COLUMBIA PACIFIC BIO-REFINERY

August 23, 2013

Oregon Department of Environmental Quality
Northwest Region
2020 SW 4th St, #400
Portland, OR 97201

Re: Application for Standard Air Contaminant Discharge Permit for Cascade Kelly Holdings, LLC dba Columbia Pacific Bio-Refinery

Dear Compliance Staff:

Cascade Kelly Holdings, LLC dba Columbia Pacific Bio-Refinery (CPBR) submits this application to obtain a standard air contaminant discharge permit (ACDP) for terminal operations at their Clatskanie, Oregon site. Enclosed with this cover letter are the applicable ODEQ forms, figures, and emission calculations.

If there are any questions or comments on this application, please feel free to call me at 503-728-7003 or my consultant, Paul Mordorski of Merjent, Inc. at 612-643-5249.

Kind regards,

Cascade Kelly Holdings, LLC dba Columbia Pacific Bio-Refinery

Dan Luckett
General Manager

Cc: Paul Mordorski, Merjent, Inc.

Enclosures: As noted

81200 Kallunki Road · Clatskanie, OR 97016-2244
(503) 728-7000 Phone · (503) 728-7065 Fax · http://www.cpbr.com

Air Contaminant Discharge Permit Application

Columbia Pacific Bio-Refinery
Clatskanie, OR

August 2013

Prepared for:
Columbia Pacific Bio-Refinery
81200 Kallunki Road
Clatskanie, OR 97016

Prepared by:
Merjent, Inc.
800 Washington Ave. N., Suite 315
Minneapolis, MN 55401
Paul R. Mordorski, P.E.
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COLUMBIA PACIFIC BIO-REFINERY

merjent

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1.0 PROJECT DESCRIPTION

Cascade Kelly Holdings, LLC dba Columbia Pacific Bio-Refinery (CPBR) would like to obtain a standard air contaminant discharge permit (ACDP) for marine terminal operations at their Clatskanie, Oregon site. Currently, CPBR is authorized as source number 05-0006 to operate a fuel ethanol production facility and volatile organic liquid (VOL) terminal operations. Terminal operations currently include loading of water-borne vessels with ethanol produced onsite as well as VOLs brought in by rail. CPBR wishes to construct additional VOL storage capacity and a vapor combustion unit to control emissions associated with VOL loading of water-borne vessels. Because these operations can be independent of the ethanol production operations, CPBR is applying for a separate permit for this activity (i.e. for a marine liquids loading terminal).

The marine liquids loading terminal will utilize the two existing 3.8 MMGal storage tanks and the existing piping and fixtures currently utilized in terminal operation at the site. In addition, CPBR proposes to construct the following additional equipment to be used at the marine liquids loading terminal:

- Four new 108,000-barrel (4.5 MMGal) internal floating roof storage tanks;
- Two new 36,000 gallon closed-system process tanks;
- A vapor combustion unit (VCU); and
- Pumps, piping, and other ancillary equipment to support the new tanks and VCU.

Subsequent to completing the proposed construction activities, two independent facilities will be permitted to operate: an ethanol production facility and ethanol marine loading terminal (operating under existing permit 05-0006) and a marine liquids loading terminal (operating under the new ACDP requested in this application).

CPBR will receive VOL with a Reid vapor pressure (RVP) less than or equal to 12.75 via rail cars. The VOLs will pass through one of two 36,000-gallon fixed roof high-pressure process tanks and enter into one of six internal floating roof storage tanks. From these storage tanks, VOL will be loaded onto water-borne vessels. Emissions from loadout operations will be controlled by a VCU.

1.1 MATERIAL THROUGHPUT AND VAPOR PRESSURE

The potential emissions calculated for this application assume a throughput of 120,000 barrels per day (1,840 million gallons per year). To be conservative, CPBR also assumes for this application that the materials transferred will have an RVP as high as 12.75. These conservative assumptions are intended to allow maximum operating flexibility for the terminal operations.

1.2 ADDITIONAL TANKS

In order to most effectively conduct terminal operations without hindering ethanol plant operations, CPBR is proposing to install four new 108,000 barrel storage tanks on CPBR's property. The tanks will be constructed with internal floating roofs and meet applicable air quality regulations (e.g., NSPS Subpart Kb). In addition, two fixed roof high-pressure process tanks will be installed near the rail receiving yard.

1.3 VAPOR COMBUSTION UNIT

CPBR is proposing to install a VCU to control emissions resulting from water-borne vessel loadout. As shown in this application, as a combustion device, the VCU will be capable of meeting very low emission levels regardless of the material loaded to water-borne vessels.

1.4 REGULATORY APPLICABILITY - OREGON

Below is a summary of applicable Oregon and federal air quality emission requirements and the proposed compliance method.

1.4.1 DIVISION 208

1.4.1.1 340-208-0110 (Opacity)

Rule 340-208-110 applies to new and existing sources within the Willamette Valley including Columbia County. It requires that no person may emit or allow to be emitted any air contaminant into the atmosphere from any new air contaminant source, or from any existing source within a special control area (Columbia County – in this case), for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity. The proposed operation will use a well-designed VCU that will use propane for supplement heat as necessary. The VCU will be designed to have minimal visible emissions and will comply with the 20% opacity requirement.

1.4.1.2 340-208-0210 (Fugitive Emissions)

Rule 340-208-0210 requires minimizing of fugitive emissions to prevent a nuisance or violation of any regulation. In the event of a nuisance or violation, ODEQ is authorized by this rule to require implementation of control measures. CPBR will comply with this regulation by implementing effective control measures for all emission sources at the facility. Tanks will be equipped with internal floating roofs and the VCU will be designed for efficient destruction of VOC emissions and minimizing of other pollutants such as particulate, nitrogen oxides (NO_x), and carbon monoxide (CO).

1.4.1.3 340-208-0300 Nuisance

Rule 340-208-0300 requires that no person may cause or allow air contaminants from any source subject to regulation by the department to cause a nuisance. CPBR will comply with this requirement by proper operation of the proposed equipment. In addition, CPBR will be required in the issued ACDP to track and report complaints received from the public. This information will be submitted to ODEQ in the annual ACDP report.

1.4.1.4 340-208-0510 - 0610 (Clackamas, Columbia, Multnomah, & Washington Counties)

Rule 340-208-0510 through 0610 apply to sources in Clackamas, Columbia, Multnomah, & Washington Counties that are not subject to regulation in divisions 230, 234, 236, and 238. The storage tanks at CPBR will be subject to regulation under the federal NSPS that are incorporated by reference in 340-238. As such, this requirement is not applicable to the storage tanks. Marine vessel loadout operations are potentially subject to 340-208-0510 through 0610.

Odor Control Measures

Rule 340-208-0550 requires that control apparatus and equipment, using the highest and best practicable treatment currently available, must be installed and operated to reduce to a minimum odor-bearing gases or odor-bearing particulate matter emitted into the atmosphere. The VCU will be designed to meet this requirement.

Water-Borne Vessel Emissions

Rule 340-208-0570 requires that while in those portions of the Willamette River and Columbia River that pass through or adjacent to Clackamas, Columbia, and Multnomah Counties, each water-borne vessel is subject to the emission standards and rules for visible emissions and particulate matter size and must minimize soot emissions. The owner, operator or other responsible party must ensure that these standards and requirements are met. No emissions, with the exception of loadout fugitive emissions from the water borne vessels being loaded at CPBR's dock, will be associated with the material transfer operation. As such, these unrelated water-borne vessel emissions are not a part of the CPBR plant operations nor are they within the control of CPBR staff. Each vessel owner/operator must ensure that applicable emission regulations are met.

1.4.2 DIVISION 216 (ACDPS)

Rule 340-216-0020 establishes requirements for sources to obtain either basic, general, simple, or standard air contaminant discharge permit (ACDP). Generally, sources are required to obtain a standard ACDP if the source is subject to a RACT, BACT, LAER, NESHAP, NSPS, State MACT, or other significant Air Quality regulation, except for sources with less than 10 tpy actual emissions or fall within a categorical exemption. The proposed storage tanks at CPBR will be subject to NSPS Subpart Kb, will have the potential to emit greater than 10 tpy of VOC, and do not meet a categorical exemption; therefore, CPBR is required to obtain a standard ACDP.

1.4.2.1 Application Requirements

Rule 340-216-0040 establishes general requirements for ACDP application content. The applicable ODEQ forms are included in Appendix A. These forms have been completed and supplemental information, as required, has also been included in order to meet these application requirements.

Rule 340-216-0066 establishes application requirements (in addition to those in 340-216-0040) for standard ACDP applications. This rule includes a requirement for a new or modified standard ACDP that is not subject to New Source Review (NSR) but that has emission increases greater than the Significant Emission Rates (SERs) to the application must include an air quality analysis and visibility impact analysis (federal major sources only). Federal major sources have the potential to emit criteria pollutants greater than 100 tpy (for listed source categories). CPBR is applying for a new standard ACDP and has a potential to emit above the SER for VOC (40 tpy). However, CPBR will not be a federal major source; as such, a visibility impact analysis is not required for this ACDP application. In addition, because there is no ambient air quality standard or air quality analysis procedure for VOC emissions, and air quality analysis is not required. All applicable requirements of this rule including fees, public notice, PSELs, testing, monitoring, recordkeeping, and reporting will be met through this application and the permitting process with ODEQ.

1.4.3 DIVISION 218 (TITLE V OPERATING PERMITS)

CPBR terminal operations will have PSELs below 100 tons per year (TPY) for criteria pollutants, less than 10 TPY for any hazardous air pollutant (HAP), 25 TPY for all HAPs in aggregate, and 100,000 TPY carbon dioxide equivalent (CO_2e) greenhouse gases (GHGs). As such, the facility is not a major source of air emission and a Title V operating permit is not required. CPBR terminal operations will operate under the standard ACDP application requested in this application.

1.4.4 DIVISION 222 (STATIONARY PSELS)

The requested standard ACDP will have PSELs that meet the requirements outlined in Division 222.

1.4.5 DIVISION 223 (REGIONAL HAZE)

Division 223 applies to BART-eligible sources. CPBR is not a BART-eligible source; therefore, this regulation does not apply.

1.4.6 DIVISION 224 (MAJOR NEW SOURCE REVIEW)

Division 224 applies to federal major sources and major modifications to federal major sources. Therefore, this regulation does not apply to CPBR.

1.4.7 DIVISION 225 (AIR QUALITY ANALYSIS REQUIREMENTS)

Division 225 establishes requirements for air quality analyses including the information that must be submitted for sources subject to the air quality and visibility impact analysis in 340-216-0066. As noted previously, this air quality impact analysis is not applicable to CPBR terminal operations.

Division 225, under 340-225-0090, also requires demonstrating a net air quality benefit for VOC emission sources that may affect an ozone non-attainment or maintenance area. This rule requires emission offsets for VOC and NOx if the source will be located within the Ozone Precursor Distance. The OPD is defined by the formula method as:

OPD (kilometers - km) = (Q/40) x 30 (km);

where Q is the larger of NOx or VOC emissions increase from the source being evaluated (in TPY).

Based on the emission calculations in Appendix B, the potential VOC emissions from the CPBR terminal operations are greater than the NOx emissions. In this application, CPBR is requesting a VOC PSEL of 78 TPY. This equates to an OPD of 58.5 km. CPBR is located approximately 61.2 km from the boundary of the Portland – Vancouver Ozone Maintenance Area. As such, emission offsets are not required.

1.4.8 DIVISION 226 (GENERAL EMISSION STANDARDS)

Division226 establishes air emission control requirements to ensure the highest and best practicable treatment and control of air contaminant emissions. However, this division also states that a source is in compliance with this requirement if the source is in compliance with all other applicable emission standards and requirements

contained in divisions 200 through 268 of chapter 340. This application is demonstrating that CPBR will comply with all applicable parts of Divisions 200 through 268. Therefore, CPBR is in compliance with division 226.

1.4.9 Division 232 (Emission Standards for VOC Point Sources)

This division applies to sources in the Portland and Medford Air Quality Management Areas (AQMAs). CPBR is not located within the Portland AQMA; therefore, this rule does not apply.

1.4.10 Division 236 (Emission Standards for Specific Industries)

Division 236 establishes emission standards for specific industries but does not include any industry in which the CPBR terminal operations would fall.

1.4.11 Division 238 (New Source Performance Standards)

Division 238 incorporates many of the federal NSPS by reference including Subpart Kb (Volatile organic liquid storage vessels). CPBR will design the new tanks to meet the requirements of NSPS Subpart Kb including internal floating roofs. NSPS Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution) is not incorporated by reference in Division 238. This regulation is discussed below in section 1.5.

1.4.12 Division 240 (Rules For Areas With Unique Air Quality Needs)

CPBR is not located in an area covered by Division 240. Therefore, the requirements of Division 240 are not applicable.

1.4.13 Division 242 (Rules Applicable to the Portland Area)

CPBR is not located in Portland AQMA. Therefore, the requirements of Division 240 are not applicable.

1.4.14 Division 244 (Oregon Federal Hazardous Air Pollutant Program)

Division 244 incorporates many of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and establishes requirements for gasoline dispensing facilities. CPBR is not a gasoline dispensing facility; therefore, those requirements are not applicable. CPBR is however, potentially subject to federal NEHSAPs. These NESHAPs are discussed in detail in section 1.5.

1.5 Regulatory Applicability - Federal

1.5.1 Title 40 Code of Federal Regulations (CFR) Part 60 (NSPS)

40 CFR 60 establishes the NSPS for numerous source types. The NSPS include Subpart Kb (Storage vessels of volatile organic liquids) and Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution).

1.5.1.1 Subpart Kb

Subpart Kb applies to the proposed new storage tanks at CPBR. Under NSPS Subpart Kb the storage tanks will need to be equipped with internal floating roofs that have seals meeting specific design criteria. The tanks will also be subject to ongoing inspections to ensure that these seals are maintained in good working order. The storage tanks at CPBR that are subject to NSPS Subpart Kb will be built/modified and operated in compliance with Subpart Kb.

1.5.1.2 Subpart OOOO

Subpart OOOO applies to several specific types of sources; none of which apply to any of the equipment at CPBR.

1.5.2 TITLE 40 CFR PARTS 61 AND 63 (NEHSAPS)

40 CFR 61 and 63 establish the NESHAPs for specific source categories and maximum achievable control technology (MACT) requirements for unlisted source categories. CPBR will be a non-major source (referred to in these regulations as an "area" source); therefore, case-by-case MACT is not applicable. As such, CPBR would be subject only to those category specific NESHAPs that are applicable. The potentially applicable Subparts are listed and evaluated below.

1.5.3 SUBPART Y (MARINE VESSEL LOADING OPERATIONS)

Subpart Y applies to affected sources. Affected sources are defined under Subpart Y as the following:

1. A source with emissions of 10 or 25 tons. Defined as a major source having aggregate actual HAP emissions from marine tank vessels loading operations at all loading berths equal to or greater than 10 tpy for single HAP or 25 tpy for all HAPs;

2. A new source with emissions less than 10 and 25 tons. Defined as a major source having aggregate actual HAP emissions from marine tank vessels loading operations at all loading berths less than 10 tpy for single HAP or 25 tpy for all HAPs;

3. A new major source offshore loading terminal. Defined as a major source facility with at least one loading berth 0.5 miles or more from the shore that is used for mooring a water-borne vessel and loading liquids from shore;

4. A source with throughput of 10 million barrels gasoline or 200 million barrels crude oil; or

5. The Valdez Marine Terminal source. A major source that is permitted under the Trans-Alaska Pipeline Authorization Act and located in Valdez, Alaska in Prince William Sound.

CPBR is not a major source for criteria pollutants or HAPs; therefore, CPBR is not an affected source under nos. 1, 2 or 3. CPBR will not receive and dispense gasoline, and will have a maximum potential crude oil throughput of less than 200 million barrels. Therefore, affected source no. 4 does not apply. CPBR is not a major source permitted under the Trans-Alaska Pipeline Authorization Act. Therefore, CPBR is not an affected source under no. 5. CPBR is not an affected source and no provisions of Subpart Y are applicable to CPBR terminal operations.

1.5.4 SUBPART BBBBBB (GASOLINE DISTRIBUTION BULK TERMINALS, BULK PLANTS, AND PIPELINE FACILITIES)

The facility will not receive gasoline and is therefore not a bulk gasoline terminal, pipeline breakout station, pipeline pumping station, or bulk gasoline plant. As such, the facility is not subject to Subpart BBBBBB. If gasoline is considered for handling at the facility in the future, the potential applicability of Subpart BBBBBB will be evaluated and requirements implemented.

APPENDIX A – ODEQ FORMS

AND ASSOCIATED FIGURES

Print Form

ADMINISTRATIVE INFORMATION

FORM AQ101
ANSWER SHEET

FOR DEQ USE ONLY	
Permit Number:	Type of Application:
Application No:	**RNW** ___ **MOD** ___ **NEW** ___ **EXT** ___
Date Received :	
Regional Office:	**Check No.** **Amount $**

1. Company	**2. Facility Location**
Legal Name: Cascade Kelly Holdings, LLC	Name: Columbia Pacific Bio-Refinery
Mailing Address: 81200 Kallunki Road	Street Address: 81200 Kallunki Road
City, State, Zip Code: Clatskanie, OR 97016	City, County, Zip Code: Clatskanie, Columbia County, 97016
Number of employees: 49	
3. Site Contact Person	**4. Standard Industrial Classification Code(s)**
Name: Brandon Gimper	Primary: 4491 and 5171
Title: Environmental Manager	Secondary: *NA*
Telephone number: 503.728.7022	**5. Other DEQ Permits**
Fax. number: 503.728.7065	General NPDES Permit: 1200-Z WPCF Permit 102666
e-mail address: BGimper@globalp.com	

6. Permit Action:

- ☐ New Simple ACDP
- ☐ New Construction ACDP
- ☒ New Standard ACDP
- ☐ New Standard ACDP (PSD/NSR)
- ☐ Renewal of an existing permit without changes (include form AQ403 for Standard ACDPs)
- ☐ Renewal of an existing permit with changes (include form AQ403 for Standard ACDPs)
- ☐ Modification of existing permit

7. Signature

I hereby apply for permission to discharge air contaminants in the State of Oregon, as stated or described in this application, and certify that the information contained in this application and the schedules and exhibits appended hereto, are true and correct to the best of my knowledge and belief.

R. Daniel Luckett	Facility General Manager 503-728-7003
Name of official (Printed or Typed)	Title of official and phone number
Signature of official	8/21/13 Date

FEE INFORMATION

(Make the check payable to DEQ)

Note: The initial application fees and annual fees specified below (OAR 340-216-0020, Table 2, Parts 1 and 2) are only required for initial permit applications. These fees are not required for an application to renew or modify an existing permit. The appropriate specific activity fee(s) specified below (OAR 340-216-0020, Table 2, Part 3) applies to permit modifications or may be in addition to initial permit application fees.

OAR 340-216-0020, Table 2, Part 1 – INITIAL PERMITTING APPLICATION FEES:	
Short Term Activity ACDP	
Simple ACDP	
Construction ACDP	
Standard ACDP	$12,000.00
Standard ACDP (PSD/NSR)	
OAR 340-216-0020, TABLE 2, PART 2 - ANNUAL FEES:	
Simple ACDP – Low fee class	
Simple ACDP – High fee class	
Standard ACDP	$7,680.00
OAR 340-216-0020, TABLE 2, PART 3 - SPECIFIC ACTIVITY FEES:	
Non-technical permit modification	
Non-PSD/NSR basic technical permit modification	
Non-PSD/NSR simple technical permit modification	
Non-PSD/NSR moderate technical permit modification	
Non-PSD/NSR complex technical permit modification	
PSD/NSR modification	
Modeling review (outside PSD/NSR)	
Public hearing at applicant's request	
State MACT determination	
TOTAL FEES	

SUBMIT TWO COPIES OF THE COMPLETED APPLICATION TO:

New or Modified Permits (include fees):	**Permit Renewals (no fees):**
Oregon Department of Environmental Quality Business Office 811 SW Sixth Avenue Portland, OR 97204-1390	Oregon Department of Environmental Quality Air Quality Program, Northwest Region Office 2020 SW 4th Avenue, Suite 400 Portland, Oregon 97201-4987

Facility Name: Columbia Pacific Bio-Refinery Permit Number: TBD

1. Description of facility and processes:

Columbia Pacific Bio-Refinery operates a volatile organic liquid (VOL) transfer and storage at their Clatskanie, Columbia County, Oregon site.

Current operations utilize two existing 90,500 barrel internal floating roof tanks (IFRT). In addition to the continued use of these two existing storage tanks, CPBR proposes to install four new 108,000 barrel IFR storage tanks, two new fixed roof high-pressure process tanks and construct a new vapor combustion unit (VCU).

VOL received by railcar will pass through one of the two high-pressure tanks and then into one of the six storage tanks. From the storage tanks, VOL will be pumped to the loading dock where it will be loaded onto water-borne vessels for shipment.

3. Attach plot plan.

4. Attach process flow diagram.

5. Attach a city map or drawing showing the facility location.

0 250 500 Feet

N E S W

Future Tank

Existing Tank

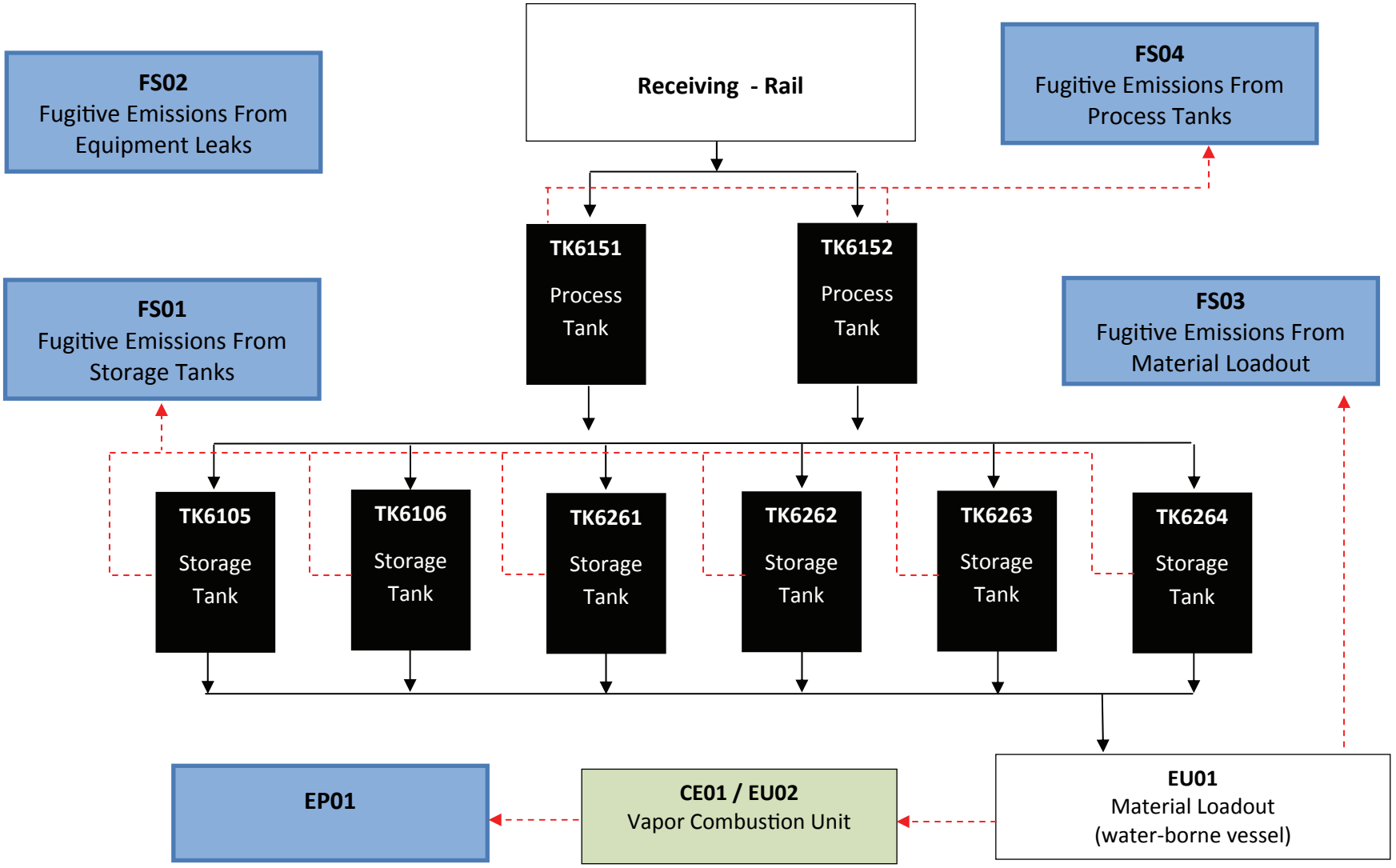
Vapor Combustion Unit

Figure 1
Columbia Pacific Bio-Refinery
Terminal Operations
Plot Plan
Clatskanie, OR

COLUMBIA PACIFIC BIO-REFINERY

Source: Z:\Clients\A_D\Columbia_Pacific\Bio_Refinery\ArcGIS\2013\08\Figures\CPBR_Figure_1.mxd

Date: (8/9/2013)



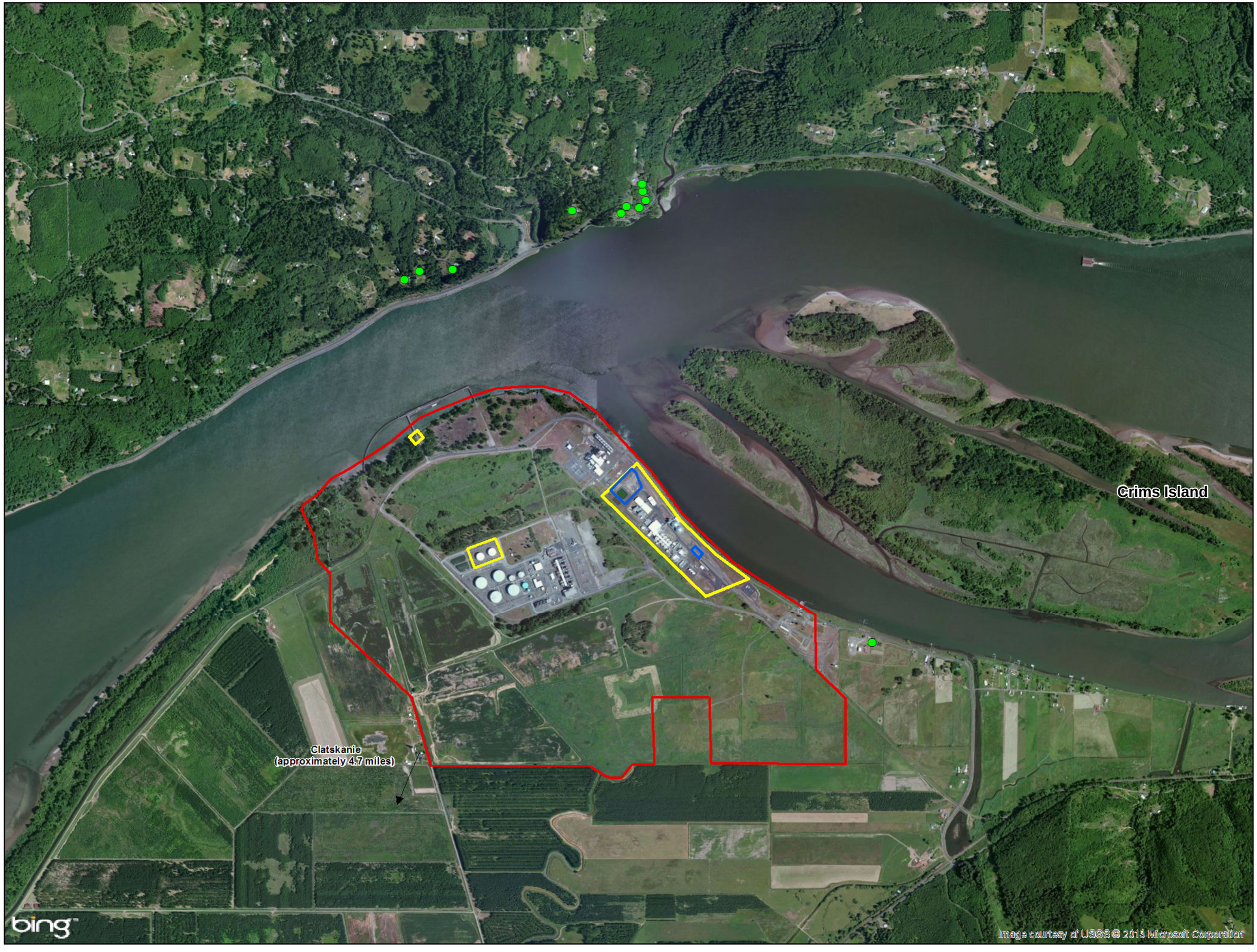
Prepared By:

merjent

Prepared:
August 22, 2013

Figure 2
Process Flow Diagram / Stack Vent Diagram
Columbia Pacific Bio-Refinery

Process Flow:
Emissions:
Control Equipment:
Stack Vent:



0 500 1,000
Feet

N
W E
S

- Noise Sensitive Area
- Facility
- Port Westward Boundary
- Future Tanks

Figure 3
Columbia Pacific Bio-Refinery
Facility Location
Clatskanie, OR

COLUMBIA PACIFIC BIO-REFINERY

Source: Z:\Clients\A_D\Columbia_Pacific\Bio_Refinery\ArcGIS\2013\08\Figures\CPBR_Figure_3.mxd
Date: (8/9/2013)

Facility Name: Columbia Pacific Bio-refinery Permit Number: TBD

Tank Information:

		Tank Identification Number			
		TK6153-6156	TK6105-6106		
1.	Existing or future?	Future	Existing		
2.	Manufacturer	T- Bailey	CB&I Services		
3.	Date construction commenced (month/year)	NA	1974		
4.	Date installed (month/year)	NA	1975		
5.	Rated capacity (gallons)	4,500,000	3,800,000		
6.	Height (feet)	56	41		
7.	Diameter (feet)	120	134		
8.	Submerged fill pipe? (yes or no)	Yes	Yes		
9.	Type of tank (see instructions)	fix. roof/int. float	fix. roof/int. float		
10.	Underground? (yes or no)	No	No		
	Underground tank fill type (see instructions)				
11.	Above ground? (yes or no)	Yes	Yes		
a.	Pipe material	ASTM A 134	Carbon Steel		
b.	Pipe size	16 inches	14 inches		
c.	Piping continuously drains downward? (yes or no)	Yes	No		
d.	Description of condensate collection tank.	NA	NA		
e.	Isolation valves? (yes or no)	Yes	Yes		
12.	Pressure/vacuum relief valves				
a.	vent pressure settings (psia)	0.03	0.03		
b.	months	0	0		
13.	Pressure conservation vent? (yes or no) If yes, enter psia.	Atmospheric	Atmospheric		
14.	Fixed roof tank? (yes or no)	No	No		
a.	roof color	NA	NA		

		Tank Identification Number			
b.	shell color	NA	NA		
c.	vapor space height (feet)	NA	NA		
d.	shell condition	NA	NA		
15.	Floating roof tank? (yes or no)	Yes	Yes		
a.	type of construction	welded	welded		
b.	condition	light rust	light rust		
c.	tank color	white	white		
d.	deck type	bolter	bolter		
16.	External floating roof tank seal type	NA	NA		
17.	Internal floating roof tanks				
a.	seal type	liq prime, rim sec	liquid primary		
b.	number of columns	7	8		
c.	effective column diameter (feet)	1.167	1		
d.	total deck seam length (feet)	2,262	2,820.52		
e.i	deck fitting types – access hatch				
	(1) bolted cover, gasketed	1	1		
	(2) unbolted cover, gasketed	0	0		
	(3) unbolted cover, ungasketed	0	0		
e.ii	deck fitting types – automatic gauge float well				
	(1) bolted cover, gasketed	1	1		
	(2) unbolted cover, gasketed	0	0		
	(3) unbolted cover, ungasketed	0	0		
e.iii	deck fitting types – column well				
	(1) built-up column, sliding cover, gasketed	0	0		

		Tank Identification Number			
	(2) built up column, sliding cover, ungasketed	0	0		
	(3) pipe column, flexible fabric sleeve seal	0	8		
	(4) pipe column, sliding cover, gasketed	7	0		
	(5) pipe column, sliding cover, ungasketed	0	0		
e.iv	deck fitting types – ladder well				
	(1) sliding cover, gasketed	1	1		
	(2) sliding cover, ungasketed	0	0		
e.v	deck fitting types – sample well or pipe				
	(1) slotted pipe, sliding cover, gasket	0	0		
	(2) slotted pipe, sliding cover, ungasketed	0	0		
	(3) sample well, slit fabric seal, 10% open area	1	1		
	(4) stub drain, 1-inch diameter	116	144		
e.vi	deck fitting types – roof leg or hanger well				
	(1) adjustable	64	49		
	(2) fix	0	0		
e.vii	deck fitting types – vacuum breaker				
	(1) weighted mechanical actuation, gasketed	4	1		
	(2) weighted mechanical actuation, ungasketed	0	0		
18.	Maximum liquid loading rate (gallons/hour)	1,050,000	1,050,000		
19.	Description of submerged fill out-loading	downcomer	downcomer		
20.	Vapor recovery system? (yes or no)	No	No		
Material Stored:					
21.	Name/type of material stored in the tank	VOLRVP<12.75	VOLRVP<12.75		
22.	Maximum projected throughput (gallons/year)	324,131,000	271,540,000		
23.	Maximum projected turnovers per year	72	72		

		Tank Identification Number			
24.	Density (pounds/gallon)	7.1	7.1		
25.	Molecular weight	Liquid: 207	Liquid: 207		
26.	Average storage temperature (°F)	53.57	53.57		
27.	Vapor pressure (psia)	9.65	9.65		

Facility Name: Columbia Pacific Bio-Refinery Permit Number: TBD

Process Information

1. ID Number: TK6151 and TK6152
2. Descriptive name: Railcar Unloading Tanks
3. Existing or future? Future
4. Date commenced
5. Date installed/completed

6. Description of process:

Volatile organic liquids with RVP < 12.75 will be delivered from rail cars and pumped through one of two identical process tanks prior to sending into one of six internal floating roof storage tanks.

The two process tanks will be 36,000-gallon fixed roof construction, and will be pressurized to eliminate boiling, working, breathing, and leakage losses.

Operating Schedule

7. Seasonal or year-round? Year-round
8. Batch or continuous operation? Continuous
9. Projected maximum hours/day 24
10. Projected maximum hours/year 8760
11. Process/device capacity:

	Short term capacity		Annual usage	
Raw materials	amount	units	amount	units
Volatile Organic Liquid	8,000	gallons/minute	1,840,000,000	gallons
Products				

12. Control device(s) (yes/no?) If yes, provide the ID number and complete and attached the applicable series AQ300 form(s).

No

OPERATION AND MAINTENACE PRACTICES

1. Facility Name: COLUMBIA PACIFIC BIO-REFINERY

2. Permit Number: TBD

3. Emission Point or Fugitive Emission Source ID	4. Criteria Pollutants Emitted	5. Emission Level Depends on O&M (yes/no)	6. O&M Option Number(s) Selected	7. Describe specific O&M work practices or Emission Action Levels to ensure that the process, control device or fugitive emission source is operated and maintained at the highest reasonable efficiency and effectiveness to minimize emissions.
VCU	PM, SO2, NOx, GHG, H2S	No		
VCU	VOC, CO	Yes	2	Monitoring of control device operating temperature.
Storage Tanks	VOC, GHG, H2S	No		
Loadout Fugitives (leaks)	VOC, GHG, H2S	No		
Tank Farm Equipment leaks	VOC, GHG, H2S	No		

Facility Name: Columbia Pacific Bio-Refinery Permit Number: TBD

1.	Control Device ID	CE01 / EU02		
2.	Process/Device(s) Controlled	EU01		
3.	Year installed	Future		
4.	Manufacturer/Model No.	Jordan CEB 4800		
5.	Control Efficiency(%)	99.5%		
6.	Type of incinerator	Thermal Oxidizer		
7.	Design temperature (°F)	2200		
8.	Design residence time (sec.)	< 1		
9.	Design inlet gas flow rate (acfm)	22340		
10.	Inlet gas pretreatment? (yes/no) If yes, list control device ID and complete a separate control device form	no		
11.	Fuel type	Propane		
12.	Design maximum hourly amount (specify units)	163.6 MMBtu/hr		
13.	Projected maximum annual amount (specify units)	1,012,457 MMBtu/yr		

Facility Name: Columbia Pacific Bio-Refinery *Permit Number:* TBD

1. Emissions Point	Production Rates		4. Pollutant	Emission Factors			Emissions	
	2. Short-term (Specify units)	3. Annual (Specify units)		5. Short-term	6. Long-term	7. Reference(s)	8. Short-term (Specify units)	9. Annual (tons/year)
EP01-EU02	1.8 kgal/hr	15768 kgal/yr	PM/PM10/PM2.5	0.7 lb/kgal	0.7 lb/kgal	AP-42 Sec 1.4	1.24 lb/hr	**3.83**
EP01-EU02	1.8 kgal/hr	15768 kgal/yr	NO_x	2.128 lb/kgal	2.128 lb/kgal	Manufacturer	3.76 lb/hr	**11.64**
EP01-EU01	1,050 kgal/hr	1,839.6 kgal	SO2	0.0001 lb/kgal	0.0001 lb/kgal	Engineering Est	0.09 lb/hr	0.08
EP01-EU02	1.8 kgal/hr	15768 kgal/yr	SO2	0.100 lb/kgal	0.100 lb/kgal	AP-42 Sec 1.4	0.18 lb/hr	0.55
TOTAL			**SO2**					**0.6**
EP01-EU01	1,050 kgal/hr	1,839.6 kgal	VOC	0.0265 lb/kgal	0.0265 lb/kgal	Engineering Est	27.83 lb/hr	24.37
FS01	1,050 kgal/hr	1,839.6 kgal	VOC	11.75 lb/kgal	11.75 lb/kgal	AP-42 Sec 7.1	3,288.48 lb/hr	35.89
FS02	1 hour	8,760 hours	VOC	0.03 lb/hr	0.03 lb/hr	EPA-453/R95017	0.03 lb/hr	0.15
FS03	1,050 kgal/hr	1,839.6 kgal	VOC	0.0172 lb/kgal	0.0172 lb/kgal	AP-42 Sec 5.2	18.06 lb/hr	15.82
FS04	1 event	1 event	VOC	2520 lb/event	2520 lb/event	Engineering Est	2520 lb/event	1.26
TOTAL			**VOC**					**77.5**
EP01-EU01	1,050 kgal/hr	1,839.6 kgal	H2S	5.2E-5 lb/kgal	5.2E-5 lb/kgal	Engineering Est	0.01 lb/hr	0.00
FS01	1,050 kgal/hr	1,839.6 kgal	H2S	0.023 lb/kgal	0.023 lb/kgal	Tanks 4.0.9d	6.58 lb/hr	0.07
FS02	1 hour	8,760 hours	H2S	0.001 lb/hr	0.001 lb/hr	EPA-453/R95017	0.00 lb/hr	0.00
FS03	1,050 kgal/hr	1,839.6 kgal	H2S	3.4E-5 lb/kgal	3.4E-5 lb/kgal	Engineering Est	0.04 lb/hr	0.03
FS04	1 event	1 event	H2S	5.04 lb/event	5.04 lb/event	Engineering Est	5.04 lb/event	0.00
TOTAL			**H2S**					**0.10**
Example	200 tons of rock/hr	400,000 tons	PM	0.04 lb/ton	0.04 lb/ton	DEQ	8.0 lb/hr	8.0

Facility Name: Columbia Pacific Bio-Refinery *Permit Number:* TBD

1. Emissions Point	Production Rates		4. Pollutant	Emission Factors			Emissions	
	2. Short-term (Specify units)	3. Annual (Specify units)		5. Short-term	6. Long-term	7. Reference(s)	8. Short-term (Specify units)	9. Annual (tons/year)
EP01-EU02	1.8 kgal/hr	15768 kgal/yr	CO	0.93 lb/kgal	0.93 lb/kgal	Manufacturer	1.64 lb/hr	5.06
EP01-EU01	1,050 kgal/hr	1,839.6 kgal	GHG	0.019 lb/kgal	0.019 lb/kgal	Engineering Est	91.87 lb/hr	80.48
EP01-EU02	1.8 kgal/hr	15768 kgal/yr	GHG	12557.8 lb/kgal	12557.8 lb/kgal	40 CFR 98 tbl C1	22,210.30 lb/hr	68,725.48
FS01	1,050 kgal/hr	1,839.6 kgal	GHG	1.83 lb/kgal	1.83 lb/kgal	Engineering Est	513.18 lb/hr	5.64
FS02	1 hour	8,760 hours	GHG	0.01 lb/hr	0.01 lb/hr	EPA-453/R95017	0.01 lb/hr	0.02
FS03	1,050 kgal/hr	1,839.6 kgal	GHG	0.024 lb/kgal	0.024 lb/kgal	Engineering Est	2.84 lb/hr	2.49
FS04	1 event	1 event	GHG	396.1 lb/event	396.1 lb/event	Engineering Est	396.1 lb/event	0.2
TOTAL			**GHG**					**68,814.11**
Example	200 tons of rock/hr	400,000 tons	PM	0.04 lb/ton	0.04 lb/ton	DEQ	8.0 lb/hr	8.0

Facility: Columbia Pacific Bio-Refinery

1. Device/process ID	2. PM10 PSEL (tons/year)	3. PM2.5 fraction (f)	4. Reference	5. PM2.5 PSEL (tons/yr)
EU02	3.83	1	AP-42 Sec 1.4	3.83
TOTAL				0

Facility Name: Columbia Pacific Bio-Refinery

Permit Number: TBD

Emissions Data

1. Emissions Point	2. Annual Production Rate (specify units)	3. Pollutant	4. Emission Factor	5. EF Reference	6. Annual Emissions (tons/yr)
EU01	195.00 lb/yr	n-hexane	0.02 lb/hr	API MPMS 19.4	0.10
EU02	2,324.52 lb/yr	n-hexane	1.80 lb/hr	AP-42 Section 1.4	1.16
FSO1	220.59 lb/yr	n-hexane	0.03 lb/hr	API MPMS 19.4	0.11
FSO3	126.56 lb/yr	n-hexane	0.01 lb/hr	API MPMS 19.4	0.06
FS04	7.12 lb/yr	n-hexane	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**n-hexane**			**1.44**
EU01	292.50 lb/yr	Benzene	0.03 lb/hr	API MPMS 19.4	0.15
EU02	2.71 lb/yr	Benzene	0.00 lb/hr	AP-42 Section 1.4	0.00
FSO1	236.05 lb/yr	Benzene	0.03 lb/hr	API MPMS 19.4	0.12
FSO3	189.85 lb/yr	Benzene	0.02 lb/hr	API MPMS 19.4	0.09
FS04	6.46 lb/yr	Benzene	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**Benzene**			**0.36**
EU01	48.75 lb/yr	iso-octane {2,2,4 trimethylpentane}	0.01 lb/hr	API MPMS 19.4	0.02
FSO1	27.37 lb/yr	iso-octane {2,2,4 trimethylpentane}	0.00 lb/hr	API MPMS 19.4	0.01
FSO3	31.64 lb/yr	iso-octane {2,2,4 trimethylpentane}	0.00 lb/hr	API MPMS 19.4	0.02
FS04	0.54 lb/yr	iso-octane {2,2,4 trimethylpentane}	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**iso-octane {2,2,4 trimethylpentane}**			**0.05**
EU01	487.49 lb/yr	toluene	0.06 lb/hr	API MPMS 19.4	0.24
EU02	4.39 lb/yr	toluene	0.00 lb/hr	AP-42 Section 1.4	0.00
FSO1	218.28 lb/yr	toluene	0.02 lb/hr	API MPMS 19.4	0.11
FSO3	316.41 lb/yr	toluene	0.04 lb/hr	API MPMS 19.4	0.16
FS04	2.97 lb/yr	toluene	0.00 lb/hr	API MPMS 19.4	0.001
TOTAL		**toluene**			**0.51**
EU01	195.00 lb/yr	ethylbenzene	0.02 lb/hr	API MPMS 19.4	0.10
FSO1	68.74 lb/yr	ethylbenzene	0.01 lb/hr	API MPMS 19.4	0.03
FSO3	126.56 lb/yr	ethylbenzene	0.01 lb/hr	API MPMS 19.4	0.06
FS04	0.36 lb/yr	ethylbenzene	0.00 lb/hr	API MPMS 19.4	0.000
TOTAL		**ethylbenzene**			**0.20**

Applications for Standard ACDPs must also include the most recent Toxics Release Inventory report, if applicable (see instructions).

Facility Name: Columbia Pacific Bio-Refinery Permit Number: TBD

Emissions Data

1. Emissions Point	2. Annual Production Rate (specify units)	3. Pollutant	4. Emission Factor	5. EF Reference	6. Annual Emissions (tons/yr)
EU01	682.49 lb/yr	xylenes, mixed isomers	0.08 lb/hr	API MPMS 19.4	0.34
FSO1	236.85 lb/yr	xylenes, mixed isomers	0.03 lb/hr	API MPMS 19.4	0.12
FSO3	442.98 lb/yr	xylenes, mixed isomers	0.02 lb/hr	API MPMS 19.4	0.22
FS04	1.10 lb/yr	xylenes, mixed isomers	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**xylenes, mixed isomers**			**0.68**
EU01	48.75 lb/yr	cumene {isopropylbenze	0.01 lb/hr	API MPMS 19.4	0.02
FSO1	51.26 lb/yr	cumene {isopropylbenze	0.01 lb/hr	API MPMS 19.4	0.01
FSO3	31.64 lb/yr	cumene {isopropylbenze	0.01 lb/hr	API MPMS 19.4	0.02
FS04	0.04 lb/yr	cumene {isopropylbenze	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**cumene {isopropylbenzene}**			**0.05**
EU01	160.87 lb/yr	1,2,4 trimethylbenzene	0.02 lb/hr	API MPMS 19.4	0.08
FSO1	51.26 lb/yr	1,2,4 trimethylbenzene	0.01 lb/hr	API MPMS 19.4	0.03
FSO3	104.42 lb/yr	1,2,4 trimethylbenzene	0.01 lb/hr	API MPMS 19.4	0.05
FS04	0.06 lb/yr	1,2,4 trimethylbenzene	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**1,2,4 trimethylbenzene**			**0.16**
EU01	341.25 lb/yr	cyclohexane	0.04 lb/hr	API MPMS 19.4	0.17
FSO1	121.92 lb/yr	cyclohexane	0.01 lb/hr	API MPMS 19.4	0.06
FSO3	221.49 lb/yr	cyclohexane	0.03 lb/hr	API MPMS 19.4	0.11
FS04	0.71 lb/yr	cyclohexane	0.00 lb/hr	API MPMS 19.4	0.00
TOTAL		**cyclohexane**			**0.17**
EU02	**2,438.11 lb/yr**	**Total combustion HAPs**	**0.28 lb/hr**	**AP-42 Section 1.4**	**1.22**

Applications for Standard ACDPs must also include the most recent Toxics Release Inventory report, if applicable (see instructions).

APPENDIX B – EMISSSION CALCULATIONS

AND TANKS 4.09 REPORTS

COLUMBIA PACIFIC BIO-REFINERY

Facility Name: Columbia Pacific Bio-Refinery
Facility Site Location: Clatskanie, OR
Permit: 05-0006

Facility Contact: Brandon Gimper, Environmental Manager
Phone #: (503) 728-7022
Email Address: bgimper@globalp.com

Responsible Official: R. Daniel Luckett
Responsible Official's Title: Facility General Manager

PERMITTED UNITS

TK6153-6156	Four identical internal floating roof storage tanks, each with working capacity of 108,000 barrels.
TK6105-6106	Two existing, identical internal floating roof tanks, each with a working capacity of 90,500 barrels
TK6151-6152	Two fixed roof (low pressure) process tanks, each with 36,000 gallons storage capacity.
EU01,EU02	Vapor Combustion Unit, rated at 163.6 MMBtu/hr
Maximum Reid vapor pressure of material handled:	12.75

COLUMBIA PACIFIC BIO-REFINERY
TERMINAL OPERATIONS - POTENTIAL EMISSIONS SUMMARY

EP#	CE#	EU#	Emission Unit Description	PM/PM10/PM2.5		NOx		SO2		VOC		CO		GHG (CO2e)		H2S		HAPs	
					limited		limited		limited		limited	limited			limited		limited		limited
				lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
EP01	CE01	EU01	VCU (Vapor Destruction)	---	---	---	---	0.1	0.1	27.8	24.4	---	---	91.9	80.5	0.005	0.005	1.40	1.23
EP01	CE01	EU02	VCU (Propane Combustion)	1.2	3.8	3.8	11.6	0.2	0.5	---	---	1.6	5.1	22,210.3	68,725.5	---	---	0.28	1.22
FS01	---	TK6153-6158	Storage Tanks	---	---	---	---	---	---	3,288.5	35.9	---	---	513.2	5.6	6.58	7.2E-02	0.1	0.6
FS02	---	---	Tank Farm Equipment Leaks	---	---	---	---	---	---	0.0	0.1	---	---	0.0	0.0	6.7E-05	2.9E-04	negligible	negligible
FS03	---	---	Loadout Fugitives (Leaks)	---	---	---	---	---	---	18.1	15.8	---	---	2.8	2.5	0.0	0.0	0.91	0.80
FS04	---	---	Process Tanks	---	---	---	---	---	---	1,259.7	1.3	---	---	198.1	0.0	2.5	0.0	9.68	0.01
TOTAL				**PM/PM10/PM2.5**		**NOx**		**SO2**		**VOC**		**CO**		**GHG (CO2e)**		**H2S**		HAPs	
				lb/hr	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**	**lb/hr**	**tpy**
				1.2	**3.8**	**3.8**	**11.6**	**0.3**	**0.6**	**4,594.1**	**77.5**	**1.6**	**5.1**	**23,016.3**	**68,814.1**	**9.1**	**0.1**	**12.4**	**3.8**

COLUMBIA PACIFIC BIO-REFINERY
WATER-BORNE VESSEL LOADOUT VAPOR COMBUSTION UNIT (VAPOR DESTRUCTION)

Potential to Emit

EP#	CE#	EU No.	Pollutant	CAS No.	Throughput		Emission Factor		Emission Factor Citation	lb/hr	TPY
EP01	CE01	EU01	SO2	7446-09-5	1,050.0	kgal/hr	0.0001	lb/kgal	Engineering Estimate	0.09	0.08
EP01	CE01	EU01	VOC	---	1,050.0	kgal/hr	0.03	lb/kgal	Engineering Estimate	27.83	24.37
EP01	CE01	EU01	Methane *	---	1,050.0	kgal/hr	0.004	lb/kgal	Engineering Estimate	91.87	80.48
EP01	CE01	EU01	H2S	7783-06-4	1,050.0	kgal/hr	5.2E-05	lb/kgal	Engineering Estimate	0.01	0.00

* Units of methane are carbon dioxide equivalent (CO2e).

PROCESS DATA

Loading Rate:

25,000 bbl/hr 1,050 kgal/hr

Annual Unrestricted Throughput:

219,000,000 bbl/yr 9,198,000 kgal/yr

Limited Annual Throughput:

43,800,000 bbl/yr 1,839,600 kgal/yr

Water-borne vessel Vapor Composition

0.200% Sulfur (wt % of total VOC) - assumed to be all H2S

90% conversion of H2S to SO2

HAPs EMISSIONS FROM LOADOUT

Pollutant	Weight fraction in crude oil *	Potential To Emit Restricted Emissions **		
	w_i	lb/yr	tpy	lb/hr
n-hexane	0.4	195.00	0.10	0.02
Benzene	0.6	292.50	0.15	0.03
iso-octane {2,2,4 trimethylpentane}	0.1	48.75	0.02	0.01
toluene	1	487.49	0.24	0.06
ethylbenzene	0.4	195.00	0.10	0.02
xylenes *	1.4	682.49	0.34	0.08
cumene {isopropylbenzene}	0.1	48.75	0.02	0.01
1,2,4 trimethylbenzene	0.33	160.87	0.08	0.02
cyclohexane	0.7	341.25	0.17	0.04
Total HAP		**2452.09**	**1.23**	**0.28**

* From API's Manual of Petroleum Measurement Standards Chapter 19.4: Evaporative Loss Reference

** Assumes a capture efficiency of 98.7%.

COLUMBIA PACIFIC BIO-REFINERY
WATER-BORNE VESSEL LOADOUT VAPOR COMBUSTION UNIT (PROPANE COMBUSTION)*

EP#	CE#	EU No.	Pollutant	CAS No.	Throughput		Emission Factor		Emission Factor Citation	Potential to Emit lb/hr	Potential to Emit limited TPY
EP01	CE01	EU02	PM/PM10/PM2.5	---	1.8	kgal/hr	7.00E-01	lb/kgal	AP-42 Section 1.5	1.24	3.83
EP01	CE01	EU02	NOx	---	1.8	kgal/hr	2.128	lb/kgal	Manufacturer	3.76	11.64
EP01	CE01	EU02	SO2	7446-09-5	1.8	kgal/hr	0.100	lb/kgal	AP-42 Section 1.5	0.18	0.55
EP01	CE01	EU02	CO	630-08-0	1.8	kgal/hr	0.93	lb/kgal	Manufacturer	1.64	5.06
EP01	CE01	EU02	GHG **	---	1.8	kgal/hr	12557.8	lb/kgal	40 CFR 98 Tables C-1 &C-2	22,210	68,725

* Potential to emit from combustion is based on propane combustion and conservatively assumes annual combustion of 1,012,457 MMBtu/yr. However, the anticpated actual annual combustion of 202,491 MMBtu/yr is well below this rate.
** GHG emissions are in units of carbon dioxide equivalent (CO2e).

PROCESS DATA

Loading Rate:
25,000 bbl/hr 1,050 kgal/hr

Annual Unrestricted Throughput:
219,000,000 bbl/yr 9,198,000 kgal/yr

Limited Annual Throughput:
43,800,000 bbl/yr 1,839,600 kgal/yr

VCU (per manufacturer quote):
2457 process gas flow (scfm)
784 BTU/scf
115.6 MMBtu/hr - expected max
163.6 MMBtu/hr - equip. rating

Other Process Data:
1,433,136 MMBtu/yr - unrestricted
1,012,457 MMBtu/yr - limited 10,945.48 kgal/yr
202,491 MMBtu/yr - maximum anticipated (1,839,600 kgal/yr / 1,050 kgal/hr * 115.6 MMBtu/hr)
92,500 BTU/gal propane
1.77 kgal/hr propane unrestricted

COLUMBIA PACIFIC BIO-REFINERY
WATER-BORNE VESSEL LOADOUT VAPOR COMBUSTION UNIT (PROPANE COMBUSTION)*
HAP EMISSIONS

EP#	CE#	EU No.	Pollutant	CAS No.	Throughput		Emission Factor		Emission Factor Citation	Potential to Emit lb/hr	Potential to Emit limited TPY
EP01	CE01	EU02	2-Methylnaphthalene	91-57-6	0.1	MMscf/hr	2.40E-05	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	3-Methylchloranthrene	56-49-5	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	7,12-Dimethylbenz(a)anthracene		0.1	MMscf/hr	1.60E-05	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Acenaphthene	83-32-9	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Acenaphthylene	203-96-8	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Anthracene	120-12-7	0.1	MMscf/hr	2.40E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Benz(a)anthracene	56-55-3	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Benzene	71-43-2	0.1	MMscf/hr	2.10E-03	lb/MMscf	AP-42 Section 1.4	0.0003	0.001
EP01	CE01	EU02	Benzo(a)pyrene	50-32-8	0.1	MMscf/hr	1.20E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Benzo(b)fluoranthene	205-99-2	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Benzo(g,h,i)perylene	191-24-2	0.1	MMscf/hr	1.20E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Benzo(k)fluoranthene	205-82-3	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Chrysene	218-01-9	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Dibenzo(a,h)anthracene	53-70-3	0.1	MMscf/hr	1.20E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Dichlorobenzene	25321-22-6	0.1	MMscf/hr	1.20E-03	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Fluoranthene	206-44-0	0.1	MMscf/hr	3.00E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Fluorene	86-73-7	0.1	MMscf/hr	2.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Formaldehyde	50-00-0	0.1	MMscf/hr	7.50E-02	lb/MMscf	AP-42 Section 1.4	0.01	0.05
EP01	CE01	EU02	Hexane	110-54-3	0.1	MMscf/hr	1.80E+00	lb/MMscf	AP-42 Section 1.4	0.27	1.16
EP01	CE01	EU02	Indeno(1,2,3-cd)pyrene	193-39-5	0.1	MMscf/hr	1.80E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Naphthalene	91-20-3	0.1	MMscf/hr	6.10E-04	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Phenanathrene	85-01-8	0.1	MMscf/hr	1.70E-05	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Pyrene	129-00-0	0.1	MMscf/hr	5.00E-06	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Toluene	108-88-3	0.1	MMscf/hr	3.40E-03	lb/MMscf	AP-42 Section 1.4	0.001	0.002
EP01	CE01	EU02	Arsenic	7440-38-2	0.1	MMscf/hr	2.00E-04	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Beryllium	7440-41-7	0.1	MMscf/hr	1.20E-05	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Cadmium	7440-43-9	0.1	MMscf/hr	1.10E-03	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Chromium	7440-47-3	0.1	MMscf/hr	1.40E-03	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Cobalt	7440-48-4	0.1	MMscf/hr	8.40E-05	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Manganese	7439-96-5	0.1	MMscf/hr	3.80E-04	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Mercury	7439-97-6	0.1	MMscf/hr	2.60E-04	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Nickel	7440-02-0	0.1	MMscf/hr	2.10E-03	lb/MMscf	AP-42 Section 1.4	0.00	0.00
EP01	CE01	EU02	Selenium	7782-49-2	0.1	MMscf/hr	2.40E-05	lb/MMscf	AP-42 Section 1.4	0.00	0.00
Total HAP										**0.28**	**1.22**

* AP-42 does not provide emission factors of HAPs from combustion of propane. Therefore, the potential to emit calculations for HAPs use emission factors for natural gas.

COLUMBIA PACIFIC BIO-REFINERY
HAPs EMISSIONS FROM STORAGE TANKS - FS01

Pollutant	Weight fraction in crude oil *	MW	Antoine's Constants * A	B	C	mol fraction in liquid	Saturated Vapor Pressure at T_{LA}	Partial Pressure	mol fraction in vapor phase	weight fraction in vapor phase	Landing loss	Standing loss **	Working loss ***	Total Emissions for component
	w_i	lb / lbmole		deg C	deg C	x_i	p_{i0} (psi)	p_i (psi)	y_i	z_i	L_{li} lb/yr	L_{si} lb/yr	L_{wi} lb/yr	lb/yr
n-hexane	0.4	86.18	6.878	1171.5	224.37	0.010	1.589	0.015	0.002	0.003	31.3	128.7	60.6	220.6
Benzene	0.6	78.1	6.906	1211	220.79	0.016	0.961	0.015	0.002	0.003	28.4	116.8	90.9	236.0
iso-octane {2,2,4 trimethylpentane}	0.1	114.23	6.812	1257.8	220.74	0.002	0.486	0.001	0.000	0.000	2.4	9.8	15.1	27.4
toluene	1	92.14	7.017	1377.6	222.64	0.022	0.265	0.006	0.001	0.001	13.1	53.7	151.5	218.3
ethylbenzene	0.4	106.17	6.95	1419.3	212.61	0.008	0.081	0.001	0.000	0.000	1.6	6.6	60.6	68.7
xylenes	1.4	106.17	7.009	1462.3	215.11	0.027	0.070	0.002	0.000	0.000	4.8	19.9	212.1	236.8
cumene {isopropylbenzene}	0.1	120.19	6.929	1455.8	207.2	0.002	0.037	0.000	0.000	0.000	0.2	0.7	15.1	16.1
1,2,4 trimethylbenzene	0.33	120.19	7.044	1573.3	208.56	0.006	0.015	0.000	0.000	0.000	0.2	1.0	50.0	51.3
cyclohexane	0.7	82.14	5.872	1221.9	223.17	0.018	0.090	0.002	0.000	0.000	3.1	12.8	106.0	121.9
TOTAL														**1197.1**

* From API's Manual of Petroleum Measurement Standards Chapter 19.4: *Evaporative Loss Reference Information and Speciation Methodology*

** Landing losses and standing losses consist of evaporation from the surface of a bulk liquid. Raoult's law is used to account for differential evaporation from the surface.

*** Working loss is evaporation of the thin film of liquid left behind when liquid level is lowered in a tank. Assume this thin film evaporates entirely. Speciated on the basis of liquid profile.

PROCESS DATA

T LA	53.0	deg F - or enter data from TANKS
	512.67	deg R
MW, liquid stock	207	lb/lbmole
MW, vapor over liquid stock	50.0	lb/lbmole crude oil
RVP	12.75	psi
total emissions (Lt)	61063.22	lb/yr
total working loss (Lw)	15,147.18	lb/yr
Total standing loss(Ls)	45,916.04	lb/yr
Landing losses (L_l)	11,166.93	lb/yr
Stock True Vapor Pressure	9.39	psi

COLUMBIA PACIFIC BIO-REFINERY
STORAGE TANK EMISSIONS (FLOATING ROOF TANKS) - FS01

Pollutant	CAS No.	Source	Potential To Emit		
			lb/hr	TPY	TPY
Normal Operations					
VOC	---	Tanks 4.0.9d	6.9	30.30	30.30
H2S*	7783-06-4	Tanks 4.0.9d	1.4E-02	6.1E-02	6.1E-02
GHG (CO2e)**	---	Engineering Estimate	1.1	4.76	4.76
Roof Landings					
VOC	---	AP-42, Ch 7.1	3,281.57	14,373.26	5.58
H2S*	7783-06-4	Tanks 4.0.9d	6.56	28.75	1.1E-02
GHG (CO2e)**	---	Engineering Estimate	512.09	2,242.96	0.9
Total					
VOC	---	AP-42, Ch 7.1	3,288.48	14,403.56	35.9
H2S*	7783-06-4	Tanks 4.0.9d	6.58	28.81	0.1
GHG (CO2e)**	---	Engineering Estimate	513.18	2,247.73	5.6

* Conservatively assumes that the concentration of H2S in the head vapors is 2,000 ppm. This is based on testing performed on heavier crude oils than will be transferred at the facility.

** Conservatively assumes that the total hydrocarbon (THC) emissions include 0.743% methane (by weight) and 99.257% VOC (by weight). This is based on engineering testing performed on the inlet to the existing vapor recovery unit at the CPBR water-borne vessel loadout.

COLUMBIA PACIFIC BIO-REFINERY
STORAGE TANK EMISSIONS (FLOATING ROOF TANKS) - FS01

Details on emissions from Roof Landings
(Per Chapter 7, Section 1 of AP-42, 11/2006 - Table 7.1-17, IFR with heel)

Parameter/Properties	Symbol	Unit	Reference	Value
Diameter of the tank	D	ft		134
Effective height of the stock liquid	h_{le}	ft		0.5
Density of the liquid inside the tank	W_l	lb/gal	TANKS output	7.09
Limit on standing idle loss	L_{SLmax}	lb/landing episode	Equation 2-13	375744.11
Height of vapor space under floating roof	h_v	ft		7
Volume of the vapor space	V_V	ft^3	Equation 2-32	98718.27
Daily maximum ambient temperature	T_{AX}	R	Table 7.1-7, Portland OR	521.67
Daily minimum ambient temperature	T_{AN}	R	Table 7.1-7, Portland OR	503.67
Daily ambient termperature range	ΔT_A	R	Equation 1-12	18.00
Tank paint solar absorptance	α	dimensionless	Table 7.1-6, white - good	0.17
Daily total solar insolation factor	I	Btu/ft^2-d	Table 7.1-7	1067
Daily vapor temperature range	ΔT_V	R	Equation 1-8	18.04
Average temperature of the vapor and liquid below the floating roof	T	R	TANKS output	513.24
Constant from the vapor pressure equation	B	R	Table 7.1-5 for organic (^{0}C), Fig 7.1-15 for refined petro, and Fig 7.1-16 for	4165.633974
True vapor pressure of the stock liquid	P	psia	Figure 7.1-13b	9.39
Atmospheric pressure at the tank location	P_a	psia	TANKS output	14.75
Vapor space expansion factor	K_E	dimensionless	Equation 2-31	0.285
Filing saturation factor	S	for a full liquid heel		0.6
Number of days the tank stands idle while floating roof is landed	n_d	days/episode		1
Stock vapor molecular weight	M_V	lb/lb-mole	TANKS output	49.9935
Standing idle saturation factor	K_S	dimensionless	if Ks $\leq$ S, use Ks, otherwise use S	0.22
Number of episodes per year the tanks stands idle while floating roof is landed		episodes/yr		2
Standing idle loss	L_{SL}	lb/episode (lb/day)	Equation 2-16, if Lsl $\leq$ Lslmax, use Lsl, otherwise use Lslmax	534.89
		lb/hr	assumes 24 hours per event	22.29
		ton/yr		0.53489
Filling Loss	L_{FL}	lb/episode (lb/day)	Equation 2-26	5048.58
		lb/hr	based on 8,000 gpm fill rate	3281.57
		ton/yr		5.049
Total Losses during roof landing	L_{TL}	lb/episode (lb/day)	Equation 2-10	5583.47
		ton/yr	$L_{TL} = L_{SL} + L_{FL}$	5.583

COLUMBIA PACIFIC BIO-REFINERY
TANK FARM EQUIPMENT LEAKS (FS02) *

Source	Service **	Eq. Count ***	Emission Factor (kg/comp-hr)	Uncontrolled Emission Rate (lb/hr)	LDAR Control	Controlled Emission Rate (lb/hr)	VOC weight	VOC		GHG		H2S	
								lb/hr	limited TPY	lb/hr	limited TPY	lb/hr	limited TPY
Valves	G	2	0.00001	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
Valves	LL	138	0.00004	0.01	0%	0.01	100%	0.01	0.06	0.00	0.01	0.00	0.00
Pumps	G	0	0.00007	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	LL	12	0.00054	0.01	0%	0.01	100%	0.01	0.06	0.00	0.01	0.00	0.00
Compressor Seals	G	0	0.00012	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
Compressor Seals	LL	0	0.00013	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
Pressure-Relief Valves	G	2	0.00012	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
Sampling Connections	LL	12	0.00001	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
Connectors/Flanges	LL	194	0.00001	0.00	0%	0.00	100%	0.00	0.01	0.00	0.00	0.00	0.00
Connectors/Flanges	G	20	0.00004	0.00	0%	0.00	100%	0.00	0.01	0.00	0.00	0.00	0.00
Other (e.g., Open-ended Lines)	LL	0	0.00013	0.00	0%	0.00	100%	0.00	0.00	0.00	0.00	0.00	0.00
		380		***0.03***		***0.03***		***0.03***	***0.15***	***0.01***	***0.02***	***0.0001***	***0.0003***

* Per Table 2-3 and Table 2-8 (PRV factor) of *Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017)* , November 1995, United States Environmental Protection Agency. Calculation conservatively takes no emission reduction credit for leak detection and repair (LDAR) program.

** Service types include LL (light liquid) and G (gas/vapor).

*** Does not include rupture disk PRVs, sealless design valves, welded connections, open-ended lines that are blind, capped, plugged or have a second valve, and closed-loop sampling equipment.

COLUMBIA PACIFIC BIO-REFINERY
LOADOUT FUGITIVE LEAKS (FS03)

Pollutant	CAS No.	Throughput		Emission Factor		Source	Potential To Emit unrestricted lb/hr	Potential To Emit limited TPY
VOC	---	1,050	kgal/hr	0.0172	lb/kgal	AP-42 Chapter 5.2	18.1	15.82
GHG (CO2e) *	---	1,050	kgal/hr	0.003	lb/kgal	Engineering Estimate	2.8	2.49
H2S	7783-06-4	1,050	kgal/hr	0.000034	lb/kgal	Engineering Estimate	0.04	0.03

* GHG are reported as CO2e and are based on 0.743% methane by weight (based on samples analyzed at the existing VRU inlet).

98.7% capture efficiency (per AP-42 Chapter 5, Section 2)
Per AP42 Chapter 5.2, VOC emisisons account for an average of 85% of total organic compounds

CL = CA + CG =	1.559	lb/kgal	
CA =	0.86	Per Table 5.2-3 of AP-42	
CG =	0.699	Per equation (3) of AP-42 Section 5.2	
G	1.02		
P	9.651	psia	For RVP12.75 - from annual TANKs simulation
M	49.9677		
T	513.24	R	from annual TANKs simulation

COLUMBIA PACIFIC BIO-REFINERY
HAPs EMISSIONS FROM LOADOUT FUGITIVE LEAKS (FS03)

Pollutant	Weight fraction in crude oil *	Potential To Emit Restricted Emissions	
	w_i	lb/yr	tpy
n-hexane	0.4	126.56	0.06
Benzene	0.6	189.85	0.09
iso-octane {2,2,4 trimethylpentane}	0.1	31.64	0.02
toluene	1	316.41	0.16
ethylbenzene	0.4	126.56	0.06
xylenes *	1.4	442.98	0.22
cumene {isopropylbenzene}	0.1	31.64	0.02
1,2,4 trimethylbenzene	0.33	104.42	0.05
cyclohexane	0.7	221.49	0.11
		-	

* From API's Manual of Petroleum Measurement Standards Chapter 19.4: Evaporative Loss Reference Information and Speciation Methodology

COLUMBIA PACIFIC BIO-REFINERY
HIGH PRESSURE PROCESS TANK EMISSIONS - FS04

High pressure process tanks are used for the initial unloading of rail cars. The tanks help the pumps to operate more efficiently during railcar unloading. Tanks generate emissions when liquid contents evaporate and vent from the tanks. There are 4 types of tank emissions: working losses, breathing losses, boiling losses, and leakage losses. Each type of loss is addressed below.

Working losses are generated as a result of liquid level changes in the tank as the tank contents enter and leave the tank. However, the tanks at CPBR will be equipped with control valves and pumps driven by variable frequency drive (VFD) motors that will maintain the liquid level in the tanks at nearly constant level. Additionally, EPA states in AP-42 Section 7.1.1.6 that "high-pressure tanks [greater than 15 psig] can be operated so that virtually no evaporative or working losses occur." This is the case for these tanks. Because the tank would maintain some level of positive gauge pressure and the maximum true vapor pressure of the VOL contents would be less than 15 psig, the tank will have no working, breathing, or boiling (evaporative) losses. The tanks will also not have leakage losses. Any leaks would be observed promptly if the tanks do not maintain pressure.

The only vapors that could potentially be emitted from these tanks would occur upon initial re-filling after a draw-down of the tank or a maintenance event that requires degassing the tank. Conservatively assuming one tank degassing when the tank is filled with saturated vapor at the maximum pressure of the tank is provided below.

Emissions = Tank Volume * [(Vapor Pressure * Vapor Molecular Weight)/(Ideal Gas Constant * Vapor Temperature)]

= 36,000 tank capacity (gallons) * 0.134 CF/gallon * (2 atm * 50 lb/lb-mol)/(0.73024 CF*atm/R*lb-mol * 513.3 R)

=	2538	lb/yr	1.27 tpy
	1269	lb/hr (for two hour degassing event)	

Pollutant	CAS No.	Potential To Emit	
		lb/hr	TPY
VOC	---	1260	1.26
GHG (CO2e) *	---	198	0.20
H2S	7783-06-4	2.52	2.52E-03

* Assumed 0.743% methane by weight

** Assumes H2S is 2,000 ppm of the emissions.

COLUMBIA PACIFIC BIO-REFINERY
HAPs EMISSIONS FROM PROCESS TANKS - FS04

Pollutant	Weight fraction in crude oil *	MW	Antoine's Constants * A	B	C	mol fraction in liquid	Saturated Vapor Pressure at T_{LA}	Partial Pressure	mol fraction in vapor phase	weight fraction in vapor phase	Degassing loss	Total Emissions for component
	w_i	lb / lbmole		deg C	deg C	x_i	p_{i0} (psi)	p_i (psi)	y_i	z_i	L_{li} lb/yr	lb/yr
n-hexane	0.4	86.18	6.878	1171.5	224.37	0.010	1.589	0.015	0.002	0.003	7.1	7.1
Benzene	0.6	78.1	6.906	1211	220.79	0.016	0.961	0.015	0.002	0.003	6.5	6.5
iso-octane {2,2,4 trimethylpentane}	0.1	114.23	6.812	1257.8	220.74	0.002	0.486	0.001	0.000	0.000	0.5	0.5
toluene	1	92.14	7.017	1377.6	222.64	0.022	0.265	0.006	0.001	0.001	3.0	3.0
ethylbenzene	0.4	106.17	6.95	1419.3	212.61	0.008	0.081	0.001	0.000	0.000	0.4	0.4
xylenes	1.4	106.17	7.009	1462.3	215.11	0.027	0.070	0.002	0.000	0.000	1.1	1.1
cumene {isopropylbenzene}	0.1	120.19	6.929	1455.8	207.2	0.002	0.037	0.000	0.000	0.000	0.0	0.0
1,2,4 trimethylbenzene	0.33	120.19	7.044	1573.3	208.56	0.006	0.015	0.000	0.000	0.000	0.1	0.1
cyclohexane	0.7	82.14	5.872	1221.9	223.17	0.018	0.090	0.002	0.000	0.000	0.7	0.7
TOTAL												**19.4**

* From API's Manual of Petroleum Measurement Standards Chapter 19.4: *Evaporative Loss Reference Information and Speciation Methodology*

** Degassing losses consist of evaporation from the surface of a bulk liquid. Raoult's law is used to account for differential evaporation from the surface.

PROCESS DATA

T LA	53.0	deg F - or enter data from TANKS
	512.67	deg R
MW, liquid stock	207	lb/lbmole
MW, vapor over liquid stock	50.0	lb/lbmole crude oil
RVP	12.75	psi
Landing losses (L_l)	2,538	lb/yr

COLUMBIA PACIFIC BIO-REFINERY STORAGE TANK CONTENTS EMISSIONS COMPARISON*		
	CRUDE OIL	DENATURED ETHANOL
Stock True Vapor Pressure (psia)	9.39	0.60
Standing Losses (tpy)	22.96	0.96
Working Losses (tpy)	7.57	0.57
Weight Fraction of Total HAP in Vapor	0.01	0.02
Weight Fraction of Total HAP in Liquid	0.05	0.01
HAP emissions (tpy)	0.56	0.02

* This table compares storage tank emissions from normal operation while storing/transferring crude oil RVP 12.75 or denatured ethanol.

The stock vapor pressure of denatured ethanol is less than crude oil (RVP 12.75); therefore, the potential evaporative VOC emissions are lower for denatured ethanol. The weight fraction of HAPs in the vapor phase is slightly higher for denatured ethanol due to the low vapor pressure of ethanol compared to the HAP consitutents in the denatured ethanol mixture. However, the HAP emissions potential from denatured ethanol storage is well below that of crude oil (RVP12.75) due to the overall signifcantly lower vapor pressure of denatured ethanol constituents. As such, this permit application assumes crude oil (RVP12.75) for determining worst case VOC and HAP emissions.

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

Identification

User Identification:	CPBR_ACDP 2013_existing VOL tanks
City:	Clatskanie
State:	Oregon
Company:	Columbia Pacific Bio-Refinery
Type of Tank:	Internal Floating Roof Tank
Description:	One of two existing Storage Tanks storing volatile organic liquids with RVP <12.75.

Tank Dimensions

Diameter (ft):	134.00
Volume (gallons):	3,800,000.00
Turnovers:	68.34
Self Supp. Roof? (y/n):	N
No. of Columns:	8.00
Eff. Col. Diam. (ft):	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal	None

Deck Characteristics

Deck Fitting Category:	Detail	
Deck Type:	Bolted	
Construction:	Sheet	
Deck Seam:	Sheet: 5 Ft Wide	
Deck Seam Len. (ft):		2,820.52

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Pipe Col.-Flex. Fabric Sleeve Seal	8
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	49
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open	144
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Astoria, Oregon (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format

Liquid Contents of Storage Tank

CPBR_ACDP 2013_existing VOL tanks - Internal Floating Roof Tank
Clatskanie, Oregon

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude - Custom - CPBR	All	52.20	48.32	56.09	50.85	9.2070	N/A	N/A	50.0000			207.00	
Crude Oil (RVP12.75)						9.2070	N/A	N/A	50.0000	1.0000	1.0000	207.00	Option 4: RVP=12.75

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

CPBR_ACDP 2013_existing VOL tanks - Internal Floating Roof Tank
Clatskanie, Oregon

Annual Emission Calcaulations

Rim Seal Losses (lb):	3,730.6022
Seal Factor A (lb-mole/ft-yr):	5.8000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000
Value of Vapor Pressure Function:	0.2400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	9.2070
Tank Diameter (ft):	134.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	2,053.9115
Number of Columns:	8.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	271,538,222.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	134.0000
Deck Fitting Losses (lb):	3,448.8390
Value of Vapor Pressure Function:	0.2400
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	718.5000
Deck Seam Losses (lb):	2,413.3141
Deck Seam Length (ft):	2,820.5200
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000
Tank Diameter (ft):	134.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Total Losses (lb):	11,646.6667

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	7.6801
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	13.4402
Column Well (24-in. Diam.)/Pipe Col.-Flex. Fabric Sleeve Seal	8	10.00	0.00	0.00	384.0043
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	268.8030
Roof Leg or Hanger Well/Adjustable	49	7.90	0.00	0.00	1,858.1010
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	57.6007
Stub Drain (1-in. Diameter)/	144	1.20	0.00	0.00	829.4494
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	29.7603

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

Emissions Report for: Annual

CPBR_ACDP 2013_existing VOL tanks - Internal Floating Roof Tank
Clatskanie, Oregon

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude - Custom - CPBR	3,730.60	2,053.91	3,448.84	2,413.31	11,646.67
Crude Oil (RVP12.75)	3,730.60	2,053.91	3,448.84	2,413.31	11,646.67

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

Identification

User Identification:	CPBR_ACDP 2013_VOL storage tanks
City:	Clatskanie
State:	Oregon
Company:	Columbia Pacific Bio-Refinery
Type of Tank:	Internal Floating Roof Tank
Description:	Tanks for storage of volatile organic liquids (RVP 12.75) during material transfer operations one of 4 identical tanks to be installed in 2013

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	4,568,545.00
Turnovers:	70.95
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
Eff. Col. Diam. (ft):	1.17

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	2,261.94

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	7
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	64
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open	116
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	4

Meterological Data used in Emissions Calculations: Astoria, Oregon (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format

Liquid Contents of Storage Tank

CPBR_ACDP 2013_VOL storage tanks - Internal Floating Roof Tank
Clatskanie, Oregon

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude - Custom - CPBR	All	52.20	48.32	56.09	50.85	9.2070	N/A	N/A	50.0000			207.00	
Crude Oil (RVP12.75)						9.2070	N/A	N/A	50.0000	1.0000	1.0000	207.00	Option 4: RVP=12.75

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

CPBR_ACDP 2013_VOL storage tanks - Internal Floating Roof Tank
Clatskanie, Oregon

Annual Emission Calcaulations

Rim Seal Losses (lb):	345.6039
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Value of Vapor Pressure Function:	0.2400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	9.2070
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	2,759.8411
Number of Columns:	7.0000
Effective Column Diameter (ft):	1.1700
Annual Net Throughput (gal/yr.):	324,130,889.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	120.0000
Deck Fitting Losses (lb):	4,401.6498
Value of Vapor Pressure Function:	0.2400
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	917.0000
Deck Seam Losses (lb):	1,935.3778
Deck Seam Length (ft):	2,261.9400
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Total Losses (lb):	9,442.4725

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	7.6801
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	13.4402
Column Well (24-in. Diam.)/Pipe Col.-Sliding Cover, Gask.	7	25.00	0.00	0.00	840.0095
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	268.8030
Roof Leg or Hanger Well/Adjustable	64	7.90	0.00	0.00	2,426.9074
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	57.6007
Stub Drain (1-in. Diameter)/	116	1.20	0.00	0.00	668.1676
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	4	6.20	1.20	0.94	119.0413

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

Emissions Report for: Annual

CPBR_ACDP 2013_VOL storage tanks - Internal Floating Roof Tank
Clatskanie, Oregon

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude - Custom - CPBR	345.60	2,759.84	4,401.65	1,935.38	9,442.47
Crude Oil (RVP12.75)	345.60	2,759.84	4,401.65	1,935.38	9,442.47

TANKS 4.0.9d
Emissions Report - Detail Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: Annual

Tank Identification				Losses (lbs)
CPBR_ACDP 2013_existing VOL tanks	Columbia Pacific Bio-Refinery	Internal Floating Roof Tank	Clatskanie, Oregon	11,646.67
CPBR_ACDP 2013_VOL storage tanks	Columbia Pacific Bio-Refinery	Internal Floating Roof Tank	Clatskanie, Oregon	9,442.47
Total Emissions for all Tanks:				21,089.14

APPENDIX C – TOXIC RELEASE INVENTORY REPORT

REPORTING YEAR 2012

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ] [ ]	Withdrawal (Enter up to two code(s)) [ ] [ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete. Printed using TRIMEweb

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ][ ]	Withdrawal (Enter up to two code(s)) [ ][ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete. Printed using TRIMEweb

IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 1330207
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Xylene (mixed isomers)
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ] [ ]	Withdrawal (Enter up to two code(s)) [ ] [ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete. Printed using TRIMEweb

IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 108883
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Toluene
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014** **Page 1 of 5**

EPA United States Environmental Protection Agency	**FORM R** Section 313 of the Emergency Planning and Community Right-to-know Act of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act.	TRI Facility ID Number **9701WCLMBP812KA** Toxic Chemical, Category, or Generic Name **Polycyclic aromatic compounds**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ][ ]	Withdrawal (Enter up to two code(s)) [ ][ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US)

4.2	This report contains information for : (Important: check a or b; check c or d if applicable)	a. [**X**] An Entire facility	b. [ ] Part of a facility	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	019177757

EPA FORM R
PART II. CHEMICAL - SPECIFIC INFORMATION

TRI Facility ID Number: **9701WCLMBP812KA**

Toxic Chemical, Category, or Generic Name: **Polycyclic aromatic compounds**

SECTION 1. TOXIC CHEMICAL IDENTITY (Important: DO NOT complete this section if you are reporting a mixture component in Section 2 below.)

1.1 CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)
N590

1.2 Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)
Polycyclic aromatic compounds

1.3 Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive).
NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

2.1 Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.)
NA

SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY (Important: Check all that apply.)

3.1 Manufacture the toxic chemical:	3.2 Process the toxic chemical:	3.3 Otherwise use the toxic chemical:
a. [ ] Produce b. [ ] Import		
If produce or import: c. [ ] For on-site use/processing d. [ ] For sale/distribution e. [ ] As a byproduct f. [ ] As an impurity	a. [ ] As a reactant b. [ ] As a formulation component c. [ ] As an article component d. [**X**] Repackaging e. [**X**] As an impurity	a. [ ] As a chemical processing aid b. [ ] As a manufacturing aid c. [ ] Ancillary or other use

SECTION 4. MAXIMUM AMOUNT OF THE TOXIC CHEMICAL ON-SITE AT ANY TIME DURING THE CALENDAR YEAR

4.1 [**01**] (Enter two-digit code from instruction package.)

SECTION 5.QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON-SITE

			A. Total Release (pounds/year*) (Enter range code or estimate**)	B. Basis of Estimate (Enter code)	C. Percent from Stormwater
5.1	Fugitive or non-point air emissions	NA [ ]	**0.2**	**E1**	
5.2	Stack or point air emissions	NA [**X**]			
5.3	Discharges to receiving streams or water bodies (Enter one name per box)	NA [**X**]			
	Stream or Water Body Name				
5.3.1	**NA**				

*For Dioxin and Dioxin-like Compounds, report in grams/year
**Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

EPA FORM R
PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)

TRI Facility ID Number: **9701WCLMBP812KA**

Toxic Chemical, Category, or Generic Name: **Polycyclic aromatic compounds**

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON-SITE (Continued)

		NA	A. Total Release (pounds/year*) (Enter range code** or estimate)	B. Basis of Estimate (Enter code)
5.4.1	Underground Injection on-site to Class I wells	[X]		
5.4.2	Underground Injection on-site to Class II-V wells	[X]		
5.5	Disposal to land on-site			
5.5.1.A	RCRA subtitle C landfills	[X]		
5.5.1.B	Other landfills	[X]		
5.5.2	Land treatment/application farming	[X]		
5.5.3A	RCRA Subtitle C surface impoundments	[X]		
5.5.3B	Other surface impoundments	[X]		
5.5.4	Other disposal	[X]		

SECTION 6. TRANSFER(S) OF THE TOXIC CHEMICAL IN WASTES TO OFF-SITE LOCATIONS

6.1 DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS (POTWs) NA [X]

*For Dioxin and Dioxin-like Compounds, report in grams/year

**Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

EPA FORM R PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)	TRI Facility ID Number 9701WCLMBP812KA Toxic Chemical, Category, or Generic Name Polycyclic aromatic compounds

6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS	NA [X]
6.2.1 Off-Site EPA Identification Number (RCRA ID No.)	
Off-Site Location Name:	NA
Off-Site Address:	

City		County		State		Zip		Country (Non-US)	

Is location under control of reporting facility or parent company?	[ ] Yes [ ] No

A. Total Transfer (pounds/year*) (Enter range code** or estimate)	B. Basis of Estimate (Enter code)	C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (Enter code)

SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY

[X] Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category.

a. General Waste Stream (Enter code)	b. Waste Treatment Method(s) Sequence (Enter 3- or 4-character code(s))	c. Waste Treatment Efficiency (Enter 2 character code)

*For Dioxin and Dioxin-like Compounds, report in grams/year

**Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

EPA FORM R
PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)

TRI Facility ID Number: **9701WCLMBP812KA**

Toxic Chemical, Category, or Generic Name: **Polycyclic aromatic compounds**

SECTION 7B. ON-SITE ENERGY RECOVERY PROCESSES

[**X**] NA - Check here if no on-site energy recovery is applied to any waste stream containing the toxic chemical or chemical category.

Energy Recovery Methods [Enter 3-character code(s)]

SECTION 7C. ON-SITE RECYCLING PROCESSES

[**X**] NA - Check here if no on-site recycling is applied to any waste stream containing the toxic chemical or chemical category.

Recycling Methods [Enter 3-character code(s)]

SECTION 8. DISPOSAL OR OTHER RELEASES, SOURCE REDUCTION, AND RECYCLING ACTIVITIES

		Column A Prior Year (pounds/year*)	Column B Current Reporting Year (pounds/year*)	Column C Following Year (pounds/year*)	Column D Second Following Year (pounds/year*)
8.1					
8.1a	Total on-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	NA	NA	NA	NA
8.1b	Total other on-site disposal or other releases	NA	.2	10	40
8.1c	Total off-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	NA	NA	NA	NA
8.1d	Total other off-site disposal or other releases	NA	NA	NA	NA
8.2	Quantity used for energy recovery on-site	NA	NA	NA	NA
8.3	Quantity used for energy recovery off-site	NA	NA	NA	NA
8.4	Quantity recycled on-site	NA	NA	NA	NA
8.5	Quantity recycled off-site	NA	NA	NA	NA
8.6	Quantity treated on-site	NA	NA	NA	NA
8.7	Quantity treated off-site	NA	NA	NA	NA
8.8	Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes (pounds/year)		NA		
8.9	Production ratio or activity index		NA		
8.10	Did your facility engage in any newly implemented source reduction activities for this chemical during the reporting year? If so, complete the following section; if not, check NA.		NA [X]		

	Source Reduction Activities (Enter code(s))	Methods to Identify Activity (Enter code(s))		
8.10.1	NA			

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

*For Dioxin and Dioxin-like Compounds, report in grams/year

TRI Facility ID Number
9701WCLMBP812KA
Toxic Chemical, Category, or Generic Name
Polycyclic aromatic compounds

Additional optional information on source reduction, recycling, or pollution control activities.

Miscellaneous, additional, or optional information regarding the Form R submission

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ] [ ]	Withdrawal (Enter up to two code(s)) [ ] [ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete. Printed using TRIMEweb

IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 110543
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) n-Hexane
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

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Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

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IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 91203
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Naphthalene
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

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Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

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SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

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Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete. Printed using TRIMEweb

IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 100414
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Ethylbenzene
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

Print **Form Status: Certified and Sent to USEPA**
Validation Status: Passed w/ Data Quality Alerts

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Form Approved OMB Number: **2025-0009**
Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 *** File Copy Only: Do Not Submit Paper Form to EPA ***	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

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Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1				TRI Facility ID Number		**9701WCLMBP812KA**	
Facility or Establishment Name: **Columbia Pacific Bio-Refinery**							
Street: **81200 Kallunki Rd.**				Mailing Address (if different from physical street address)			
City/County/Tribe/State/ZIP Code: **Clatskanie / Columbia / BIA Code: / OR / 97016**				City/State/ZIP Code / /		Country (Non-US) /	
4.2	This report contains information for : (Important: check c or d if applicable)			c. [ ] A Federal facility		d. [ ] GOCO	
4.3	Technical Contact name	**Brandon Gimper**		Email Address: **bgimper@globalp.com**		Telephone Number (include area code): **5037287002**	
4.4	Public Contact name	**Brandon Gimper**		Email Address: **bgimper@globalp.com**		Telephone Number (include area code): **5037287022**	
4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a. **071175015**	
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**		No U.S. Parent Company (for TRI Reporting purposes) [ ]
5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**	

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete. Printed using TRIMEweb

IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 110827
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Cyclohexane
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

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Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

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Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

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IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 98828
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Cumene
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

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(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014** **Page 1 of 5**

EPA United States Environmental Protection Agency	**FORM R** Section 313 of the Emergency Planning and Community Right-to-know Act of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act.	TRI Facility ID Number **9701WCLMBP812KA** / Toxic Chemical, Category, or Generic Name **Benzo(g,h,i)perylene**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ] [ ]	Withdrawal (Enter up to two code(s)) [ ] [ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US)

4.2	This report contains information for : (Important: check a or b; check c or d if applicable)	a. [**X**] An Entire facility	b. [ ] Part of a facility	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a.	**071175015**
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]

5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	019177757

EPA FORM R
PART II. CHEMICAL - SPECIFIC INFORMATION

TRI Facility ID Number: **9701WCLMBP812KA**

Toxic Chemical, Category, or Generic Name: **Benzo(g,h,i)perylene**

SECTION 1. TOXIC CHEMICAL IDENTITY (Important: DO NOT complete this section if you are reporting a mixture component in Section 2 below.)

1.1 CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)
191242

1.2 Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)
Benzo(g,h,i)perylene

1.3 Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive).
NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

2.1 Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.)
NA

SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY (Important: Check all that apply.)

3.1 Manufacture the toxic chemical:	3.2 Process the toxic chemical:	3.3 Otherwise use the toxic chemical:
a. [**X**] Produce b. [ ] Import		
If produce or import: c. [ ] For on-site use/processing d. [ ] For sale/distribution e. [**X**] As a byproduct f. [ ] As an impurity	a. [ ] As a reactant b. [ ] As a formulation component c. [ ] As an article component d. [**X**] Repackaging e. [**X**] As an impurity	a. [ ] As a chemical processing aid b. [ ] As a manufacturing aid c. [ ] Ancillary or other use

SECTION 4. MAXIMUM AMOUNT OF THE TOXIC CHEMICAL ON-SITE AT ANY TIME DURING THE CALENDAR YEAR

4.1 [**01**] (Enter two-digit code from instruction package.)

SECTION 5.QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON-SITE

			A. Total Release (pounds/year*) (Enter range code or estimate**)	B. Basis of Estimate (Enter code)	C. Percent from Stormwater
5.1	Fugitive or non-point air emissions	NA [ ]	**0.00001**	**E1**	
5.2	Stack or point air emissions	NA [**X**]			
5.3	Discharges to receiving streams or water bodies (Enter one name per box)	NA [**X**]			
	Stream or Water Body Name				
5.3.1	**NA**				

*For Dioxin and Dioxin-like Compounds, report in grams/year
**Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

EPA FORM R
PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)

TRI Facility ID Number: **9701WCLMBP812KA**

Toxic Chemical, Category, or Generic Name: **Benzo(g,h,i)perylene**

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON-SITE (Continued)

		NA	A. Total Release (pounds/year*) (Enter range code** or estimate)	B. Basis of Estimate (Enter code)
5.4.1	Underground Injection on-site to Class I wells	[X]		
5.4.2	Underground Injection on-site to Class II-V wells	[X]		
5.5	Disposal to land on-site			
5.5.1.A	RCRA subtitle C landfills	[X]		
5.5.1.B	Other landfills	[X]		
5.5.2	Land treatment/application farming	[X]		
5.5.3A	RCRA Subtitle C surface impoundments	[X]		
5.5.3B	Other surface impoundments	[X]		
5.5.4	Other disposal	[X]		

SECTION 6. TRANSFER(S) OF THE TOXIC CHEMICAL IN WASTES TO OFF-SITE LOCATIONS

6.1 DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS (POTWs) NA [X]

*For Dioxin and Dioxin-like Compounds, report in grams/year

**Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

EPA FORM R PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)	TRI Facility ID Number 9701WCLMBP812KA Toxic Chemical, Category, or Generic Name Benzo(g,h,i)perylene

6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS	NA [X]
6.2.1 Off-Site EPA Identification Number (RCRA ID No.)	
Off-Site Location Name:	NA
Off-Site Address:	

City		County		State		Zip		Country (Non-US)	

Is location under control of reporting facility or parent company?	[ ] Yes [ ] No

A. Total Transfer (pounds/year*) (Enter range code** or estimate)	B. Basis of Estimate (Enter code)	C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (Enter code)

SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY

[X] Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category.

a. General Waste Stream (Enter code)	b. Waste Treatment Method(s) Sequence (Enter 3- or 4-character code(s))	c. Waste Treatment Efficiency (Enter 2 character code)

*For Dioxin and Dioxin-like Compounds, report in grams/year

**Range Codes: A=1-10 pounds; B=11-499 pounds; C=500-999 pounds.

EPA Form 9350-1 (Rev. 10/2012) - Previous editions are obsolete.

EPA FORM R
PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)

TRI Facility ID Number: **9701WCLMBP812KA**

Toxic Chemical, Category, or Generic Name: **Benzo(g,h,i)perylene**

SECTION 7B. ON-SITE ENERGY RECOVERY PROCESSES

[**X**] NA - Check here if no on-site energy recovery is applied to any waste stream containing the toxic chemical or chemical category.

Energy Recovery Methods [Enter 3-character code(s)]

SECTION 7C. ON-SITE RECYCLING PROCESSES

[**X**] NA - Check here if no on-site recycling is applied to any waste stream containing the toxic chemical or chemical category.

Recycling Methods [Enter 3-character code(s)]

SECTION 8. DISPOSAL OR OTHER RELEASES, SOURCE REDUCTION, AND RECYCLING ACTIVITIES

		Column A Prior Year (pounds/year*)	Column B Current Reporting Year (pounds/year*)	Column C Following Year (pounds/year*)	Column D Second Following Year (pounds/year*)
8.1					
8.1a	Total on-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	NA	NA	NA	NA
8.1b	Total other on-site disposal or other releases	NA	.00001	.0005	.002
8.1c	Total off-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	NA	NA	NA	NA
8.1d	Total other off-site disposal or other releases	NA	NA	NA	NA
8.2	Quantity used for energy recovery on-site	NA	NA	NA	NA
8.3	Quantity used for energy recovery off-site	NA	NA	NA	NA
8.4	Quantity recycled on-site	NA	NA	NA	NA
8.5	Quantity recycled off-site	NA	NA	NA	NA
8.6	Quantity treated on-site	NA	NA	NA	NA
8.7	Quantity treated off-site	NA	NA	NA	NA
8.8	Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes (pounds/year)		NA		
8.9	Production ratio or activity index		NA		
8.10	Did your facility engage in any newly implemented source reduction activities for this chemical during the reporting year? If so, complete the following section; if not, check NA.		NA [X]		

	Source Reduction Activities (Enter code(s))	Methods to Identify Activity (Enter code(s))		
8.10.1	NA			

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*For Dioxin and Dioxin-like Compounds, report in grams/year

TRI Facility ID Number
9701WCLMBP812KA
Toxic Chemical, Category, or Generic Name
Benzo(g,h,i)perylene

Additional optional information on source reduction, recycling, or pollution control activities.

Miscellaneous, additional, or optional information regarding the Form R submission

Form Status: Certified and Sent to USEPA
Validation Status: Passed w/ Data Quality Alerts

Form Approved OMB Number: **2025-0009**

(IMPORTANT: Read instructions before completing form; type or use fill-and-print form)

Approval Expires: **10/31/2014**

United States Environmental Protection Agency	**TOXIC CHEMICAL RELEASE INVENTORY FORM A**	TRI Facility ID Number **9701WCLMBP812KA**

WHERE TO SEND COMPLETED FORMS:	1. TRI Data Processing Center P.O. Box 10163 Fairfax, VA 22038 ***** File Copy Only: Do Not Submit Paper Form to EPA *****	2. APPROPRIATE STATE OFFICE (See instructions in Appendix F)

This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank:	Revision (Enter up to two code(s)) [ ][ ]	Withdrawal (Enter up to two code(s)) [ ][ ]

Important: See Instructions to determine when "Not Applicable (NA)" boxes should be checked.

Part I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR : **2012**

SECTION 2. TRADE SECRET INFORMATION

2.1 Are you claiming the toxic chemical identified on page 2 trade secret? [ ] Yes (Answer questions 2.2; attach substantiation forms) [**X**] NO (Do not answer 2.2; go to Section 3)	2.2 Is this copy [ ] Sanitized [ ] Unsanitized (Answer only if "Yes" in 2.1)	

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

Name and official title of owner/operator or senior management official:	Signature:	Date Signed:
File Copy Only: Do Not Submit Paper Form to EPA	**File Copy Only: Do Not Submit Paper Form to EPA**	**XX/XX/XXXX**

SECTION 4. FACILITY IDENTIFICATION

4.1		TRI Facility ID Number	**9701WCLMBP812KA**

Facility or Establishment Name
Columbia Pacific Bio-Refinery

Street **81200 Kallunki Rd.**	Mailing Address (if different from physical street address)	
City/County/Tribe/State/ZIP Code **Clatskanie / Columbia / BIA Code: / OR / 97016**	City/State/ZIP Code / /	Country (Non-US) /

4.2	This report contains information for : (Important: check c or d if applicable)	c. [ ] A Federal facility	d. [ ] GOCO

4.3	Technical Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**
4.4	Public Contact name	**Brandon Gimper**	Email Address **bgimper@globalp.com**	Telephone Number (include area code) **5037287022**

4.5	NAICS Code(s) (6 digits)	a. **325193 (Primary)**	b.	c.	d.	e.	f.

4.6	Dun and Bradstreet Number(s) (9 digits)
a. **071175015**	
b.	

SECTION 5. PARENT COMPANY INFORMATION

5.1	Name of U.S. Parent Company (for TRI Reporting purposes)	**Global Companies LLC**	No U.S. Parent Company (for TRI Reporting purposes) [ ]
5.2	Parent Company's Dun & Bradstreet Number	NA [ ]	**019177757**

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IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 71432
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Benzene
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.

IMPORTANT: Read instructions before completing form; type or use fill-and-print form

EPA FORM A PART II. CHEMICAL IDENTIFICATION Do not use this form for reporting Dioxin and Dioxin-like Compounds*	TRI Facility ID Number 9701WCLMBP812KA

SECTION 1. TOXIC CHEMICAL IDENTITY Report 1 of 1

1.1	CAS Number (Important: Enter only one number as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 95636
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) 1,2,4-Trimethylbenzene
1.3	Generic Chemical Name (Important: Complete only if Part I, Section 2.1 is checked "Yes". Generic Name must be structurally descriptive). NA

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, spaces, and punctuation.) NA

*See the TRI Reporting Forms and Instructions Manual for the TRI-listed Dioxin and Dioxin-like Compounds

EPA Form 9350-2 (Rev. 10/2012) - Previous editions are obsolete.