



October 8, 2020

Indiana Department of Environmental Management Office of Land Quality State Cleanup Section 100 North Senate Avenue, IGCN, Room 1101 Indianapolis, Indiana 46204-2251 Attn: Mr. Tim Johnson

RE: Status Report Indoor Air Mitigation S

Indoor Air Mitigation System Performance Sampling and Carbon Filter Replacement Hurricane Road Industrial Development, LLC Property Crossroads Recycling Building Office 1062 Eastview Drive Franklin, Indiana IDEM SCP Site #2013-34567 Patriot Project No. 20-0317-01E

Dear Mr. Johnson:

Patriot Engineering and Environmental, Inc. (*Patriot*) is pleased to submit this report documenting the June and July 2020 monthly performance air sampling conducted following installation of an interim indoor air vapor mitigation system at the Crossroads Recycling building located on the Hurricane Road Industrial Development, LLC (HRID) property at 1062 Eastview Drive in Franklin, Indiana (the Site). This work was conducted in response to a request from the Indiana Department of Environmental Management (IDEM) to install a vapor mitigation system to reduce the concentrations of VOCs in the office space at the Crossroads Recycling building. This report describes the work activities that were conducted by *Patriot* during the June and July 2020 performance sampling events and presents our findings and conclusions relative to the Site.

# PROJECT BACKGROUND

*Patriot* installed an Airpura C600DLX Air Purifier (C600) within the office space at the Crossroads Recycling building where indoor air concentrations of trichloroethylene (TCE) had been detected during previous vapor intrusion investigations at concentrations exceeding the Remediation Closure Guide (RCG) Commercial/Industrial Indoor Air Screening Level (IASL) of 8.8 micrograms per cubic meter (ug/m<sup>3</sup>). The C600 was installed on April 1, 2020 and placed on the ground surface in the north-west

corner of the office space. *Patriot* performed vapor intrusion sampling events immediately prior to startup of the system and at intervals of 2 days, 1 week, and 2 weeks following system setup. During each sampling event, one indoor air sample was collected from the office space over an approximately 8-hour period using a 6-liter batch-certified summa canister equipped with a laboratory calibrated flow regulator and vacuum gauge. The Summa canisters were labeled, logged onto a chain-of-custody form and delivered to the laboratory for short list VOC analyses including TCE, perchloroethylene (PCE), cis-1,2,dichloroethylene (cis-1,2-DCE), trans-1,2-dichloroethylene (trans-1,2-DCE), and vinyl chloride using U.S. EPA Method TO-15. The analytical results for these sampling events are summarized below.

				Analytic	cal Results	s (ug/m³)	
Sample ID	Date	Duration	PCE	TCE	c-DCE	t-DCE	VC
Office Baseline	4/1/2020	8 hr	1.7	86.0	ND	ND	ND
Office 48hrs	4/3/2020	8 hr	ND	14.6	ND	ND	ND
IA-6	4/9/2020	8 hr	ND	20.1	ND	ND	ND
Office- 2 Week	4/16/2020	8 hr	ND	10.5	ND	ND	ND
IDEM RCG	Residential	IASLs	42	2.1	NE	NE	1.7
IDEM RCG	Commercial	IASLs	180	8.8	NE	NE	28

Notes:

ND= Below Laboratory Reporting Limit

ug/m<sup>3</sup> = micrograms per meter cubed

**10.5** = Constituent detected above IDEM RCG Residential IASLs

10.5 = Constituent detected above IDEM RCG Commercial IASLs

The sampling events conducted after installation of the C600 showed a substantial reduction in TCE concentrations. Analysis of the post-installation 2-day, one-week and two-week samples reported TCE concentration reductions of 83%, 76.6% and 87.8% when compared to the initial baseline TCE concentration of 86.0 ug/m<sup>3</sup>. However, all of the samples exceeded the RCG Commercial/ Industrial IASL of 8.8 ug/m<sup>3</sup>. During each of the post-installation sampling events, *Patriot* noted that the variable airflow controller on the C600 air purifier had been turned down by the tenant to a level below the maximum volume due to noise from the unit and *Patriot* was not able to determine whether the failure to meet the mitigation goal was due to limitations of the C600 or due to the unit not being operated properly. The tenant was reinstructed on use of the C600 and was instructed that the unit must operate at full airflow volume in order to successfully remediate the Indoor Air. An *"Indoor Air Vapor Mitigation System Installation and Startup Report"* documenting the system installation and indoor air sampling was submitted to IDEM on June 4, 2020.

*Patriot* conducted one-month post-startup performance air sampling on May 6, 2020 and monthly performance air sampling on May 27, 2020 to document the performance

of the C600 mitigation system and determine whether break-through of the carbon filter was occurring. The samples were collected from the office space over an approximately 1-hour period using a 6-liter batch-certified summa canister. Upon arrival at the Site for the May 6, 2020 sampling event, Patriot noted that the tenant had set the variable airflow controller at approximately 30% of the maximum airflow. The tenant was reinstructed that the airflow controller needed to be set at maximum volume for proper system operation. The C600 mitigation system was operating at maximum volume at the time of the May 27, 2020 sampling event. The analytical results revealed that the TCE concentration in the indoor air sample collected on May 6, 2020, when the system was operating at approximately 30% volume, exceeded the RCG Commercial/Industrial IASL and the TCE concentration in the indoor air sample collected on May 27, 2020, when the system was operating at maximum volume, was below the RCG Commercial/Industrial IASL. The May 6 and May 27, 2020 monthly performance sampling results were submitted to IDEM in a report dated June 24, 2020 and the analytical are included in the table below.

# MONTHLY PERFORMANCE AIR SAMPLING

*Patriot* conducted performance air sampling events during the months of June and July 2020 to document the performance of the C600 mitigation system and determine whether break-through of the carbon filter was occurring. The samples were collected from the office space over an approximately 1-hour period during the work day using a 6-liter batch-certified summa canister in a similar manner to previous sampling events. The analytical results for the June and July monthly sampling events and for the previously conducted May 2020 sampling events are summarized in the table below.

			Analyti	cal Results	s (ug/m³)	
Sample ID	Date	PCE	TCE	c-DCE	t-DCE	VC
Office 1 Month (April)	5/6/2020	4.9	33.1	ND	ND	ND
May Monthly Sample Office	5/27/2020	ND	2.5	ND	ND	ND
June Monthly Sample Office	6/8/2020	ND	2.4	ND	ND	ND
July Monthly Sample Office	7/15/2020	ND	7.0	ND	ND	ND
IDEM RCG Commercial	IASLs	180	8.8	NE	NE	28

Notes:

ND = Below Laboratory Reporting Limit

ug/m<sup>3</sup> = micrograms per meter cubed

NE = RCG Screening Level not established

10.5 = Constituent detected above IDEM RCG Commercial IASLs

As shown in the table, TCE was detected at concentrations below the RCG Commercial/Industrial IASL during the June and July monthly sampling events. No other VOCs were reported in the samples collected during the June and July 2020 monthly

sampling events. The laboratory analytical reports for the June and July sampling events are included in Attachment B.

Upon arrival at the Site for the May 27, June 8, and July 15, 2020 sampling events, *Patriot* noted that the variable airflow controller was set at the maximum airflow and the analytical results of the these sampling events showed that the mitigation goal had been met. Therefore, it appears that the C600 air purifier is successfully mitigating the indoor air in the office portion of the building when it is properly operated at or near maximum airflow.

# CARBON REPLACMENT AND ONGOING PERFORMANCE MONITORING

*Patriot* replaced the carbon filter in the C600 air purifier immediately following collection of the July monthly air sample. The analytical data indicates that the carbon filter will successfully mitigate the indoor air in the office portion of the building for at least two to three months of continuous operation. The carbon filter will be replaced again in October 2020 unless future analytical data indicate that breakthrough has or may occur and the carbon filter should be replaced sooner.

Monthly indoor air performance air sampling will be conducted in September and October 2020 (two and three months after carbon filter replacement) to confirm that the system is successfully mitigating the air in the office area and to determine the appropriate carbon filter replacement schedule. At the request of IDEM, the indoor air office space samples will be collected over an approximately 8-hour period when the building is occupied. An additional 8-hour indoor air sample will be collected simultaneously in the warehouse portion of the building to document that the exhaust fan installed in the building continues to reduce VOCs in the warehouse area breathing air to concentrations below the RCG Commercial/Industrial IASLs. The analytical results from the September sampling will be submitted to IDEM upon receipt and a status report documenting the September and October sampling events will be submitted to IDEM following receipt of the October sampling event laboratory data.

The C600 air purifier and the warehouse area exhaust fan are intended to be interim measures to prevent personnel exposure until a permanent mitigation system can be installed or the source of the indoor air impacts is identified and remediated. Patriot has submitted a Work Plan for Further Site Investigation #4 to IDEM for review and approval. The Work Plan includes soil and groundwater sampling and analysis beneath the floor of Crossroads Recycling building and in the area immediately surrounding the building. The results of this investigation will be utilized to develop a plan for remediation of the soil or groundwater impacts causing the indoor air impacts or a permanent long-term mitigation system for the indoor air impacts.

Please do not hesitate to contact us if you have any questions regarding this report of if you need any additional information.

Very truly yours,

Patriot Engineering and Environmental, Inc.

Cares & Coby

James J. Cody Project Engineer Environmental Group

Michael & Carpen

Michael F. Casper, LPG Principal Chief Environmental Consultant

Attachments

cc: Greg Cafouros, Kroger Gardis & Regas, LLP

# Attachment A

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Site Map



# Attachment B

Laboratory Reports



Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

May 14, 2020

James Cody Patriot Engineering 6330 East 75th. St. Indianapolis, IN 46250

RE: Project: 20-0317-01E Crossroads Recycli Pace Project No.: 10517364

Dear James Cody:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne That

Carolynne Trout carolynne.trout@pacelabs.com 1(612)607-6351 Project Manager

Enclosures

cc: Mike Casper, Patriot Engineering





Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

# CERTIFICATIONS

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

### Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01 Alabama Certification #: 40770 Alaska Contaminated Sites Certification #: 17-009 Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137 Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064 Hawaii Certification #: MN00064 Idaho Certification #: MN00064 Illinois Certification #: 200011 Indiana Certification #: C-MN-01 Iowa Certification #: 368 Kansas Certification #: E-10167 Kentucky DW Certification #: 90062 Kentucky WW Certification #: 90062 Louisiana DEQ Certification #: 03086 Louisiana DW Certification #: MN00064 Maine Certification #: MN00064 Marvland Certification #: 322 Massachusetts Certification #: M-MN064 Massachusetts DWP Certification #: via MN 027-053-137 Michigan Certification #: 9909 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certifcation #: via MN 027-053-137 Minnesota Petrofund Certification #: 1240 Mississippi Certification #: MN00064 Missouri Certification #: 10100 Montana Certification #: CERT0092 Nebraska Certification #: NE-OS-18-06 Nevada Certification #: MN00064 New Hampshire Certification #: 2081 New Jersey Certification #: MN002 New York Certification #: 11647 North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Primary Certification #: MN300001 Oregon Secondary Certification #: MN200001 Pennsylvania Certification #: 68-00563 Puerto Rico Certification #: MN00064 South Carolina Certification #:74003001 Tennessee Certification #: TN02818 Texas Certification #: T104704192 Utah Certification #: MN00064 Vermont Certification #: VT-027053137 Virginia Certification #: 460163 Washington Certification #: C486 West Virginia DEP Certification #: 382 West Virginia DW Certification #: 9952 C Wisconsin Certification #: 999407970 Wyoming UST Certification #: via A2LA 2926.01



# SAMPLE SUMMARY

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10517364001	Office - 1 Month	Air	05/06/20 12:00	05/08/20 11:30
10517364002	Office - 1 Month Cert#0801	Air	05/06/20 12:00	05/08/20 11:30



# SAMPLE ANALYTE COUNT

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10517364001	Office - 1 Month	TO-15	MJL	5
10517364002	Office - 1 Month Cert#0801	TO-15	MJL	61

PASI-M = Pace Analytical Services - Minneapolis



# **PROJECT NARRATIVE**

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

Method:TO-15Description:TO15 MSV AIRClient:Patriot Engineering-INDate:May 14, 2020

### **General Information:**

1 sample was analyzed for TO-15 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

### Additional Comments:



# **PROJECT NARRATIVE**

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

Method:TO-15Description:Individual Can CertificationClient:Patriot Engineering-INDate:May 14, 2020

### **General Information:**

1 sample was analyzed for TO-15 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank: All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



# ANALYTICAL RESULTS

# Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

Sample: Office - 1 Month	Lab ID:	10517364001	Collected	: 05/06/20	) 12:00	Received: 05	5/08/20 11:30 Ma	atrix: Air	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical	Method: TO-15	5						
	Pace Ana	lytical Services	- Minneapoli	S					
cis-1,2-Dichloroethene	ND	ug/m3	1.3	0.19	1.61		05/12/20 17:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	0.27	1.61		05/12/20 17:51	156-60-5	
Tetrachloroethene	4.9	ug/m3	1.1	0.43	1.61		05/12/20 17:51	127-18-4	
Trichloroethene	33.1	ug/m3	0.88	0.36	1.61		05/12/20 17:51	79-01-6	
Vinyl chloride	ND	ug/m3	0.42	0.15	1.61		05/12/20 17:51	75-01-4	
Sample: Office - 1 Month Cert#0801	Lab ID:	10517364002	Collected	: 05/06/20	) 12:00	Received: 05	5/08/20 11:30 Ma	atrix: Air	
•			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical	Method: TO-15							
	Pace Ana	lytical Services	- Minneapoli	s					
Acetone	ND	ug/m3	3.0	0.64	0.5		04/29/20 02:38	67-64-1	
Benzene	ND	ug/m3	0.16	0.065	0.5		04/29/20 02:38	71-43-2	
Benzyl chloride	ND	ug/m3	1.3	0.24	0.5		04/29/20 02:38	100-44-7	
Bromodichloromethane	ND	ug/m3	0.68	0.088	0.5		04/29/20 02:38	75-27-4	
Bromoform	ND	ug/m3	2.6	0.90	0.5		04/29/20 02:38	75-25-2	
Bromomethane	ND	ug/m3	0.39	0.073	0.5		04/29/20 02:38	74-83-9	
1,3-Butadiene	ND	ug/m3	0.22	0.052	0.5		04/29/20 02:38	106-99-0	
2-Butanone (MEK)	ND	ug/m3	1.5	0.28	0.5		04/29/20 02:38	78-93-3	
Carbon disulfide	ND	ug/m3	0.32	0.054	0.5		04/29/20 02:38	75-15-0	
Carbon tetrachloride	ND	ug/m3	0.64	0.13	0.5		04/29/20 02:38	56-23-5	
Chlorobenzene	ND	ug/m3	0.47	0.066	0.5		04/29/20 02:38	108-90-7	
Chloroethane	ND	ug/m3	0.27	0.063	0.5		04/29/20 02:38	75-00-3	
Chloroform	ND	ug/m3	0.25	0.066	0.5		04/29/20 02:38	67-66-3	
Chloromethane	ND	ug/m3	0.21	0.033	0.5		04/29/20 02:38	74-87-3	
Cyclohexane	ND	ug/m3	0.88	0.073	0.5		04/29/20 02:38	110-82-7	
Dibromochloromethane	ND	ug/m3	0.86	0.20	0.5		04/29/20 02:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	0.39	0.14	0.5		04/29/20 02:38	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	0.61	0.16	0.5		04/29/20 02:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	0.61	0.24	0.5		04/29/20 02:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.5	0.37	0.5		04/29/20 02:38	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	0.50	0.084	0.5		04/29/20 02:38	75-71-8	
1,1-Dichloroethane	ND	ug/m3	0.41	0.056	0.5		04/29/20 02:38	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.21	0.084	0.5		04/29/20 02:38	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.40	0.060	0.5		04/29/20 02:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.40	0.058	0.5		04/29/20 02:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.40	0.084	0.5		04/29/20 02:38	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.47	0.10	0.5		04/29/20 02:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.46	0.19	0.5		04/29/20 02:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.46	0.13	0.5		04/29/20 02:38	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	0.71	0.079	0.5		04/29/20 02:38	76-14-2	
Ethanol	ND	ug/m3	0.96	0.47	0.5		04/29/20 02:38	64-17-5	



# ANALYTICAL RESULTS

# Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

Sample: Office - 1 Month Cert#0801	Lab ID:	10517364002	Collecte	d: 05/06/20	0 12:00	Received: 05/	/08/20 11:30 Ma	atrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Cortification	Analytical	Method: TO-15		·		·			
			Minnoono	lie					
	Pace Ana	invitcal Services	- winneapo	015					
Ethyl acetate	ND	ug/m3	0.37	0.092	0.5		04/29/20 02:38	141-78-6	
Ethylbenzene	ND	ug/m3	0.44	0.069	0.5		04/29/20 02:38	100-41-4	
4-Ethyltoluene	ND	ug/m3	1.2	0.21	0.5		04/29/20 02:38	622-96-8	
n-Heptane	ND	ug/m3	0.42	0.098	0.5		04/29/20 02:38	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.7	0.62	0.5		04/29/20 02:38	87-68-3	
n-Hexane	ND	ug/m3	0.36	0.10	0.5		04/29/20 02:38	110-54-3	
2-Hexanone	ND	ug/m3	2.1	0.17	0.5		04/29/20 02:38	591-78-6	
Methylene Chloride	ND	ug/m3	1.8	0.46	0.5		04/29/20 02:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.1	0.088	0.5		04/29/20 02:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.8	0.050	0.5		04/29/20 02:38	1634-04-4	
Naphthalene	ND	ug/m3	1.3	0.64	0.5		04/29/20 02:38	91-20-3	
2-Propanol	ND	ug/m3	1.2	0.19	0.5		04/29/20 02:38	67-63-0	
Propylene	ND	ug/m3	0.18	0.049	0.5		04/29/20 02:38	115-07-1	
Styrene	ND	ug/m3	0.43	0.21	0.5		04/29/20 02:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	0.35	0.15	0.5		04/29/20 02:38	79-34-5	
Tetrachloroethene	ND	ug/m3	0.34	0.13	0.5		04/29/20 02:38	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.30	0.092	0.5		04/29/20 02:38	109-99-9	
Toluene	ND	ug/m3	0.38	0.086	0.5		04/29/20 02:38	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	3.8	1.7	0.5		04/29/20 02:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	0.56	0.076	0.5		04/29/20 02:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.28	0.099	0.5		04/29/20 02:38	79-00-5	
Trichloroethene	ND	ug/m3	0.27	0.11	0.5		04/29/20 02:38	79-01-6	
Trichlorofluoromethane	ND	ug/m3	0.57	0.12	0.5		04/29/20 02:38	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	0.78	0.13	0.5		04/29/20 02:38	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	0.50	0.16	0.5		04/29/20 02:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.50	0.12	0.5		04/29/20 02:38	108-67-8	
Vinyl acetate	ND	ug/m3	0.36	0.088	0.5		04/29/20 02:38	108-05-4	
Vinyl chloride	ND	ug/m3	0.13	0.048	0.5		04/29/20 02:38	75-01-4	
m&p-Xylene	ND	ug/m3	0.88	0.17	0.5		04/29/20 02:38	179601-23-1	
o-Xylene	ND	ug/m3	0.44	0.074	0.5		04/29/20 02:38	95-47-6	

# **REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



# **QUALITY CONTROL DATA**

QC Batch: 674803 QC Batch Method: TO-15 Associated Lab Samples: 105173	64001	Analysis M Analysis De Laboratory	ethod: escription: :	TO-15 TO15 MS Pace Anal	/ AIR Lo ytical Se	w Level rvices - Mir	neapo	lis
METHOD BLANK: 3612978		Matri	c Air					
Associated Lab Samples: 105173	64001	Math	. <i>7</i> m					
	04001	Blank	Penartin	a				
Parameter	Units	Result	Limit	9 Mi	DL	Analvz	zed	Qualifiers
cis-1 2-Dichloroethene					0.12	05/12/20	08.18	
Tetrachloroethene	ug/m3			1 69	0.12	05/12/20	08.10	
trans-1 2-Dichloroethene	ug/m3			) 81	0.27	05/12/20	08.18	
Trichloroethene	ug/m3			) 55	0.17	05/12/20	08.18	
Vinyl chloride	ug/m3	NE	) (	).26	0.096	05/12/20	08:18	
LABORATORY CONTROL SAMPLE	: 3612979							
		Spike	LCS	LCS	ç	% Rec		
Parameter	Units	Conc.	Result	% Rec		Limits	Qua	alifiers
cis-1,2-Dichloroethene	ug/m3	41.6	45.4	1	09	70-132		—
Tetrachloroethene	ug/m3	71	71.8	1	01	70-136		
trans-1,2-Dichloroethene	ug/m3	42.2	46.4	1	10	70-132		
Trichloroethene	ug/m3	56.3	62.6	1	11	70-132		
Vinyl chloride	ug/m3	26.7	30.2	1	13	68-141		
SAMPLE DUPLICATE: 3613319								
		10517364001	Dup			Max		
Parameter	Units	Result	Result	RF	יD	RPD		Qualifiers
cis-1,2-Dichloroethene	ug/m3	NE	) .	61J			25	
Tetrachloroethene	ug/m3	4.9	)	4.9	0		25	
trans-1,2-Dichloroethene	ug/m3	NE	)	ND			25	
Trichloroethene	ug/m3	33.1	1 3	34.2	3		25	
Vinyl chloride	ug/m3	NE	)	ND			25	
SAMPLE DUPLICATE: 3613320								
Parameter	Units	10517246002 Result	Dup Result	RF	PD	Max RPD		Qualifiers
cis-1,2-Dichloroethene	ug/m3	NE	)	ND			25	
Tetrachloroethene	ug/m3	NE	)	ND			25	
trans-1,2-Dichloroethene	ug/m3	NE	)	ND			25	
Trichloroethene	ug/m3	NE	) (	9.2J			25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

# REPORT OF LABORATORY ANALYSIS

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# QUALIFIERS

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10517364

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

**RPD - Relative Percent Difference** 

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:20-0317-01E Crossroads RecycliPace Project No.:10517364

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10517364001	Office - 1 Month	TO-15	674803		
10517364002	Office - 1 Month Cert#0801	TO-15	674528		

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1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

FC046Rev.01, 03Feb2010

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Air Sample Condition ( Upon Receipt	Client Name: PATRUT	- ENG	INEERIN	Proje		<u>#:105</u>	1736	<b>4</b> 05/15/20	 
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Sampler Name and/or Sign			<u>/20</u>						<b></b>
Short Hold Time Analysis	10 Time?		<u>k</u>		5.		-, .		
Rush Turn Around Time R	equested?			Yes Zino	7.				
Sufficient Volume?			<u> </u>	Yes 🗍 No	8.			,	
Correct Containers Used? (Tedlar bags not accep	table containe	r for TO-1	.4,		a				
-Pace Containers Used? Containers Intact?			Ž	Yes 🔲 No			•		
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Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

June 04, 2020

James Cody Patriot Engineering 6330 East 75th. St. Indianapolis, IN 46250

RE: Project: 20-0317-01E CROSSROADS RECYCLI Pace Project No.: 10519823

Dear James Cody:

Enclosed are the analytical results for sample(s) received by the laboratory on June 01, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne That

Carolynne Trout carolynne.trout@pacelabs.com 1(612)607-6351 Project Manager

Enclosures

cc: Mike Casper, Patriot Engineering





Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

# CERTIFICATIONS

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

### Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01 Alabama Certification #: 40770 Alaska Contaminated Sites Certification #: 17-009 Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137 Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064 Hawaii Certification #: MN00064 Idaho Certification #: MN00064 Illinois Certification #: 200011 Indiana Certification #: C-MN-01 Iowa Certification #: 368 Kansas Certification #: E-10167 Kentucky DW Certification #: 90062 Kentucky WW Certification #: 90062 Louisiana DEQ Certification #: 03086 Louisiana DW Certification #: MN00064 Maine Certification #: MN00064 Marvland Certification #: 322 Massachusetts Certification #: M-MN064 Massachusetts DWP Certification #: via MN 027-053-137 Michigan Certification #: 9909 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certifcation #: via MN 027-053-137 Minnesota Petrofund Certification #: 1240 Mississippi Certification #: MN00064 Missouri Certification #: 10100 Montana Certification #: CERT0092 Nebraska Certification #: NE-OS-18-06 Nevada Certification #: MN00064 New Hampshire Certification #: 2081 New Jersey Certification #: MN002 New York Certification #: 11647 North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Primary Certification #: MN300001 Oregon Secondary Certification #: MN200001 Pennsylvania Certification #: 68-00563 Puerto Rico Certification #: MN00064 South Carolina Certification #:74003001 Tennessee Certification #: TN02818 Texas Certification #: T104704192 Utah Certification #: MN00064 Vermont Certification #: VT-027053137 Virginia Certification #: 460163 Washington Certification #: C486 West Virginia DEP Certification #: 382 West Virginia DW Certification #: 9952 C Wisconsin Certification #: 999407970 Wyoming UST Certification #: via A2LA 2926.01



# SAMPLE SUMMARY

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10519823001	MAY MONTHLY SAMPLE OFFICE	Air	05/27/20 13:57	06/01/20 12:00
10519823002	MAY MONTHLY SAMPLE OFFICE CERT	Air	05/27/20 13:57	06/01/20 12:00



# SAMPLE ANALYTE COUNT

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10519823001	MAY MONTHLY SAMPLE OFFICE	TO-15	MG2	5
10519823002	MAY MONTHLY SAMPLE OFFICE CERT	TO-15	MG2	5

PASI-M = Pace Analytical Services - Minneapolis



# **PROJECT NARRATIVE**

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

Method:TO-15Description:TO15 MSV AIRClient:Patriot Engineering-INDate:June 04, 2020

### General Information:

1 sample was analyzed for TO-15 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

### Additional Comments:



# **PROJECT NARRATIVE**

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

Method:TO-15Description:Individual Can CertificationClient:Patriot Engineering-INDate:June 04, 2020

### **General Information:**

1 sample was analyzed for TO-15 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank: All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



# ANALYTICAL RESULTS

# Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

Sample: MAY MONTHLY SAMPLE OFFICE	Lab ID:	10519823001	Collecte	d: 05/27/2	0 13:57	Received: 06	/01/20 12:00 M	atrix: Air	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytica	I Method: TO-15	5						
	Pace Ana	alytical Services	- Minneapo	olis					
cis-1,2-Dichloroethene	ND	ug/m3	1.3	0.19	1.64		06/02/20 18:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	0.27	1.64		06/02/20 18:56	156-60-5	
Tetrachloroethene	ND	ug/m3	1.1	0.44	1.64		06/02/20 18:56	127-18-4	
Trichloroethene	2.5	ug/m3	0.90	0.36	1.64		06/02/20 18:56	79-01-6	
Vinyl chloride	ND	ug/m3	0.43	0.16	1.64		06/02/20 18:56	75-01-4	
Sample: MAY MONTHLY SAMPLE OFFICE CERT	Lab ID:	10519823002	Collecte	d: 05/27/2	0 13:57	Received: 06	/01/20 12:00 M	atrix: Air	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytica	I Method: TO-15	5						
	Pace Ana	alytical Services	- Minneapo	olis					
cis-1,2-Dichloroethene	ND	ug/m3	0.40	0.058	0.5		05/18/20 13:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.40	0.084	0.5		05/18/20 13:50	156-60-5	
Tetrachloroethene	ND	ug/m3	0.34	0.13	0.5		05/18/20 13:50	127-18-4	
Trichloroethene	ND	ug/m3	0.27	0.11	0.5		05/18/20 13:50	79-01-6	
Vinyl chloride	ND	ug/m3	0.13	0.048	0.5		05/18/20 13:50	75-01-4	



# **QUALITY CONTROL DATA**

QC Batch: 678662		Analysis M	ethod:	TO-1	5			
QC Batch Method: TO-15		Analysis De	escription:	TO1	5 MSV AIR Lo	w Level		
		Laboratory		Pace	Analytical S	ervices - Min	neapo	lis
Associated Lab Samples: 10519823	001							
METHOD BLANK: 3631812		Matrix	c: Air					
Associated Lab Samples: 10519823	001							
		Blank	Reporting	g				
Parameter	Units	Result	Limit		MDL	Analyz	ed	Qualifier
cis-1,2-Dichloroethene	ug/m3	ND	) (	0.40	0.058	06/02/20	08:37	
Tetrachloroethene	ug/m3	ND	) (	).34	0.13	06/02/20	08:37	
trans-1,2-Dichloroethene	ug/m3	ND	) (	0.40	0.084	06/02/20	08:37	
Trichloroethene	ug/m3	NC	) (	).27	0.11	06/02/20	08:37	
Vinyl chloride	ug/m3	ND	) (	).13	0.048	06/02/20	08:37	
LABORATORY CONTROL SAMPLE:	3631813							
		Spike	LCS	LC	CS	% Rec		
Parameter	Units	Conc.	Result	% I	Rec	Limits	Qua	alifiers
cis-1,2-Dichloroethene	ug/m3	41.6	44.8		108	70-132		
Tetrachloroethene	ug/m3	71	68.3		96	70-136		
trans-1,2-Dichloroethene	ug/m3	42.2	44.8		106	70-132		
Trichloroethene	ug/m3	56.3	59.9		106	70-132		
Vinyl chloride	ug/m3	26.7	28.7		107	68-141		
SAMPLE DUPLICATE: 3632987								
		10519726049	Dup			Max		
Parameter	Units	Result	Result		RPD	RPD		Qualifiers
cis-1,2-Dichloroethene	ua/m3		2	ND			25	
Tetrachloroethene	ug/m3	<1.1		ND			25	
trans-1,2-Dichloroethene	ug/m3	<1.2	2	ND			25	
Trichloroethene	ug/m3	<0.85	5	ND			25	
Vinyl chloride	ug/m3	<0.40	)	ND			25	
SAMPLE DUPLICATE: 3632988								
		10519726047	Dup			Max		
Parameter	Units	Result	Result		RPD	RPD		Qualifiers
cis-1,2-Dichloroethene	ug/m3	<1.2	2	ND			25	
Tetrachloroethene	ug/m3	<1.1		ND			25	
trans-1,2-Dichloroethene	ug/m3	<1.2	2	ND			25	
Trichloroethene	ug/m3	<0.85	5	ND			25	
Vinul ablarida	ug/m2	-0.40	)				25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

# **REPORT OF LABORATORY ANALYSIS**

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# QUALIFIERS

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10519823

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:20-0317-01E CROSSROADS RECYCLIPace Project No.:10519823

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10519823001	MAY MONTHLY SAMPLE OFFICE	TO-15	678662		
10519823002	MAY MONTHLY SAMPLE OFFICE CERT	TO-15	678665		

$\langle$		
2		
Face Analytical		
www.pacelabs.com		
Section A	Section B	Section
	Required Project Information:	Invoice In

# AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

ar of the state to be a state to be a series of the state		TUST Superfund TEmissions Clean Air Act	T_Voluntary Clean Up T_Dry Clean T_RCRA_T_Other	Location of Reporting Units	caring by state to cher physe	Report Level III III V. Other	Method: // // // // // // // // // // // // //		22 12 12 12 12 12 12 12 12 12 12 12 12 1	G X X Pace Lab ID										N UATE LINE SAMPLE CONDITIONS	e 6/20 1 600 ≤ ≤ ≤
n en alle anno 1997 a chuir an an an ann an Anna an Ann	and some strong that the state of the second s				-10 C -1		Flow Summa	Can Control Number Number		53317131											1/1/1/1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1
Section C	Attention: Attention:	Company Manue.	Pade Quote Reference	Pace Project Manager/Sales Rep.	Pace Profile #: So of Solar Solar Solar So		COLLECTED	COMPOSITE	TIME Can Control Contr	Na: 535 artao 13:57 -30 -									FILIATION DATE TIME	Moint Charles Reserved	(1/0) RITERS
Section B Required Project Information:	Report To: SAMES CON	MIKE CASPER	Purchase Order No.:	CRUSSRADOS DECARINAL	Project Number. 20-5517-016	alid Media Codes	defaction code ediar Bag TB Lifer Summa Can TC Ulter Summa Can ELC	av Volume Putr LVP DB all Volume Putr HVP DD adding the the PM10 A C CoMPOSITESTA	DATE	Other 4c 5/87/8									RELINQUISHED BY / AF	Sampe Constant	/ Juniez and / ILL
Section A Required Client Information:	COMPANY REION ENCINERAINE	0 54 3 2 10	Email To: Norver Charles IN	Phone: Fax: Rotar wtory. Cary	Requested Due Date/TAT: S MY	Section D Required Client Information		4 WE		1 MAY MONTHLY SAMPLE	3	4 - 14 1.12 - 11 1.1 1. 11 - 11 - 12 - 1	5		8	5 C 7	11 Section Section 1	12	omments: 5 RAJ TURN		X Or Color and and

WO# : 10519823

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Samples Intact

Custody Sealed Cooler

Received on

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DATE Signed (MM/DD/20 27 30

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SAMPLER NAME AND SIGNATURE

RINT Name of SAMPLER: GNATURE of SAMPLER:

cal Phone: 612.607.6386

Page 11 of 12

1700 .

TUC ONLY \*

Program Ample time!	Document Name: Air Sample Condition Upon	Receipt	Document Revised: 19Nov2019 Page 1 of 1									
	Document No.: F-MN-A-106-rev.20	17	Pace Analytical S Minneapo	Services - I <b>lis</b>								
Air Sample Condition Upon Receipt	Project #:	WO# : 10	51982	3								
Courier: Fed Ex UPS Pace SpeeDee Tracking Number: 1723 2542 71	USPS Client Commercial See Exception	PM: CT1 CLIENT: PATRI	Due Date: OT	06/08/20								
Custody Seal on Cooler/Box Present?	Seals Intact? Yes	∭No			./							
Packing Material: Bubble Wrap Bubble Bags	Foam None Tin C	an Other:	Temp I	Blank rec: [	Yes 🕅 No							
Temp. (TO17 and TO13 samples only) (°C): Corrector	ed Temp (°C):	Therr	nometer Used:	G87A91706	500254 100842							
Type of ice Received Blue Wet Mone	Date	e contrais of Person exam	nining contents: 0	100 11								
			Comments:									
Chain of Custody Present?	Yes No	1.										
Chain of Custody Filled Out?	Yes No	2.	ويوج ومعروف والمحرفين والمرا									
Chain of Custody Relinquished?		3.										
Sampler Name and/or Signature on COC?		4.										
Short Hold Time Analysis (<72 hr)?		6. S Day										
Rush Turn Around Time Requested?	Yes XNo	7.										
Sufficient Volume?	Yes No	8.										
(Tedlar bags not acceptable container for TO-14				( <u>@</u> .:								
TO-15 or APH)	🖄 🖾 No	9.	2									
-Pace Containers Used?	Yes No											
Containers Intact?		1.839										
(Visual inspection no leaks when pressurized) Media: Air Can Airbag Filter TDT	Zeres No Passive	10.		ble	OM							
Is sufficient information available to reconcile camples to	105000	11. Individually	Certified Cangery	(list which	ch samples)							
the COC?	XYes □No	12.										
Do cans need to be pressurized?				- 1982 -								
(DO NOT PRESSURIZE 3C or ASTM 1946!!!)	Xİ¥es □No	13.	2 141 - 5									
Gauge # 🔲 10Al	R26 10AIR34 110	AIR35 4097		1 a 1/a 1/a								
Canisters		÷	Canisters									
Flow Init	ial Final		Flow	Initial	Final							
Sample Number Can ID Controller Press	ure Pressure Sam	ole Number Can	ID Controller	Pressure	Pressure							
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		2022-0										
					~							
CLIENT NOTIFICATION/RESOLUTION		Field	Data Required?	Yes No								
Person Contacted:	Date/	Time:										
Comments/Resolution: 😽	2											
Project Manager Review:	ling	Date: 06/01	1/20	Page	e 12 of 12							

and the second s



Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

June 25, 2020

James Cody Patriot Engineering 6330 East 75th. St. Indianapolis, IN 46250

RE: Project: 20-0317-01E CROSSROADS RECYCLI Pace Project No.: 10522391

Dear James Cody:

Enclosed are the analytical results for sample(s) received by the laboratory on June 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne That

Carolynne Trout carolynne.trout@pacelabs.com 1(612)607-6351 Project Manager

Enclosures

cc: Mike Casper, Patriot Engineering





Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

# CERTIFICATIONS

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10522391

### Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01 Alabama Certification #: 40770 Alaska Contaminated Sites Certification #: 17-009 Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137 Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064 Hawaii Certification #: MN00064 Idaho Certification #: MN00064 Illinois Certification #: 200011 Indiana Certification #: C-MN-01 Iowa Certification #: 368 Kansas Certification #: E-10167 Kentucky DW Certification #: 90062 Kentucky WW Certification #: 90062 Louisiana DEQ Certification #: 03086 Louisiana DW Certification #: MN00064 Maine Certification #: MN00064 Marvland Certification #: 322 Massachusetts DWP Certification #: via MN 027-053-137 Michigan Certification #: 9909 Minnesota Certification #: 027-053-137 Minnesota Dept of Ag Certification #: via MN 027-053-137 Minnesota Petrofund Certification #: 1240 Mississippi Certification #: MN00064 Missouri Certification #: 10100 Montana Certification #: CERT0092 Nebraska Certification #: NE-OS-18-06 Nevada Certification #: MN00064 New Hampshire Certification #: 2081 New Jersey Certification #: MN002 New York Certification #: 11647 North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Primary Certification #: MN300001 Oregon Secondary Certification #: MN200001 Pennsylvania Certification #: 68-00563 Puerto Rico Certification #: MN00064 South Carolina Certification #:74003001 Tennessee Certification #: TN02818 Texas Certification #: T104704192 Utah Certification #: MN00064 Vermont Certification #: VT-027053137 Virginia Certification #: 460163 Washington Certification #: C486 West Virginia DEP Certification #: 382 West Virginia DW Certification #: 9952 C Wisconsin Certification #: 999407970 Wyoming UST Certification #: via A2LA 2926.01



# SAMPLE SUMMARY

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10522391

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10522391001	IA-1 1HR SAMPLE	Air	06/18/20 11:11	06/22/20 10:00
10522391002	JUNE MONTHLY SAMPLE OFFICE	Air	06/18/20 11:11	06/22/20 10:00



# SAMPLE ANALYTE COUNT

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10522391

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10522391001	IA-1 1HR SAMPLE	TO-15	MJL	5
10522391002	JUNE MONTHLY SAMPLE OFFICE	TO-15	MJL	5

PASI-M = Pace Analytical Services - Minneapolis



# **PROJECT NARRATIVE**

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10522391

Method:TO-15Description:TO15 MSV AIRClient:Patriot Engineering-INDate:June 25, 2020

### **General Information:**

2 samples were analyzed for TO-15 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



# ANALYTICAL RESULTS

# Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10522391

Sample: IA-1 1HR SAMPLE	Lab ID:	10522391001	Collecte	d: 06/18/2	0 11:11	Received: 06	/22/20 10:00 M	atrix: Air	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical	Method: TO-15	5						
	Pace Ana	lytical Services	- Minneapo	lis					
cis-1,2-Dichloroethene	ND	ug/m3	1.3	0.19	1.61		06/23/20 18:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	0.27	1.61		06/23/20 18:49	156-60-5	
Tetrachloroethene	ND	ug/m3	1.1	0.43	1.61		06/23/20 18:49	127-18-4	
Trichloroethene	1.1	ug/m3	0.88	0.36	1.61		06/23/20 18:49	79-01-6	
Vinyl chloride	ND	ug/m3	0.42	0.15	1.61		06/23/20 18:49	75-01-4	
Sample: JUNE MONTHLY SAMPLE OFFICE	Lab ID:	10522391002	Collecte	d: 06/18/2	0 11:11	Received: 06	/22/20 10:00 M	atrix: Air	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical	Method: TO-15	5						
	Pace Ana	lytical Services	- Minneapo	lis					
cis-1,2-Dichloroethene	ND	ug/m3	1.2	0.18	1.52		06/23/20 19:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	0.25	1.52		06/23/20 19:18	156-60-5	
Tetrachloroethene	ND	ug/m3	1.0	0.41	1.52		06/23/20 19:18	127-18-4	
Trichloroethene	2.4	ug/m3	0.83	0.34	1.52		06/23/20 19:18	79-01-6	
Vinyl chloride	ND	ug/m3	0.40	0.15	1.52		06/23/20 19:18	75-01-4	



# **QUALITY CONTROL DATA**

Project:         20-0317-01E           Pace Project No.:         10522391	CROSSROADS RECYC	LI					
QC Batch: 682807		Analysis Me	ethod:	TO-15			
QC Batch Method: TO-15		Analysis De	scription:	TO15 MSV AIF	Rlowlevel		
		Laboratory:			al Services - Mir	neanoli	e
Associated Lab Samples: 1052	22391001, 10522391002	Laboratory.				ineapoil	3
METHOD BLANK: 3653622		Matrix	: Air				
Associated Lab Samples: 1052	22391001, 10522391002						
1		Blank	Reporting				
Parameter	Units	Result	Limit	MDL	Analyz	zed	Qualifiers
cis-1 2-Dichloroethene			0	40 0	058 06/23/20	11.02	
Tetrachloroethene	ug/m3		ο 1 Ο.	-+0 0.1 34 r	000 00/20/20 13 06/23/20	11.02 11.02	
trans-1 2-Dichloroethene	ug/m3		0. 1 0.	40 01	084 06/23/20	11.02	
Trichloroethene	ug/m3		0.	27 (	06/23/20	11:02	
Vinvl chloride	ua/m3	ND	0.	.13 0.0	048 06/23/20	11:02	
	<i>ug</i> ,e				0.0 00,20,20		
LABORATORY CONTROL SAMP	PLE: 3653623						
		Spike	LCS	LCS	% Rec	<b>c</b>	
Parameter	Units	Conc.	Result	% Rec	Limits	Qual	itiers
cis-1,2-Dichloroethene	ug/m3	41.8	34.6	83	70-132		
Tetrachloroethene	ug/m3	74.9	53.8	72	70-136		
trans-1,2-Dichloroethene	ug/m3	41.9	33.8	81	70-132		
Trichloroethene	ug/m3	56.7	44.6	79	70-132		
Vinyl chloride	ug/m3	28.5	22.9	80	68-141		
SAMPLE DUPLICATE: 365466	5						
		10522403008	Dup		Max		
Parameter	Units	Result	Result	RPD	RPD		Qualifiers
cis-1 2-Dichloroethene		<0.18				25	
Tetrachloroethene	ug/m3	<0.42				25	
trans-1.2-Dichloroethene	ug/m3	<0.26				25	
Trichloroethene	ug/m3	< 0.34	· .	ND		25	
Vinyl chloride	ug/m3	<0.15	1	ND		25	
	3						
SAME LE DOI LICATE. 3034000	<i>,</i>	10522403009	Dun		Мах		
Parameter	Units	Result	Result	RPD	RPD		Qualifiers
cis-1.2-Dichloroethene		<0.19				25	
Tetrachloroethene	ug/m3	<0.44	. N	ND		25	
trans-1.2-Dichloroethene	ug/m3	<0.27	' '	ND		25	
Trichloroethene	ug/m3	1.7	' í	1.7	3	25	
Vinvl chloride	ua/m3	<0.16		ND	-	25	
	č						

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



# QUALIFIERS

Project: 20-0317-01E CROSSROADS RECYCLI

Pace Project No.: 10522391

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

 Project:
 20-0317-01E CROSSROADS RECYCLI

 Pace Project No.:
 10522391

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10522391001	IA-1 1HR SAMPLE	TO-15	682807		
10522391002	JUNE MONTHLY SAMPLE OFFICE	TO-15	682807		

	1997 1997 1997 1997 1997 1997 1997 1997				Act	her		1				1 00	800											SNO	R.	<b>)</b> //	N/A	NД	es Intact	Idms2	2
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Custody Seal on Coole	r/Box Present?	Yes >	K No	Seals Intact?	Yes	No			- ···	-
Packing Material:	Bubble Wrap	Bubble B		m 🗌 None	Tin (	Can 🗌 Other	·	Temp	Blank rec:	Yes No
Temp. (TO17 and TO13 sa Temp should be above fro Type of ice Received	mples only) (°C): eezing to 6°C Blue 🔲 Wet	Correction Factor	Corrected Ten	np (°C):	 Date	a & Initials of Pe	Thermomerson Examinin	eter Used: g Contents:	G87A9170 G87A9155 G-22-	600254 100842 1
						· · · · · · · · · · · · · · · · · · ·		Comments:		
Chain of Custody Presen	t?	······	<u> </u>	Yes No		1.			·····	
Chain of Custody Reling	uished?		<u>x</u>		· · · ·	2.		•···••		
Sampler Name and/or Si	gnature on COC	?	<u>&gt;</u>	Yes TNo		4		······································		· · · · · · · · · · · · · · · · · · ·
Samples Arrived within H	lold Time?	· · · · · · · · · · · · · · · · · · ·	×	Yes 🗌 No		5.	•			
Short Hold Time Analysi	s (<72 hr)?	1 <sup>3 2 3</sup>	·	Yes XNo		6		·····		
Sufficient Volume?	Requested?	·	L			7.	<u>.</u>	196-al	·	
Correct Containers Used (Tedlar bags not acce TO-15 or APH) -Pace Containers Used	? eptable conta	iner for TO-1	14, X	Yes No Yes No	•	9.		····		
(visual inspection/no	leaks when r	pressurized)	ম	Ves 🗍No		.10			•	
Media: Air Can	Airbag	Filter	TDT	Passive		10. 11. Ind	lividually Certi	fied Cans Y	N (list whi	ch samples)
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Project Manager Review	r: lawlyn	e naut.				Nate.	6100100			



Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

July 21, 2020

James Cody Patriot Engineering 6330 East 75th. St. Indianapolis, IN 46250

RE: Project: 20-0317-01E Crossroads Recycli Pace Project No.: 10525337

Dear James Cody:

Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne That

Carolynne Trout carolynne.trout@pacelabs.com 1(612)607-6351 Project Manager

Enclosures

cc: Mike Casper, Patriot Engineering





Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

# CERTIFICATIONS

Project: 20-0317-01E Crossroads Recycli Pace Project No.: 10525337

### Pace Analytical Services - Minneapolis MN

A2LA Certification #: 2926.01 Alabama Certification #: 40770 Alaska Contaminated Sites Certification #: 17-009 Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137 Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064 Hawaii Certification #: MN00064 Idaho Certification #: MN00064 Illinois Certification #: 200011 Indiana Certification #: C-MN-01 Iowa Certification #: 368 Kansas Certification #: E-10167 Kentucky DW Certification #: 90062 Kentucky WW Certification #: 90062 Louisiana DEQ Certification #: 03086 Louisiana DW Certification #: MN00064 Maine Certification #: MN00064 Marvland Certification #: 322 Massachusetts DWP Certification #: via MN 027-053-137 Michigan Certification #: 9909 Minnesota Certification #: 027-053-137 Minnesota Dept of Ag Certification #: via MN 027-053-137 Minnesota Petrofund Certification #: 1240 Mississippi Certification #: MN00064 Missouri Certification #: 10100 Montana Certification #: CERT0092 Nebraska Certification #: NE-OS-18-06 Nevada Certification #: MN00064 New Hampshire Certification #: 2081 New Jersey Certification #: MN002 New York Certification #: 11647 North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Primary Certification #: MN300001 Oregon Secondary Certification #: MN200001 Pennsylvania Certification #: 68-00563 Puerto Rico Certification #: MN00064 South Carolina Certification #:74003001 Tennessee Certification #: TN02818 Texas Certification #: T104704192 Utah Certification #: MN00064 Vermont Certification #: VT-027053137 Virginia Certification #: 460163 Washington Certification #: C486 West Virginia DEP Certification #: 382 West Virginia DW Certification #: 9952 C Wisconsin Certification #: 999407970 Wyoming UST Certification #: via A2LA 2926.01



# SAMPLE SUMMARY

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10525337

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10525337001	July Monthly Sample Office	Air	07/15/20 11:55	07/17/20 11:00



# SAMPLE ANALYTE COUNT

Project:20-0317-01E Crossroads RecycliPace Project No.:10525337

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10525337001	July Monthly Sample Office	TO-15	MJL	5

PASI-M = Pace Analytical Services - Minneapolis



# **PROJECT NARRATIVE**

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10525337

Method:TO-15Description:TO15 MSV AIRClient:Patriot Engineering-INDate:July 21, 2020

### General Information:

1 sample was analyzed for TO-15 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



# ANALYTICAL RESULTS

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10525337

Sample: July Monthly Sample Office	Lab ID:	10525337001	Collecte	d: 07/15/2	0 11:55	Received: 07	7/17/20 11:00 Ma	atrix: Air	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Pace Ana	l Method: TO-15 Ilytical Services	- Minneapo	olis					
cis-1,2-Dichloroethene	ND	ug/m3	1.3	0.26	1.64		07/19/20 18:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	0.28	1.64		07/19/20 18:20	156-60-5	
Tetrachloroethene	ND	ug/m3	1.1	0.47	1.64		07/19/20 18:20	127-18-4	
Trichloroethene	7.0	ug/m3	0.90	0.29	1.64		07/19/20 18:20	79-01-6	
Vinyl chloride	ND	ug/m3	0.43	0.17	1.64		07/19/20 18:20	75-01-4	



# **QUALITY CONTROL DATA**

QC Batch: 687716		Analysis M	ethod:	TO-1	ГО-15							
QC Batch Method: TO-15		Analysis De	escription:	TO15	MSV AIR I	_ow Level						
		Laboratory	:	Pace	Analytical S	Services - Mir	nneapo	lis				
Associated Lab Samples: 1052533	37001											
METHOD BLANK: 3678276		Matrix	x: Air									
Associated Lab Samples: 1052533	37001											
		Blank	Reporting	I								
Parameter	Units	Result	Limit		MDL	Analyz	zed	Qualifiers				
cis-1,2-Dichloroethene	ug/m3	ND	0 0	.81	0.1	6 07/19/20	10:13					
Tetrachloroethene	ug/m3	NE	0 0	.69	0.2	9 07/19/20	10:13					
trans-1,2-Dichloroethene	ug/m3	NE	0 0	.81	0.1	7 07/19/20	10:13					
Trichloroethene	ug/m3	NE	0 0	.55	0.1	8 07/19/20	10:13					
Vinyl chloride	ug/m3	NE	0 0	.26	0.1	0 07/19/20	10:13					
	3678277											
	0010211	Spike	LCS	LC	S	% Rec						
Parameter	Units	Conc.	Result	% R	lec	Limits	Qua	alifiers				
cis-1,2-Dichloroethene	ug/m3	41.6	48.6		117	70-132						
Tetrachloroethene	ug/m3	71	79.0		111	70-136						
trans-1,2-Dichloroethene	ug/m3	42.2	49.1		116	70-132						
Trichloroethene	ug/m3	56.3	65.3		116	70-132						
Vinyl chloride	ug/m3	26.7	32.4		121	68-141						
SAMPLE DUPLICATE: 3678884												
		10525309001	Dup			Max						
Parameter	Units	Result	Result		RPD	RPD		Qualifiers				
	ug/m3	<0.26	<u> </u>	ND			25					
cis-1,2-Dichloroethene			,	1.2		0	25					
cis-1,2-Dichloroethene Tetrachloroethene	ug/m3	1.2	-				05					
cis-1,2-Dichloroethene Tetrachloroethene trans-1,2-Dichloroethene	ug/m3 ug/m3	1.2 0.36	J	.4J			25					
cis-1,2-Dichloroethene Tetrachloroethene trans-1,2-Dichloroethene Trichloroethene	ug/m3 ug/m3 ug/m3	1.2 0.36 <0.28	- J 3	.4J ND			25 25					

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

# **REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



# QUALIFIERS

Project: 20-0317-01E Crossroads Recycli

Pace Project No.: 10525337

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:20-0317-01E Crossroads RecycliPace Project No.:10525337

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10525337001	July Monthly Sample Office	TO-15	687716		

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FC046Rev.01, 03Feb2010

		Pace Analy	tical°	Sample Co	Document ndition Upor Documer	Name: Receipt	t (SCUR) - Air	Document Revised: 24Mar2020 <b>Page 1 of 1</b> Pace Analytical Services -						
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Air Sample Upon	e Condition Receipt Courier: N	Client Name	Patr Dups	iot	Pro	oject #: +	<u>ШО</u> # РМ: ст:	<u>:105</u>	5253( Due Date	<u>37</u> : 07/24/2	20			
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Custody	Seal on Cooler	/Box Present	? 🗌 Yes	XIN0	Seals Intact?	Ye	s XNo			<u></u>				
Packing M	laterial:	Bubble Wrap	Bubble I	Bags 🏹 Foa	am 🗌 None	· 🗌 Tin	Can 🗌 Other	:	Temp	Blank rec:	Yes 🔊 Yes			
Temp. (TO	17 and TO13 sai	mples only) (°C)		Corrected Te	mp (°C):			Thermom	eter Used:	G87A9170	0600254			
Temp sho	uld be above fre	ezing to 6°C	Correction Fac	tor:	\$19 <u>919111111111</u>	Da	te & Initials of Pe	rson Examinir	g Contents:	R127/	17/20			
Type of ice	e Received 🗌	Blue 🗌 We	t 🖾 None							+ ~ - +	_/			
			1-						Comments:					
Chain of Cu	stody Present?	)		<u>ک</u> ر	Yes 🗌 No		1.							
Chain of Cu	stody Filled Ou	t?		59	Yes 🔲 No		2.				<u> </u>			
Chain of Cu	stody Relinquis	shed?		<u>ل</u> لأ	Yes 🛄 No		3.							
Sampler Na	me and/or Sigr	nature on COC	?	<u>ک</u> ا	Yes 🔲 No	□n/a	4.							
Samples Ar	rived within Ho	ld Time?		 द्र	Yes 🗌 No		5.							
Short Hold	Time Analysis	(<72 hr)?		<u>`</u>	Yes 🚺 No		6.							
Rush Turn /	Around Time R	equested?		<u> </u>	Yes XINo		7.							
Sufficient V	Olume?			<u> </u>	Yes 🔟 No		8.							
(Tedlar ba	ags not accer	otable conta	iner for TO-:	14.			а.							
TO-15 or /	APH)			201 ~ ~ ~	Yes 🗌 No		9.							
-Pace Co	ntainers Used?			<u>j</u> o	Yes 🗌 No									
Containers	Intact?			,										
(visual ins	pection/no l	leaks when p	pressurized)	<u>M</u>	Yes 🗌 No		10.							
Media:	Air Can	Airbag	Filter	TDT	Passive		11. Indiv	idually Certif	ied Cans Y	N (lise which	ch samples)			
Is sufficient. the COC?	information av	ailable to reco	ncile samples	to K	Ves 🗔No		12							
Do cans nee	ed to be pressu	rized?												
(DO NOT	PRESSURIZ	E 3C or AST	'M 1946!!!)	X	Yes 🗌 No		13.							
			Caura # . [					007		- <del></del>				
			Gauge #					097			- 10 <b>- 1</b> 0 - <b>1</b> 0 - <b>1</b> 0			
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Sample	Number	Can iD	Controller	Pressure	Pressure	Sam	ple Number	Can ID	Controller	Pressure	Pressure			
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CLIENT NO	JIFICATION/F	RESOLUTION					<b></b> .	Field Data	a Required?	∐Yes ∐N	lo			
	Person Con	tacted:				Dat	e/Time:							
Co	omments/Reso	olution:		100										
		$\wedge$		1										
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Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

7