

Department of
Environmental Protection
Division of Air Resource Management

**SUBMITTED APPLICATION REPORT
APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE**

Application Number: 4801- 1
Application Name: CONTANDA AC PERMIT
Date Submitted: 21 February 2017

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: CONTANDA TERMINALS LLC	
2. Site Name: JACKSONVILLE TERMINAL	
3. Facility Identification Number: <input type="checkbox"/> Unknown	
4. Facility Location:	
Street Address or Other Locator:	The Facility is located within the Jacksonville Port Authority Talleyrand Marine Terminal. 2701 TALLEYRAND AVE.
City: JACKSONVILLE	County: DUVAL Zip Code: 32206
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Permitted Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Application Contact

1.	Application Contact Name: ALEX SEASE	Application Contact Job Title: Terminal Manager
2.	Application Contact Mailing Address: Organization/Firm: CONTANDA TERMINALS LLC Street Address: 2701 TALLEYRAND AVE. City: JACKSONVILLE State: FL Zip Code: 32206	
3.	Application Contact Telephone Numbers: Telephone: (904) 356-3311 ext. Fax: (904) 353-7613	
Application Contact Email Address: asease@contanda.com		

Purpose of Application**Air Operation Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

- Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.
- Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.
- Current construction permit number:
- Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.
- Current construction permit number:
- Operation permit number to be revised:
- Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.
- Current operation/construction permit number(s):
- Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.
- Operation permit number to be revised:
- Reason for revision:

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative Statement

1.	Owner/Authorized Representative Name: ALEX SEASE	Owner/Authorized Representative Job Title: Terminal manager
2.	Owner/Authorized Representative Mailing Address: Organization/Firm: CONTANDA TERMINALS LLC Street Address: 2701 TALLEYRAND AVE City: JACKSONVILLE State: FL Zip Code: 32206	
3.	Owner/Authorized Representative Telephone Numbers: Telephone: (904) 356-3311 ext. Fax: (904) 353-7613	
Owner/Authorized Representative Email Address: asease@contanda.com		
4.	<p>Owner/Authorized Representative Statement:</p> <p>By entering my PIN below, I certify that I am the owner or authorized representative of the facility addressed in this application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of the facility or any permitted emissions unit.</p>	

Professional Engineer Certification

1.	Professional Engineer Name: ROBERT FOX Registration Number: 40980	Professional Engineer Job Title: Principal Consultant
2.	Professional Engineer Mailing Address: Organization/Firm: ENVIRONMENTAL RESOURCES MANAGEMENT Street Address: 10210 HIGHLAND MANOR DR. SUITE 140 City: TAMPA State: FL Zip Code: 33610-9150	
3.	Professional Engineer Telephone Numbers: Telephone: (813) 357-3865 ext. Fax: (888) 831-1641	
	Professional Engineer Email Address: bob.fox@erm.com	
4.	Professional Engineer Statement: I hereby certify, except as particularly noted herein*, that: (1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application. If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here <input checked="" type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application. If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit. * Explain any exception to the certification statement.	

Professional Engineer Exception Statement:

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Permit Type
	Soil Fumigant Handling System	AC1F

Note: The fee calculation information associated with this application may be accessed from the Main Menu of ESPAP.

Construction/Modification Information

- | | |
|----|---|
| 1. | Description of Proposed Project or Alterations:
This is an existing facility seeking authorization for current operations. |
| 2. | Projected or Actual Date of Commencement of Construction: 16-FEB-17 |
| 3. | Projected Date of Completion of Construction: 16-FEB-17 |

Application Comment

This application is being submitted to obtain an after-the fact Air Construction Permit authorizing continued operation of the existing emission sources at Contanda's bulk liquids distribution terminal in Jacksonville, Florida. The application attachments describe the facility and discuss its permitting status.

Facility Contact Email Address: asease@contanda.com

Facility Regulatory Classifications

Check all that apply:

1.	<input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2.	<input checked="" type="checkbox"/> Synthetic Non-Title V Source?	
3.	<input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4.	<input checked="" type="checkbox"/> Synthetic Minor Source of HAPs?	
5.	<input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
6.	<input type="checkbox"/> One or More Emissions Units Subject to NESHAP Recordkeeping or Reporting?	
12.	Facility Regulatory Classifications Comment: Please refer to Attachment FS-4 for further detail.	

Rule Applicability Analysis

Please refer to Attachment FS-4 for further detail.

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Class.	3. Requested Emissions Cap lb/hour tons/year		4. Basis for Emissions Cap	5. Pollutant Comment
H064	SM		3.81	OTHER	Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.
HAPS	SM		3.94	OTHER	Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.
VOC	B				Facility emissions are limited by the maximum soil fumigant throughput as defined by the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.

C. FACILITY SUPPLEMENTAL INFORMATION**Supplemental Requirements**

1. Area Map Showing Facility Location <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Waiver Requested <input checked="" type="checkbox"/> Attachment
2. Facility Plot Plan <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Waiver Requested <input checked="" type="checkbox"/> Attachment
3. Process Flow Diagram(s) <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Waiver Requested <input checked="" type="checkbox"/> Attachment
4. Precautions to Prevent Emissions of Unconfined Particulate Matter <input type="checkbox"/> Applicable <input type="checkbox"/> Waiver Requested <input type="checkbox"/> Attachment
5. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Applicable <input checked="" type="checkbox"/> Attachment
6. Supplemental Information Comment: 1. The Jacksonville terminal operations generate negligible amounts of unconfined particulate matter (PM). The facility property is entirely paved or covered with buildings or tanks and has no unpaved traffic areas that could generate unconfined PM. Therefore, no special precautions to prevent PM emissions are warranted. 2. Attachment FS-4 "Air Permitting Compliance Assessment" describes the facility operations, identifies the facility emission sources, presents the calculated facility emissions, and summarizes the applicability of Florida's air quality regulations to the facility operations.

Facility Attachments

Supplemental Item	Electronic File Name	Attachment Description	Electronic Document	Date Uploaded
Area Map Showing Facility Location	ATT FS-1 Area Map.pdf	Attachment FS-1 Area Map	Yes	02/16/2017
Facility Plot Plan	ATT FS-2 Facility Plot Plan.pdf	Attachment FS-2 Facility Plot Plan	Yes	02/16/2017
Process Flow Diagram (s)	ATT FS-3 Process Flow Diagram.pdf	Attachment FS-3 Process Flow Diagram	Yes	02/16/2017
Supplemental Information for Construction Permit Application	ATT FS-4 Air Permitting Compliance Assessment.pdf	Attachment FS-4 Air Permitting Compliance Assessment	Yes	02/16/2017

III. EMISSIONS UNIT INFORMATION
A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in this Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>		
<p>2. Description of Emissions Unit Addressed in this Section: Soil Fumigant Handling System</p>		
<p>3. Emissions Unit Identification Number: <input checked="" type="checkbox"/> No ID ID:</p>		
<p>4. Emissions Unit Status Code: A - Active</p>	<p>5. Initial Startup Date: 01-JAN-96</p>	<p>6. Emissions Unit Major Group SIC Code: 42</p>
<p>7. Emissions Unit Comment: This unit consists of Tank #826 and associated piping, pumps, valves, flanges, and loading equipment used to handle a commercial soil fumigant comprised mostly of 1,3-dichloropropene (97.5%).</p>		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Tank 826		2. Emission Point Type Code: 3 - A configuration of multiple emission points serving a single emissions unit	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: (W) A VERTICAL STACK WITH A WEATHER CAP OR SIMILAR OBSTRUCTION IN THE EXHAUST STREAM		6. Stack Height: 33 feet	7. Exit Diameter: .5 feet
8. Exit Temperature: 77° F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: 4 feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment: Emission points for this unit include the tank conservation vent (information provided above) and fugitive emissions from handling equipment (piping, pumps, valves, flanges, and loading racks).			

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): Tank 826 Storage		
2. Source Classification Code (SCC): 40706097	3. SCC Units: 1000 Gallon-Years Halogenated Organic Storage Capacity	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: 506.87
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Soil fumigant comprised mostly of 1,3 dicloropropene (97.5%).		
Is this a valid segment? Yes		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): Tank 826 Throughput		
2. Source Classification Code (SCC): 40706098	3. SCC Units: 1000 Gallons Halogenated Organic Throughput	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: 2590
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Soil fumigant comprised mostly of 1,3 dicloropropene (97.5%).		
Is this a valid segment? Yes		

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): Fugitives - Equipment Leaks		
2. Source Classification Code (SCC): 40880001	3. SCC Units: Each-Year Facility Operating	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: 1
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Fugitive losses associated with leaks from equipment associated with the handling of soil fumigant.		
Is this a valid segment? Yes		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): Fugitives - Loading Losses		
2. Source Classification Code (SCC): 40899999	3. SCC Units: 1000 Gallons Liquid Transferred	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: 2590
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Fugitive losses associated with the unloading/loading of soil fumigant from marine vessels, railcars, tanker trucks, and ISO containers.		
Is this a valid segment? Yes		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emittted: H064 - 1,3-Dichloropropene		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: 88 - CONSERVATION VENT	4. Secondary Control Device Code: 47 - VAPOR RECOVERY SYSTEM (INCL. CONDENSER, HOODING/OTHER ENCL.)		5. Total Percent Efficiency of Control:
6. Potential Emissions: lb/hour 3.81 tons/year		7. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8. Emission Factor: Reference:		9. Emissions Method Code: (3B) CALCULATED USING EMISSION FACTOR FROM AP-42/FIRE SYSTEM OR OTHER PUBLISHED EMISSIONS CALCULATION SOURCE.	
10. Calculation of Emissions: See the attached emission calculations.			
11. Pollutant Potential Emissions Comment: Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: (OTHER) Requested by applicant for other reasons (Explain in comment field)	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.81 TONS/YEAR	4. Equivalent Allowable Emissions: lb/hour 3.81 tons/year
5. Method of Compliance: Throughput limit	
6. Allowable Emissions Comment (Description of Operating Method): Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.	

Potential Emissions

1. Pollutant Emitted: HAPS - Total Hazardous Air Pollutants		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: 88 - CONSERVATION VENT	4. Secondary Control Device Code: 47 - VAPOR RECOVERY SYSTEM (INCL. CONDENSER, HOODING/OTHER ENCL.)		5. Total Percent Efficiency of Control:
6. Potential Emissions: lb/hour 3.81 tons/year		7. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8. Emission Factor: Reference:		9. Emissions Method Code: (3B) CALCULATED USING EMISSION FACTOR FROM AP-42/FIRE SYSTEM OR OTHER PUBLISHED EMISSIONS CALCULATION SOURCE.	
10. Calculation of Emissions: See the attached emission calculations.			
11. Pollutant Potential Emissions Comment: Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: (OTHER) Requested by applicant for other reasons (Explain in comment field)	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.81 TONS/YEAR	4. Equivalent Allowable Emissions: lb/hour 3.81 tons/year
5. Method of Compliance: Throughput limit	
6. Allowable Emissions Comment (Description of Operating Method): Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.	

Potential Emissions

1. Pollutant Emitted: VOC - Volatile Organic Compounds		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: 88 - CONSERVATION VENT	4. Secondary Control Device Code: 47 - VAPOR RECOVERY SYSTEM (INCL. CONDENSER, HOODING/OTHER ENCL.)		5. Total Percent Efficiency of Control:
6. Potential Emissions: lb/hour 3.81 tons/year		7. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8. Emission Factor: Reference:		9. Emissions Method Code: (3B) CALCULATED USING EMISSION FACTOR FROM AP-42/FIRE SYSTEM OR OTHER PUBLISHED EMISSIONS CALCULATION SOURCE.	
10. Calculation of Emissions: See the attached emission calculations.			
11. Pollutant Potential Emissions Comment: Facility emissions are limited by the maximum soil fumigant throughput defined as the current base customer contract volume plus a 5% annual increase on this volume for the 5-year term of the permit.			

Allowable Emissions

No Pollutant Allowable Emissions information submitted.

E. VISIBLE EMISSIONS INFORMATION

(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

<p>1. Visible Emissions Subtype: VE20 - VISIBLE EMISSIONS - 20% NORMAL OPACITY</p>	<p>2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other</p>
<p>3. Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: 20% Maximum Period of Excess Opacity Allowed: min/hour</p>	
<p>4. Method of Compliance: EPA METHOD 9</p>	
<p>5. Visible Emissions Comment: General Pollutant Emission Limiting Standard at Chapter 62-296.320(4)(b), FAC.</p>	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

No Continuous Monitoring information submitted.

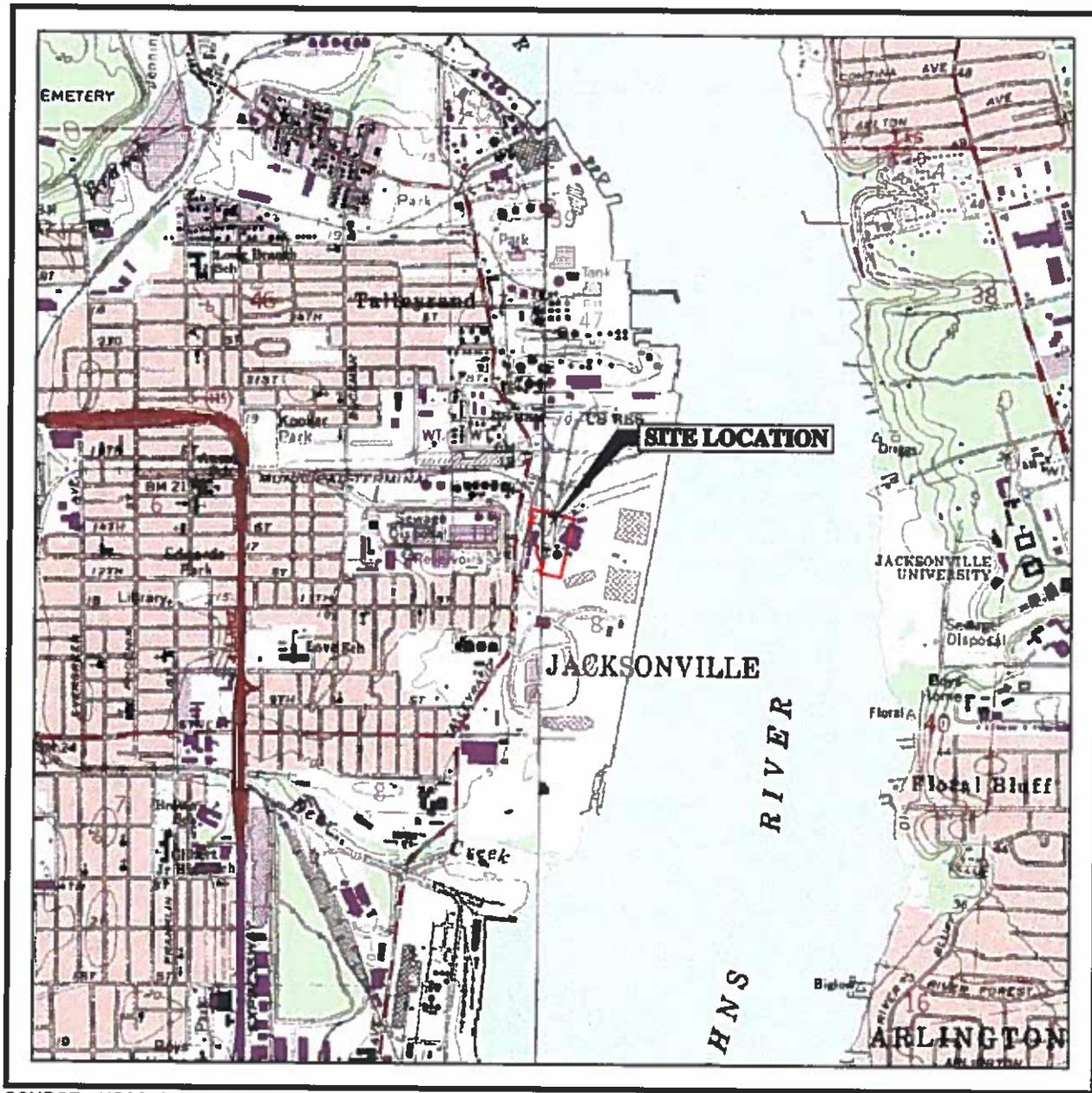
G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**Supplemental Requirements**

1. Process Flow Diagram	<input type="checkbox"/> Applicable	<input type="checkbox"/> Waiver Requested	<input type="checkbox"/> Attachment
2. Fuel Analysis or Specification	<input type="checkbox"/> Applicable	<input type="checkbox"/> Waiver Requested	<input type="checkbox"/> Attachment
3. Detailed Description of Control Equipment	<input type="checkbox"/> Applicable	<input type="checkbox"/> Waiver Requested	<input type="checkbox"/> Attachment
4. Description of Stack Sampling Facilities	<input type="checkbox"/> Applicable	<input type="checkbox"/> Waiver Requested	<input type="checkbox"/> Attachment
5. Compliance Test Report	<input type="checkbox"/> Applicable	<input type="checkbox"/> Previously Submitted, Date:	<input type="checkbox"/> Attachment
6. Procedures for Startup and Shutdown	<input type="checkbox"/> Applicable	<input type="checkbox"/> Waiver Requested	<input type="checkbox"/> Attachment
7. Operation and Maintenance Plan	<input type="checkbox"/> Applicable	<input type="checkbox"/> Waiver Requested	<input type="checkbox"/> Attachment
8. Supplemental Information for Construction Permit Application	<input checked="" type="checkbox"/> Applicable		<input checked="" type="checkbox"/> Attachment
9. Other Information Required by Rule or Statute	<input type="checkbox"/> Applicable		<input type="checkbox"/> Attachment
10. Supplemental Requirements Comment:	See the attachments to the Facility Supplemental Information section for relevant facility and rule applicability information. The facility potential to emit calculations are attached to this section.		

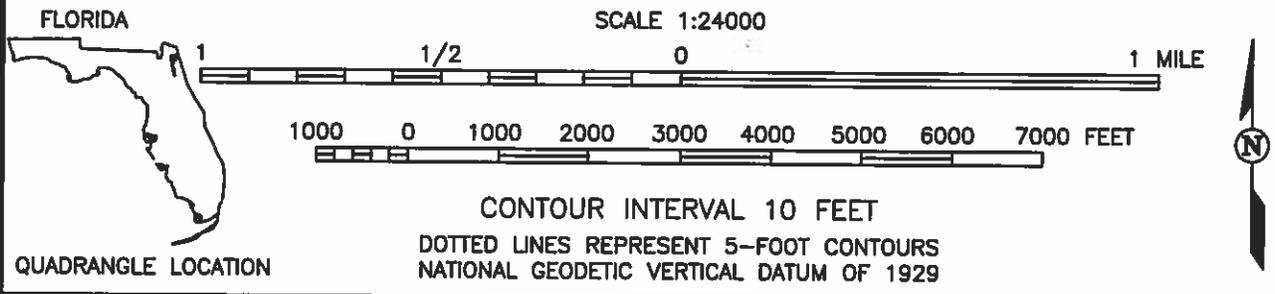
Emission Unit Attachments

Supplemental Item	Electronic File Name	Attachment Description	Electronic Document	Date Uploaded
Supplemental Information for Construction Permit Application	ATT EU-1 Terminal Potential To Emit (PTE).xlsx	Attachment EU-1 Terminal Potential to Emit (PTE) Calculations	Yes	02/16/2017

PROJECTS\0358867 WESTWAY\0358867 SITE FIGS.DWG 12/13/16 YAT REV



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: ARLINGTON, FLORIDA - 1992.

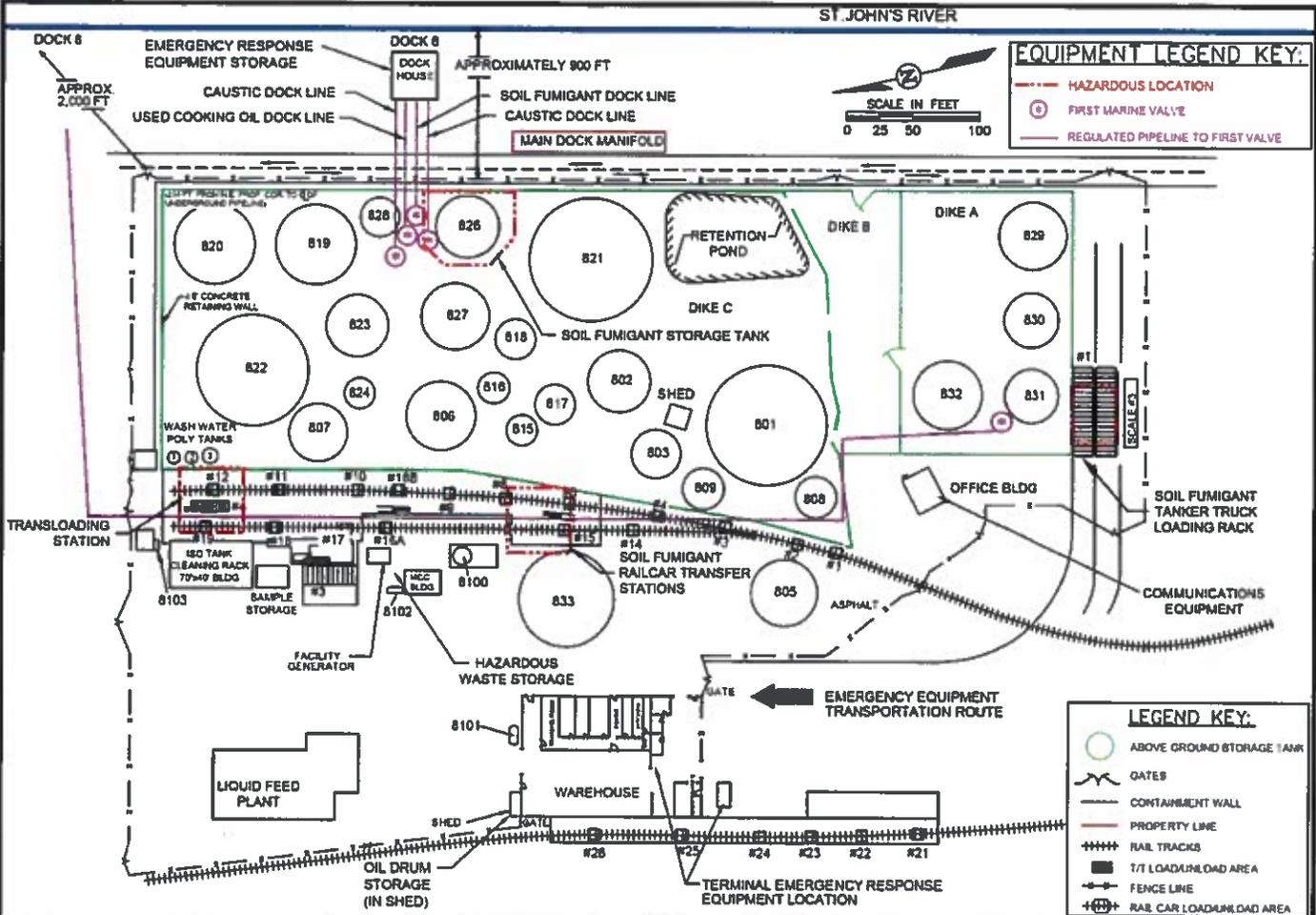



Environmental Resources Management

AREA MAP
CONTANDA TERMINALS, LLC
JACKSONVILLE BULK LIQUID TERMINAL
2701 TALLEYRAND AVE., JACKSONVILLE, FLORIDA

ATTACHMENT
FS-1

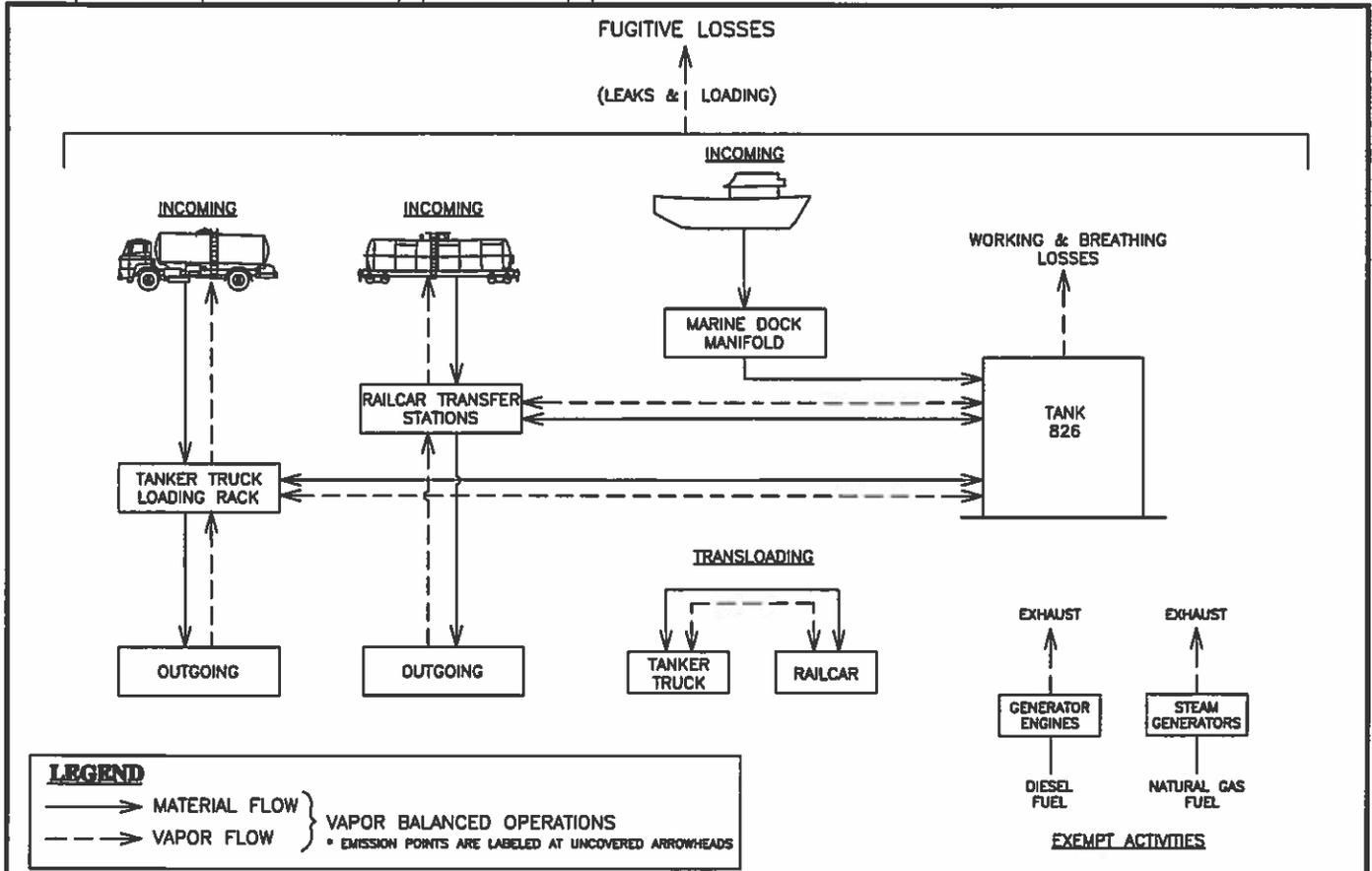
PROJECTS\0358887 WESTMAN\0358887 SITE PROSING 12/13/18 VMT REV



Environmental Resources Management


FACILITY PLOT PLAN
CONTANDA TERMINALS, LLC
JACKSONVILLE BULK LIQUID TERMINAL
2701 TALLEYRAND AVB., JACKSONVILLE, FLORIDA

ATTACHMENT
FS-2



**Environmental
Resources
Management**

10210 Highland Manor Dr.
Suite 140
Tampa, FL 33610

(813) 357-3888
(813) 831-1641 (fax)

February 15, 2017
Project No. 0358867

Mr. Terry Duplantis
Vice President of HSSE
Contanda LLC
1111 Bagby Street, Suite 1800
Houston, TX 77002



RE: Air Permitting Compliance Assessment

Dear Terry:

Environmental Resources Management-Southeast, Inc. (ERM) has completed an air permitting compliance assessment of the bulk liquids distribution terminal operated by Contanda Terminals LLC (Contanda) in Jacksonville, Florida (the Site). The assessment was completed in order to provide Contanda with information needed to determine the applicable air pollution control regulatory and permitting requirements for the Site. The assessment was specifically focused on the requirements for the soil fumigant storage tank (Tank 826) at the Site, but other existing Site operations were considered as well. Our assessment was based on the following ERM project activities:

- Inspection of the site operations to ensure proper understanding of the facility operations and to identify the data needs for the project;
- Calculation of the potential to emit (PTE) for the facility operations using information obtained from the facility; and
- Evaluation of air permitting requirements for the observed facility operations and calculated PTE.

The results of these activities are documented in this letter report, which summarizes Site operations, identifies potential air-emission sources, presents the PTE calculations and basis, and evaluates the Site air permitting status.

FACILITY OPERATIONS

Contanda operates a bulk liquid distribution terminal located in the Jacksonville Port Authority Talleyrand Marine Terminal, with a Site address of 2701 Talleyrand Avenue, Jacksonville, Florida. The Site is a storage and distribution facility for commercial chemical products including caustic soda, various acids, crude tall oil, black liquor, molasses, vegetable oils, and the soil fumigant.

Products are brought into the terminal via marine vessel, railcar, tanker trucks, and intermodal tank (ISO) containers. These units are off-loaded through the marine dock manifold located adjacent to Docks 6 or 8; through the thirteen railcar transfer stations located along the east-west rail spur on the Site; or through the four truck loading bays located throughout the terminal. Unloaded product is pumped directly into the facility's twenty-three active storage tanks (see Attachment 1) or directly off-loaded from railcar into a tanker truck or ISO container (i.e., transloaded). Product is shipped from the terminal by railcar through the railcar transfer stations, by tanker truck through the truck loading racks, or by ISO container.

Tank 826 is a 506,870 gallon tank dedicated to the storage and distribution of a commercial soil fumigant used for control of all major species of nematodes. This soil fumigant is comprised primarily of 1,3 dichloropropene (up to 97.5%), which is both a volatile organic compound (VOC) and a hazardous air pollutant (HAP). The tank was field erected (52' diameter; 32' high) in 1996 with a fixed dome roof, a conservation vent, and an emergency relief manway. It is nitrogen blanketed, with a minimum regulated pressure. Incoming soil fumigant is received from marine vessels through a welded steel pipeline from the marine dock manifold; from railcars through vapor-balanced loading lines via two (2) dedicated railcar transfer stations (#15-active and #6-inactive); or through vapor-balanced loading lines via one (1) dedicated tanker truck loading rack (#1). Outgoing soil fumigant is loaded into railcars using the vapor-balanced loading lines to the dedicated railcar transfer stations and into tanker trucks using the vapor-balanced loading lines to the dedicated truck loading rack.

EMISSION SOURCES

ERM visited the Site to review the facility operations and meet with facility personnel to identify the facility emission sources and the information needed to estimate emissions from significant sources. During the site visit, ERM recorded process equipment configurations and capacity information and Contanda subsequently supplied requested information related to terminal capacities and throughputs, materials handled, and safety data sheets.

Current terminal operations determined by the Site and ERM to be emission sources are briefly described as follows:

- Tank 826 emissions, including standing and breathing losses associated with the handling of soil fumigant.
- Fugitive emissions, including equipment leak and loading losses associated with the movement of soil fumigant between marine vessels, railcars, tanker trucks, and the storage tank.
- Transloading losses, including equipment leak and loading losses associated with the transfer of isopropyl alcohol (IPA) from railcars into tanker trucks (*Note: the Site also transloads coconut palm kernel fatty acid distillate, but emissions from this activity are considered to be de minimis*).

- Steam generators (2 natural gas-fired units).
- Stationary emergency generator engines (2 diesel-fired units).
- Other tank emissions, including sulfuric acid, caustic soda, tall oil products, vegetable oils, molasses, wash waters, and vehicle fuel tanks.

Air pollutant emissions for potentially significant emission sources have been estimated based on the facility process equipment design ratings and the overall maximum facility throughput rates as provided by Contanda. Emissions were not calculated for several of these sources as these are considered to be de minimis based on the following rationale:

- The emergency generator engines are only operated to allow for equipment exercising, maintenance, and testing such that the generators are designated as emergency engines (≤ 100 hours per year).
- The other tanks handle inorganic materials (acids and bases) or organic materials with high molecular weights, high boiling points, and low vapor pressures that will not result in significant emissions during normal handling (including heated materials).

Emissions calculations were performed using agency accepted methods, with appropriate documentation of the emissions estimating techniques used for the inventory. The estimated emissions for the Jacksonville terminal are summarized as follows and presented in Attachment 1:

Table 1 - Annual Potential to Emit Emissions Summary

Emission Source	Actual Average (TPY)			5-Year Potential (TPY)			PM	SO2	NOx	CO
	VOC	SF	THAP	VOC	SF	THAP				
Soil Fumigant Storage Tank	2.28	2.28	2.28	3.38	3.38	3.38	NE	NE	NE	NE
Soil Fumigant Handling Fugitive	0.25	0.25	0.25	0.43	0.43	0.43	NE	NE	NE	NE
IPA Transloading	0.78	NE	NE	0.78	NE	NE	NE	NE	NE	NE
Steam Generators	0.38	NE	0.13	0.38	NE	0.13	0.52	0.04	6.90	5.80
Emergency Generators	0.10	NE	0.001	0.10	NE	0.001	0.01	0.08	1.28	0.28
Other Facility Tanks	DM	NE	DM	DM	NE	DM	DM	DM	NE	NE
Potential Facility Emissions	3.79	2.53	2.66	5.07	3.81	3.94	0.53	0.12	8.18	6.08
Unit Exemption Criteria	5.00	0.50	1.25	5.00	0.50	1.25	5.00	5.00	5.00	5.00
Facility Exemption Criteria	10.00	1.00	2.50	10.00	1.00	2.50	10.00	25.00	25.00	10.00

Facility throughputs considered include the following:

- Actual Average = average recorded throughput shipped for the period of 2006 to 2015 (10 years).
- 5-Year Potential = current terminal contract basis (2,027,480 gal/yr) plus 5% annual increase for 5 year term of the permit.

TPY = Tons per year

NE = Not emitted

DM = de minimis

VOC = Volatile organic compounds

SF = 1,3 dichloropropene (97.5%)

THAP = Total hazardous air pollutant

PM = Particulate matter (All <1 microns)

SO2 = Sulfur dioxide

NOx = Nitrogen oxide

CO = Carbon monoxide

NE = Not Emitted

DM = De Minimus

Generic unit and facility exemption criteria pursuant to Chapter 62-210.300(3)(b)1 and (3)(b)2, FAC.

REGULATORY APPLICABILITY ANALYSIS

The Site is not currently authorized for the above emissions under a State of Florida air construction or operation permit. The permitting status of the soil fumigant tank was previously disclosed to the City of Jacksonville (COJ) in a 2005 letter and was exempted from permitting in January 27, 2006 correspondence. This exemption was based on the premise that Tank 826 operates as a zero-emissions unit, with all tank inputs and outputs vapor balanced to essentially eliminate tank-related emissions. However, a change of corporate management prompted Contanda to commission compliance reviews for several of its operating facilities and the Jacksonville review revealed that the above exemption basis is only partially accurate. The Tank 826 outputs and the railcar inputs are in fact vapor-balanced, but the marine inputs are not vapor-balanced and the tank itself is vented through a conservation vent under excess pressure conditions. Based on this review finding and the above-estimated emissions for the facility, it has been concluded that permit authorization is required for the Jacksonville terminal.

The regulatory status of each potential emission source identified at the Jacksonville terminal has been evaluated in light of the nature of the emitting activity and the estimated potential emissions from each source. Potential sources determined to produce *de minimis* emissions are exempt from Florida air quality regulations pursuant to Chapter 62-4.040(1)(b), Florida Administrative Code (FAC) and/or Chapter 62-210.300(3), FAC. The status determination and supporting rule applicability analysis for the identified sources are presented in Table 2 as follows:

Table 2 - Unit-Specific Rule Applicability Analysis

Emission Source	Regulatory Status	Rule Applicability Analysis
Soil Fumigant Storage Tank	Not Exempt	Generic unit exemption criteria at Chapter 62-210.300(b)1, FAC exceeded → VOC emissions > 5.0 TPY; 1,3 dichloropropene (HAP) emissions > 1,000 lbs/yr.
Soil Fumigant Handling Fugitive	Not Exempt	Generic unit exemption criteria at Chapter 62-210.300(b)1, FAC exceeded → 1,3 dichloropropene (HAP) emissions > 1,000 lbs/yr.
IPA Transloading	Exempt	Generic unit exemption pursuant to Chapter 62-210.300(b)1, FAC → VOC emissions < 5.0 TPY.
Steam Generators	Exempt	Categorical exemption pursuant to Chapter 62-210.300(a)34, FAC → heat input capacity < 250 MMBtu/hr (total) and max fuel consumption < 150 MMscf/yr (each).
Emergency Generators	Exempt	Categorical exemption pursuant to Chapter 62-210.300(a)35, FAC → max fuel consumption < 64,000 gal/yr diesel fuel (total) ; subject to subject to unit-specific limitations/ requirements.
Other Facility Tanks	Exempt	<i>De minimis</i> emissions → Unit exemption pursuant to Chapter 62-4.040(1)(b) and/or Chapter 62-210.300(3).

The regulatory status of the overall facility has also been evaluated in light of the operations conducted by the facility and the estimated potential total emissions

for the facility. The resulting status determinations and supporting rule applicability analysis are presented below:

- **Chapter 62-210, FAC – General Requirements.** Two of the emission sources at the Site are not exempt from the permitting requirements of Chapter 62-210, FAC for the reasons set forth above. Thus, an air construction permit will be required under the provisions of Chapter 62-210.300(1), FAC. Subsequent application for an air operation permit will also be necessary, as required under the provisions of Chapter 62-210.300(2), FAC.
- **Chapter 62-212, FAC – Preconstruction Review Requirements.** The Site is required to obtain an air construction permit pursuant to Chapter 62-210.300(1), FAC. Therefore, the general preconstruction review requirements of Chapter 62-212.300, FAC apply. However, the facility is not a major stationary source, as defined under Chapter 62-210.200(174), FAC and, thus, is not subject to the provisions of Chapter 62-212.400, FAC. Furthermore, the facility is located in an air quality maintenance area for ozone and is not a source of particulate matter emissions and, thus, is not subject to the provisions of Chapter 62-212.500, FAC.
- **Chapter 62-213, FAC - Operation Permits For Major Sources.** The potential HAP emission calculations presented above indicate the Site is not a major source of air pollutants as defined under Chapter 62-210.200(173), FAC (i.e., maximum 1,3 dichloropropene emissions @ 3.59 TPY) and thus is not subject to the provisions of Chapter 62-213, FAC. Thus, the Site will assume a permit limit on its soil fumigant throughput of 2,590,000 gallons per year (current contract basis plus 5% annual increase for 5 year term of the permit) to formalize its status as a minor source of VOCs and HAPs.
- **Chapter 62-296, FAC - Emission Standards.** The Reasonably Available Control Technology (RACT) requirements of Chapter 62-296.500, FAC apply to the Site as a VOC-emitting facility located in an air quality maintenance area for ozone that is not exempt due to its daily and hourly VOC emission rates. However, none of the specific emission limiting standards or other requirements of Chapter 62-296.501 through 62-296.516, FAC apply and the Permit, Recordkeeping, and Compliance Reporting Requirements of Chapter 62-296.500 (2), FAC does not impose any material requirements. There are no other specific categories of facilities or emissions units that are covered under Chapter 62-296, FAC, except for the General Pollutant Emission Limiting Standards specified in Chapter 62-296.320(1), (2), and (4).
- **Chapter 62-204.800, FAC - Federal Regulations Adopted By Reference.** The facility is currently affected by several provisions of the New Source Performance Standards (NSPS) and the National Emission Standard for Hazardous Air Pollutants (NESHAP) promulgated at 40 CFR Parts 60 and 63 respectively and as adopted and incorporated by reference in Chapter 62-204.800, FAC. Specifically, the following NSPS and NESHAP apply to the Site operations as indicated below:
 - Part 60, Subpart Kb - Volatile Organic Liquid Storage Vessels: Tank 826 is a volatile organic liquid (VOL) storage vessel that meets the applicability criteria specified at 40 CFR 60.110b. However, because the tank capacity

is > 151 cubic meters and the maximum true vapor pressure of 1,3 dichloropropene is < 5.2 kilopascal, the tank is not required to be equipped with a floating roof (internal or external) or a closed vent system and control device. Only the requirements of 40 CFR 63.116b Monitoring of Operations (recordkeeping) must be met.

- Part 63, Subpart EEEE - Organic Liquids Distribution: The soil fumigant storage and distribution system at the Site is an organic liquids distribution (OLD)(non-gasoline) operation located at an area source of HAP emissions (based on the estimated potential emissions). As such, this subpart does not apply and the system is not subject to the emission limitations, operating limits, or work practice standards of this subpart.
- Part 60, Subpart IIII - Compression Ignition Internal Combustion Engines and/or Part 63, Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines: The diesel-fired emergency generator engines operated by the Site are stationary engines that must comply with the applicable emission limits and work practices of this subpart. The specific requirements are dependent upon the age and size of the engines and their status as emergency engines.
- Part 63, Subpart DDDDD - Major Source Industrial, Commercial, and Institutional Boilers and Process Heaters: The steam generators operated by the site are boilers located at an area source of HAP and this subpart does not apply.
- Part 63, Subpart JJJJJ - Industrial, Commercial, and Institutional Boilers Area Sources: The steam generators operated by the site are boilers located at an area source of HAP, but these units are natural gas-fired and this subpart does not apply.

CONCLUSION

ERM has completed an air permitting compliance assessment for Contanda's Jacksonville terminal. This assessment included a review of the Site operations, determination of the estimated Site emissions (including potential emissions), and completion of a regulatory review to identify applicable air quality regulatory requirements. Based on the work completed, the facility is required to obtain air construction and air operation permits for its current operations. In addition, the facility is subject to several unit-specific applicable requirements that will require the development and implementation of compliance plans to maintain compliance with the applicable regulatory requirements. This conclusion, in part, flows from comparison of the estimated unit and facility potential emissions with the identified Florida exemption criteria. It is recommended that the facility proceed with development of an application for the initial, after-the-fact air construction permit for the identified operations. ERM also recommends that this program evaluation be kept at the facility to document this permitting determination and that the emissions inventory and regulatory review be revisited periodically to ensure these adequately represent facility operations and current air permitting regulations.

Mr. Terry Duplantis
February 15, 2017
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**Environmental
Resources
Management**

Upon review of this correspondence, please contact Bob Fox at (813) 357-3865 or bob.fox@erm.com if you have any questions, or require additional information.

Sincerely,
Environmental Resources Management-Southeast, Inc.



Julianna Duckworth, P.E.
Senior Consultant



Robert W. Fox, P.E.
Principal Consultant

RWF/ymt

ATTACHMENT 1

Terminal Tankage Listing

Attachment 1 - Terminal Tankage Listing *

Contanda Terminals LLC

Jacksonville, Florida Terminal

Tank No.	Heated?	Tank Height (Feet)		Total Capacity (Gallons)	Density (lbs/gal)	Product	Construction Material	Installation Date
		Total	Safe Fill					
801	No	33.417	28.000	1,965,823	N/A	Out of Service	Carbon steel	1948
802	No	31.000	26.000	500,000	12.80	Caustic Soda	Carbon steel	1948
803	No	27.333	24.000	256,848	N/A	Empty	Carbon steel	1952
805	No	31.667	20.000	582,201	N/A	Out of Service	Carbon steel	1955
806	Yes	32.031	30.500	652,697	12.00	Molasses	Carbon steel	1998
807	Yes	31.875	30.500	457,680	N/A	Empty	Carbon steel	1998
808	Yes	31.000	26.000	210,571	7.56	MOX/OCD Blend	Carbon steel	Unknown
809	Yes	31.000	26.000	210,571	8.16	OCD-641	Carbon steel	Unknown
815	Yes	31.958	30.500	126,827	7.56	MOX/OCD Blend	Carbon steel	1990
816	No	32.021	30.500	126,948	N/A	Out of Service	Carbon steel	1990
817	Yes	31.979	30.500	210,314	12.80	Caustic Soda	Carbon steel	1990
818	No	32.042	30.500	211,027	12.80	Caustic Soda	Carbon steel	1990
819	Yes	31.917	30.500	837,242	7.66	Yellow Grease	Carbon steel	1990
820	No	31.938	30.500	838,192	N/A	Empty	Carbon steel	1990
821	Yes	32.094	30.500	2,021,900	12.80	Caustic Soda	Carbon steel	1993
822	No	32.000	30.500	1,689,781	12.80	Caustic Soda	Carbon steel	1994
823	Yes	32.094	30.500	433,643	8.00	Crude Tall Oil	Carbon steel	1994
824	No	32.000	30.500	136,619	7.55	Tall Oil Fatty Acid	Carbon steel	1995
826	No	31.990	30.500	506,870	10.15	Soil Fumigant	Carbon steel	1996
827	Yes	32.042	30.500	631,847	12.80	Caustic Soda	Carbon steel	1997
828	Yes	32.042	30.500	213,472	8.16	Distilled Tall Oil (DTO)	Carbon steel	1998
829	No	31.000	26.667	631,025	15.30	Sulfuric Acid	Carbon steel	1999
830	No	31.833	26.667	422,040	15.30	Sulfuric Acid	Carbon steel	1999
831	No	31.000	30.500	422,170	15.30	Sulfuric Acid	Carbon steel	2002
832	No	31.000	30.500	639,578	15.30	Sulfuric Acid	Carbon steel	2002
833	Yes	40.000	37.667	1,495,565	12.00	Molasses	Carbon steel	2012
Total Product Capacity				16,431,451				
1	No			6,200	8.34	Wash Water	Polyethylene	
2	No			6,200	8.34	Wash Water	Polyethylene	
3	No			12,000	8.34	Wash Water	Polyethylene	
8100	No			3,000	6.75	Nitrogen	Carbon steel	
8102	No			500	7.00	DieselFuel	Carbon steel (DW)	2005
8103	No			175	7.00	DieselFuel	Carbon steel (DW)	2008
Generator	No			70	7.00	Diesel Fuel	Carbon steel	2004

* (as of 11/30/16)

ATTACHMENT 2

Terminal Potential to Emit (PTE)

Attachment 2 Terminal Potential To Emit (PTE)

Contanda Terminals LLC
Jacksonville, Florida Terminal

Source or Operation	Facility Throughput Volume						PM	SO2	NOx	CO
	Actual Average (TPY)			5-Year Potential (TPY)						
	VOC	SF	THAP	VOC	SF	THAP				
Soil Fumigant Storage Tank Emissions	2.28	2.28	2.28	3.38	3.38	3.38	NE	NE	NE	NE
Soil Fumigant Handling Fugitive Emissions	0.25	0.25	0.25	0.43	0.43	0.43	NE	NE	NE	NE
Isopropyl Alcohol (IPA) Transloading Emissions	0.78	NE	NE	0.78	NE	NE	NE	NE	NE	NE
Steam Generator Emissions	0.38	NE	0.13	0.38	NE	0.13	0.52	0.04	6.90	5.80
Emergency Generator Emissions	0.10	NE	0.001	0.10	NE	0.001	0.01	0.08	1.28	0.28
Other Facility Tanks	DM	NE	DM	DM	NE	DM	DM	DM	NE	NE
Terminal PTE	3.78	2.52	2.65	5.07	3.81	3.94	0.53	0.13	8.18	6.07

Soil Fumigant throughputs as follows: Actual Average = average recorded throughput shipped for the period of 2006 to 2015 (10 years).
5-Year Potential Output = current terminal contract basis plus 5% annual increase for 5 year term of the permit.

Abbreviations used as follows: TPY = Tons Per Year

VOC = Volatile organic compounds
PM = Particulate matter (All <1 micrometers)
NOx = Nitrogen oxide
NE = Not Emitted

SF = 1,3 dichloropropene (97.5%)
SO2 = Sulfur dioxide
CO = Carbon monoxide
DM = De Minimus

THAP = Total hazardous air pollutant

Soil Fumigant Storage Tank Emissions
Contanda Terminals LLC
 Jacksonville, Florida Terminal

Tank Identification			Tank Dimensions (Feet)				Tanks Capacity (gallons)			Other Tank Details			
No.	Throughput Status	Material Stored	Shell Height	Liquid Depth (maximum)	Liquid Depth (average)	Diameter	Maximum	Working	Average	Color/Condition	Roof Height (ft)	Pressure Setting (psi)	Vacuum Setting (psi)
B26	Actual Average	Soil Fumigant	32.00	30.40	19.00	52.00	506,870	482,916	301,823	White/Good	7.33	0.07218	0.07218

Fixed roof Tank No. 826 - Soil Fumigant tank VOC emissions calculated using EPA TANKS 4.09d Software:

Tank No.	Throughput Status	Tank Throughputs			Working Losses		Breathing Losses		Total Emissions			(lbs/hr)
		Gal/yr	TO	BBL/yr	(lbs/yr)	(TPY)	(lbs/yr)	(TPY)	(lbs/yr)	(lbs/day)	(TPY)	
B26	Actual Average	775,900	1.61	18,474	939.97	0.47	3,613.91	1.81	4,553.88	12.48	2,277	5.65
B27	Actual Maximum	1,301,610	2.70	30,991	1,576.85	0.79	3,613.91	1.81	5,190.76	14.22	2,595	6.44
B26	Contract Basis	2,027,480	4.20	48,273	2,456.21	1.23	3,613.91	1.81	6,070.12	16.63	3,035	7.53
B28	5-Year Potential	2,590,000	5.36	61,667	3,137.68	1.57	3,613.91	1.81	6,751.59	18.50	3,376	8.38

TO = Turn Overs: Tank Throughput ÷ Working Capacity

Soil Fumigant throughputs based on recorded inputs/outputs or the current contract with customer. 5-year potential assume a 5% increase in contract throughput annually.

Soil Fumigant Handling Fugitive Emissions

Contanda Terminals LLC

Jacksonville, Florida Terminal

Equipment Leaks:

Component Type	No. of Components	Emission Factor (per source)		Emission Rates	
		kg/hr	lbs/hr	lbs/hr	TPY
Valves (Gas/Vapor)	4	0.00597	0.01316	0.053	0.021
Valves (Light Liquid)	16	0.00403	0.00888	0.142	0.057
Pumps (Light Liquid)	1	0.0199	0.04387	0.044	0.018
Flanges/Connectors (All)	43	0.00183	0.00403	0.173	0.070
Total Fugitive Emissions (VOC/HAP)				0.412	0.166

Component counts as provided by Contanda operational staff in 7/18/16 email.

Emission factors from Table 2-1 of the EPA document "Protocol for Equipment Leak Emission Estimates," November 1995

Loading Losses:

Rail Station #15 is located in the east-central portion of the facility next to Tank No. 833. This loading station has one active loading connection with an associated vapor balance header to return displaced vapors to Tank No. 826. According to the Contanda operations staff, a maximum of 6 railcars at 18,000 gal working capacity each can be loaded by submerged fill loading from this connection. The facility operates 5 days per week, 52 weeks per year, and 13 weekends during the prime treatment months of the year, for a total of 286 loading days.

The Truck Loading Rack is located in the southern portion of the facility near the main office building. This loading rack has one dedicated loading connection with an associated vapor balance header to return displaced vapors to Tank No. 826. According to Contanda operations staff, a maximum of 4 tanker trucks at 6,000 gal working capacity each can be loaded by submerged fill loading from this connection. As above, a total of 286 loading days are available for this activity.

The equation for estimating loading losses is presented in Chapter 5.2 of US EPA's technical document AP 42, Fifth Edition, Volume I section updated in July 2008 (Equation 1, Page 5.2-4) and is presented as follows:

$$L = 12.46 \times S \times P \times M / T$$

L = loading loss, expressed as lbs/1000 gallons of liquid loaded

12.46 = conversion factor

S = saturation factor - S for Submerged loading at dedicated normal service = 0.6 (Table 5.2-1, AP-42)

P = true vapor pressure as lbs/sq. inch of liquid loaded = 0.435 psi for 1,3 dichloropropene at 68 °F

M = molecular weight of vapors, as lb/lb-mole - M for 1,3 Dichloropropene = 110.97 lbs/lb-mole

T = liquid temperature, as Rankin (460 + °F); T = 460 + 68 = 528 °R

$$L = 12.46 \times 0.6 \times 0.435 \times 110.97 / 528$$

$$L = 0.6835 \quad \text{lbs/1000 gal}$$

For the total gallons of Soil Fumigant loaded at the Rail Station and Truck Loading Rack, the annual emissions may be estimated by using the above-calculated emission factor as follows:

Throughput Status	Loaded Volume (1000 gals/year)	Uncontrolled Emissions		Vapor-Balanced Emissions	
		(lbs/yr)	(TPY)	(lbs/yr)	(TPY)
Actual Average	776	530.32	0.27	159.10	0.0795
Actual Maximum	1,302	889.63	0.44	266.89	0.1334
Contract Basis	2,027	1,385.76	0.69	415.73	0.2079
5-Year Potential	2,590	1,770.23	0.89	531.07	0.2655

Vapor balance system collection efficiency taken at 70% for untested receiving vehicles pursuant to AP 42 Section 5.2.2.1.1, page 5.2-6.

Total Losses:

Throughput Status	Equipment Losses (TPY)	Loading Losses (TPY)	Total Emissions (TPY)
Actual Average	0.166	0.0795	0.2456
Actual Maximum	0.166	0.1334	0.2995
Contract Basis	0.166	0.2079	0.3739
5-Year Potential	0.166	0.2655	0.4316

Isopropyl Alcohol (IPA) Transloading Emissions

Contanda Terminals LLC

Jacksonville, Florida Terminal

Transloading of IPA is completed at Rail Station #19 located at the northern end of the rail spur that services the Site. Transloading is accomplished by connecting the bottom valving of the railcar and tanker truck (or ISO container) using flexible hosing and a pump and loading the tanker truck from the bottom. A vapor return hose is also connected from the top of the tanker truck to the top of the railcar to allow displaced vapors to be returned to the railcar.

Loading Losses:

The equation for estimating loading losses is presented in Chapter 5.2 of US EPA's technical document AP 42, Fifth Edition, Volume I section updated in July 2008 (Equation 1, Page 5.2-4) and is presented as follows:

$$L = 12.46 \times S \times P \times M / T$$

- L = loading loss, expressed as lbs/1000 gallons of liquid loaded
- 12.46 = conversion factor
- S = saturation factor - S for Submerged loading at dedicated normal service = 0.6 (Table 5.2-1, AP-42)
- P = true vapor pressure as lbs/sq. inch of liquid loaded = 0.387 psi for isopropyl alcohol at 68 °F
- M = molecular weight of vapors, as lb/lb-mole - M for isopropyl alcohol = 60.10 lbs/lb-mole
- T = liquid temperature, as Rankin (460 + °F); T = 460 + 68 = 528 °R

$$L = 12.46 \times 0.6 \times 0.387 \times 60.10 / 528$$

$$L = 0.3293 \quad \text{lbs/1000 gal}$$

For the total gallons of IPA transloaded, the annual emissions may be estimated by using the above-calculated emission factor as follows:

Throughput Status	Loaded Volume (1000 gals/year)	Uncontrolled Emissions		Vapor-Balanced Emissions	
		(lbs/year)	(tons/year)	(lbs/year)	(tons/year)
Maximum Transload	5,148	1,695.35	0.85	508.60	0.254

Transload throughput based on 1 railcar per day (18,000 gal); weekday shipments plus 13 weekend shipments.

Vapor balance system collection efficiency taken at 70% for untested receiving vehicles pursuant to AP 42 Section 5.2.2.1.1, page 5.2-6.

Equipment Leak Losses:

Component Type	No. of Components	Emission Factor (per source)		Emission Rates	
		kg/hr	lb/hr	lb/hr	tpy
Valves (Gas/Vapor)	2	0.00597	0.01316	0.026	0.115
Valves (Light Liquid)	2	0.00403	0.00888	0.018	0.078
Pumps (Light Liquid)	1	0.0199	0.04387	0.044	0.192
Flanges/Connectors (All)	8	0.00183	0.00403	0.032	0.141
Total Emissions (VOC/HAP)				0.120	0.527

Emission factors from Table 2-1 of the EPA document "Protocol for Equipment Leak Emission Estimates," November 1995

Total Losses:

Throughput Status	Loading Losses (TPY)	Equipment Losses (TPY)	Total Emissions (TPY)
Maximum Transload	0.254	0.527	0.781

Steam Generator Emissions

Contanda Terminals LLC
Jacksonville, Florida Terminal

Make:	Clayton Steam Generators (x2)
Model:	SF 200-SE (w/ economizer)
Location:	Warehouse Building
Design Heat Input	7.9 MMBtu/hr
Fuel Type :	Natural gas
Gas Consumption:	7,876 scf/hr

Regulated Pollutant	Annual Activity (MMscf/yr)		Emission Factor (lbs/MMBtu)	SG #1 Emissions (TPY)	SG #2 Emissions (TPY)	Potential Emissions (TPY)
	SG #1	SG #2				
Carbon Monoxide (CO)	68.994	68.994	84.0	2.90	2.90	5.795
Nitrogen Oxides (NOx)	68.994	68.994	100.0	3.45	3.45	6.899
Sulfur Dioxide (SO2)	68.994	68.994	0.6	0.02	0.02	0.041
Volatile Organic Compounds (VOC)	68.994	68.994	5.5	0.19	0.19	0.379
Particulate Matter (PM) - Total (< 2.5 micron)	68.994	68.994	7.6	0.26	0.26	0.524
PM - Filterable (< 2.5 micron)	68.994	68.994	1.9	0.07	0.07	0.131
PM - Condensable (< 1.0 micron)	68.994	68.994	5.7	0.20	0.20	0.393
Total Hazardous Air Pollutants (THAP)	68.994	68.994	1.9	0.07	0.07	0.130

Notes:

- [1] Abbreviations as follows: hrs = hours; yr = year; MMBtu = million Btu; TPY = Tons per Year.
- [2] Design heat input and maximum gas consumption values for each unit as provided in vendor literature.
- [3] Annual activity is calculated as the maximum gas consumption times unrestricted operating hours (8,760).
- [4] Emission factors are taken from Ap-42 Chapter 1.4, Tables 1.4-1 (NOx and CO), 1.4-2 (SO2, VOC, and PM), and 1.4-3 (THAPs).

Emergency Generator Emissions

Contanda Terminals LLC

Jacksonville, Florida Terminal

The facility operates one "existing" and one "new" (i.e., constructed before or after June 12, 2006) emergency stationary engines to provide water pressure and electrical power generation for critical facility operations during times of power interruption.

	Generator	Fire Pump
Engine Make:	John Deere	John Deere
Engine Model:	3029TF150	4045DF120
Location:	MCC Bldg	ISO Rack
Manufacture Date:	11/25/2004	4/27/2008
Model Year:	2004	2008
Date Ordered:	N/A	N/A
Date Installed:	2004	2008
Fuel Type :	Diesel	Diesel
Fuel Consumption (gal/hr):	3.9	4.5
Engine Type:	In-line 3	In-line 4
Displacement (L/cylinder):	0.967	1.125
Max Power (horsepower):	70	85
Max Speed (rpm):	2500	2500

Regulated Pollutant	Operating Time (hrs)	Fuel Consumption (gal/yr)		Annual Activity (MMBtu/yr)		Emission Factor	Potential Emissions (TPY)		
		Generator	Fire Pump	Generator	Fire Pump		Generator	Fire Pump	Totals
Carbon Monoxide (CO)	500	1,936	2,230	269	310	0.95	0.13	0.15	0.28
Nitrogen Oxides (NOx)	500	1,936	2,230	269	310	4.41	0.59	0.68	1.28
Sulfur Dioxide (SO2)	500	1,936	2,230	269	310	0.29	0.04	0.04	0.08
Volatile Organic Compounds (VOC)	500	1,936	2,230	269	310	0.35	0.05	0.05	0.10
PM-Total	500	1,936	2,230	269	310	0.031	0.00	0.005	0.01
PM-10	500	1,936	2,230	269	310	0.031	0.00	0.005	0.01
PM-2.5	500	1,936	2,230	269	310	0.031	0.00	0.005	0.01
Total Hazardous Air Pollutants (THAP)	500	1,936	2,230	269	310	0.0038	0.001	0.0006	0.001

Notes:

- [1] Abbreviations as follows: hrs = hours; yr = year; gal = gallons; MMBtu = million Btu; lbs = pounds; TPY = Tons per Year.
- [2] Annual fuel use calculated using the indicated manufacturer's maximum fuel consumption rate for the engine.
- [3] Maximum operating hours are assumed based on EPA guidance for engine PTE calculation.
- [4] Emission factors are taken from AP-42, Chapter 3.3, Tables 3.3-1 and 3.3-2 and are for fuel input.
- [5] Annual activity is based on the maximum fuel consumption and a heat content for diesel of 139,000 Btu/gal.

Soil Fumigant Storage Tank Throughput Data

Contanda Terminals LLC

Jacksonville, Florida Terminal

Facility Throughput Data:

Calendar Year	Amount Received (gals)	Amount Shipped (gals)	5-Year Potential (gals)	Flow Times (hours)
2015	1,066,981	1,147,592	Basis: Contract basis plus 5% annual increase for 5 year term of the permit.	Basis: 5-year potential volume split 80% to railcar (18,000 gal each) and 20% to tanker truck (6,000 gal each) @ 4 hours per load.
2014	999,515	1,074,936		
2013	1,067,378	948,647		
2012	1,301,610	1,257,731		
2011	790,759	647,425		
2010	621,586	712,696		
2009	525,344	293,953		
2008	422,556	775,984		
2007	161,389	124,132		
2006	0	0		
Average *	773,013	775,900		
Maximum	1,301,610	1,257,731		
Contract Basis	2,027,480	2,027,480		

Data provided by Contanda in emails date 7/9/16 and 11/1/2016

* Excludes zero values

Soil Fumigant Vapor Pressure Data:

Temperature (°F)	Temperature (°C)	Soil Fumigant Vapor Pressures		True Vapor Pressures (TVP)		
		psi	mm Hg	Temperature (°F)	psi	kPa
40	4.4	0.175	9.050	Ave = 70.0 Max = 75.6	0.4585	3.1612
50	10.0	0.245	12.670			
60	15.6	0.337	17.428			
70	21.1	0.459	23.737			
80	26.7	0.615	31.805			
90	32.2	0.815	42.148			
100	37.8	0.815	42.148			

Vapor pressures provided by Dow in 8/22/05 email

True vapor pressure data Data from TANKS 4.0.9d output

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tank 826 (Actual Average)
City:	Jacksonville
State:	Florida
Company:	Westway Terminal Co.
Type of Tank:	Vertical Fixed Roof Tank
Description:	Telone II - 506 870 gal

Tank Dimensions

Shell Height (ft):	32.00
Diameter (ft):	52.00
Liquid Height (ft):	30.40
Avg. Liquid Height (ft):	19.00
Volume (gallons):	482,951.31
Turnovers:	1.61
Net Throughput(gal/yr):	775,900.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	7.33
Radius (ft) (Dome Roof):	52.00

Breather Vent Settings

Vacuum Settings (psig):	-0.07
Pressure Settings (psig):	0.07

Meteorological Data used in Emissions Calculations: Jacksonville, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 826 (Actual Average) - Vertical Fixed Roof Tank
Jacksonville, Florida

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
1,3 Dichloropropene	All	69.90	64.29	75.63	66.02	0.4585	0.3894	0.5468	110.9700			110.97	Option 1 VP60 = 337 VP70 = 459

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 826 (Actual Average) - Vertical Fixed Roof Tank
Jacksonville, Florida

<u>Annual Emission Calculations</u>	
Standing Losses (lb)	3,613.9050
Vapor Space Volume (cu ft)	35,597.9481
Vapor Density (lb/cu ft)	0.0090
Vapor Space Expansion Factor	0.0437
Vented Vapor Saturation Factor	0.7106
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	35,597.9481
Tank Diameter (ft)	52.0000
Vapor Space Outage (ft)	16.7621
Tank Shell Height (ft)	32.0000
Average Liquid Height (ft)	19.0000
Roof Outage (ft)	3.7621
Roof Outage (Dome Roof)	
Roof Outage (ft)	3.7621
Dome Radius (ft)	52.0000
Shell Radius (ft)	26.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0090
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Average Ambient Temp. (deg. F)	67.9659
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	527.6856
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sq ft day)	1,454.2854
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0437
Daily Vapor Temperature Range (deg. R)	22.6724
Daily Vapor Pressure Range (psia)	0.1574
Breather Vent Press. Setting Range (psia)	0.1444
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.3894
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	0.5468
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Min. Liquid Surface Temp. (deg. R)	523.9620
Daily Max. Liquid Surface Temp. (deg. R)	535.2982
Daily Ambient Temp. Range (deg. R)	21.8750
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.7106
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Space Outage (ft)	16.7621
Working Losses (lb)	
Working Losses (lb)	939.9708
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Annual Net Throughput (gal/yr)	775,500.0000
Annual Turnovers	1.8086

Turnover Factor	1 0000
Maximum Liquid Volume (gal)	482,951 3101
Maximum Liquid Height (ft)	30 4000
Tank Diameter (ft)	52 0000
Working Loss Product Factor	1 0000
Total Losses (b)	4,553 8750

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 826 (Actual Average) - Vertical Fixed Roof Tank
Jacksonville, Florida

Components	Losses(lbs)		Total Emissions
	Working Loss	Breathing Loss	
1,3 Dichloropropene	939.97	3,613.91	4,553.88

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tank 828 (Actual Maximum)
City:	Jacksonville
State:	Florida
Company:	Westway Terminal Co.
Type of Tank:	Vertical Fixed Roof Tank
Description:	Telone II - 506,870 gal

Tank Dimensions

Shell Height (ft):	32.00
Diameter (ft):	52.00
Liquid Height (ft):	30.40
Avg. Liquid Height (ft):	19.00
Volume (gallons):	482,951.31
Turnovers:	2.70
Net Throughput(gal/yr):	1,301,610.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	7.33
Radius (ft) (Dome Roof):	52.00

Breather Vent Settings

Vacuum Settings (psig):	-0.07
Pressure Settings (psig):	0.07

Meteorological Data used in Emissions Calculations: Jacksonville, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 826 (Actual Maximum) - Vertical Fixed Roof Tank
Jacksonville, Florida

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
1,3 Dichloropropene	All	69.06	64.29	75.63	66.02	0.4585	0.3694	0.5466	110.9700			110.97	Option 1 VP60 = .337 VP70 = .459

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank B26 (Actual Maximum) - Vertical Fixed Roof Tank
Jacksonville, Florida

<u>Annual Emission Calculations</u>	
Standing Losses (lb)	3,613.9050
Vapor Space Volume (cu ft)	35,597.9481
Vapor Density (lb/cu ft)	0.0090
Vapor Space Expansion Factor	0.0437
Vented Vapor Saturation Factor	0.7106
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	35,597.9481
Tank Diameter (ft)	52.0000
Vapor Space Outage (ft)	16.7621
Tank Shell Height (ft)	32.0000
Average Liquid Height (ft)	19.0000
Roof Outage (ft)	3.7621
Roof Outage (Dome Roof)	
Roof Outage (ft)	3.7621
Dome Radius (ft)	52.0000
Shell Radius (ft)	26.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0090
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Average Ambient Temp. (deg. F)	67.9959
Ideal Gas Constant R (psia cu ft / (lb-mol-deg. R))	10.731
Liquid Bulk Temperature (deg. R)	527.6856
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/ft ² day)	1,454.2864
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0437
Daily Vapor Temperature Range (deg. R)	22.6724
Daily Vapor Pressure Range (psia)	0.1574
Breather Vent Press. Setting Range (psia)	0.1444
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.3994
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	0.5469
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Min. Liquid Surface Temp. (deg. R)	523.9620
Daily Max. Liquid Surface Temp. (deg. R)	535.2982
Daily Ambient Temp. Range (deg. R)	21.6750
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.7106
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Space Outage (ft)	16.7621
Working Losses (lb)	
Working Losses (lb)	1,576.8488
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Annual Net Throughput (gal/yr)	1,301,610.0000
Annual Turnovers	2.6651

Turnover Factor:	1.0000
Maximum Liquid Volume (gal)	482,951.3101
Maximum Liquid Height (ft)	30.4000
Tank Diameter (ft)	52.0000
Working Loss Product Factor	1.0000

Total Losses (lb)	5,190,7518
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TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 826 (Actual Maximum) - Vertical Fixed Roof Tank
Jacksonville, Florida

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
1,3 Dichloropropene	1,576.85	3,613.91	5,190.75

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tank 828 (Contract Basis)
City:	Jacksonville
State:	Florida
Company:	Westway Terminal Co.
Type of Tank:	Vertical Fixed Roof Tank
Description:	Telone II - 506 870 gal

Tank Dimensions

Shell Height (ft):	32.00
Diameter (ft):	52.00
Liquid Height (ft):	30.40
Avg. Liquid Height (ft):	19.00
Volume (gallons):	482,951.31
Turnovers:	4.20
Net Throughput(gal/yr):	2,027,460.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	7.33
Radius (ft) (Dome Roof):	52.00

Breather Vent Settings

Vacuum Settings (psig):	-0.07
Pressure Settings (psig):	0.07

Meteorological Data used in Emissions Calculations: Jacksonville, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 826 (Contract Basis) - Vertical Fixed Roof Tank
Jacksonville, Florida

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weigh	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
1,3 Dichloropropene	All	69.98	64.29	75.63	68.02	0.4585	0.3894	0.5468	110.9700			110.97	Option 1 VP00 = .337 VP70 = .459

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 826 (Contract Basis) - Vertical Fixed Roof Tank
Jacksonville, Florida

Annual Emission Calculations	
Standing Losses (lb)	3,613,9055
Vapor Space Volume (cu ft)	35,597,9481
Vapor Density (lb/cu ft)	0.0090
Vapor Space Expansion Factor	0.0437
Vented Vapor Saturation Factor	0.7108
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	35,597,9481
Tank Diameter (ft)	52.0000
Vapor Space Outage (ft)	16.7621
Tank Shell Height (ft)	32.0000
Average Liquid Height (ft)	19.0000
Roof Outage (ft)	3.7621
Roof Outage (Dome Roof)	
Roof Outage (ft)	3.7621
Dome Radius (ft)	52.0000
Shell Radius (ft)	26.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0090
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Average Ambient Temp. (deg. F)	67.9658
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	527.6858
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sq ft day)	1,454,2864
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0437
Daily Vapor Temperature Range (deg. R)	22.6724
Daily Vapor Pressure Range (psia)	0.1574
Breather Vent Press. Setting Range (psia)	0.1444
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.3694
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	0.5468
Daily Avg. Liquid Surface Temp. (deg R)	529.6301
Daily Min. Liquid Surface Temp. (deg R)	523.9620
Daily Max. Liquid Surface Temp. (deg R)	535.2982
Daily Ambient Temp. Range (deg. R)	21.8750
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.7108
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Space Outage (ft)	16.7621
Working Losses (lb)	
Working Losses (lb)	2,458,2063
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Annual Net Throughput (gal/yr.)	2,027,480,0000
Annual Turnovers	4.1981

Turnover Factor	1 0000
Maximum Liquid Volume (gal)	482,951.3101
Maximum Liquid Height (ft)	30 4000
Tank Diameter (ft)	52 0000
Working Loss Product Factor	1 0000

Total Losses (lb)	6,070 1133
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TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 826 (Contract Basis) - Vertical Fixed Roof Tank
Jacksonville, Florida

Components	Losses(lbs)		Total Emissions
	Working Loss	Breathing Loss	
1,3 Dichloropropene	2,458.21	3,613.91	6,070.11

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tank 826 (5-Year Potential)
City:	Jacksonville
State:	Florida
Company:	Westway Terminal Co.
Type of Tank:	Vertical Fixed Roof Tank
Description:	Telone II - 506,870 gal

Tank Dimensions

Shell Height (ft):	32.00
Diameter (ft):	52.00
Liquid Height (ft):	30.40
Avg. Liquid Height (ft):	19.00
Volume (gallons):	482,951.31
Turnovers:	5.38
Net Throughput(gal/yr):	2,590,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	7.33
Radius (ft) (Dome Roof):	52.00

Breather Vent Settings

Vacuum Settings (psig):	-0.07
Pressure Settings (psig):	0.07

Meteorological Data used in Emissions Calculations: Jacksonville, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 826 (5-Year Potential) - Vertical Fixed Roof Tank
Jacksonville, Florida

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
1,3 Dichloropropene	All	69.98	64.29	75.63	68.02	0.4585	0.3804	0.5468	110.9700			110.97	Option 1 VP60 = .337 VP70 = .459

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 826 (5-Year Potential) - Vertical Fixed Roof Tank
Jacksonville, Florida

Annual Emission Calculations	
Standing Losses (lb)	3,813.9056
Vapor Space Volume (cu ft)	35,597.9481
Vapor Density (lb/cu ft)	0.0263
Vapor Space Expansion Factor	0.0437
Vented Vapor Saturation Factor	0.7108
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	35,597.9481
Tank Diameter (ft)	52.0000
Vapor Space Outage (ft)	16.7821
Tank Shell Height (ft)	32.0000
Average Liquid Height (ft)	19.0000
Roof Outage (ft)	3.7821
Roof Outage (Dome Roof)	
Roof Outage (ft)	3.7821
Dome Radius (ft)	52.0000
Shell Radius (ft)	26.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0263
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Average Ambient Temp. (deg. F)	67.9958
Ideal Gas Constant R (psia cu ft / (lb-mol-deg. R))	10.731
Liquid Bulk Temperature (deg. R)	527.6858
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insolation Factor (Btu/sq ft day)	1,454.2864
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0437
Daily Vapor Temperature Range (deg. R)	22.6724
Daily Vapor Pressure Range (psia)	0.1574
Breather Vent Press. Setting Range (psia)	0.1444
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.3894
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	0.5468
Daily Avg. Liquid Surface Temp. (deg. R)	529.6301
Daily Min. Liquid Surface Temp. (deg. R)	523.9620
Daily Max. Liquid Surface Temp. (deg. R)	535.2982
Daily Ambient Temp. Range (deg. R)	21.8750
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.7108
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Vapor Space Outage (ft)	16.7821
Working Losses (lb)	
Working Losses (lb)	3,137.8781
Vapor Molecular Weight (lb/lb-mole)	110.9700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	0.4585
Annual Net Throughput (gal/yr)	2,500,000.0000
Annual Turnovers	5.3629

Turnover Factor	1 0000
Maximum Liquid Volume (gal)	482,951 3101
Maximum Liquid Height (ft)	30 4000
Tank Diameter (ft)	52 0000
Working Loss Product Factor	1 0000

Total Losses (lb)	6,751 5831
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TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 826 (5-Year Potential) - Vertical Fixed Roof Tank
Jacksonville, Florida

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
1,3 Dichloropropene	3,137.68	3,613.91	6,751.58

Attachment EU-1 Terminal Potential to Emit (PTE)

Contanda Terminals LLC
Jacksonville, Florida Terminal

Source or Operation	Facility Throughput Volume										
	Actual Average (TPY)					5-Year Potential (TPY)					
	VOC	SF	TRAP	VOC	TRAP	VOC	SF	TRAP	PM	NOx	CO
Soil Fumigant Storage Tank Emissions	2.28	2.28	2.28	3.38	3.38	3.38	3.38	3.38	NE	NE	NE
Soil Fumigant Handling Fugitive Emissions	0.25	0.25	0.25	0.43	0.43	0.43	0.43	0.43	NE	NE	NE
Isopropyl Alcohol (IPA) Transloading Emissions	0.78	NE	NE	0.78	NE	NE	NE	NE	NE	NE	NE
Steam Generator Emissions	0.38	NE	0.13	0.38	0.13	NE	NE	0.13	0.52	0.04	5.80
Emergency Generator Emissions	0.10	NE	0.001	0.10	0.001	NE	NE	0.001	0.01	0.08	0.28
Other Facility Tanks	DM	NE	DM	DM	DM	NE	NE	DM	DM	DM	NE
Terminal PTE	3.78	2.52	2.65	5.07	2.65	3.81	3.94	0.53	8.18	0.13	6.07

Soil Fumigant throughputs as follows:

Actual Average = average recorded throughput shipped for the period of 2006 to 2015 (10 years).

5-Year Potential Output = current terminal contract basis plus 5% annual increase for 5 year term of the permit.

TPY = Tons Per Year

VOC = Volatile organic compounds

PM = Particulate matter (All <1 micrometers)

NOx = Nitrogen oxide

NE = Not Emitted

Abbreviations used as follows:

VOC = Volatile organic compounds

SF = 1,3 dichloropropene (97.5%)

S02 = Sulfur dioxide

CO = Carbon monoxide

DM = De Minimus

THAP = Total hazardous air pollutant