15 Roszel Rd, Ste 105, Princeton, NJ 08540 / P 609.318.5500 / **trinityconsultants.com**

SUBMITTED VIA NJDEP ONLINE

September 30, 2022

NJDEP - Air Quality Permitting and Planning
Bureau of Stationary Sources
Preconstruction Permits Section

RE: Patrick J. Kelly Drums, Inc. (PI # 50895)
2109 Howell St, Camden City, NJ 08105
Preconstruction Permit Modification Application

To whom it may concern:

On behalf of Patrick J. Kelly Drums, Inc. (PJKD), Trinity Consultants Inc. (Trinity) hereby submits a preconstruction permit modification application for the existing permit PCP190001 for the facility, located at 2109 Howell St, Camden City, NJ 08105 (PI # 50895).

REASON FOR APPLICATION

The PJKD facility currently operates one (1) drum paint booth permitted under preconstruction permit PCP190001 issued by the New Jersey Department of Environmental Protection (NJDEP). In response to recent ACO associated with TST210001, PJKD is proposing to install a Catalytic Products International TRITON 15.95 regenerative thermal oxidizer (RTO) to reduce VOC emissions by 98%. This preconstruction permit (PCP) modification application also proposes to incorporate its two (2) washing decks (PCP200002) into PCP190001 as the VOC emissions will also be ducted to and controlled by the proposed RTO.

The detailed potential-to-emit calculations and regulatory applicability review are provided in the sections below. The RADIUS application is included in **Attachment 1**.

POTENTIAL EMISSIONS

The air pollutant Potential-to-Emit (PTE) has been recalculated based on the proposed addition of the RTO. Toluene is the only Hazardous Air Pollutants (HAPs) present in the surface coating formulations (and spray gun cleaning) currently used at the facility. The pre-control PTE for toluene is above the reportable threshold (codified under N.J.A.C 7:27 Subchapter 17, Table 2). The drum washing emissions are based on the stack test results controlled by the RTO for each washing stations.

The PTE is summarized in Table 1 below. Detailed PTE calculations are included in **Attachment 2**. The results from the drum washing lines stack test are included in **Attachment 3**.

REGULATORY REVIEW

New Source Performance Standards

The New Source Performance Standards (NSPS) codified in 40 CFR Part 60 require that new, modified or reconstructed sources control emissions to the level achievable by the best-demonstrated technology as specified by the applicable provisions. The facility source operations (surface coating of metal parts and products) are not covered under any of the 40 CFR Part 60 standards. Hence, the facility source operations are not subject to NSPS.

National Emissions Standards for Hazardous Air Pollutants

National Emission Standards for Hazardous Air Pollutants (NESHAP) are emission standards for HAPs, regulated by 40 CFR Part 61 and 63. NESHAP regulations apply to sources in specifically regulated industrial source classifications (Clean Air Act Section 112(d)) or on a case-by-case basis (Clean Air Act Section 112(g)) for facilities not regulated as a specific industrial source type.

40 CFR Part 63 Subpart MMMM – Surface Coating of Miscellaneous Metal Parts and Products

The National Emission Standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR 63 Subpart MMMM) is applicable to a facility that is engaged in surface coating of miscellaneous metal parts and products (including, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and numerous other industrial, household, and consumer products) that uses 946 liters (250 gallons) per year, or more, of coatings that contain hazardous air pollutants (HAP) and is a major source, is located at a major source, or is not part of a major source of emissions of HAP (as per 40 CFR 63.3881(a) &(b)).

Though the facility surface coating operations have potential to use 946 liters (250 gallons) per year, or more, of coatings that contain hazardous air pollutants (HAP) but is not a major source, is not located at a major source, or is not part of a major source of emissions of HAP (A major source of HAP that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year). Thus, the facility is not subject to 40 CFR Part 63 Subpart MMMM.

New Jersey Administrative Code

Air emissions from the PJKD facility are subject to certain regulations from Chapter 7:27 of the New Jersey Administrative Code (N.J.A.C.). The applicability of N.J.A.C. Chapter 7:27 to the projects is evaluated in the following sections.

N.J.A.C. 7:27-6 - Control and Prohibition of Particles from Manufacturing Processes (Subchapter 6)

N.J.A.C. 7:27-6 requires source operations at a facility to limit particulate emissions from any sources operation, through any stack or chimney into the outdoor air in excess of the maximum allowable emission rate as determined under N.J.A.C. 7:27-6.2(a). Also, as per N.J.A.C. 7:27-6.2(f), a paint spray operation meeting the definition of a significant source operation under N.J.A.C. 7:27-8 or 22, as applicable, and the

operation is being constructed, reconstructed, installed, or modified on or after March 31, 1991, the operation shall, at a minimum, be served by particulate control apparatus.

The existing paint booth at the facility is a significant source under N.J.A.C. 7:27-8 and has installed a particulate control device (CD3) to demonstrate compliance with N.J.A.C. 7:27-6.2(a) and (f). The post control particulate emissions are de minimis (i.e., below 0.05 lb/hr).

N.J.A.C. 7:27-8 - Permits and Certificates (Subchapter 8)

N.J.A.C. 7:27-8 requires a pre-construction permit to be obtained for equipment that is used in a surface coating operation including, but not limited to, spray or dip painting, roller coating, and electrostatic depositing, in which the quantity of coating or cleaning material used in any one hour is equal to or greater than one half gallon of liquid. This permit modification application seeks to modify the existing preconstruction permit pursuant to Subchapter 8 for the paint booth.

N.J.A.C. 7:27-16 - Control and Prohibition of Air Pollution by Volatile Organic Compounds (Subchapter 16)

The surface coating operations at the facility is subject to the VOC RACT rule under N.J.A.C. 7:27-16.15 (Miscellaneous metal and plastic parts coatings). As per N.J.A.C. 7:27-16.15, Table 15B, the applicable maximum allowable VOC content per volume of coating (minus water and exempt solvent) for the facility source operations is 2.8 lb/gal (for Drum coating, new, exterior, Air Dried).

Pursuant to N.J.A.C. 7:27-16.7(c)(1)(i), the facility currently demonstrates compliance with the VOC RACT rule by using the compliant coatings with VOC content less than or equal to 2.8 lbs VOC/gal (less water and exempt solvent). However, the inclusion of the RTO as a VOC control device eliminates the need for the facility to utilize coatings with VOC content less than or equal to 2.8 lb/gal (less water and exempt solvent).

N.J.A.C. 7:27-16.15(g)(1) through (4) establishes the best management practices that need to be implemented for the metal products surface coating operations. The facility will implement the best management practices stipulated under N.J.A.C. 7:27.16.15(g)(1) through (4). The facility will also record and maintain on-site, logs of the VOC content of each surface coating formulation as applied pursuant to N.J.A.C. 7:27.16.15(h) & (j) and implementation of the best management practices pursuant to N.J.A.C. 7:27-16.22.

N.J.A.C. 7:27-17 - Control and Prohibition of Air Pollution by Toxic Substances and Hazardous Air Pollutants (Subchapter 17)

N.J.A.C. 7:27-17 applies to operations or equipment, but not be limited to, storage tanks, transfer operations, open top tanks, surface cleaning, surface coating, organic chemical manufacture, pharmaceutical manufacture, petroleum refining, and miscellaneous organic solvent uses in which one or more of the Group 1 or Group 2 air toxics (TXS) listed under N.J.A.C. 7:27-17, Table 1 are stored, used, or manufactured. The surface coating and drum conditioning operations at the facility do not use coatings with any of the Group 1 or Group 2 air toxics and thus not subject to Subchapter 17 for TXS.

N.J.A.C 7:27-17, Table 2 provides the reportable threshold and SOTA threshold for the hazardous air pollutant (HAP). The NJDEP requires that a first-level screening be provided with every permit application for any HAP with potential emissions above its NJDEP established reporting threshold. Since the RTO reduces the emissions of toluene below the reportable threshold, a health risk screening is not required.

HAP emissions from all emission sources in this application are below the reporting thresholds and SOTA applicability thresholds.

N.J.A.C. 7:27-22 - Operating Permits (Subchapter 22)

N.J.A.C. 7:27-22 applies to facilities that have the potential to emit greater than 25 tpy of NOX or VOC, greater than 10 tpy of a single HAP, 25 tpy of total HAPs or 100 tpy of any other contaminant. Since the facility-wide potential to emit is less than 25 tpy of NOX or VOC, less than 10 tpy of a single HAP, 25 tpy of total HAPs or 100 tpy of any other contaminant, the facility is not required to obtain a Title V operating permit.

State of the Art (SOTA) Analysis

As per N.J.A.C.7:27-8.12(a), an application shall include a SOTA analysis for any newly constructed, reconstructed, or modified equipment and control apparatus which constitutes a significant source operation, if the PTE is above the applicability thresholds. As indicated in Table 1, the pre-control PTE for VOC is above 5 tpy and thus the paint booth operations exceed the State of the Art (SOTA) applicability thresholds as per N.J.A.C. 7:27-8, Appendix 1, Table A (for Criteria Pollutants). With the inclusion of the RTO to control VOC emissions, a SOTA analysis is not required for this application.

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The RADIUS application (Appendix 1) along with the appendices is being submitted & certified (by the Responsible Official & Individual with Direct Knowledge) via NJDEP Online.

If you have any questions or comments about the information presented in this letter, please feel free to contact Ed Bash of Patrick J. Kelly (ed.bash@kellydrums.com, 800.963.1795 x 706) or me (jkwiatkowski@trinityconsultants.com, 609.318.5500 x 1754) should you have any questions or comments regarding this application.

Sincerely,

TRINITY CONSULTANTS

Joseph J. Kwiatkowski
Managing Consultant

Attachments

cc: Mr. Ed Bash, Patrick J. Kelly Drums Inc. (Camden, NJ)

ATTACHMENT 1

RADIUS Application

Patrick J Kelly Drums Inc (50895)

Date: 9/30/2022

New Jersey Department of Environmental Protection
Reason for Application

Permit Being Modified

Permit Class: PCP **Number:** 190001

Description of Modifications: The PJKD facility currently operates one (1) drum paint booth permitted under preconstruction permit PCP190001 issued by the New Jersey Department of Environmental Protection (NJDEP). In response to recent notice of violation (NOV), PJKD is proposing to install a Catalytic Products International TRITON 15.95 regenerative thermal oxidizer (RTO) to reduce VOC emissions by 98%. This preconstruction permit (PCP) modification application also proposes to incorporate its two (2) washing decks (PCP200002) into PCP190001 as the VOC emissions will also be ducted to and controlled by the proposed RTO.

The detailed potential-to-emit calculations and regulatory applicability review are provided in supporting documentation attached to this application.

New Jersey Department of Environmental Protection
Facility Profile (General)

Facility Name (AIMS): Patrick J Kelly Drums Inc **Facility ID (AIMS):** 50895

Street Address: 2109 HOWELL ST
CAMDEN, NJ 08096

Mailing Address: 2109 HOWELL ST
CAMDEN, NJ 08096

State Plane Coordinates:

X-Coordinate:	40
Y-Coordinate:	75
Units:	Long/Lat
Datum:	NAD83
Source Org.:	xAddress Match
Source Type:	Exact Address Match

County: Camden

Location Description:

Industry:

Primary SIC:	
Secondary SIC:	
NAICS:	332439

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: Air Permit Information Contact

Organization: Patrick J. Kelly Drums, Inc.
Org. Type: Corporation
Name: Ed Bash
NJ EIN:
Title: Regulatory Compliance Manager
Phone: (800) 963-1795 x0706
Fax: (856) 365-8796 x
Other: (609) 352-0841 x
Type: Mobile
Email: Ed.Bash@kellydrums.com
Mailing Address: 2109 Howell St
Camden, NJ 08105

Contact Type: Consultant

Organization: Trinity Consultants Inc.
Org. Type: Corporation
Name: Joseph J. Kwaitkowski
NJ EIN:
Title: Managing Consultant
Phone: (609) 318-5500 x1754
Fax: ( ) - x
Other: ( ) - x
Type:
Email: jkwiatkowski@trinityconsultants.com
Mailing Address: 15 Roszel Rd
Suite 105
Princeton, NJ 08540

Contact Type: Fees/Billing Contact

Organization: Patrick J. Kelly Drums, Inc.
Org. Type: Corporation
Name: Ed Bash
NJ EIN:
Title: Regulatory Compliance Manager
Phone: (800) 963-1795 x0706
Fax: (856) 365-8796 x
Other: (609) 352-0841 x
Type: Mobile
Email: Ed.Bash@kellydrums.com
Mailing Address: 2109 Howell St
Camden, NJ 08105

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: **Responsible Official**

Organization: Patrick J. Kelly Drums, Inc.

Name: Ed Bash

Title: Regulatory Compliance Manager

Phone: (800) 963-1795 x0706

Fax: (856) 365-8796 x

Other: (609) 352-0841 x

Type: Mobile

Email: Ed.Bash@kellydrums.com

Org. Type: Corporation

NJ EIN:

Mailing Address: 2109 Howell St
Camden, NJ 08105

Patrick J Kelly Drums Inc (50895) Date: 9/30/2022

New Jersey Department of Environmental Protection
Facility Profile (Permitting)

1. Is this facility classified as a small business by the USEPA?	No
2. Is this facility subject to N.J.A.C. 7:27-22?	No
3. Are you voluntarily subjecting this facility to the requirements of Subchapter 22?	No
4. Has a copy of this application been sent to the USEPA?	No
5. If not, has the EPA waived the requirement?	No
6. Are you claiming any portion of this application to be confidential?	No
7. Is the facility an existing major facility?	No
8. Have you submitted a netting analysis?	No
9. Are emissions of any pollutant above the SOTA threshold?	No
10. Have you submitted a SOTA analysis?	No
11. If you answered "Yes" to Question 9 and "No" to Question 10, explain why a SOTA analysis was not required	
12. Have you provided, or are you planning to provide air contaminant modeling?	No

Patrick J Kelly Drums Inc (50895) Date: 9/30/2022

New Jersey Department of Environmental Protection
Equipment Inventory

Equip. NJID	Facility's Designation	Equipment Description	Equipment Type	Certificate Number	Install Date	Grand-Fathered	Last Mod. (Since 1968)	Equip. Set ID
E20	Paint Booth	Paint Booth	Surface Coating Equipment (Non-Fabric Material)	PCP190001	9/1/1994	No		
E21	Open Head	Open Head Washing Deck	Manufacturing and Materials Handling Equipment	PCP200002	9/1/1994	No		
E22	Tight Head	Tight Head Washing Deck	Manufacturing and Materials Handling Equipment	PCP200002	9/1/1994	No		

000000 E20 (Surface Coating Equipment (Non-Fabric Material))
Print Date: 9/30/2022

Make:	Custom
Manufacturer:	Custom
Model:	Custom
Method of Application:	Spray — Spray Type: Air-Assisted
Description:	

Have you attached a diagram showing the location and/or the configuration of this equipment?

- ○ Yes
- ● No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

- ○ Yes
- ● No

Comments:

000000 E21 (Manufacturing and Materials Handling Equipment)
Print Date: 9/30/2022

Make:	Custom
Manufacturer:	Custom
Model:	
Type of Manufacturing and Materials Handling Equipment:	Drum Cleaning
Capacity:	1.31E+02
Units:	other units
Description (if other):	Drums/hour
Have you attached a diagram showing the location and/or the configuration of this equipment?	No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	No
Comments:	Onsite manufactured deck with nozzles built into the floor for spraying hot water.

000000 E22 (Manufacturing and Materials Handling Equipment)
Print Date: 9/30/2022

Make:	Custom
Manufacturer:	Custom
Model:	
Type of Manufacturing and Materials Handling Equipment:	Drum Cleaning
Capacity:	1.31E+02
Units:	other units
Description (if other):	Drums/hour
Have you attached a diagram showing the location and/or the configuration of this equipment?	No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	No
Comments:	Onsite manufactured deck with nozzles built into the floor for spraying hot water.

Patrick J Kelly Drums Inc (50895) Date: 9/30/2022

New Jersey Department of Environmental Protection
Control Device Inventory

CD NJID	Facility's Designation	Description	CD Type	Install Date	Grand-Fathered	Last Mod. (Since 1968)	CD Set ID
CD20	Booth Filter	Particulate filter on paint spray booth	Particulate Filter (Other)	9/1/1994	No		
CD21	RTO	RTO	Oxidizer (Thermal)		No		

000000 CD21 (Oxidizer (Thermal))
Print Date: 9/30/2022

Make:	TRITON 15.95
Manufacturer:	Catalytic Products International
Model:	TRITON RTO
Minimum Chamber Temperature (°F):	1600.0
Minimum Residence Time (sec):	0.75
Fuel Type:	Natural gas
Description:	
Maximum Rated Gross Heat Input (MMBtu/hr):	2.52
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	3
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	● Yes ○ No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	● Yes ○ No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	● Yes ○ No
Comments:	98% destruction efficiency

Patrick J Kelly Drums Inc (50895)

Date: 9/30/2022

New Jersey Department of Environmental Protection
Emission Points Inventory

PT NJID	Facility's Designation	Description	Config.	Equiv. Diam. (in.)	Height (ft.)	Dist. to Prop. Line (ft)	Exhaust Temp. (deg. F)			Exhaust Vol. (acfm)			Discharge Direction	PT Set ID
							Avg.	Min.	Max.	Avg.	Min.	Max.		
PT20	RTO	RTO	Round	38	30	15	1,600.0	40.0	1,600.0	15,000.0	15,000.0	15,000.0	Up	

Patrick J Kelly Drums Inc (50895)

Date: 9/30/2022

New Jersey Department of Environmental Protection
Emission Unit/Batch Process Inventory

U 20 Drum Ops Paint Spray Booth

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Paint Booth	Paint Spray Booth in normal operation	Normal - Steady State	E20	CD20 (P) CD21 (P)	PT20	3-99-999-98	0.0	2,860.0		15,000.0	15,000.0	40.0	90.0
OS2	Drum Wash 1	Drum Washing Station 1	Normal - Steady State	E21	CD21 (P)	PT20	3-99-999-98	0.0	2,500.0		15,000.0	15,000.0	40.0	90.0
OS3	Drum Wash 2	Drum Washing Station 2	Normal - Steady State	E22	CD21 (P)	PT20	3-99-999-98	0.0	2,500.0		15,000.0	15,000.0	40.0	90.0

000000 U20 OS1 (Efficiency Table - CD20) Print Date: 9/30/2022			
Pollutant Category	**Capture Efficiency (%)**	**Removal Efficiency (%)**	**Overall Efficiency (%)**
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	99.00	99.00
PM-2.5	100.00	99.00	99.00
SO2			
TSP	100.00	99.00	99.00
VOC (Total)			

000000 U20 OS2 (Oxidizer (Thermal) - CD21)
Print Date: 9/30/2022

Maximum Feed Rate to the Oxidizer (tons/hr):	
Maximum Air Supply Flow Rate (acfm):	15000.0
Minimum Air Supply Flow Rate (acfm):	
Oxygen Content in Exhuast (%O2):	
CO Concentration in Exhaust (ppmvd):	
Total VOC Concentration in Exhaust (ppmvd):	

000000 U20 OS3 (Oxidizer (Thermal) - CD21)
Print Date: 9/30/2022

Maximum Feed Rate to the Oxidizer (tons/hr):	
Maximum Air Supply Flow Rate (acfm):	15000.0
Minimum Air Supply Flow Rate (acfm):	
Oxygen Content in Exhuast (%O2):	
CO Concentration in Exhaust (ppmvd):	
Total VOC Concentration in Exhaust (ppmvd):	

Patrick J Kelly Drums Inc (50895) Date: 9/30/2022

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U20 Drum Ops**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO			0.25000000	0.25000000	tons/yr	No
HAPs (Total)			0.03000000	0.03000000	tons/yr	No
NOx (Total)			0.02000000	0.02000000	tons/yr	No
PM-10 (Total)			D	D	tons/yr	No
PM-2.5 (Total)			D	D	tons/yr	No
SO2			D	D	tons/yr	No
Toluene		2,927.70000000	58.55000000	58.55000000	lb/yr	No
TSP			D	D	tons/yr	No
VOC (Total)		25.71000000	0.51000000	0.51000000	tons/yr	No

Subject Item: **U20 Drum Ops**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
PM-10 (Total)		35.38000000	D	D	lb/hr	No
PM-2.5 (Total)		35.38000000	D	D	lb/hr	No
Toluene		2.25000000	0.05000000	0.05000000	lb/hr	No
TSP		35.38000000	D	D	lb/hr	No
VOC (Total)		11.40000000	0.23000000	0.23000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U20 Drum Ops**

Operating Scenario: **OS2**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
VOC (Total)		4.95000000	0.10000000	0.10000000	lb/hr	No

Subject Item: **U20 Drum Ops**

Operating Scenario: **OS3**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
VOC (Total)		4.95000000	0.10000000	0.10000000	lb/hr	No

Subject Item: **U21**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
VOC (Total)		24.75000000	0.49500000	0.49500000	tons/yr	No

Subject Item: **U21**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
VOC (Total)		4.95000000	0.10000000	0.10000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U21**

Operating Scenario: **OS2**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
VOC (Total)		4.95000000	0.10000000	0.10000000	lb/hr	No

ATTACHMENT 2

Emission Calculations

Patrick Kelly Drums Inc.
PI # 50895
PCP190001 Permit Modification

U20: Potential to Emit (PTE) Calculations

Operating Scenario	U20 & U21 PTE		
	VOC (tpy)	Toluene (lb/yr)	TSP/PM10/PM2.5 (tpy)
Paint Booth	0.27	58.55	0.04
Wash Station 1	0.12	0	0
Wash Station 2	0.12	0	0
Total	**0.51**	**58.55**	**0.04**

Patrick Kelly Drums Inc.
PI # 50895
PCP190001 Permit Modification

Paint Booth (U20/OS1): Potential to Emit (PTE) Calculations

Operational Data [1]

Coating Operations		
Max. Annual Usage	11833.5	gal/yr
Max. Days of Operation	275	days/yr
Max. Hours of Operation	10.5	hrs/day
Max. Daily Usage	43.0	gals/day
Max. Hourly Usage	4.10	gals/hr
Black Coating Usage	84%	%
Colored Coating	16%	%
Cleaning Solvent Usage		
Max. Annual Usage	260.0	gal/yr
Max. Daily Usage (coating)	0.95	gals/day
Average Hourly Usage	0.09	gals/hr
Particulate Emissions Control		
Spray Gun Transfer Efficiency	90%	
Particulate Filter Control Efficiency	99%	
RTO Control Efficiency	98%	

Hourly Emissions (lb/hr)

Coating / Cleaning Solvent	Coating/ Cleaning Solvent Code	Coating/ Cleaning Solvent Name	Max . Hourly Usage (lb/hr)	Potential to Emit (lb/hr)				
				VOC	VOC after RTO	Toluene	Toluene after RTO	TSP/PM10/PM2.5
Black Coating	43-21105	Low VOC Black	36.31	8.04	0.16	0.00	0.00	0.023
Colored Coating	43-1835B	China white	45.90	10.67	0.21	2.25	0.05	0.035
	43-41372B	DuPont Blue	35.00	10.86	0.22	0.77	0.02	0.023
	43-81458C	Bright Red	35.93	10.58	0.21	0.83	0.02	0.024
	43-51528B	Brilliant Green	35.38	10.97	0.22	0.78	0.02	0.023
	43-9654A	Dark Brown	36.18	11.40	0.23	0.81	0.02	0.025
	43-62030B	Orange	35.62	11.02	0.22	0.76	0.02	0.024
	43-62033C	Golden Yellow	37.21	10.94	0.22	0.76	0.02	0.025
Cleaning Solvent	100% Toluene	100% Toluene	0.65	0.65	0.01	0.65	0.01	0.00
Max. Hourly Emissions			**lb/hr**	**11.40**	**0.23**	**2.25**	**0.05**	**0.035**

Patrick Kelly Drums Inc.
PI # 50895
PCP190001 Permit Modification

Paint Booth (U20/OS1): Potential to Emit (PTE) Calculations
Annual Emissions (tpy)

Coating / Cleaning Solvent	Annual Usage (gal/yr)	Potential to Emit				
		VOC	VOC after RTO	Toluene	Toluene after RTO	TSP/PM10/PM2.5
Black Coating	9940	19507.43	390.15	0.00	0.00	56.63
Colored Coating	1893	5266.71	105.33	1041.20	20.82	16.28
Cleaning Solvent	260	1886.51	37.73	1886.51	37.73	0.00
Annual Emissions	**lb/yr**	**26660.64**	**533.21**	**2927.70**	**58.55**	**72.90**
Annual Emissions	**tpy**	**13.33**	**0.27**	**1.46**	**0.03**	**0.04**
Reportable Thresholds [3,4]	lb/hr or lb/yr	0.05	0.05	2,000	2,000	0.05
SOTA Thresholds [3,4]	TPY or lb/yr	5	5	10,000	10,000	5
Emissions Above Reportable Threshold		Yes	Yes	Yes	No	No
Emissions Above SOTA Threshold		Yes	No	No	No	No

Notes:
1. Information pertaining to spray booth operations provided by the client.
2. Hourly emission rates for the coating operation based on worst case coating.
3. The reporting threshold (in lbs/hr) and SOTA thresholds (in tpy) for criteria pollutants as per N.J.A.C 7:27 Subchapter 8, Appendix 1- Table A.
4. The reporting threshold and SOTA thresholds (in lb/yr) for HAPs as per N.J.A.C 7:27 Subchapter 17, Table 3A.

Patrick Kelly Drums Inc.
PI # 50895
PCP190001 Permit Modification

Drum Washing (U20/OS2 & OS3): Potential to Emit (PTE) Calculations

Input Data

Drum Washing		
VOC per station[1]	4.95	lb/hr
Max. Hours of Operation [2]	2500.0	hr/yr
VOC Emissions Control		
RTO Control Efficiency	98%	

Hourly Emissions (lb/hr)

Drum Washing Station	Potential to Emit (lb/hr)	
	VOC	VOC after RTO
Station 1	4.95	0.10
Station 2	4.95	0.10
Total	9.90	0.20

Annual Emissions (tpy)

Drum Washing Station	Potential to Emit	
	Precontrol VOC	Controlled VOC
Washing Station 1 (tpy) Washing Station 2 (tpy)	6.19 6.19	0.12 0.12
Annual Emissions (tpy)	**15.47**	**0.31**
Reporting Threshold (lb/hr) [3,4] SOTA Threshold (tpy) [3,4]	0.05 5	0.05 5
Emissions Above Reportable Threshold Emissions Above SOTA Threshold	Yes Yes	Yes No

Notes:
1. Information pertaining to drum washing operations VOC emissions provided by stack test results.
2. Hours of operation provided by client
3. The reporting threshold (in lbs/hr) and SOTA thresholds (in tpy) for criteria pollutants as per N.J.A.C 7:27 Subchapter 8, Appendix 1- Table A.
4. The reporting threshold and SOTA thresholds (in lb/yr) for HAPs as per N.J.A.C 7:27 Subchapter 17, Table 3A.

Patrick Kelly Drums Inc.
PI # 50895
PCP190001 Permit Modification

RTO Emissions:

Criteria Pollutant	Emission Factor		Emissions	SOTA Thresholds	
	lb/MMScf[3]	lb/hr[2]	tpy	tpy	Exceeded?
VOC[1]	5.50	0.01	0.02	5.00	No
NOx	100	0.24	0.30	5.00	No
CO	84	0.20	0.25	5.00	No
TSP/PM10/PM2.5	7.60	0.02	0.02	5.00	No
SO2	0.60	0.00	0.00	5.00	No
Lead	0.0005	0.00	1.50E-06	NA	No
CO2 (1,000 tons)	120,000	288.00	0.36	NA	No
CH4	2.30	0.01	0.01	NA	No
N2O	2.20	0.01	0.01	NA	No

HAPs	Emission Factor		Emissions		Reporting Thresholds			SOTA Thresholds	
	lb/MMScf[3]	lb/hr	lb/hr	lb/yr	lb/hr	lb/yr	Below RT?	lb/yr	Exceeded?
Arsenic	0.0002	-	0.00000048	0.001	-	0.01	Yes	10	No
Benzene	0.0021	-	0.00000504	0.013	0.01	6.00	Yes	4,000	No
Beryllium	0.000012	-	0.00000003	0.000	-	0.02	Yes	16	No
Cadmium	0.0011	-	0.00000264	0.007	-	0.01	Yes	20	No
Chromium	0.0014	-	0.00000336	0.008	-	1,000	Yes	10,000	No
Cobalt	0.000084	-	0.00000020	0.001	-	0.005	Yes	200	No
Formaldehyde	0.075	-	0.00018000	0.450	-	3.50	Yes	4,000	No
Hexane	1.8	-	0.00432000	10.800	-	2,000	Yes	10,000	No
Naphthalene	0.00061	-	0.00000146	0.004	-	1.40	Yes	10,000	No
Manganese	0.00038	-	0.00000091	0.002	-	0.60	Yes	1,600	No
Mercury	0.00026	-	0.00000062	0.002	-	2.00	Yes	20	No
Nickel	0.0021	-	0.00000504	0.013	-	0.60	Yes	2,000	No
Selenium	0.000024	-	0.00000006	0.000	-	925	Yes	200	No
Toluene	0.0034	-	0.00000816	0.020	-	2,000	Yes	10,000	No

Notes:

RTO Fuel Consumption:	2,400	scf/hr
Hours of Operation:	2,500	hr/year
NG Heat Value:	1,050	Btu/cf

[1] VOC lb/hr emission factor is VOC from burning natural gas.
[2] lb/hr emission factors based on AP42 1.4 NG Combustion
[2] lb/MMScf emission factors are from AP42 1.4 Natural Gas Combustion.

ATTACHMENT 3

Stack Test Results

Executive Summary

PACE Environmental (PACE) was contracted by Patrick J Kelly Drums Inc. to perform an Emission Compliance Test at their drum reconditioning facility located in Camden, NJ. Testing was performed to determine the total hydrocarbons as methane (THC as CH_4) emissions rates of the facility's Tight Head Drum Washing process.

Test Results Summary

PI:	**50895**			
Permit Activity:	**PCP200002**			
TST:	**TST210001**			
Sources:	U10 OS2			
Test Date:	March 3, 2022			
Tested Pollutant	**Result**	**Limit**	**Unit**	**Compliance Status**
THC (as CH_4)	4.95	0.153	lb/hr	Not Compliant

Technical Discussion

The facility installed a temporary stack for this testing.

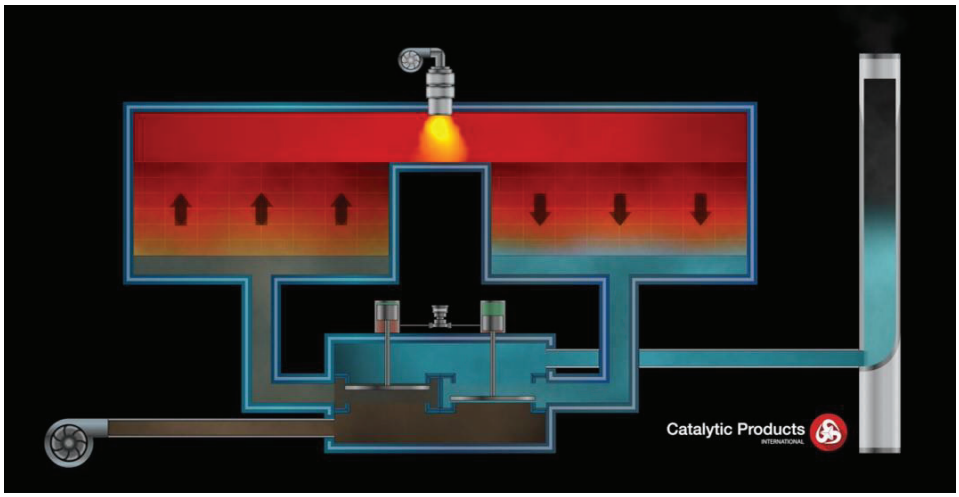
recommending stainless steel ducting from the washers, and stainless steel inlet plenum on the RTO to prohibit corrosion in areas where we know liquids to collect.

The final design engineering as noted in this proposal will incorporate all the necessary components to successfully destroy the solvents listed above from the facility while using our proven and innovative design features to provide a long lasting - highly reliable system. The TRITON will decrease total solvent emissions by the level noted in Section 6: Performance Guarantee of this proposal.

TRITON 10,000 SCFM RTO fastener coating (for reference)

The TRITON Regenerative Thermal Oxidization System recommended in this proposal will allow:

- Continuous solvent destruction abatement across operational range
- Low cost of operation
- Fully automatic operation - with no operating interface required
- Highest reliability with minimal maintenance
- Vinyl ester coated inlet plenum construction for liquid condensation/carryover
- Stainless steel duct and damper construction from washers and liquid tanks



TRITON RTO Diagram for reference

The TRITON system designed will include our innovative design features allowing for continuous VOC destruction. This continuous destruction ability is key to air pollution control design.

The system's low cost of operation will center on the use of a 95% primary heat exchanger. The heat exchanger is made up of a thermally stable structured ceramic. This special heat exchange system will provide very low burner heating demands and provides very low static pressures for reduced electrical consumption. Sophisticated control logic constantly analyzes the regenerator temperature profiles from several thermocouple inputs and constantly adjusts valve timing to maximize the thermal rate efficiency of the system.

The system will incorporate our TSS control package supplied with all PLC logic, relays, and wiring for automated control.

Each TRITON system is designed to allow the highest uptime reliability with minimal maintenance. The maintenance requirements will be fully described in the supplied operator manuals, and only includes normal fan maintenance, linkage tightening, and fan bearing lubrication. The system uses a few moving parts, and all these parts are accessible from outside of the system. There is no need to enter the oxidizer for normal maintenance.

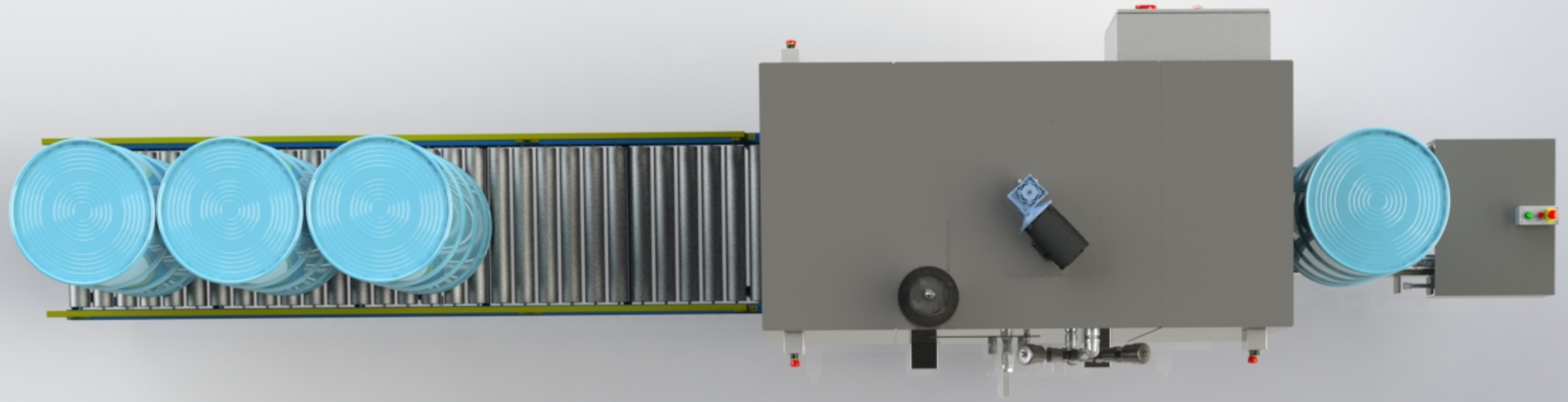
Section 2: Equipment Specifications

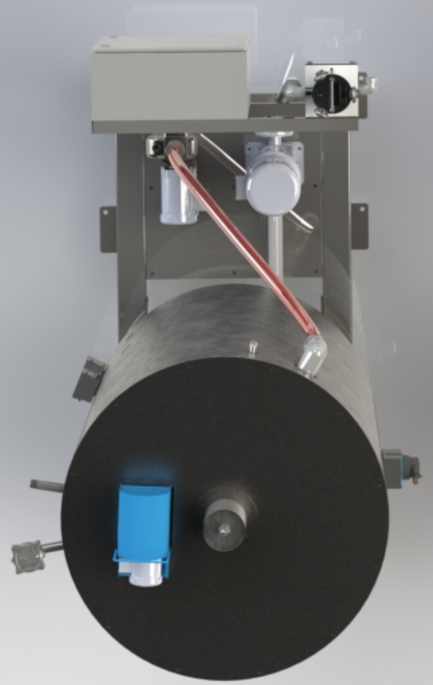
TRITON RTO Model		**TRITON 15.95**
Maximum Process Exhaust Flow	SCFM	15,000
Maximum VOC Load – Base Bid 95% TER	MM Btu/h	< 2.916
Process Exhaust Temperature	°F	90
Operating Temperature – normal	°F	1,600
Operating Temperature – maximum	°F	2,000
Residence Time	sec	>0.75
Heat Exchanger Effectiveness	%	95
Heat Exchanger		High temperature ceramic structured media
RTO Destruction Efficiency	%	See Section 6: Performance Guarantee
Insulation – Type		Ceramic Fiber
Insulation – Thickness	"	6
Insulation – Density	lb/ft3	10
Materials of Construction (MOC)		
Fresh Air Damper		304 stainless steel
Housing – Media Chamber		A36 steel
Housing – Combustion Chamber		A36 steel
Housing Structural – Media Chamber		A36 steel
Housing Structural – Combustion Chamber		A36 steel
Media Chamber Base Frame		A36 steel
Poppet Housing		A36 steel
Poppet Housing Inlet Plenum		Vinyl ester coated
Poppet Base Frame		A36 steel
Poppet Valve Support Structural		A36 steel
Poppet Valve Discs		A36 steel
Cold Face Support		A36 steel
Cold Face Expanded Metal		A36 steel
Fan Housing		A36 steel
Fan Structural		A36 steel
Exhaust Stack		A36 steel
Exhaust Stack Structural		A36 steel
Burner		High Velocity Nozzle Mix
Burner Quantity		1
Burner Capacity – Installed	MMBtu/h	2.4
Combustion Blower	hp	5.0
Forced Draft Booster Fan – Arrangement		1
Forced Draft Booster Fan	hp	100
Booster Fan Corrosion Protection Coating		Heresite Airstream Coating
TSS Panel		NEMA 4
TSS Panel Location		Prewired on RTO Skid

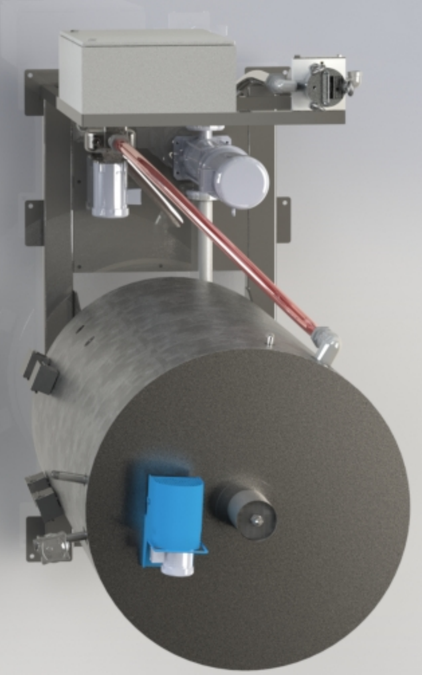
PLC		Allen-Bradley Compact Logix
HMI		(2) Allen-Bradley 7 Plus, 12" Color-one on oxidizer chassis-one on remote panel
Flame Safety		Honeywell
Data Recorder (Located in remote panel)		Honeywell TVEZ Single Pen
VFD for RTO Fan Volume Control		Siemens
Exhaust Stack – Diameter at Discharge	Inches	38
Exhaust Stack – Height at Discharge	Feet	30
Oxidizer Pad Size - Approximate	Feet	15 x 35
Oxidizer Installed Weight – Approximate	Pounds	64,000

Utilities

Fuel		Natural Gas
Fuel Pressure	psig	1,000 Btu/ft^3 @ 10 psig
Fuel Requirements	CFH	2,400
Electrical		480 V, 3-Ph, 60 Hz 120 V, 1-Ph, 60 Hz
Electrical Requirements to TSS Control Panel on Oxidizer chassis 480V	Amps	200
Electrical Requirement to Enclosure Panel 480V		
Compressed Air @ -40 °F dewpoint, clean and dry	psig	80 – 90
Compressed Air Requirements	CFM	10 – 12







000000 CD21 (Oxidizer (Thermal))
Print Date: 4/6/2023

Make:	TRITON 15.95
Manufacturer:	Catalytic Products International
Model:	TRITON RTO
Minimum Chamber Temperature (°F):	1600.0
Minimum Residence Time (sec):	0.75
Fuel Type:	Natural gas
Description:	
Maximum Rated Gross Heat Input (MMBtu/hr):	2.52
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	3
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	● Yes ○ No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	● Yes ○ No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	● Yes ○ No
Comments:	98% destruction efficiency

Yalartai, Bennett [DEP]

From: Yalartai, Bennett [DEP]
Sent: Tuesday, May 16, 2023 10:27 AM
To: Joe Kwiatkowski
Cc: Ed Bash; mjackel@michelmanbricker.com; Wong, Danny [DEP]; Agrawal, Sunila [DEP]
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Quick addendum: Pls submit the revised RADIUS permit application on/or before 31May2023.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

From: Yalartai, Bennett [DEP]
Sent: Tuesday, May 16, 2023 10:22 AM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Thanks for the submittal…

However, given the voluminous info in the revised PDF edit details forms, and for the essence of time, pls submit a revised RADIUS permit application, accordingly.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

Like us on Facebook

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Tuesday, May 16, 2023 10:08 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

Please see some minor revisions to the response #1 below.

Thank you,
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Joe Kwiatkowski
Sent: Monday, May 15, 2023 4:29 PM
To: Bennett.Yalartai@dep.nj.gov
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny <Danny.Wong@dep.nj.gov>; Agrawal, Sunila <Sunila.Agrawal@dep.nj.gov>
Subject: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

Please see below (and attached) for responses to your questions and data requests. Please reach out if you want to discuss any of the details.

1. Detailed process descriptions for:
    a. the drum wash operation, with specific references to the process steps, number of wash tanks , max operating temp, and frequency and method of wastewater change outs
        i. Steps of drum washing;
            1. Separate the different types of drums, TH vs OH
            2. Pour off residuals into 55 gallon drums to be shipped off as haz. waste
            3. Place three drums onto the conveyor to the washer
            4. Drums cycle into the washer
            5. Drums are fully enclosed
            6. Drums get washed
            7. Drums exit washer
            8. Drums are rinsed
            9. Drums are inspected
            10. Drums are sent to be blasted
        ii. There are two tanks (one for each washer) that contain the wash water for the drum washers (see attachment “DWT100 – RT-500 Equipment Renderings.pdf” for rendering of wash system)

iii. Each tank has a max temperature of 180 degrees
iv. The wash water is changed out every two weeks
v. The used wash water (wastewater) is pumped into 275 gallon totes and bulk vacuum truck removes contents and takes off site for solidification & landfilling
vi. PJKD is presently acquiring NJPDES permits so the wastewater can be shipped over to their 1810 River Ave facility for wastewater treatment and reuse.

b. surface coating operations, with specific references to types of coatings (VOC and/or HAP VOC), flexibility on coating max VOC (in light of the installation of the catalytic thermal oxidizer), number of spray booths, annual coating usages, transfer efficiency and overspray, and reason for the absence of drying ovens.
   i. See calculation sheet for types of coatings
   ii. See calculation sheet for VOC content
   iii. There is one spray booth
   iv. Annual coating usage in calculation sheet along with transfer efficiency and overspray
   v. No drying oven required for type of coating.

2. PDF copies of the revised edit details correctly reflecting completion of all applicable fields for:
   a. Each E
      i. See attached
   b. Each CD
      i. See attached for Thermal Oxidizer details
   c. Each OS
      i. See attached files

3. PDF copy of the U-Inventory correctly reflecting:
   a. Proper listing of raw material coatings as group, if they're non-HAP VOCs, and speciation of each HAP VOC coating, if applicable
      i. See attached calculation sheet for paint details
   b. addition of OS for solvent cleaning of the spray booth
      i. the toluene utilized in the spray head cleaning is blended back into the paint

4. Revised electronic copy of the PTE calcs Excel spreadsheet correctly reflecting each OS and OS Summary
   a. PTE calculation sheet is attached, see "Attachment 3 - 20220930_PJKD RTO Permit Mod PTE.xlsx"

5. PDF copy of the manufacturer's specs for the thermal oxidizer
   a. See attached file "RTO Spec sheet 9-7-22.pdf"

Joseph J. Kwiatkowski
Managing Consultant

P 609.318.5500 D 609.336.9160 M 609.668.1779
15 Roszel Road, Suite 105, Princeton, NJ 08540
Email: jkwiatkowski@trinityconsultants.com | LinkedIn: www.linkedin.com/in/joseph-j-kwiatkowski

000000 E20 (Surface Coating Equipment (Non-Fabric Material))
Print Date: 4/6/2023

Make:	Custom
Manufacturer:	Custom
Model:	Custom
Method of Application:	Spray — Spray Type: Air-Assisted
Description:	

Have you attached a diagram showing the location and/or the configuration of this equipment?

- ○ Yes
- ● No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

- ○ Yes
- ● No

Comments:

000000 E21 (Manufacturing and Materials Handling Equipment)
Print Date: 4/6/2023

Make:	Custom
Manufacturer:	Custom
Model:	
Type of Manufacturing and Materials Handling Equipment:	Drum Cleaning
Capacity:	1.31E+02
Units:	other units
Description (if other):	Drums/hour
Have you attached a diagram showing the location and/or the configuration of this equipment?	No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	No
Comments:	Onsite manufactured deck with nozzles built into the floor for spraying hot water.

000000 U20 OS1 (Oxidizer (Thermal) (CD21))
Print Date: 4/6/2023

Maximum Feed Rate to the Oxidizer (tons/hr):	
Maximum Air Supply Flow Rate (acfm):	8000
Minimum Air Supply Flow Rate (acfm):	
Oxygen Content in Exhuast (%O2):	
CO Concentration in Exhaust (ppmvd):	
Total VOC Concentration in Exhaust (ppmvd):	

000000 U20 OS1 (Surface Coating (NFM))
Print Date: 4/6/2023

Objects being Coated?	Metal Drums
Material of Objects being Coated?	Steel
VOC Content in Coating as applied (after thinning) (lbs/gal):	2.79
Density of Coating as applied (after thinning) (lbs/gal):	11.2
Type of Coating Being Applied:	
Maximum coating used (gal/hr):	4.1
Maximum coating used (gal/day):	43
Maximum coating used (gal/yr):	11833.5
% VOC in Coating Emitted During Process:	100
% Overspray (Fraction of the solid component of the Coating Material that does not adhere to the object when the Coating is sprayed. Usually 10-15% for a Booth in good operating condition. About 20% for an old unit.)	10
Maximum % Weight of VOC in Coating:	31
Maximum % Weight of Solids in Coating:	77
Maximum % Weight of Water in Coating:	0
Maximum % Volume of VOC in Coating:	45
Maximum % Volume of Solids in Coating:	48
Maximum % Volume of Water in Coating:	0
Operating Hours per Day:	10.5 (Max)
Operating Hours per Week:	40 (Max)
Have you Attached the MSDS for the Coating?	○ Yes ● No
Comments:	

Catalytic Products INTERNATIONAL
Enabling Clean Production™ since 1969

Proposal for a TRITON 15.95
Regenerative Thermal Oxidizer

Proposal Number 22-8943 R1

Presented To:

Mr. Ed Bash
Patrick Kelly Drum
2109 Howell St.
Camden, NJ 08105

For:

VOC Control from Drum Wash and Paint Operations

Prepared By:

Catalytic Products International
980 Ensell Road
Lake Zurich, Illinois 60047

Ron Naddeo
Regional Sales Engineer
610-674-2295
rnaddeo@cpilink.com

Mark Betz
Vice President, Engineering
847-550-4114
mbetz@cpilink.com

September 7th, 2022

Table of Contents

Revision History

- Revision 1 –Proposal submitted for 15,000 SCFM RTO with installation including rigging, ductwork and required dampers from the spray booth, one drum wash line and one drum wash line liquid tank vent to the oxidizer. Submitted 9/7/2022
- Revision 0 – Budgetary proposal submitted for 15,000 SCFM RTO, submitted 06/01/2022

Section 1: Basis of Design

Project Background

This application covers the design and supply of a Regenerative Thermal Oxidizer (RTO) unit and controlling emissions from a single paint spray booth, one drum wash line, one drum wash liquid storage tank vent, one future drum wash line, and one future drum wash liquid storage tank vent.

Exhaust Characteristics

The initial process conditions are detailed in the table below:

Process Sources

Paint Spray Booth (Estimated needs to be confirmed by PKD)	SCFM	8,000 @ 90 F
Drum Washing Machine #1	SCFM	(3) exhaust points at 450 scfm = 1350 scfm @ 90F
Drum Washing Machine #1 Liquid Tank Vent	SCFM	(1) Vent = 450 scfm
Future Drum Washing Machine #2	SCFM	(3) exhaust points at 450 scfm = 1350 scfm @ 90F
Future Drum Washing Machine #2 Liquid Tank Vent	SCFM	(1) Vent = 450 scfm

Plant Information

Plant Location		Camden, NJ
Plant Elevation – Approximate	FASL	25
Process		Drum washing & paint spray
Ambient Temperature Range - Average	°F	10 – 90
Design Wind Velocity	mph	90
Electrical Area Classification		Unclassified
Equipment Location		Outdoors

Basis of Recommendation

Catalytic Products International (CPI) has worked with a variety of industries to develop a proven and innovative technique to eliminate VOC emissions and for this operation CPI has selected the regenerative thermal oxidizer for this application with some specific upgrades based upon CPI's experience in the drum washing/coating industry. Regenerative Thermal Oxidization has been selected for this application due to the relatively low solvent loading and the high integral heat recovery of an RTO unit while providing a long lasting, high uptime air pollution control system. CPI recognizes the challenges facing a drum wash and repaint facility and has incorporated several features to ensure a long, oxidizer life. The water carryover from the drum washing systems is typically high PH, and detrimental to carbon steel dyctwork and RTO inlet plenums. CPI is

recommending stainless steel ducting from the washers, and stainless steel inlet plenum on the RTO to prohibit corrosion in areas where we know liquids to collect.

The final design engineering as noted in this proposal will incorporate all the necessary components to successfully destroy the solvents listed above from the facility while using our proven and innovative design features to provide a long lasting - highly reliable system. The TRITON will decrease total solvent emissions by the level noted in Section 6: Performance Guarantee of this proposal.

TRITON 10,000 SCFM RTO fastener coating (for reference)

The TRITON Regenerative Thermal Oxidization System recommended in this proposal will allow:

- Continuous solvent destruction abatement across operational range
- Low cost of operation
- Fully automatic operation - with no operating interface required
- Highest reliability with minimal maintenance
- Vinyl ester coated inlet plenum construction for liquid condensation/carryover
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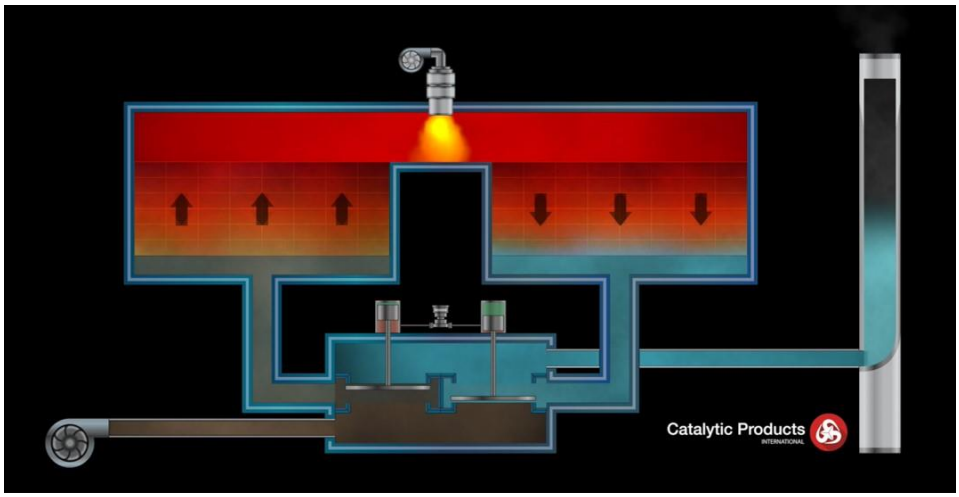

TRITON RTO Diagram for reference

The TRITON system designed will include our innovative design features allowing for continuous VOC destruction. This continuous destruction ability is key to air pollution control design.

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Section 2: Equipment Specifications

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Operating Temperature – normal	°F	1,600
Operating Temperature – maximum	°F	2,000
Residence Time	sec	>0.75
Heat Exchanger Effectiveness	%	95
Heat Exchanger		High temperature ceramic structured media
RTO Destruction Efficiency	%	See Section 6: Performance Guarantee
Insulation – Type		Ceramic Fiber
Insulation – Thickness	"	6
Insulation – Density	lb/ft3	10
Materials of Construction (MOC)		
Fresh Air Damper		304 stainless steel
Housing – Media Chamber		A36 steel
Housing – Combustion Chamber		A36 steel
Housing Structural – Media Chamber		A36 steel
Housing Structural – Combustion Chamber		A36 steel
Media Chamber Base Frame		A36 steel
Poppet Housing		A36 steel
Poppet Housing Inlet Plenum		Vinyl ester coated
Poppet Base Frame		A36 steel
Poppet Valve Support Structural		A36 steel
Poppet Valve Discs		A36 steel
Cold Face Support		A36 steel
Cold Face Expanded Metal		A36 steel
Fan Housing		A36 steel
Fan Structural		A36 steel
Exhaust Stack		A36 steel
Exhaust Stack Structural		A36 steel
Burner		High Velocity Nozzle Mix
Burner Quantity		1
Burner Capacity – Installed	MMBtu/h	2.4
Combustion Blower	hp	5.0
Forced Draft Booster Fan – Arrangement		1
Forced Draft Booster Fan	hp	100
Booster Fan Corrosion Protection Coating		Heresite Airstream Coating
TSS Panel		NEMA 4
TSS Panel Location		Prewired on RTO Skid

PLC		Allen-Bradley Compact Logix
HMI		(2) Allen-Bradley 7 Plus, 12" Color-one on oxidizer chassis-one on remote panel
Flame Safety		Honeywell
Data Recorder (Located in remote panel)		Honeywell TVEZ Single Pen
VFD for RTO Fan Volume Control		Siemens
Exhaust Stack – Diameter at Discharge	Inches	38
Exhaust Stack – Height at Discharge	Feet	30
Oxidizer Pad Size - Approximate	Feet	15 x 35
Oxidizer Installed Weight – Approximate	Pounds	64,000

Utilities

Fuel		Natural Gas
Fuel Pressure	psig	1,000 Btu/ft^3 @ 10 psig
Fuel Requirements	CFH	2,400
Electrical		480 V, 3-Ph, 60 Hz 120 V, 1-Ph, 60 Hz
Electrical Requirements to TSS Control Panel on Oxidizer chassis 480V	Amps	200
Electrical Requirement to Enclosure Panel 480V		
Compressed Air @ -40 °F dewpoint, clean and dry	psig	80 – 90
Compressed Air Requirements	CFM	10 – 12

Section 3: Equipment Description

General Description

TRITON Regenerative Thermal Oxidizers are specially designed systems that provide industry leading VOC destruction, the lowest operating cost, and the highest uptime reliability.

The Regenerative process starts by using a system booster fan to draw in process emissions and force these gasses into the Even-Flo manifolds. The process emissions are directed into one set of Posi-Seal Valves, for distribution into one of two regenerator columns. Posi-Seal Valves in conjunction with the Even-Flo manifolds are the basis for all TRITON systems ability to provide continuous VOC destruction stated in Section V: Performance Guarantee of this proposal. The design of these two revolutionary components takes advantage of leak-free construction and minimal flushing volumes. The results provide the user with only high performance and minimized costs.

From the exit of the Posi-Seal Valves, the un-treated exhaust enters one of the ceramic media filled regenerator columns. Here the exhaust stream is heated from approximately the inlet temperature to within approximately 80 °F of the combustion chamber set-point. The structured ceramic media used in the TRITON Series Regenerative Thermal Oxidizer provides low (flange to flange) static pressures and the highest thermal rate efficiency. TRITON systems pack more thermal heat transfer in a smaller package.

Upon exiting the regenerator column, the exhaust will be oxidized in the combustion chamber, where the temperature will be raised to the combustion chamber set-point. At this temperature the VOC will be destroyed to meet the destruction removal efficiency (DRE) stated in Section 6: Performance Guarantee of this proposal When solvent loads are sufficient (approximately 3% of the LEL) the natural gas burner system can be shut off and self-sustaining operation is achieved.

These combusted VOC are then forced into the second regenerator column to give up the heat to the incoming un-treated air. The whole process is controlled via the TSS control system. Posi-Seal Valve positioning is monitored for precise destruction and thermal exchange effectiveness. No input is required by operators.

Fresh air purge/idle/dilution air damper

One (1) fresh air purge/idle damper with 4-20 mA modulating direct drive electric operator, personnel protection on weather-hood inlet, and loose matching carbon steel flange for installation in the process exhaust ductwork by others.

Main Booster FD Fan

The booster fan will be an Air Pro equivalent manufacturer fan complete with the following features and accessories:

- Heavy-duty, all-welded construction
- Punched, flanged inlet and outlet
- Shaft / bearing guards
- Bolted access door
- Housing drain
- Ceramic felt shaft seal
- Constant speed, V-belt drive package
- 1,800 RPM, TEFC, VFD rated, PE motor

Note: The RTO booster fan will be capable of providing up to -3.0" w.c. at the fan inlet to adequately clear the exhaust ductwork and provide for future capture considerations, if necessary.

Even-Flo Manifolds

The start of the TRITON regenerative oxidation process begins with the introduction of process exhaust through the EvenFlo inlet manifolds. The basis of the EvenFlo design takes advantage of duct-under construction to minimize flushing air volume while maximizing flushing efficiency. The EvenFlo manifolds are specially designed for even air distribution to the regenerator beds. Each manifold is constructed and designed for maximum performance, durability, and easy access. The EvenFlo manifolds are shop fitted to the Posi-Seal Valves. The EvenFlo inlet manifolds are supplied shop insulated to minimize heat losses during operation, work to minimize organic condensation, and provide a safe temperature during high inlet temperature operations.

- Vinylester coated inlet plenum with 2" NPT threaded drain

Vertical Posi-Seal Valves

This perhaps is the most important feature about any TRITON system, the highly reliable regenerator valves use the concepts that we made famous in our FLOATING TUBE recuperative heat exchangers, stress free designs with zero leakage. When compared to less reliable butterfly or other poppet valve assemblies, Posi-Seal valves provide a level of sophistication that is un-matched.

Posi-Seal Valving Technology

Posi-Seal valves are designed to take advantage of a vertical axis that allows for soft seating action with self-centering guidance. The innovative feature about all Posi-Seal valves is the airtight machined seal that eliminates valve bypass and maintenance intensive gaskets. The Posi-Seal valve will be pneumatically operated and will cycle open or closed based on the program logic called for in this application. Each Posi-Seal Valve will include the following:

- 1/4-inch-thick platter reinforced with 3/8" thick coupling plates are bolted together with aircraft style wire tie of all fasteners
- Heavy Duty Construction including:
    - 2-inch diameter damper shafts
    - High temperature linear bearings with air cooling rated for 600° F Bake-Off (when required)
- Pneumatically operated air actuators
- Proximity switches to prove position
- Two compressed air holding tanks, one piped and wired to each Posi-Seal Valve
- Each valve is factory adjusted for: stroke, proximity switch position, and soft seating guidance.

Exhaust Stack

One (1) oxidizer exhaust stack

- Stack to be constructed from A36 carbon steel with carbon steel base rings primed and painted with grey epoxy
- Two (2) 3" diameter test ports located 90 degrees apart
- Exhaust anchor bolt template

Posi-Seal Valving Technology

Superior design and high-quality construction allow TRITON Systems to effectively treat very large exhaust streams with the same performance as smaller Regenerative Thermal Oxidizers.

All TRITON Systems utilize air actuators pre-set at the factory
Actuators are pre-piped and wired

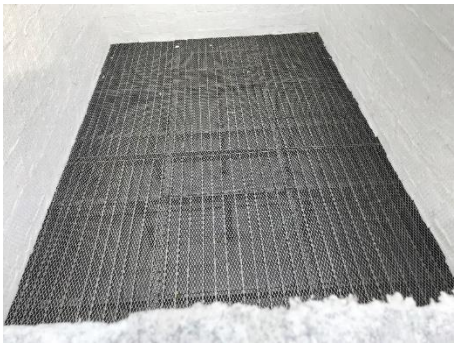
Pneumatic POSI-SEAL Valve Operator and Compressed Air Holding Tank

High temperature linear bearing package insures smooth linear action
Bearings used at two points to provide extraordinary support of the valve

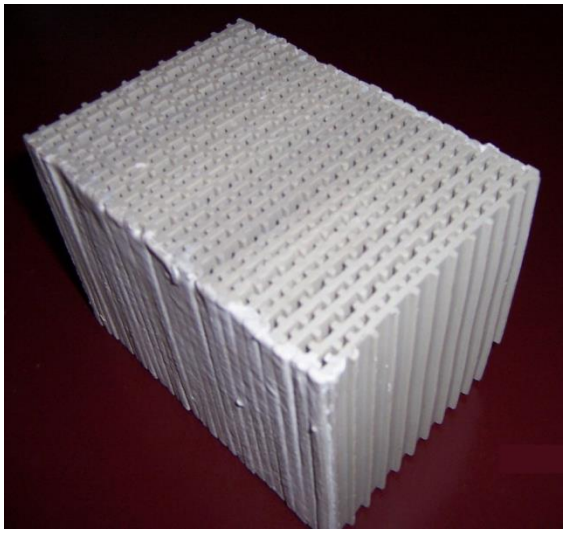
Bearing air seal and valve position indicators all visible through clear Plexiglas Protective Cover

Cold Face Support Grid

The cold face support grid is another innovative technique developed to allow high support strength and low pressure drop. While conventional systems use a low cost expanded metal support, the TRITON's cold face support grid is a fabricated structure made of 3" x 3/8" bar stock on top of a unique system of I-beam support. The advantages offered in our cold face support grid are high strength, lowest pressure drop, and plugging elimination.



Regenerator Heat Exchange Media



The TRITON Series Regenerative Thermal Oxidizer utilizes a special ceramic heat exchange media system which is developed to provide reduced pressure drops and the highest thermal efficiencies. The media is chemically inert and thermally to temperatures in excess of 2,000° F.

Regenerator and Combustion Chamber

The main housing consists of two (2) internally insulated regenerators connected by a common insulated combustion chamber. The combustion chamber is designed in conjunction with the nozzle mix burner system for even temperature uniformity, leading to high performance and lower operating cost. The unit is shop assembled to simplify field erection.

The construction of the regenerators and combustion chamber is made up of the following materials:

- The regenerator towers and combustion chamber are fabricated from at least 3/16" thick steel shell reinforced with external structural framing.
    - The combustion chamber will be supplied with a 24" x 24" hinged access door to the combustion chamber.
- Painted carbon steel I-beam skid frame.
- Three (3) dual element thermocouples are provided in each media bed for precise temperature profiling of the ceramic media.
- Three (3) dual element thermocouples are provided in the combustion chamber. (two for temperature control and one for high temp limit)
- Two (2) dual element thermocouples will also be provided for monitoring Oxidizer inlet and outlet temperatures.
- Two (2) 1/4 NPT pressure ports will be provided above and below each media bed for manual pressure monitoring.
- Burner site glass will be provided.

All TRITON Systems are fully insulated with high-quality ceramic insulation lining to prevent shell deformation and growth.

Burner System

The burner will be a Maxon gas burner system. A nozzle mix burner uses external combustion air to provide sufficient oxygen even in an oxygen-deficient air stream and to provide a stable flame pattern throughout the operating range of the system. The burner is designed to promote mixing when fired horizontally into the combustion chamber and provides even heating during regenerator switching. This design provides the high velocity which creates a tremendous amount of turbulence and leads to the excellent temperature uniformity for which TRITON RTOs are known.

The burner allows for a turndown of at least 20:1, requires low gas pressure, and emits low levels of NOx and CO in oxidizer applications.
The Maxon burner will include the following:

- One (1) nozzle mix burner with ceramic discharge sleeve pre-mounted into the combustion chamber

- Self-checking UV scanner with air purge for flame supervision
- External combustion air blower
    - The combustion air blower will be a New York Blower or equivalent, pressure type blower fan complete with skid mounting of the following equipment:
        - Direct drive TEFC motor
        - Flanged inlet & outlets
        - Punched, flanged inlet and discharge
- The combustion air blower will be mounted on top of the Even-Flo Manifold – allowing convenient connection to the gas burner. The auxiliary equipment includes:
    - Painted carbon steel weather hood with personnel protection
    - Carbon steel manual control damper with locking lever arm
    - Flex connection
    - Painted carbon steel combustion air blower ducting from discharge of blower to inlet of burner.
    - Includes flanged connection and pre-mounting of the following air control valve:
        - Carbon steel Combustion air control valve and actuator
        - Welded pressure ports as necessary
    - A proof of air flow pressure switch will be provided in an NEMA 4 enclosure

Burner Gas Train

This natural gas train is designed pursuant to NFPA-86 and will include the following components:

- The gas train will be schedule 40 BI, threaded construction:
    - Pre-piped and mounted on a pipe rack
        - The pipe rack will be located adjacent to the burner, mounted on the EvenFlo Manifold
        - Gas pipe from the gas train outlet to the burner inlet is factory installed
        - Stainless steel flex connection mounted at burner elevation for both main gas and pilot

    - 6000V ignition transformer (mounted at on the gas train stand) in an enclosure with ignition wire to burner
    - Pre-mounted gas control valve:
        - Carbon steel combustion gas control and actuator
    - Shop leak tested prior to shipment.
- Main shut-off valve
- Inlet Strainer
- Main Gas Train:
    - Main gas regulator
    - Low gas pressure switch
    - Two (2) automatic shut-off valves
    - High gas pressure switch
    - Main gas shut-off valve

- Pilot Gas Train:
  - Two (2) Pilot gas shut-off valve
  - Pilot gas regulator
  - Two (2) pilot solenoids
  - Three (3) pressure indicator gauges with manual shut-off

Volume Control

The volume control will be provided by a variable frequency drive controlled by the PLC receiving a signal from the inlet duct pressure transmitter. The system will include the following:

- The VFD will be mounted in the TSS panel.
- Pressure transmitter

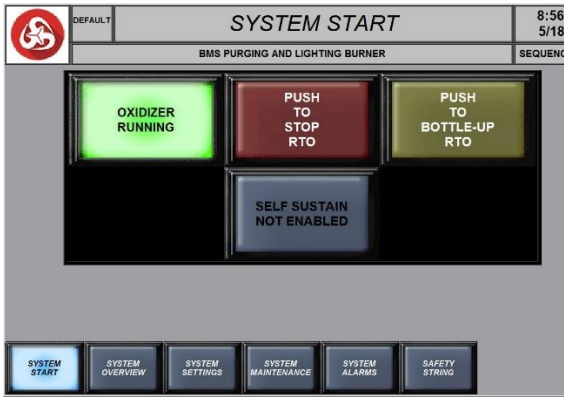
Bottle-Up Mode

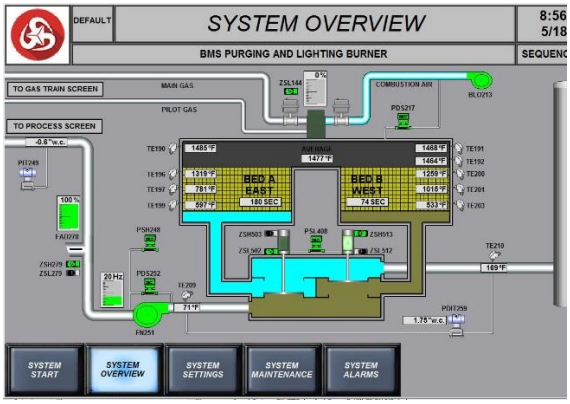
The TRITON RTO has a special operation mode called bottle-up. When the system is placed into standby (operator initiated long term idle) the TRITON RTO is in bottle-up mode conserving the heat that is stored in the heat recovery media and therefore minimizing the auxiliary fuel needed to restart the unit. This method of operation saves a considerable amount of fuel and further improves the fuel efficiency of the TRITON RTO.

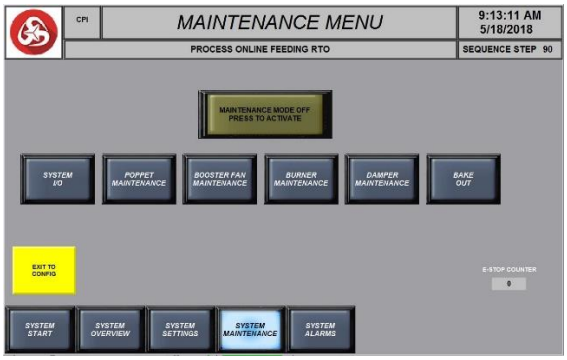
System Control

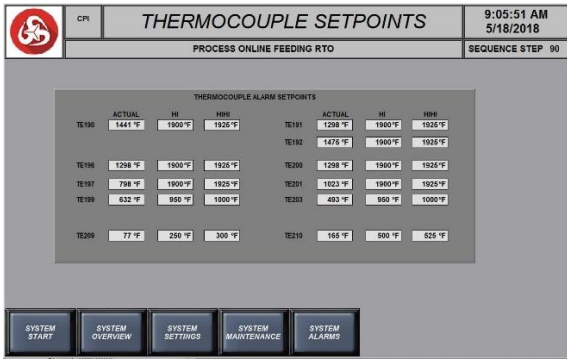
The TRITON Series Regenerative Thermal Oxidizer comes equipped, as standard, with a special control and monitoring package called Temperature Safety System (TSS). It has been developed for the use of protecting the oxidizer and providing self-diagnostics.

The TSS-PLC panel allows the entire oxidizer system to be a one-button start/stop operation. This provides user-friendly operation and avoids costly operator errors. TSS controls temperature programming during all phases of the oxidizer's warm up, operating, and cool down cycles. This minimizes thermal stress on components and provides long equipment life. TSS will also integrate the process with the operation of the oxidizer for safe, economical operation.









The TRITON Series Regenerative Thermal Oxidizer process begins with the touch of a button, which activates the system's PLC-based Temperature Safety System (TSS). The TSS control system automatically retrieves media temperatures, selects the hottest bed for damper positioning, opens the fresh air purge/idle damper, energizes the booster fan, purges the system with fresh air, ignites the burner, cycles the valves, and gradually brings the system up to the correct operating temperature. The TSS also monitors the temperature in the regenerators, combustion chamber in three places, and in the valve assembly's inlet and outlet. This helps safeguard the system from extreme temperature fluctuations that cause thermal stress and overall system fatigue.

As soon as the required operating temperature is reached, the TSS enables the process lines to feed into the oxidizer or holds the system in idle mode until production is ready. When production is ready the fresh air purge damper closes and one or more of the diverting dampers open to draw the volatile organic compounds (VOCs) from the process lines.

A booster fan draws one or more VOC-laden exhaust from your process lines into the system at a fixed duct static pressure through one of the systems regenerators (an internally insulated vessel containing ceramic media). The contaminated gases are passed through the first regenerator where energy is transferred from the ceramic media to the gas in order to elevate the temperature.

This elevated temperature approaches the ignition level for most solvents and then is directed from the ceramic bed into the combustion chamber. As the stream exits the ceramic bed and travels through the internally lined combustion chamber minimal heat is added to ensure a proper oxidation temperature and a designed dwell time is maintained for the ultimate destruction of the streams VOCs. The resultant clean, oxidized gases are redirected into a second regenerator bed to continue the energy transfer and oxidation cycle before passing through the fan to be released to the atmosphere.

The TSS control panel will include the following components:

- NEMA 4 rated, painted carbon steel enclosure will be mounted on the oxidizer chassis and fully prewired. I
    - Color: CPI standard gray epoxy
    - Codes – TSS control panels are designed to NEC standards. Unless specifically mentioned below, no other codes or standards apply
    - Main 120V circuit breaker
- Allen-Bradley CompactLogix Ethernet Processor with the following:
    - Inputs and outputs as required for managing the oxidizer system and interlocks for inlet prefilter and bypass T-damper.
    - Remote Service Access via VPN internet broadband web port with integral Ethernet switch
- Allen-Bradley PanelView 7+ 12" color touch screen. HMI will include the following:
    - Door mounted in the main control panel
    - Start/Stop functions
    - PID Loop Control of:
        - Burner Temperature Control
        - VF Drive Speed Control
        - Valve Switching
        - Bake-out Feature
    - Text messaging of system status on individual graphic screens
        - System overview screen with First Fault Annunciation and Trouble Alarm History
        - Combustion system detail screen
        - Booster fan detail screen
        - Maintenance screen
        - Secure PID access screen
- Hard wired high temperature limit shut off
- Honeywell paperless advanced TVEZ Series single pen graphical chart recorder:
    - Combustion Chamber Temperature
- Honeywell flame safety system

Rigging

CPI will provide all the personnel and equipment to unload the RTO in the roadway in front of the facility and skate into the courtyard area, set unit onto concrete pad, load media and assemble the related components. The TRITON Regenerative Thermal Oxidizer and related components on the customer provided concrete pad located in the courtyard behind the buildingd. See enclosed oxidizer layout drawing 99-800. CPI labor is non-union and working straight time.

Ductwork and Installation

CPI has designed this duct system as a wet and dry side collection system. The "wet side" will be all ducting from the drum wash machines and tank vents. This ducting and any dampers will require stainless steel construction to withstand the high PH water vapor that will be part of the machine exhaust. The "dry side" will utilize welded galvanized or painted carbon steel construction from the paint spray booth to the main leading to the oxidizer. One the two streams join; the ducting will remain stainless steel construction all the way to the oxidizer inlet.

CPI will pickup (3) exhaust connections on the new drum wash machine #1, and feed those into a common 12" diameter branch main. From there a 12" bypass T-damper and manual balancing damper will be installed, the bypass T-damper will have the "to atmosphere" bypass leg ducted up thru the roof with a rain hat. The 12" branch will have a 12" diameter blank off for the future drum wash machine #2. The duct will increase to 18" diameter branch main and travel the length of the high bay building. A 6" diameter 304 stainless steel tank vent line will be provided and tie into the branch main. Once the branch main reaches the paint spray booth tie in point, the main will increase to 32" diameter stainless steel duct to the inlet of the oxidizer.

CPI will provide 28" diameter, galvanized welded duct from the spray booth blower discharge, across the building and tie into the stainless steel main leading to the oxidizer. CPI will install a bypass T-damper in the run after the spray booth and duct the "to atmosphere" bypass leg up thru the roof with a rain hat.

- All washer and tank vent ducting to be 304 stainless steel welded duct to prohibit corrosion.
- Main duct to oxidizer and fan inlet box to be 304 stainless steel construction welded duct to prohibit corrosion.
- All ducting to be designed, reinforced, and supported per SMACNA duct design guidelines for industrial, welded duct designed for +/-10" W.C.
- All fittings to be 1.5R and two gauges heavier than the duct
- All flanges to be welded and use PTFE sealant.

- Ducting will be supported per SMACNA guidelines every 10-15' as required. The Bypass T-damper assembly to be supported. All ducting under roof to be supported off of bar joists on hangers.
- (2) Two 3" diameter EPA test ports will be provided in main before the oxidizer
- CPI to provide (1) 15,000 scfm 304 stainless steel fan inlet box with 2" diameter threaded drain

Dampers

CPI will provide One (1) 28" diameter paint spray booth Bypass T-damper assembly for isolation & bypass of paint spray booth line. The bypass T-damper will be installed on the roof above the dip spin line. The 22" diameter Bypass T-damper will include the following:

- Painted carbon steel construction
- Painted carbon steel body with flanged connections
- Two (2) carbon steel reinforced damper vanes
- Two (2) Painted carbon steel continuous thru shafts
- Grease lubricated ball bearings mounted on carbon steel stand-offs over adjustable packing glands.
- Tadpole vane seals for 99% shut-off @ 5" w.c.
- Carbon steel slave linkage
- Painted carbon steel rain cap
- Carbon steel operator mounting bracket with electric direct drive actuator with internal limit switches.
- Galvanized bypass stack with rain hat

CPI will provide One (1) painted C.S. 28" diameter manual balancing damper to be located after the T-damper to balance the flow to the oxidizer. The 28" manual balancing damper will include the following:

- Painted carbon steel construction
- Locking quadrant
- Metal blade stop

CPI will provide One (1) stainless steel 12" diameter paint wash machine #1 Bypass T-damper assembly for isolation & bypass of paint spray booth line. The bypass T-damper will be installed on the roof above the dip spin line. The 22" diameter Bypass T-damper will include the following:

- 304 stainless steel "wetted" air stream construction; exterior parts will be painted carbon steel
- 304 stainless steel body with flanged connections
- Two (2) 304 stainless steel reinforced damper vanes
- Two (2) 304 stainless steel continuous thru shafts
- Grease lubricated ball bearings mounted on carbon steel stand-offs over adjustable packing glands.
- Tadpole vane seals for 99% shut-off @ 5" w.c.
- Carbon steel slave linkage
- Painted 304 stainless steel rain cap
- Carbon steel operator mounting bracket with electric direct drive actuator with internal limit switches.

CPI will provide One (1) 304 stainless steel 12" diameter manual balancing damper to be located after the T-damper to balance the flow to the oxidizer. The 28" manual balancing damper will include the following:

- 304 stainless steel "wetted" construction
- Locking quadrant
- Metal blade stop

Instrument Piping & Mounting

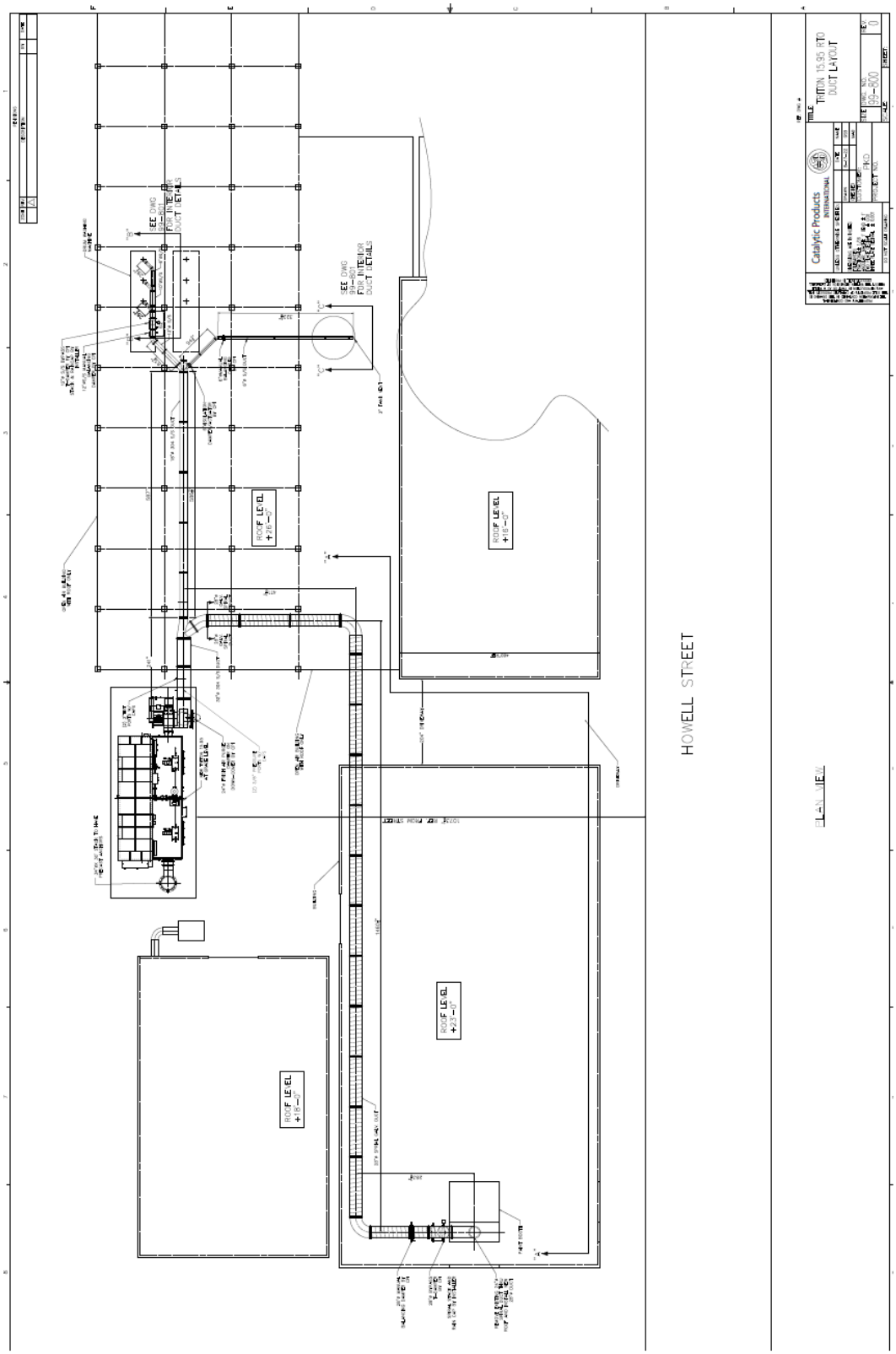
CPI will mount, install, and provide pressure piping for required pressure safety switches, pressure transmitters required for the ducting control and RTO control. All piping will be 3/8" stainless steel Swagelok style fittings with drip legs.

Startup Services

Complete start-up and operator training will include one trip, by two men, for 50 hours per trip of site time (M-F) to commission and train employees in the operation of this system. The startup normally begins after the customer has confirmed readiness by filling out our supplied startup checklist. This list is a simple sheet that asks you to confirm such things as: the gas supply is ready, electrical components have all been wired correctly, ductwork is ready, and production conditions are ready. Our men will perform the following steps:

- Confirm operation of all safeties
- Establish oxidizer readiness and startup on fresh air
- Balance the air volumes and flows from the source to the equipment
- Set all the system field components
- Set all the oxidizer adjustments on production conditions
- Record pressures and volumes for insertion into the operation manual
- Verify operation via mutual acceptance of performance by both parties
- Train all necessary personnel. Training normally requires a few hours (per shift). A customized training program tailored to the customers' needs can be developed if desired, once the needs are finalized CPI will issue a proposal for the custom training program.

General Arrangement Drawing (proposed)



Section 4: Project Cost Summary

Project Investment

TRITON 15.95 RTO & 30' Exhaust Stack:..... $ 513,500.00
Mechanical Installation (rigging, ducting, damper installation) ..... $ 316,100.00

Start-up Services: ..... $ 22,000.00

This proposal does not include electrical, natural gas, or compressed air connections.

Payment Terms

Net 10 Days upon receipt of invoice

30% down payment to initiate the order
30% upon submission of general arrangement drawing and PID
30% upon equipment ready to ship
10% upon completion of startup, not to exceed 30 days from shipment

Project Schedule

Project Schedule Estimated			
Week No.	**Date**	**Duration in Weeks**	**RTO**
0	10/1/2022	0	Purchase Order
6	11/12/2022	6	Drawing Submittal - RTO - GA / PID
7	11/19/2022	1	Drawing Approval
33	5/20/2023	26	Fabrication of RTO & Ductwork Ductwork installation to start prior to shipment of RTO
34	5/27/2023	1	Shipment of RTO
36	6/10/2023	2	Installation of RTO
37	6/17/2023	1	Start-Up & Commissioning

Equipment Shipment

EXW, CPI Factory. Buyer is responsible for all shipping costs. CPI can offer other options such as FOB Destination where CPI includes the cost of freight, if requested.

The quoted prices and deliveries are budgetary, and any order will be subject to the attached. TERMS AND CONDITIONS and are valid for a period of 30 days

Due to volatility in carbon steel and stainless-steel pricing, this proposal is valid for only 30 days.

Section 5: Project Responsibilities

The following list will detail items that are not included as part of the equipment only portion of the proposal and identifies the responsibility of each component. Any items included in the installation are noted **IX**, if the installation is not purchased from CPI the buyer is responsible for those services.

	CPI	Buyer
Supply concrete or structural steel designed to adequately support the TRITON system and related components including embedded anchors for exhaust stack		**X**
Provide a exhaust stack anchor bolt template	**IX**	
Rig and assemble Oxidizer on the site	**IX**	
Remove/repair/replace any landscaping that is inadvertently damaged during rigging and assembly due to the heavy weights of the cranes and trucks hauling the oxidizer		**X**
Free and clear access for the installation – including removal of any equipment or platforms blocking the driveway into the courtyard		**X**
Inlet collection ductwork/piping, process dampers as described.	**IX**	
Roof and/or wall penetrations, curbs and final sealing.		**X**
Natural gas piping to the TRITON system gas train inlet at 3,000 cfh at 5-10 psig		**X**
Power feed, 460 VAC, 3 phase, 60 Hz electrical service to the TRITON system TSS control panel on oxidizer chassis		**X**
Electrical interconnecting wire from any field devises, process interlocks all dampers in the process exhaust ductwork, to the TRITON TSS control panel		**X**
Clean (oil free) compressed air at 85 PSIG minimum, dry to -40 °F to the RTO connection point : 10-14 CFM		**X**
All required construction and/or operating permits, fees and taxes. CPI will assist in filing and securing these permits. If special registrations (such as; CE, UL, PE or others) are required, the costs for such expertise will be re-billed at cost. All fees for permits are payable by the customer.		**X**
All controls and instruments other than specified. (i.e., flow measurement, LEL devices, detonation, and flame arrestors, etc.)		**X**
Freight to jobsite.		**X**
Compliance testing if required.		**X**
Startup service for any delays caused by the customer or representatives of the customer will be billed at $135.00/h for normal weekdays, $202.00/h for weekends, $270.00/h for all holidays, and all expenses plus 10%.		**X**
Any time required for plant specific safety training to work on site over and above 2 hours will be billed at $135.00/h		**X**

Section 6: Performance Guarantee

Catalytic Products International guarantees that the total VOC concentration of the abatement system will reduce the concentration of gaseous phase hydrocarbons measured at the inlet of the oxidizer as compared to the concentration of gaseous phase total hydrocarbons measured at the outlet (i.e.: discharge stack).

CPI guarantees that the oxidizer proposed herein will comply with the following performance:

VOC Destruction: 98%

Subject to the following conditions:

VOC Inlet Concentration (as C_3)	Performance Limitations
concentration < 750 ppm C_3	Average total outlet VOC emissions, non-methane, shall not exceed 10 ppm as C_3
concentration > 750 ppm C_3	TR shall reduce total outlet VOC emissions by at least 98%, non-methane

Note: Inlet concentrations shall be measured at the RTO fan inlet, upstream of any dilution/recirculation inlets. The above guarantee is conditioned upon simultaneous measurement of the inlet and outlet hydrocarbon solvent loadings after the deduction of any burner-generated chemical compounds such as methane or others.

This guarantee is conditional on the following:

- The oxidizer is operated and maintained as described in the Operating and/or Maintenance instructions and manuals provided with the equipment.
- The actual process is as described by the customer and described within this proposal.
- The test method for hydrocarbons is Method 25A
- RTO must be running at 60% of total flow capacity during test
- Test methods must be of sufficient accuracy and reproducible for any and all test conditions encountered. CPI requests prior review and approval of test protocols prior to conducting any performance test.

CPI must perform an annual inspection of the supplied equipment. Customer is responsible for providing sufficient downtime for inspections, approx. 24 hours.

This performance guarantee is predicated upon having a CPI technician on site during the test. CPI reserves the right to adjust the operating temperature of the oxidizer from 1,500 to 1,700 F to achieve compliance with the above emissions guarantees.

CPI has estimated fuel usage and electrical consumption is based on available data, actual results may vary depending upon process conditions, ambient temperature, fuel gas quality, and oxidizer maintenance.

Section 7: Equipment Warranty

The Seller warranty to Buyer that the equipment and machinery mentioned in this proposal shall be free from defects of materials or workmanship under normal use and maintenance for a period of one (1) year from date of shipment. The liability of Seller under this warranty shall be limited to the repair or replacement, at Seller's option, or any part or component which may prove to be defective under normal use, service and maintenance after Seller, in its sole discretion, determines same to be defective. This warranty is conditioned upon Buyer giving Seller immediate written notice of an alleged defect and refraining from the attempted repair of alleged defects without prior written consent of Seller. The Seller makes no warranty whatsoever with respect to accessories or components not supplied by Seller. For any components purchased by Seller for use on or in conjunction with the equipment, which is the subject of this contract, the Seller extends to the Buyer only the same warranty granted to Seller by the component vendor or manufacturer.

The performance and safety of the equipment mentioned herein is contingent upon proper installation, the use of suitable process materials, and operation and maintenance by properly trained personnel. Seller makes no warranty whatsoever as to the inclusion of the equipment supplied by Seller into Buyer's manufacturing process; Seller's warranty being limited solely to the operation of its equipment sold hereunder in accordance with the specifications, therefore.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE. IT IS EXPRESSLY AGREED THAT UNDER NO CIRCUMSTANCES SHALL THE SELLER BE HELD LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS OF PROFIT ARISING FROM ANY CAUSE, AND SELLER'S LIABILITY SHALL BE STRICTLY LIMITED AS STATED HEREIN.

Section 8: Terms and Conditions

I. **ACCEPTANCE**

All sales of material or equipment by Catalytic Products International are expressly conditioned upon the terms and conditions set forth in the written order acknowledgment of Seller. Any additional or different terms of conditions set forth in the purchase order of the Buyer or any similar such communication, are hereby objected to by Catalytic Products International and shall not be binding nor effective unless assented to in writing by Catalytic Products International.

II. **CANCELLATION**

Buyer acknowledges this is custom engineered and fabricated equipment to the buyers exacting specifications. Buyer may cancel any order only by mutual agreement, and only upon written notice to Catalytic Products International, and with payment to Catalytic Products International of reasonable cancellation charges, including but not limited to (1) the proportionate contract price for all material completed, whether shipped or not, prior to notice of cancellation is received; (2) an inventory restocking fee equal to 30% of the original order including any change orders; and (3) all expenses incurred by Catalytic Products International by reason of such cancellation, including reimbursement for any charges arising from termination of sub-contract claims.

III. **DAMAGE OR LOSS**

The Company shall not be liable for damage to or loss of equipment after delivery of such equipment to the point of shipment. In the case of equipment to be installed by or under supervision of the Company, the Company shall not be liable for damage or loss after delivery by the carrier to the site of installation. If, thereafter, pending installation or completion of installation or full performance by the Company, any such equipment is damaged or destroyed by any cause whatsoever, other than by the fault of the Company, the Buyer agrees promptly to pay or reimburse to the Company, in addition to or apart from any and all other sums due or to become due hereunder, an amount equal to the damage or loss so occasioned.

IV. **DELAYED SHIPMENTS**

Quoted shipping dates are approximate. Catalytic Products International will use its best efforts to fill all orders within the time quoted. However, final shipping schedules shall be subject to any conditions that may prevent compliance with acknowledged delivery schedules. Catalytic Products International shall not be liable for failure to give notice any delay, and such delay shall not constitute grounds for cancellation.

Catalytic Products International reserves the right to store such products in a warehouse for the accounts and at the risk of the Buyer after the products or any substantial portion thereof are ready for shipment cannot be made for either of the following reasons:

(a) If CPI is prevented from making shipment or delivery in accordance with instructions of the Buyer, or
(b) By strike, boycott, natural disaster, governmental law, regulation, or circumstances beyond the control of CPI.

V. **FIELD SERVICE**

Unless otherwise noted herein, the cost of this equipment does not include service and/or installation. Field service, as stated in proper written quotation, for repair or start-up will be charged at a per diem rate plus all living and traveling expenses incurred from the time of leaving base of operations until return. Premium rate will be charged for work in excess of eight hours per day and for Saturday, Sunday, and holiday work. On start-up projects Catalytic Products International should be notified approximately thirty days prior to the start-up date, and name and title of a single authority responsible for securing and releasing personnel should be included. Catalytic Products International service representative will require time verification sheets to be approved by the Buyer's authorized representative at the completion of each day's work.

Upon request, Catalytic Products International in its discretion will furnish as an accommodation to Buyer such technical advice or assistance as is available in reference to the use of the product by Buyer. Catalytic Products International assumes no obligation or liability for the advice or assistance given or results obtained, all such advice or assistance being given and accepted at Buyer's risk.

VI. **GUARANTEE**

Material and equipment distributed by Catalytic Products International are the products of reputable manufacturers sold under their respective brand or trade names. Catalytic Products International shall use its best efforts to obtain from each manufacturer, in accordance with the manufacturer's warranty (copies of which will be furnished upon request) or customary practice, the repair or replacement of products that may prove defective in material or workmanship. The foregoing shall constitute the exclusive remedy of the Buyer and the sole obligation of Catalytic Products International. Except as to title, THERE ARE NO WARRANTIES, WRITTEN, ORAL, IMPLIED, OR STATUTORY, relating to the described material or equipment, which extends beyond that described in this paragraph. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR PURPOSE SHALL APPLY. Any and all such warranties are subject to purchaser's application of purchased equipment and materials strictly and exclusively within the technical specification as defined in Catalytic Products International's order acknowledgment and general technical description.

With acknowledgment of Buyer's order, Seller assumes that Buyer has verified technical specifications as set forth in this contract and Buyer has the responsibility for correctness of said technical specifications. Unless specially noted, this proposal is not intended to exactly meet the Buyers specification and if conflict arises, this proposal takes precedence.

Performance guarantees for catalyst and systems shall be strictly and exclusively limited to those expressly stated in Seller's written order acknowledgment, and such guarantees shall only apply if catalysts were found in original and sealed factory package. Performance guarantees for heat exchangers shall be strictly and exclusively limited to those expressly stated in Seller's written order acknowledgment based on nominal (+/- 5%) efficiencies. All replacements arising from claims on guarantees as herein stated are made FOB Shipping Point (American Uniform Commercial Code) Seller's Plant.

The foregoing warranty is in lieu of and excludes all other expressed or implied warranties of merchantability or fitness for any particular use. Seller guarantees that catalysts have been given to carrier in unbroken original factory sealed package.

VII. **LIABILITY**

The Company will not be liable for any damage caused by the operation of the machinery or devices purchased whether or not operated in accordance with instructions or because of any failure to meet conditions of our guarantee. Liability under any contract shall in no case exceed the price paid for goods furnished by Catalytic Products International. In no event will Catalytic Products International be liable for consequential damages, or the failure of the Buyer to provide proper safety features for the protection of personnel in the use of operation of equipment.

Catalytic Products International's liability on any claim for loss or damage arising out of this contract or from the performance or breach thereof or connected with the supplying of material or equipment hereunder, or its sale, resale, operation or use, whether based on warranty, contract, negligence or other grounds, shall not exceed the price allowable to such material or equipment or part thereof involved in the claim. Catalytic Products International shall not, under any circumstances, be liable for any labor charges unless agreed upon in advance in writing by Catalytic Products International.

Buyer assumes full responsibility for proper handling and storage of catalysts and equipment, after receipt from carrier, in accordance with Seller's instructions. Warranties and guarantees become void unless handling and storage was made in accordance with Seller's instructions.

VIII**PATENTS**
The Company shall hold Buyer harmless for any expense or loss resulting from infringement of patents or trademarks arising from compliance with the Buyer's designs or specifications.

IX. **PRICING**
Seller reserves the right (a) to revise any price quoted without notice to Buyer, at any time prior to acceptance of Buyer's purchase order by Seller, (b) unless otherwise noted, all prices by Catalytic Products International are subject to change without notice. Prices do not include sales, use, excise, value added, or similar taxes, and where applicable, such taxes shall be billed as a separate item and paid by the Buyer. Unless otherwise noted, all sales are made FOB Shipping Point (American Uniform Commercial Code) with no allowance for special crating, duties or fees and in all cases, title shall pass upon delivery at point of shipment and thereafter all risk of loss or damage shall be upon the Buyer.

All items shown as freight allowed pertains to particular items and quantities. Any deviation after placement of order such as changes in quality or partial release will be subject to the manufacturer's terms and conditions where applicable.

X. **RETURNED MATERIAL**
No credit will be given for returns except by specific written approval of Seller. No special designed catalyst materials or equipment may be returned. No catalyst, burner nozzle, burner block, or other parts directly exposed to flame, condensate or poisonous substances may be returned after use.

XI. **SHIPMENT**
All shipments will be made FOB Shipping Point s (American Uniform Commercial Code) Catalytic Products International factory unless otherwise specified. In the absence of specific instructions, Catalytic Products International will select the carrier. Title to the material shall pass to the Buyer upon delivery thereof by Catalytic Products International to the carrier, delivery or pick-up service. Thereupon the Buyer shall be responsible thereof. Products held for Buyer, or stored for Buyer, shall be at the risk and expense of Buyer. Claims against Catalytic Products International for shortages must be made within 48 hours after arrival of shipment at Buyer's destination.
Shipping dates are approximate and only as shows on the order acknowledgment. Shipping dates are not guaranteed. Catalytic Products International shall not be liable for delays in delivery or failure to manufacture or deliver due to causes beyond its reasonable control, including but not limited to acts of God, acts of Buyer, acts of military or civil authorities, fires, strikes, flood, epidemic, war, riot, delays in transportation or car shortages, or inability to obtain necessary labor materials, components or manufacturing facilities. In the event of any such delay, the date of delivery shall be extended for a period equal to the time lost by reason of such delay. In the event of impossibility of performance resulting from any of the above causes, Catalytic Products International shall have the right to cancel this contract without further liability to Buyer. Cancellation of any part of this order shall not affect Catalytic Products International's right to payment for any product delivered hereunder. Orders with indefinite delivery dates are accepted upon the understanding that Catalytic Products International shall have the right to fill said order as it sees fit in the course of its manufacturing schedules and to hold the goods for the Buyer's account at Buyer's expense and risk, pending receipt of definite delivery instructions.

XII.**SUPPLEMENTAL CLAUSES FOR EXPORT ORDERS**
(a)...Currency: The prices quoted herein are payable in U.S. Dollars, unless otherwise stated in written order acknowledgment.
(b)...Proof of Export: Those products which are to be purchased only for export: The Buyer agrees to furnish Catalytic Products International with proof of exportation of all or any part of such products within five months from the date of the Catalytic Products International invoices therefore, or if exportation of any part shall not have occurred within that period. Buyer agrees to pay Catalytic Products International upon demand, the amount of any manufacturer's excise tax or other tax which now or hereafter may be imposed on the sale of such products for consumption within the United States.
(c)...License and Permit Requirements:
(1)...Catalytic Products International will secure all export licenses and permits required by the United States Government and Buyer will furnish reasonable cooperation in acquiring such licenses and permits. If such licenses and permits are paid for by Buyer such payments will be added to the contract price.
(2)...Buyer will secure all licenses and permits required by the foreign government and Catalytic Products International will furnish reasonable cooperation in acquiring such licenses and permits. The delivery schedule is contingent upon securing all necessary licenses and permits.
(3)...Failure to obtain a required license or permit in sufficient time to permit delivery within the time set forth in the contract, and without the fault or negligence of the contracting parties, shall occasion an equitable adjustment in the delivery schedule.

XIII.**TAXES**
The prices shown do not include any taxes (sales, excise, use, etc...) or any government charges. Such taxes or charges applicable to the order will be paid by the Buyer except where specifically exempt by a certificate. Only when Catalytic Products International is registered to collect applicable taxes will such taxes be added to the invoice and collected by Catalytic Products International.

XIV.**NON-SOLICITATION**
Each party agrees that beginning on the contract acceptance date and for a period of twelve (12) months after final acceptance or earlier termination of this Agreement, it shall not (I) solicit, encourage, advise, induce or cause any employee of the other party [who worked directly or indirectly on the Services after the contract acceptance date] to terminate his or her employment with such party or any of its subsidiaries or Affiliates, nor provide any assistance, encouragement, information, or suggestion to any person or entity regarding the solicitation or hiring of any employee of the other party or any of its subsidiaries or Affiliates; or (ii) induce or attempt to induce any person, business or entity which is a supplier or customer of a party, or which otherwise is a contracting party with a party, to terminate any agreement with a party.

Yalartai, Bennett [DEP]

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Wednesday, December 13, 2023 2:33 PM
To: Yalartai, Bennett [DEP]
Cc: Ed Bash; mjackel@michelmanbricker.com; Lehberger, Art [DEP]; Agrawal, Sunila [DEP]; Wong, Danny [DEP]
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)
Attachments: 2023-1212_PJKD Howell Pour Off Emissions.xlsx

HI Bennett,

Here is the process description for how all drums are handled upon receipt:

- All drums arrive at PJKD sealed, with product labels on the drum and RCRA empty. The drums previously contained commercially used chemicals.
    - Drums contain varying VOC containing materials including oils, lubricants, flavors, fragrances, and other commercially used chemicals including a smaller subset (significantly lower than 1% of the total of drums processed) that contain HAPs such as toluene, xylenes, methyl methacrylate, ethylene glycol, hexane, and methanol.
- Once ready to be processed, the following steps are taken:
    - Drums are opened (i.e., bung is removed),
    - Residual liquid is poured off into a holding drum
    - Opened drum to be cleaned is loaded on conveyor which moves drum into the wash tunnel (vents to RTO)
    - Wash water tanks will also vent to the RTO
- Residual pour off liquid drums are sealed when full and shipped to a RCRA disposal facility where the materials are typically incinerated.
- PJKD estimates about 88 drums/month, or 1056 drums/year of residual liquid shipped off site for disposal.

Attached is a spreadsheet calculation that conservatively assumes that all residual liquid is methanol (which has a high vapor pressure). Emissions based on the actual number of residual drums +50% safety factor results in a total of 105.11 lb/yr. However, it is important to note that the reality is that there is a mixture of VOC and non-VOC containing drums processed and only a small subset (significantly lower than 1%) of the drums contained HAPs. Therefore, all potential HAP VOC emissions from the process are well below the reporting threshold for HAPs.

Feel free to call Ed or me to discuss further.

Happy Holidays!

Thank you,
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Friday, December 8, 2023 3:52 PM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Happy Holidays, Joe!

Just following up to quickly gage receipt confirmation of the Department's 30Nov2023 email.

Pls advise.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

From: Yalartai, Bennett [DEP]
Sent: Thursday, November 30, 2023 4:32 PM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Hope all's well.

Two reasons for this email. The first is to info we're in the process of finalizing the draft permit…pending clarification of whether the waste chemical drums contain HAPs, which is the second reason for this email. Specifically, the Department would like to know whether PJKD has established a profile of the HAP content of the waste chemicals based on the shipping manifests of the drums, and/or based on sampling data of the wash or wastewater?

The reason for this inquiry to ensure compliance with the rule requirements for speciating HAP raw materials in the permit application, with specific reference to the provisions of N.J.A.C. 7:27-8.4(l). See link below.

https://dep.nj.gov/wp-content/uploads/aqm/sub8.pdf

That said, if the waste chemical drums do not contain any HAPs, then pls confirm as such.

However, if they do contain HAPs and if a profile of the waste chemicals has been established, then pls submit the following:

1. PDF copies of the revised *raw material edit details* forms and *efficiency tables* correctly reflecting speciation of all HAPs for OS2 and OS3, respectively.
2. Revised PTE calculations Excel spreadsheet correctly reflecting speciation of all HAPs and their emissions to establish their portability, as required by N.J.A.C. 7:27-8.4(k) and m). See link above.

Pls respond asap, **on/before 15Dec2023**.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Wednesday, August 16, 2023 10:35 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hello Bennett,

Please see Patrick J Kelly Drum's responses to your information request:

- Full copy of RTO manufacturer specs, as I'm in possession of only 4 pages out of 27…
  - Please see the attached specifications file.
- Pls include proposed THC, CO, and NOx concs (ppmvd @ 15% or 7% O2), if data are absent from manufacturer specs…
  - 23.3 ppmv NO_x at 7% O_2 or 9.9 ppmv NO_x at 15% O_2
  - 38.8 ppmv CO at 7% O_2 or 16.5 ppmv CO at 15% O_2
  - The guarantee for VOC is listed on Page 26 of the specification sheet.
- Annual wastewater throughput (gals) from drum wash ops.
  - The **estimated annual** wash water throughput is as follows:
    - 78,000 gallons input (combination of rainwater collected and treated water)
    - Estimated 52,000 gallons removed and sent for treatment.
    - The evaporated water (delta of in/out) from both the tank and the wash process is vented to the RTO

- It is important to note that the wash water throughput values are strictly estimates. This is a brand-new system and final usage will not be known until it is up and running. Therefore, at this point, PJKD can only provide estimates.

Please let me know if you have any additional questions. We look forward to having an opportunity to review the pre-draft of the final permit.

Thank you!
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Friday, August 4, 2023 3:39 PM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Just following up on my voicemail with a request, to pls quickly send me the following info on/or before next Wednesday, 9Aug2023:

- Full copy of RTO manufacturer specs, as I'm in possession of only 4 pages out of 27…
- Pls include proposed THC, CO, and NOx concs (ppmvd @ 15% or 7% O2), if data are absent from manufacturer specs…
- Annual wastewater throughput (gals) from drum wash ops.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Wednesday, May 31, 2023 11:59 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP]

<Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

The updated RADIUS application along with the appropriate supporting documents (emission calculations, RTO specifications, washing station renderings) have been uploaded/certified/submitted via NJDEP Online. Please reach out with any questions that arise during your review.

Thanks!
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Thursday, May 18, 2023 11:30 AM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Joe,

Apologies for the miscommunication and inconvenience…

That said, I'd like to remind you that the two main reasons for the Department's 21Feb2023 email request (attached) were to **simply correct the emission unit** from your end and **address the minor RADIUS housekeeping issues**, as the Department was already in the process of drafting the permit… That the PDF copies of the minor revised *edit details* data, upon receipt, could be incorporated manually from our end, as the Department really wanted to **fast-track** the permit approval, as a **model** for the *drum reconditioning facilities source category* located not only in Camden but also in the State as a whole.

And the permit was on track to be approved late March or 1st week of April 2023.

But, surprisingly, you informed the Department that additional time was needed to gather all the requested items, as they were not available, and that you needed to contact the manufacturer(s)…

And given the voluminous info contained in your recent email attachments, the Department decided that, for the essence of time, a revised RADIUS permit application should be submitted, instead…

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

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From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Tuesday, May 16, 2023 10:36 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Bennett,

We can provide the updated RADIUS forms; however, it is important to point out that we were following your specific instructions on how to provide you with this information. If the data was desired in the now requested format, it should have been specified as such. This is very disappointing.

Joe Kwiatkowski

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Tuesday, May 16, 2023 10:22 AM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Thanks for the submittal…

However, given the voluminous info in the revised PDF edit details forms, and for the essence of time, pls submit a revised RADIUS permit application, accordingly.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html
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From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Tuesday, May 16, 2023 10:08 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

Please see some minor revisions to the response #1 below.

Thank you,
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Joe Kwiatkowski
Sent: Monday, May 15, 2023 4:29 PM
To: Bennett.Yalartai@dep.nj.gov
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny <Danny.Wong@dep.nj.gov>; Agrawal, Sunila <Sunila.Agrawal@dep.nj.gov>
Subject: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

Please see below (and attached) for responses to your questions and data requests. Please reach out if you want to discuss any of the details.

1. Detailed process descriptions for:
    a. the drum wash operation, with specific references to the process steps, number of wash tanks , max operating temp, and frequency and method of wastewater change outs
        i. Steps of drum washing;
            1. Separate the different types of drums, TH vs OH
            2. Pour off residuals into 55 gallon drums to be shipped off as haz. waste
            3. Place three drums onto the conveyor to the washer
            4. Drums cycle into the washer
            5. Drums are fully enclosed
            6. Drums get washed
            7. Drums exit washer
            8. Drums are rinsed
            9. Drums are inspected
            10. Drums are sent to be blasted
        ii. There are two tanks (one for each washer) that contain the wash water for the drum washers (see attachment “DWT100 – RT-500 Equipment Renderings.pdf” for rendering of wash system)
        iii. Each tank has a max temperature of 180 degrees
        iv. The wash water is changed out every two weeks

v. The used wash water (wastewater) is pumped into 275 gallon totes and bulk vacuum truck removes contents and takes off site for solidification & landfilling
vi. PJKD is presently acquiring NJPDES permits so the wastewater can be shipped over to their 1810 River Ave facility for wastewater treatment and reuse.

b. surface coating operations, with specific references to types of coatings (VOC and/or HAP VOC), flexibility on coating max VOC (in light of the installation of the catalytic thermal oxidizer), number of spray booths, annual coating usages, transfer efficiency and overspray, and reason for the absence of drying ovens.
   i. See calculation sheet for types of coatings
   ii. See calculation sheet for VOC content
   iii. There is one spray booth
   iv. Annual coating usage in calculation sheet along with transfer efficiency and overspray
   v. No drying oven required for type of coating.

2. PDF copies of the revised edit details correctly reflecting completion of all applicable fields for:
   a. Each E
      i. See attached
   b. Each CD
      i. See attached for Thermal Oxidizer details
   c. Each OS
      i. See attached files

3. PDF copy of the U-Inventory correctly reflecting:
   a. Proper listing of raw material coatings as group, if they're non-HAP VOCs, and speciation of each HAP VOC coating, if applicable
      i. See attached calculation sheet for paint details
   b. addition of OS for solvent cleaning of the spray booth
      i. the toluene utilized in the spray head cleaning is blended back into the paint

4. Revised electronic copy of the PTE calcs Excel spreadsheet correctly reflecting each OS and OS Summary
   a. PTE calculation sheet is attached, see "Attachment 3 - 20220930_PJKD RTO Permit Mod PTE.xlsx"

5. PDF copy of the manufacturer's specs for the thermal oxidizer
   a. See attached file "RTO Spec sheet 9-7-22.pdf"

Joseph J. Kwiatkowski
Managing Consultant

P 609.318.5500 D 609.336.9160 M 609.668.1779
15 Roszel Road, Suite 105, Princeton, NJ 08540
Email: jkwiatkowski@trinityconsultants.com | LinkedIn: www.linkedin.com/in/joseph-j-kwiatkowski

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Yalartai, Bennett [DEP]

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Wednesday, December 13, 2023 2:33 PM
To: Yalartai, Bennett [DEP]
Cc: Ed Bash; mjackel@michelmanbricker.com; Lehberger, Art [DEP]; Agrawal, Sunila [DEP]; Wong, Danny [DEP]
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)
Attachments: 2023-1212_PJKD Howell Pour Off Emissions.xlsx

HI Bennett,

Here is the process description for how all drums are handled upon receipt:

- All drums arrive at PJKD sealed, with product labels on the drum and RCRA empty. The drums previously contained commercially used chemicals.
    - Drums contain varying VOC containing materials including oils, lubricants, flavors, fragrances, and other commercially used chemicals including a smaller subset (significantly lower than 1% of the total of drums processed) that contain HAPs such as toluene, xylenes, methyl methacrylate, ethylene glycol, hexane, and methanol.
- Once ready to be processed, the following steps are taken:
    - Drums are opened (i.e., bung is removed),
    - Residual liquid is poured off into a holding drum
    - Opened drum to be cleaned is loaded on conveyor which moves drum into the wash tunnel (vents to RTO)
    - Wash water tanks will also vent to the RTO
- Residual pour off liquid drums are sealed when full and shipped to a RCRA disposal facility where the materials are typically incinerated.
- PJKD estimates about 88 drums/month, or 1056 drums/year of residual liquid shipped off site for disposal.

Attached is a spreadsheet calculation that conservatively assumes that all residual liquid is methanol (which has a high vapor pressure). Emissions based on the actual number of residual drums +50% safety factor results in a total of 105.11 lb/yr. However, it is important to note that the reality is that there is a mixture of VOC and non-VOC containing drums processed and only a small subset (significantly lower than 1%) of the drums contained HAPs. Therefore, all potential HAP VOC emissions from the process are well below the reporting threshold for HAPs.

Feel free to call Ed or me to discuss further.

Happy Holidays!

Thank you,
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Friday, December 8, 2023 3:52 PM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Happy Holidays, Joe!

Just following up to quickly gage receipt confirmation of the Department's 30Nov2023 email.

Pls advise.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html
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From: Yalartai, Bennett [DEP]
Sent: Thursday, November 30, 2023 4:32 PM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Hope all's well.

Two reasons for this email. The first is to info we're in the process of finalizing the draft permit…pending clarification of whether the waste chemical drums contain HAPs, which is the second reason for this email. Specifically, the Department would like to know whether PJKD has established a profile of the HAP content of the waste chemicals based on the shipping manifests of the drums, and/or based on sampling data of the wash or wastewater?

The reason for this inquiry to ensure compliance with the rule requirements for speciating HAP raw materials in the permit application, with specific reference to the provisions of N.J.A.C. 7:27-8.4(l). See link below.

https://dep.nj.gov/wp-content/uploads/aqm/sub8.pdf

That said, if the waste chemical drums do not contain any HAPs, then pls confirm as such.

However, if they do contain HAPs and if a profile of the waste chemicals has been established, then pls submit the following:

1. PDF copies of the revised *raw material edit details* forms and *efficiency tables* correctly reflecting speciation of all HAPs for OS2 and OS3, respectively.
2. Revised PTE calculations Excel spreadsheet correctly reflecting speciation of all HAPs and their emissions to establish their portability, as required by N.J.A.C. 7:27-8.4(k) and m). See link above.

Pls respond asap, **on/before 15Dec2023**.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Wednesday, August 16, 2023 10:35 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hello Bennett,

Please see Patrick J Kelly Drum's responses to your information request:

- Full copy of RTO manufacturer specs, as I'm in possession of only 4 pages out of 27…
  - Please see the attached specifications file.
- Pls include proposed THC, CO, and NOx concs (ppmvd @ 15% or 7% O2), if data are absent from manufacturer specs…
  - 23.3 ppmv NO_x at 7% O_2 or 9.9 ppmv NO_x at 15% O_2
  - 38.8 ppmv CO at 7% O_2 or 16.5 ppmv CO at 15% O_2
  - The guarantee for VOC is listed on Page 26 of the specification sheet.
- Annual wastewater throughput (gals) from drum wash ops.
  - The **estimated annual** wash water throughput is as follows:
    - 78,000 gallons input (combination of rainwater collected and treated water)
    - Estimated 52,000 gallons removed and sent for treatment.

        - The evaporated water (delta of in/out) from both the tank and the wash process is vented to the RTO
    - It is important to note that the wash water throughput values are strictly estimates. This is a brand-new system and final usage will not be known until it is up and running. Therefore, at this point, PJKD can only provide estimates.

Please let me know if you have any additional questions. We look forward to having an opportunity to review the pre-draft of the final permit.

Thank you!
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Friday, August 4, 2023 3:39 PM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Lehberger, Art [DEP] <Art.Lehberger@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Just following up on my voicemail with a request, to pls quickly send me the following info on/or before next Wednesday, 9Aug2023:

- Full copy of RTO manufacturer specs, as I'm in possession of only 4 pages out of 27…
- Pls include proposed THC, CO, and NOx concs (ppmvd @ 15% or 7% O2), if data are absent from manufacturer specs…
- Annual wastewater throughput (gals) from drum wash ops.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Wednesday, May 31, 2023 11:59 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>

Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

The updated RADIUS application along with the appropriate supporting documents (emission calculations, RTO specifications, washing station renderings) have been uploaded/certified/submitted via NJDEP Online. Please reach out with any questions that arise during your review.

Thanks!
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Thursday, May 18, 2023 11:30 AM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>; Dziewa, Krystian [DEP] <Krystian.Dziewa@dep.nj.gov>; Meisner, Shirley [DEP] <Shirley.Meisner@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Joe,

Apologies for the miscommunication and inconvenience…

That said, I'd like to remind you that the two main reasons for the Department's 21Feb2023 email request (attached) were to **simply correct the emission unit** from your end and **address the minor RADIUS housekeeping issues**, as the Department was already in the process of drafting the permit… That the PDF copies of the minor revised *edit details* data, upon receipt, could be incorporated manually from our end, as the Department really wanted to **fast-track** the permit approval, as a **model** for the *drum reconditioning facilities source category* located not only in Camden but also in the State as a whole.

And the permit was on track to be approved late March or 1st week of April 2023.

But, surprisingly, you informed the Department that additional time was needed to gather all the requested items, as they were not available, and that you needed to contact the manufacturer(s)…

And given the voluminous info contained in your recent email attachments, the Department decided that, for the essence of time, a revised RADIUS permit application should be submitted, instead…

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

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From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Tuesday, May 16, 2023 10:36 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Bennett,

We can provide the updated RADIUS forms; however, it is important to point out that we were following your specific instructions on how to provide you with this information. If the data was desired in the now requested format, it should have been specified as such. This is very disappointing.

Joe Kwiatkowski

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Sent: Tuesday, May 16, 2023 10:22 AM
To: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Joe,

Thanks for the submittal…

However, given the voluminous info in the revised PDF edit details forms, and for the essence of time, pls submit a revised RADIUS permit application, accordingly.

Thanks,

Bennett M. Yalartai
Environmental Engineer 3
Bureau of Stationary Sources
Tel: 609-633-8253
Email: bennett.yalartai@dep.nj.gov
http://www.nj.gov/dep/aqes/index.html

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From: Joe Kwiatkowski <JKwiatkowski@trinityconsultants.com>
Sent: Tuesday, May 16, 2023 10:08 AM
To: Yalartai, Bennett [DEP] <Bennett.Yalartai@dep.nj.gov>
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny [DEP] <Danny.Wong@dep.nj.gov>; Agrawal, Sunila [DEP] <Sunila.Agrawal@dep.nj.gov>
Subject: [EXTERNAL] RE: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

Please see some minor revisions to the response #1 below.

Thank you,
Joe

Joseph J. Kwiatkowski
Trinity Consultants
P 609.318.5500 D 609.336.9160 M 609.668.1779

From: Joe Kwiatkowski
Sent: Monday, May 15, 2023 4:29 PM
To: Bennett.Yalartai@dep.nj.gov
Cc: Ed Bash <ed.bash@kellydrums.com>; mjackel@michelmanbricker.com; Wong, Danny <Danny.Wong@dep.nj.gov>; Agrawal, Sunila <Sunila.Agrawal@dep.nj.gov>
Subject: Request for Additional Infor for Patrick J Kelly Drums Pending Permit Application (PI 50895)

Hi Bennett,

Please see below (and attached) for responses to your questions and data requests. Please reach out if you want to discuss any of the details.

1. Detailed process descriptions for:
    a. the drum wash operation, with specific references to the process steps, number of wash tanks , max operating temp, and frequency and method of wastewater change outs
        i. Steps of drum washing;
            1. Separate the different types of drums, TH vs OH
            2. Pour off residuals into 55 gallon drums to be shipped off as haz. waste
            3. Place three drums onto the conveyor to the washer
            4. Drums cycle into the washer
            5. Drums are fully enclosed
            6. Drums get washed
            7. Drums exit washer
            8. Drums are rinsed
            9. Drums are inspected
            10. Drums are sent to be blasted
        ii. There are two tanks (one for each washer) that contain the wash water for the drum washers (see attachment “DWT100 – RT-500 Equipment Renderings.pdf” for rendering of wash system)
        iii. Each tank has a max temperature of 180 degrees
        iv. The wash water is changed out every two weeks

v. The used wash water (wastewater) is pumped into 275 gallon totes and bulk vacuum truck removes contents and takes off site for solidification & landfilling
vi. PJKD is presently acquiring NJPDES permits so the wastewater can be shipped over to their 1810 River Ave facility for wastewater treatment and reuse.

b. surface coating operations, with specific references to types of coatings (VOC and/or HAP VOC), flexibility on coating max VOC (in light of the installation of the catalytic thermal oxidizer), number of spray booths, annual coating usages, transfer efficiency and overspray, and reason for the absence of drying ovens.
   i. See calculation sheet for types of coatings
   ii. See calculation sheet for VOC content
   iii. There is one spray booth
   iv. Annual coating usage in calculation sheet along with transfer efficiency and overspray
   v. No drying oven required for type of coating.

2. PDF copies of the revised edit details correctly reflecting completion of all applicable fields for:
   a. Each E
      i. See attached
   b. Each CD
      i. See attached for Thermal Oxidizer details
   c. Each OS
      i. See attached files

3. PDF copy of the U-Inventory correctly reflecting:
   a. Proper listing of raw material coatings as group, if they're non-HAP VOCs, and speciation of each HAP VOC coating, if applicable
      i. See attached calculation sheet for paint details
   b. addition of OS for solvent cleaning of the spray booth
      i. the toluene utilized in the spray head cleaning is blended back into the paint

4. Revised electronic copy of the PTE calcs Excel spreadsheet correctly reflecting each OS and OS Summary
   a. PTE calculation sheet is attached, see "Attachment 3 - 20220930_PJKD RTO Permit Mod PTE.xlsx"

5. PDF copy of the manufacturer's specs for the thermal oxidizer
   a. See attached file "RTO Spec sheet 9-7-22.pdf"

Joseph J. Kwiatkowski
Managing Consultant

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