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PRESS RELEASE



Cortec®/Bionetix® Joint Forces Make Life Easier for Wastewater Treatment Plant Operators

As a global leader in corrosion control technologies, with a subsidiary that specializes in biological wastewater treatment, [Cortec® Corporation](#) is in a unique position to make life easier for wastewater treatment plant operators. Biological treatments from Cortec's subsidiary [Bionetix® International](#) help plants get on track for more efficient waste



processing after plant upsets or imbalances, while simple and effective corrosion and preventative maintenance solutions from Cortec® bid to help plant equipment and facilities last longer in a notoriously corrosive environment. Here is a closer look at how these strategies work and the problems they address.

Let Microbes Eat Away Your Wastewater Troubles



Wastewater treatment plants rely on naturally occurring microorganisms to break down waste substances. Practically speaking, the microorganisms feed on the waste and eliminate it from water and/or convert toxins into harmless substances that can be safely discharged back to the environment. However, this delicate

balance is easily upset. Temperature fluctuations can slow down microbial activity in cool weather or encourage growth of unwanted substances in hot weather. A sudden influx of waste reflected by a high BOD (biochemical oxygen demand) can overload the system, choking it for oxygen and increasing bad odors as the natural biological mechanism switches from aerobic to anaerobic digestion. Startup and reseeded are also sensitive periods when it can be difficult to get a good microbial colony established in time to handle a heavy new load of waste materials.

Bionetix[®] International comes to the rescue with bioaugmentation, the addition of “good” bacteria to help with industrial waste and sewage cleanup. These biological “reinforcements” help tackle sewage overload in general and target specific contaminants in particular. [BCP50™](#) is one treatment that provides a good



microbial population for seeding a new municipal wastewater treatment system. It can also reduce sludge and odors in lagoons. [BCP11™](#) is well-suited to digesting wastewater from chemical plants, while [BCP22™](#) is targeted to digest FOG (fats, oils, and greases). Operators can remove high levels of ammonia with [BCP655™](#), a bioconverter that in certain conditions acts better than nitrifiers. Rather than converting nitrogen to another form that requires further denitrification, BCP655™ removes nitrogen from wastewater by consuming compounds such as ammonia, nitrate, and nitrite—even in cool weather and at lower pH.

Do Not Let Corrosion Eat Away Your Structures and Equipment



The main activity of wastewater treatment does not negate the significance of maintenance at a wastewater treatment plant. A rich supply of moisture, H₂S, and contaminants in the wastewater treatment environment creates a perfect recipe for corrosion, threatening to accelerate the deterioration of structures and equipment. An especially critical area is corrosion

protection of electronics and electricals. In these days of ever-increasing reliance on technology, wastewater treatment operations are controlled by HMIs (human machine interfaces) and other automatic devices that regulate pumps and equipment throughout the plant and the municipality that it serves. Replacement of these electronics due to corrosion is extremely costly and can add up quickly if corrosion failures are frequent. Moreover, critical equipment failure can have serious effects on plant functions.

Electricals/Electronics Protection

Fortunately, Cortec[®] has extremely simple answers for electronics and electricals. [VpCI[®]-105](#) or [VpCI[®]-111](#) Emitters are self-adhesive devices easy to stick inside a control panel. These devices emit Vapor phase Corrosion Inhibitors, which adsorb on metal surfaces within the enclosure to form a protective molecular layer that disrupts the normal corrosion reaction. VpCI[®]



Emitters can be supplemented by spraying [ElectriCorr[™] VpCI[®]-238](#) or [ElectriCorr[™] VpCI[®]-239](#) over exposed electrical contacts (when the panel is powered down). This leaves behind a clear protective film that is effective even on electrical or electronics panels that are vented or not fully enclosed. A third step is to apply [Corrosorber[®] cups](#). Similar to VpCI[®] Emitters, Corrosorbers are self-adhesive. Unlike VpCI[®] Emitters, they do not emit active corrosion inhibitors. Instead, they absorb H₂S, helping make the environment inside a control panel less corrosive. By following this

general prescription, one municipal wastewater treatment operation was able to significantly reduce the failure of HMIs located at pumphouses throughout the city, saving significant replacement costs with a price tag ranging from \$15,000 to \$40,000 apiece every six months.

Structural Protection



Corrosion also takes its toll on structures within the plant. Metal railings, beams, tanks, walkways, and even equipment can benefit from an anticorrosive coating. Where rust has already set in, it should be removed, or else arrested with [CorrVerter® Rust Converter Primer](#). Applied to corroded surfaces where loose rust has been

brushed off, this fast-drying water-based primer converts remaining rust into a passive layer. [VpCI®-373](#) is an anticorrosion primer that helps with good bonding to aluminum and galvanized substrates, while [VpCI®-396](#) or [VpCI®-384](#) serve as tough urethane topcoats for protection in harsh, unsheltered applications. For equipment that needs an unnoticeable layer of corrosion protection, [VpCI®-386](#) clear can be applied directly over painted surfaces.

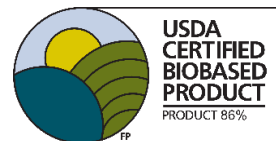
Concrete structures such as tanks, pillars, or floors should also be protected. [MCI®-2026 Floor Coating](#) is an excellent choice for protecting concrete floors from chemical ingress and physical wear and tear. Migrating Corrosion Inhibitors can be added to new concrete structures as admixtures (e.g., [MCI®-2005](#)) or to existing structures as surface applied corrosion



inhibitors (SACIs) (e.g., [MCI®-2020](#)). Migrating Corrosion Inhibitors slow time to corrosion and reduce corrosion rates once started.

Plant Maintenance

General plant maintenance can also benefit from a little extra protection here and there. For instance, [CorrLube™ VpCI® Lithium EP Grease](#) is a lithium complex grease that can be used in applications where NLGI grade 2 grease with added corrosion protection is needed. For NLGI grade 3 applications in severely corrosive environments, Cortec® offers [EcoLine® Biobased Grease powered by Nano VpCI®](#). This multipurpose grease has superior corrosion protection properties and contains 86% USDA certified biobased content as an environmental “sustainability” side benefit. [EcoLine® Cleaner/Degreaser](#) also includes biobased content plus flash corrosion protection for metal cleanup tasks.



Make Life Easier for Wastewater Treatment Operators

Wastewater treatment can be a messy business with constant maintenance and oversight activities to perform. Together, Cortec® and Bionetix® are here to help make life easier for wastewater treatment plant operators by taking simple steps of bioaugmentation and corrosion preventative maintenance. Contact Cortec®/Bionetix® today for further help or a tailored solution!

Cortec® corrosion and preventative maintenance solutions:

<https://www.cortecvci.com/contact-us/>

Bionetix® wastewater treatment solutions: <https://www.bionetix-international.com/contact-us/>

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Bionetix® International is a Canadian-based company that produces biological products used in thousands of field applications worldwide. We promote a healthy environment by providing superior, environmentally friendly alternatives to current treatment methods. Our customers are able to clean and remediate contaminated systems or boost agricultural productivity in a cost-effective, natural, and non-intrusive way through the application of our biological products. Headquartered in Quebec, Canada, Bionetix® International is a subsidiary of Cortec® Corporation. ISO 9001:2015 Certified.

Cortec® Corporation is the global leader in innovative, environmentally responsible VpCI® and MCI® corrosion control technologies for Packaging, Metalworking, Construction, Electronics, Water Treatment, Oil & Gas, and other industries. Our relentless dedication to sustainability, quality, service, and support is unmatched in the industry. Headquartered in St. Paul, Minnesota, Cortec® manufactures over 400 products distributed worldwide. ISO 9001, ISO 14001:2004, & ISO 17025 Certified. Cortec® Website: <http://www.cortecvci.com> Phone: 1-800-426-7832 FAX: (651) 429-1122