



P.O. Box 1229 • Township of Washington, NJ 07676 • Ph: [REDACTED] • Fax: [REDACTED] • E-Mail: [REDACTED]

Mr. Rich Barnett  
[REDACTED]

Re: **Water Treatment Program - Solid Chemistry**

Dear Rich:

Most recent the chemical feed pumps on the open condenser system have been experiencing operational problems. Chemical pumps used for this type of application need to be replaced or upgraded from time to time. The open condenser system currently has two pumps that have failed. The cost of the pumps is \$600 each. I recommend a new chemical program, which will allow us to never replace the chemical pumps again, as the proposed program does not require chemical pumps. In the following document you will find the description of the new chemical feed system that can be a real solution for your plant.

Over the last 2 years we have discussed the possibility of solid feed chemical usage at your facility. Solid feed chemistry in the past has been inconsistent and still required the use of chemical pumps. Control issues on chemical ranges have also been inconsistent. With many changes in the industry, and a desire to become a "greener" society, new products have been developed.

The EcoSafe Program utilizes a corrosion/scale inhibitor, an oxidizing biocide, and a non-oxidizing biocide similar to a conventional liquid based feed program. However, the EcoSafe Solid Feed Product is dissolved via osmotic pressure as water flows through the EcoSafe Feeder. Because of this, no chemical feed pumps are required, and there is never the potential of underfeeding chemical due to loss of prime on a pump.

With low toxicity, and no liquid spill potential, EcoSafe Solid Feed Products are delivered via normal UPS or Fed Ex in 25-lb boxes. Now no need for drums or drum disposal. Lower freight costs reduce the overall carbon footprint left behind, and the product's low toxicity make EcoSafe a smart and greener technology.

Please review the information attached.



**EcoSAFE Solid Feed System (powered by Smart Release)** is a U.S. Green Buildings Council LEED Certified diffusion-based, NON-HAZARDOUS solid tablet program that will provide a reliable and controlled release of scale/corrosion inhibitors, and/or oxidizing, and/or non-oxidizing microbiocides to cooling systems over a 30, 60, or 90 day period between service intervals.

**EcoSAFE** intelligent cooling water treatment benefits include:

- **Reliable Chemical Treatment** – no feed pump failures or power outages to interrupt chemical release
- **Consistent chemical release** – as long as system is running, water is being treated
- **GREEN INITIATIVE** – no container disposal issues, shipped as non-hazardous chemical, in recyclable cardboard packaging (lower carbon footprint), LEED Certified Status:

**INDEPENDANT STUDY REVEALED THAT ECOSAFE REDUCES  
CARBON FOOTPRINT BY OVER 75%**

- **Improved Program SAFETY** – non-liquid chemical eliminates chemical containment, possibility of employee/tenant exposure, spillage, accidental release; EcoSAFE is environmentally safe. Holding this product dry in your hand is safer than holding coated aspirin.

The osmotic pressure from the system's condenser water pump (or spray pump on evaporative condensers/coolers) diffuses the chemical from its protective porous macroreticular casing, so **NO CHEMICAL FEED PUMPS** are used; no more pump failures due to loss of prime, loss of electricity, etc.

- Tablets ship in convenient lightweight (25#) recyclable cardboard boxes
- Concentrated: 100 lbs. of Eco-Safe tablets is equivalent to 600 lbs. of traditional liquid product
- Results in lower shipping (transportation fuel) costs, reduced fuel consumption and CO2 emissions from shipping
- No chemical feed pumps reduce electricity usage and greatly simplify treatment strategy

## EcoSAFE Solid Products

EcoSAFE comes in two forms: Inhibitor Tablets utilizing a patented polymer coating technology and Biocide Canisters utilizing a patented membrane technology. Both the Tablets and the Canisters are fed through standing tube feeders. Tablets come in specialized pre-measure, porous poly bags, making loading and clean fast and simple.

### EcoSAFE Chemicals



Corrosion inhibitors come in tablets and biocides come in canisters.

## EcoSAFE Feeders

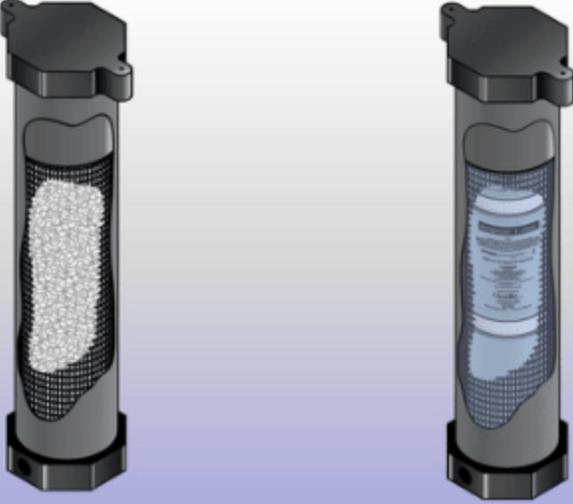
**• 5, 10 & 15 lb Feeders**  
**• No moving parts**

**• Small flow required (1-2 gallons per minute)**  
**• Simple installation**



The image shows three vertical, cylindrical feeders of increasing height. Each has a grey top cap, a central vertical pipe with a side valve, and a base with two red-handled valves. The 5lb feeder is the shortest, the 10lb is medium, and the 15lb is the tallest.

**5lb Continuous Flow Feeder    10lb Continuous Flow Feeder    15lb Continuous Flow Feeder**



The image shows two vertical cylindrical feeders in cross-section. The left one, labeled 'Tablet Technology', contains a mesh basket filled with small, white, irregularly shaped tablets. The right one, labeled 'Membrane Technology', contains a mesh basket filled with a blue, porous, cylindrical membrane filter.

**Tablet Technology                      Membrane Technology**

**Space Saving**



Which  
would you  
rather have?



**Safe Storage**



EcoSAFE products are less expensive to ship than traditional chemicals because they contain no water. No water means less weight. No water also means that there is no chance for hazard spills.

### **Safe Disposal**

Exhausted EcoSAFE Tablets and Canisters are safe to dispose of into normal solid waste collections.

- Safe and easy disposal into normal solid waste stream
- Tablets contain no heavy metals
- Fully exhausted tablets leave only insoluble materials
- Materials are non-toxic, completely and non-hazardous



Exhausted Tablets

## Photos of Typical Installations







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## **ECOSAFE CHEMICALS**

### **CORROSION INHIBITOR: Eco-Safe CWD-125**

**CWD-125: EcoSAFE Solid Feed Product** \*Powered by *Smart Release Technology*  
For Treatment of Industrial Cooling Water Systems

#### **DESCRIPTION**

**CWD-125 corrosion inhibitor**- is designed for use in open, recirculating cooling water systems where a solid, 30 Day controlled-release treatment is desired. CWD-125 contains a blend of organic sequestrants and dispersants for control of mineral and organic fouling. Corrosion inhibitors present in CWD-125 work with the NYC corrosive water conditions in open recirculating water to protect system metals.

#### **PRODUCT BENEFITS**

- *Eco-Safe* minimizes maintenance costs
- Protects all system metals
- Contains no heavy metals
- Controls mineral scales
- Controls system fouling

### **COOLING TOWER OXIDIZING MICROBIOCIDE: (BCDMH)**

**CLARITY'S BromiCide** is a broad spectrum bromine based oxidizing biocide. BromiCide is designed for use in open recirculating cooling water systems and closed loops where a solid, controlled-release biocide treatment is desired. Eco-Safe BromiCide contains a granular form of Bromo-chloro-5,5-dimethylhydantoin packaged in a proprietary Smart Release container.

#### **PRODUCT BENEFITS**

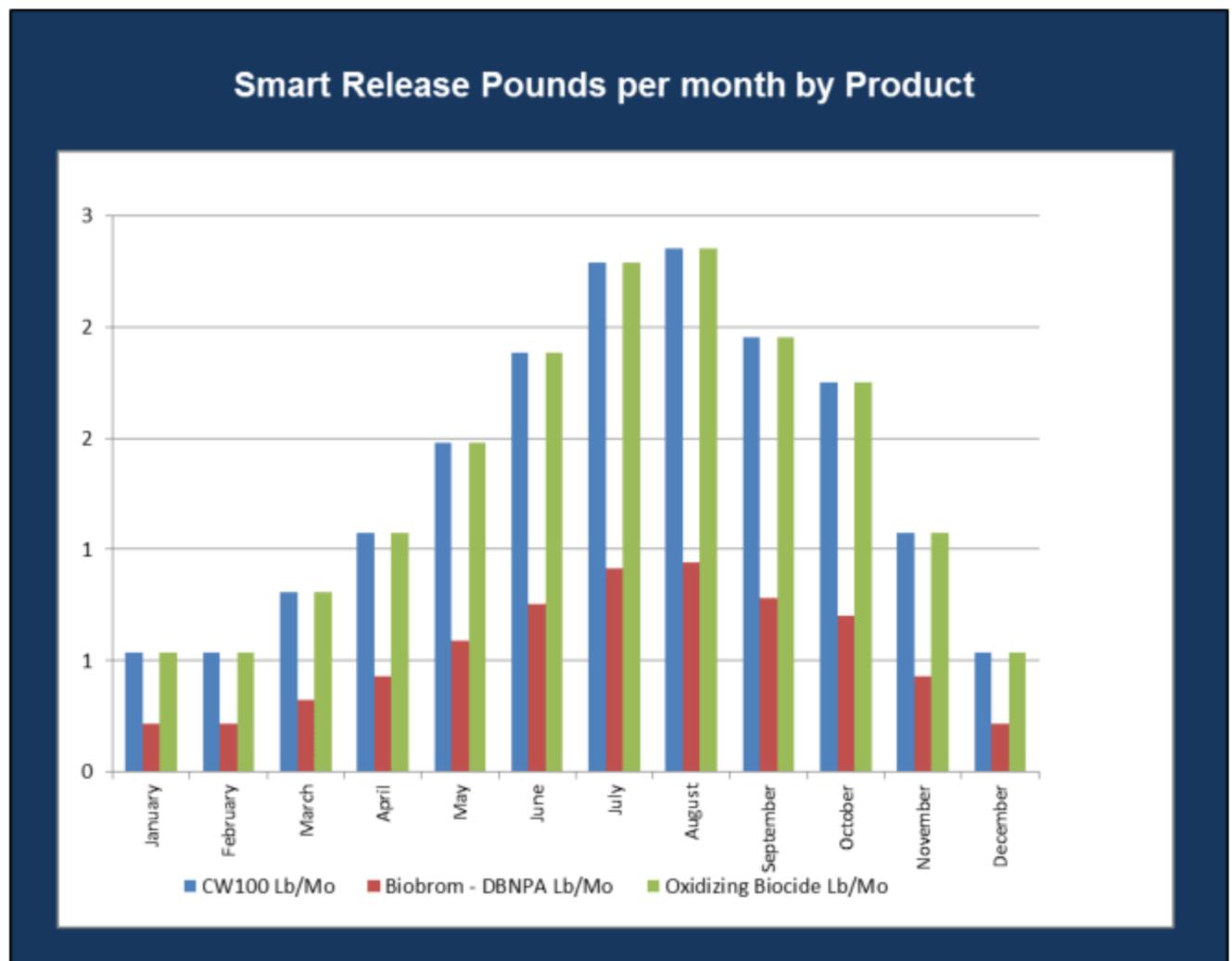
- Minimizes maintenance costs – No Pumping Required
- Prevents human exposure to chemical
- Controls biofilm and microbiological contamination
- Controls system fouling
- Reduces risk associated with waterborne pathogens

### **AIR WASHER NON-OXIDIZING MICROBIOCIDE: (DBNPA)**

**CLARITY'S BIOBROM C100G** is a non-oxidizing broad spectrum biocide. Biobrom C-100G is designed for use in open recirculating cooling water systems and closed loops where a solid, controlled-release biocide treatment is desired. EcoSAFE Biobrom C-100G contains a granular, 98% active DBNPA (2,2-Dibromo-3-nitripropionamide) material.

**PRODUCT BENEFITS**

- Minimizes maintenance costs – No Pumping Required
- Prevents human exposure to chemical
- Controls microbiological contamination
- Controls system fouling
- Reduces risk associated with waterborne pathogens





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## **SECTION 4. CLARITY SERVICE RESPONSIBILITY**

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Service Visits will be once per month during operation. During every regular service visit, the following objectives will be met:

- Discuss in-depth any operating or water related questions or problems.
- Inspect any open water handling equipment.
- Run analyses of pertinent samples from all treated systems.
- Hach DR890 to be utilized on site to monitor & report all water chemistries. Tests will include, but are not limited to: sulfite, polymer, alkalinity, hardness, conductivity, and pH.
- Submit a complete computerized report of all findings and recommendations to designated management and operating personnel.
- Submit water or deposit samples to company's R & D Laboratory if any unusual conditions exist.
- Check inventory and calculate a material balance to insure proper dosing, of all systems.
- Meet with appropriate personnel for a review of the overall water treatment program(s).
- Work on special projects to improve the water treatment program(s).

Also, we want to make sure all of your operators are familiar and comfortable with our services. The following is a list of typical one-on-one operational training that we would offer as part of your new contract:



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### **A. Startup Services**

During startup, small group training sessions will be held for operating personnel in basic water chemistry relevant to the use, application, and control of all chemicals used (if applicable). The seminars will cover:

- Basic water chemistry
- Purpose of each product
- Handling and feeding information
- Testing procedures
- Equipment lay-up procedures
- Chemical adjustments
- Handling of operational upsets

### **B. Operator Training**

As part of startup, a complete water treatment manual with all pertinent products, testing, safety, feeding, and control information will be provided to each operating and management personnel involved. To insure smooth, effective initiation of the recommended program(s), service personnel will be present to:

- Assure that chemicals are properly handled and fed.
- Train personnel in running required control tests. (if applicable)
- Instruct personnel in the proper application of chemicals and implementation and control of the program(s).
- Assure that the chemical treatment program(s) is (is) functioning properly and control limits are established and maintained at a steady rate.



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## SECTION 5. PROGRAM PRICING

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Based on our technical data, we have the following program options for (east71st street) to choose from.

### COOLING TOWER

**OPTION #1:** The cost for all Chemical for the term of 1 year (except close loop product/ purchased as needed) \$4400. Pay for the Eco Safe Feeders separately for \$2100.

**OPTION #2:** Combine the Chemistry cost and equipment and receive a monthly invoice of  $\$6500/12 = 541.66$  per month. Plus tax.

I am pleased to offer this new program and option to you and your plant. If you have any questions, please give me a call at [REDACTED]

Best regards,

Pete Stempkowski