



Blue Ribbon

ENVIRONMENTAL PRODUCTS, INC.

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RESPONSE TO NOTICE OF OPPORTUNITY TO COMMENT

PROPOSED APPROVAL OF AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE COLORADO RIVER BASIN REGION TO ESTABLISH A TOTAL MAXIMUM DAILY LOAD AND IMPLEMENT A PLAN FOR DISSOLVED OXYGEN IN THE NEW RIVER AT THE INTERNATIONAL BOUNDARY, IMPERIAL COUNTY, CALIFORNIA

The key to unlocking any water “problem” is to first understand the chemistry of that water body, like the New River. Information on flows, temperature, dissolved oxygen (DO), microbial counts and orientation (anaerobic or aerobic), pH, as well as any metal contaminants is necessary to unlocking a solution to address the situation. The attached document requests the necessary information to allow us to develop a comprehensive solution. Our approach is based on cooperation of all parties involved and using our industry leading technology at improving DO levels in rivers and sewage treatment lagoons, while addressing other water chemistry issues as well.

Screening, filtration, and other mechanical treatments are not designed to deal with such a complex water stream or inadequate oxygen levels that would help to maintain a healthy aquatic system and are very expensive. Screening is a technique to remove large pieces of debris not microscopic particles of contamination comprised of fecal coli form, blood from a slaughter house, salinity or heavy metals just to name a few. The addition of Chlorine is a doubled-edge sword because it does act as a disinfectant on drinking water but it also kills beneficial microbes that are necessary to a healthy body of water.

The most successful and cost effective way to clean up the New River is to treat at the source of contamination. Attempting to treat one complex waste stream is far more challenging when dealing with variable flows, contaminant levels and interactions between contaminants. As flows and contaminant levels fluctuate up or down from day to day or hour by hour adjustments need to be made to the system to react to the changing conditions. A reliable system needs to be based on constant data.

By eliminating these chemicals one at a time you will change the New River from a complex waste stream to a simple waste stream. This will make it easier to deal with because each

chemical has its own signature which reacts differently to the any cleanup technology. What will remove one chemical may “set” another so it cannot be removed. It makes the process very difficult and very expensive. A system capable of treating all the possible combined variations will require a lot more flexibility and higher costs. Requiring each plant or source to deal with their specific waste stream will allow you to start to get a grip on cleaning up the New River.

The best treatment scheme for a waste stream is microbial contact. The trick to microbes is the correct form of Dissolved Oxygen (DO) and colony size. Every sewage treatment plant in America deals with the exact same problem; keeping a balanced system. Bacteria or Microbes in the sewage system need to be facultative aerobic or anaerobic depending on their use. Aerobic bacteria require oxygen for life support whereas anaerobes can sustain life without oxygen and are used for a different purpose. Facultative bacteria have the capability of living either in the presence or in the absence of oxygen. In the typical sewage treatment plant, oxygen is added to improve the functioning of aerobic bacteria in the polishing ponds and to assist them in maintaining control over digestion while anaerobic are used in removal of heavy metals, higher agitation costs, and other controllable components of your system. Ideally one must carefully consider and employ a means of maximizing the potential of the bacterial reduction of organic in the wastewater.

Herein lays the problem....the wrong form of Oxygen. The industry tries to force O₂ into the water column which does nothing for the water because O₂ forms air bubbles and returns back to the atmosphere. Following is a brief description on the workings of water and Oxygen.

D.O. & Basic Water Description

Water exists as a molecule, “H₂O”; it is made up with 2 Hydrogen atoms and one Oxygen atom. The Oxygen is negatively charged and the Hydrogen is charged positive. The old adage is “Opposites attract”. Even though the molecule is neutrally charged it still has a polarity meaning it has a positive and negative side, which is how these molecules link together and form water. Some of those polarity sites will link with additional Hydrogen atoms, which are referred to as weak-linked Hydrogen bond. When you look at a water molecule it is made up of a positively charged Hydrogen Ion “H⁺” and a Negatively charged Hydroxyl Ion “OH“.

When water warms it begins a process that is called Ionization. What happens when water ionizes is the water molecule takes on more hydrogen bonds than normal. This process stops the water molecule from being able to absorb oxygen normally from the sky or release the Oxygen that is tied up in these loose-linked Hydroxyl bonds. Thus the biological and aquatic life uses up what Oxygen is available in the water and the water becomes Oxygen deficient.

When water reaches this deficient level of Oxygen, below 6ppm, Mother Nature’s steps in and tries to help solve this deficiency by introducing green Oxygen producing plants into the equation, like Algae, Milfoil, Elodea or Pond weeds. This actually causes a downward spiral in the D.O. level because the indigenous microbial life keeps consuming the Oxygen faster than the plants can produce it.

Our patented dissolved oxygen “bubble-free” delivery technology, or Supersaturated Dissolved Oxygen system, can accelerate what Mother Nature can’t do herself all in one cost-effective, portable system.

Our equipment uses a patented and patents pending technology for delivering dissolved oxygen (DO) to a body of water. The benefits of the SDOX® over current technologies include lower operating costs, far greater flexibility over where and when dissolved oxygen is delivered to any point in the water body and precise control of oxygen concentration in the water being treated. This is an ideal solution for delivering dissolved oxygen to rivers and streams to remediate impacts from point and non-point pollution, for providing refuge for critical species and for enhancing ecological services.

What our technology does, is it breaks the “H₂O” form back to single ionic “O” which replaces the bound-up Oxygen and then allows the water to absorb Oxygen naturally from the atmosphere to satisfy maintain its need. Then the indigenous microbes revert back to the Aerobic state and start consuming the nutrients (Phosphates & Nitrates) that are the food source for the Algae, Milfoil, Elodea or Pond weed. These plants cannot survive without nutrients or in an Oxygen rich environment.

The Oxygen that our system is releasing into the water is single Ionic “O” not “O₂”. Thus we do not have a negative effect on Aquatic life by what is called over saturation.

This is a very basic description of what we do in a nut shell and why...

In most cases, polluted water is extremely oxygen deficient or suffering from low D.O. (Dissolved Oxygen). Oxygen is essential for maximum survival and performance of Aerobic Digester Microbes and survival of the aquatic life (like the Fish). This has been the reason companies have experienced limited success with microbial remediation projects in the past. If you add microbes without increasing the available oxygen it will not solve your problems. The Facultative Microbes have gone Anaerobic or are in the fermenting state. We took this factor into account when we developed our technology to remediate a body of water by increasing the oxygen levels in the water. With the correct level of dissolved oxygen in the water the microbes will revert back to the Aerobic state and resume their job of keeping the water clean.

This is what led us to develop our patented Single Ionic “O” Delivery System. With the data I requested on the form attached we could develop a system to help correct your problems, but it would take the cooperation of every agency, corporation and government involved. If you would like a disk on our equipment and projects please advise. Here are some advantages to our equipment.

Blue Ribbon Environmental offers a revolutionary new approach to dissolved oxygen delivery. These scalable systems offer ease of operation, low capital and operating costs, controlled delivery of dissolved gas at a wide range of concentrations and virtually 100% gas utilization (no off-gassing.) This technology offers solutions for many difficult applications:

- Increasing water treatment capacity

- High dissolved oxygen concentration delivered
- Odor control and Algae control and removal
- Complete flexibility for delivery of DO at different rates and at different locations for supplemental oxygenation needs
- Site-specific dissolved gas delivery needs. Application adaptability from permanent to trailer mounted
- Portable for addressing remote or intermittent problem
- Fish survivability and invasive control

Respectfully Submitted,

Gary M. Snyder

Gary M. Snyder, Environmental Director

Blue Ribbon Environmental Products, Inc.



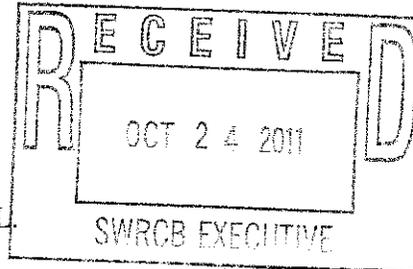
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

October 20, 2011



Jeanine Townsend
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



Re: Comment Letter - New River DO TMDL

Dear Ms. Townsend:

The International Boundary and Water Commission, United States Section (USIBWC) appreciates the opportunity to review and comment on the subject action. The USIBWC understands the proposed action will place the New River at the International Boundary to 12 miles downstream into a Total Maximum Daily Load (TMDL) status due to low dissolved oxygen levels in the New River.

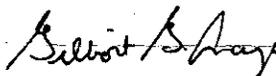
The USIBWC has reviewed the data collected at this site by USIBWC personnel and our data shows that during the past 5 years the dissolved oxygen has a seasonal occurrence of not meeting the 5.0 mg/L standard; however, our data also shows that the dissolved oxygen levels are improving. During the past two years, dissolved oxygen levels have been meeting the 5.0 mg/L standard and as such do not meet the criteria for a TMDL.

In addition, the TMDL implementation plan proposes in Phase 1 to request that the federal government (USIBWC and USEPA) develop and submit to the Regional Board a New River DO TMDL Implementation Report that describes measures taken or proposed to ensure Mexico does not cause or contribute to violations of this TMDL within one year after USEPA approval of the TMDL. The USIBWC works with Mexico to recognize and resolve bi-national issues along the United States – Mexico border; however, Mexico is a sovereign nation and the USIBWC cannot ensure that Mexico will agree to or meet any conditions established by the State of California for this TMDL. The USIBWC will continue to make every effort to resolve environmental issues in the New River but will not be submitting the requested report. The USIBWC will continue, as requested, to conduct water quality and DO monitoring in the New River at the International Boundary, and to submit monitoring data and reports to the Regional Board.

In lieu of a TMDL, the USIBWC would like to recommend the development of a watershed protection plan. This will provide a framework that will lead to achieving the same goals and will allow for stakeholder input and voluntary efforts to reduce the dissolved oxygen problems in the New River. Any TMDL will be unenforceable in the country of Mexico and places undue burden on the regulated stakeholders in the United States.

Thank you again for the opportunity to review and comment on the subject document for the proposed TMDL listing. Should you or your staff have questions, please contact me at (915) 832-4702 or Mr. Wayne Belzer at (915) 832-4703.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gilbert G. Anaya", is written over a horizontal dashed line.

Gilbert G. Anaya
Division Chief
Environmental Management Division