece, heating element, battery and electronic circuit that delivers vapor which is inhaled by an individual user as he or she simulates smoking.

19.2. For the purposes of this provision, “on Oneida County property” shall be defined as:

19.2.1. Upon all real property owned or leased by the County of Oneida; and

19.2.2. Within all County of Oneida-owned vehicles or within private vehicles when being used for a County of Oneida purpose, except that a driver may smoke in a privately-owned vehicle being used for a County of Oneida Purpose if the driver is the sole occupant of the vehicle.

19.3. Each violation of this Local Law No. 3 of 2016 shall constitute a separate and distinct offense and may be punishable by a fine of up to \$200.00 for a first offense and up to \$1,000.00 for subsequent offenses.

20. Compliance with New York State Labor Law § 201-G.

20.1. The Contractor shall comply with the provisions of New York State Labor Law § 201-g.

Updated: 11/8/2018

Safety Data Sheet: CHEM-AQUA 42171

Supersedes Date: 01/04/2018

Issuing Date: 08/26/2019

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CHEM-AQUA 42171
Recommended use Water treatment chemical Biocidal product
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code: TV11
Chemical nature Aqueous solution Alkaline
Emergency Telephone
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Orange

Physical state Liquid

Odor Slight chlorine

GHS Classification

Physical Hazards

Corrosive to Metals

Category 1

Health Hazard

Acute toxicity - Inhalation (Dusts/Mists)

Category 4

Skin Corrosion/Irritation

Category 1

Serious Eye Damage/Eye Irritation

Category 1

Other hazards

None

Labeling

Signal Word

DANGER



Hazard statements

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

H290 - May be corrosive to metals

Precautionary Statements

P280 - Wear protective gloves, protective clothing and eye protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P260 - Do not breathe mists

P271 - Use in a well-ventilated area.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P363 - Wash contaminated clothing before reuse

P332 + P313 - If skin irritation occurs, get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a physician.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms, call a physician.

P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.

P390 - Absorb spillage to prevent damage.

P406 - Store in a corrosion-resistant container.

P501 - Dispose of contents and container to an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
Sulfamic acid, n-bromo, sodium salt	1004542-84-0	10-30
Sodium hydroxide	1310-73-2	3-7

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician or poison control center immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Inhalation	Move to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	No data available
Flammability Limits in Air %:	Hydrogen, by reaction with metals.	Upper:	75
		Lower:	4
Suitable Extinguishing Media	Water spray. Foam. Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific hazards arising from the chemical	Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability 0	Instability 1
HMIS -	Health 3	Flammability 0	Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
Methods for Cleaning Up	No information available.
Neutralizing Agent	Not applicable.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe mist.			
Storage	Store in original container. Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined. Do not freeze.			
Storage Temperature	Minimum	45 °F / 7 °C	Maximum	100 °F / 38 °C
Storage Conditions	Indoor	X	Outdoor	
			Heated	
			Refrigerated	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	10 mg/m ³ Ceiling: 2 mg/m ³

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection

Tightly fitting safety goggles. Face-shield.

Skin Protection

Wear suitable protective clothing, Impervious gloves.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations

Wear protective gloves/clothing. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Viscosity	Non viscous
Color	Orange	Odor	Slight chlorine
Odor Threshold	Not applicable	Appearance	Orange
pH	> 13	Specific Gravity	1.32

Evaporation Rate	0.45 (Butyl acetate=1)	Percent Volatile (Volume)	82.2
VOC Content (%)	.?	VOC Content (g/L)	0
Vapor pressure	12.58 mmHg @ 70°F	Vapor Density	0.6 (Air = 1.0)
Solubility	Completely soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	No data available	Flammability (solid, gas)	No data available
Flash Point	Does not flash	Method	No data available
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Hydrogen, by reaction with metals	Upper: 75	Lower: 4

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Extremes of temperature and direct sunlight.
Incompatible Products	Reducing agents, Acids, Bases, Oxidizing agents, Organic materials, Metals, Alkalis.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Nitrogen oxides (NOx), Bromine.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation, Ingestion.

Primary Routes of Entry None known.

Acute Effects:

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	Ingestion causes burns of the upper digestive and respiratory tracts. May be fatal if swallowed.

Chronic Toxicity

Inhaled corrosive substances can lead to a toxic edema of the lungs.

Target Organ Effects: Skin, Respiratory system, Eyes.

Aggravated Medical Conditions Skin disorders, Respiratory disorders.

Component Information

Acute Toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Sodium hydroxide 1310-73-2	= 325 mg/kg (Rat)	= 1350 mg/kg (Rabbit)	No data available	No data available	No data available

Chronic Toxicity

Chemical name	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium hydroxide 1310-73-2	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system

Carcinogenicity There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information

Additional Ecological Information: Toxicity data will be furnished on request.

Component Information

Chemical name	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
Sodium hydroxide	No information available.	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	No information available	No information available.	N/A

Persistence and Degradability No information available.

Bioaccumulation	No information available.
Mobility	No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal	Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.
Container Disposal	Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
UN-No	UN1760
Packing Group	III
Description	UN1760, Corrosive liquid, n.o.s.,(Bromide Salts), 8, PG III

TDG

Proper shipping name	UN1760, Corrosive liquid, n.o.s.(Bromide Salts), 8, PG III
Hazard Class	8
UN-No	UN1760
Packing Group	III
Description	UN1760, Corrosive liquid, n.o.s.,(Bromide Salts), 8, PG III

ICAO

UN-No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Shipping Description	UN1760, Corrosive liquid, n.o.s.,(Bromide Salts), 8, PG III

IATA

UN-No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
ERG-Code	8L
Shipping Description	UN1760, Corrosive liquid, n.o.s.(Bromide Salts), 8, PG III

IMDG/IMO

UN proper shipping name	Corrosive liquid, n.o.s.
Hazard Class	8
UN Number	UN1760
Packing Group	III
EmS No.	F-A, S-B
Description	UN1760, Corrosive liquid, n.o.s.(Bromide Salts), 8, PG III

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations**FIFRA**

This chemical is a pesticide product registered by the US EPA and is subject to certain labeling requirements under federal pesticide laws. These requirements differ from the classification criteria and hazard information required for SDSs, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER

Corrosive - causes irreversible eye damage
 Causes skin burns
 The pesticide is toxic to fish and aquatic organisms.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

See Section 2

CERCLA

Chemical name	Hazardous Substances RQs	CERCLA EHS RQs
Sodium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By Adrienne McKee
Supersedes Date: 01/04/2018
Issuing Date: 08/26/2019
Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

CHEM-AQUA, INC assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Safety Data Sheet: CHEM-AQUA 31165

Supersedes Date 09/18/2014

Issuing Date 01/02/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 31165
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code C797
Chemical nature Aqueous solution of alkali salts
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Yellow

Physical state Liquid

Odor Sweet

GHS Classification

Physical Hazards

Corrosive to metals

Category 1

Health Hazard

Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation

Category 1

Category 1

Other hazards

None

Labeling

Signal Word

DANGER



Hazard statements

H314 - Causes severe skin burns and eye damage
H290 - May be corrosive to metals

Precautionary Statements

P280 - Wear protective gloves, protective clothing, eye protection and face protection.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P260 - Do not breathe mist
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P332 + P313 - If skin irritation occurs, get medical attention.
P363 - Wash contaminated clothing before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a physician.
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311 - If experiencing respiratory symptoms, call a physician.
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.
P390 - Absorb spillage to prevent damage.
P406 - Store in a corrosion-resistant container.
P501 - Dispose of contents and container in accordance with applicable local regulations.

11 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
2-Phosphonobutane-1,2,4-tricarboxylic acid, sodium salt	40372-66-5	5-10
Sodium tolyltriazole	64665-57-2	3-7
Sodium polyacrylate	9003-04-7	1-5

Sodium hydroxide	1310-73-2	0.1-1.0
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*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	not applicable
Flammability Limits in Air %:	Hydrogen, by reaction with metals.	Upper:	75
		Lower:	4
Suitable Extinguishing Media	Carbon dioxide (CO ₂). Foam. Alcohol-resistant foam. Water spray. Dry powder. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific hazards arising from the chemical	Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability	0
HMIS -	Health 3	Flammability	0
		Instability	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Neutralizing Agent	Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe mist.			
Storage	Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.			
Storage Temperature	Minimum	40 °F / 4 °C	Maximum	120 °F / 49 °C
Storage Conditions	Indoor	X	Outdoor	Heated Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Sodium polyacrylate	3 mg/m ³ PNOS	5 mg/m ³ PNOR	No data available
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	10 mg/m ³ Ceiling: 2 mg/m ³
Sodium chloride	No data available	5 mg/m ³ PNOR (as solid)	No data available

Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing

General Hygiene Considerations concentrations above the exposure limit they must use appropriate certified respirators. Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Viscosity	Non viscous
Color	Yellow	Odor	Sweet
Odor Threshold	Not applicable	Appearance	Transparent
pH	13.04	Specific Gravity	1.169
Evaporation Rate	0.46 (Butyl acetate=1)	Percent Volatile (Volume)	84.8
VOC Content (%)	0	VOC Content (g/L)	0
Vapor Pressure	14.77 mmHg @ 70°F	Vapor Density	0.6 (Air = 1.0)
Solubility	Completely soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	No data available	Flammability (solid, gas)	No data available
Flash Point	Does not flash	Method	not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Hydrogen, by reaction with metals	Upper: 75 Lower: 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Extremes of temperature and direct sunlight.
Incompatible Products	Oxidizing agents, Acids.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides (NOx), Sodium oxides, Sulfur oxides, Oxides of phosphorus, Phosphorus compounds, Hydrocarbons, Hydrogen, by reaction with metals.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	979,839.99
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact.
Primary Routes of Entry None known.

Acute Effects:

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Toxicity

Target Organ Effects Inhaled corrosive substances can lead to a toxic edema of the lungs.

Aggravated Medical Conditions Skin, Eyes, Respiratory system.
Respiratory disorders, Skin disorders.

Component Information

Acute Toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Sodium tolyltriazole 64665-57-2	640 mg/kg	no data available	No data available	No data available	No data available
Sodium polyacrylate 9003-04-7	5000 mg/kg	2000 mg/kg	No data available	No data available	No data available
Sodium hydroxide 1310-73-2	No data available	= 1350 mg/kg (Rabbit)	No data available	No data available	No data available

Chronic Toxicity

Chemical Name	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium hydroxide 1310-73-2	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system

Carcinogenicity

There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
Sodium hydroxide	No information available.	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	No information available	No information available.	N/A

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.

Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE)
 Hazard Class 8
 UN-No UN1719
 Packing Group II
 Description UN1719, CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE), 8, PG II

TDG

Proper shipping name CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE)
 Hazard Class 8
 UN-No UN1719
 Packing Group II
 Description UN1719, CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE), 8, PG II

ICAO

UN-No UN1719
 Proper Shipping Name CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE)
 Hazard Class 8
 Packing Group II
 Shipping Description UN1719, CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE), 8, PG II

IATA

UN-No UN1719
 Proper Shipping Name CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE)
 Hazard Class 8
 Packing Group II
 Shipping Description UN1719, CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE), 8, PG II

IMDG/IMO

Proper Shipping Name CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE)
 Hazard Class 8
 UN-No UN1719
 Packing Group II
 Description UN1719, CAUSTIC ALKALI LIQUIDS, N.O.S., (SODIUM TOLYLTRIAZOLE, SODIUM HYDROXIDE), 8, PG II

15. REGULATORY INFORMATION

Inventories

TSCA Complies

DSL Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA EHS RQs
Sodium hydroxide	1000 lb	Not applicable

16. OTHER INFORMATION

Prepared By Laura Strauss
 Supercedes Date 09/18/2014
 Issuing Date 01/02/2018
 Reason for Revision No information available.
 Glossary No information available.
 List of References. No information available.

CHEM-AQUA, INC assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Safety Data Sheet: CHEM-AQUA 51999

Supersedes Date 01/04/2018

Issuing Date 07/19/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 51999
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code C365
Chemical nature Aqueous solution of alkali salts
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Colorless - Light yellow

Physical state Liquid

Odor Sweet

GHS

Classification

Physical Hazards

Corrosive to Metals

Category 1

Health Hazard

Acute Oral Toxicity

Category 4

Skin Corrosion/Irritation

Category 1

Serious Eye Damage/Eye Irritation

Category 1

Reproductive Toxicity

Category 1B

Other hazards

None

Labeling

Signal Word

DANGER



Hazard statements

H314 - Causes severe skin burns and eye damage

H302 - Harmful if swallowed

H360 - May damage fertility or the unborn child

H290 - May be corrosive to metals

Precautionary Statements

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P260 - Do not breathe mist

P270 - Do not eat, drink or smoke when using this product

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P363 - Wash contaminated clothing before reuse

P332 + P313 - If skin irritation occurs, get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a physician.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.

P308 + P313 - IF exposed or concerned, get medical attention

P390 - Absorb spillage to prevent damage.

P406 - Store in a corrosion-resistant container.

P501 - Dispose of contents and container in accordance with applicable local regulations.

1 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
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Sodium nitrite	7632-00-0	15-40
Sodium borate decahydrate	1303-96-4	1-5
Sodium tolyltriazole	64665-57-2	1-5
Sodium hydroxide	1310-73-2	0.1-1.0

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	No data available
Flammability Limits in Air %:	Hydrogen, by reaction with metals.	Upper:	75
		Lower:	4
Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific hazards arising from the chemical	Material can create slippery conditions. Contact with metals may evolve flammable hydrogen gas.		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability 0	Instability 0
HMIS -	Health 3	Flammability 0	Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.
Neutralizing Agent	Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling	Do not get in eyes, on skin or on clothing. Do not breathe mist.		
Storage	Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.		
Storage Temperature	Minimum	40 °F / 4 °C	Maximum
Storage Conditions	Indoor	X	Outdoor
			Heated
			Refrigerated
			120 °F / 49 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Sodium borate decahydrate	TWA: 2 mg/m ³ inhalable fraction STEL: 6 mg/m ³	No data available	TWA: 5 mg/m ³ TWA: 1 mg/m ³
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	10 mg/m ³ Ceiling: 2 mg/m ³

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should

Personal Protective Equipment	be achieved by the use of local exhaust ventilation and good general extraction.
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Viscosity	Non viscous
Color	Colorless - Light yellow	Odor	Sweet
Odor Threshold	Not applicable	Appearance	Transparent - Hazy
pH	12.2	Specific Gravity	1.203
Evaporation Rate	0.44	Percent Volatile (Volume)	84.1
VOC Content (%)	0	VOC Content (g/L)	0
Vapor Pressure	13.25 mmHg @ 70°F	Vapor Density	0.6 (Air = 1.0)
Solubility	Completely soluble	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	No information available.	Flammability (solid, gas)	No data available
Flash Point	Does not flash	Method	No data available
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Hydrogen, by reaction with metals	Upper: 75 Lower: 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Extremes of temperature and direct sunlight.
Incompatible Products	Strong oxidizing agents, Reducing agents, Avoid amines, Acids, Metals.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Sodium oxides, Nitrogen oxides (NOx), Hydrogen, by reaction with metals.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.
Primary Routes of Entry Skin contact, Ingestion, Skin Absorption.

Acute Effects:

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns. Methemoglobinemia.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Harmful if swallowed. Components of the product create formation of methemoglobin.

Chronic Toxicity Inhaled corrosive substances can lead to a toxic edema of the lungs. Contains a known or suspected reproductive toxin. Methemoglobinemia.

Target Organ Effects Respiratory system, Skin, Eyes.

Aggravated Medical Conditions Skin disorders, Respiratory disorders.

Component Information

Acute Toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Sodium nitrite 7632-00-0	= 85 mg/kg (Rat)	no data available	= 5.5 mg/L (Rat) 4 h	No data available	No data available
Sodium borate decahydrate 1303-96-4	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	No data available	No data available	No data available
Sodium tolyltriazole 64665-57-2	640 mg/kg	no data available	No data available	No data available	No data available

Sodium hydroxide 1310-73-2	No data available	= 1350 mg/kg (Rabbit)	No data available	No data available	No data available
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Chronic Toxicity

Chemical Name	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium borate decahydrate 1303-96-4	No data available	No data available	No data available	X	Skin; Eyes; Respiratory system
Sodium hydroxide 1310-73-2	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system

Carcinogenicity

There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
Sodium nitrite	No information available.	LC50 = 0.19 mg/L Oncorhynchus mykiss 96 h LC50 0.092 - 0.13 mg/L Oncorhynchus mykiss 96 h LC50 0.4 - 0.6 mg/L Oncorhynchus mykiss 96 h LC50 0.65 - 1 mg/L Oncorhynchus mykiss 96 h LC50 = 2.3 mg/L Pimephales promelas 96 h LC50 = 20 mg/L Pimephales promelas 96 h	No information available	No information available.	-3.7
Sodium borate decahydrate	EC50 = 158 mg/L Desmodesmus subspicatus 96 h EC50 2.6 - 21.8 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 340 mg/L Limanda limanda 96 h	No information available	1085 - 1402: 48 h Daphnia magna mg/L LC50	N/A
Sodium hydroxide	No information available.	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	No information available	No information available.	N/A

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations.

Container Disposal

Do not re-use empty containers. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
UN-No UN3266
Packing Group II
Reportable Quantity (RQ) Sodium Nitrite RQ @ 400LBS
Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(SODIUM HYDROXIDE), 8, PG II

TDG

Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
UN-No UN266
Packing Group II
Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(SODIUM HYDROXIDE), 8, PG II

ICAO

UN-No UN3266
Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.

Hazard Class 8
Packing Group II
Shipping Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(SODIUM HYDROXIDE), 8, PG II

IATA

UN-No UN3266
Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group II
Shipping Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(SODIUM HYDROXIDE), 8, PG II

IMDG/IMO

Proper Shipping Name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
UN-No UN3266
Packing Group II
Description UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.,(SODIUM HYDROXIDE), 8, PG II

15. REGULATORY INFORMATION

Inventories

TSCA Complies
DSL Complies

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS No.	Weight %	SARA 313 - Threshold Values
Sodium nitrite	7632-00-0	15-40	1.0
Sodium nitrate	7631-99-4	0.1-1.0	1.0

SARA 311/312 Hazardous Categorization

See Section 2

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA EHS RQs
Sodium nitrite	100 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

U.S. State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

Prepared By Adrienne McKee
Supersedes Date 01/04/2018
Issuing Date 07/19/2018
Reason for Revision SDS sections updated 15
Glossary No information available.
List of References. No information available.

CHEM-AQUA, INC assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Safety Data Sheet CHEM-AQUA 40215

Supersedes Date 08/16/2016

Issuing Date 11/18/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 40215
Recommended use Biocidal product
Information on Manufacturer
CHEM-AQUA, INC
BOX 152170
IRVING, TEXAS 75015

Product Code C668
Chemical nature Aqueous solution
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Colorless - Yellow

Physical state Liquid

Odor Pungent

GHS

Classification

Physical Hazards

Substances/mixtures corrosive to metal

Health Hazard

Acute toxicity - Inhalation (Dusts/Mists)

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Skin sensitization

Category 3

Category 1

Category 1

Category 1

Other hazards

None

Labeling

Signal Word

DANGER



Hazard statements

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H331 - Toxic if inhaled

H290 - May be corrosive to metals

Precautionary Statements

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P260 - Do not breathe mist

P271 - Use in a well-ventilated area.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P333 + P313 - If skin irritation or rash occurs, get medical attention

P363 - Wash contaminated clothing before reuse.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a physician.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P406 - Store in a corrosion-resistant container.

P390 - Absorb spillage to prevent damage.

P501 - Dispose of contents and container in accordance with applicable local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %
Magnesium nitrate	10377-60-3	1-5
5-Chloro-2-methyl-4-isothiazolin-3-one	26172-55-4	1-5
Magnesium chloride	7786-30-3	1-5

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Call a physician or poison control center immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Contact a poison control center.
Inhalation	Move to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Call a physician or poison control center immediately. Give small amounts of water to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Flash Point	Does not flash	Method	No data available
Flammability Limits in Air %:	Hydrogen, by reaction with metals.	Upper:	75
		Lower:	4
Suitable Extinguishing Media	Foam. Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific hazards arising from the chemical	Thermal decomposition can lead to release of irritating gases and vapors. Contact with metals liberates flammable hydrogen gas. Material can create slippery conditions.		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.		
NFPA	Health 3	Flammability 1	Instability 0
HMIS	Health 3	Flammability 1	Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.
Neutralizing Agent	Neutralize with lime milk or soda and flush with plenty of water.

7. HANDLING AND STORAGE

Handling	Ensure adequate ventilation. Wear personal protective equipment.			
Storage	Keep out of the reach of children. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Metal containers must be lined. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.			
Storage Temperature	Minimum	34 °F / 1 °C	Maximum	131 °F / 55 °C
Storage Conditions	Indoor	X	Outdoor	Heated Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering Measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles. Face-shield.

Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Viscosity	Non viscous
Color	Colorless - Yellow	Odor	Pungent
Odor Threshold	Not applicable	Appearance	Transparent
pH	2	Specific Gravity	1.02
Evaporation Rate	0.58 (Butyl acetate=1)	Percent Volatile (Volume)	0
VOC Content (%)	0	VOC Photoreactive (Y/N)	No
VOC Content (g/L)	0	Vapor Pressure	17.05 mmHg @ 70°F
Vapor Density	0.6 (Air = 1.0)	Solubility	Completely soluble
n-Octanol/Water Partition	No data available	Melting Point/Range	No data available
Decomposition Temperature	No data available	Boiling Point/Range	212 °F / 100 °C
Flammability (solid, gas)	No data available	Method	No data available
Flash Point	Does not flash		
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Hydrogen, by reaction with metals	Upper: 75 Lower: 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	None known.
Incompatible Products	Strong oxidizing agents, Reducing agents, Amines, Powdered metals, Light and/or alkaline metals, Contact with metals liberates hydrogen gas.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride gas.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Skin Absorption.

Acute Effects:

Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns. May cause allergic skin reaction.
Inhalation	Harmful by inhalation. Causes burns. Risk of serious damage to the lungs (by inhalation).
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Components of the product create formation of methemoglobin.

Chronic Toxicity

May cause sensitization by skin contact. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Target Organ Effects Immune system, Blood.

Aggravated Medical Conditions Skin disorders, Respiratory system.

Component Information

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Magnesium nitrate 10377-60-3	= 5440 mg/kg (Rat)	no data available	No data available	No data available	No data available
5-Chloro-2-methyl-4- isothiazolin-3-one 26172-55-4	= 481 mg/kg (Rat)	no data available	= 1.23 mg/L (Rat) 4 h	No data available	No data available
Magnesium chloride 7786-30-3	= 2800 mg/kg (Rat)	no data available	No data available	No data available	No data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
5-Chloro-2-methyl-4-isothiazolin-3-one 26172-55-4	No data available	Skin sensitization	No data available	No data available	No data available

Carcinogenicity There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
5-Chloro-2-methyl-4-isothiazolin-3-one	EC50 0.11 - 0.16 mg/L Pseudokirchneriella subcapitata 72 h EC50 0.03 - 0.13 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 1.6 mg/L Oncorhynchus mykiss 96 h	EC50 = 5.7 mg/L 16 h	4.71: 48 h Daphnia magna mg/L EC50 0.12 - 0.3: 48 h Daphnia magna mg/L EC50 Flow through 0.71 - 0.99: 48 h Daphnia magna mg/L EC50 Static	0.75
Magnesium chloride	EC50 = 2200 mg/L Desmodesmus subspicatus 72 h	LC50 1970 - 3880 mg/L Pimephales promelas 96 h	EC50 = 26140 mg/L 1 h EC50 = 36300 mg/L 30 min EC50 = 77200 mg/L 24 h	140: 48 h Daphnia magna mg/L EC50 Static	N/A

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s.
Hazard Class 8
UN-No UN3265
Packing Group II
Description Corrosive liquid, acidic, organic, n.o.s.(5-chloro-2-methyl-4-isothiazolin-3-one),8,UN3265,PG II

TDG

Proper shipping name Corrosive liquid, acidic, organic, n.o.s.
Hazard Class 8
UN-No UN3265
Packing Group II
Description Corrosive Liquid, Acidic, Organic, N.O.S.,(5-chloro-2-methyl-4-isothiazolin-3-one),8,UN3265,PG II

ICAO

UN-No UN3265
Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s.*
Hazard Class 8
Packing Group II
Shipping Description Corrosive liquid, acidic, organic, n.o.s.*(5-chloro-2-methyl-4-isothiazolin-3-one),8,UN3265,PG II

IATA

UN-No UN3265
Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s.*
Hazard Class 8
Packing Group II
ERG-Code 8L
Shipping Description UN3265,Corrosive liquid, acidic, organic, n.o.s.*(5-chloro-2-methyl-4-isothiazolin-3-one),8,PG II

IMDG/IMO

Proper Shipping Name Corrosive liquid, acidic, organic, n.o.s.
Hazard Class 8
UN-No UN3265
Packing Group II
EmS No. F-A, S-B
Description UN3265, Corrosive liquid, acidic, organic, n.o.s.(5-chloro-2-methyl-4-isothiazolin-3-one,8,PG II

15. REGULATORY INFORMATION

Inventories

TSCA Complies
DSL Complies

U.S. Federal Regulations

FIFRA

This chemical is a pesticide product registered by the US EPA and is subject to certain labeling requirements under federal pesticide laws. These requirements differ from the classification criteria and hazard information required for SDSs, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

16. OTHER INFORMATION

Prepared By Adrienne McKee
Supersedes Date 08/16/2016
Issuing Date 11/18/2016
Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

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