

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

AQUATECH INTERNATIONAL	:	
CORPORATION, a Pennsylvania corporation,	:	
and DEBASISH MUKHOPADHYAY, an	:	
individual,	:	Civil Action No.
	:	
Plaintiffs,	:	
	:	
	:	
vs.	:	
	:	
VEOLIA WATER WEST OPERATING	:	JURY TRIAL DEMANDED
SERVICES, INC., a Delaware corporation and	:	
VEOLIA WATER SOLUTIONS &	:	
TECHNOLOGIES NORTH AMERICA, INC.,	:	
a Delaware corporation,	:	
	:	
Defendants.	:	

COMPLAINT FOR PATENT INFRINGEMENT

AND NOW come Plaintiffs Aquatech International Corporation (hereinafter “Aquatech”) and Debasish Mukhopadhyay (hereinafter “Deb”) (and hereinafter, collectively, “The Aquatech Plaintiffs”), and bring this action against Defendants Veolia Water West Operating Services, Inc. (hereinafter “VWWOS”) and Veolia Water Solutions & Technologies North America, Inc. (hereinafter “VWSTNA”) (and, collectively, “Defendants”) for infringement of Plaintiffs’ U.S. Patent Nos. 5,925,255 (the “255 Patent”) and 6,537,456 (the “456 Patent”) (and, collectively, the “HERO Patents”).

PARTIES

1. Plaintiff Aquatech International Corporation (“Aquatech”) is a corporation incorporated under the laws of the Commonwealth of Pennsylvania, with its principal office and place of business at One Four Coins Drive, Canonsburg, Washington County, Pennsylvania 15317. Aquatech is an exclusive licensee of the HERO Patents.

2. Plaintiff Debasish Mukhopadhyay (“Deb”) is an individual residing in the State of California. Deb is the owner of U.S. Patent Nos. 5,925,255 (the “255 Patent”) and 6,537,456 (the “456 Patent”). (See attached Exhibits “1” and “2,” respectively.)

3. Upon information and belief, Defendant Veolia Water West Operating Services, Inc. (“VWWOS”) is a Delaware corporation and has its principal place of business at 101 West Washington Street, Suite 1400 E, Indianapolis, IN 46304.

4. Upon information and belief, Defendant Veolia Water Solutions & Technologies North America, Inc. (“VWSTNA”) is a Delaware corporation and has its principal place of business at 250 Airside Drive, Moon Township, Pennsylvania 15109-2793. Defendant is a related corporation to VWWOS.

JURISDICTION AND VENUE

5. This action arises under the patent laws of the United States, 35 U.S.C. §§ 101, *et seq.*

6. This Court has subject matter jurisdiction over patent infringement claims under 28 U.S.C. § 1331 and 28 U.S.C. § 1338(a).

7. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400(b) because Defendant VWWOS and Defendant VWSTNA have each regularly conducted business in this judicial district and each Defendant is subject to personal jurisdiction in this judicial district.

PATENT INFRINGEMENT UNDER 35 U.S.C. § 271

8 Plaintiff Deb is the owner of all right, title and interest in U.S. Patent No. 5,925,255 (the “255 Patent”), which was duly and legally issued by the United States Patent Office on July 20, 1999, and U.S. Patent No. 6,537,456 (the “456 Patent”), which was duly and legally issued by the United States Patent Office on March 25, 2003 (collectively, the “HERO Patents”).

THE AQUATECH PLAINTIFFS’ HERO PROCESS

9. Plaintiffs specialize in industrial water purification technologies for the electricity generation, chemical, petrochemical, pharmaceutical, microelectronics, and other industries. During the past 15 years, Deb, as the owner of the inventive HERO Patents, has licensed his unique HERO® water purification technologies to preeminent industry leaders, including General Electric, Intel and Aquatech.

10. Processes using the HERO® Patents utilize the patented high efficiency reverse osmosis technologies, and are currently being employed globally in a multitude of industries including power generation, petrochemical and microelectronics. Plaintiffs’ well recognized HERO® water treatment processes have proven effective in treating high silica, fouling and difficult-to-treat industrial waste streams for at least the past decade. Applications include zero liquid discharge, cooling tower blow down treatment, recycle/reuse and treating water supplies

with high organic content (including treated effluents). The HERO® processes are robust and forgiving processes which utilize industry standard and proven hardware components. Water recoveries in excess of 90% result in economical water reuse and environmental benefits. Advantages, beyond the simplicity of design and operation, include lower total installation costs, lower operating costs and lower life cycle costs when compared to prior art reverse osmosis (RO) processes.

THE ACCUSED OPUS PROCESS AND EQUIPMENT

11. Defendants' OPUS Process is alleged by Defendants to be a "proprietary Optimized Pretreatment and Unique Separation Process" for desalination of feed water with high concentrations of silica, organics, hardness, boron and particulates.

12. Defendants' accused OPUS technology consists of multiple processes, including, in various configuration degasification, chemical softening, media filtration, ion exchange softening, cartridge filtration and reverse osmosis (RO). The processes upstream of the RO are designed to reduce hardness, metals and suspended solids in a feed water. The RO process operates at an elevated pH, which effectively controls biological, organic and particulate fouling, eliminates scaling due to silica, and increases the reject of silica and boron, (See attached Exhibit "3").

13. In feed water applications with high dissolved gases and/or excess alkalinity, the feed water is subjected to degasification after the addition of an acid, to reduce the quantity of solids generated in the downstream chemical softening process, and to reduce the alkali demand associated with raising the pH.

14. Defendants' OPUS Process is disclosed in, *inter alia*, the following documents produced in related United States District Court for the Western District of Pennsylvania Action No. 10-CV-00484: NAWS000029-30; NAWS000360-61; NAWS000012, NAWS001455; and NAWS000348-000407.

DEFENDANTS' OPERATION OF WATER TREATMENT FACILITIES AT SAN ARDO

15. Defendants were awarded a contract for the Water Treatment Facilities expansion project at Chevron's oil production field in San Ardo, California. The expansion increased production of soft water at the facility from 10,000 barrels per day to 70,000 barrels per day. The project includes Defendants' OPUS Process which is capable of producing 50,000 barrels per day of treated water for discharge. Defendants operate and maintain, and will continue to operate and maintain, the Water Treatment Facilities at San Ardo for a period of at least 11 years. (See attached Exhibit "4").

16. On information and belief, Defendants have provided and will provide operations and maintenance services, and performance guarantees, on a fixed-fee basis to ensure design performance and high-quality recycled water from the Water Treatment Facilities at San Ardo.

DEFENDANTS' OPERATION OF PLAINS EXPLORATION & PRODUCTION OPUS WATER TREATMENT SYSTEM

17. Defendants operate, and will continue to operate, a 45,000 barrel-per-day (Bbls/d) produced water reclamation facility in California for Plains Exploration & Production Company ("PXP") located in Plains' Arroyo Grande Oilfield in San Luis Obispo County, California. The PXP water reclamation facility utilizes Defendants' OPUS Process and is, and will continue to be, supervised by Defendants under a 12-year performance agreement. (See attached Exhibit "5").

18. On information and belief, Defendants have, and will continue to provide operations and maintenance services and performance guarantees on a fixed-fee basis to ensure design performance and high-quality recycled water.

19. Defendants' accused OPUS treatment process will produce water that meets or exceeds state and federal permit requirements. This treated water at the Arroyo Grande facility will provide 25,000 Bbls/d for use as Once Through Steam Generation ("OTSG") make-up. It will also provide about 20,000 Bbls/d for surface water discharge and dewatering the Arroyo reservoir, which will result in reduction of formation pressure enabling increased crude oil production at the site.

DEFENDANTS' OPERATION OF MOLYCORP MINERALS' OPUS SYSTEM

20. On information and belief, Molycorp, Inc. acquired the Mountain Pass, California facility on September 30, 2008 from Chevron Mining, Inc. The Mountain Pass facility produces high purity rare earth products.

21. The Mountain Pass facility produces lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium and dysprosium in various chemical compounds and/or metal forms, including alloys.

22. Defendants' OPUS Process is used to treat wastewater from the Mountain Pass facility, the only developed commercial source of rare earth material in the Western hemisphere.

23. The Federal Clean Water Act and similar state and local laws and regulations regulate surface mining and processing operation by imposing restrictions on the discharge of pollutants, including tailings and other material, into waters of the United States.

24. Molycorp's Mountain Pass operations require significant quantities of water to process REOs. As part of the modernization and expansion of the Mountain Pass facility, Molycorp expects to significantly reduce their need for fresh water by recycling available water. Defendants have contracted with Molycorp to operate the Mountain Pass facility utilizing Defendants' OPUS Process to meet the foregoing needs. (See attached Exhibit "6").

25. On information and belief, Defendants will provide operations and maintenance services, and performance guarantees, on a fixed-fee basis to ensure design performance and high-quality recycled water at the Molycorp Mountain Pass facility.

**DEFENDANTS' SUPPLY OF OPUS SYSTEM EQUIPMENT
TO GENERAL MOTORS MEXICO**

26. Defendants have supplied OPUS® System Equipment to Treat Produced Water for Aquifer Recharge. The General Motors Cactus Plant in San Luis Potosi, Mexico, is an automobile assembly plant situated in an area with limited-capacity deep wells that supply the production facility with process water. (See attached Exhibit "7").

27. The process wastewater from this assembly plant is pre-treated for oil and grease and metals removal. It is then combined with sanitary waste and is treated by a conventional activated sludge process for organics removal. Following treatment, the wastewater contains 1,000 to 1,500 mg/l total dissolved solids (TDS), 25 to 35 mg/l silica, and 18 to 35 mg/l of dissolved organics. The water is then processed by Defendants' proprietary OPUS® technology, where the TDS and dissolved organics are removed so that the water can be recycled for reuse.

28. The stated goal of Defendants' OPUS® technology is to convert 90% of the wastewater into reusable water. This technology consists of multiple treatment processes including degasification, chemical softening, media filtration, ion exchange softening and reverse osmosis (RO) technologies. The pretreatment processes upstream of the RO are designed to reduce the hardness, metals and suspended solids in the feed water. The RO process operates at an elevated pH, which effectively controls biological, organic and particulate fouling, eliminates scaling due to silica, and increases the rejection of organics. The reject water is sent to solar ponds at the site for evaporation.

29. Defendants' OPUS® technology was demonstrated by Defendants on the facility's site in a pilot-scale study for a period of four months, before a purchase agreement was reached with General Motors.

30. On information and belief, Defendants have infringed, have induced, and have contributed to the infringement of the HERO® patents by numerous customers and potential customers of the accused OPUS Process, and by the supply of related OPUS equipment throughout the United States.

DEFENDANTS' OPERATION OF KENNECOTT EAGLE MINERALS OPUS SYSTEM

31. In October 2011, Kennecott Eagle Minerals, a wholly owned unit of Rio Tinto, awarded Veolia Water Solutions & Technologies a contract for an OPUS wastewater treatment plant at its Eagle Mine located in Michigan's Upper Peninsula. Kennecott's Eagle Mine will be the only primary nickel mine operating in the United States and is expected to produce approximately 300 million pounds of nickel and 250 million pounds of copper over the life of the mine. (See attached Exhibit "8").

32. Defendants' OPUS wastewater treatment process includes precipitation softening and clarification, filtration, ion exchange softening and a final two pass reverse osmosis (RO) polishing system. The discharge streams from this wastewater treatment process include treatment effluent water, metals precipitation sludge, ion exchange regenerate and RO concentrate. The treated effluent water will be suitable for reuse in the mining process or to release back into the groundwater by treated water infiltration system. The ion exchange regenerate and RO concentrate liquid waste will then be sent to the evaporator and crystallizer system and converted to solids which will be disposed of off-site as a non-hazardous solid waste.

33. On information and belief, Defendants have, and will continue to provide operations and maintenance services and performance guarantees on a fixed-fee basis to ensure design performance and high-quality recycled water.

34. Defendants, and their respective predecessors in interest, have had prior knowledge of the HERO Patents at least as early as 2003. In this respect, Defendants filed a lawsuit in the United States District Court for the District of New Mexico (Case No. cv-03-0402 JH (LFG)) (hereinafter referred to as the "402 Action.").

35. In the 402 Action, Defendants sought ownership of the HERO Patents. Defendants ultimately failed in their attempt to claim ownership, and the 402 Action was dismissed pursuant to Stipulation and Order in August of 2005.

36. Defendants, and their predecessors in interest, sought to gain access to the patented HERO® technology by and through discussions with Aquatech, which occurred from July 2005 to August 2005. In this respect, on July 22, 2005, Aquatech sent an equipment proposal in response to their request, but warned Defendants of their potential infringement of

the HERO Patents relating to Defendants' wastewater treatment process to be designed and built for Chevron at San Ardo, California.

PATENT INFRINGEMENT OF U.S. PATENT NO. 5,925,255 (the "255 Patent")

37. The Aquatech Plaintiffs incorporate Paragraphs 1 through 36 of this Complaint, as if set forth fully herein.

38. On July 20, 1999, U.S. Patent No. 5,925,255 (the "255 Patent") was duly and legally issued to Debasish Mukhopadhyay for an invention entitled "Method and Apparatus for High Efficiency Reverse Osmosis Operation."

39. Debasish Mukhopadhyay is the owner, inventor and has the right to bring suit under the 255 Patent.

40. Defendants have infringed and continue to infringe the 255 Patent.

41. Defendants have been, and still are, infringing, actively inducing others to infringe, and contributorily infringing the 255 Patent throughout the United States.

42. Section 271(f) specifies a manufacturer can be held liable for inducement: Defendants have supplied within the United States all or a substantial portion of the components of a patented invention for assembly and distribution overseas:

- (1) Whoever without authority supplies or causes to be supplied in or from the United states all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States shall be liable as an infringer. 35 U.S.C. § 271(f)(2000).

43. Defendants have supplied from the United States one, or more, components of a patented invention that are either specially made or specially adapted for use in the invention, but it is not a staple article or commodity of commerce suitable for substantial non-infringing use, in violation of 35 U.S.C. § 271(f)(2):

(2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

44. On information and belief, Defendants' infringement has been willful. Defendants were advised of the existence of the Aquatech Plaintiffs' patent rights and continue selling the accused OPUS Process and related equipment specially designed for performing the accused OPUS Process.

45. The Aquatech Plaintiffs have been, and will continue to be, irreparably harmed by Defendants' infringing conduct unless Defendants are enjoined by this Court.

PATENT INFRINGEMENT OF U.S. PATENT NO. 6,537,456 (the "456 Patent")

46. The Aquatech Plaintiffs incorporate Paragraphs 1 through 45 of this Complaint, as if set forth fully herein.

47. On March 25, 2003, U.S. Patent No. 6,537,456 (the “456 Patent”) was duly and legally issued to Debasish Mukhopadhyay for an invention entitled “Method and Apparatus for High Efficiency Reverse Osmosis Operation.”

48. Debasish Mukhopadhyay is the owner, inventor and has the right to bring suit under the 456 Patent.

49. Defendants have infringed and continue to infringe the 456 Patent.

50. Defendants have been, and still are, infringing, actively inducing others to infringe, and contributorily infringing the 456 Patent throughout the country.

51. On information and belief, Defendants’ infringement has been willful. Defendants were advised of the existence of The Aquatech Plaintiffs’ patent rights, yet continue to sell the accused OPUS Process and related equipment specially designed for performing the accused OPUS Process.

52. The Aquatech Plaintiffs have been, and will continue to be, irreparably harmed by Defendants’ infringing conduct unless Defendants are enjoined by this Court.

DEMAND FOR JURY

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, the Aquatech Plaintiffs demand trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, the Aquatech Plaintiffs respectfully pray that the Court enter judgment on the Complaint and:

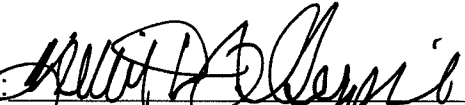
- 1) Adjudge that Defendants have infringed U.S. Patent No. 5,925,255;
- 2) Adjudge that Defendants have infringed U.S. Patent No. 6,537,456;
- 3) Enter a permanent injunction restraining and enjoining Defendants and its respective officers, agents, servants, employees, attorneys, and other persons in active concert or participation with them from contributing to or inducing the infringement of U.S. Patent No. 5,925,255;
- 4) Enter a permanent injunction restraining and enjoining Defendants and its respective officers, agents, servants, employees, attorneys, and other persons in active concert or participation with them from contributing to or inducing the infringement of U.S. Patent No. 6,537,456;
- 5) Award damages to compensate the Aquatech Plaintiffs for Defendants' infringement of U.S. Patent No. 5,925,255 pursuant to 35 U.S.C. § 284;
- 6) Award damages to compensate the Aquatech Plaintiffs for Defendants' infringement of U.S. Patent No. 6,537,456 pursuant to 35 U.S.C. § 284;
- 7) Enter a declaration that the accused OPUS Process, and the specially engineered related equipment, infringes U.S. Patent No. 5,925,255;
- 8) Enter a declaration that the accused OPUS Process infringes U.S. Patent No. 6,537,456;

- 9) Enter a declaration that the actions of Defendants in promoting the accused OPUS Process and selling equipment to others for the purpose of practicing the accused OPUS Process constitutes contributory infringement or inducement to infringe U.S. Patent No. 5,925,255;
- 10) Enter a declaration that the actions of Defendants in promoting the accused OPUS Process and selling equipment to others for the purpose of practicing the accused OPUS Process constitutes contributory infringement or inducement to infringe U.S. Patent No. 6,537,456;
- 11) Award to the Aquatech Plaintiffs the Defendants' total profit pursuant to 35 U.S.C. § 284;
- 12) Find that Defendants' infringement is deliberate and willful, and that the damages be trebled and prejudgment interest be awarded to the Aquatech Plaintiffs be pursuant to 35 U.S.C. § 284;
- 13) Award the Aquatech Plaintiffs' reasonable attorneys' fees pursuant to 35 U.S.C. § 285 and Rule 54(d) of the Federal Rules of Civil Procedure;
- 14) Award the Aquatech Plaintiffs interest and costs pursuant to 35 U.S.C. § 284 and Rule 54(d) of the Federal Rules of Civil Procedure; and
- 15) Award the Aquatech Plaintiffs any such other relief as the Court may deem just and appropriate.

DATE: June 27, 2013

Respectfully submitted,

BOSWELL, TINTNER & PICCOLA

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