Bayer CropScience

William F. Durham, Director
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, West Virginia 25304

CERTIFIED MAIL
(Return Receipt Requested)
7008 0500 0000 7888 2412

May 6, 2015

Bayer CropScience
Institute Site
P. O. Box 1005
Charleston, WV 25112

Tel. 304 767 3129
Fax 304 767 3294

Re: Bayer CropScience, Institute, West Virginia
Administrative Update – Class II General Permit G60-C054

Dear Mr. Durham,

Bayer recently submitted the Title V Group I Renewal application on May 1, 2015. The renewal application included equipment listed in the General Permit G60-C054. This letter is to correct language that is listed in the current permit.

On May 28, 2013, a Class II G60 permit application was submitted to DEP. Enclosed is a copy of the General Permit application. This permit application was to register two emergency generators associated with the site's wastewater process sewers sumps. In the event of power losses, the process sewer flow system would have back-up power to insure continued operation of the site's water treatment system. The final general permit was issued on July 25, 2013, however the description of change was noted as "construction of two (2) emergency fire pumps". This administrative update is to request corrected language describing the equipment in the current General Permit G60-C054.

If you have any questions concerning this update, please contact Linda Tennant at (304) 767-6161 or linda.tennant@bayer.com.

Sincerely,

Connie Stewart

Connie Stewart
Director - QHSE

Bayer CropScience

Enclosures

Bayer CropScience

Mr. John Benedict
Director
WV Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

CERTIFIED MAIL
(Return Receipt Requested)

May 28, 2013

Bayer CropScience
Institute Site
P. O. Box 1005
Institute, WV 25112
Tel. 304-767-6866
Fax 304-767-6063

Subject: Class II General Permit Emergency Generator G60 Permit Application

Dear Mr. Benedict:

Bayer CropScience is seeking to register two emergency generators, for two (2) Wastewater sumps, under the Class II General Permit for Emergency Generators (G60). The purpose of these generators is to provide diesel power backup to the Plant's electric operated process wastewater sewer sump pumps located at the Center and West Sumps. The generators will be tested periodically to insure proper operation. In addition, the new generators are subject to 40CFR60, Subpart IIII and meet the Tier III emission standards for non-road diesel engines. The required application fee of $1500 will be paid by credit card.

Should you require any additional information, please contact me at (304) 767-6866 or via e-mail (lennie.scott@bayercropscience.com).

Sincerely,

R. Lennie Scott, P.E., BCEE
Director QHSE
Institute Industrial Park

Enclosures:

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 - 57th Street
Charleston, WV 25304
Phone: (304) 926-0475 ▫ www.wvdep.org

APPLICATION FOR GENERAL PERMIT REGISTRATION

CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE A STATIONARY SOURCE OF AIR POLLUTANTS

PLEASE CHECK ALL THAT APPLY (IF KNOWN):
☒ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

FOR AGENCY USE ONLY: *PLANT I.D. #* _____

*PERMIT #*_____ *PERMIT WRITER:* _____

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

☐ **G10-D** – Coal Preparation and Handling
☐ **G20-B** – Hot Mix Asphalt
☐ **G30-D** – Natural Gas Compressor Stations
☐ **G33-A** – Spark Ignition Internal Combustion Engines
☐ **G35-A** – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit)
☐ **G40-B** – Nonmetallic Minerals Processing ☐
☐ **G50-B** – Concrete Batch ☐
☒ **G60-C** Class II Emergency Generator
☐ **G65-C** – Class I Emergency Generator

SECTION I. GENERAL INFORMATION

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):
Bayer CropScience LP

2. FEDERAL EMPLOYER ID NO. **(FEIN):**
13-2887825

3. APPLICANT'S MAILING ADDRESS:
Bayer CropScience LP
P.O. Box 1005
Institute WV 25112

4. IF APPLICANT IS A SUBSIDIARY CORPORATION, PLEASE PROVIDE THE NAME OF PARENT CORPORATION:
Bayer AG

5. **WV BUSINESS REGISTRATION.** IS THE APPLICANT A RESIDENT OF THE STATE OF WEST VIRGINIA? ☒ **YES** ☐ **NO**

– IF **YES,** PROVIDE A COPY OF THE **CERTIFICATE OF INCORPORATION / ORGANIZATION / LIMITED PARTNERSHIP** (ONE PAGE) INCLUDING ANY NAME CHANGE AMENDMENTS OR OTHER ***BUSINESS CERTIFICATE*** AS **ATTACHMENT A.**

– IF **NO,** PROVIDE A COPY OF THE **CERTIFICATE OF AUTHORITY / AUTHORITY OF L.L.C. / 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.) :
Emergency Generator

8. STANDARD INDUSTRIAL CLASSIFICATION **(SIC)** CODE FOR THE FACILITY:
2879; 2869

NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM **(NAICS)** FOR THE FACILITY:
325320, 325199

9A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY):	10A. LIST ALL CURRENT 45CSR13 AND 45CSR30 (TITLE V) PERMIT NUMBERS ASSOCIATED WITH THIS PROCESS (FOR EXISTING FACILITY ONLY):
039-00007	**NA**

PRIMARY OPERATING SITE INFORMATION

11A. NAME OF PRIMARY OPERATING SITE:	12A. MAILING ADDRESS OF PRIMARY OPERATING SITE:
Institute Plant	**Bayer CropScience LP** **P.O. Box 1005** **Institute, WV 25112**

13A. DOES THE APPLICANT OWN, LEASE, HAVE AN OPTION TO BUY, OR OTHERWISE HAVE CONTROL OF THE *PROPOSED SITE*?
☒ YES ☐ NO

– IF YES, PLEASE EXPLAIN: **Owns**

– 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.

The facility is located west of Institute, WV adjacent to State Route 25 and West Virginia State University.

INCLUDE A **MAP** AS **ATTACHMENT F.**

15A. NEAREST CITY OR TOWN:	16A. COUNTY:	
Institute	**Kanawha**	
17A. UTM NORTHING (KM):	18A. UTM EASTING (KM):	19A. UTM ZONE:
4248.3	**432.0**	**17**

1ST ALTERNATE OPERATING SITE INFORMATION

11B. NAME OF PRIMARY OPERATING SITE:	12B. MAILING ADDRESS OF PRIMARY OPERATING SITE:
Not Applicable **NA**	

13B. DOES THE APPLICANT OWN, LEASE, HAVE AN OPTION TO BUY, OR OTHERWISE HAVE CONTROL OF THE *PROPOSED SITE*?
☐ YES ☐ 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 NORTHING (KM):	18B. UTM EASTING (KM):	19B. UTM ZONE:

2ND *ALTERNATE OPERATING SITE INFORMATION*

11C. NAME OF PRIMARY OPERATING SITE: Not Applicable **NA**	12C. MAILING ADDRESS OF PRIMARY OPERATING SITE:

13C. DOES THE APPLICANT OWN, LEASE, HAVE AN OPTION TO BUY, OR OTHERWISE HAVE CONTROL OF THE *PROPOSED SITE*?
☐ **YES** ☐ **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 NORTHING (KM):	18C. UTM EASTING (KM):	19C. UTM ZONE:

20. PROVIDE THE DATE OF ANTICIPATED INSTALLATION OR CHANGE: 9 / 1 / 2013 – IF THIS IS AN **AFTER-THE-FACT** PERMIT APPLICATION, PROVIDE THE DATE UPON WHICH THE PROPOSED CHANGE DID HAPPEN: ___/___/___	21. DATE OF ANTICIPATED START- UP IF REGISTRATION IS GRANTED: 9 / 1 / 2013

22. PROVIDE MAXIMUM PROJECTED OPERATING SCHEDULE OF ACTIVITY/ ACTIVITIES OUTLINED IN THIS APPLICATION:

HOURS PER DAY 24 DAYS PER WEEK 7 WEEKS PER YEAR 52 PERCENTAGE OF OPERATION 5.7%

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

PLEASE CHECK ALL ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:
Please See the appropriate reference document for an explanation of the attachments listed below.

- ☒ ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- ☒ ATTACHMENT B: PROCESS DESCRIPTION
- ☒ ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- ☒ ATTACHMENT D: PROCESS FLOW DIAGRAM
- ☒ ATTACHMENT E: PLOT PLAN
- ☒ ATTACHMENT F: AREA MAP
- ☒ ATTACHMENT G: AFFECTED SOURCE SHEETS
- ☒ ATTACHMENT H: BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET
- ☒ ATTACHMENT I: EMISSIONS CALCULATIONS
- ☒ ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT
- ☒ ATTACHMENT K: ELECTRONIC SUBMITTAL DISKETTE
- ☒ CERTIFICATION OF INFORMATION
- ☒ ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE
- ☒ ATTACHMENT M: SITING CRITERIA WAIVER

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. PLEASE DO NOT FAX PERMIT APPLICATIONS. FOR QUESTIONS REGARDING APPLICATIONS OR WEST VIRGINIA AIR POLLUTION RULES AND REGULATIONS PLEASE CALL (304) 926-0475.

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

☒ ***hereby certify that*** (please print or type) **James H. Covington**

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 Chief 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 _____ 30 May 2013
(please use blue ink) Responsible Official Date

Name & Title James H. Covington, Vice President, Head Institute Industrial Park
(please print or type)

Applicant's Name Bayer CropScience LP

Please direct all technical questions to Lennie Scott **at** lennie.scott@bayercropscience.com
(304) 767-6866 (Office) (304) 767-6621 (Fax)

A	Current Business Certificate
B	Process Description
C	Description of Fugitive Emissions
D	Process Flow Diagram
E	Plot Plan
F	Area Map
G	Affected Source Sheets
H	Air Pollution Control
I	Emissions Calculations
J	Class I Legal Advertisement
K	Electronic Submittal Diskette
L	General Permit Application Fee
M	Siting Criteria Waiver
N	
O	
P	
Q	
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U	
V	
W	
X	
Y	
Z	

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
BAYER CROPSCIENCE LP
2 TW ALEXANDER DR
RESEARCH TRIANGLE PARK, NC 27709-0000

BUSINESS REGISTRATION ACCOUNT NUMBER: **1048-6631**

This certificate is issued on: **10/11/2011**

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them. CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.4
L0547580544

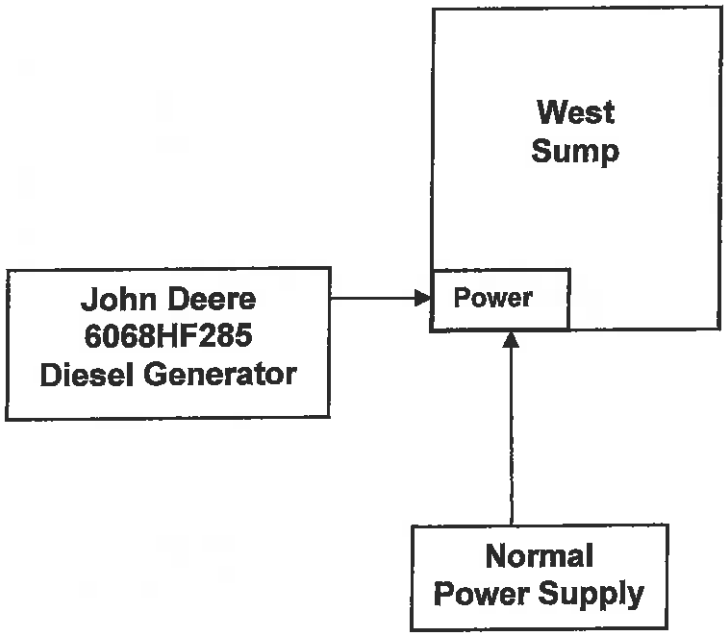
Attachment B
Process Description

Bayer CropScience proposes to install a CD250M Dri-Prime Pump with a John Deere 6068HF285 Diesel Engine emergency generator and a CD300Dri-Prime Pump with a Caterpillar C9 Diesel Engine emergency generator for two process wastewater sumps (center and west). These engines will be cycled routinely to insure that they properly operate and are ready for service.

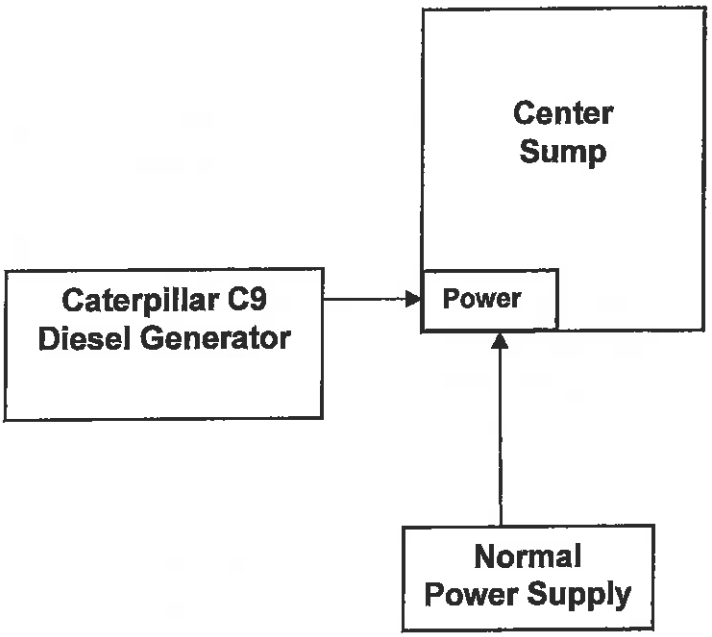
Attachment C
Fugitive Emissions

There are no fugitive emissions associated with these generators.

Attachment D
Process Flow Diagram



Attachment D
Process Flow Diagram



G60-C REGISTRATION APPLICATION FORMS

General Permit G60-C Registration
Section Applicability Form

General Permit G60-C was developed to allow qualified registrants to seek registration for emergency generator(s).

General Permit G60-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	Reciprocating Internal Combustion Engines (R.I.C.E.)*	☒
Section 6	Tanks	☒
Section 7	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	☒
Section 8	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	☐

* **Affected facilities that are subject to Section 5 may also be subject to Sections 7 or 8. Therefore, if the applicant is seeking registration under both sections, please select both.**

EMERGENCY GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		EG – 1 Center Sump		EG – 2 West Sump			
Engine Manufacturer and Model		CAT C9		John Deere 6068HF285			
Manufacturer's Rated bhp/rpm		300/1800		156/2200			
Source Status[2]		NS		NS			
Date Installed/Modified/Removed[3]		5/2013		5/2013			
Engine Manufactured/Reconstruction Date[4]		2011		2011			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		Yes		Yes			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No		No			
Engine, Fuel and Combustion Data	Engine Type[7]	LB4S		LB4S			
	APCD Type[8]	A/F (Turbocharged w/Charge Air Cooled)		A/F (Turbocharged w/Charge Air Cooled)			
	Fuel Type[9]	2FO		2FO			
	H_2S (gr/100 scf)	100		100			
	Operating bhp/rpm	300/1800		156/2200			
	BSFC (BTU/bhp-hr)	5,560		6,415			
	Fuel throughput (gal/hr)	12.0 gal/hr		7.2 gal/hr			
	Fuel throughput (gal/yr)	6,000 gal/yr		3,600 gal/yr			
	Operation (hrs/yr)	500		500			
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr	lbs/hr	tons/yr		
AP	NO_X	9.30	2.33	4.84	1.21		
MD	CO	1.60	0.40	1.29	0.32		
AP	VOC	0.76	1.13	0.40	0.45		
AP	SO_2	0.62	0.15	0.32	0.08		
MD	PM_{10}	0.09	0.02	0.08	0.02		
AP	Formaldehyde	0.002	0.001	0.001	0.000		
AP	Benzene	0.001	0.000	0.001	0.000		
AP	Xylene	0.000	0.000	0.000	0.000		
AP	Toluene	0.001	0.000	0.000	0.000		

Source Identification Number[1]	EG – 1 Center Sump	EG – 2 West Sump	
Engine Manufacturer and Model	CAT C9	John Deere 6068HF285	
Manufacturer's Rated bhp/rpm	300/1800	156/2200	
Source Status[2]	NS	NS	
Date Installed/Modified/Removed[3]	5/2013	5/2013	

1. Enter the appropriate Source Identification Number for each emergency generator. 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 spark 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*.

STORAGE TANK DATA SHEET

Source ID #[1]	Status[2]	Content[3]	Volume[4]	Dia[5]	Throughput[6]	Orientation[7]	Liquid Height[8]
T-CS	NEW	Diesel	250 gal	2.00	6,000	HORZ	1.00
T-WS	NEW	Diesel	175 gal	1.48	3,600	HORZ	0.74

1. Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the compressor station. Tanks should be designated T01, T02, T03, etc.
2. Enter storage tank Status using the following:

   EXIST Existing Equipment NEW Installation of New Equipment
   REM Equipment Removed
3. Enter storage tank content such as condensate, pipeline liquids, glycol (DEG or TEG), lube oil, etc.
4. Enter storage tank volume in gallons.
5. Enter storage tank diameter in feet.
6. Enter storage tank throughput in gallons per year.
7. Enter storage tank orientation using the following:

   VERT Vertical Tank HORZ Horizontal Tank
8. Enter storage tank average liquid height in feet.

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS

Emergency Generator Location:						Registration Number (Agency Use) G60-C				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_X	CO	VOC	SO_2	PM_{10}	NO_X	CO	VOC	SO_2	PM_{10}
EG – 1	9.30	1.60	0.76	0.62	0.09	2.33	0.40	1.13	0.15	0.02
EG – 2	4.84	1.29	0.40	0.32	0.08	1.21	0.32	0.45	0.08	0.02
Total	14.14	2.89	1.16	0.94	0.17	3.54	0.72	1.58	0.23	0.04

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS

Emergency Generator Location:

Registration Number (Agency Use) G60-C

	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
Source ID No.	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde
EG - 1	0.001	NA	0.001	0.000	NA	0.002	0.000	NA	0.000	0.000	NA	0.001
EG - 2	0.001	NA	0.000	0.000	NA	0.001	0.000	NA	0.000	0.000	NA	0.000
Total	0.002	NA	0.001	0.000	NA	0.003	0.000	NA	0.000	0.000	NA	0.001

California Environmental Protection Agency AIR RESOURCES BOARD	JOHN DEERE POWER SYSTEMS	EXECUTIVE ORDER U-R-004-0433 New Off-Road Compression-Ignition Engines

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 systems 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)
2011	BJDXL06.8117	4.5, 6.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Control Module, Direct Diesel Injection, Turbocharger, Charge Air Cooler, Smoke Puff Limiter	Loaders, Tractor, Dozer, Pump, Generator Set, Compressor, Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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
75 ≤ kW < 130	Tier 3	STD	N/A	N/A	4.0	5.0	0.30	20	15	50
		FEL	--	--	3.8	--	--	--	--	--
		CERT	--	--	3.5	1.6	0.20	6	2	12

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

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 22 day of December 2010.

Annette Hebert, Chief
Mobile Source Operations Division

Manufacturer	**John Deere**
Model	**6068HF285_H**
Emissions certifications	
CARB	---
EPA Tier 3	---
EU Stage III A	---
General engine data	
Model	6068HF285
Number of cylinders	6
Displacement-- L (cu in)	6.8 (415)
Bore and Stroke-- mm (in)	106 x 127 (4.17 x 5.00)
Compression Ratio	19.0:1
Engine Type	In-line, 4-Cycle
Aspiration	Turbocharged and air-to-air aftercooled
Length - mm (in)	1123 (44.2)
Width-- mm (in)	657 (25.9)
Height-- mm (in)	1036 (40.8)
Weight, dry-- kg (lb)	608 (1340)
Performance Data	
Intermittent rated speed	116 kW (156 hp) @ 2200 rpm
Peak power	124 kW (166 hp) @ 2000 rpm
Power bulge %	7% @ 2000 rpm
Peak torque	667 N·m (492 ft-lb) @ 1500 rpm
Torque rise %	32% @ 1500 rpm

Specifications are based on published information at the time of publication.Specifications are subject to change without notice.

Prices are subject to change without notice. Prices are in dollars and only applicable to products sold in the United States.In all cases, current published price lists and incentive program bulletins will take precedence.All trademarked terms, including John Deere, the leaping deer symbol and the colors green and yellow used herein are the property of Deere & Company,unless otherwise noted.

EMISSIONS DATA

EPA TIER-3 2005 - ---- ********** G5
Gaseous emissions data measurement are consistent with those described in
in 40 CFR, EU 97/68/EC, ECE Regulation No. 96 and ISO 8178 for measuring
HC, CO, PM and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance
with the following non-road regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kw-hr		
U. S. (incl Calif)	EPA/Tier 3	CO:3.5	NOx + HC:4.0	PM:0.2
Europe	EU/Stage-IIIA	CO:3.5	NOx + HC:4.0	PM:0.2

EU STAGE -IIIA 2006 - 2010 ********** G5
Gaseous emissions data measurement are consistent with those described in
in 40 CFR, EU 97/68/EC, ECE Regulation No. 96 and ISO 8178 for measuring
HC, CO, PM and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance
with the following non-road regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kw-hr		
U. S. (incl Calif)	EPA/Tier 3	CO:3.5	NOx + HC:4.0	PM:0.2
Europe	EU/Stage-IIIA	CO:3.5	NOx + HC:4.0	PM:0.2

IMO II - 2011 - ---- ********** M5
Gaseous emissions data measurements are consistent with those described
in REGULATION 13 of ANNEX VI of MARPOL 73/78 and ISO 8178 for measuring
HC, CO, PM, and NOx.

This engine conforms to INTERNATIONAL MARINE ORGANIZATION'S (IMO)
MARINE compression-ignition emission regulations.

CD250M Dri-Prime Pump

CD250M

The Godwin Dri-Prime CD250M pump offers flow rates to 3,713 USGPM and discharge heads to 169' (51m). Also it has the capability of handling solids up to 3" (75mm) in diameter.

The CD250M is able to prime to 28' (8.5 m) of suction lift from dry.

Indefinite dry-running is no problem due to the unique Godwin oil bath mechanical seal design. Solids handling, dry-running and portability make the CD250M the perfect choice for small dewatering and bypass applications. The standard model is mounted on a highway trailer, with a skid-mounted option.

Features

- Simple maintenance normally limited to checking fluid levels.
- Close-coupled centrifugal pump with vacuum priming compressor mounted to a diesel engine. Also available in electric drive or as bare shaft pumpend.
- Extensive application flexibility. It will handle sewage, slurries and liquids with solids up to 3" in diameter.
- Continuously operated Godwin venturi air ejector priming device requiring no form of periodic adjustment or control.
- Dry-running heavy duty mechanical seal with abrasion-resistant interfaces.
- Also available in a Critically Silenced unit which drastically reduce noise levels of the pump.
- Standard engine John Deere 6068HF285. Also available with Caterpillar C6.6E.
- The volute & suction cover are made from cast iron bs1452:1990 grade 220 and the impeller is made from cast steel bs3100 1976grbw 4 hardness to 341 hb brinell.

Specifications

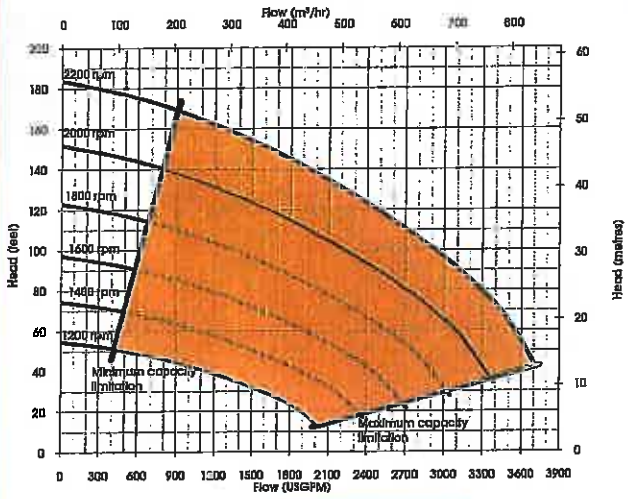
Suction connection	10". 125# ANSI B16.1
Delivery connection	10" 125# ANSI B16.1
Max capacity	3713 USGPM
Max head	169' (51m)
Max solids handling	3" (75mm)
Max impeller diameter	11" (290mm)
Max operating temp	176°F (80°C)
Max working pressure	79.8 psi (5.5 bar)
Max suction pressure	65.3 psi (4.5 bar)
Max casing pressure	123.3 psi (8.5 bar)
Max operating speed	2200 rpm

godwin
a xylem brand

Reference number : 95-1016-3000
Date of issue : August 25, 2011
Issue : 1

Please contact Godwin for further details.
A typical picture of the pump is shown.
All information is approximate and for general guidance only.

Performance Curve



Materials

Pump casing & suction cover	Cast iron BS1452:1990 grade 220
Wearplates	Cast iron hardened to 480 HB Brinell
Pump shaft	Nickel chrome steel to BS970 grade 817M40T
Impeller	Cast steel BS3100 1976GRBW 4 hardness to 341 HB Brinell
Non-return valve body	Cast iron
Mechanical seal faces	Silicon carbide vs silicon carbide

Engine option 1

John Deere, 6068HF285, 155.4 HP @ 2200 rpm

Impeller diameter 11 " (290 mm)

Suction Lift Table

Total Suction Head (')	Total Delivery Head (')				
	22	62	105	145	161
	Output (USGPM)				
9.8	3753	3390	2591	1453	872
15.1	3681	3293	2470	1235	581
20.0	3390	3148	2276	1017	557
24.9	3148	2906	2300	775	-

Fuel capacity (Full) 175 US Gal, (Usable) 175 US Gal

Fuel consumption @ 2200 rpm BEP 7.2 US Gal/hr

Weight: (Dry) 5,229 lbs, (Wet) 6,641 lbs

Dimensions: (L) 138" x (W) 58" x (H) 72"

Engine option 2

Caterpillar, C6.6E, 142.1 HP @ 2000 rpm

Impeller diameter 11 " (290 mm)

Suction Lift Table

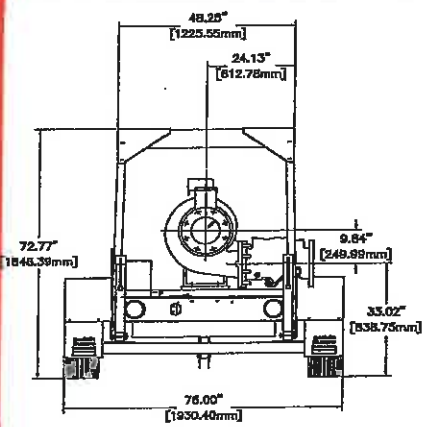
Total Suction Head (')	Total Delivery Head (')				
	16	49	85	118	131
	Output (USGPM)				
9.8	3412	3082	2356	1321	793
15.1	3346	2994	2245	1123	528
20.0	3082	2862	2069	925	506
24.9	2862	2642	2091	704	-

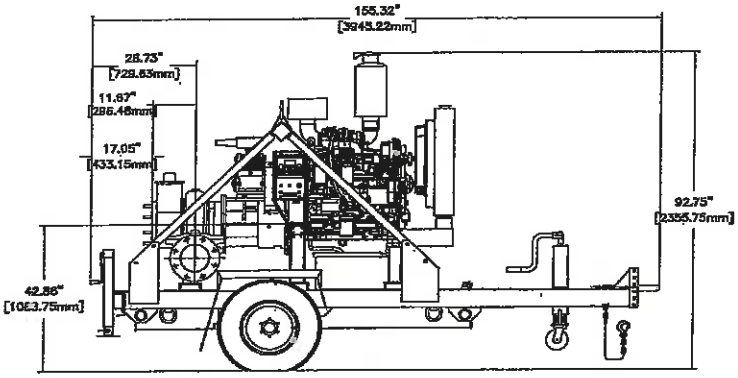
Fuel capacity (Full) 175 US Gal, (Usable) 175 US Gal

Fuel consumption @ 2000 rpm BEP 5.8 US Gal/hr

Weight: (Dry) 5,004 lbs, (Wet) 6,407 lbs

Dimensions: (L) 138" x (W) 58" x (H) 72"





Performance data provided in tables is based on water tests at sea level and 68°F ambient.

All information is approximate and for general guidance only.

Please contact Godwin Pumps for further details.

Reference number : 95-1016-3000

Date of Issue : August 25, 2011

Issue : 1

godwin
a xylem brand

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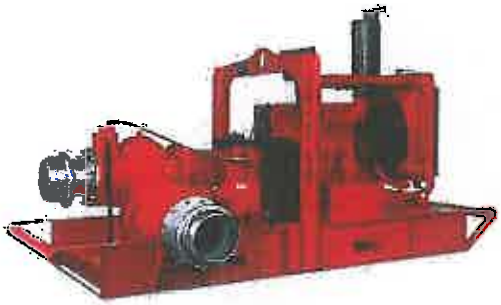
CD300M Dri-Prime Pump

CD300M

The Godwin Dri-Prime CD300M pump offers flow rates to 5,988 USGPM and discharge heads to 178' (54m). Also it has the capability of handling solids up to 4" (95mm) in diameter.

The CD300M is able to prime to 28' (8.5 m) of suction lift from dry.

Indefinite dry-running is no problem due to the unique Godwin oil bath mechanical seal design. Solids handling, dry-running and portability make the CD300M the perfect choice for small dewatering and bypass applications. The standard model is mounted on a highway trailer, with a skid-mounted option.



Features

- Simple maintenance normally limited to checking fluid levels.
- Close-coupled centrifugal pump with vacuum priming compressor mounted to a diesel engine. Also available in electric drive or as bare shaft pumpend.
- Extensive application flexibility. It will handle sewage, slurries and liquids with solids up to 4" in diameter.
- Continuously operated Godwin venturi air ejector priming device requiring no form of periodic adjustment or control.
- Dry-running heavy duty mechanical seal with abrasion-resistant interfaces.
- Also available in a Critically Silenced unit which drastically reduce noise levels of the pump.
- Standard engine Caterpillar C9. Also available with John Deere 6090HFC94.
- The volute & suction cover are made from cast iron bs1452:1990 grade 220 and the impeller is made from cast steel bs3100 a5 hardness to 200 hb brinell.

Specifications

Suction connection	12" 125# ANSI B16.1
Delivery connection	12" 125# ANSI B16.1
Max capacity	5988 USGPM
Max head	178' (54m)
Max solids handling	4" (95mm)
Max impeller diameter	14" (362mm)
Max operating temp	176°F (80°C)
Max working pressure	87.0 psi (6.0 bar)
Max suction pressure	58.0 psi (4.0 bar)
Max casing pressure	130.5 psi (9.0 bar)
Max operating speed	1800 rpm

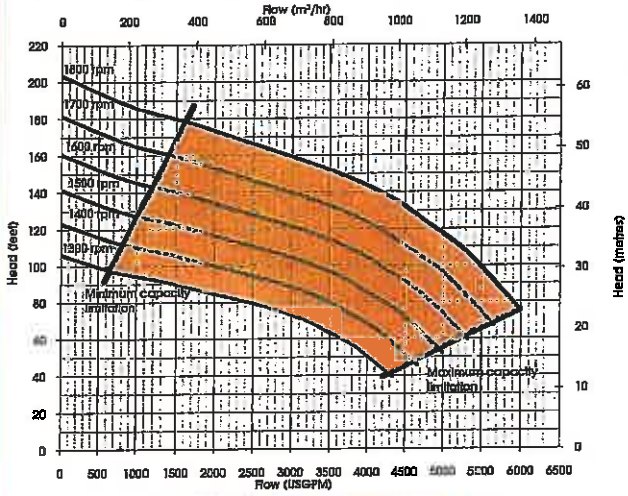
godwin
a xylem brand

Reference number : 95-1018-3000
Date of issue : August 25, 2011
Issue : 1

Please contact Godwin for further details.
A typical picture of the pump is shown.
All information is approximate and for general guidance only.

CD300M

Performance Curve



Materials

Pump casing & suction cover	Cast Iron BS1452:1990 grade 220
Wearplates	High Chromium Cast Iron HC403:1977 grade FR6252
Pump shaft	Nickel chrome steel to BS970 grade 817M40T
Impeller	Cast steel BS3100 A5 hardness to 200 HB Brinell
Non-return valve body	Cast Iron
Mechanical seal faces	Double Mech seal; Inboard SiC v SiC, Outboard SiC v Carbon

Engine option 1

Caterpillar, C9, 299.9 HP @ 1800 rpm

Impeller diameter 14 " (362 mm)

Suction Lift Table

Total Suction Head (')	Total Delivery Head (')				
	61	99	132	141	156
	Output (USGPM)				
9.8	6076	5283	4121	3540	2589
15.1	5917	5019	3646	3064	2108
20.0	5283	4755	2906	2113	1057
24.9	4227	3963	2642	2113	-

Fuel capacity (Full) 250 US Gal, (Usable) 250 US Gal

Fuel consumption @ 1800 rpm BEP 12.0 US Gal/hr

Weight: (Dry) 10,247 lbs, (Wet) 12,249 lbs

Dimensions: (L) 160" x (W) 65" x (H) 76"

Engine option 2

John Deere, 6090HFC94, 276.2 HP @ 1800 rpm

Impeller diameter 14 " (362 mm)

Suction Lift Table

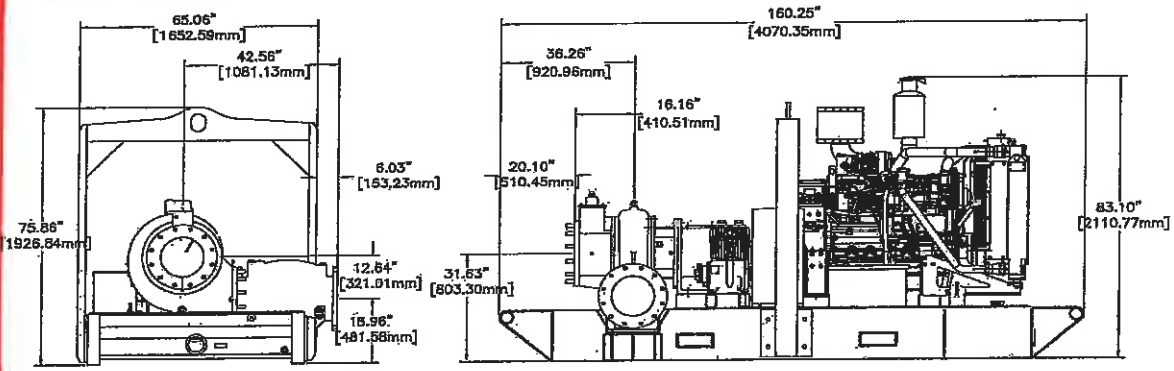
Total Suction Head (')	Total Delivery Head (')				
	61	99	132	141	156
	Output (USGPM)				
9.8	6076	5283	4121	3540	2589
15.1	5917	5019	3646	3064	2108
20.0	5283	4755	2906	2113	1057
24.9	4227	3963	2642	2113	-

Fuel capacity (Full) 250 US Gal, (Usable) 250 US Gal

Fuel consumption @ 1800 rpm BEP 0.0 US Gal/hr

Weight: (Dry) 8,574 lbs, (Wet) 10,619 lbs

Dimensions: (L) 160" x (W) 65" x (H) 76"



Performance data provided in tables is based on water tests at sea level and 68°F ambient.

All information is approximate and for general guidance only.

Please contact Godwin Pumps for further details.

Reference number : 95-1018-3000

Date of issue : August 25, 2011

Issue : 1

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Attachment H
Control Device Sheets

There are no control devices associated with these emergency generators.

Attachment I
Emission Calculations

Emergency Generator (Source ID# EG-1) Calculations Summary & Rationale

Caterpillar C9, Diesel									
Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Fuel Consumption (US gal/hour)	Engine Power (bhp)	Annual Operating Hours	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
NOx	0.03	lbs/hp-hr	AP-42, Table 3.3-1	1	12.0	300	500	9.30	2.33
CO	5.00	g/kW-hr	Vendor Guarantee	2	12.0	300	500	1.60	0.40
VOC	2.47E-03	lbs/hp-hr	AP-42, Table 3.3-1	1	12.0	300	500	0.74	0.19
PM10	0.30	g/kW-hr	Vendor Guarantee	2	12.0	300	500	0.09	0.02
SO2	2.05E-03	lbs/hp-hr	AP-42, Table 3.3-1	1	12.0	300	500	0.62	0.15

Notes:

- AP-42, Chapter 3.3 references are from the October 1996 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 500 hr/yr.

Example Equations:

1 Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lbs/hp-hr) x Engine Power (HP)

2 Max. Hourly Emis. Rate (g/kW-hr) = Emission Factor (g/kW-hr) x (1oz/28g) x (1 lb/16oz) x Power Rating (kW)

Attachment I
Emission Calculations

Emergency Generator (Source ID# EG-1) Calculations Summary & Rationale

Caterpillar C9, Diesel										
Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Fuel Consumption (US gal/hour)	Engine Power (bhp)	Engine Power (kW)	Annual Operating Hours	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
Formaldehyde	1.18E-03	lb/MMBtu	AP-42, Table 3.3-2	1	12.0	300	205	500	0.002	0.001
Benzene	9.33E-04	lb/MMBtu	AP-42, Table 3.3-2	1	12.0	300	205	500	0.001	0.000
Toluene	4.09E-04	lb/MMBtu	AP-42, Table 3.3-2	1	12.0	300	205	500	0.001	0.000
Xylenes	2.85E-04	lb/MMBtu	AP-42, Table 3.3-2	1	12.0	300	205	500	0.000	0.000
Total Organic HAP									0.004	0.001

Notes:

- AP-42, Chapter 3.3 references are from the October 1996 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 500 hr/yr.
- Only the WVDEP-DAQ required Emergency Generator General Permit HAP species are calculated above.

Example Equations:

1. Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/MMBtu) x Fuel Consumption (gal/hour) x Fuel Btu value (130,000 Btu/gal)Conversion Factor (MMBtu/1,000,000 Btu)

Tank ID:	T-CS		Unit ID:	Bayer Center Sump Pump				
Capacity (Kgal)	0.25	Thruput (lb/yr)	36438	Max. Total VP (psia)	0.016			
Diameter (ft)	2.83	Vent Days/Year	365	Avg. Total VP (psia)	0.0045			
Height or Length (ft)	10.17	Max. Temp (F)	90	Maximum Vapor MW	233			
Paint Factor	1.33	Avg. Temp (F)	56	Average Vapor MW	233			
Operating Pressure (psia)	14.7	Daily Temp. Change (F)	21.6	Diameter Factor	0.48281363			
Control Device Eff.	0	Const. Level Tank ?	no					
Fill Rate (gpm)	20.0	Horizontal Tank ?	no					
Specific Gravity	1							

Pollutant Name	Wt. Fraction		Molecular Weight		VP @ Max. Temp.		VP @ Avg. Temp.	
Diesel Fuel	Wt Fr A	1	MW A	233	psia A	0.016	psia A	0.0045
Water	Wt Fr B		MW B	1	psia B		psia B	
	Wt Fr C		MW C	1	psia C		psia C	
	Wt Fr D		MW D	1	psia D		psia D	
	Wt Fr E		MW E	1	psia E		psia E	
	Wt Fr F		MW F	1	psia F		psia F	
	Wt Fr G		MW G	1	psia G		psia G	
	Wt Fr H		MW H	1	psia H		psia H	
	Wt Fr I		MW I	1	psia I		psia I	
	Wt Fr J		MW J	1	psia J		psia J	
	Wt Fr K		MW K	1	psia K		psia K	
	Wt Fr L		MW L	1	psia L		psia L	
	Wt Fr M		MW M	1	psia M		psia M	
	Wt Fr N		MW N	1	psia N		psia N	
	Wt Fr O		MW O	1	psia O		psia O	

	Working Losses				Breathing Losses			
Pollutant Name	Max. lb/hr		Avg. lb/yr		Avg. lb/hr		Avg. lb/yr	
Diesel Fuel	lb/hr A	0.018	lb/yr A	0.02	lb/hr A	0.0000	lb/yr A	0.92
Water	lb/hr B	0.000	lb/yr B	0.00	lb/hr B	0.0000	lb/yr B	0.00
	lb/hr C	0.00	lb/yr C	0.0	lb/hr C	0.0000	lb/yr C	0.0
	lb/hr D	0.00	lb/yr D	0.0	lb/hr D	0.0000	lb/yr D	0.0
	lb/hr E	0.00	lb/yr E	0.0	lb/hr E	0.0000	lb/yr E	0.0
	lb/hr F	0.00	lb/yr F	0.0	lb/hr F	0.0000	lb/yr F	0.0
	lb/hr G	0.00	lb/yr G	0.0	lb/hr G	0.0000	lb/yr G	0.0
	lb/hr H	0.00	lb/yr H	0.0	lb/hr H	0.0000	lb/yr H	0.0
	lb/hr I	0.00	lb/yr I	0.0	lb/hr I	0.0000	lb/yr I	0.0
	lb/hr J	0.00	lb/yr J	0.0	lb/hr J	0.0000	lb/yr J	0.0
	lb/hr K	0.00	lb/yr K	0.0	lb/hr K	0.0000	lb/yr K	0.0
	lb/hr L	0.00	lb/yr L	0.0	lb/hr L	0.0000	lb/yr L	0.0
	lb/hr M	0.00	lb/yr M	0.0	lb/hr M	0.0000	lb/yr M	0.0
	lb/hr N	0.00	lb/yr N	0.0	lb/hr N	0.0000	lb/yr N	0.0
	lb/hr O	0.00	lb/yr O	0.0	lb/hr O	0.0000	lb/yr O	0.0
	TOTAL:	0.018	TOTAL:	0.02	TOTAL:	0.0000	TOTAL:	0.92

ANNUAL LOSS GRAND TOTAL:	0.94

Attachment I
Emission Calculations

Emergency Generator (Source ID# EG-2) Calculations Summary & Rationale

John Deere 6068HF285, Diesel									
Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Fuel Consumption (US gal/hour)	Engine Power (bhp)	Annual Operating Hours	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
NOx	0.03	lbs/hp-hr	AP-42, Table 3.3-1	1	7.2	156	500	4.84	1.21
CO	5.00	g/kW-hr	Vendor Guarantee	2	7.2	156	500	1.29	0.32
VOC	2.47E-03	lbs/hp-hr	AP-42, Table 3.3-1	1	7.2	156	500	0.39	0.10
PM10	0.30	g/kW-hr	Vendor Guarantee	2	7.2	156	500	0.08	0.02
SO2	2.05E-03	lbs/hp-hr	AP-42, Table 3.3-1	1	7.2	156	500	0.32	0.08

Notes:

- AP-42, Chapter 3.3 references are from the October 1996 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 500 hr/yr.

Example Equations:

1 Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lbs/hp-hr) x Engine Power (HP)

2 Max. Hourly Emis. Rate (g/kW-hr) = Emission Factor (g/kW-hr) x (1oz/28g) x (1 lb/16oz) x Power Rating (kW)

Attachment I
Emission Calculations

Emergency Generator (Source ID# EG-2) Calculations Summary & Rationale

John Deere 6068HF285, Diesel										
Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Fuel Consumption (US gal/hour)	Engine Power (bhp)	Engine Power (kW)	Annual Operating Hours	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
Formaldehyde	1.18E-03	lb/MMBtu	AP-42, Table 3.3-2	1	7.2	156	116	500	0.001	0.000
Benzene	9.33E-04	lb/MMBtu	AP-42, Table 3.3-2	1	7.2	156	116	500	0.001	0.000
Toluene	4.09E-04	lb/MMBtu	AP-42, Table 3.3-2	1	7.2	156	116	500	0.000	0.000
Xylenes	2.85E-04	lb/MMBtu	AP-42, Table 3.3-2	1	7.2	156	116	500	0.000	0.000
Total Organic HAP									**0.003**	**0.001**

Notes:

- AP-42, Chapter 3.3 references are from the October 1996 revision.
- Max. Annual Emissions based upon Max. Hourly Emissions @ 500 hr/yr.
- Only the WVDEP-DAQ required Emergency Generator General Permit HAP species are calculated above.

Example Equations:

1 Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/MMBtu) x Fuel Consumption (gal/hour) x Fuel Btu value (130,000 Btu/gal)Conversion Factor (MMBtu/1,000,000 Btu)

Tank ID:	T-W3		Unit ID:	Bayer West Sump Pump					
Capacity (bbl)	0.175		Thruput (bbl/yr)	21913		Max. Total VP (psia)		0.018	
Diameter (ft)	2		Vent Days/Year	365		Avg. Total VP (psia)		0.0045	
Height or Length (ft)	10.7		Max. Temp (F)	90		Maximum Vapor MW		233	
Paint Factor	1.33		Avg. Temp (F)	56		Average Vapor MW		233	
Operating Pressure (psia)	14.7		Daily Temp. Change (F)	21.5		Diameter Factor		0.3238766	
Control Device Eff.	0		Const. Level Tank ?	no					
Fill Rate (gpm)	20.0		Horizontal Tank ?	no					
Specific Gravity	1								

Pollutant Name	Vap. Fraction	Molecular Weight	VP @ Max. Temp.	VP @ Avg. Temp.
Diesel Fuel	Wt Fr A 1	MW A 233	psia A 0.018	psia A 0.0045
	Wt Fr B	MW B 1	psia B	psia B
	Wt Fr C	MW C 1	psia C	psia C
	Wt Fr D	MW D 1	psia D	psia D
	Wt Fr E	MW E 1	psia E	psia E
	Wt Fr F	MW F 1	psia F	psia F
	Wt Fr G	MW G 1	psia G	psia G
	Wt Fr H	MW H 1	psia H	psia H
	Wt Fr I	MW I 1	psia I	psia I
	Wt Fr J	MW J 1	psia J	psia J
	Wt Fr K	MW K 1	psia K	psia K
	Wt Fr L	MW L 1	psia L	psia L
	Wt Fr M	MW M 1	psia M	psia M
	Wt Fr N	MW N 1	psia N	psia N
	Wt Fr O	MW O 1	psia O	psia O

Pollutant Name	Working Losses				Breathing Losses			
	Max. lb/hr		Avg. lb/hr		Avg. lb/hr		Avg. lb/yr	
Diesel Fuel	lb/hr A	0.018	lb/yr A	0.01	lb/hr A	0.0000	lb/yr A	0.34
	lb/hr B	0.000	lb/yr B	0.00	lb/hr B	0.0000	lb/yr B	0.00
	lb/hr C	0.00	lb/yr C	0.0	lb/hr C	0.0000	lb/yr C	0.0
	lb/hr D	0.00	lb/yr D	0.0	lb/hr D	0.0000	lb/yr D	0.0
	lb/hr E	0.00	lb/yr E	0.0	lb/hr E	0.0000	lb/yr E	0.0
	lb/hr F	0.00	lb/yr F	0.0	lb/hr F	0.0000	lb/yr F	0.0
	lb/hr G	0.00	lb/yr G	0.0	lb/hr G	0.0000	lb/yr G	0.0
	lb/hr H	0.00	lb/yr H	0.0	lb/hr H	0.0000	lb/yr H	0.0
	lb/hr I	0.00	lb/yr I	0.0	lb/hr I	0.0000	lb/yr I	0.0
	lb/hr J	0.00	lb/yr J	0.0	lb/hr J	0.0000	lb/yr J	0.0
	lb/hr K	0.00	lb/yr K	0.0	lb/hr K	0.0000	lb/yr K	0.0
	lb/hr L	0.00	lb/yr L	0.0	lb/hr L	0.0000	lb/yr L	0.0
	lb/hr M	0.00	lb/yr M	0.0	lb/hr M	0.0000	lb/yr M	0.0
	lb/hr N	0.00	lb/yr N	0.0	lb/hr N	0.0000	lb/yr N	0.0
	lb/hr O	0.00	lb/yr O	0.0	lb/hr O	0.0000	lb/yr O	0.0
	TOTAL:	0.018	TOTAL:	0.01	TOTAL:	0.0000	TOTAL:	0.34
						ANNUAL LOSS GRAND TOTAL:		0.35 VOC

Tank Color		Paint Factor, F	
Roof	Shell	Good	Poor
White	White	1	1.15
Al (shiny)	White	1.04	1.18
White	Al (shiny)	1.16	1.24
Al (shiny)	Al (shiny)	1.2	1.29
White	Al (dull)	1.3	1.38
Al (dull)	Al (dull)	1.38	1.48
White	Gray	1.3	1.38
Light Gray	Light Gray	1.33	---
Medium Gray	Medium Gray	1.49	---

0.0042918	= wt lb/ MW
0.2198972	= Equivalent Diameter
0.7081778	= Equivalent Vapor Space Height

LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Bayer CropScience has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit Registration for an Emergency Generator located on State Route 25 west of Institute, in Kanawha County, West Virginia. The latitude and longitude coordinates are: 38.384156, -81.765865. The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: Nitrogen Oxides 3.54 TPY, Carbon Monoxide 0.72 TPY, Volatile Organic Compounds 1.58 TPY, Particulate Matter 0.04 TPY, Sulfur Dioxide 0.23 TPY, and Hazardous Air Pollutants 0.002. Startup of operation is planned to begin on or about the 15th day of August, 2013. 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 31th day of May 2013.

By: Bayer CropScience LP
James H. Covington
Vice President, Head Institute Industrial Park
P.O. Box 1005
Institute, WV 25112

Attachment K
Electronic Submittal

This registration application is not being submitted electronically.

Attachment L
Application Fee

The $1,500 registration application fee required for this application will be paid by credit card.

Attachment M
Siting Criteria Waiver

The emergency generator will be located more than 300 feet form a public building or dwelling. Therefore, no waiver is required.