

AIR QUALITY GENERAL PERMIT G40-C

PREPARED FOR

XTO Energy, Inc.

COASTAL CRUSHER

LOCATED IN

**LINCOLN DISTRICT
MARION COUNTY
WEST VIRGINIA**

March 2015

Prepared by

**McTish, Kunkel & Associates**
Consulting Engineers
Environmental Scientists
Construction Inspectors

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WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 Phone: (304) 926-0475 • www.dep.wv.gov/daq

APPLICATION FOR GENERAL PERMIT REGISTRATION
 CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE
 A STATIONARY SOURCE OF AIR POLLUTANTS

- CONSTRUCTION MODIFICATION RELOCATION CLASS I ADMINISTRATIVE UPDATE
 CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

- | | |
|---|--|
| <input type="checkbox"/> G10-D – Coal Preparation and Handling | <input type="checkbox"/> G40-C – Nonmetallic Minerals Processing |
| <input type="checkbox"/> G20-B – Hot Mix Asphalt | <input type="checkbox"/> G50-B – Concrete Batch |
| <input type="checkbox"/> G30-D – Natural Gas Compressor Stations | <input type="checkbox"/> G60-C – Class II Emergency Generator |
| <input type="checkbox"/> G33-A – Spark Ignition Internal Combustion Engines | <input type="checkbox"/> G65-C – Class I Emergency Generator |
| <input type="checkbox"/> G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input type="checkbox"/> G70-A – Class II Oil and Natural Gas Production Facility |

SECTION I. GENERAL INFORMATION

1. Name of applicant (as registered with the WV Secretary of State's Office):		2. Federal Employer ID No. (FEIN):	
3. Applicant's mailing address:		4. Applicant's physical address:	
_____		_____	
_____		_____	
5. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
6. WV BUSINESS REGISTRATION. Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input type="checkbox"/> NO			
↪ IF YES , provide a copy of the Certificate of Incorporation/ Organization / Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A .			
↪ IF NO , provide a copy of the Certificate of Authority / Authority of LLC / Registration (one page) including any name change amendments or other Business Certificate as Attachment A .			

SECTION II. FACILITY INFORMATION

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Portable Crusher	8a. Standard Industrial Classification Classification (SIC) code: 1629	AND	8b. North American Industry System (NAICS) code: 238910
9. DAQ Plant ID No. (for existing facilities only): _____	10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): _____ _____		

A: PRIMARY OPERATING SITE INFORMATION

11A. Facility name of primary operating site: _____ _____	12A. Address of primary operating site: Mailing: _____ Physical: _____ _____	
13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES, please explain: _____ _____ ⇨ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14A. ⇨ For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; ⇨ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . _____ _____ _____		
15A. Nearest city or town:	16A. County:	17A. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18A. Briefly describe the proposed new operation or change (s) to the facility:		19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

11B. Name of 1 st alternate operating site: _____ _____	12B. Address of 1 st alternate operating site: Mailing: _____ Physical: _____ _____	
13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES, please explain: _____ _____ ⇨ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		

14B. ⇨ For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; ⇨ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . _____ _____ _____		
15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2 nd alternate operating site: _____	12C. Address of 2 nd alternate operating site: Mailing: _____ Physical: _____	
13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES , please explain: _____ _____ ⇨ IF NO , YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14C. ⇨ For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; ⇨ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . _____ _____ _____		
15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

<p>20. Provide the date of anticipated installation or change:</p> <p style="text-align: center;">____/____/____</p> <p><input type="checkbox"/> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: :</p> <p style="text-align: center;">____/____/____</p>	<p>21. Date of anticipated Start-up if registration is granted:</p> <p style="text-align: center;">____/____/____</p>
<p>22. Provide maximum projected Operating Schedule of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation).</p> <p>Hours per day _____ Days per week _____ Weeks per year _____ Percentage of operation _____</p>	

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

<p>23. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).</p>
<p>24. Include a Table of Contents as the first page of your application package.</p>
<p>All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.</p>
<p>25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.</p> <ul style="list-style-type: none"> <input type="checkbox"/> ATTACHMENT A : CURRENT BUSINESS CERTIFICATE <input type="checkbox"/> ATTACHMENT B: PROCESS DESCRIPTION <input type="checkbox"/> ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS <input type="checkbox"/> ATTACHMENT D: PROCESS FLOW DIAGRAM <input type="checkbox"/> ATTACHMENT E: PLOT PLAN <input type="checkbox"/> ATTACHMENT F: AREA MAP <input type="checkbox"/> ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM <input type="checkbox"/> ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS <input type="checkbox"/> ATTACHMENT I: EMISSIONS CALCULATIONS <input type="checkbox"/> ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT <input type="checkbox"/> ATTACHMENT K: ELECTRONIC SUBMITTAL <input type="checkbox"/> ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE <input type="checkbox"/> ATTACHMENT M: SITING CRITERIA WAIVER <input type="checkbox"/> ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS) <input type="checkbox"/> ATTACHMENT O: EMISSIONS SUMMARY SHEETS <input type="checkbox"/> OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.) <p>Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.</p>

ATTACHMENT A

CURRENT BUSINESS CERTIFICATE

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

XTO ENERGY INC.

a corporation formed under the laws of Delaware filed an application to be registered as a foreign corporation authorizing it to transact business in West Virginia. The application was found to conform to law and a "Certificate of Authority" was issued by the West Virginia Secretary of State on May 30, 2008.

I further certify that the corporation has not been revoked by the State of West Virginia nor has a Certificate of Withdrawal been issued to the corporation by the West Virginia Secretary of State.

Accordingly, I hereby issue this

CERTIFICATE OF AUTHORIZATION

Validation ID:6WV5R_YEDXX



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
March 10, 2015*

Natalie E. Tennant

Secretary of State

CM

State of West Virginia



Certificate

I, Betty Ireland, Secretary of State of the State of West Virginia, hereby certify that

XTO ENERGY INC.

Control Number: 999BI

a corporation formed under the laws of Delaware has filed its "Application for Certificate of Authority" to transact business in West Virginia as required by the provisions of the West Virginia Code. I hereby declare the organization to be registered as a foreign corporation from its effective date of May 30, 2008.

Therefore, I issue this

CERTIFICATE OF AUTHORITY

to the corporation authorizing it to transact business in West Virginia



Given under my hand and the Great Seal of the State of West Virginia on this day of May 30, 2008

Betty Ireland

Secretary of State

Betty Ireland
Secretary of State
State Capitol
1900 Kanawha Blvd. E.
Charleston, WV 25305
FILE ONE ORIGINAL
FEES PER SCHEDULE

**CERTIFICATE OF
AUTHORITY**

Handwritten signature

Penney Barker, Manager
Corporations Division
Tel. (304) 558-8000
Fax (304) 558-8381
www.wvsos.com
Hours: 8:30am-5:00pm
PLEASE READ INSTRUCTIONS

CTRL # 999BI

1. HOME STATE INFORMATION:

- a. The name of the corporation as it is registered in its home state is: XTO Energy Inc.
- b. State of Delaware Date of Incorp. 10/9/90 Duration (# yrs. or perpetual) perpetual
Warning: Tax reporting requirements in West Va. will not end until a withdrawal is filed.
- c. NAIC # _____ (If an insurance company)

FILED

2. PRINCIPAL OFFICE INFORMATION:

- a. Address of the principal office of the corporation: No. & Street 810 Houston Street
City/State/Zip Fort Worth, TX 76102
- b. Mailing address, if different, from above address: Street/PO Box _____
City/State/Zip _____

IN THE OFFICE OF
SECRETARY OF STATE
WEST VIRGINIA

MAY 30 2008

3. WEST VIRGINIA INFORMATION:

- a. Corporate name to be used in W. Va.: (check one, follow instructions)
 Home state name as listed on line 1.a. above, if available.
 DBA name
- b. Address of registered office in West Virginia, if any: No. & Street _____
City/State/Zip _____
- c. Mailing address in WV, if different, from above: Street/PO Box _____
City/State/Zip _____
- d. Proposed purpose(s) for transaction of business in WV: Oil and Gas

4. AGENT OF PROCESS:

Properly designated person to whom notice of process may be sent, if any:

Name Corporation Service Company
Address 209 West Washington Street, Charleston, WV 25302

5. **CORPORATE STATUS INFORMATION:**


- a. Corporation is organized as (check one): For profit
 Non-profit

b. Directors and Officers: (Add extra page if necessary; please list all officers)

Officer (see attached)	Name (see attached)	Address (see attached)

6. The number of acres of land it holds or expects to hold in West Virginia is: 0

7. **Contact and Signature Information**

- a. Frank G. McDonald (817) 870-2800
Contact Name Phone Number
- b. Frank G. McDonald Sr. VP, GC and Asst. Secretary
Print or type name of signer Title or Capacity of Signer
- c. Signature of Signer:  Date: May 8, 2008

XTO ENERGY INC.

Directors:

Class I Phillip R. Kevil, Herbert D. Simons; Vaughn O. Vennerberg II (expires 5/09)
Class II Lane G. Collins, Scott G. Sherman, Bob R. Simpson (expires 5/10)
Class III William H. Adams III, Keith A. Hutton, Jack P. Randall (expires 5/08)

Business Address for XTO Energy Inc. Officers and Directors:

810 Houston Street, Fort Worth, TX 76102

Officers:

Chairman of the Board and Chief Executive Officer	Bob R. Simpson
President	Keith A. Hutton
Senior Executive Vice President and Chief of Staff	Vaughn O. Vennerberg II
Executive Vice President and Chief Financial Officer	Louis G. Baldwin
Executive Vice President - Acquisitions	Timothy L. Petrus
Senior Vice President and Treasurer	Brent W. Clum
Senior Vice President - Land	James L. Death
Senior Vice President - Natural Gas Operations	Nick J. Dungey
Senior Vice President - East Texas Operations	Ken K. Kirby
Senior Vice President and Controller	Bennie G. Kniffen
Senior Vice President, General Counsel and Assistant Secretary	Frank G. McDonald
Senior Vice President - Reservoir Engineering	F. Terry Perkins
Senior Vice President - Geology & Geophysics	Mark J. Pospisil
Senior Vice President - Land Administration	Edwin S. Ryan, Jr.
Senior Vice President - Marketing	Terry L. Schultz
Senior Vice President - Mid-Continent Operations	Douglas C. Schultze
Senior Vice President - Investor Relations and Finance	Gary D. Simpson
Senior Vice President - Engineering	Kenneth F. Staab
Senior Vice President - Taxation	Mark A. Stevens
Vice President - Financial Reporting	Scott T. Agosta
Vice President & Corporate Secretary	Virginia N. Anderson
Vice President, Associate General Counsel & Assistant Secretary	Kathy L. Cox
Vice President Operations - San Juan Division	Del L. Craddock
Vice President Operations - Permian Division & Alaska	Kyle M. Hammond
Vice President - Environmental, Health & Safety	Nina C. Hutton
Vice President Operations - Fort Worth Division	Timothy B. McIlwain
Vice President - Information Technology	L. Frank Thomas III
Vice President - Facilities	T. Joy Webster
Vice President - Human Resources	Karen S. Wilson
Assistant Treasurer	William B. Butler
Assistant Controller	Martha L. Montgomery

Delaware

PAGE 1

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "XTO ENERGY INC." IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE SIXTH DAY OF MAY, A.D. 2008.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "XTO ENERGY INC." WAS INCORPORATED ON THE NINTH DAY OF OCTOBER, A.D. 1990.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE FRANCHISE TAXES HAVE BEEN PAID TO DATE.

2243325 8300

080510772

You may verify this certificate online
at corp.delaware.gov/authver.shtml



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 6572039

DATE: 05-06-08

ATTACHMENT B

PROCESS DESCRIPTION

Process Description & Site Information

In 2011, XTO Energy Inc. (XTO) was issued an Order for Compliance (Docket No. CWA-03-2011-0208DW) (Order) by the U.S. Environmental Protection Agency (EPA) to resolve alleged unauthorized impacts to waters of U.S. pursuant to Section 404 of the Clean Water Act at XTO's Coastal Site located in Marion County, West Virginia. The Order pertains to alleged impacts from the construction of an impoundment, compressor/well pad and a connecting access road. Among other things, the Order requires XTO to submit a plan to restore/mitigate impacts to the Coastal Site and then implement the plan after approval by EPA.

XTO is currently preparing for submittal to EPA a restoration plan that requires XTO to restore (to the extent possible) impacted wetlands, streams, and adjacent riparian uplands. As part of this plan, XTO will be required to regrade the majority of the site, with cut of upto 35' in depth. It is expected that a majority of the cut will be in rock, and as such the rock will need to be crushed on site, for reuse or transfer to other permitted sites.

XTO is expected to use the crusher on site for no more than six (6) months, however the permit application is based on a one (1) year operating timeframe to allow for variability in final EPA approval and construction scheduling.

Portable Crusher

An excavator will take raw materials and transfer it into the hopper (PP-FH1) at Transfer Point TP-1. The internal belt feeder (PP-BF1) will transfer the feed to the crusher (PP-CR1) through TP-2/TC-PE. The crushed product is then dumped on the Main Conveyor (PP-BC1) through TP-3/TC-PE. Which then conveys the material to TP-4 and placed in the Stockpile (PP-OS-SM) or into trucks. Calculations are based on product being stockpiled due to the potential for greater emissions.

ATTACHMENT C

DESCRIPTION OF FUGITIVE EMISSIONS

DESCRIPTION OF FUGITIVE EMISSIONS

Fugitive emissions from the operation of the portable crusher include possible particulate emissions from the work area, haul roads, operation and stockpiles. To control particulate emissions, the work area surfaces, haul roads and stockpiles will be watered as needed using a water truck. Any water sprays and water supply lines will be protected from freezing by the use of thermal protection as needed. In the event that the thermal protection or other methods of winterizing do not prevent freezing, additives may be mixed into the water for freeze proofing.

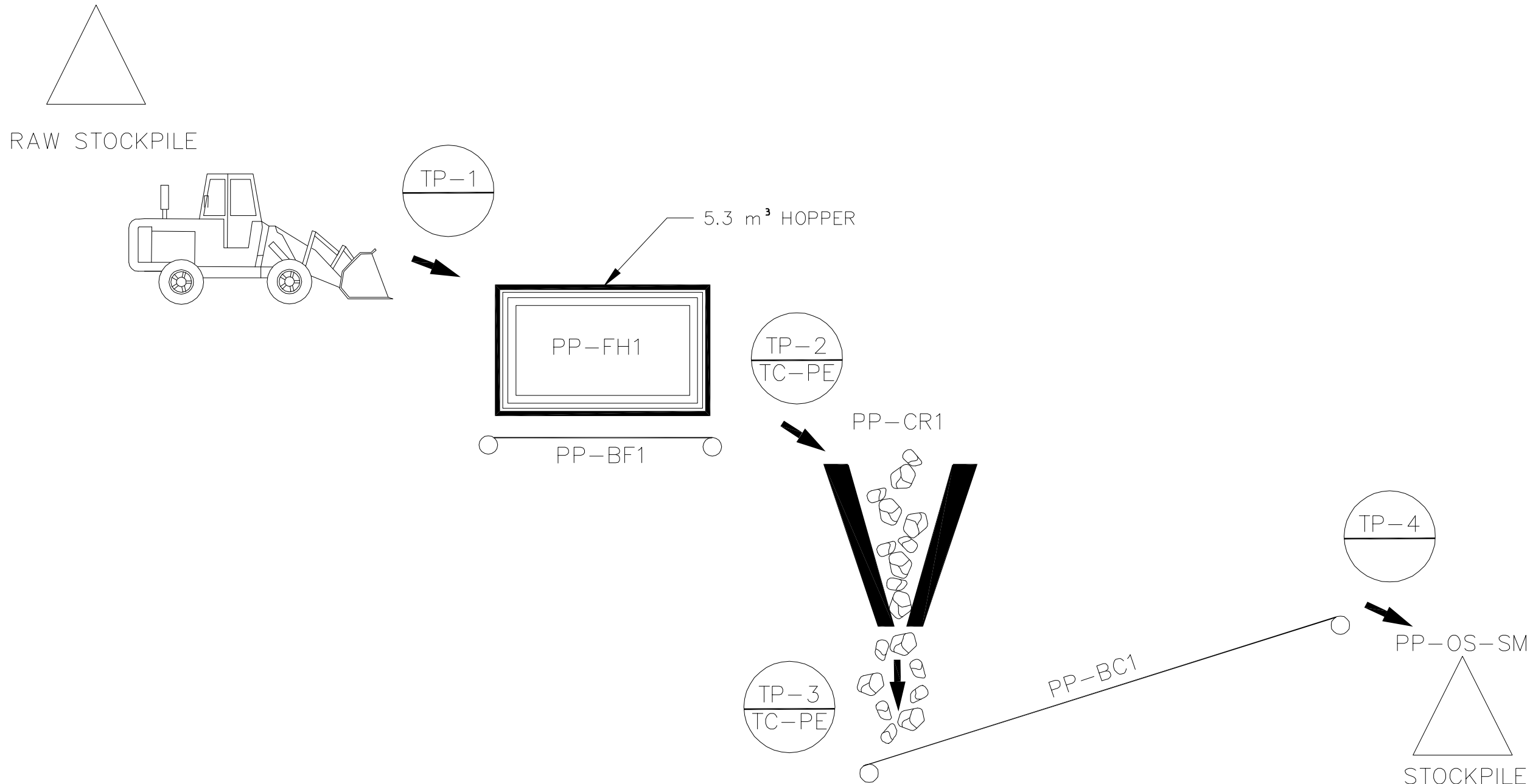
Emissions from the diesel engine will be controlled by maintaining recommended services at the required intervals to insure that the engine operates at peak efficiency.


ATTACHMENT D

PROCESS FLOW DIAGRAM

PROCESS FLOW DIAGRAM FOR PORTABLE CRUSHER

XTO Energy INC.
Coastal Site
Lincoln District, Marion County, WV



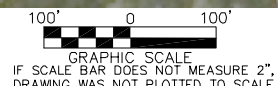
DATE	02-27-15	PREPARED BY	LMB
SHEET	DIAGRAM	CHECKED BY	RJB
DWG. NO.	51001-03	APPROVED BY	RJB
XTO ENERGY, INC. COASTAL WELL PAD LINCOLN DISTRICT, MARION COUNTY WEST VIRGINIA			
PROCESS FLOW DIAGRAM			
 consulting engineers planners & surveyors			
METISH, KUNKEL & ASSOCIATES 1500 sycamore rd, suite 320 montoursville, pa 17754 570-368-3040 fax 570-368-3166 COPYRIGHT, 2014			
NO.	DATE	DESCRIPTION	BY

ATTACHMENT E

PLOT PLAN

W:\51\51001-03\DWG\51001-03-C12-EXBT-Attachment E-Plot_Plan.dwg 3/6/15

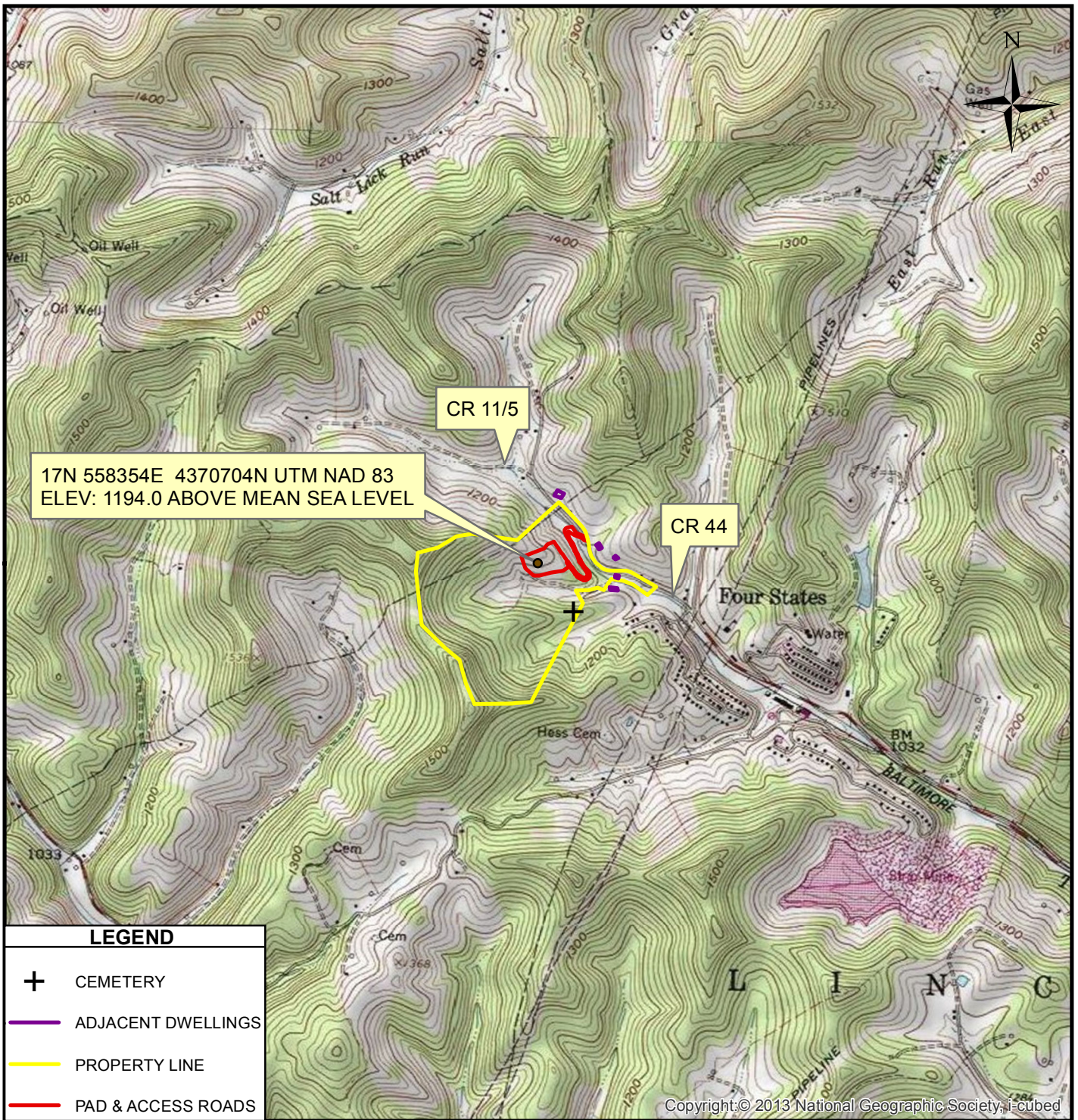
NOTES:
 1. THIS DRAWING HAS BEEN CREATED USING INFORMATION FROM DRAWING "SOLO7B_COASTAL_071013" BY WHM CONSULTING INC. SOLELY FOR PERMITTING OF SITE IMPROVEMENTS AND IS NOT INTENDED FOR ANY OTHER USE.
 2. PROPERTY LINES SHOWN ARE NOT THE RESULT OF A BOUNDARY OR OTHER SURVEY AND ARE APPROXIMATE. PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, AND WERE TAKEN FROM DRAWING "SOLO7B_COASTAL_071013" BY WHM CONSULTING INC.



DATE DRAWN	02/24/15	PREPARED BY	JMT
SHEET	EXHIBIT	CHECKED BY	RJB
DWG. NO.	51001-03-4	APPROVED BY	RJB
XTO ENERGY, INC (##-##-###) COASTAL CRUSHER 2518 GRAYS RUN ROAD WORTHINGTON MARION COUNTY WEST VIRGINIA ATTACHMENT E-PLOT PLAN			
 consulting engineers planners & surveyors			
METISH, KUNKEL & ASSOCIATES 1500 sycamore rd, suite 320 montoursville, pa 17754 copyright, 2015 570-368-3040 fax 570-368-3166			
		NO.	DATE
		0	XX/XX/XX
		PLAN SUBMISSION	DESCRIPTION
		BY	REVISIONS
		JMT	SET 0

ATTACHMENT F

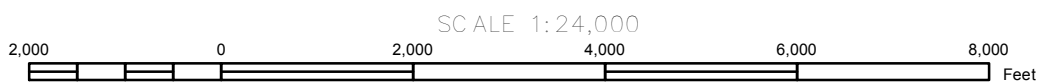
AREA MAP

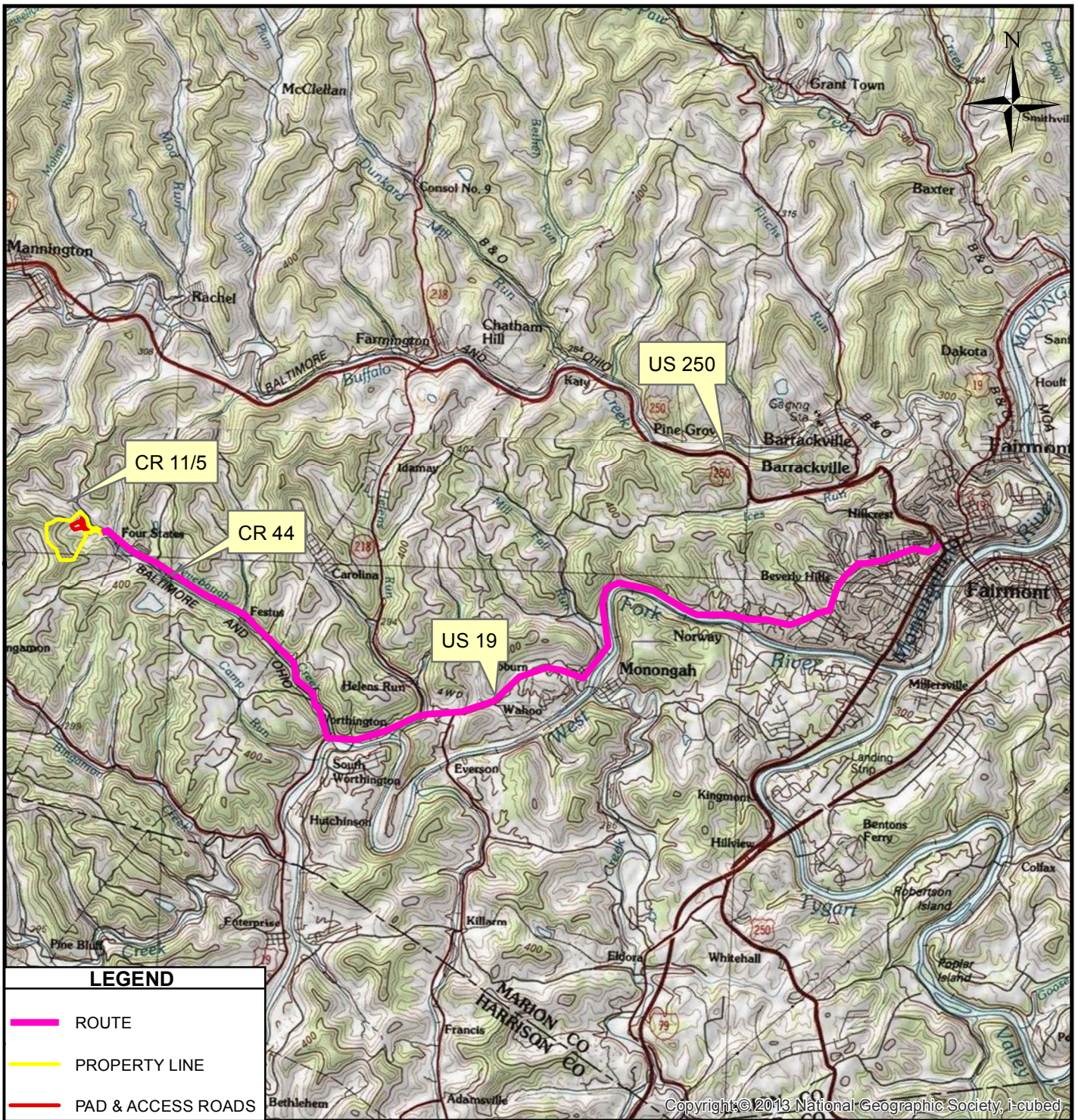


U.S.G.S. 7.5 MINUTE SERIES
 SHINNSTON QUADRANGLE
 CONTOUR INTERVAL 20 FT
 N.G.V.D. OF 1929

ATTACHMENT F AREA MAP

XTO Energy INC.
Coastal Site
Lincoln District, Marion County, WV



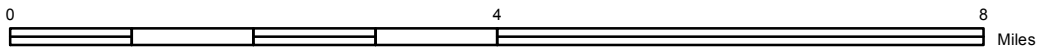


U.S.G.S. 7.5 MINUTE SERIES
 SHINNSTON QUADRANGLE
 CONTOUR INTERVAL 20 FT
 N.G.V.D. OF 1929

ATTACHMENT F DIRECTIONS MAP

XTO Energy INC.
Coastal Site
Lincoln District, Marion County, WV

SCALE 1:100,000



ATTACHMENT G

EQUIPMENT DATA SHEET AND SECTION APPLICABILITY FORM

CRUSHING AND SCREENING AFFECTED SOURCE SHEET

Source Identification Number ¹		PP-CR1					
Type of Crusher or Screen ²		JC					
Make, Model No., Serial No. ³		EXTECH					
Date of Construction, Reconstruction, or Modification (Month/Year) ⁴		2006					
Maximum Throughput ⁵	tons/hour	350					
	tons/year	875,000					
Material sized from/to: ⁶		+24" / 6"					
Average Moisture Content (%) ⁷		~1%					
Control Device ID Number ⁸		CR-FE					
Baghouse Stack Parameters ⁹	height (ft)	N/A					
	diameter (ft)	N/A					
	volume (ACFM)	N/A					
	exit temp (F)	N/A					
	UTM Coordinates	N/A					
Maximum Operating Schedule ¹⁰	hours/day	24					
	days/year	365					
	hours/year	8760					

1. Enter the appropriate Source Identification Number for each crusher and screen. For example, in the case of an operation which incorporates multiple crushers, the crushers should be designated CR-1, CR-2, CR-3 etc. beginning with the breaker or primary crusher. Multiple screens should be designated S-1, S-2, S-3 etc.
2. Describe types of crushers and screens using the following codes:

HM	Hammermill	SS	Stationary Screen	DR	Double Roll Crusher
SD	Single Deck Screen	BM	Ball Mill	DD	Double-Deck Screen
RB	Rotary Breaker	TD	Triple Deck Screen	JC	Jaw Crusher
GC	Gyratory Crusher	OT	Other		
3. Enter the make, model number, and serial number of the crusher/screen.
4. Enter the date that each crusher and screen was constructed, reconstructed, or modified.
5. Enter the maximum throughput for each crusher and screen in tons per hour and tons per year.
6. Describe the nominal material size reduction (e.g. +2"/ -3/8").
7. Enter the average percent moisture content of the material processed.
8. Enter the appropriate Control Device Identification Number for each crusher and screen. Refer to Table A - *Control Device Listing and Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.
9. Enter the appropriate stack parameters if a baghouse control device is used.
10. Enter the maximum operating schedule for each crusher and screen in hours per day, days per year and hours per year.

CONVEYING AFFECTED SOURCE SHEET

Source Identification Number ¹	Date of Construction, Reconstruction, or Modification (Month/Year) ²	Type of Material Handled ³	Size of Material Handled ⁴	Maximum Material Transfer Rate ⁵		Average Moisture Content (%) ⁶	Control Device ⁷
				tons/hour	tons/year		
PP-FH1	2006	RM	+24"X0"	350	875,000	~1%	N
PP-BF1	2006	RM	+24"X0"	350	875,000	~1%	FE
PP-BC1	2006	SM	-1/2"X0	350	875,000	~1%	FE

- Enter the appropriate Source Identification Number for each conveyor using the following codes. For example, multiple belt conveyors should be designated BC-1, BC-2, BC-3 etc. Transfer points are considered emission points, not sources, and should not be included in the *Conveying Affected Source Sheet*. Transfer Point Identification Numbers shall be assigned in the *Emission Calculation Sheet*.
 - BC Belt Conveyor BE Bucket Elevator DL Drag-link Conveyor
 - PS Pneumatic System SC Screw Conveyor VC Vibrating Conveyor
 - OT Other
- Enter the date that each crusher and screen was constructed, reconstructed, or modified.
- Enter the type of material being handled - Raw Material (RM) Sized Material (SM) Refuse (R) Other (O)
- Enter the nominal size of the material being conveyed (e.g. sized material- ¾" x 0). If more than one material is handled by the listed conveyor, list each material and enter the appropriate data for each material.
- Enter the maximum material transfer rate for each conveyor in tons per hour and tons per year.
- Enter the average percent moisture content of the conveyed material.
- Enter the control device for the conveyor. PE - Partial Enclosure (example 3/4 hoop), FE - Full Enclosure, N - None

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number ¹	PP-OS					
Type of Material Stored ²	Sized					
Average Moisture Content (%) ³	~1%					
Maximum Yearly Storage Throughput (tons) ⁴	875,000					
Maximum Storage Capacity (tons) ⁵	1,500,000					
Maximum Base Area (ft ²) ⁶	4,000					
Maximum Pile Height (ft) ⁷	25					
Method of Material Load-in ⁸	MC					
Load-in Control Device Identification Number ⁹	N					
Storage Control Device Identification Number ⁹	SW-WS					
Method of Material Load-out ⁸	FE					
Load-out Control Device Identification Number ⁹	N					

1. Enter the appropriate Source Identification Number for each storage activity using the following codes. For example, if the facility utilizes three storage bins, four open stockpiles and one storage building (full enclosure), the Source Identification Numbers should be BS-1, BS-2, and BS-3; OS-1, OS-2, OS-3, and OS-4; and SB-1, respectively.

BS Bin or Storage Silo (full enclosure)	E3 Enclosure (three sided enclosure)
OS Open Stockpile	SB Storage Building (full enclosure)
SF Stockpiles with wind fences	OT Other
2. Describe the type of material stored or stockpiled. (e.g. sized material, raw material, refuse, etc).
3. Enter the average percent moisture content of the stored material.
4. Enter the maximum yearly storage throughput for each storage activity.
5. Enter the maximum storage capacity for each storage activity in tons (e.g. silo capacity, maximum stockpile size, etc.)
6. For stockpiles, enter the maximum stockpile base area.
7. For stockpiles, enter the maximum stockpile height.
8. Enter the method of load-in or load-out to/from stockpiles or bins using the following codes:

CS Clamshell	SS Stationary Conveyor/Stacker
FC Fixed Height Chute from Bins	ST Stacking Tube
FE Front Endloader	TC Telescoping Chute from Bins
MC Mobile Conveyor/Stacker	TD Truck Dump
UC Under-pile or Under-Bin Reclaim Conveyor	PC Pneumatic Conveyor/Stacker
RC Rake or Bucket Reclaim Conveyor	OT Other
9. Enter the appropriate Control Device Identification Number for each storage activity. Refer to Table A - *Control Device Listing and Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.

HAULROAD EMISSIONS

Include G40-C Emission Calculation Spreadsheet indicating haulroad emissions, or submit calculations indicating assumptions made to substantiate emission values.

Emission Source	Uncontrolled Emissions		Controlled Emissions	
	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)
UNPAVED HAULROAD	14.37	17.96	4.31	5.39

General Permit G40-C Registration Section Applicability Form

General Permit G40-C allows qualified registrants to seek registration for a variety of sources. These sources include nonmetallic mineral processing plants which include crushers, screens, transfer points (loading, unloading, etc.), open stockpiles, bins, haulroads, reciprocating internal combustion engine driven compressors, emergency standby generators, and tanks. All registered facilities will be subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

General Permit G40-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Section 5 ¹	Nonmetallic Mineral Processing Operations	<input checked="" type="checkbox"/>
Section 6	Standards of Performance for Nonmetallic Mineral Processing Plants that Commenced Construction, Reconstruction or Modification after August 31, 1983 but before April 22, 2008 (40CFR60 Subpart OOO)	<input type="checkbox"/>
Section 7	Standards of Performance for Nonmetallic Mineral Processing Plants that Commenced Construction, Reconstruction or Modification on or after April 22, 2008. (40CFR60 Subpart OOO)	<input checked="" type="checkbox"/>
Section 8 ²	Reciprocating Internal Combustion Engines (R.I.C.E.)	<input checked="" type="checkbox"/>
Section 9	Tanks	<input type="checkbox"/>
Section 10	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	<input checked="" type="checkbox"/>
Section 11	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	<input type="checkbox"/>

1 Affected facilities that are subject to Section 5 may also be subject to Sections 6 and 7. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

2 Affected facilities that are subject to Section 8 may also be subject to Sections 10 or 11. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

ENGINE DATA SHEET

Source Identification Number ¹		PP-CE1						
Engine Manufacturer and Model		BF6M 1015						
Manufacturer's Rated bhp/rpm		365 HP						
Source Status ²		MS						
Date Installed/Modified/Removed (Month/Year) ³		4/2015						
Engine Manufactured/Reconstruction Date ⁴		02/21/2006						
Is this a Certified Stationary Compression Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No) ⁵		YES						
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No) ⁶		NO						
Engine, Fuel and Combustion Data	Engine Type ⁷		RB4S					
	APCD Type ⁸		N/A					
	Fuel Type ⁹		2FO					
	H ₂ S (gr/100 scf)		N/A					
	Operating bhp/rpm		365 hp					
	BSFC (Btu/bhp-hr)		N/A					
	Fuel throughput (ft ³ /hr)		2.5					
	Fuel throughput (MMft ³ /yr)		6,250					
	Operation (hrs/yr)		2,500					
Reference ¹⁰	Potential Emissions ¹¹	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	
MD	NO _x	2.43	3.04					
MD	CO	0.90	1.13					
MD	VOC	0.83	1.04					
	SO ₂	N/A	N/A					
MD	PM	0.08	0.1					
	Formaldehyde	N/A	N/A					

1. Enter the appropriate Source Identification Number for each reciprocating internal combustion compressor/generator engine located at the facility. Multiple compressor engines should be designated CE-1, CE-2, CE-3 etc. Emergency Generator engines should be designated EG-1, EG-2, EG-3 etc. If more than three (3) engines exist, please use additional sheets.

2. Enter the Source Status using the following codes:

- | | |
|--|----------------------|
| NS Construction of New Source (installation) | ES Existing Source |
| MS Modification of Existing Source | RS Removal of Source |

3. Enter the date (or anticipated date) of the engine's installation (construction of source), modification or removal.
4. Enter the date that the engine was manufactured, modified or reconstructed.
5. Is the engine a certified stationary compression ignition internal combustion engine according to 40CFR60 Subpart IIII. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4210 as appropriate.

Provide a manufacturer's data sheet for all engines being registered.

6. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart JJJJ. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4243a(2)(i) through (iii), as appropriate.

Provide a manufacturer's data sheet for all engines being registered.

7. Enter the Engine Type designation(s) using the following codes:

LB2S	Lean Burn Two Stroke	RB4S	Rich Burn Four Stroke
LB4S	Lean Burn Four Stroke		

8. Enter the Air Pollution Control Device (APCD) type designation(s) using the following codes:

A/F	Air/Fuel Ratio	IR	Ignition Retard
HEIS	High Energy Ignition System	SIPC	Screw-in Precombustion Chambers
PSC	Prestratified Charge	LEC	Low Emission Combustion
NSCR	Rich Burn & Non-Selective Catalytic Reduction	SCR	Lean Burn & Selective Catalytic Reduction

9. Enter the Fuel Type using the following codes:

PQ	Pipeline Quality Natural Gas	RG	Raw Natural Gas
2FO	#2 Fuel Oil	LPG	Liquid Propane Gas

10. Enter the Potential Emissions Data Reference designation using the following codes. Attach all referenced data to this *Compressor/Generator Data Sheet(s)*.

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-HAPCalc™	OT	Other _____	(please list)

11. Enter each engine's Potential to Emit (PTE) for the listed regulated pollutants in pounds per hour and tons per year. PTE shall be calculated at manufacturer's rated brake horsepower and may reflect reduction efficiencies of listed Air Pollution Control Devices. Emergency generator engines may use 500 hours of operation when calculating PTE. PTE data from this data sheet shall be incorporated in the *Emissions Summary Sheet*.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

2005 Model Year Certificate of Conformity

Manufacturer: **Deutz AG**
Certificate Number: **DZX-NR8-05-08**
Effective Date: **8/17/2004**
Date Issued: **8/17/2004**



Merrylin Zaw-Mon, Director
Certification and Compliance Division
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 89 and produced in the stated model year.

Nonroad Diesel Engine Family: 5DZXL15.9002

This certificate of conformity covers only those new nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 89. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5DZXL15.9002	11.9, 15.9	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Smoke Puff Limiter, Turbocharger, Charge Air Cooler			Pump, Compressor, Generator Set, Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
225 ≤ kW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
450 ≤ kW ≤ 560	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	-	-	5.4	1.5	0.14	18	6	27

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 28TH day of October 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm ³ /stroke @ peak HP (for diesel only)	5.Fuel Rate: (bs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm ³ /stroke@peak torque	8.Fuel Rate: (bs/hr)@peak torque	9.Emission Control Device Per SAE J1930
5DZXL15.9002	CE228	BF6M1015C	305.7@1500	206	102.9	1166.8@1200	235	93.9	SPL DPE,TS,CAC
5DZXL15.9002	CE228/1	BF6M1015C	305.7@1800	182	109.1	1124@1200	238	95.1	SPL
5DZXL15.9002	CE240	BF6M1015C	321.8@2300	171	131	1028.8@1200	194	77.5	SPL
5DZXL15.9002	CE240/1	BF6M1015C	321.8@2100	175	122.4	1085.6@1200	210	83.9	SPL
5DZXL15.9002	CE240/2	BF6M1015C	321.8@1900	182	115.2	1112.2@1300	209	90.5	SPL
5DZXL15.9002	CE242	BF6M1015C	324.5@2050	179	122.3	1193.3@1200	230	91.9	SPL
5DZXL15.9002	CE248	BF6M1015C	332.5@1800	194	116.3	1222.8@1200	232	92.7	SPL
5DZXL15.9002	CE259	BF6M1015C	347.3@1800	204	122.3	1276.7@1200	243	97.1	SPL
5DZXL15.9002	CE261	BF6M1015C	350@2100	188	131.5	1269.3@1200	242	96.7	SPL
5DZXL15.9002	CE261/1	BF6M1015C	350@2050	189	129.1	1289.2@1200	248	99.1	SPL
5DZXL15.9002	CE261/3	BF6M1015C	350@1900	198	125.3	1306.2@1200	249	99.5	SPL
5DZXL15.9002	CE261/5	BF6M1015C	350@2300	185	141.8	1118.8@1200	213	85.1	SPL
5DZXL15.9002	CE261/6	BF6M1015C	350@2000	191	127.3	1287@1200	244	97.5	SPL
5DZXL15.9002	CE271	BF6M1015C	363.4@1800	214	128.3	1336.4@1200	253	101.1	SPL
5DZXL15.9002	CE273	BF6M1015C	366@2100	194	135.7	1327.6@1200	252	100.7	SPL
5DZXL15.9002	CE273/1	BF6M1015C	366@2000	203	135.3	1346@1200	258	103.1	SPL
5DZXL15.9002	CE273/2	BF6M1015C	366@1900	208	131.7	1365.9@1200	259	103.5	SPL
5DZXL15.9002	CE280	BF6M1015C	375.4@2050	204	139.3	1380.7@1200	264	105.5	SPL
5DZXL15.9002	CE285	BF6M1015C	382.1@1800	225	134.9	1405@1200	266	106.3	SPL
5DZXL15.9002	CE286	BF6M1015C	383.5@2100	206	144.1	1391@1200	267	106.7	SPL
5DZXL15.9002	CE286/1	BF6M1015C	383.5@2000	214	142.6	1410.2@1200	269	107.5	SPL
5DZXL15.9002	CE286/2	BF6M1015C	383.5@1900	220	139.3	1431.6@1200	272	108.7	SPL
5DZXL15.9002	CE298	BF6M1015C	399.6@1500	280	139.9	1479.5@1200	282	112.7	SPL
5DZXL15.9002	CE300	BF6M1015C	402.3@2100	220	153.9	1488.8@1200	278	111.1	SPL
5DZXL15.9002	CE300/1	BF6M1015C	402.3@2000	225	149.9	1479.5@1200	282	112.7	SPL
5DZXL15.9002	CE300/2	BF6M1015C	402.3@1900	231	146.2	1501.6@1200	286	114.3	SPL
5DZXL15.9002	D250	BF6M1015C	335.2@1500	228	113.9	FIXED	0	0	SPL
5DZXL15.9002	D271/1	BF6M1015C	363.4@1800	210	125.9	FIXED	0	0	SPL

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Engine Model Summary Template



Engine Family	1 Engine Code	2 Engine Model	3 BHP@RPM (SAE Gross)	4 Fuel Rate: mm ³ /stroke @ peak HP (for diesel only)	5 Fuel Rate: (lb/hr) @ peak HP (for diesels only)	6 Torque @ RPM (SEA Gross)	7 Fuel Rate: mm ³ /stroke @ peak torque	8 Fuel Rate: (lb/hr) @ peak torque	9 Emission Control Device Per SAE J1930
									SPL
5DZXL15.9002	D285	BF6M1015C	382.1@1500	261	130.4	FIXED	0	0	SPL
5DZXL15.9002	D310/1	BF6M1015C	415.7@1800	243	145.7	FIXED	0	0	SPL
5DZXL15.9002	D314	BF6M1015C	421@1500	292	145.9	FIXED	0	0	SPL
5DZXL15.9002	D321	BF6M1015C	430.4@1800	257	154.1	FIXED	0	0	SPL
5DZXL15.9002	D341/1	BF6M1015C	457.2@1800	273	163.7	FIXED	0	0	SPL
5DZXL15.9002	D345	BF6M1015C	462.6@1500	321	160.4	FIXED	0	0	SPL
5DZXL15.9002	CE261/4	BF6M1015CP	350@2100	189	132.2	1180.8@1300	227	98.3	SPL
5DZXL15.9002	CE272	BF6M1015CP	364.7@1800	219	131.3	1245@1200	241	96.3	SPL
5DZXL15.9002	CE273/5	BF6M1015CP	366@2100	200	139.9	1234.6@1300	240	103.9	SPL
5DZXL15.9002	CE285/1	BF6M1015CP	382.1@1800	228	136.7	1304.7@1200	256	102.3	SPL
5DZXL15.9002	CE286/4	BF6M1015CP	383.5@2100	210	146.9	1292.2@1300	251	108.7	SPL
5DZXL15.9002	CE287	BF6M1015CP	384.8@2100	210	146.9	1202.9@1300	231	100	SPL
5DZXL15.9002	CE287/1	BF6M1015CP	384.8@1900	224	141.8	1276.7@1200	246	98.3	SPL
5DZXL15.9002	CE300/5	BF6M1015CP	402.3@2100	219	153.2	1257.5@1300	242	104.8	SPL
5DZXL15.9002	CE300/6	BF6M1015CP	402.3@2100	219	153.2	1357.8@1300	261	113	SPL
5DZXL15.9002	CE300/7	BF6M1015CP	402.3@1900	237	150	1334.2@1200	259	103.5	SPL
5DZXL15.9002	CE300/8	BF6M1015CP	402.3@1800	241	144.5	1373.3@1200	272	108.7	SPL
5DZXL15.9002	CE313	BF6M1015CP	419.7@1800	255	152.9	1433@1200	280	111.9	SPL
5DZXL15.9002	CE314/1	BF6M1015CP	421@2100	231	161.6	1316.5@1300	254	110	SPL
5DZXL15.9002	CE314/3	BF6M1015CP	421@1900	246	155.7	1396.9@1200	270	107.9	SPL
5DZXL15.9002	CE330/2	BF6M1015CP	442.5@2100	248	173.5	1383.6@1300	268	116.1	SPL
5DZXL15.9002	CE330/4	BF6M1015CP	442.5@1900	264	167.1	1467.7@1200	283	113.1	SPL
5DZXL15.9002	D303	BF6M1015CP	406.3@1500	279	139.4	FIXED	0	0	SPL
5DZXL15.9002	D320/1	BF6M1015CP	429.1@1800	256	153.5	FIXED	0	0	SPL
5DZXL15.9002	D338	BF6M1015CP	453.2@1500	312	155.9	FIXED	0	0	SPL
5DZXL15.9002	D351/1	BF6M1015CP	470.6@1800	284	170.3	FIXED	0	0	SPL
5DZXL15.9002	D365	BF6M1015CP	489.4@1500	350	174.9	FIXED	0	0	SPL
5DZXL15.9002	D384/1	BF6M1015CP	514.9@1800	316	189.5	FIXED	0	0	SPL

SPL

Engine Model Summary Template

Engine Family	1 Engine Code	2 Engine Model	3 BHP@RPM (SAE Gross)	4 Fuel Rate: min/stroke @ peak HP (for diesel only)	5 Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6 Torque @ RPM (SEA Gross)	7 Fuel Rate: min/stroke @ peak torque	8 Fuel Rate: (lbs/hr) @ peak torque	9 Emission Control Device Per SAE J1930
5DZXL15.9002	CE290	BF8M1015C	388.8@1900	168	141.8	1376.2@1300	197	113.8	SPL
5DZXL15.9002	CE320	BF8M1015C	429.1@2000	177	157.3	1512@1300	216	124.7	SPL
5DZXL15.9002	CE330	BF8M1015C	442.5@1800	196	156.7	1627@1200	235	125.3	SPL
5DZXL15.9002	CE345	BF8M1015C	462.6@1800	203	162.3	1700.8@1200	248	132.2	SPL
5DZXL15.9002	CE348	BF8M1015C	466.6@2100	191	178.2	1692.7@1200	240	127.9	SPL
5DZXL15.9002	CE348/1	BF8M1015C	466.6@2000	193	171.5	1715.5@1200	245	130.6	SPL
5DZXL15.9002	CE348/2	BF8M1015C	466.6@1900	205	173.1	1741.3@1200	251	133.8	SPL
5DZXL15.9002	CE362	BF8M1015C	485.4@1800	215	171.9	1784.9@1200	260	138.6	SPL
5DZXL15.9002	CE364	BF8M1015C	488.1@2100	201	187.5	1770.1@1200	251	133.8	SPL
5DZXL15.9002	CE364/1	BF8M1015C	488.1@2000	201	178.6	1794.4@1200	258	137.5	SPL
5DZXL15.9002	CE364/2	BF8M1015C	488.1@1900	211	178.1	1821.7@1200	264	140.7	SPL
5DZXL15.9002	CE370	BF8M1015C	496.1@2000	202	179.5	1823.9@1200	266	141.8	SPL
5DZXL15.9002	CE370/1	BF8M1015C	496.1@2100	203	189.4	1798.9@1200	198	105.5	SPL
5DZXL15.9002	CE380	BF8M1015C	509.5@1800	228	182.3	1873.4@1200	271	144.5	SPL
5DZXL15.9002	CE381	BF8M1015C	510.9@2100	210	195.9	1852.7@1200	268	142.9	SPL
5DZXL15.9002	CE381/1	BF8M1015C	510.9@2000	211	187.5	1878.5@1200	269	143.4	SPL
5DZXL15.9002	CE381/2	BF8M1015C	510.9@1900	221	186.6	1906.5@1200	281	149.8	SPL
5DZXL15.9002	CE385	BF8M1015C	516.2@2100	212	197.8	1872.6@1200	270	143.9	SPL
5DZXL15.9002	CE400	BF8M1015C	536.4@2100	221	206.2	1947.1@1200	278	148.2	SPL
5DZXL15.9002	CE400/1	BF8M1015C	536.4@2000	226	200.8	1972.2@1200	280	149.3	SPL
5DZXL15.9002	CE400/2	BF8M1015C	536.4@1900	234	197.5	2001.7@1200	290	156.2	SPL
5DZXL15.9002	D333	BF8M1015C	446.5@1500	228	151.9	FIXED	0	0	SPL
5DZXL15.9002	D362/1	BF8M1015C	485.4@1800	216	172.7	FIXED	0	0	SPL
5DZXL15.9002	D380	BF8M1015C	509.5@1500	282	174.6	FIXED	0	0	SPL
5DZXL15.9002	D413/1	BF8M1015C	553.8@1800	253	202.3	FIXED	0	0	SPL
5DZXL15.9002	D418	BF8M1015C	560.5@1500	291	193.9	FIXED	0	0	SPL
5DZXL15.9002	D454/1	BF8M1015C	608.8@1800	277	221.5	FIXED	0	0	SPL
5DZXL15.9002	CE348/4	BF8M1015CP	466.6@2100	191	178.2	1576.1@1300	231	133.4	SPL

SPL JDE TL, etc

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Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: min/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lb/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: min/stroke@peak torque	8.Fuel Rate: (lb/hr)@peak torque	9.Emission Control Device Per SAE J1930
5DZXL15.9002	CE364/3	BF8M1015CP	488.1@1800	220	175.9	1666.1@1200	244	130.1	SPL DDI, T, OAC
5DZXL15.9002	CE364/4	BF8M1015CP	488.1@2100	202	188.5	1646.2@1300	244	140.9	SPL
5DZXL15.9002	CE381/3	BF8M1015CP	510.9@2100	210	195.9	1724.4@1300	256	147.9	SPL
5DZXL15.9002	CE382	BF8M1015CP	512.2@1800	231	164.7	1748.7@1200	259	138.1	SPL
5DZXL15.9002	CE383	BF8M1015CP	513.6@2100	211	196.9	1605.6@1300	235	135.7	SPL
5DZXL15.9002	CE383/1	BF8M1015CP	513.6@1900	228	192.5	1703.7@1200	250	133.3	SPL
5DZXL15.9002	CE400/5	BF8M1015CP	536.4@2100	221	206.2	1677.2@1300	247	142.7	SPL
5DZXL15.9002	CE400/6	BF8M1015CP	536.4@2100	221	206.2	1810.7@1300	264	152.5	SPL
5DZXL15.9002	CE400/7	BF8M1015CP	536.4@1900	240	202.6	1779@1200	262	139.7	SPL
5DZXL15.9002	CE400/8	BF8M1015CP	536.4@1800	244	195.1	1830.6@1200	275	146.6	SPL
5DZXL15.9002	CE418	BF8M1015CP	560.5@1800	258	206.3	1913.9@1200	283	150.9	SPL
5DZXL15.9002	CE419	BF8M1015CP	561.8@2100	232	216.5	1756.8@1300	258	149	SPL
5DZXL15.9002	CE419/1	BF8M1015CP	561.8@1900	248	209.4	1863.8@1200	273	145.5	SPL
5DZXL15.9002	CE440	BF8M1015CP	590@2100	248	231.4	1843.9@1300	272	157.1	SPL
5DZXL15.9002	CE440/1	BF8M1015CP	590@1900	267	225.4	1954.5@1200	289	154.1	SPL
5DZXL15.9002	CE440/2	BF8M1015CP	590@2150	251	239.8	1843.9@1300	272	157.1	SPL
5DZXL15.9002	CE470	BF8M1015CP	630.2@1900	277	233.9	1969.2@1300	291	168.1	SPL
5DZXL15.9002	CE470/1	BF8M1015CP	630.2@2100	269	251	1843.9@1300	272	157.1	SPL
5DZXL15.9002	D399	BF8M1015CP	535@1500	285	189.9	FIXED	0	0	SPL
5DZXL15.9002	D426/1	BF8M1015CP	571.2@1800	260	207.9	FIXED	0	0	SPL
5DZXL15.9002	D448	BF8M1015CP	600.7@1500	315	209.9	FIXED	0	0	SPL
5DZXL15.9002	D473/1	BF8M1015CP	634.2@1800	288	230.3	FIXED	0	0	SPL
5DZXL15.9002	D490	BF8M1015CP	657@1500	352	234.6	FIXED	0	0	SPL
5DZXL15.9002	D517/1	BF8M1015CP	693.2@1800	320	255.9	FIXED	0	0	SPL
5DZXL15.9002	CE330/5	BF6M1015CP	442.5@2100	252	176.3	1347.5@1300	265	114.8	SPL
5DZXL15.9002	CE335	BF8M1015C	449.2@2300	193	197.2	1512@1300	221	127.6	SPL
5DZXL15.9002	CE400/3	BF8M1015C	241.3@1900	222	167.4	2001.7@600	290	78.1	SPL

CALCULATE NO_x + VOC FROM CARB CERT

NMHC + NO_x =

CONVERT HP TO KW

$$365 \text{ HP} \times 0.746 = 272.29 \approx 273 \text{ KW}$$

PER OHIO EPA GUIDANCE DOCUMENT ENCLOSED

74.6% NO_x + 25.4% VOC = NO_x + NMHC

$$\frac{5.4 \text{ g}}{\text{kwhr}} \times 74.6\% \text{ NO}_x \times 273 \text{ kW} \times \frac{0.002205 \text{ lb}}{\text{g}} = \frac{2.43 \text{ lb NO}_x}{\text{hr}}$$

$$\frac{5.4 \text{ g}}{\text{kwhr}} \times 25.4\% \text{ VOC} \times 273 \text{ kW} \times \frac{0.002205 \text{ lb}}{\text{g}} = \frac{0.83 \text{ lb VOC}}{\text{hr}}$$

CALCULATE CO

$$\frac{1.5 \text{ g}}{\text{kwhr}} \times 273 \text{ kW} \times \frac{0.002205 \text{ lb}}{\text{g}} = \frac{0.90 \text{ lb CO}}{\text{hr}}$$

CALCULATE PM

$$\frac{0.14 \text{ g}}{\text{kwhr}} \times 273 \text{ kW} \times \frac{0.002205 \text{ lb}}{\text{g}} = \frac{0.08 \text{ lb PM}}{\text{hr}}$$

Calculation of NOx Emissions for Compression Ignition (CI), Internal Combustion Engines (ICE)

The hourly NOx emissions for all of the diesel engines at a facility can be calculated using the applicable gram/kW-hr limit to which each is certified or AP-42 emission factor for pre-NSPS CI ICE.

The NOx hourly emission limits shall be calculated as follows:

To convert horse power to kilowatts multiply the horse power by 0.746.

Enter the size engine in kilowatts into the following calculations and add the resulting pound per hour emissions for all of the diesel engines operating at the facility, to document that the total facility emissions do not exceed 50.7 or 53.7 pounds of NOx per hour and to determine the minimum distance of any of the facility engines from the fenceline.

The pound per hour emission limitations for NOx shall be calculated as follows, based on the emission limits to which the engine is certified. Select the appropriate General Permits (GP) based on the model year and certification:

Templates #1 and #2 for pre-2007 engines installed on or after 6/12/06:

The nitrogen oxide limit from Table 1 to Part 60, Subpart IIII and/or the Tier 1 limits from Table 1 to 40 CFR 89.112 is 9.2 grams of NOx per kilowatt hour.

The estimated pound per hour emissions shall be calculated as follows:

$$9.2 \text{ g NOx /kW-hr} \times \mathbf{kW} \times 0.002205 \text{ lb/g} = \mathbf{XX} \text{ lb NOx/hr}$$

Template #3 for 2007 model year or earlier engines from 50 HP (37 kW) to <75 HP (<56 kW)

Template #4 for 2007 to 2011 model year or earlier engines from 75 HP (56 kW) to <100 HP (<75 kW)

Template #8 for 2008 to 2012 model year engines from 50 HP (37 kW) to <75 HP (<56 kW)

The nitrogen oxide limit from Table 1 to 40 CFR 89.112 and/or Table 3 to 40 CFR 1039.102 is 4.7 grams NOx + NMHC/kW-hr

Since the limit is for NOx + NMHC*, the NOx and VOC limits shall be calculated using a ratio of 76.0%** NOx to 24.0% VOC.

The estimated pound per hour emissions shall be calculated as follows:

$$4.7 \text{ grams NOx + NMHC/kW-hr} \times 76\% \text{ NOx} = 3.6 \text{ grams NOx/kW-hr}$$

$$3.6 \text{ g NOx /kW-hr} \times \mathbf{kW} \times 0.002205 \text{ lb/g} = \mathbf{XX} \text{ lb NOx/hr}$$

Template #5 for 2007 to 2011 model year or earlier engines from 100 HP (75 kW) to <175 HP (<130 kW)

Template #6 for 2007 to 2010 model year or earlier engines from 175 HP (130 kW) to 750 HP (560 kW)

The nitrogen oxide limit from Table 1 to 40 CFR 89.112 for these model years and size engines is 4.0 grams NOx + NMHC/kW-hr

Since the limit is for NO_x + NMHC*, the NO_x and VOC limits shall be calculated using a ratio of 74.6%** NO_x to 25.4% VOC.

The estimated pound per hour emissions shall be calculated as follows:

$$4.0 \text{ grams NO}_x + \text{NMHC/kW-hr} \times 74.6\% \text{ NO}_x = 3.0 \text{ grams NO}_x/\text{kW-hr}$$

$$3.0 \text{ g NO}_x / \text{kW-hr} \times \text{kW} \times 0.002205 \text{ lb/g} = \text{XX lb NO}_x/\text{hr}$$

Template #7 for 2007 to 2010 model year or earlier engines from >750 HP (560 kW) to 1,100 HP (820 kW)

The nitrogen oxide limit from Table 1 to 40 CFR 89.112 for these model year and size engines is 6.4 grams NO_x + NMHC/kW-hr

Since the limit is for NO_x + NMHC*, the NO_x and VOC limits shall be calculated using a ratio of 79.4%** NO_x to 20.6% VOC.

The estimated pound per hour emissions shall be calculated as follows:

$$6.4 \text{ grams NO}_x + \text{NMHC/kW-hr} \times 79.4\% \text{ NO}_x = 5.1 \text{ grams NO}_x/\text{kW-hr}$$

$$5.1 \text{ g NO}_x / \text{kW-hr} \times \text{kW} \times 0.002205 \text{ lb/g} = \text{XX lb NO}_x/\text{hr}$$

Templates #9, #10, and #11 for pre-NSPS RICE less than 600 HP, permitted at emission factors from AP-42

The nitrogen oxide limit from AP-42 Table 3.3-1 for pre-NSPS ICE is 4.41 lbs NO_x/MMBtu

The estimated pound per hour emissions shall be calculated as follows:

$$4.41 \text{ lbs NO}_x/\text{MMBtu} \times 137,000 \text{ Btu/gal} \times \text{gallons/hour} = \text{XX lb NO}_x/\text{hr}$$

Template #12 for pre-NSPS RICE more than 600 HP, permitted at emission factors from AP-42

The nitrogen oxide limit from AP-42 Table 3.4-1 for pre-NSPS ICE is 3.2 lbs NO_x/MMBtu

The estimated pound per hour emissions shall be calculated as follows:

$$3.2 \text{ lbs NO}_x/\text{MMBtu} \times 137,000 \text{ Btu/gal} \times \text{gallons/hour} = \text{XX lb NO}_x/\text{hr}$$

* non-methane hydrocarbons

**This ratio is based upon the linear relationship of NO_x to NMHC from Table 1 of Subpart IIII, Table 1 from 40 CFR 89.112, to Tables 4, 5, and 6 from 40 CFR 1039.102.

ATTACHMENT H

AIR POLLUTION CONTROL DEVICE SHEETS

XTO - COASTAL CRUSHER

G40-C

MKA #51001-03

At this time there is no plan to utilize a baghouse or wet scrubber.

ATTACHMENT I

EMISSIONS CALCULATIONS

3. WIND EROSION OF STOCKPILES (including all stockpiles of raw coal, clean coal, coal refuse, etc.)

p =	number of days per year with precipitation >0.01 inch	157
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height	20

Source ID No.	Stockpile Description	Silt Content of Material %	Stockpile base area Max. sqft	Control Device ID Number	Control Efficiency %
OS-SM	SIZED MATERIAL	10	4,000	SW-WS	75

4. UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

s =	silt content of road surface material (%)	10
p =	number of days per year with precipitation >0.01 inch	157
M _{dry} =	surface material moisture content (%) - dry conditions	0.2

Item Number	Description	Number of wheels	Mean Vehicle Weight(tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1	FROM EXCAVATION TO PP	6	55	5	0.13	6	15,000	HR-WS	70
2	FROM PP TO FILL AREAS	6	55	5	0.02	6	15,000	HR-WS	70
3									
4									
5									
6									
7									
8									

5. INDUSTRIAL PAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

sL =	road surface silt loading, (g/ft^2)	70
P =	number of days per year with precipitation >0.01 inch	157

Item Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1							
2							
3							
4							
5							
6							
7							
8							

1a. Primary Crushing

Primary Crusher ID Number	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PP-CS1	0.700	0.120	0.140	0.024	0.350	0.060	0.070	0.012
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.700	0.120	0.140	0.024	0.350	0.060	0.070	0.012

1b. Secondary and Tertiary Crushing

Secondary & Tertiary Crusher ID	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1c. Screening

Screen ID Number	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Crushing and Screening	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TOTAL	0.700	0.120	0.140	0.024	0.350	0.060	0.070	0.012

EMISSION FACTORS

source: AP42, Fifth Edition, Revised 08/2004

(lb/ton of material throughput)

PM	
Primary Crushing	0.002
Tertiary Crushing	0.0054
Screening	0.025

PM-10	
Primary Crushing	0.001
Tertiary Crushing	0.0024
Screening	0.0087

2. Emissions From TRANSFER POINTS (continued)

Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	13.549	2.323	10.162	1.742	6.408	1.099	4.806	0.824

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.4 Aggregate Handling and Storage Piles

Emissions From Batch Drop

$$E = k \cdot (0.0032) \cdot [(U/5)^{1.3}] / [(M/2)^{1.4}] = \text{pounds/ton}$$

Where:

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)		
M =	Material Moisture Content (%)		

Assumptions:

k - Particle size multiplier

For PM (< or equal to 30um) k = 0.74

For PM-10 (< or equal to 10um) k = 0.35

Emission Factor

For PM $E = \frac{0.0032 \cdot (U/5)^{1.3}}{(M/2)^{1.4}}$
=lb/ton

For PM-10 $E = \frac{0.0032 \cdot (U/5)^{1.3}}{(M/2)^{1.4}}$
=lb/ton

For lb/hr [lb/ton]*[ton/hr] = [lb/hr]

For Tons/year [lb/ton]*[ton/yr]*[ton/2000lb] = [ton/yr]

3. Emissions From WIND EROSION OF STOCKPILES

Stockpile ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
OS-SM	0.051	0.224	0.013	0.056	0.024	0.105	0.006	0.026
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	0.051	0.224	0.013	0.056	0.024	0.105	0.006	0.026

Source:

Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

$$E = 1.7 \cdot [s/1.5] \cdot [(365-p)/235] \cdot [f/15] = (\text{lb/day/acre})$$

Where:

s =	silt content of material
p =	number of days with >0.01 inch of precipitation per year
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Emission Factors

For PM $E = (1.7) \cdot ((\text{Inputs!F147})/1.5) \cdot ((365 - \text{Inputs!I139})/235) \cdot ((\text{Inputs!I140})/15)$

For PM-10 $E = 0.47 \cdot (1.7) \cdot ((\text{Inputs!F147})/1.5) \cdot ((365 - \text{Inputs!I139})/235) \cdot ((\text{Inputs!I140})/15)$

For lb/hr $[\text{lb/day/acre}] \cdot [\text{day}/24\text{hr}] \cdot [\text{base area of pile (acres)}] = \text{lb/hr}$

For Ton/yr $[\text{lb/day/acre}] \cdot [365\text{day/yr}] \cdot [\text{Ton}/2000\text{lb}] \cdot [\text{base area of pile (acres)}] = \text{Ton/yr}$

4. Emissions From UNPAVED HAULROADS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	12.45	15.57	3.74	4.67	3.68	4.60	1.10	1.38
2	1.92	2.40	0.57	0.72	0.57	0.71	0.17	0.21
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	14.37	17.96	4.31	5.39	4.24	5.30	1.27	1.59

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.2 Unpaved Roads

Emission Estimate For Unpaved Haulroads at Industrial Sites (equation 1)

$$E = k \cdot (s/12)^a \cdot (W/3)^b = \text{lb/vmt}$$

Where:

		PM	PM-10
k =	particle size multiplier	4.90	1.50
a =	empirical constant	0.7	0.9
b =	empirical constant	0.45	0.45

Emission Factors

For PM $E = ((\$35) \cdot (((\text{Inputs!}\$163)/12)^{\$36}) \cdot (((\text{Inputs!}H171)/3)^{\$37}))$

For PM-10 $E = ((\$35) \cdot (((\text{Inputs!}\$163)/12)^{\$36}) \cdot (((\text{Inputs!}H171)/3)^{\$37}))$

For lb/hr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per hour})$

For Ton/yr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per year}) \cdot (1/2000)$

5. Emissions From INDUSTRIAL PAVED HAULROADS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.1 PAVED ROADS

Emission Estimate For Paved Haulroads

$$E = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C] * (1 - (P/4*N)) = \text{lb} / \text{Vehicle Mile Traveled (VMT)}$$

Where:

		PM	PM-10
k =	particle size multiplier	0.082	0.016
sL =	road surface silt loading, (g/ft ²)	70	
P =	number of days per year with precipitation >0.01 inch	157	
N =	number of days in averaging period	365	
C =	factor for exhaust, brake wear and tire wear	0.00047	0.00047

Emission Factors

For PM E= $(k * (sL/2)^{0.65} * ((W/3)^{1.5} - C) * (1 - (P/4*N))) * (1/2000)$

For PM-10 E= $(k * (sL/2)^{0.65} * ((W/3)^{1.5} - C) * (1 - (P/4*N))) * (1/2000)$

For lb/hr (lb/vmt)*(miles per trip)*(Max trips per hour)

For Ton/yr (lb/vmt)*(miles per trip)*(Max trips per year)*(1/2000)

ATTACHMENT J

CLASS I LEGAL ADVERTISEMENT

LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE Notice of Application

Notice is given that XTO Energy, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit Registration for a Nonmetallic Mineral Processing Plant located at 2518 Grays Run Road, Worthington in Marion County, West Virginia. The latitude and longitude coordinates are (39.48396N, 80.32144W)

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: Particulate Matter (PM) 6.23 tons per year, CO 1.13 tons per year, VOC 1.04 tons per year, NO_x 3.04 tons per year.

Startup of operation is planned to begin on or about the 1st day of May, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the **(Day)** day of **(Month), (Year)**.

By: XTO Energy, Inc.
Bernhardt Kissel
Regulatory Manager
PO Box 1008
Jane Lew, WV 26378

AIR QUALITY PERMIT NOTICE

notice of application

Notice is given that XTO Energy, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for General Permit Registration for a Nonmetallic Mineral Processing Plant located at 2518 Grays Run road, Worthington in Marion County, West Virginia. the latitude and longitude coordinates are (39.4396N, 80.32144W)

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March 12, 2015

By: XTO Energy, Inc.

Berhardt Kissel

Regulatory Manager

PO Box 1008

Jane Lew, WV 26378

Times March 18, 2015

Robert J. Belvin

From: Sands, Tim <Tim_Sands@xtoenergy.com>
Sent: Friday, March 13, 2015 4:44 PM
To: Robert J. Belvin
Subject: FW: legal ad proof
Attachments: 00061376.pdf

Rob – see below and attached, thanks

Tim Sands
Regulatory Compliance Technician
XTO Energy Inc.
PO Box 1008
Jane Lew, WV 26378
tim_sands@xtoenergy.com

An ExxonMobil Subsidiary

This document may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you are not the intended recipient, you are on notice that any unauthorized disclosure, copying, distribution or taking of any action in reliance on the contents of this document is prohibited.

From: Skylar Norman [<mailto:snorman@timeswv.com>]
Sent: Friday, March 13, 2015 4:41 PM
To: Sands, Tim
Subject: legal ad proof

hi Tim,
just wanting to send you a proof of the legal ad that will run on Wednesday March 18th. your total cost of this ad will be \$28.15 and this also posted on our legal website. Call for any questions or concerns.

thank you,

Skylar Norman
Times West Virginian snorman@timeswv.com
Phone: 304-367-2510
Fax: 304-367-2569

ATTACHMENT K

ELECTRONIC SUBMITTAL

ATTACHMENT L

GENERAL PERMIT REGISTRATION APPLICATION FEE

McTISH KUNKEL & ASSOCIATES
 3500 WINCHESTER RD., SUITE 300
 ALLENTOWN, PA 18104

EMBASSY BANK
 Lehigh Valley, PA

60-1871
 313

083371

DATE
 March 13, 2015

PAY One Thousand Five Hundred and 00/100 Dollars

AMOUNT
 1,500.00

TO THE ORDER OF
 West Virginia DEP Division of Air Quality
 601 57th Street SE
 Charleston, WV 25304

VOID AFTER 90 DAYS

Barbara E Boyd
 AUTHORIZED SIGNATURE

⑈083371⑈ ⑆031318716⑆ 0001451645⑈

McTISH KUNKEL & ASSOCIATES - ALLENTOWN, PENNSYLVANIA 18104 Check Date: 3/13/2015 **083371**

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
20604	3/13/2015	000000049345	1,500.00			1,500.00
West Virginia DEP Division of Air Quality			TOTAL			1,500.00
Embassy Operating Account 1		WVA DEP AIR				

51001 - 03

ATTACHMENT M

SITING CRITERIA WAIVER

The Siting Criteria Waiver is not required for this project since the area within 300 feet of the proposed site is owned by the applicant. Please refer to the 300 foot offset line on the plot plan located in Attachment E.

ATTACHMENT N

MATERIAL SAFETY DATA SHEETS (MSDS)



CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

Material Safety Data Sheet

CITGO Petroleum Corporation
 P. O. Box 4689
 Houston, TX 77210


MSDS No. AG2DF
 Revision Date 12/31/2007

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Hazard Rankings		
	HMIS	NFPA
Health Hazard	* 2	0
Fire Hazard	2	2
Reactivity	0	0

* = Chronic Health Hazard

Emergency Overview			
Physical State	Liquid.		
Color	Transparent, clear to yellow or red.	Odor	Characteristic, kerosene-like.
WARNING!			
Combustible liquid; vapor may cause flash fire.			
Harmful or fatal if swallowed - can enter lungs and cause damage.			
Can cause eye, skin or respiratory tract irritation.			
May be harmful if inhaled or absorbed through the skin.			
Overexposure can cause central nervous system (CNS) depression and/or other target organ effects.			
Possible Cancer Hazard (See Section 3)			
Harmful to aquatic organisms.			

Protective Equipment
Minimum Recommended See Section 8 for Details


SECTION 1. PRODUCT IDENTIFICATION

Trade Name	CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades	Technical Contact	(832) 486-5940
Product Number	Various	Medical Emergency	(832) 486-4700
CAS Number	68476-34-6	CHEMTREC Emergency (United States Only)	(800) 424-9300
Product Family	Motor fuels.		
Synonyms	No. 2-D Grade Diesel Fuel Oil (defined by ASTM D-975); Treated or Refined Diesel Fuel No. 2; Diesel No. 2; Diesel Motor Fuel No. 2; Diesel Oil (Medium); Grade 2 Distillate Fuel; Hydrodesulfurized (HDS) Light Catalytically Cracked Distillate; Middle Distillates (Petroleum); HDS Diesel; Hydrodesulfurized Medium Distillate; HDS Middle Distillate; C9-C16 Petroleum Hydrocarbons; Ultra Low Sulfur Diesel.		

SECTION 2. COMPOSITION

This product may be composed, in whole or in part, of any of the following refinery streams:

- Diesel Fuel No. 2 [CAS No.: 68476-34-6]
- Hydrodesulfurized Middle Distillate (petroleum) [CAS No.: 64742-80-9]
- Hydrodesulfurized Light Catalytic Cracked Distillate (Petroleum) [CAS No.: 68333-25-5]
- Kerosene [CAS No.: 8008-20-6]
- Hydrodesulfurized Kerosine (Petroleum) [CAS No.: 64742-81-0]

This product contains the following chemical components:

Component Name(s)	CAS Registry No.	Concentration (%)
-------------------	------------------	-------------------

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

Nonane, all isomers	Mixture	1 - 10
Trimethylbenzenes, all isomers	25551-13-7	0 - 2
Naphthalene	91-20-3	0 - 2
Cumene	98-82-8	0 - 1
Ethylbenzene	100-41-4	0 - 1

SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact. Inhalation.

Signs and Symptoms of Acute Exposure

Inhalation Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness.

Eye Contact This material can cause eye irritation with tearing, redness, or a stinging or burning feeling. Further, it can cause swelling of the eyes with blurred vision. Effects may become more serious with repeated or prolonged contact.

Skin Contact This material can cause skin irritation. Symptoms include redness, itching, and burning of the skin. This material can be absorbed by the skin and produce central nervous system depression (headache, nausea, fatigue and/or other symptoms including unconsciousness). If the skin is damaged, absorption increases. Prolonged and/or repeated contact may cause severe dermatitis and/or more serious skin disorders. Chronic symptoms may include drying, swelling, scaling, blistering, cracking, and/or severe tissue damage.

Ingestion If swallowed, this material may irritate the mouth, throat, and esophagus. It can be absorbed into the blood stream through the stomach and intestinal tract. Symptoms may include a burning sensation of the mouth and esophagus, nausea and vomiting. In addition, it can cause central nervous system effects characterized by dizziness, staggering, drowsiness, delirium and/or loss of consciousness.

Because of the low viscosity, this material can enter the lungs directly by aspiration during swallowing or subsequent vomiting. Aspiration of a small amount of liquid can cause severe lung damage and/or death.

Chronic Health Effects Summary Secondary effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

This product contains petroleum middle distillates similar to those shown to produce skin tumors on laboratory rodents following repeated application. All tumors appeared during the latter portion of the typical 2-year lifespan of the animals. Certain studies have shown that washing the exposed skin of the test animal with soap and water between treatments greatly reduces the potential tumorigenic effects. These data suggest that good personal hygiene is effective in reducing the risk of this potential adverse health effect.

This material and/or its components have been associated with developmental toxicity, reproductive toxicity, genotoxicity, immunotoxicity, and/or carcinogenicity. Refer to Section 11 of this MSDS for additional health-related information.

Conditions Aggravated by Exposure Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

Target Organs May cause damage to the following organs: kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

Carcinogenic Potential

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

This material may contain ethylbenzene and naphthalene at concentrations above 0.1%. IARC has identified ethylbenzene and naphthalene as possibly carcinogenic to humans (Group 2B) based on laboratory animal studies. The NTP has determined that naphthalene is *reasonably anticipated to be a human carcinogen* based on sufficient evidence from studies in experimental animals. NTP has determined that exposure to diesel exhaust particulates, a complex mixture of combustion products of diesel fuel, is reasonably anticipated to be a human carcinogen.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification			
Irritant	<input checked="" type="checkbox"/>	Sensitizer	<input type="checkbox"/>	Combustible	<input checked="" type="checkbox"/>	Explosive	<input type="checkbox"/>
Toxic	<input type="checkbox"/>	Highly Toxic	<input type="checkbox"/>	Flammable	<input type="checkbox"/>	Oxidizer	<input type="checkbox"/>
Corrosive	<input type="checkbox"/>	Carcinogenic	<input type="checkbox"/>	Compressed Gas	<input type="checkbox"/>	Organic Peroxide	<input type="checkbox"/>
						Pyrophoric	<input type="checkbox"/>
						Water-reactive	<input type="checkbox"/>
						Unstable	<input type="checkbox"/>

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.
Eye Contact	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water for at least 15 minutes while occasionally lifting and lowering eyelids. Do not use eye ointment unless directed to by a physician. Seek medical attention if excessive tearing, irritation, or pain persists.
Skin Contact	Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
Ingestion	Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.
Notes to Physician	<p>INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.</p> <p>INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.</p>

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification	NFPA Class-II combustible liquid.
Flash Point	Closed cup: AP 52°C (AP 125°F). (Pensky-Martens.)
Lower Flammable Limit	AP 0.6 %
Upper Flammable Limit	AP 7.5 %
Autoignition Temperature	>254°C (>489°F)
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and nitrogen.
Special Properties	Combustible Liquid! This material releases vapors when heated above ambient temperatures. Vapors can cause a flash fire. Vapors can travel to a source of ignition and flashback. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. Use only with adequate ventilation. If container is not properly cooled, it can rupture in the heat of a fire.
Extinguishing Media	SMALL FIRE: Use dry chemicals, carbon dioxide, foam, or inert gas (nitrogen). Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces. LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.
Protection of Fire Fighters	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities of potential fire and explosion hazard if liquid enter sewers or waterways.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Combustible Liquid! Release can result in a fire hazard. Evacuate all non-essential personnel from release area. Establish a regulated zone with site control and security. Eliminate all ignition sources. Stop the leak if it can be done without risk. A vapor-suppressing foam may be used to reduce vapors. Properly bond or ground all equipment used when handling this material. Avoid skin contact. Do not walk through spilled material. Verify that responders are properly trained and wearing appropriate personnel protective equipment. Dike far ahead of a liquid spill. Do not allow released material to enter waterways, sewers, basements, or confined areas. This material will float on water. Absorb or cover with dry earth, sand or other non-combustible material. Use clean, non-sparking tools to collect absorbed material. Place spent sorbent materials, free liquids and other clean-up debris into proper waste containers for appropriate disposal. Certain releases must be reported to the National Response Center (800/424-8802) and state or regulatory authorities. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE

Handling

Combustible Liquid!

A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always bond receiving containers to the fill pipe before and during loading. Always keep nozzle in contact with the container throughout the loading process. Do not fill any portable container in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e., loading this material in tanks or shipping compartments that previously containing gasoline or similar low flash point products).

Fire hazard increases as product temperature approaches its flash point. Keep container closed and drum bungs in place. Remove spillage immediately from walking areas. Do not handle or store near heat, sparks or other potential ignition sources. Do not handle or store with oxidizing agents. Avoid breathing mist or vapor. Never siphon by mouth. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure levels. Avoid water contamination. Wash thoroughly after handling. Prevent contact with food or tobacco products.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons from hazard area. Eliminate heat, flame and other potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Do not use this material as fuel for equipment, such as portable heaters, in enclosed areas. Hazardous combustion products can cause death.

Protect the environment from releases of this material. Prevent discharges to surface waters and groundwater. Maintain handling, transfer and storage equipment in proper working order.

Misuse of empty containers can be dangerous. Empty containers may contain material residues which can ignite with explosive force. **Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues** Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

Storage

Store in a cool, dry, well-ventilated place. Keep containers tightly closed. Do not store this product near heat, flame or other potential ignition sources. Do not store with oxidizers. Do not store this product in unlabeled containers. Do not puncture or incinerate containers. Ground all equipment containing this material. All electrical equipment in areas where this material is stored or handled must meet all applicable requirements of the NFPA's National Electrical Code (NEC). Store and transport in accordance with all applicable laws.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work-station.

Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades



- Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.
- Hand Protection** Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.
- Body Protection** Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discard contaminated leather goods.
- Respiratory Protection** Airborne concentration will determine the level of respiratory protection required. Respiratory protection is normally not required unless the product is heated or misted. For known or anticipated vapor or mist concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
- General Comments** Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Nonane, all isomers	ACGIH (United States). TWA: 200 ppm 8 hour(s).
Ethylmethylbenzene, all isomers	Not available.
Trimethylbenzenes, all isomers	ACGIH (United States). TWA: 25 ppm 8 hour(s).
Naphthalene	ACGIH (United States). Skin TWA: 10 ppm 8 hour(s). STEL: 15 ppm 15 minute(s).
Cumene	OSHA (United States). TWA: 10 ppm 8 hour(s).
n-Propylbenzene	ACGIH (United States). TWA: 50 ppm 8 hour(s).
1, 2, 4 Trimethylbenzene	OSHA (United States). Skin TWA: 50 ppm 8 hour(s).
Ethylbenzene	ACGIH (United States). TWA: 100 ppm 8 hour(s). STEL: 125 ppm 15 minute(s).
Xylene, all isomers	OSHA (United States). TWA: 100 ppm 8 hour(s).
	ACGIH (United States). TWA: 100 ppm 8 hour(s). STEL: 150 ppm 15 minute(s).
	OSHA (United States). TWA: 100 ppm 8 hour(s).
Diesel exhaust particulate	Not available.

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

Benzene	<p>ACGIH (United States). Skin TWA: 0.5 ppm 8 hour(s). STEL: 2.5 ppm 15 minute(s). OSHA (United States). Skin Notes: See Table Z-2 for exclusions in 20 CFR 1910.1028 to the PEL. TWA: 1 ppm 8 hour(s). STEL: 5 ppm 15 minute(s).</p>
Toluene	<p>ACGIH (United States). Skin TWA: 20ppm 8 hour(s). OSHA (United States). TWA: 200 ppm 8 hour(s). CEIL: 300 ppm PEAK: 500 ppm</p>
Middle distillates, petroleum Straight-run middle distillate (petroleum)	<p>Not available. ACGIH (United States, 1998). Skin TWA: 100 mg/m³</p>
Distillates, petroleum, light catalytic cracked Kerosene	<p>Not available. NIOSH REL (United States). TWA: 100 mg/m³ 8 hour(s).</p>
Hydrodesulfurized middle distillate (petroleum) Hydrodesulfurized Kerosine (Petroleum) Distillates, petroleum, hydrodesulfurized light catalytic cracked Diesel Fuel No. 2	<p>Not available. Not available. Not available. ACGIH TLV (United States). Skin TWA: 100 mg/m³ 8 hour(s).</p>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid.	Color	Transparent, clear to yellow or red.	Odor	Characteristic, kerosene-like.
Specific Gravity	AP 0.84 (Water = 1)	pH	Not Applicable.	Vapor Density	AP 5 (Air = 1)
Boiling Range	154° C (309° F) to 371° C (700° F)			Melting/Freezing Point	Not available.
Vapor Pressure	<0.3 kPa (<2 mm Hg) (at 20°C)			Volatility	840 g/l VOC (w/v)
Solubility in Water	Very slightly soluble in cold water. (<0.1 % w/w)			Viscosity (cSt @ 40°C)	AP 3
Flash Point	Closed cup: AP 52°C (AP 125°F). (Pensky-Martens.)				
Additional Properties	Density = AP 7.0 lbs/gal. Viscosity (ASTM D2161) = 30 - 40 SUS @ 100° F				

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable.	Hazardous Polymerization	Not expected to occur.
Conditions to Avoid	Keep away from all ignition sources and strong oxidizing conditions.		
Materials Incompatibility	Strong acids, alkalis, and oxidizers such as liquid chlorine, other halogens, hydrogen peroxide and oxygen.		
Hazardous Decomposition Products	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

Toxicity Data

Diesel Fuel, No. 2

ORAL LD50, Acute: 12,000 to 17,500 mg/kg or 9.0 ml/kg [Rat]

DERMAL LD50, Acute: >5.0 ml/kg [Rabbit screen level].

DRAIZE EYE, Acute: Mild irritant [Rabbit]

DRAIZE DERMAL, Acute: Severe skin irritant [Rabbit].

BUEHLER DERMAL, Acute: Non-sensitizing [Guinea Pig]

14-Day DERMAL, Sub-chronic: 0% and 67% mortality at 4.0 and 8.0 ml/kg [Rabbit]

62-Week DERMAL, Chronic: 0.05 ml/kg 3x/week [Mouse] - Extreme skin irritation.

97-Week DERMAL, Chronic: 243 g/kg applied 3x/week [Mouse] - Extreme skin irritation.

Moderate increase in contact-point skin tumors.

MUTAGENICITY:

Modified Ames Assay: Negative. [Salmonella typhimurium]

In-vitro SCE Ovary Assay: Negative. [Chinese Hamster]

In-vitro Lymphoma Assay: Negative. [Mouse]

In-vivo Dominant Lethal Assay: Negative. [Mouse]

In-vivo Bone Marrow Assay: Clastogenic at 2.0 ml/kg and 6.0 ml/kg [Rat]

Diesel exhaust particulate

Lung tumor and lymphomas were identified in rats and mice exposed to unfiltered diesel fuel exhaust in chronic inhalation studies. Further, epidemiological studies have identified increase incidences of lung cancer in US railroad workers and bladder cancer in bus and truck drivers possibly associated with exposure to diesel engine exhaust. NTP has determined that exposure to diesel exhaust particulates, a complex mixture of combustion products of diesel fuel, is reasonably anticipated to be a human carcinogen. In addition, NIOSH has identified complete diesel exhaust as a potential carcinogen.

Trimethylbenzenes, all isomers

Studies of Workers:

Levels of total hydrocarbon vapors present in the breathing atmosphere of these workers ranged from 10 to 60 ppm. The TClO for humans is 10 ppm, with somnolence and respiratory tract irritation noted.

Studies in Laboratory Animals:

In inhalation studies with rats, four of ten animals died after exposures of 2400 ppm for 24 hours. An oral dose of 5 mL/kg resulted in death in one of ten rats. Minimum lethal intraperitoneal doses were 1.5 to 2.0 mL/kg in rats and 1.13 to 12 mL/kg in guinea pigs. Mesitylene (1, 3, 5 Trimethylbenzene) inhalation at concentrations of 1.5, 3.0, and 6.0 mg/L for six hours was associated with dose-related changes in white blood cell counts in rats. No significant effects on the complete blood count were noted with six hours per day exposure for five weeks, but elevations of alkaline phosphatase and SGOT were observed. Central nervous system depression and ataxia were noted in rats exposed to 5,100 to 9,180 ppm for two hours.

Naphthalene

Studies in Humans Overexposed to Naphthalene:

Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from over-exposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have also been reported from over-exposure to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect.

Studies in Laboratory Animals:

Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) *in vitro*.

Ethylbenzene

Effects from Acute Exposure:

ORAL (LD50), Acute: 3,500 mg/kg [Rat].

DERMAL (LD50), Acute: 17,800 uL/kg [Rabbit].

INTRAPERITONEAL (LD50), Acute: 2,624 mg/kg [Rat].

Effects from Prolonged or Repeated Exposure:

Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). Also, the incidence of tumors was elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

Middle distillates, petroleum

Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Freshwater Toxicity:

Concentration: 2400 ppm Exposure: 48 hrs. Species: Juven. Am. Shad (*Squalius cephalus*) Assay: TLM

Concentration: >127 ppm Exposure: 96 hrs. Species: Bluegill (*Lepomis macrochirus*) Assay: LC50

Saltwater Toxicity

Concentration: 10 ppm Exposure: 96 hrs. Species: Menhaden (*Brevoortia patronus*) Assay: LC50

Concentration: 10 ppm Exposure: 96 hrs. Species: Grass Shrimp Assay: LC50

Environmental Fate

If spilled, this material will normally evaporate. Hydrocarbon components may contribute to atmospheric smog. If released to the subsoils, petroleum middle distillate fuels will strongly adsorb to soils. Groundwater should be considered as an exposure pathway. Liquid and vapor can migrate through the subsurface and preferential pathways (such as utility line backfill) to downgradient receptors.

Middle distillates are potentially toxic to freshwater and saltwater ecosystems. Distillate fuels will normally float on water. In stagnant or slow-flowing waterways, a hydrocarbon layer can cover a large surface area. As a result, this oil layer can limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway can cause a fish kill or create an anaerobic environment. Also, this coating action can also kill plankton, algae, and water birds.


SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Maximize material recovery for reuse or recycling. Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitibility (D001) and/or its toxic (D018) characteristics. In addition, conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR Parts 260 through 271). Contact your regional US EPA office for guidance concerning case specific disposal issues. State and/or local regulations might be even more restrictive.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status	A U.S. Department of Transportation (DOT) regulated material. The following U. S. DOT hazardous materials shipping description applies to bulk packaged material that is transported by highway or rail. Alternate shipping descriptions may be required for product transported by marine vessel, air or other method and for non-bulk packaged material.		
Proper Shipping Name	Diesel Fuel, Combustible liquid, NA1993, PG III		
Hazard Class	DOT Class: Combustible liquid with a flash point greater than 37.8°C (100°F).	Packing Group	III
		UN/NA Number	NA 1993
Reportable Quantity	A Reportable Quantity (RQ) has not been established for this material.		
Placard(s)		Emergency Response Guide No.	128
		MARPOL III Status	Not a DOT "Marine Pollutant" per 49 CFR 171.8.

SECTION 15. REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
SARA 302/304 Emergency Planning and Notification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

SARA 313 Toxic Chemical Notification and Release Reporting

This product contains the following components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA:

Naphthalene [CAS No.: 91-20-3] Concentration: 2%

Ethylbenzene [CAS No.: 100-41-4] Concentration: 0.9%

CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are:

Naphthalene [CAS No.: 91-20-3] RQ = 100 lbs. (45.36 kg) Concentration: 2%

Cumene [CAS No.: 98-82-8] RQ = 5000 lbs. (2268 kg) Concentration: 0.9%

Ethylbenzene [CAS No.: 100-41-4] RQ = 1000 lbs. (453.6 kg) Concentration: 0.9%

Xylene, all isomers [CAS No.: 1330-20-7] RQ = 100 lbs. (45.36 kg) Concentration: 0.9%

Benzene [CAS No.: 71-43-2] RQ = 10 lbs. (4.536 kg) Concentration: 0.045%

Clean Water Act (CWA)

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

California Proposition 65

This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Diesel exhaust particulate

Naphthalene: <2%

Ethylbenzene: <1%

Toluene: <0.1%

Benzene: <0.1%

New Jersey Right-to-Know Label

Diesel Fuel

Additional Remarks

As minimum requirements, CITGO recommends that the following advisory information be displayed on equipment used to dispense diesel fuel. Additional warnings specified by various regulatory authorities may be required: **"Diesel Fuel DANGER: Combustible Liquid. Use as a Motor Fuel Only. DO NOT FILL CONTAINERS THAT HAVE PREVIOUSLY CONTAINED GASOLINE OR OTHER FLAMMABLE LIQUIDS. Sparks From static electricity can ignite flammable vapor residues. PLACE CONTAINER ON GROUND. DO NOT FILL ANY PORTABLE CONTAINER IN OR ON A VEHICLE. Containers must be metal or other material approved for storing diesel fuel. Keep nozzle spout in contact with the container during the entire filling operation. NO SMOKING! Do not leave nozzle unattended during filling. HARMFUL OR FATAL IF SWALLOWED**If swallowed, do not induce vomiting. Call Physician Immediately. Keep Out of Reach of Children. Avoid prolonged breathing of vapors. Never siphon by mouth. Do not store in vehicle or living space. Store and use in a well ventilated area. Do not use near heat, spark or flame. Keep container closed."

SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number 5.1

Revision Date 12/31/2007

ABBREVIATIONS

AP: Approximately EQ: Equal >: Greater Than <: Less Than NA: Not Applicable ND: No Data NE: Not Established

CITGO No. 2 Diesel Fuel, Low Sulfur, All Grades

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

NIOSH: National Institute of Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

NPCA: National Paint and Coating Manufacturers Association

HMIS: Hazardous Materials Information System

NFPA: National Fire Protection Association

EPA: US Environmental Protection Agency

DISCLAIMER OF LIABILITY

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THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

***** END OF MSDS *****

ATTACHMENT O

EMISSIONS SUMMARY SHEETS

EMISSIONS SUMMARY

Name of applicant: XTO ENERGY, INC.
 Name of plant: COSTAL CRUSHER

Particulate Matter or PM (for 45CSR14 Major Source Determination)

Uncontrolled PM		Controlled PM	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.05	0.22	0.01	0.06
<i>Unpaved Haulroad Emissions</i>	14.37	17.96	4.31	5.39
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	14.42	18.19	4.32	5.44

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	0.70	0.12	0.14	0.02
<i>Transfer Point Emissions</i>	13.55	2.32	10.16	1.74
Point Source Emissions Total*	14.25	2.44	10.30	1.77

*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)

Facility Emissions Total	28.67	20.63	14.63	7.21
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***Facility Potential to Emit (PTE) (Baseline Emissions) =** 1.77
 (Based on Point Source Total controlled PM TPY emissions from above) ENTER ON LINE 26 OF APPLICATION

Particulate Matter under 10 microns, or PM-10 (for 45CSR30 Major Source Determination)

Uncontrolled PM-10		Controlled PM-10	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.02	0.11	0.01	0.03
<i>Unpaved Haulroad Emissions</i>	4.24	5.30	1.27	1.59
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	4.27	5.41	1.28	1.62

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	0.35	0.06	0.07	0.01
<i>Transfer Point Emissions</i>	6.41	1.10	4.81	0.82
Point Source Emissions Total*	6.76	1.16	4.88	0.84

*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination

Facility Emissions Total	11.02	6.57	6.15	2.45
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<u>EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS</u>										
						Registration Number (Agency Use) G40-C				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_x	CO	VOC	SO₂	PM₁₀	NO_x	CO	VOC	SO₂	PM₁₀
PP-CE1	2.43	0.90	0.83	N/A	0.08	3.04	1.13	1.04	N/A	0.10
PP-CS1					14.63					7.21
Total	2.43	0.90	0.83	N/A	14.71	3.04	1.13	1.04	N/A	7.31

EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS												
							Registration Number <small>(Agency Use)</small> G40-C					
	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
Source ID No.	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formaldehyde	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formaldehyde
Total												

ATTACHMENT P

OTHER SUPPORTING DOCUMENTS

The Extec C-12⁺



Features and Benefits Book

Welcome to Extec Screens & Crushers - a member of the Sandvik group



EXTEC C-12⁺



The Extec C12+ offers a unique mix; formidable crushing technology and true mobility in one machine. Expanding from the highly successful C-12, improvements include a new compact chassis, along with the powerful CAT C-9 engine. Aiding in the processing of concrete, an over band magnet ensures the removal of any reinforcing bar during crushing, while the large 1200 x 750 mm feed opening allows the jaws to give very high production with minimal bottle necking of crushing.

The newly designated **C12+** is the result of Extec's unrivalled R&D programme, and encompasses features designed to further enhance the profitability of the user at its core.

Applications include:

- Granite, slate, bricks, Limestone, Recycling and demolition
- Rock crushing in quarries
- Concrete crushing in recycling yards, demolition sites or construction sites
- Asphalt crushing

The following features document includes:

- Key features of Extec C-12+
- C-12+ Technical Specification
- Product features
- Application photographs
- Transport & Working drawings



Key features of the Extec C12⁺

- Unique high crushing speed
- Reverse crushing action to relieve blockages
- Excellent Product size reduction
- Extended main conveyor as standard
- CAT C-9 diesel engine
- Vogel central Lubrication



C12+ Technical Specification

Feed opening	1200 x 750mm	(48" x 28")
Crusher speed	300rpm	
Drive	Hydraulic	
Hopper width	2751mm	(9')
Feeder width	1100mm	(3' 6")
Feeder length	4000mm	(13' 1")
Transport length	14646mm	(48')
Transport length bogie	15383mm	(49' 5")
Transport width	2756mm	(9')
Transport height	3429mm	(11' 2")
Transport height Bogie	3838mm	(12' 6")
Working Length	15750mm	(51' 8")
Working Width	4108mm	(13' 5")
Working height	4063mm	(13' 3")
Engine	Cat C-9 – 261 kw / 350 hp	
Weight	46.38 Tonnes	(105,280lbs)



Jaws - Powerful Jaws able to crush even the toughest rock products



Large gap between discharge point of crusher and conveyor eliminates blockages and facilitates cleaning.



Large vibrating feeder with grizzly – flow of materials can be co-ordinated between the grizzly and jaw



Maintenance platforms are provided on the right hand side of the crusher



Extended main conveyor- no need for ramps for onward machine feeding and stock piles



Side conveyor- collects fines passing through grizzly bars.

Optional extended side conveyor available



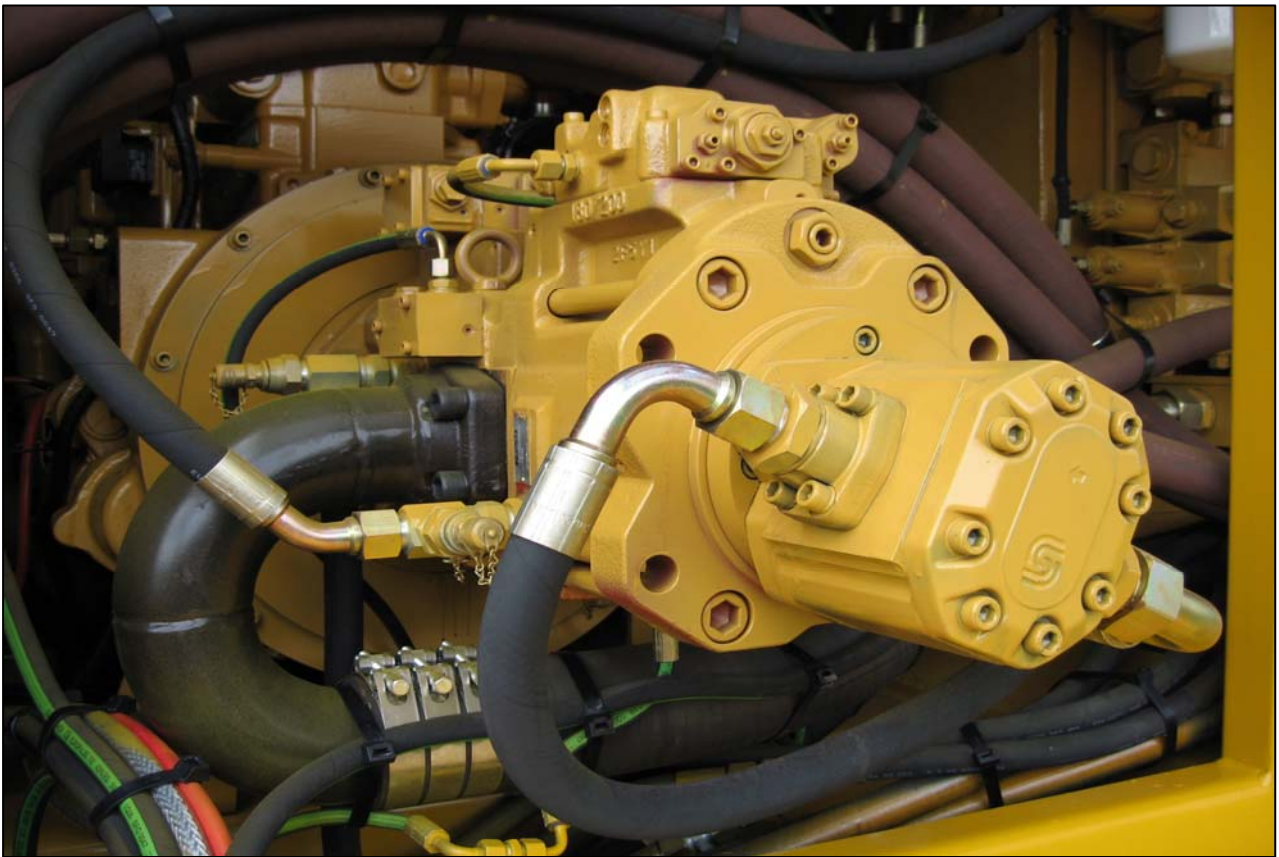
Features and Benefits Book

Welcome to Extec Screens & Crushers - a member of the Sandvik group



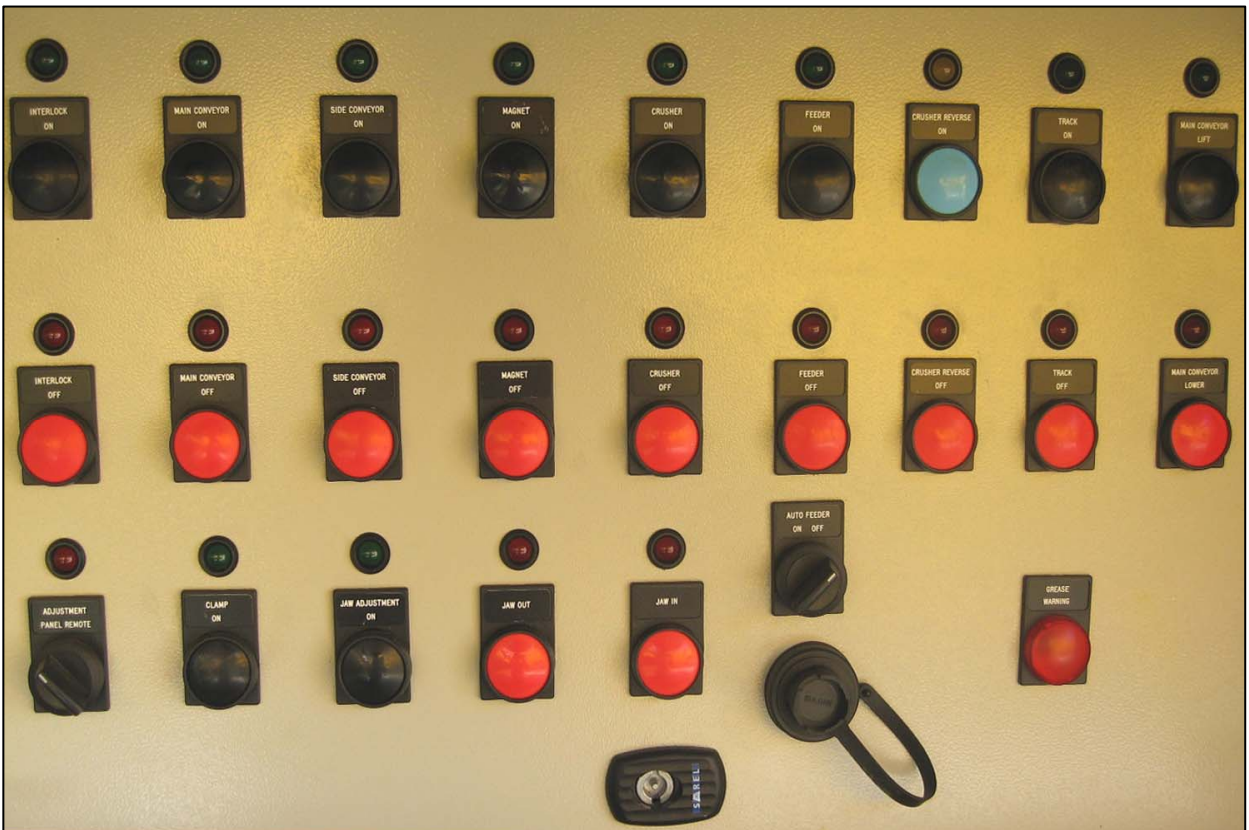


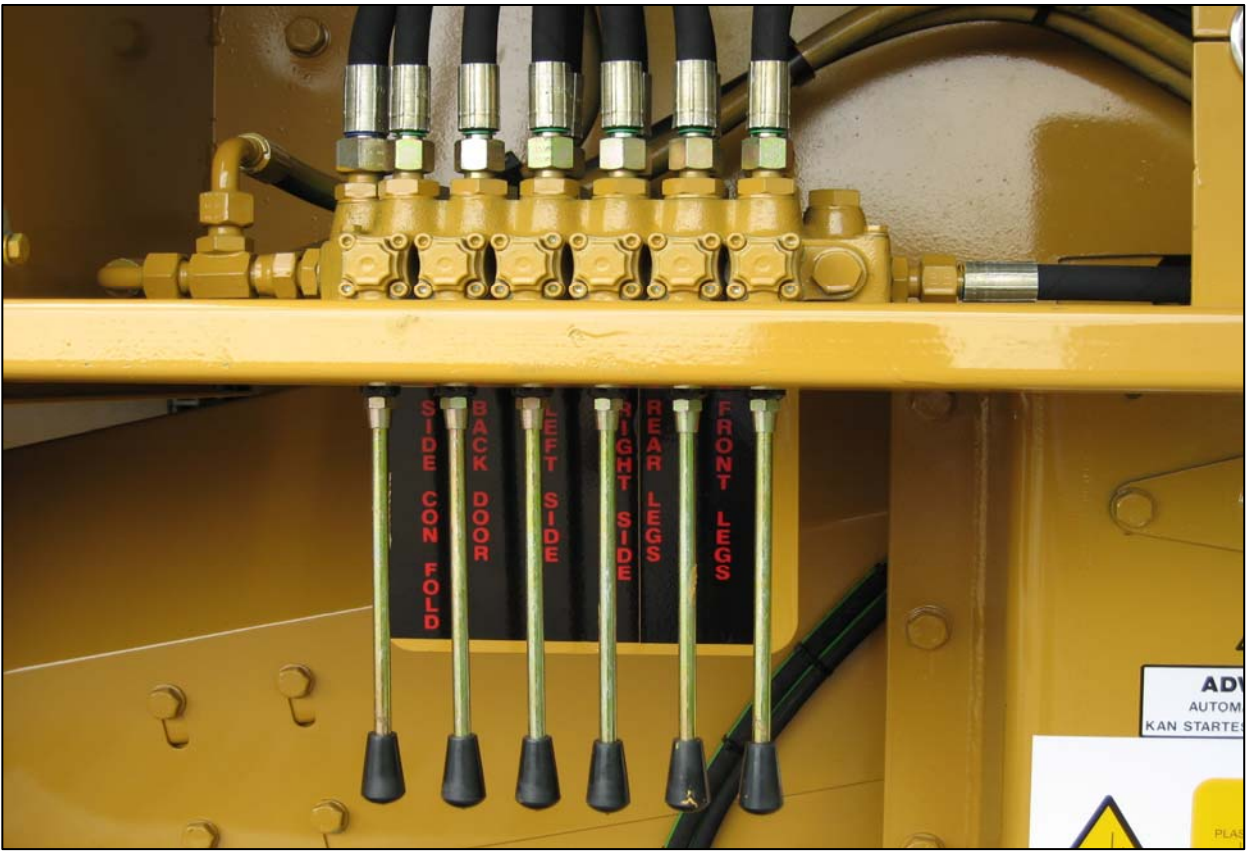
Caterpillar C-9 Powerpack- easy access for maintenance and service





Control box- easy adjustments at the touch of a button





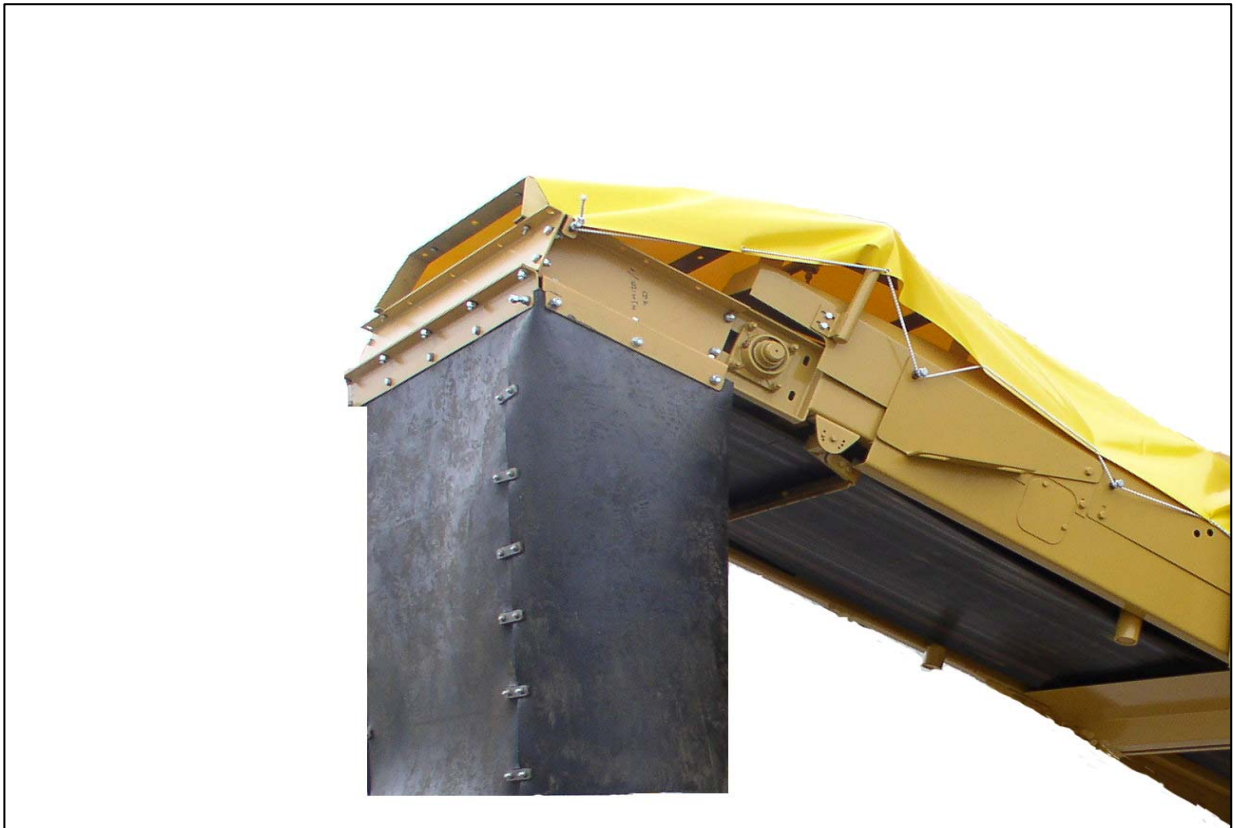
User-friendly conveyor and hopper controls



Extended main conveyor control



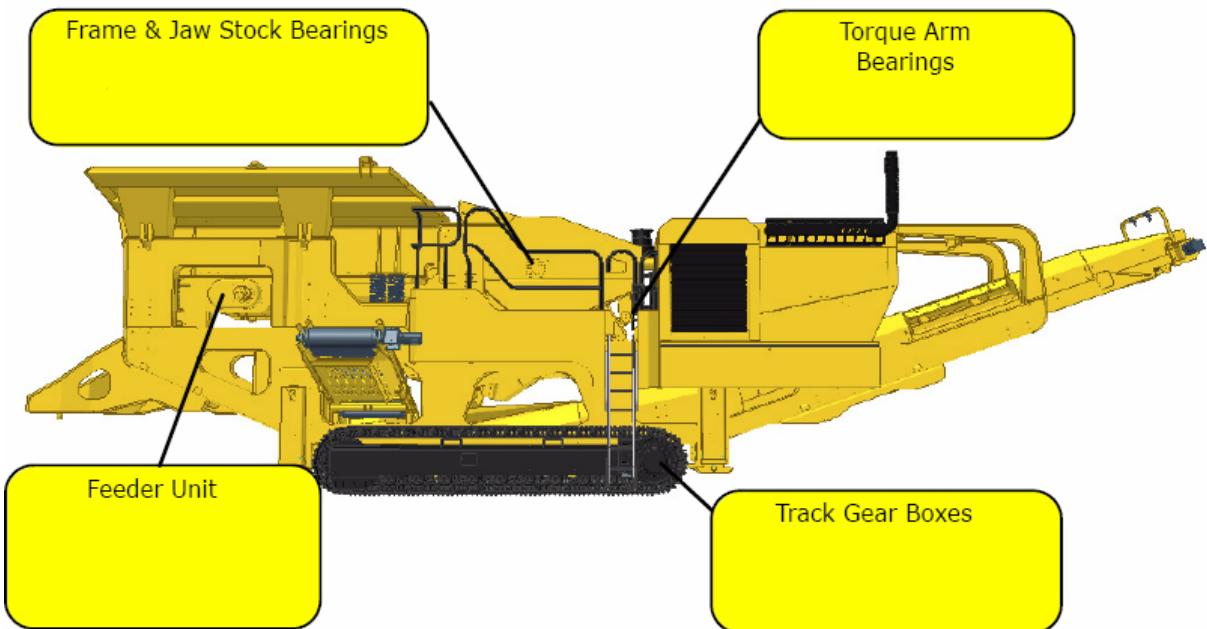
Magnetic separator



Optional dust covers



SKF automatic lubrication – reduced wear and downtime



3: Grease Points



Optional peck arm





Optional bogie system – eliminates the need for low loader



Machine raises on its hydraulic legs to facilitate cleaning and servicing of tracks



New Heavy Steel, Web and Flange Frame Construction





Construction & demolition application



Huge Stockpiling capabilities



Features and Benefits Book

Welcome to Extec Screens & Crushers - a member of the Sandvik group





Granite application





Limestone quarry application





Demolition recycling application



Waste recycling application



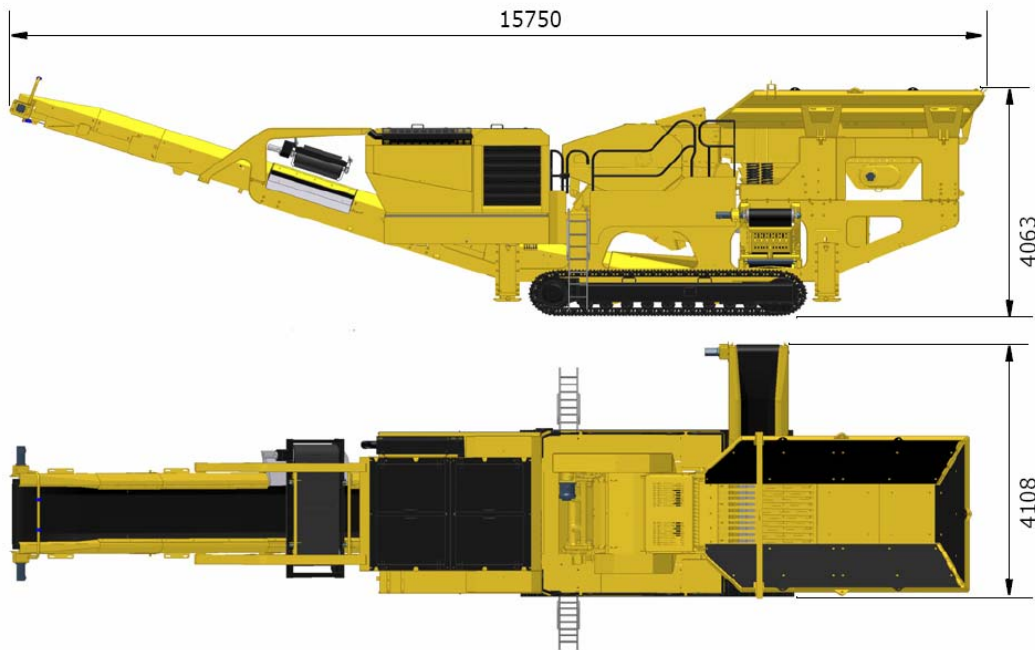
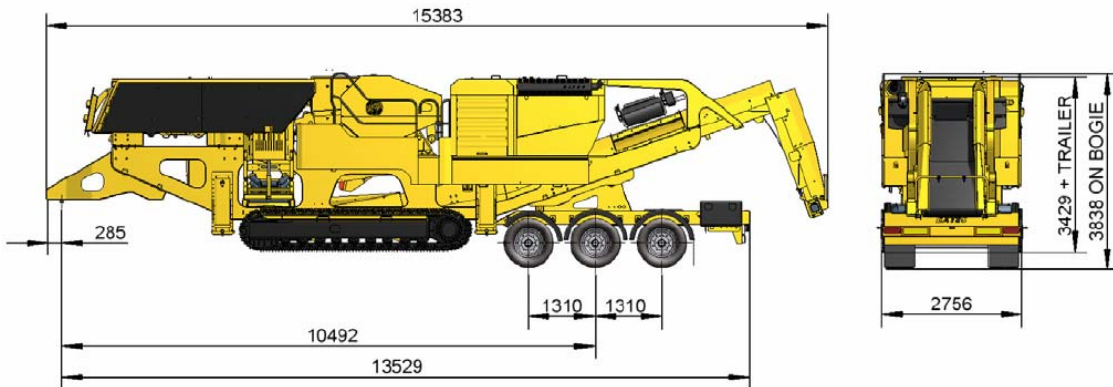
Quarrying applications in the UK





C-12+ Transport and Working Drawings

C12⁺ Transport (bogie)



C12⁺ Working

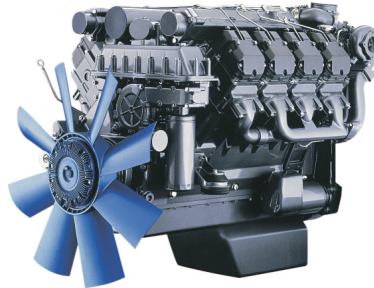
BFM 1015

for mobile machinery

195 - 440 kW | 261 - 590 hp at 1500 - 2100 min⁻¹ | rpm

EU stage II / US EPA Tier 2

- Water-cooled V6 and V8 engines with turbocharging, charge air cooling and four-valve technology.
- Very compact engine design reduces the installation costs.
- Wet cylinder liners, long oil change intervals and easy changing of the engine fluids reduce the running and service costs and increase the availability of the machinery.
- Best cold starting performance even under extreme conditions.



- Robust and reliable mechanical injection system.

- Also available with an electronic motor regulator (EMR) to allow easy integration into the electronic device control and monitoring system.
- Low noise emissions due to acoustically optimized components with very smooth running and high durability.
- The robust engine design allows worldwide operation even with high sulphur fuels.

Technical data

Engine type		BF6M1015C	BF6M1015CP	BF8M1015C	BF8M1015CP
No. of cylinders		6	6	8	8
Bore/stroke	mm in	132/145 5.20/5.71	132/145 5.20/5.71	132/145 5.20/5.71	132/145 5.20/5.71
Displacement	l cu in	11.9 726.2	11.9 726.2	15.9 970.3	15.9 970.3
Maximum nominal speed	min ⁻¹ rpm	2100	2100	2100	2100
Power output ¹⁾		BF6M1015C	BF6M1015CP	BF8M1015C	BF8M1015CP
Power output as per ISO 14396	kW hp	300 402	330 443	400 536	440 590
at speed	min ⁻¹ rpm	2100	2100	2100	2100
Max. torque	Nm lb/ft	1978 1459	1875 1383	2637 1945	2500 1844
at speed	min ⁻¹ rpm	1200	1300	1200	1300
Minimum idling speed	min ⁻¹ rpm	550	550	550	550
Specific fuel consumption ²⁾	g/kWh lb/hph	203 0.334	210 0.345	204 0.335	212 0.359
Weight as per DIN 70020 Part 7A ³⁾	kg lb	850 1874	850 1874	1060 2337	1060 2337

1) Power data without deduction of fan power.

2) Best full load consumption refers to diesel with a density of 0.835 kg/dm³ at 15°C | 6.96 lb/US gallon at 60°F.

3) Without starter/alternator, cooler and fluids but with flywheel and flywheel housing.

The data on this data sheet are for information purposes only and are not binding values. The data in the quotation is definitive.

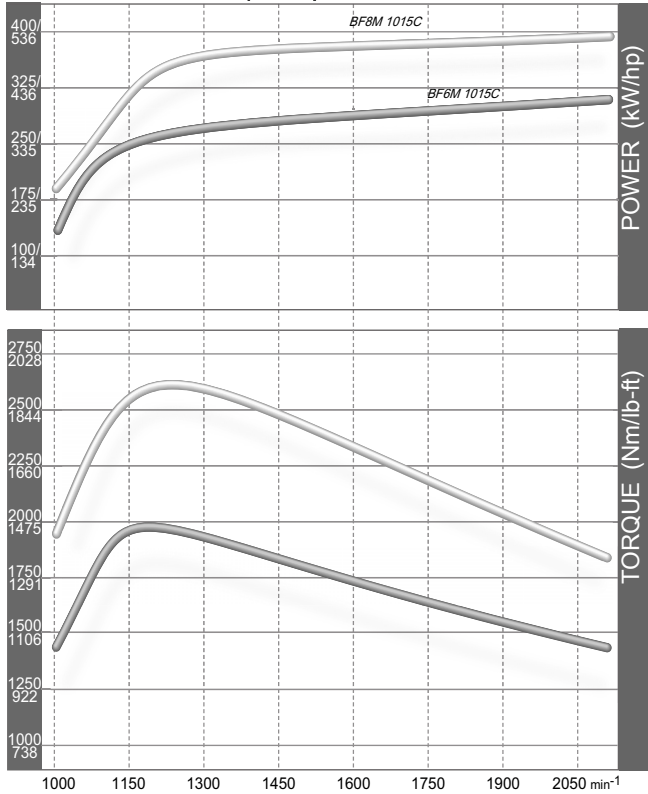
The engine company.



Torque curve

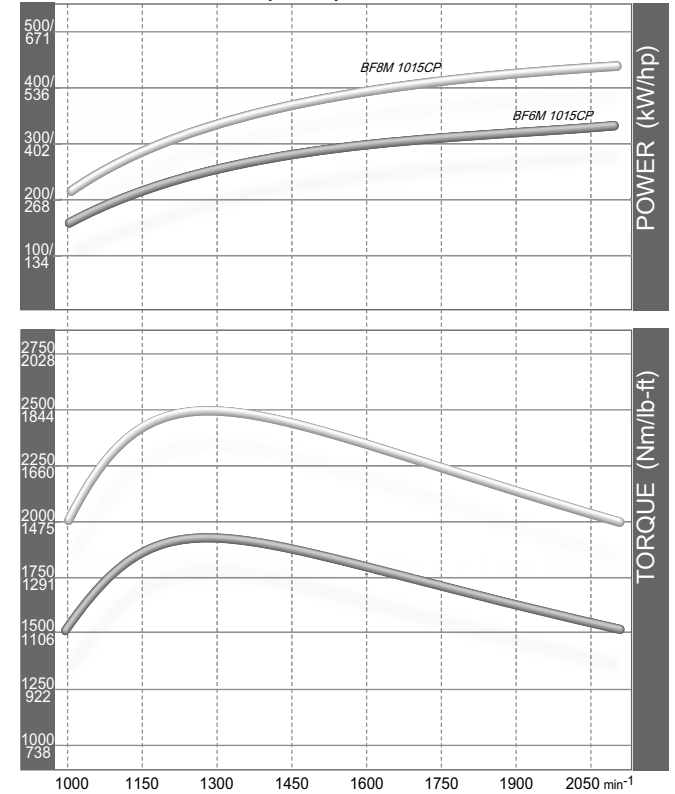
BF8M 1015C - 400kW|536 hp

BF6M 1015C - 300kW|402 hp

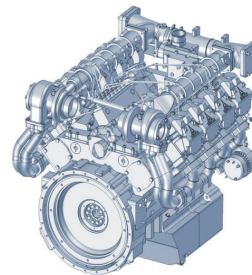
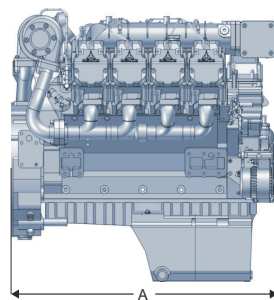
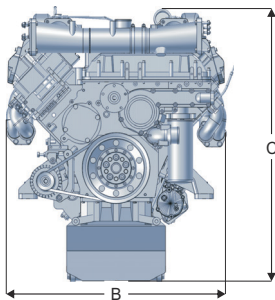


BF8M 1015CP - 440kW|590 hp

BF6M 1015CP - 330kW|443 hp



Dimensions



		A	B	C
BF6M1015C	mm in	841 33.1	932 36.7	1170 46.1
BF6M1015CP	mm in	841 33.1	932 36.7	1170 46.1
BF8M1015C	mm in	1151 45.3	932 36.7	1170 46.1
BF8M1015CP	mm in	1151 45.3	932 36.7	1170 46.1

Note: The engine dimensions and weights vary depending on the scope of delivery.

For more information please contact the DEUTZ AG Köln or the responsible sales partner.



1015. The engine for construction.

187-440 kW at 1500-2100 rpm



Engines for exhaust emission step 2

These are the characteristics of the 1015:

Water-cooled 6- and 8-cylinder V-engines.

Turbocharging with charge air cooling.

Four-valve technology.

Injection system with mechanical governor, mechanically actuated/ electronically controlled high-pressure injection on request.

Separate gear-driven PTOs, beltless fan drive.

Very compact design.

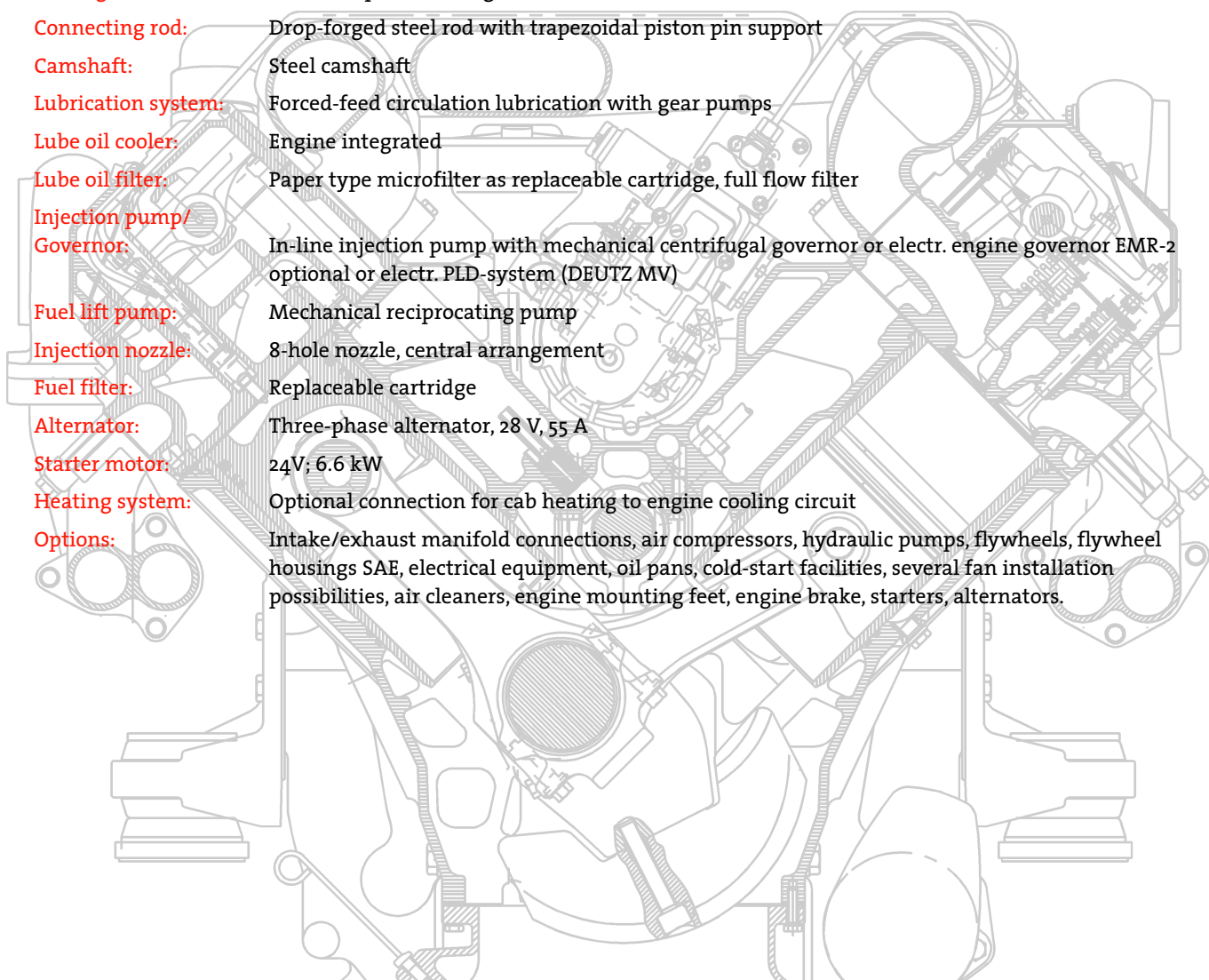
Powerful and rugged engine with a high power-to-volume ratio.



Your benefit:

- ▶ Extremely low noise emission, reduces insulation measures significantly.
- ▶ High torque ensures excellent flexible and powerful response to changing operating duties.
- ▶ Savings in investment costs thanks to long life cycles. Low fuel consumption and long oil change intervals (500 running hours) increase savings in operating costs.
- ▶ Easily accessible and clearly arranged service points make inspection and maintenance work quick and easy.
- ▶ Environment-friendly and long-term use. Meets exhaust emission regulations EU-RL 97/68 EG, Step II and US EPA Tier II Nonroad.

► Engine description



Type of cooling:	Liquid cooling
Crankcase:	Crankcase of grey cast iron with wet liner
Crankcase breather:	Closed-circuit system, vacuum-controlled
Cylinder head:	Individual cylinder heads of grey cast iron of crossflow design
Valve arrangement/ Timing:	Overhead valves in cylinder head, four valve technology, actuated via tappets, pushrods and rocker arms, driven by gears and central camshaft
Turbocharging:	V6 with one turbocharger and with charge air cooler V8 with two turbochargers and charge-air cooler
Piston:	Three-ring pistons: two compression rings and one oil scraper ring
Piston cooling:	Oil-cooled with spray nozzles (CP-engines: channel-cooled piston)
Crankshaft:	Drop-forged steel crankshaft with bolted counterweights. V6 with 30° offset crankpins (split-pin)
Main and big-end bearings:	Tri-metal plain bearings
Connecting rod:	Drop-forged steel rod with trapezoidal piston pin support
Camshaft:	Steel camshaft
Lubrication system:	Forced-feed circulation lubrication with gear pumps
Lube oil cooler:	Engine integrated
Lube oil filter:	Paper type microfilter as replaceable cartridge, full flow filter
Injection pump/ Governor:	In-line injection pump with mechanical centrifugal governor or electr. engine governor EMR-2 optional or electr. PLD-system (DEUTZ MV)
Fuel lift pump:	Mechanical reciprocating pump
Injection nozzle:	8-hole nozzle, central arrangement
Fuel filter:	Replaceable cartridge
Alternator:	Three-phase alternator, 28 V, 55 A
Starter motor:	24V; 6.6 kW
Heating system:	Optional connection for cab heating to engine cooling circuit
Options:	Intake/exhaust manifold connections, air compressors, hydraulic pumps, flywheels, flywheel housings SAE, electrical equipment, oil pans, cold-start facilities, several fan installation possibilities, air cleaners, engine mounting feet, engine brake, starters, alternators.

► Technical Data

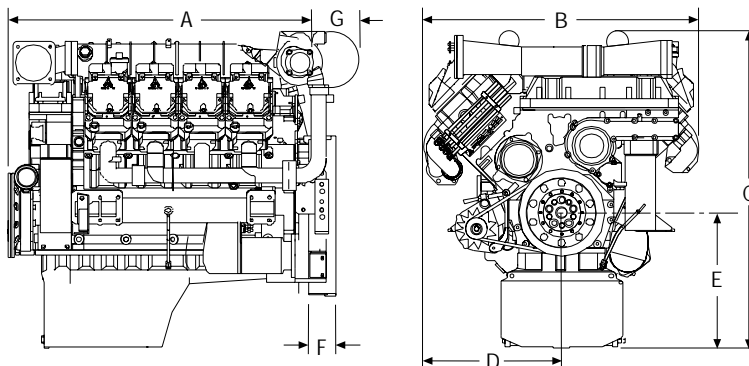
Engine Type		BF6M1015C	BF6M1015CP	BF8M1015C	BF8M1015CP
Number of cylinders		6	6	8	8
Bore/stroke	mm	132/145	132/145	132/145	132/145
Displacement	l	11.91	11.91	15.87	15.87
Compression ratio		16.5	16.5	16.5	16.5
Max. rated speed	rpm	2100	2100	2100	2100
Mean piston speed	m/s	10.15	10.15	10.15	10.15

Power ratings for construction equipment engines¹⁾

Power ratings for industrial engines

Group I	kW	300	330	400	440
at speed	rpm	1900	2100	1900	2100
Mean effective pressure	bar	14.4	15.8	14.4	15.8
Group III ²⁾	kW	273	300	364	400
at speed	rpm	1900	2100	1900	2100
Mean effective pressure	bar	13.1	14.4	13.1	14.4
Max. torque	Nm	1980	1875	2637	2500
at speed	rpm	1200	1300	1200	1300
Minimum idle speed	rpm	550	550	550	550
Weight to DIN 70020, Part 7A ³⁾	kg	850	850	1060	1060

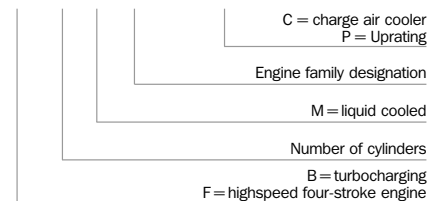
► Dimensions



Engine type		A	B	C	D	E	F	G
BF6M1015C	mm	841	932	1174	466	462	143	198
BF6M1015CP	mm	841	932	1174	466	462	143	198
BF8M1015C	mm	1010	955	1174	478	462	143	198
BF8M1015CP	mm	1010	955	1174	478	462	143	198

► Model designation

BF 8 M 1015 CP



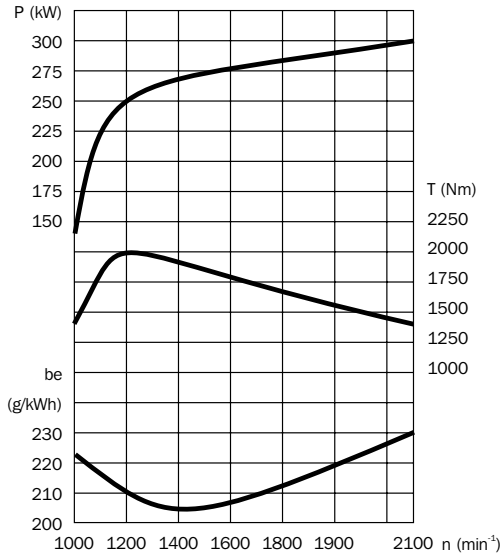
1) Power ratings without deduction of fan power requirement.

2) Fuel stop power to ISO 3046/1 (IFN), DIN 6271. The fuel stop IFN power is an ISO net power at flywheel under reference conditions with all essential auxiliaries driven by the engine.

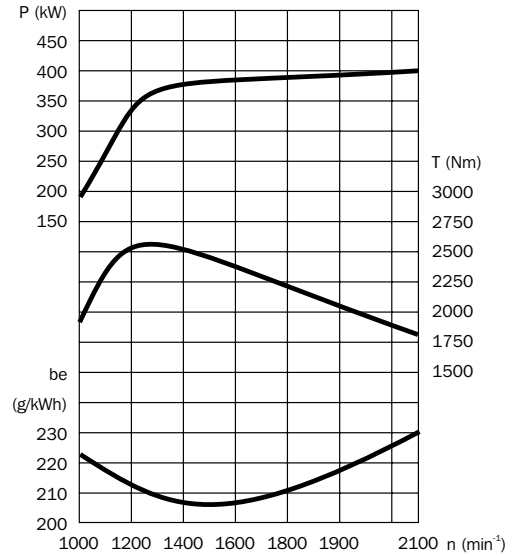
3) Weights are for a dry engine.

The values given in this data sheet are for information purposes only and not binding. The information given in the offer is decisive.

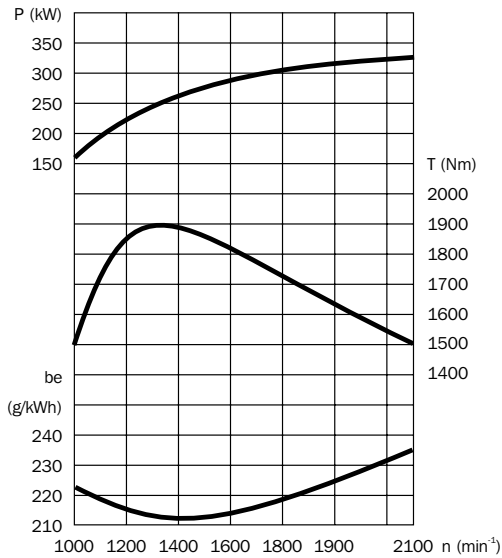
► Standard engines



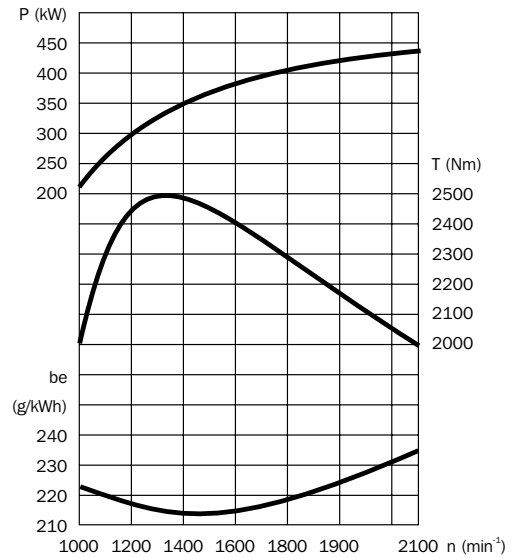
► BF6M1015C



► BF8M1015C



► BF6M1015CP



► BF8M1015CP



The engine company.

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DEUTZ MOTOR

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eMail: info@deutz.de

SECTION IV

CERTIFICATION OF INFORMATION

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

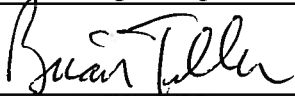
I certify that I am the Owner and Proprietor

I hereby certify that (please print or type) _____
is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature _____
(please use blue ink) Responsible Official Date

Name & Title Brian Teller, Drilling Manager
(please print or type)

Signature  _____
(please use blue ink) Authorized Representative (if applicable) Date 3/13/15

Applicant's Name _____

Phone & Fax _____
Phone Fax

Email _____