

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAZOOKA-FARMSTAR, LLC,

Petitioner,

v.

NUHN INDUSTRIES LTD.,

Patent Owner.

Case No. IPR2024-00004
U.S. Patent No. 11,491,835

PATENT OWNER'S REVISED AND CONDITIONAL MOTION TO AMEND

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	STATEMENT OF RELIEF REQUESTED	1
III.	THE SUBSTITUTE CLAIMS INCLUDE ONLY NARROWING LIMITATIONS	1
IV.	THE ORIGINAL NON-PROVISIONAL APPLICATIONS SUPPORT EACH LIMITATION OF THE PROPOSED SUBSTITUTE CLAIMS	3
V.	LEVEL OF ORDINARY SKILL IN THE ART	10
VI.	CLAIM CONSTRUCTION.....	11
VII.	THE SUBSTITUTE CLAIMS ARE PATENTABLE OVER THE PRIOR ART	11
A.	The Proposed Claims Have Limitations Not Found In The Prior Art	11
B.	The Substitute Claims Are Patentable Over The Prior Art Cited In The IPR Petition	19
i.	The Substitute Claims Are Patentable Over Carrier.....	19
ii.	The Substitute Claims Are Patentable Over Truxor In View Of Yoon Or Carrier	20
iii.	The Substitute Claims Are Patentable Over SenwaTec In View Of Yoon Or Carrier.....	21
iv.	The Substitute Claims Are Patentable Over Puck In View Of Bryham.....	21
v.	The Substitute Claims Are Patentable Over Puck In View Of Bryham And In View Of Bennett-II	22
C.	The Substitute Claims Are Also Patentable Over the Prior Art Cited in Petitioner’s Opposition to Patent Owner’s Original Motion to Amend the ‘835 Patent	22
i.	The Substitute Claims Are Patentable Over Puck In View Of The Puck Video, Bryham, And Manure-Manager	23
ii.	The Substitute Claims Are Patentable Over Sundstrom In View Of Bryham.....	25
VIII.	CONCLUSION	25

TABLE OF AUTHORITIES

	Page(s)
Statutes	
35 U.S.C. § 316(d).....	1
Other Authorities	
37 C.F.R. § 42.11.....	14
37 C.F.R § 42.121.....	1

LIST OF PATENT OWNER'S EXHIBITS

<i>Exhibit #</i>	<i>Description</i>
2001	Petitioner's <i>Ex Parte</i> Reexamination Requests for U.S. Patent No. 11,358,425 and U.S. Patent No. 10,974,557
2002	Decision Granting Patent Owner's Petition for an Unintentionally Delayed Priority Claim in U.S. Patent. No. 10,124,638
2003	U.S. Patent No. 4,594,006 to Depeault ("Depeault")
2004	Expert Declaration of Douglas S. Prairie
2005	Curriculum Vitae of Douglas S. Prairie and Case List
2006	Screenshots from Patent Owner's YouTube Channel of Patented Product, retrieved on 10-2-23 from https://www.youtube.com/watch?v=fEgvvq9HZkk
2007	Screenshots from Petitioner's YouTube Channel of Accused Product, retrieved on 10-2-23 from https://www.youtube.com/watch?v=3y3bSJJUOps
2008	Screenshots from Progressive Dairyman YouTube Channel of 2014 Manure Lagoon Agitation Boat Demonstration, published on 7-9-14 by Progressive Dairy, retrieved on 10-2-23 from https://www.youtube.com/watch?v=FXRS-9Ip1pE
2009	Patent Classification List for U.S. Patent No. 11,358,425, retrieved on 10-4-23 from https://patents.google.com/patent/US11358425B1/en?q=US11358425
2010	U.S. Patent No. 4,406,413 to Houle ("Houle")
2011	U.S. Patent No. 7,833,071 to Gaither ("Gaither")
2012	U.S. Patent No. 5,176,098 to Royle ("Royle")
2013	U.S. Patent No. 9,462,741 to Puck ("Puck-II")
2014	U.S. Patent No. 9,572,297 to Puck ("Puck-III")
2015	DE2364962 to Kronseder ("Kronseder")
2016	DE3431345 to Lüllmann ("Lüllmann")
2017	CA2002619 to Depeault ("Depeault-II")
2018	U.S. Patent No. 10,118,138 to Tews ("Tews")
2019	Daniel L. Pfoest et al., Univ. of Mo. Extension, Anaerobic Lagoons for Storage/Treatment of Livestock Manure (Oct. 2000)
2020	Screenshots from 2023 North American Manure Expo Website, retrieved on 10-2-23 from https://www.manureexpo.ca/

2021	Dictionary Definitions of “Dredging” and “Agitation”, retrieved on 9-30-23 from https://en.wikipedia.org/wiki/Dredging , https://www.merriam-webster.com/dictionary/dredging#dictionary-entry-1 , https://www.merriam-webster.com/dictionary/agitation , and https://www.lagoonpumping.com/articles-resources/agriculture-articles/manure-articles/
2022	Envtl. Prot. Agency, Primer for Municipal Wastewater Treatment Systems (Sept. 2004)
2023	U.S. Dep’t Agric., <i>Agricultural Waste Management Systems</i> , in <i>Agricultural Waste Management Field Handbook</i> Ch. 9 (Dec. 2011)
2024	Screenshot of 2023 Commercial Manure Applicator Certification, retrieved on 10-3-23 from https://elearning-dnr.iowa.gov/course/index.php?categoryid=2
2025	Joseph Akyeampong et al., <i>Evaluation of hydraulic excavator Human-Machine Interface concepts using NASA TLX</i> , 44 Int’l J. of Indus. Ergonomics 374, 374–82 (2014)
2026	Screenshots of 2023 Truxor Website, retrieved on 10-1-23 from https://truxor.com/en/catalog/node/products and https://truxor.com/en/catalog/node/products-truxor-machines
2027	Screenshots of 2023 Berky (formerly SenwaTec) Website, retrieved on 10-4-23 from https://www.berky.de/en/berky-nereus-240-amphi/
2028	Christian Haas et al., <i>Practical Evaluation of a Control Concept for a Remote Controlled 1.8T Excavator Using a 3D Input Device</i> , BATH/ASME 2022 Symposium on Fluid Power and Motion Control, ISBN: 978-0-7918-8633-5, FPMC2022-88959, V001T01A012-1 thru V001T01A012-7 (2022)
2029	Timeline Showing Bazooka’s Post-Grant Challenges
2030	January 18, 2023 District Court Order Granting Motion to Lift Stay
2031	Reexamination History of U.S. Patent No. 11,358,425
2032	Screenshots from YouTube of SenwaTec video, retrieved on January 15, 2024 from https://www.youtube.com/watch?v=ecnlfMf7CH4&t=1s

2033	Printout of Bazooka's webpage for its Wolverine Agitation Boat, retrieved on March 30, 2024 from: https://www.bazookafarmstar.com/equipment/wolverine-agitation-boat/
2034	K. Smith et al., <i>Natural Crusting Of Slurry Storage As An Abatement Measure For Ammonia Emissions On Dairy Farms</i> , 97 Biosystems Engineering 464 (2007)
2035	Brochure for MY2017 of Nuhn's Gen 1 Lagoon Crawler
2036	Operator's/Safety Manual for the MY2017 of the Gen 1 Lagoon Crawler
2037	Parts Catalog for Gen 1 Lagoon Crawler
2038	Brochure for Nuhn's Gen 1 Lagoon Crawler
2039	Brochure for MY2018 of Nuhn's Gen 2 Lagoon Crawler
2040	Operator's/Safety Manual for the MY2019 Gen 2 Lagoon Crawler
2041	Parts Book for the MY2018 Gen 2 Lagoon Crawler
2042	Brochure for Gen 2 Lagoon Crawler
2043	Operator's/Safety Manual for the MY2020 of the Gen 3 Lagoon Crawler
2044	Operator's/Safety Manual for the MY2020 of the Gen 3 Lagoon Crawler
2045	Parts catalog for the MY2021 of the Gen 3 Lagoon Crawler
2046	Brochure for Crawler X
2047	Parts Catalog for MY2022 Lagoon Crawler X
2048	U.S. Provisional Patent Application No. 63/040,562 filed June 18, 2020
2049	U.S. Provisional Patent Application No. 63/104,887 filed October 23, 2020
2050	U.S. Patent Application Publication US 2021/0394571 published December 23, 2021
2051	Notice of Allowance in U.S. Application No. 17,590,125, Mailed April 22, 2022.
2052	Notice of Intent to Issue Ex Parte Reexamination Certificate, Control No. 90/019,107, Mailed November 2, 2022.
2053	Print No. 1 of Nuhn YouTube Video - "Nuhn Lagoon Crawler Unrivaled Lagoon Agitation!", accessed at https://www.youtube.com/watch?v=fEgvvq9HZk
2054	Lagoon Crawler Prototype Brochure, Aggressive Agitation

2055	Intentionally Omitted
2056	Intentionally Omitted
2057	Intentionally Omitted
2058	Intentionally Omitted
2059 (Under Seal)	Lagoon Crawler Sales Report - X Models
2060	Print No. 2 of Nuhn YouTube Video - "Nuhn Lagoon Crawler Unrivaled Lagoon Agitation!", accessed at https://www.youtube.com/watch?v=fEgvvq9HZk
2061	<i>New Lagoon Crawler Demos Will Satisfy Curiosity</i> , Canada's Outdoor Farm Show Official Show Guide for September 9-11, 2014 in Woodstock, Ontario
2062	H. Rivers, <i>Farm show opens with a splash</i> , The Beacon Herald (Sept. 10, 2014)
2063	B. Shypula, <i>Transforming farming</i> , The London Free Press (Sept. 9, 2013))
2064	B. Shypula, <i>Crawler makes manure almost sexy</i> , The Beacon Herald (Sept. 6, 2013)
2065	30th Annual AMC Engineering Conference Brochure for May 5-7, 2015 in Waterloo, Iowa
2066	Certificate of Services Awarded to Ian Nuhn
2067	M. Beitz, <i>Crawler is turning heads</i> , The Beacon Herald at A2 (Jan. 30, 2014)
2068	C. Elmore, <i>Innovative Uses of Horsepower – A real crapshoot</i> , Diesel Progress North American Edition (Dec. 2014)
2069	D. Rankin, <i>Nuhn Industries celebrates employees at expansion grand opening</i> , 100th lagoon crawler unveiling, St. Marys Independent (Aug. 7, 2015)
2070	B. Reid, <i>Agitator has reclaimed manure lagoons around the world</i> , Ontario Farmer (Aug. 18, 2015)
2071	L. Cudworth, <i>Nuhn marks major milestone</i> , The London Free Press (Aug. 11, 2015)
2072	L. Cudworth, <i>Marking a major milestone</i> , The Stratford Beacon Herald (Aug. 7, 2015)
2073	J. Algie, <i>Made-in-Sebringville lagoon crawler to be featured on Discovery Channel</i> , Betterfarming.com (Sept. 2, 2015)

2074	B. Reid, Self-propelled, Western Dairy Farmer (Oct. 2015)
2075 (Under Seal)	March 21, 2022 Email to Nuhn re: Licensing Lagoon Crawler Technology
2076 (Under Seal)	Nuhn Invoice to Eldon C. Stutsman, Inc. (Sept. 9, 2015)
2077 (Under Seal)	Nuhn Invoice to Eldon C. Stutsman, Inc. (June 20, 2020)
2078 (Under Seal)	Nuhn Invoice to Eldon C. Stutsman, Inc. (Sept. 28, 2020)
2079	Print of Bazooka's YouTube Video - "Meet the Wolverine Agitation Boat," accessed at https://www.youtube.com/watch?v=ehAHKL442as
2080	Discovery Channel's Lagoon Crawler Feature (Sept. 3, 2015)
2081	U.S. Provisional Application No. 61/867,598 (filed August 19, 2013).
2082	U.S. Patent No. 3,384,047 to Remley
2083 (Under Seal)	Declaration of Ian Nuhn
2084	U.S. Patent Application Publication 2010/0144220 to Bailey
2085	Intentionally Omitted
2086	Intentionally Omitted
2087	D. Prairie CV and Case List updated April 2, 2024 (cited here for completeness)
2088	Proposed Protective Order (Redline)
2089	Proposed Protective Order (Clean)
2090	U.S. Patent No. 6,922,922 to Cheramie
2091	Dredge Yard Auger Dredger ECO200-A8-brochure, downloaded from https://dredgeyard.com/wp-content/uploads/2021/01/ECO200-A8-brochure.pdf
2092	Hydraulic Dredgers – Dredge Brokers LLC, accessed at https://dredgebrokers.com/equipment/hydraulic-dredgers/dt-horizontal-cutter/
2093	MANURE MANAGER, Jan./Feb. 2011 (Manure-Manager)
2094	July 9, 2024 Expert Declaration of Douglas Prairie Regarding '835 Patent (cited here for completeness)
2095	Agriculture – manure storage statistics, eurostat, Sept. 2013, accessed at

	https://url.us.m.mimecastprotect.com/s/ZSdwCkRw8BHqom10i2tW
2096	Bazooka's brochure for the Bazooka Wolverine Agitation Boat from: https://www.bazookafarmstar.com/wp-content/uploads/2023/01/Cutsheet-Wolverine-1.pdf
2097	H. Landry et al., Physical and Rheological Properties of Manure Products, Applied Engineering in Agriculture, at 278 (2004)
2098	Hydrostatic Pto's Run in Reverse, Farm Show, Vol. 1 No. 5, 1977
2099	November 12, 2024 Declaration of Douglas S. Prairie

I. INTRODUCTION

In response to the Board’s Preliminary Guidance (Paper 39), Patent Owner Nuhn Industries Ltd. (“Nuhn” or “Patent Owner”) files this Revised Motion to Amend U.S. Patent No. 11,491,835 (“the ‘835 Patent”) in accordance with the Board’s Motion to Amend Pilot Program, 35 U.S.C. § 316(d), and 37 C.F.R. § 42.121. This motion and the substitute claims meet all of the requirements of 37 C.F.R. § 42.121. Each contingent amendment is responsive to a ground of unpatentability involved in this proceeding, none of the amendments seeks to enlarge the scope of the claims or introduce new subject matter, each amendment proposes only one substitute claim for each conditionally canceled claim, and the motion clearly shows the changes sought and the support in the original disclosure of the patent for each claim that is added or amended.

II. STATEMENT OF RELIEF REQUESTED

If the Board finds any original claim unpatentable in this proceeding, Nuhn respectfully requests that the Board grant this revised motion to amend with respect to each corresponding substitute claim presented herein. The Board should not consider this motion for each original claim it finds patentable.

III. THE SUBSTITUTE CLAIMS INCLUDE ONLY NARROWING LIMITATIONS

The proposed claims add only narrowing limitations. Proposed Substitute Claim 41 adds to Claim 1:

(1) the “floatable vehicle body” including “a front, a rear, an underside and a longitudinal centerline,”

(2) the “liquid manure mover” “including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a substantially vertical drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing, the pump housing and the impeller of the immersible liquid manure pump are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating and has a constant angular orientation relative to the floatable vehicle body,” and

(3) “wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.”

Proposed Substitute Claim 57 adds limitations (1), (2) and (3) above to Claim 17, except that limitation (2) of Claim 57 recites in part “the immersible liquid manure pump including a bottom fluid opening in the pump housing” and limitation (3) of Claim 57 recites in part “wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned forward of and rearward of the pump housing along the longitudinal centerline.” Proposed Substitute Claim 79 adds limitations (1), (2) and (3) above to Claim 39, except that limitation (1) of Claim 79 does not recite “a longitudinal centerline,” limitation (2) of Claim 79 recites in part “the

immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing is mounted to the underside of the floatable vehicle body in a space collectively defined between the four ground engaging wheels,” and limitation (3) of Claim 79 recites in part “wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing.” Proposed Substitute Claim 80 adds limitations (1), (2) and (3) above to Claim 40, except that limitation (1) of Claim 80 does not recite “a longitudinal centerline,” limitation (2) of Claim 80 recites in part that “the pump housing is mounted to the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body ... where the drive shaft is substantially vertical and has a constant angular orientation relative to the floatable vehicle body,” and limitation (3) of Claim 80 recites in part “wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing.” For the at least the same reasons, the proposed substitute dependent claims 41-56 and 58-78 likewise do not enlarge the scope of any original claim.

IV. THE ORIGINAL NON-PROVISIONAL APPLICATIONS SUPPORT EACH LIMITATION OF THE PROPOSED SUBSTITUTE CLAIMS

The ‘835 Patent claims priority to U.S. Provisional Application No.

61/867,598 (the ‘598 Application). The following portions of the ‘598 Application (EX2081) provide § 112 support for the Substitute Claims:

Claim Limitation	Support
Claim 41. An amphibious vehicle, comprising:	EX2081, [0001].
a floatable vehicle body with a front, a rear, an underside and a longitudinal centerline;	EX2081, [0005], [0013], [0019], [0020], [0024], [0036].
ground engaging propulsion structure comprising a plurality of ground engaging elements powered by at least one hydraulic motor;	EX2081, [0006].
a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a substantially vertical drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing, the pump housing and the impeller of the immersible liquid manure pump are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating and has a constant angular orientation relative to the floatable vehicle body;	EX2081, [0001], [0009], [0010], [0012], [0013], [0019], [0020], [0021], [0024], [0028], [0034], [0038].
a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover, the at least one fluid nozzle of the liquid manure mover positioned above the floatable vehicle body forward of the power source and the immersible liquid manure pump of the liquid manure mover positioned rearward of the power source; and	EX2081, [0008], [0013], [0021], [0023], [0028].

a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the immersible liquid manure pump; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	EX2081, [0037].
wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump	EX2081, [0005], [0009], [0010], [0019], [0020], [0024], [0034], [0038].
Claim 42	EX2081, [0006].
Claim 43	EX2081, [0008], [0023], [0033].
Claim 44	EX2081, [0006], [0030].
Claim 45	EX2081, [0010].
Claim 46	EX2081, [0010], [0028].
Claim 47	EX2081, [0037].
Claim 48	EX2081, [0013].
Claim 49	EX2081, [0012], [0028].
Claim 50	EX2081, [0028].
Claim 51	EX2081, [0031], [0032], [0037].
Claim 52	EX2081, [0031].
Claim 53	EX2081, [0012], [0028].
Claim 54	EX2081, [0012], [0028].

Claim 55	EX2081, [0012], [0028].
Claim 56	EX2081, [0012], [0028].
Claim 57. An amphibious vehicle, comprising:	EX2081, [0001].
a floatable vehicle body with a front, a rear, an underside and a longitudinal centerline;	EX2081, [0005], [0013], [0019], [0020], [0024], [0036].
ground engaging propulsion structure comprising a plurality of ground engaging elements powered by at least one hydraulic motor;	EX2081, [0006].
a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a substantially vertical drive shaft powering an impeller that is positioned in a pump housing, the immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing and the impeller are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating in a manure lagoon and has a constant angular orientation relative to the floatable vehicle body;	EX2081, [0001], [0009], [0010], [0012], [0013], [0019], [0020], [0021], [0024], [0028], [0034], [0038].
a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and	EX2081, [0008].
a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control the flow of liquid manure from the liquid manure mover back into the manure lagoon; (3) control at least one of	EX2081, [0037], [0038].

the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	
wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned forward of and rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.	EX2081, [0005], [0009], [0010], [0019], [0020], [0024], [0034], [0038].
Claim 58	EX2081, [0006].
Claim 59	EX2081, [0008], [0023], [0033].
Claim 60	EX2081, [0006], [0030].
Claim 61	EX2081, [0010].
Claim 62	EX2081, [0010], [0028].
Claim 63	EX2081, [0037].
Claim 64	EX2081, [0013].
Claim 65	EX2081, [0012], [0028].
Claim 66	EX2081, [0028].
Claim 67	EX2081, [0031], [0032], [0037].
Claim 68	EX2081, [0031].
Claim 69	EX2081, [0012], [0028].
Claim 70	EX2081, [0012], [0028].
Claim 71	EX2081, [0012], [0028].
Claim 72	EX2081, [0012], [0028].
Claim 73	EX2081, [0030].

Claim 74	EX2081, [0006], [0030].
Claim 75	EX2081, [0006], [0030].
Claim 76	EX2081, [0030].
Claim 77	EX2081, [0006], [0030].
Claim 78	EX2081, [0006], [0030].
Claim 79. An amphibious vehicle, comprising:	EX2081, [0001].
a floatable vehicle body with a front, a rear, and an underside;	EX2081, [0005], [0019], [0020], [0024], [0028].
a ground engaging propulsion structure comprising a set of four ground engaging wheels and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor;	EX2081, [0006].
a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a pump housing and an impeller that is driven by a substantially vertical drive shaft, the immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing is mounted to the underside of the floatable vehicle body in a space collectively defined between the four ground engaging wheels such that the pump housing is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body and such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating and has a constant angular orientation relative to the floatable vehicle body;	EX2081, [0001], [0009], [0010], [0012], [0013], [0019], [0020], [0021], [0024], [0028], [0034], [0038].
a power source connected to a hydraulic pump, the power source configured to provide power to both the	EX2081, [0008].

ground engaging propulsion structure and the liquid manure mover; and	
a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the liquid manure pump; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	EX2081, [0037].
wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.	EX2081, [0005], [0009], [0010], [0019], [0020], [0024], [0034], [0038].
Claim 80. An amphibious vehicle, comprising:	EX2081, [0001].
a floatable vehicle body with a front, a rear, and an underside;	EX2081, [0005], [0019], [0020], [0024], [0028].
a ground engaging propulsion structure comprising a front set of ground engaging wheels at the front of the floatable vehicle body and a rear set of ground engaging wheels at the rear of the floatable vehicle body and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor;	EX2081, [0006], [0026], [0030].
a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing, the pump housing is mounted to the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the	EX2081, [0001], [0009], [0010], [0012], [0013], [0019], [0020], [0021], [0024], [0028], [0034], [0038].

immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating in a manure lagoon, where the drive shaft is substantially vertical and has a constant angular orientation relative to the floatable vehicle body;	
a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover, the at least one fluid nozzle of the liquid manure mover positioned at the front of the floatable vehicle body forward of the power source and the immersible liquid manure pump of the liquid manure mover positioned rearward of the power source; and	EX2081, [0008], [0013], [0021], [0023], [0028].
a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the liquid manure mover; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	EX2081, [0037].
wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.	EX2081, [0005], [0009], [0010], [0019], [0020], [0024], [0034], [0038].

Based on the disclosure of the ‘598 Application identified above, a POSITA would have understood how to make and use the claimed invention and that the inventors possessed the subject matter of the Substitute Claims. EX2099, ¶40.

V. LEVEL OF ORDINARY SKILL IN THE ART

Based on the totality of the ‘835 Patent disclosure, a POSITA is “a livestock farmer or commercial manure applicator familiar with manure agitation equipment

or an engineer with at least 2 years of experience designing agricultural equipment and knowledge of manure agitation equipment.” EX2099, ¶35.

VI. CLAIM CONSTRUCTION

The claim terms contained in the amendments made herein should be given their plain and ordinary meaning. Nuhn reserves the right to rebut any claim construction arguments from Petitioner in response to this motion.

VII. THE SUBSTITUTE CLAIMS ARE PATENTABLE OVER THE PRIOR ART

The Substitute Claims are patentable over the prior art record. Consistent with its duty under 37 C.F.R. § 42.11, Patent Owner discusses and distinguishes below not just the closest primary reference(s), but also the closest secondary references that might be deemed material to the claimed features.

A. The Proposed Claims Have Limitations Not Found In The Prior Art

No prior art, considered and cited during prosecution of the ‘835 Patent or IPR2024-00004 discloses the specifically claimed arrangement of elements set forth in Substitute Claims 41, 57, 79, and 80. EX2099, ¶¶67-139. Specifically, and as set forth in further detail below, the prior art of record in this IPR and related proceedings fails to disclose at least the following limitations of Substitute Claims 41, 57, 79, and 80, which have been highlighted in the chart below using colored font:

Substitute Claim 41	Substitute Claim 57	Substitute Claim 79	Substitute Claim 80
41. An amphibious vehicle, comprising:	57. An amphibious vehicle, comprising:	79. An amphibious vehicle, comprising:	80. An amphibious vehicle, comprising:
a floatable vehicle body with a front, a rear, an underside and a longitudinal centerline;	a floatable vehicle body with a front, a rear, an underside and a longitudinal centerline;	a floatable vehicle body with a front, a rear, and an underside;	a floatable vehicle body with a front, a rear, and an underside;
a ground engaging propulsion structure comprising a plurality of ground engaging elements powered by at least one hydraulic motor;	a ground engaging propulsion structure comprising a plurality of ground engaging elements powered by at least one hydraulic motor;	a ground engaging propulsion structure comprising a set of four ground engaging wheels and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor;	a ground engaging propulsion structure comprising a front set of ground engaging wheels at the front of the floatable vehicle body and a rear set of ground engaging wheels at the rear of the floatable vehicle body and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor;
a hydraulically powered liquid manure mover separate from the ground engaging	a hydraulically powered liquid manure mover separate from the ground engaging	a hydraulically powered liquid manure mover separate from the ground engaging	a hydraulically powered liquid manure mover separate from the ground engaging

propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a substantially vertical drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing, the pump housing and the impeller of the immersible liquid manure pump are positioned along the underside of the floatable vehicle body at a location that is	propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a substantially vertical drive shaft powering an impeller that is positioned in a pump housing, the immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing and the impeller are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the	propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a pump housing and an impeller that is driven by a substantially vertical drive shaft, the immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing is mounted to the underside of the floatable vehicle body in a space collectively defined between the four ground engaging wheels	propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing, the pump housing is mounted to the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the
---	---	---	--

rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating and has a constant angular orientation relative to the floatable vehicle body;	floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating in a manure lagoon and has a constant angular orientation relative to the floatable vehicle body;	such that the pump housing is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body and such that immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating and has a constant angular orientation relative to the floatable vehicle body;	rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating in a manure lagoon, where the drive shaft is substantially vertical and has a constant angular orientation relative to the floatable vehicle body;
a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and	a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and	a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and	a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and
a wireless remote control configured to	a wireless remote control configured to	a wireless remote control configured to	a wireless remote control configured to

enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the immersible liquid manure pump; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control the flow of liquid manure from the liquid manure mover back into the manure lagoon; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the liquid manure pump; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,	enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the liquid manure mover; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,
wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned	wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned	wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned	wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned

directly forward of and directly rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.	forward of and rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.	directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.	directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.
--	--	--	--

The prior art of record does not teach an amphibious vehicle for agitating manure lagoons that combines a floatable vehicle body, hydraulically powered wheels, an immersible liquid manure pump that is connected to a nozzle by a conduit, and wireless remote control. EX2099, ¶¶67-79. Even if a POSITA were to combine the prior art as the Petitioner suggests, the resulting combinations would still not yield a machine with the pump placement described in the Substitute Claims, where the immersible liquid manure pump: (1) has a pump housing that is positioned along (Claims 41 and 57) / mounted to (Claims 79 and 80) the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body, (2) has a substantially vertical drive shaft powering the impeller, a bottom fluid opening in

the pump housing, and a constant angular orientation relative to the floatable vehicle body, and (3) components (Claims 41 and 80) / portions (Claims 57 and 79) of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side (Claims 41 and 79) / the right and left (Claims 57 and 80) of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing. EX2099, ¶80.

The ubiquitous teachings of the prior art suggest locating the pump high and dry inside or on top of the vehicle body (like in Carrier, Yoon, Puck, and Remley) or placing a submersible pump at the front of the vehicle on the end of a boom arm (like in Truxor, SenwaTec, Cheramie, Sundstrom, Manure-Manager, Houle, and Depault). EX2099, ¶81. The prior art does not teach or suggest the claimed arrangement where the immersible liquid manure pump has a pump housing that is positioned along / mounted to the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body. *Id.* Nor does the prior art teach or suggest a vehicle where the immersible liquid manure pump has a substantially vertical drive shaft, a bottom fluid opening in the pump housing, and a constant angular orientation relative to the floatable vehicle body. *Id.* Indeed, the submersible pumps disclosed in Truxor, SenwaTec, Cheramie, Sundstrom, Manure-Manager, Houle, and Depault

are ALL boom mounted and therefore do NOT have a constant angular orientation relative to the floatable vehicle body. *Id.* Any combination of these references with Puck and/or Sundstrom by a POSITA would have resulted in a vehicle with a boom mounted pump that could swing up and down, since that is precisely what Sundstrom discloses. *Id.* Absent impermissible hindsight, a POSITA would not mount any of these boom-mounted, submersible pumps in a central location along the underside of Puck, with a vertical drive shaft and a constant angular orientation, as required by the Substitute Claims. *Id.* And even if such a combination were made, the resulting vehicle would not have a configuration where components / portions of the vehicle that are submerged when the vehicle is floating are: (1) spaced from and positioned to each side of the pump housing, AND (2) spaced from and positioned directly forward of and directly rearward of the pump housing, to form a protective perimeter that functions to keep floating solid material away from the immersible liquid manure pump, as required by the Substitute Claims. EX2099, ¶82.

These differences between the prior art and the claimed arrangements of components are material. The particular claimed arrangements of components directly contribute to the new and unexpected results and commercial success experienced by Nuhn's invention. EX2099, ¶83. These particular claimed arrangements, which discuss the position of the liquid manure pump along the underside of the floatable vehicle body, where the displacement of the vehicle body

and the churning action of the ground engaging elements work together in synergy to break up thick crust around the vehicle, generating a working pocket or opening within which the liquid manure pump can operate without clogging. *Id.* Placing these elements elsewhere would destroy this synergy, which depends on the specific location of the liquid manure pump as claimed. *Id.*

B. The Substitute Claims Are Patentable Over The Prior Art Cited In The IPR Petition

i. The Substitute Claims Are Patentable Over Carrier

Carrier describes a general-purpose amphibious firefighting or combat vehicle with quick-connect attachments. EX1005, ¶60. One of the quick-connect attachments has a water cannon 204 and water pumps 202 that are designed to pump water from lakes or streams onto a fire. EX1005, ¶61. The water pumps 202 in Carrier are illustrated as being located at the top of the vehicle above a water tank 201. Carrier fails to teach an immersible liquid manure pump with a pump housing and impeller that are positioned along the underside of the floatable vehicle body as required by the Substitute Claims. EX1005, Fig. 1; EX2099, ¶¶86, 119. Carrier also fails to disclose the structure of its water pumps and therefore does not teach a pump with a substantially vertical drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing as required by the Substitute Claims. EX2099, ¶119.

ii. The Substitute Claims Are Patentable Over Truxor In View Of Yoon Or Carrier

Truxor discloses a general-purpose amphibious vehicle with quick-connect attachments for weed clearing and dredging. EX1006, 6-12. One of the quick-connect attachments is a pump mounted at the far end of a boom arm for dredging lakes or streams. EX1006, 10-11. The pump in Truxor hangs off the front of the vehicle and can be swung up and down using the boom arm. *Id.* Yoon discloses a vehicle for use in waste-water treatment that includes a water pump 131 that is located inside the main body 130 of the vehicle and is positioned high above the waterline. EX1011, 2. A combination of Truxor with Carrier or Yoon would therefore not result in an immersible liquid manure pump with a pump housing and impeller that are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body, as required by the Substitute Claims. EX2099, ¶120. Nor does the combination of Truxor with Carrier or Yoon teach a vehicle where the immersible liquid manure pump has a constant angular orientation and components/portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the immersible liquid manure pump, as required by the Substitute Claims. *Id.*

iii. The Substitute Claims Are Patentable Over SenwaTec In View Of Yoon Or Carrier

SenwaTec discloses a general-purpose amphibious vehicle with quick-connect attachments for weed clearing and dredging. EX1012, 2. One of the quick-connect attachments is a pump mounted at the far end of a boom arm for dredging lakes or streams. EX1012, 1. The pump in SenwaTec hangs off the front of the vehicle and can be swung up, down, and side-to-side using the boom arm. *Id.* A combination of SenwaTec with Carrier or Yoon would not result in an immersible liquid manure pump with a pump housing and impeller that are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the vehicle and forward of the rear of the vehicle, as required by the Substitute Claims. EX2099, ¶121. Nor does the combination of SenwaTec with Carrier or Yoon teach a vehicle where the immersible liquid manure pump has a constant angular orientation and components/portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the immersible liquid manure pump, as required by the Substitute Claims. *Id.*

iv. The Substitute Claims Are Patentable Over Puck In View Of Bryham

Puck discloses an agitation boat with a pump (38) that is mounted high

above the “waterline.” EX1014; EX1143, 2, 7; EX2099, ¶¶99, 122. A liquid manure intake pipe (40) is positioned at the rear of the boat, with a ninety-degree bend so that the intake pipe extends down into the manure lagoon. EX1014, FIGS. 1 and 8; EX2099, ¶100. Bryham discloses a boat with amphibious wheels. EX1015, 2. Puck’s pump (38) is mechanically driven by a drive shaft, so it is not “hydraulically powered” as required by the Substitute Claims. EX2099, ¶122. Nor is Puck’s pump (38) immersed in the manure lagoon when the boat is floating and it does not have a pump housing and an impeller that are located on the underside of the boat, as required by the Substitute Claims. EX1014, FIGS. 1 and 8; EX2099, ¶122. Puck’s pump also has a horizontal drive shaft with a rear-facing opening in the rear of the pump housing and therefore fails to teach an immersible liquid manure pump with a substantially vertical drive shaft and a bottom fluid opening in the pump housing, as required by the Substitute Claims. EX2099, ¶122.

v. The Substitute Claims Are Patentable Over Puck In View Of Bryham And In View Of Bennett-II

Bennett-II discloses a general-purpose amphibious vehicle that is powered by a pair of tracks. EX1017, 1. Bennett-II does not disclose a pump, so it does not cure the deficiencies of the Puck-Bryham combination. EX2099, ¶115.

C. The Substitute Claims Are Also Patentable Over the Prior Art Cited in Petitioner’s Opposition to Patent Owner’s Original Motion to Amend the ‘835 Patent

The prior references and combinations that Petitioner cited in its Opposition

(Paper 36) to Patent Owner's original Motion to Amend (Paper 21) also fail to disclose the limitations of the Substitute Claims presented in this Revised Motion to Amend. EX2099, ¶¶124-138. As explained below, the combination of Puck in view of the Puck Video, Bryham, and Manure-Manager and the combination of Sundstrom in view of Bryham fail to teach the newly added limitations of Substitute Claims 41, 57, 79, and 80 concerning the constant angular orientation of the liquid manure pump and the positioning of immersed elements forward, rearward, and to the sides of the liquid manure pump. *Id.*

i. The Substitute Claims Are Patentable Over Puck In View Of The Puck Video, Bryham, And Manure-Manager

In Petitioner's combination of Puck, Bryham, and Manure-Manager, Nuhn's G-Force Vertical Pit Pump (advertised in Manure-Manager) replaces Puck's pump. Patent Owner disagrees that a POSITA would make such a combination in the first place, but if they did, the result would be Nuhn's G-Force Vertical Pit Pump being pivotally mounted on the rear of Puck's boat so that the pump could swing up and down and be mechanically powered by a drive shaft aligned with and connected to the engine output. EX2099, ¶¶125-129. Such a combination would not result in a liquid manure pump that "has a constant angular orientation relative to the floatable vehicle body" or a pump housing and impeller "positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body" as required by

the Substitute Claims. *Id.* Additionally, because Puck and Manure-Manure both disclose mechanically driven pumps, Petitioner's combination would still fail to comprise a "hydraulically driven" liquid manure pump. EX2099, ¶134.

Petitioner's proposed combination is flawed because it assumes that a POSITA would skip past the most logical combination, as described above, which would be easier to implement and is actually suggested by Sundstrom, where the liquid manure pump is mounted on the end of a pivoting boom arm, in favor of a more complicated and obscure arrangement that would require a substantial amount of re-design work to mount and power a vertically oriented manure pump positioned close to the bottom of Puck's boat. EX2099, ¶¶130-132. Such an arrangement is not suggested by the prior art and is purely hindsight based. Even if such a combination were made, the resulting vehicle still fails to satisfy the limitations of the Substitute Claims. EX2099, ¶133. The rear of Puck's boat has a U-shaped cut-out between the floating dock sections (26) where the liquid manure intake pipe (40) is positioned, with a ninety-degree bend so that the intake pipe extends down into the manure lagoon. EX1014, Figs. 1 and 6; EX2099, ¶133. So even if a POSITA positioned Nuhn's G-Force Vertical Pit Pump in this space, as Petitioner suggests, there would be no submerged components that "are spaced from and positioned ... directly rearward of the pump housing ... to keep floating solid material away from the bottom fluid opening in the pump housing." *Id.*

ii. The Substitute Claims Are Patentable Over Sundstrom In View Of Bryham

Sundstrom discloses a floating manure agitator with a liquid manure pump that is mounted on the front end of a boom arm and mechanically powered by a drive shaft. The boom arm extends forward at an angle that can be adjusted up and down to a limited degree. EX1028; EX2099, ¶136. Bryham discloses a boat with amphibious wheels. EX1015, 2. Patent Owner disagrees that a POSITA would make such a combination in the first place, but if they did, the result would not satisfy the language of the Substitute Claims. Indeed, Sundstrom’s manure pump is not “hydraulically powered,” does not have a “substantially vertical drive shaft,” does not have “a constant angular orientation relative to the floatable vehicle body,” and does not have a pump housing and impeller “positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body” as required by the Substitute Claims. EX2099, ¶¶137-138. Also, because the pump housing in Sundstrom hangs off the front of the barge, there are no submerged components that “are spaced from and positioned directly forward of ... the pump housing ... to keep floating solid material away from the bottom fluid opening in the pump housing,” as required by the language of the Substitute Claims. EX2099, ¶138.

VIII. CONCLUSION

For the foregoing reasons, each Substitute Claim is patentable.

Dated: November 12, 2024

Respectfully submitted,

By: /James B. Luchsinger/
James B. Luchsinger, Reg. 73,705
HARNESS DICKY & PIERCE, P.L.C.
5445 Corporate Drive, Suite 200
Troy, MI 48098
Phone: 248-641-1600
Fax: 248-641-0270
bluchsinger@harnessip.com

Matthew L. Cutler, Reg. No. 43,574
HARNESS DICKY & PIERCE, P.L.C.
7700 Bonhomme Ave., Suite 400
St. Louis, MO 63105
Phone: 314-726-7500
Fax: 314-726-7501
mcutler@harnessip.com

Scott E. Yackey, Reg. No. 73,301
HARNESS, DICKY & PIERCE, P.L.C.
2600 Network Blvd, Ste. 230
Frisco, TX 75034
Phone: (469) 777-5400
syackey@harnessip.com

Attorneys for Nuhn Industries Ltd.

Claims Appendix

41. (substitute for claim 1, if found unpatentable) An amphibious vehicle,
comprising:

a floatable vehicle body with a front, a rear, an underside and a longitudinal centerline;

ground engaging propulsion structure comprising a plurality of ground
engaging elements powered by at least one hydraulic motor;

a hydraulically powered liquid manure mover separate from the
ground engaging propulsion structure, the liquid manure mover including an
immersible liquid manure pump that is hydraulically powered, at least one fluid
conduit, and at least one fluid nozzle, the immersible liquid manure pump of the
liquid manure mover including a substantially vertical drive shaft powering an
impeller that is positioned in a pump housing and draws liquid manure in through a
bottom fluid opening in the pump housing, the pump housing and the impeller of
the immersible liquid manure pump are positioned along the underside of the
floatable vehicle body at a location that is rearward of the front of the floatable
vehicle body and forward of the rear of the floatable vehicle body such that the
immersible liquid manure pump of the liquid manure mover is positioned within
liquid manure when the vehicle is floating and has a constant angular orientation
relative to the floatable vehicle body;

a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and[[,]]

a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from [[a]] the immersible liquid manure pump; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and[[,]] (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,

wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.

42. (substitute for claim 2, if found unpatentable) The vehicle according to claim 41, wherein the ground engaging propulsion structure comprises a set of ground engaging wheels or [[an]] endless tracks.

43. (substitute for claim 3, if found unpatentable) The vehicle according to claim 41, wherein the power source is configured to provide hydraulic fluid power to both the ground engaging propulsion structure and the liquid manure mover.

44. (substitute for claim 4, if found unpatentable) The vehicle according to claim 43, wherein the ground engaging propulsion structure is operable at variable speed by the hydraulic motor.

45. (substitute for claim 5, if found unpatentable) The vehicle according to claim 41, wherein the ~~vehicle comprises~~ at least one fluid-nozzle ~~that~~ is fluidly-connected to ~~[[a]]~~the at least one fluid conduit.

46. (substitute for claim 6, if found unpatentable) The vehicle according to claim 45, wherein the at least one fluid nozzle comprises a plurality of fluid nozzles that are fluidly-connected to the at least one fluid conduit.

47. (substitute for claim 7, if found unpatentable) The vehicle according to claim 45, wherein the amount of fluid flow from the at least one fluid nozzle and~~or~~ the direction of the at least one fluid nozzle are remotely controllable by the

operator remote from the vehicle when the vehicle is floating.

48. (substitute for claim 8, if found unpatentable) The vehicle according to claim 41, wherein the location of the ground engaging propulsion structure, the power source, and the immersible liquid manure pump are selected to provide a desired location for a center of gravity of the vehicle.

49. (substitute for claim 9, if found unpatentable) The vehicle according to claim 41, further comprising an angle adjustment structure configured to adjust an angular orientation of the at least one fluid nozzle of the liquid manure mover.

50. (substitute for claim 10, if found unpatentable) The vehicle according to claim 49, wherein the angle adjustment structure comprises a hydraulically powered articulation means.

51. (substitute for claim 11, if found unpatentable) The vehicle according to claim 50~~40~~, wherein the hydraulically powered articulation means comprises a hydraulic cylinder.

52. (substitute for claim 12, if found unpatentable) The vehicle according

to claim 5040, wherein the angle adjustment structure comprises a four bar linkage connected to the hydraulically powered articulation means to extend the effective stroke length of the hydraulically powered articulation means.

53. (substitute for claim 13, if found unpatentable) The vehicle according to claim 49, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a vertical plane.

54. (substitute for claim 14, if found unpatentable) The vehicle according to claim 5040, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a vertical plane.

55. (substitute for claim 15, if found unpatentable) The vehicle according to claim 49, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a horizontal plane.

56. (substitute for claim 16, if found unpatentable) The vehicle according to claim 5040, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a

horizontal plane.

57. (substitute for claim 17, if found unpatentable) An amphibious vehicle, comprising:

a floatable vehicle body with a front, a rear, an underside and a longitudinal centerline;

a ground engaging propulsion structure comprising a plurality of ground engaging elements powered by at least one hydraulic motor;

a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a substantially vertical drive shaft powering an impeller that is positioned in a pump housing, the immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing and the impeller are positioned along the underside of the floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating in a manure lagoon and has a constant angular orientation relative to the

floatable vehicle body;

a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and[[,]]

a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control [[a]] the flow of liquid manure from the liquid manure mover back into the manure lagoon; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and[[,]] (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,

wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned forward of and rearward of the pump housing along the longitudinal centerline of the floatable vehicle body to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.

58. (substitute for claim 18, if found unpatentable) The vehicle according to claim 57~~17~~, wherein the ground engaging propulsion structure comprises a set of ground engaging wheels or [[an]] endless tracks.

59. (substitute for claim 19, if found unpatentable) The vehicle according to claim 57~~47~~, wherein the power source is configured to provide hydraulic fluid power to both the ground engaging propulsion structure and the liquid manure mover.

60. (substitute for claim 20, if found unpatentable) The vehicle according to claim 59~~49~~, wherein the ground engaging propulsion structure is operable at variable speed by the hydraulic motor.

61. (substitute for claim 21, if found unpatentable) The vehicle according to claim 57~~47~~, wherein the ~~vehicle comprises~~ at least one fluid nozzle that is fluidly-connected to ~~[[a]]~~the at least one fluid conduit.

62. (substitute for claim 22, if found unpatentable) The vehicle according to claim 61~~24~~, wherein the at least one fluid nozzle comprises a plurality of fluid nozzles that are fluidly-connected to the at least one fluid conduit.

63. (substitute for claim 23, if found unpatentable) The vehicle according to claim 61~~24~~, wherein the amount of fluid flow from the at least one fluid nozzle

and/or the direction of the at least one fluid nozzle are remotely controllable by the operator remote from the vehicle when the vehicle is floating.

64. (substitute for claim 24, if found unpatentable) The vehicle according to claim ~~57~~⁴⁷, wherein the location of the ground engaging propulsion structure, the power source, and the immersible liquid manure pump are selected to provide a desired location for a center of gravity of the vehicle.

65. (substitute for claim 25, if found unpatentable) The vehicle according to claim ~~57~~⁴⁷, further comprising an angle adjustment structure configured to adjust an angular orientation of the at least one fluid nozzle of the liquid manure mover.

66. (substitute for claim 26, if found unpatentable) The vehicle according to claim ~~65~~²⁵, wherein the angle adjustment structure comprises a hydraulically powered articulation means.

67. (substitute for claim 27, if found unpatentable) The vehicle according to claim ~~66~~²⁶, wherein the hydraulically powered articulation means comprises a hydraulic cylinder.

68. (substitute for claim 28, if found unpatentable) The vehicle according to claim ~~66~~26, wherein the angle adjustment structure comprises a four bar linkage connected to the hydraulically powered articulation means to extend the effective stroke length of the hydraulically powered articulation means.

69. (substitute for claim 29, if found unpatentable) The vehicle according to claim ~~65~~25, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a vertical plane.

70. (substitute for claim 30, if found unpatentable) The vehicle according to claim ~~66~~26, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a vertical plane.

71. (substitute for claim 31, if found unpatentable) The vehicle according to claim ~~65~~25, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a horizontal plane.

72. (substitute for claim 32, if found unpatentable) The vehicle according to claim ~~66~~26, wherein the angle adjustment structure adjusts the angular orientation of the at least one fluid nozzle of the liquid manure mover in a horizontal plane.

73. (substitute for claim 33, if found unpatentable) The vehicle according to claim 41, wherein the plurality of ground engaging elements is powered by a separate hydraulic motor for each ground engaging element.

74. (substitute for claim 34, if found unpatentable) The vehicle according to claim 41, wherein at least one hydraulic motor that is operable at variable speed is connected to each ground engaging element.

75. (substitute for claim 35, if found unpatentable) The vehicle according to claim 42, wherein the ground engaging propulsion structure is the set of ground engaging wheels and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor.

76. (substitute for claim 36, if found unpatentable) The vehicle according

to claim 5747, wherein the plurality of ground engaging elements is powered by a separate hydraulic motor for each ground engaging element.

77. (substitute for claim 37, if found unpatentable) The vehicle according to claim 5747, wherein at least one hydraulic motor that is operable at variable speed is connected to each ground engaging element.

78. (substitute for claim 38, if found unpatentable) The vehicle according to claim 5848, wherein the ground engaging propulsion structure is the set of ground engaging wheels and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor.

79. (substitute for claim 39, if found unpatentable) An amphibious vehicle, comprising:

a floatable vehicle body with a front, a rear, and an underside;

a ground engaging propulsion structure comprising a set of four ground engaging wheels and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor;

a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an

immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a pump housing and an impeller that is driven by a substantially vertical drive shaft, the immersible liquid manure pump including a bottom fluid opening in the pump housing, where the pump housing is mounted to the underside of the floatable vehicle body in a space collectively defined between the four ground engaging wheels such that the pump housing is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body and such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating and has a constant angular orientation relative to the floatable vehicle body;

a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and[[,]]

a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from [[a]] the liquid manure pump; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and[[,]] (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,

wherein portions of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to each side of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.

80. (substitute for claim 40, if found unpatentable) An amphibious vehicle, comprising:

a floatable vehicle body with a front, a rear, and an underside;

a ground engaging propulsion structure comprising a front set of ground engaging wheels at the front of the floatable vehicle body and a rear set of ground engaging wheels at the rear of the floatable vehicle body and wherein each ground engaging wheel is powered by its own variable speed hydraulic motor;

a hydraulically powered liquid manure mover separate from the ground engaging propulsion structure, the liquid manure mover including an immersible liquid manure pump that is hydraulically powered, at least one fluid conduit, and at least one fluid nozzle, the immersible liquid manure pump of the liquid manure mover including a drive shaft powering an impeller that is positioned in a pump housing and draws liquid manure in through a bottom fluid opening in the pump housing, the pump housing is mounted to the underside of the

floatable vehicle body at a location that is rearward of the front of the floatable vehicle body and forward of the rear of the floatable vehicle body such that the immersible liquid manure pump of the liquid manure mover is positioned within liquid manure when the vehicle is floating in a manure lagoon, where the drive shaft is substantially vertical and has a constant angular orientation relative to the floatable vehicle body;

a power source connected to a hydraulic pump, the power source configured to provide power to both the ground engaging propulsion structure and the liquid manure mover; and[[,]]

a wireless remote control configured to enable an operator who is remote from the vehicle to: (1) control the ground engaging propulsion structure; (2) control a flow of liquid manure from the liquid manure mover; (3) control at least one of the speed and direction of the vehicle when the vehicle is ground engaging; and[[,]] (4) control at least one of the speed and direction of the vehicle when the vehicle is floating,

wherein components of the vehicle that are submerged when the vehicle is floating are spaced from and positioned to the right and left of the pump housing and are spaced from and positioned directly forward of and directly rearward of the pump housing to keep floating solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump.

CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that this brief complies with the type volume limitations of 37 C.F.R. § 42.24(a)(1)(vi), and that this Revised Motion to Amend is 25 pages or less.

The undersigned further certifies this brief complies with the typeface requirements of 37 C.F.R. § 42.6(a)(2)(ii) and typestyle requirements of 37 C.F.R. § 42.6(a)(2)(iii). This brief has been prepared in a proportionally spaced typeface using Microsoft Word for Microsoft 365 MSO in Times New Roman 14-point font.

Dated: November 12, 2024

Respectfully submitted,

By: /James B. Luchsinger/
James B. Luchsinger, Reg. 73,705
HARNESS DICKY & PIERCE, P.L.C.
5445 Corporate Drive, Suite 200
Troy, MI 48098
Phone: 248-641-1600
Fax: 248-641-0270
bluchsinger@harnessip.com

Matthew L. Cutler, Reg. No. 43,574
HARNESS DICKY & PIERCE, P.L.C.
7700 Bonhomme Ave., Suite 400
St. Louis, MO 63105
Phone: 314-726-7500
Fax: 314-726-7501
mcutler@harnessip.com

Scott E. Yackey, Reg. No. 73,301
HARNESS, DICKY & PIERCE, P.L.C.

Case No. IPR2024-00004
U.S. Patent No. 11,491,835

2600 Network Blvd, Ste. 230
Frisco, TX 75034
Phone: (469) 777-5400
syackey@harnessip.com

Attorneys for Nuhn Industries Ltd.

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. 42.6(e), I certify that on this 12th day of November, 2024, a true and correct copy of the foregoing **Revised Patent Owner's Conditional Motion to Amend** was served by electronic mail on Petitioner's lead and backup counsel at the following addresses:

Lead Counsel

Thomas J. Leach
MERCHANT & GOULD P.C.
150 South Fifth Street, Suite 2200
Minneapolis, MN 55402
Phone: 612-336-4665
Fax: 612-332-9081
tleach@merchantgould.com
USPTO Reg. No. 53,188

Back-up Counsel

Robert A. Kalinsky
MERCHANT & GOULD P.C.
150 South Fifth Street, Suite 2200
Minneapolis, MN 55402
Phone: 612-336-4771
Fax: 612-332-9081
rkalinsky@merchantgould.com
USPTO Reg. No. 50,471

Jeffrey D. Blake
MERCHANT & GOULD P.C.
191 Peachtree Street NE, Suite 3800
Atlanta, GA 30303
Phone: 404-954-5040
Fax: 612-332-9081
jblake@merchantgould.com
USPTO Reg. No. 58,884

Michael A. Erbele
(*pro hac vice* forthcoming)
MERCHANT & GOULD P.C.
150 South Fifth Street, Suite 2200
Minneapolis, MN 55402
Phone: 612-336-4670
Fax: 612-332-9081
merbele@merchantgould.com

Taylor R. Stemler
MERCHANT & GOULD P.C.
150 South Fifth Street, Suite 2200
Minneapolis, MN 55402
Phone: 612-371-5215
Fax: 612-332-9081
tstemler@merchantgould.com
USPTO Reg. No. 79,777

/James B. Luchsinger/
JAMES B. LUCHSINGER
HARNESS DICKY & PIERCE, P.L.C.

63493158.1