TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 30, 2008

MR MATT BOWMAN
PRESIDENT
CES ENVIRONMENTAL SERVICES INC
4904 GRIGGS RD
HOUSTON TX 77021

Permit by Rule Registration Number:	83798
Location/City/County:	4904 Griggs Road, Houston, Harris County
Project Description/Unit:	Oil Quality Improvement Operations
Regulated Entity Number:	RN100693282
Customer Reference Number:	CN600618946
New or Existing Site:	Existing
Affected Permit (if applicable):	None
Renewal Date (if applicable):	None

CES Environmental Services, Inc. has certified the emissions associated with the Oil Quality Improvement Operations (tank container cleaning and waste handling) under Title 30 Texas Administrative Code §§ 106.261, 106.262, and 106.472. No planned MSS emissions have been represented or reviewed for this registration and none will be authorized by this PBR. For rule information see www.tceq.state.tx.us/permitting/air/nav/numerical_index.html.

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. This certification is taken under the authority delegated by the Executive Director of the TCEQ. If you have questions, please contact Mr. Innocent Onuoha at (512) 239-4042.

Sincerely,

Certified Project Emissions:

VOCs	1.47	tpy

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

cc: Bureau Chief of Air Quality Control, Health and Human Services Department, City of Houston, Houston
Director, Environmental Public Health Division, Harris County Public Health and Environmental Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 135618

TECHNICAL REVIEW: AIR PERMIT BY RULE

Permit No.:	83798	*Company Name:*	CES Environmental Services, Inc.	*APD Reviewer:*	Mr. Innocent Onuoha
Project No.:	135618	*Unit Name:*	Oil Quality Improvement Operation	*PBR No(s).:*	106.261, 106.262, and 106.472

GENERAL INFORMATION			
Regulated Entity No.:	RN100693282	**Project Type:**	Permit by Rule Application
Customer Reference No.:	CN600618946	**Date Received by TCEQ:**	January 07, 2008
Account No.:	Unassigned	**Date Received by Reviewer:**	January 14, 2008
City/County:	Houston, Harris County	**Physical Location:**	4904 Griggs Road

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title:	Mr. Matt Bowman President	**Phone No.:** **Fax No.:**	(713) 676-1460 (713) 676-1676	**Email:**	mbowman@cesenvironmental.com
Technical Contact/ Consultant Name and Title:	Mr. Philip Evans Director Technical Services	**Phone No.:** **Fax No.:**	(281) 446-7070 (281) 446-3348	**Email:**	pevans@wcmgroup.com

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?		X	No confidential information was submitted.
Are there affected NSR or Title V permits for the project?		X	There are no NSR air permits or Title V Permit at this site.
Is each PBR > 25/250 tpy?		X	See emission table listed below.
Are PBR sitewide emissions > 25/250 tpy?		X	See emission table listed below.
Are there permit limits on using PBRs at the site?		X	See emission table listed below.
Is PSD or Nonattainment netting required?		X	PSD or Non-attainment netting is not required.
Do NSPS, NESHAP, or MACT standards apply to this registration?		X	NSPS, NESHAP, or MACT standards are not applicable.
Does NOx Cap and Trade apply to this registration?		X	NO_x Cap and Trade is not applicable.
Is the facility in compliance with all other applicable rules and regulations?	X		CES Environmental Services, Inc. claims that the site is in compliance with all other applicable rules and regulations.

DESCRIBE OVERALL PROCESS AT THE SITE

CES Environmental Services (CES) site is a tank container cleaning and waste handling operation located at 4904 Griggs Road in Houston, Harris County.

DESCRIBE PROJECT AND INVOLVED PROCESS

CES is submitting an application to authorize an oil quality improvement operation at the site using PBRs §§106.261, 262 and 472. The process treats oil and mixed molecular weight petroleum hydrocarbons received from off site to remove water and other impurities.

Materials for processing are received from off site and stored and processed in a series of tanks near the south end of the CES property. The materials received fall into three general categories- (1) mixed molecular weight petroleum hydrocarbons, (2) oily water or base oil, and (3) water. Upon entering the site, oily water may be stored in Tank OT-7 or OT-8 or any other tank associated with the oil process. Similarly base oil and water is typically stored in Tanks OT-1 or OT-02 or any oil processing tanks. Mixed molecular weight hydrocarbons are stored and processed in Tank OT-9. Mixed molecular weight petroleum hydrocarbons enter the facility mixed with water. The light organics are gravity phase separated from the water in Tank OT-9. The mixed molecular weight petroleum hydrocarbons are then transferred to bullet truck trailers designed for LPG service and shipped off site as CES fuel. The two remaining material types (oily water and wet base oil undergo similar four step processes to recover usable oil materials.

The first processing step for both material types is removal of water through gravity phase separation while in storage. This process generally occurs in the tank in which the oil was originally stored, but any of the processing tanks may be utilized as needed.

The second processing phase consists of heating further facilitate phase separation. An emulsion breaker is added to improve the separation of oil and water. Oily water is normally treated in Tank OT-3 while wet base oil is normally treated in Tank OT-4. This operation qualifies for §106.472 because there is no reaction taking place in the tanks.

The third phase of processing differs for the two material types. The oily water is sent to Tank OT-5 and then to a centrifuge to remove the remaining water. The oil from the centrifuge is then 'sent to Tank FO-1. The wet base is sent to Tank OT-10 and is then fed to a vacuum distillation system where the remaining water is removed. Emissions from the centrifuge and distillation systems are vented through a scrubber for odor control.

The fourth step in the process is the transfer of the finished oil to holding tanks. These may be any of the tanks associated with the oil quality improvement process. From these tanks, the oil may be returned to Step 3 for further processing or loaded into transport vessels for removal from the site.

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TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

Highlighted 106.261 Requirements as Represented by the Company

- The distance to the nearest off-site receptor is >100 feet.
- Other permits by rule and standard permits do not apply to these facilities.
- Total new or increased emissions, including fugitives, are less than or equal to 6.0 lb/hr and 10 tpy for refinery petroleum fractions. See table below.
- Not applicable. None of the chemicals listed in this paragraph are associated with this project (see the table below).
- There will be no changes to or additions of any air pollution abatement equipment.
- Visible emissions, except uncombined water, will not exceed 5% opacity in any six-minute period.

Highlighted 106.262 Requirements as Represented by the Company

- The distance to the nearest off-site receptor is >100 feet.
- The facilities are not authorized under another PBR or a standard permit.
- There will be no changes to or additions of any air pollution abatement equipment.
- Emissions will not exceed the calculated E value, using the equation E = L/K; see table below.
- 106.262(a)(4) does not apply to this registration.
- Visible emissions, except uncombined water, will not exceed 5% opacity in any six-minute period.

Chemical	L Value	PBR	PBR Limits		Fugitives Components		Storage Emissions		Loading Emissions		Total Emissions	
			tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr[1,2]
Xylene	434	106.261(a)(3)	4.38	1.00	0.0046	0.0202	0.3087	0.0565	0.0052	0.0010	0.3185	0.0777
Heptane	350	106.261(a)(3)	4.38	1.00	0.0046	0.0202	0.6615	0.1207	0.0052	0.0010	0.6713	0.1419
iso-Hexane	1760	106.262(a)(3)	4.38	1.00	0.0046	0.0202	1.0832	0.1977	0.0052	0.0010	1.0939	0.2189
Ethyl Benzene	434	106.262	4.38	1.00	0.0046	0.0202	0.2113	0.0386	0.0052	0.0010	0.2210	0.0598
Toluene	188	106.262	5.49	1.25	0.0046	0.0202	0.4932	0.0990	0.0052	0.0010	0.5029	0.111
Methanol	262	106.262	7.65	1.75	0.0046	0.0202	1.0240	0.1869	0.0052	0.0010	1.0337	0.2081
Butanol	76	106.262	2.22	0.51	0.0046	0.0202	0.1447	0.0264	0.0052	0.0010	0.1545	0.0476
Propanol	NA	106.261(a)(2)	10.00	6.00	0.0046	0.0202	0.3969	0.0724	0.0052	0.0010	0.4067	0.0936
Ethanol	NA	106.261(a)(2)	10.00	6.00	0.0046	0.0202	0.7598	0.1387	0.0052	0.0010	0.7695	0.1599
Dimethyl Disulfide	N/A	106.261(a)(3)	4.38	1.00	0.0046	0.0202	0.4955	0.0904	0.0052	0.0010	0.5052	0.1116
Diethyl Disulfide	N/A	106.261(a)(3)	4.38	1.00	0.0046	0.0202	0.1014	0.0185	0.0052	0.0010	0.1112	0.0397
Gasoline	890	106.261(a)(3)	4.38	1.00	0.0046	0.0202	1.2914	0.2357	0.0052	0.0010	1.3012	0.2569
Acetic Acid	25	106.262	0.73	0.17	0.0023	0.0101	0.1465	0.0267	0.0026	0.0005	0.1514	0.0373
Isopropyl Ether	1040	106.261(a)(3)	4.38	1.00	0.0046	0.0202	1.0729	0.1958	0.0052	0.0010	1.0827	0.2170
Proponic Acid	30	106.262	0.88	0.20	0.0046	0.0202	0.0843	0.0154	0.0052	0.0010	0.0940	0.0366
Naphthalene	52	106.262	1.52	0.35	0.0046	0.0202	0.0049	0.0009	0.0052	0.0010	0.0147	0.0221
Propylamine	N/A	106.261(a)(3)	4.38	1.00	0.0020	0.0087	0.9725	0.1775	0.0147	0.0221	0.9767	0.1867
Kerosene	100	106.262	2.92	0.67	0.0046	0.0202	0.0187	0.0034	0.0286	0.00246	0.0285	0.0246
Diesel	N/A	106.261	4.38	1.00	0.0046	0.0202	0.0145	0.0026	0.0052	0.0010	0.0243	0.0239
Ehylene Glycol	26	106.262	0.76	0.17	0.0046	0.0202	0.0033	0.0006	0.0052	0.0010	0.0131	0.0216
Propylene Glycol	N/A	106.261(a)(3)	4.38	1.00	0.0023	0.0101	0.0019	0.0004	0.0052	0.0010	0.0117	0.0216
Naphtha	350	106.261(a)(3)	4.38	1.00	-	-	0.0426	0.0078	-	-	0.0425	0.0078
Oil	N/A	106.261(a)(3)	4.38	1.00	0.1460	0.6396	0.7977	0.1148	0.0712	0.0159	0.2803	0.9691
Sulfuric Acid	1	106.262	0.01	0.00295	-	-	0.000375	0.00000202	-	-	0.0004	0.00000

[1]Total oil emissions shown for §106.261/262 compliance does not include storage or loading emissions which are authorized under 106.472

[2] Emissions of light ends constituents are based on the maximum potential of that material in the mixture. The sum of the components will therefore be greater than 100% of the total emissions.

Oil improvements Area distance to receptor (D) = 125 feet, K = 339

Light ends Distance to Receptor = 150 feet; K = 277

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EPN	Description	Capacity (gallon)	Authorization	Emissions	
				lb/hr	tpy
OT-1	Wet Base Oil Tank	16, 800	106.472(1)	0.11	0.01
OT-2	Wet Base Oil Tank	16, 800	106.472(1)	0.11	0.01
OT-3	Oily Water Treatment Tank	16, 800	106.472(1)	0.06	0.02
OT-4	Wet Base Oil Treatment Tank	16, 800	106.472(1)	0.11	0.01
OT-5	Centrifuge Feed Tank	16, 800	106.472(1)	0.06	0.02
OT-6	Wet Base Oil Tank	16, 800	106.472(1)	0.11	0.01
OT-7	Oily Water Tank	16, 800	106.472(1)	0.06	0.02
OT-8	Oily Water Tank	16, 800	106.472(1)	0.06	0.02
OT-9	Mixed Molecular Weight Petroleum Hydrocarbons Storage	16, 800	106.261 and 106.262	1.50	0.02
OT-10	Distillation Feed Tank	16, 800	106.472(1)	0.08	0.27
FO-1	Centrifuged Oil Storage Tank	7, 518	106.472(1)	0.04	0.02
WT-1	Water Storage	7, 518	N/A	0	0.01
ST-1	Sulfuric Acid Storage Tank	4,000	106.472(5)	0.000375	0.0000000202
ET-1	Emulsion Breaker Storage Tank	270	106.261	0.15	0.03
SV-1	Centrifuge	N/A	106.261	0.06	0.02
SV-1	Vacuum Distillation System	N/A	106.261	0.07	0.31
OL-1	Product Loading	N/A	106.472(1) & 106.261/106.262	0.09	0.02
OF-1	Oil Improvement Area Fugitives	N/A	106.261/106.262	0.16	0.71
Total				**2.83**	**1.47**

Calculation Methodology

Emissions from the tanks are calculated using AP-42 factors.

The MSDS for the oil specifies a vapor pressure < 0.1 mmHg) (<0.002psia). Because the oil handling tanks are heated to approximately 200F, the higher pressure of 0.1psia is used.

Tank OT-9 is not heated. The temperature of Tank OT-9, sulfuric Acid Tank, and the Emulsion breaker Tank are calculate din accordance with AP-42. The speciation of emissions from Tank OT-9 is calculated using the maximum content of each component, generally being 30%, with the balance of the composition being water.

Loading and unloading of the mixed weight petroleum hydrocarbons between the processes and truck tanks and other transport vessels is vapor balanced back to the storage tank. As a result there are no emissions from the loading activities except from the disconnecting of loading lines.

Emissions from the loading of oil into transport vessels are calculated in accordance with AP-42.

Emissions from disconnecting of hoses are calculated assuming that the vapor volume inside the hose is saturated with the last material to pass through the hose. It also assumes that all of the residual liquid in the line, which is calculated with the clingage factor from AP-42 Chapter 7, evaporates.

Fugitive emissions from potential leaks at valves, pumps, and connections associated with this project are calculated using the methods and emission factors specified in the TCEQ Document "Air Permit Technical Guidance for Chemical Sources: Equipment Leak Fugitives". A thirty percent reduction credit for operations personnel monitoring for leaks that can be detected with visible, auditory, or olfactory means

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ESTIMATED EMISSIONS												
EPN / Emission Source	VOC		NOx		CO		PM_{10}		SO_2		Other	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Oil Operations	2.83	1.47										
TOTAL EMISSIONS (TPY):		1.47										
MAXIMUM OPERATING SCHEDULE:	Hours/Day			Days/Week			Weeks/Year			Hours/Year		8,760

SITE REVIEW / DISTANCE LIMIT	Yes	No	Description/Outcome	Date	Reviewed by
Site Review Required?		X		01/28/2008	Mr. Innocent Onuoha
PBR Distance Limits Met?	X		100 feet from the nearest property line and 125 feet from the nearest off property structure	01/28/2008	Mr. Innocent Onuoha

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:			
PRINTED NAME:	Mr. Innocent Onuoha	Mr. Thomas Becker	Mr. Clyde Price
DATE:	01/28/2008	01/28/2008	January 30, 2008

BASIS OF PROJECT POINTS	POINTS
Base Points:	1.5
Project Complexity Description and Points: Two additional PBRs chemical speciation & verification of calculations`	 1.0 2.0
Technical Reviewer Project Points Assessment:	4.5
Final Reviewer Project Points Confirmation:	4.50