Intellectual Property Assertions

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
(b)(4), (b)(6)				
1.	U.S. Patent App. 549,552 10/13/06, High Photo-efficiency Microalgae Bioreactors	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
2.	U.S. Patent App. 549,561 10/13/06, Photosynthetic Oil Production with High Carbon Dioxide Utilization	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
3.	U.S. Patent App. 549,532 10/13/06, Photosynthetic Oil Production in a Two-Stage Reactor	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
4.	U.S. Patent App. 549,541 10/13/06, Photosynthetic Carbon Dioxide Sequestration and Pollution Abatement	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
5.	U.S. Patent App. 11/860,327, High Efficiency Separations to Recover Oil from Microalgae	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
6.	U.S. Patent App. 11/860,341 Transportable Algae Biodiesel System (was 1402-014)	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
7.	GA I.D. No. 2008.01-014 Microalgae Growth Pond Design (gradient system)	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
8.	GA I.D. No. 2008.02-014 Microalgae Photobioreactor Design	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
9.	GA I.D. No. 2008.03-014 Atmospheric Carbon Dioxide Removal via Microalgae	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
10.	GA I.D. No. 2008.04-014 Continuous Microalgae Oil Extraction Process	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
11.	GA I.D. No. 2008.05-014 Microalgae Biofuel Production System	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
12.	GA I.D. No 2008.06-014 Fresh Water Recovery and Temperature Control in Microalgae Raceways	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
13.	GA I.D. No. 2008.07-014 Biofuels with Improved Low Temperature Properties	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
14.	GA I.D. No. 2008.22-014 Microalgae Stability by Nutrient Preloading (include heterotrophic)	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
(b)(4), (b)(6)				
15.	GA I.D. No. 2008.23-014 Microbial Stability in an Expanding Plug Flow Reactor	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
16.	GA I.D. No. 2008.24-014 High Efficiency Separations to Recover Oil from Microalgae	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
17.	GA I.D. No. 2008.27-014 Method for Achieving Microalgae Stability by Nutrient Cycling	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
18.	GA I.D. No. 2008.28-014 Algae Biofuel Carbon Dioxide Distribution	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
19.	GA I.D. No. 2008.29-014 Method and System for Microbial Conversion of Cellulose to Fuel	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
20.	GA I.D. No. 2008-30-014 Microalgae Oil Production from Waste Water	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
21.	List of Species with GA Cross-Reference Number and Species details from GA Private Collection for those Species identified prior to contract effective date	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
22.	Algae biofuel system baseline design and design description completed prior to contract effective date	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
23.	Algae biofuel system approach and research plan as identified in the GA proposal	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
24.	Algae biorefinery conceptual design established as of the effective date of the contract	Developed exclusively at private expense	Limited	Dr. David Hazlebeck General Atomics
25.	GA Microalgae Production System Cost Model software baselined as of the effective date of the contract	Developed exclusively at private expense	Restricted	Dr. David Hazlebeck General Atomics
26.	U.S. Patent Application Serial No. 12/243,933 - Production of Biodiesel, Cellulosic Sugars, and Peptides from the Simultaneous Esterfication and Alcoholysis/Hydrolysis of Oil-Containing Substituent including phospholipids and peptidic content filed October 1, 2008, is a continuation-in-part of pending U.S. Application Serial No. 12/061,038 filed April 2, 2008, which claims priority to expired U.S. Provisional Application No. 60/921,327, filed Aprile 2, 2007	Developed exclusively at private expense	Limited	Mark Tegen Inventure Chemical, Inc.
27.	U.S. Provisional Patent Application Serial	Developed	Limited	Mark Tegen

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
(b)(4), (b)(6)	(b)(4), (b)(6)			
	61/079,867 - Method for Harvesting Microalgae using Hydrophobic Chemical Suspension, Flocculation, and Floatation, July 11, 2008	exclusively at private expense		Inventure Chemical, Inc.
28.	U.S. Provisional Patent Application Serial No. 61/079,877 - Partial Pressure Distillation Process, July 11, 2008	Developed exclusively at private expense	Limited	Mark Tegen Inventure Chemical, Inc.
29.	Hydroprocessing of vegetable and natural oils to diesel fuel as described in the following Invention Disclosure numbers: H0013952, H0015370, H0017932, H0019086, H0019238, UOP110108A, UOP27710, and other internal reports (no number available). Patent applications filed but not yet published	Developed exclusively at private expense	Limited	UOP LLC Ben Christolini VP & CTO R&D
30.	Catalyst formulations for deoxygenation, cracking, isomerizations, etc., as described in the following Invention Disclosure numbers: H0016343, H0017914, H0019331, H0019480 and other internal reports (no number available). Patent applications filed but not yet published	Developed exclusively at private expense	Limited	UOP LLC Ben Christolini VP & CTO R&D
31.	Process flow schemes for processing of vegetable and natural oils to diesel fuel as described in the following Invention Disclosure numbers: H0013966, H0013968, H0016339, H0016340, H0017132, H0017182, H0019432 and other internal reports (no number available). Patent applications filed but not yet published	Developed exclusively at private expense	Limited	UOP LLC Ben Christolini VP & CTO R&D
32.	Techno-economic analysis Methodology: Trade Secret based upon Invention disclosures H0013952, H0013966, H0013968, H0015370, H0016339, H0016340, H0017132, H0017182, H0017932, H0019086, H0019238, H0019432, UOP110108A, UOP27710, and other internal reports (no numbers available)	Developed exclusively at private expense	Limited	UOP LLC Ben Christolini VP & CTO R&D
33.	Process designs for the conversion of vegetable and natural oils to diesel fuel as described in the following Invention Disclosure numbers: H0013966, H0013968, H0016339, H0016340, H0017132, H0017182, H0019432 and other internal reports (no number available). Patent applications filed but not yet published	Developed exclusively at private expense	Limited	UOP LLC Ben Christolini VP & CTO R&D
34.	Invention disclosure to USU on1/9/08: In situ extraction and conversion of lipids	Developed exclusively at	Limited	B. Wahlen Utah State University

(b)(4); (b)(6)

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
	(b)(4); (b)(6) biodiesel	private expense		
35.	Invention disclosure to USU on 1/16/08: Method and apparatus for improving sunlight use and optimizing algal growth in photobioreactors	Developed exclusively at private expense	Limited	J. Muhs Utah State University
36.	Method & Experimental & Analytical Tools for determining Algae Characterization and Growth Data produced prior to effective of contract	Developed exclusively at private expense	Limited	J. Muhs Utah State University
37.	Method and Experimental & Analytical Tools for determining Algae Lipid Profiles produced prior to effective of contract	Developed exclusively at private expense	Limited	J. Muhs Utah State University
38.	Sunlight Utilization Methods and Apparatus for Increased Algae Yields using planar waveguides and nonimaging optics. P-DARPA – Seedling Project (P-701-104266)	Developed partially at private expense	Unlimited	J. Muhs Utah State University
39.	Experimental and Analytical Tools for Determining Light Distribution in Bioreactors produced prior to effective of contract	Developed exclusively at private expense	Limited	J. Muhs Utah State University
40.	Method & Apparatus for UV/IR Energy Capture and use from Bioreactors produced prior to effective of contract	Developed exclusively at private expense	Limited	J. Muhs Utah State University
41.	U.S. Provisional Patent Application; Production and purification of ester of polyunsaturated fatty acids	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
42.	U.S. Provisional Patent Application; Biological oils and production and uses thereof	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
43.	Photosynthetic organisms from Martek's private collection including green algae and red algae	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
44.	List of proprietary lipid-producing photosynthetic microalgae stains	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
45.	Biorational screening process for the isolation of photosynthetic microalgae	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
46.	Hexane based oil extraction processes for photosynthetic microalgae	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
47.	Enzyme based oil extraction processes for photosynthetic microalgae	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
48.	Processes to improve strains of photosynthetic microalgae (e.g., increase	Developed exclusively at	Limited	David Feitel Martek Biosciences

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
(b)(4); (b)(6)	(b)(4); (b)(6)	private expense		
49.	Photosynthetic microalgae developed by Martek through classical strain selection or molecular engineering	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
50.	Process for the production of branched-acyl-chain biodiesel from photosynthetic algal oil	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
51.	Process conditions to minimize foreign growth in the production of photosynthetic microalgae	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
52.	Processes for growing marine photosynthetic microalgae in low chloride culture conditions	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
53.	Proprietary growth media formula that supports production of oil by organisms	Developed exclusively at private expense	Limited	David Feitel Martek Biosciences
54.	All technical data relating to IP 07-004 - Optimal Energy Pathway to Renewable Domestic and Other Fuels, US Patent Application 11/840,191 and all corresponding foreign patent applications	Developed exclusively at private expense	Limited	EERC Foundation
55.	All technical data relating to IP 07-032 - Chain selective synthesis process of fuel components and chemical intermediates	Developed exclusively at private expense	Limited	EERC Foundation
56.	IP07-034 – Aviation-Grade Kerosene from Independently Produced Blendstocks, US Patent Application 12/147,783 and all corresponding foreign patent applications			
	56a. IP07-034 – US Patent Application 12/147,783 excluding Example 3 (Fuel 3).	Developed exclusively at private expense	Limited	EERC Foundation
	56b. IP07-034 – Patent Example 3 (Fuel C) as described in US Patent Application12/147,783	Developed partially at private expense	Government Purpose Rights	EERC Foundation
57.	A provisional patent on a high throughput algal screening and characterization method for oleaginous algae is in preparation.	Developed exclusively at private expense	Limited	Drs. Qiang Hu, Wei Chen, and Milton Sommerfeld Arizona State University
58.	A provisional patent on a hybrid culture system and process for mass culture of algae for production of biofuels and biomaterials is in preparation.	Developed exclusively at private expense	Limited	Drs. Qiang Hu, Wei Chen, and Milton Sommerfeld Arizona State University
59.	A provisional patent on a novel device and process for harvesting a dewatering of algae and other microorganisms is in preparation.	Developed exclusively at private expense	Limited	Drs. Qiang Hu, Wei Chen, and Milton Sommerfeld Arizona State University
60.	A provisional patent on a solar drying device and process for algae biomass	Developed exclusively at	Limited	Drs. Qiang Hu, Wei Chen, and Milton

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
(b)(4), (b)(6)	(b)(4), (b)(6) is in preparation.	private expense		Sommerfeld Arizona State University
61.	A provisional patent on a screen filterbased algae harvesting and dewatering device and process is in preparation	Developed exclusively at private expense	Limited	Drs. Qiang Hu, Wei Chen, and Milton Sommerfeld Arizona State University
62.	Microwave-assisted oil extraction method documentation for lipid extraction produced prior to effective date of contract	Developed exclusively at private expense	Limited	Drs. Qiang Hu, Wei Chen, and Milton Sommerfeld Arizona State University
63.	U.S. Patent Application No. 11936045 (dated 06-Nov-07 with priority date of 15-Mar-07); Method & System for Assembly of Macromolecules & Nanostructures	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
64.	U.S. Patent App 60/918,144 Method and System for Assembly of Macromolecules and Nanostructure	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
65.	U.S. Patent Application No. 61/047,201 (dated 10-Apr-2008); Systems and methods for generating nanoprecise molecular placement in three dimensions	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
66.	U.S. Patent Application No. 60/985.961 (dated 6-Nov-07); Synthetic Polypeptide Mimetics	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
67.	U.S. Patent Application No. 61/023,118 (dated 02-Feb-2008); Copolymerize mimetics enzymes,	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
68.	U.S. Patent Application No. 61/048,599 (dated 29-Apr-2008); Methods & apparatuses relating to single strand dimensional construction	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
69.	U.S. Patent Application No. 61/047,201 (dated: 23-Apr-2008); Methods & apparatuses relating to single strand dimensional construction	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
70.	U.S. Patent Application No. 61/061,555 (dated 13-June-08); Single strand dimensional construction templating, fabrication, cybernetics	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
71.	Geometrically patterned, Two and Three Dimensional Asemblies A Self-Assembled 61/092.374; 27-Aug-2008	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
72.	Three-dimensional Nanoscale Platforms – 61/110535	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC

(b)(4), (b)(6)

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
73.	Shape Construction 61/092.057; 27-Aug-2008	Developed exclusively at private expense	Limited	Troy Lapsys Incitor, LLC
74.	3D computer modeling software modified for Incitor synthetic enzyme constructs baselined as of the effective date of the contract	Developed at private expense	Restricted	Troy Lapsys Incitor, LLC
75.	Process for the extraction of algal oil from algal biomass by rupturing the cells using pressurized gas produced prior to effective date of contract	Developed exclusively at private expense	Limited	Tommie Merimon Eco-Solids Intl and Missing Link Technology LLC
76.	List of elite algae strains their utility and attributes	Developed exclusively at private expense	Limited	Adelheid R. Kuehnle Kuehnle AgroSystems
77.	Method for bulk live algae preservation as seedstock and feed	Developed partially at private expense	Rights in SBIR; USDA SBIR Proposal Number: 2008-00099 Award Number: 2008-33610-18936 Project Dates: May 1 to Dec. 31, 2008	Adelheid R. Kuehnle Kuehnle AgroSystems
78.	Process for oil extraction/meal preservation/enrichment of process feedstock	Developed exclusively at private expense	Limited	Adelheid R. Kuehnle Kuehnle AgroSystems
79.	List of live algae strains themselves	Developed exclusively at private expense	Limited	Adelheid R. Kuehnle Kuehnle AgroSystems
80.	Highly efficient dewatering and drying system design that uses both pressure and heat to expel water, process data	Developed partially at private expense	Government Purpose Rights; Rights in SBIR data generated under DOE contract DE-FG02-07ER84874 Period of Performance 6/20/07–3/19/08, Charles Russomanno, 202-586-7543	John Kelly Altex Technologies Corporation
81.	U.S. Patent Application S.N. 11/269,417 (filed 11/7/05). S100625/L2003057 "Use of Prolines for Improving Growth and/or Yield"	Developed partially at private expense	Government Purpose Rights	Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight Los Alamos National

No.	Technical Data or Computer Software to Be Furnished with Restrictions*	Basis for Assertion	Assertion Rights Category	Name of Person Asserting Restrictions
(b)(4); (b)(6)	(b)(4); (b)(6)			Laboratory
82.	S91735/L1998085 "Use of Prolines for Improving Growth and Other Properties of Plants and Algae" by Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight. U.S. Patent No. 6,831,040 issued 12/14/2004. This is BIP in a CRADA. It is licensed please check with TMT for availability.	Developed partially at private expense	Government Purpose Rights	Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight Los Alamos National Laboratory
83.	S97845/L1998085 'Use of Prolines for Improving Growth and Other Properties of Plants and Algae' by Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight. U.S. Patent No. 6,555,500 issued 4/29/2003. This is BIP in a CRADA. It is licensed please check with TMT for availability. This case is a divisional of S91735/L1998085.	Developed partially at private expense	Government Purpose Rights	Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight Los Alamos National Laboratory
84.	S97846/L1998085 'Use of Prolines for Improving Growth and Other Properties of Plants and Algae' by Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight. U.S. Patent No. 6,593,275, issued 07/15/2003. This is BIP in a CRADA. It is licensed; please check with TMT for availability. This case is a divisional of S91735/L1998085.	Developed partially at private expense	Government Purpose Rights	Pat J. Unkefer, Rodolofo A. Martinez, Thomas J. Knight Los Alamos National Laboratory