

American Carbon Registry Addendum to Greenhouse Gas (GHG) Project Plans for Supplemental Project Description

Applicability and Directions

Projects developed using the ACR Standard may provide supplemental information as an addendum to the GHG Project Plan for the purposes of providing a short, narrative description of the project. If provided, this addendum shall be submitted on the project's Registry, denoted as a GHG Project Plan document type, and maintained as public.

This addendum and the information contained herein are provided optionally to further increase transparency as a project reference document that goes beyond requirements of the ACR Standard and relevant methodology. The information has not been independently validated or verified but, per the ACR Terms of Use, is required to be true, correct, and complete to the best of the Account Holder's knowledge, information, and belief. This addendum does not replace any information previously submitted within the GHG Project Plan nor any other validated or verified documentation. Any quantitative information is considered supplemental and supporting, and it may not contradict the GHG Project Plan or other project documentation. ACR may request modifications to this addendum as needed.

Submission Date

This Supplemental Project Description is added to the GHG Project Plan via upload to the ACR Registry, and is considered true, correct, and complete to the best of the Account Holder's knowledge, information, and belief, on the following date: 6/28/2023

Supplemental Project Description

Provide the Supplemental Project Description, using more sheets as necessary.

ACR875: Supplemental Project Documentation

July 27, 2023

ODS projects result in permanent destruction of greenhouse gases. The key components that establish the quantifiable impact of these projects include documentation that 1) establishes that the ODS gases were collected and moved through a traceable chain of custody to a destruction facility; 2) a Certificate of Destruction for the material contained in the produce; 3) calculations of the climate impact based on emission factors and requirements of the offset protocol.

Enclosure 1: Chain of Custody and Ownership Documentation

Chain of custody and ownership documentation is collected and maintained beginning at the point of origin through destruction. This flow diagram outlines the parties involved throughout the custody and material movement process. Material from multiple point of origins is aggregated into an ISO container (TMLU925103-1) at Tradewater's warehouse for movement, sampling, and final destruction at a qualified destruction facility (A-Gas).

Enclosure 2: Certificate of Destruction

The Certificate of Destruction is provided by the qualified destruction facility (A-Gas) certifying the date, mass, and species of materials contained in the ISO container (TMLU925103-1) and destroyed.

Enclosure 3: GHG Emissions Reduction Assertion Spreadsheet

Project data and greenhouse gas emissions reductions are quantified by comparing actual project emissions to calculated baseline emissions in the absence of the project (the destruction of materials contained in the ISO TMLU925103-1 and destroyed at A-Gas). Calculation methods, factors, and constants are applied per the provisions and equations in the Methodology.

Point of Origins

- Alabama
- Arizona
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Iowa
- Idaho
- Illinois
- Indiana
- Kansas
- Kentucky
- Louisiana
- Massachusetts
- Maryland
- Michigan
- Minnesota
- Missouri
- North Carolina
- Nebraska
- New Hampshire
- New Jersey
- New Mexico
- Nevada
- New York
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- Tennessee
- Texas
- Utah
- Virginia
- Washington
- Wisconsin
- West Virginia

Tradewater
Warehouse

Transported by
ISO Carrier

National
Refrigerants Inc.
(Lab)

A-Gas
Bowling Green,
OH

Sample via
UPS



1100 Haskins Road, Bowling Green, OH 43402 419-867-8990

CERTIFICATE OF DESTRUCTION

Developer of ODS Destroyed	<u>Tradewater</u>	Generator	<u>Tradewater</u>
	<u>650 Morse Ave</u>	Name	<u>N/A</u>
	<u>Elk Grove Village IL,60007</u>		
Certificate ID/PO#:	<u>Plas- 1211</u>	Manifest #:	<u>N/A</u>
		Destruction Unit :	<u>PDU 1</u>
Generator EPA ID:	<u>N/A</u>	Container ID#:	<u>5005</u>

The following Quantity of mixed Ozone Depleting Substances were destroyed:

Profile ID/Description:	<u>Tradewater</u>
Batch Number:	<u>Plas- 1211</u>
Date started:	<u>5/11/23</u>
Date Complete	<u>5/16/23</u>
Starting Batch Weight:	<u>9,130.0 lbs</u>
Ending Batch Weight:	<u>140.0 lbs</u>
Residue / Oil Weight:	<u>133.0 lbs*</u>
Total weight destroyed:	8,857.0 lbs.

*Product not destroyed by Plascon
To be disposed of separately

I certify that A-Gas is in possession of and operates a licensed plasma arc destruction facility, and it operates in accordance with the Destruction and Removal Efficiency and emission guidelines set forth in the Montreal Protocol Technology Assessment Panel (TEAP), Task Force for Destruction Technologies, final report dated April 2002. Based upon testing of the technology in April 12,2022 and April 13, 2022 the destruction guidelines achieved are certified to be met or exceed TEAP requirements:

The sample was analyzed by GC/MS to identify the compounds present. The sample was analyzed by GC/FID to quantify the amount of each compound present. The sample contains R-113: 77.44%, R-11: 21.90%, R-22: 0.23%, R-12: 0.13%, R-115: 0.09%, R-123: 0.02%, R-114: 0.01%, R-134a: 0.08%, 2-butanone: 0.06%, tetradecafluorohexane: 0.02%, R-140a: 0.01%.

I certify that to the best of my knowledge, the above described material was destroyed in compliance with all applicable laws, regulations, permits, and licenses during the period listed above.

Signature: Zachary Babb Date: 5/16/2023



1100 Haskins Road, Bowling Green, OH 43402 419-867-8990

CERTIFICATE OF DESTRUCTION

Developer of ODS Destroyed	<u>Tradewater</u>	Generator	<u>Tradewater</u>
	<u>650 Morse Ave</u>	Name	<u>N/A</u>
	<u>Elk Grove Village IL,60007</u>		
Certificate ID/PO#:	<u>Plas- 1209</u>	Manifest #:	<u>N/A</u>
		Destruction Unit :	<u>PDU 2</u>
Generator EPA ID:	<u>N/A</u>	Container ID#:	<u>5001</u>

The following Quantity of mixed Ozone Depleting Substances were destroyed:

Profile ID/Description:	<u>Tradewater</u>		
Batch Number:	<u>Plas- 1209</u>		
Date started:	<u>4/19/23</u>	Starting Batch Weight:	<u>19,580.0 lbs</u>
Date Complete	<u>4/27/23</u>	Ending Batch Weight:	<u>150.0 lbs</u>
		Residue / Oil Weight:	<u>0.0 lbs*</u>
		Total weight destroyed:	19,430.0 lbs.

*Product not destroyed by Plascon
To be disposed of separately

I certify that A-Gas is in possession of and operates a licensed plasma arc destruction facility, and it operates in accordance with the Destruction and Removal Efficiency and emission guidelines set forth in the Montreal Protocol Technology Assessment Panel (TEAP), Task Force for Destruction Technologies, final report dated April 2002. Based upon testing of the technology in April 12,2022 and April 13, 2022 the destruction guidelines achieved are certified to be met or exceed TEAP requirements:

The sample was analyzed by GC/MS to identify the compounds present. The sample was analyzed by GC/FID to quantify the amount of each compound present. The sample contains R-22: 51.49%, R-12: 27.26%, R-115: 17.85%, R-114/R-114a: 1.73%, R-125: 0.51%, R-152a: 0.38%, R-134a: 0.33%, R-11: 0.18%, R-124: 0.07%, R-143a: 0.06%, R-113: 0.01%, R-32: 0.13%.

I certify that to the best of my knowledge, the above described material was destroyed in compliance with all applicable laws, regulations, permits, and licenses during the period listed above.

Signature: Zachary Babb Date: 4/27/2023

Quantification of Emissions Reductions

Reference Values Obtained from ACR Destruction of Ozone Depleting Substances and High-GWP Foam V2.0

		CFC-12	CFC-11	CFC-13	CFC-113	CFC-114	CFC-115	HCFC-22	HCFC-123	
CFC-12 10-Year Cumulative Emissions Rate (%/10 Years)	ER	100%	100%	100%	100%	100%	100%	100%	100%	Sec. 5.1.1 (Table 5.2)
Refrigerant Substitute Emissions Factor (tCO2e/tODS)	SE	0	0	0	0	0	0	0	0	Sec 5.2.1 (Table 5.4)
Global Warming Potential (tCO2e/tODS)	GWP	10239	4663	13893	5824	8592	7665	1764	79	Sec. 5.1 (Table 5.1)
Default Emission Factor for Transportation and Destruction of ODS (tCO2e/tODS)	EF					7.5				Sec. 5.2.3

COD		Refrigerant Type	Measured Values		Gross Quantity of Refrigerant Destroyed (lbs)	Moisture Reduction	High Boiling Residue Reduction	Total Eligible Refrigerant Destroyed (lbs)	Quantity of Refrigerant Destroyed (metric tonnes)	GHG Emissions from Substitute Refrigerants	Quantity of ODS Transported to Destruction Facility	Transportation and Destruction Default Emissions Factor (tCO2e)	Total Project Emissions (tCO2e)	Total Project Baseline Emissions (tCO2e)	Total GHG Emissions Reductions (tCO2e)	
			Mass of ODS in COD in LBS	Concentration of ODS in Tranche												
			m	c	Q _g	mr	hbr	Q	Q _{ref}	Sub _{ref}	Q _t	Def	PE	BE _{ref}	ER	
			Q _g = m x c		Q = Q _g - (Q _g x mr) - (Q _g x hbr)		Q _{ref} = Q x .45359/1000		Sub _{ref} = Q _{ref} x SE		Def = Q _t x EF		PE = Sub _{ref} + Def		BE _{ref} = Q _{ref} x ER x GWP	ER = BE _{ref} - PE
TMLU925103-1-A1	TMLU925103-1-A1	CFC-12	19430.0	27.26%	5296.62			5270.40	2.39	0.00				24477.74		
	TMLU925103-1-A1	CFC-11		0.18%	34.97			34.80	0.02	0.00				0		
	TMLU925103-1-A1	CFC-13		0.00%	0.00			0.00	0.00	0.00				0		
	TMLU925103-1-A1	CFC-113		0.01%	1.94	0.000110	0.00484	1.93	0.00	0.00	8.81325	66.10	66	5		
	TMLU925103-1-A1	CFC-114		1.73%	336.14			334.48	0.15	0.00				1304	45757	
	TMLU925103-1-A1	CFC-115		17.85%	3468.26			3451.09	1.57	0.00				11999		
	TMLU925103-1-A1	HCFC-22		51.49%	10004.51			9954.98	4.52	0.00				7965		
TMLU925103-1-A1	HCFC-123		0.00%	0.00			0.00	0.00	0.00				0			
TMLU925103-1-A2	TMLU925103-1-A2	CFC-12	19430.0	27.48%	5339.36			5321.64	2.41	0.00				24715.78		
	TMLU925103-1-A2	CFC-11		0.19%	36.92			36.79	0.02	0.00				0		
	TMLU925103-1-A2	CFC-13		0.00%	0.00			0.00	0.00	0.00				0		
	TMLU925103-1-A2	CFC-113		0.01%	1.94	0.000110	0.00321	1.94	0.00	0.00	8.81325	66.10	66	5		
	TMLU925103-1-A2	CFC-114		1.80%	349.74			348.58	0.16	0.00				1358	45982	
	TMLU925103-1-A2	CFC-115		17.74%	3446.88			3435.44	1.56	0.00				11944		
	TMLU925103-1-A2	HCFC-22		51.29%	9965.65			9932.56	4.51	0.00				7947		
TMLU925103-1-A2	HCFC-123		0.01%	1.94			1.94	0.00	0.00				0			
TMLU925103-1-B1	TMLU925103-1-B1	CFC-12	8990.0	0.11%	9.89			9.69	0.00	0.00				45		
	TMLU925103-1-B1	CFC-11		21.29%	1913.97			1876.00	0.85	0.00				3968		
	TMLU925103-1-B1	CFC-13		0.00%	0.00			0.00	0.00	0.00				0		
	TMLU925103-1-B1	CFC-113		78.14%	7024.79	0.000038	0.01980	6885.43	3.12	0.00	4.07777	30.58	31	18189	22209	
	TMLU925103-1-B1	CFC-114		0.01%	0.90			0.88	0.00	0.00				3		
	TMLU925103-1-B1	CFC-115		0.07%	6.29			6.17	0.00	0.00				21		
	TMLU925103-1-B1	HCFC-22		0.18%	16.18			15.86	0.01	0.00				13		
TMLU925103-1-B1	HCFC-123		0.02%	1.80			1.76	0.00	0.00				0			
TMLU925103-1-B2	TMLU925103-1-B2	CFC-12	8990.0	0.13%	11.69			11.48	0.01	0.00				53		
	TMLU925103-1-B2	CFC-11		21.90%	1968.81			1933.87	0.88	0.00				4090		
	TMLU925103-1-B2	CFC-13		0.00%	0.00			0.00	0.00	0.00				0		
	TMLU925103-1-B2	CFC-113		77.44%	6961.86	0.000049	0.01770	6838.29	3.10	0.00	4.07777	30.58	31	18065	22225	
	TMLU925103-1-B2	CFC-114		0.01%	0.90			0.88	0.00	0.00				3		
	TMLU925103-1-B2	CFC-115		0.09%	8.09			7.95	0.00	0.00				28		
	TMLU925103-1-B2	HCFC-22		0.23%	20.68			20.31	0.01	0.00				16		
TMLU925103-1-B2	HCFC-123		0.02%	1.80			1.77	0.00	0.00				0			

Quantifications Excluding Oil															
TMLU925103-1-A1-NOOIL	TMLU925103-1-A1-NOOIL	CFC-12	19430.0	27.26%	5296.62			5296.04	2.40	0.00				24596	45980
	TMLU925103-1-A1-NOOIL	CFC-11		0.18%	34.97			34.97	0.02	0.00				74	
	TMLU925103-1-A1-NOOIL	CFC-13		0.00%	0.00			0.00	0.00	0.00				0	
	TMLU925103-1-A1-NOOIL	CFC-113		0.01%	1.94	0.000110	0.00000	1.94	0.00	0.00	8.81325	66.10	66	5	
	TMLU925103-1-A1-NOOIL	CFC-114		1.73%	336.14			336.10	0.15	0.00				1310	
	TMLU925103-1-A1-NOOIL	CFC-115		17.85%	3468.26			3467.87	1.57	0.00				12057	
	TMLU925103-1-A1-NOOIL	HCFC-22		51.49%	10004.51			10003.41	4.54	0.00				8004	
TMLU925103-1-A2-NOOIL	TMLU925103-1-A2-NOOIL	HCFC-123		0.00%	0.00			0.00	0.00	0.00				0	
	TMLU925103-1-A2-NOOIL	CFC-12	19430.0	27.48%	5339.36			5338.78	2.42	0.00				24795	46131
	TMLU925103-1-A2-NOOIL	CFC-11		0.19%	36.92			36.91	0.02	0.00				78	
	TMLU925103-1-A2-NOOIL	CFC-13		0.00%	0.00			0.00	0.00	0.00				0	
	TMLU925103-1-A2-NOOIL	CFC-113		0.01%	1.94	0.000110	0.00000	1.94	0.00	0.00	8.81325	66.10	66	5	
	TMLU925103-1-A2-NOOIL	CFC-114		1.80%	349.74			349.70	0.16	0.00				1363	
	TMLU925103-1-A2-NOOIL	CFC-115		17.74%	3446.88			3446.50	1.56	0.00				11983	
TMLU925103-1-B1-NOOIL	TMLU925103-1-B1-NOOIL	HCFC-22		51.29%	9965.65			9964.55	4.52	0.00				7973	
	TMLU925103-1-B1-NOOIL	HCFC-123		0.01%	1.94			1.94	0.00	0.00				0	
	TMLU925103-1-B1-NOOIL	CFC-12	8857.0	0.11%	9.74			9.74	0.00	0.00				45	22323
	TMLU925103-1-B1-NOOIL	CFC-11		21.29%	1885.66			1885.58	0.86	0.00				3988	
	TMLU925103-1-B1-NOOIL	CFC-13		0.00%	0.00			0.00	0.00	0.00				0	
	TMLU925103-1-B1-NOOIL	CFC-113		78.14%	6920.86	0.000038	0.00000	6920.60	3.14	0.00	4.07777	30.58	31	18282	
	TMLU925103-1-B1-NOOIL	CFC-114		0.01%	0.89			0.89	0.00	0.00				3	
TMLU925103-1-B2-NOOIL	TMLU925103-1-B2-NOOIL	CFC-115		0.07%	6.20			6.20	0.00	0.00				22	
	TMLU925103-1-B2-NOOIL	HCFC-22		0.18%	15.94			15.94	0.01	0.00				13	
	TMLU925103-1-B2-NOOIL	HCFC-123		0.02%	1.77			1.77	0.00	0.00				0	
	TMLU925103-1-B2-NOOIL	CFC-12	8857.0	0.13%	11.51			11.51	0.01	0.00				53	22291
	TMLU925103-1-B2-NOOIL	CFC-11		21.90%	1939.68			1939.59	0.88	0.00				4102	
	TMLU925103-1-B2-NOOIL	CFC-13		0.00%	0.00			0.00	0.00	0.00				0	
	TMLU925103-1-B2-NOOIL	CFC-113		77.44%	6858.86	0.000049	0.00000	6858.52	3.11	0.00	4.07777	30.58	31	18118	
TMLU925103-1-B2-NOOIL	TMLU925103-1-B2-NOOIL	CFC-114		0.01%	0.89			0.89	0.00	0.00				3	
	TMLU925103-1-B2-NOOIL	CFC-115		0.09%	7.97			7.97	0.00	0.00				28	
	TMLU925103-1-B2-NOOIL	HCFC-22		0.23%	20.37			20.37	0.01	0.00				16	
	TMLU925103-1-B2-NOOIL	HCFC-123		0.02%	1.77			1.77	0.00	0.00				0	

Destruction Information

Certificate of Destruction ID Number	Weight of Material Destroyed	Destruction Start Date	Destruction Facility	Certificate of Destruction Link:	End Date of Destruction
TMLU925103-1-A1	19430	4/19/2023	A-Gas	COD	4/27/2023
TMLU925103-1-A2	19430	4/19/2023	A-Gas	COD	4/27/2023
TMLU925103-1-B1	8,990	5/11/2023	A-Gas	COD	5/16/2023
TMLU925103-1-B2	8,990	5/11/2023	A-Gas	COD	5/16/2023

Start Weight	Weight of Residue	Heel Weight
19580	0	150
19580	0	150
9130	133	140
9130	133	140

Destruction Information Exclusive of Residue

Certificate of Destruction ID Number	Weight of Material Destroyed	Destruction Start Date	Destruction Facility	Certificate of Destruction Link:	End Date of Destruction	Start Weight of Material Destroyed
TMLU925103-1-A1-NOOIL	19430	4/19/2023	A-Gas	COD	4/27/2023	19430
TMLU925103-1-A2-NOOIL	19430	4/19/2023	A-Gas	COD	4/27/2023	19430
TMLU925103-1-B1-NOOIL	8857	5/11/2023	A-Gas	COD	5/16/2023	8990
TMLU925103-1-B2-NOOIL	8857	5/11/2023	A-Gas	COD	5/16/2023	8990

Sampling Information						Purity									
Cylinder Number	Date of Sample	Time of Sample	Technician Taking Sample	Sampling Company	Ambient Air Temperature (degrees F)	R12 Purity (%) of ODS	R11 Purity (%) of ODS	R-13 Purity (%) of ODS	R113 Purity (%) of ODS	R114 Purity (%) of ODS	R115 Purity (%) of ODS	R22 Purity (%) of ODS	R123 Purity (%) of ODS	Moisture Level (PPM)	High Boiling Residue (%)
TMLU925103-1-A1	4/13/2023	8:26AM	Mark Dulaney	A-Gas	71.6	27.26	0.18	0	0.01	1.73	17.85	51.49	0	110	0.484
TMLU925103-1-A2	4/13/2023	8:26AM	Mark Dulaney	A-Gas	71.6	27.48	0.19	0	0.01	1.8	17.74	51.29	0.01	110	0.321
TMLU925103-1-B1	5/2/2023	9:51AM	Nick Alsip	A-Gas	75.9	0.11	21.29	0	78.14	0.01	0.07	0.18	0.02	38	1.98
TMLU925103-1-B2	5/2/2023	9:51AM	Nick Alsip	A-Gas	75.9	0.13	21.9	0	77.44	0.01	0.09	0.23	0.02	49	1.77

Sampling Information with oil removed						Purity									
Cylinder Number	Date of Sample	Time of Sample	Technician Taking Sample	Sampling Company	Ambient Air Temperature (degrees F)	R12 Purity (%) of ODS	R11 Purity (%) of ODS	R-13 Purity (%) of ODS	R113 Purity (%) of ODS	R114 Purity (%) of ODS	R115 Purity (%) of ODS	R22 Purity (%) of ODS	R123 Purity (%) of ODS	Moisture Level (PPM)	High Boiling Residue (%)
TMLU925103-1-A1	4/13/2023	8:26AM	Mark Dulaney	A-Gas	71.6	27.26	0.18	0	0.01	1.73	17.85	51.49	0	110	0
TMLU925103-1-A2	4/13/2023	8:26AM	Mark Dulaney	A-Gas	71.6	27.48	0.19	0	0.01	1.8	17.74	51.29	0.01	110	0
TMLU925103-1-B1	5/2/2023	9:51AM	Nick Alsip	A-Gas	75.9	0.11	21.29	0	78.14	0.01	0.07	0.18	0.02	38	0
TMLU925103-1-B2	5/2/2023	9:51AM	Nick Alsip	A-Gas	75.9	0.13	21.9	0	77.44	0.01	0.09	0.23	0.02	49	0