

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MINNESOTA

OXYGENATOR WATER  
TECHNOLOGIES, INC.

Plaintiff,

v.

TENNANT COMPANY

Defendant.

Civil Action No. 0:20-cv-00358

**Jury Trial Demanded**

**RESPONSIVE EXPERT DECLARATION OF RALPH E. WHITE**

I, Ralph E. White, declare as follows:

1. I provide the following responsive declaration to respond to one issue in Tennant's opening claim construction memorandum.
2. In that memorandum, Tennant argued that a POSA would not know whether the claim term "water . . . has a conductivity produced by the presence of dissolved solids such that the water supports plant or animal life" encompassed fresh water or sea water. In my opinion, a POSA reading the claim in light of the intrinsic record of the Patents would understand the phrase to encompass water that supports fresh water plants and animal life.
3. The Patents are focused on the electrolysis of water to create microbubbles and nanobubbles of oxygen. As explained in my opening declaration, water with too many dissolved solids—such as sea water—does not support this electrolysis of water to create oxygen. (See, for example, opening Expert Declaration of Ralph E. White

(“opening Expert Declaration”) at paragraphs 32, 38.) The specification reflects this reality. First, none of the examples from the specification describe the use of the product in seawater. Instead, the examples relate to conducting electrolysis on tap water or freshwater sources. Moreover, the specification states that, in general, a medium that supports the electrolysis of water contains less than 2000 ppm of total dissolved solids. (*Id.* at paragraph 38.) Seawater includes many more dissolved solids than that (approximately 35,000 ppm<sup>1</sup>). It would not make sense to interpret the claim language “has a conductivity produced by the presence of dissolved solids such that the water supports plant or animal life” as encompassing seawater given that the dissolved solids in seawater is more than an order of magnitude higher than the guidance provided by the specification.

4. The prosecution history also supports this understanding. As I stated in my opening Expert Declaration, when the applicant added the phrase “has a conductivity produced by the presence of dissolved solids such that the water supports plant or animal life”, he included a statement about what this phrase means. (See opening Expert Declaration at Paragraphs 27, 42.) This statement in the prosecution history did not state that the above phrase encompasses sea water. Instead it states : “ water delivered by a municipal water treatment plant in addition to well water, lake water and irrigation water”.

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<sup>1</sup> [https://www.usgs.gov/special-topic/water-science-school/science/saline-water-and-salinity?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/special-topic/water-science-school/science/saline-water-and-salinity?qt-science_center_objects=0#qt-science_center_objects)

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 6/17/21

*Ralph E. White*  
Ralph E. White