Walt Disney World Co.

March 30, 2004

Mr. Al Linero
Title V Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Construction Permit Application
Walt Disney World Co.
Three DISC Building Diesel Generators

Dear Mr. Linero:

Enclosed are four copies of a construction permit application for three diesel electric generators at the Walt Disney World Resort DISC Building. The generators are currently conditionally exempt from permitting since they are being used as emergency generators. This application is being submitted in order to reclassify them as unregulated emissions units to allow greater operational flexibility.

If you have any questions or need any further information, please call me at 407-824-7129.

Sincerely,

Rich Bumar, PE
Sr. Environmental Control Representative

Enclosure
cc: Alan Zahm, EPD

Department of Environmental Protection

Division of Air Resource Management

RECEIVED
MAR 31 2004
BUREAU OF AIR REGULATION

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Walt Disney World Co.	
2. Site Name: Walt Disney World Resort Complex	
3. Facility Identification Number: 0950111	
4. Facility Location... Walt Disney World Area Street Address or Other Locator: 1375 Buena Vista Dr. City: Lake Buena Vista County: Orange (48) Zip Code: 32830-1000	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: Richard A. Bumar, Jr., P.E.
2. Application Contact Mailing Address... Organization/Firm: Walt Disney World Co. Street Address: P.O. Box 10,000 City: Lake Buena Vista State: FL Zip Code: 32830-1000
3. Application Contact Telephone Numbers... Telephone: (407) 824-7129 ext. Fax: (407) 824 - 7455
4. Application Contact Email Address: rich.bumar@disney.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3-31-04
2. Project Number(s):	0950111-022-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

[x] Air construction permit.

Air Operation Permit

[ ] Initial Title V air operation permit.
[ ] Title V air operation permit revision.
[ ] Title V air operation permit renewal.
[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

[ ] Air construction permit and Title V permit revision, incorporating the proposed project.
[ ] Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

[x] I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The purpose of this application is to receive a contruction permit for three diesel generators. The generators were intitially installed in November 2002 to operate only as conditionally emempt emergency generators. This application is being submitted to reclassify the generators as unregulated emissions units to allow operational flexibility.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
New	3 DISC BUILDING STANDBY DIESEL ELECTRIC GENERATORS	AC1D	$0.00

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Lee Schmudde

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: Walt Disney World Co.
   Street Address: P.O. Box 10,000
   City: Lake Buena Vista Zip Code: 32830-1000

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: (407) 828-1723 ext. Fax: (407) 828-4311

4. Owner/Authorized Representative Email Address:

5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Signature

3/15/04

Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Richard A. Bumar, Jr.
   Registration Number: 55375
2. Professional Engineer Mailing Address...
   Organization/Firm: Walt Disney World Co.
   Street Address: P.O. Box 10,000
   City: Lake Buena Vista State: FL Zip Code: 32830-1000
3. Professional Engineer Telephone Numbers...
   Telephone: (407) 824-7129 ext. Fax: (407) 824-7455
4. Professional Engineer Email Address: rich.bumar@disney.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 3/15/04
Date

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone East (km) 449.70 North (km) 3138.00		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 79	6. Facility SIC(s): 7996
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Armando Rodriguez
2. Facility Contact Mailing Address... Organization/Firm: Walt Disney World Co. Street Address: P.O. Box 10000 City: Lake Buena Vista State: FL Zip Code: 32830-1000
3. Facility Contact Telephone Numbers: Telephone: (407) 824-7486 ext. Fax: (407) 824-7455
4. Facility Contact Email Address: Armando.rodriguex@disney.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: **N/A**
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☐ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
N/A		

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
None					

7. Facility-Wide or Multi-Unit Emissions Cap Comment:
N/A

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [x] Attached, Document ID: Attachment A [ ] Previously Submitted, Date:_____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [x] Attached, Document ID: Attachment B [ ] Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [x] Attached, Document ID: Attachment C [ ] Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   [x] Attached, Document ID: Attachment D [ ] Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification:
   [x] Attached, Document ID: Attachment E
3. Rule Applicability Analysis:
   [x] Attached, Document ID: Attachment F
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   [ ] Attached, Document ID:_____ [x] Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    [ ] Attached, Document ID:_____ [x] Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☐ Attached, Document ID:_____
   ☒ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable

5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:_____ ☒ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

Additional Requirements Comment

Please see the Walt Disney World Title V permit (0950111-021-AV) for a listing of exempt and insignificant activities/emissions units at this facility. The most recent compliance report was submitted to the FDEP on February 26 and all emissions units were in compliance.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [1] of [1]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☒ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
3 Disc Building Standby Diesel Electric Generators

3. Emissions Unit Identification Number: No corresponding ID exists

4. Emissions Unit Status Code: A	5. Commence Construction Date: 11/26/2002	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 7996	8. Acid Rain Unit? ☐ Yes ☒ No

9. Package Unit:
Manufacturer: Spectrum Detroit Diesel Model Number: 1750DS-4

10. Generator Nameplate Rating: 1.75 MW

11. Emissions Unit Comment: This emissions unit consists of three identical diesel electric generators

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description: None
2. Control Device or Method Code(s): N/A

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 254,000 gallons per year	
2. Maximum Production Rate: N/A	
3. Maximum Heat Input Rate: 47.362 million Btu/hr	
4. Maximum Incineration Rate: N/A pounds/hr N/A tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year

6. Operating Capacity/Schedule Comment:

The requested permitted operating capacity limit is 254,000 gallons of diesel fuel per year. This limit is requested to avoid the PSD significance threshold for NOx. The worst case operating mode for this emissions unit at 254,000 gallons per year will result in an emissions rate of 39.4 tons of NOx per year.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: NSA-21	2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: The emissions point for each unit is an 18 diameter opening, exiting horizontally from the south side of the generator enclosure building.		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: None		
5. Discharge Type Code: H	6. Stack Height: feet 15	7. Exit Diameter: feet 1.2
8. Exit Temperature: 831 °F	9. Actual Volumetric Flow Rate: acfm 14000	10. Water Vapor: N/A%
11. Maximum Dry Standard Flow Rate: dscfm N/A	12. Nonstack Emission Point Height: feet N/A	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) 28°15'43'' Longitude (DD/MM/SS) 81°34'31''	
15. Emission Point Comment: This emissions point is representative of three emissions point in this emissions unit.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Burning diesel fuel in a diesel electric generator		
2. Source Classification Code (SCC): 20200401	3. SCC Units: 1000 gallons burned	
4. Maximum Hourly Rate: 0.3432	5. Maximum Annual Rate: 254	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur: 0.1	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: 138
10. Segment Comment: The maximum hourly rate is for the entire emissions unit (3 generators operating simultaneously). The units individually operate at a maximum fuel usage rate of 114.4 gal/hr.		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOx	**N/A**	**N/A**	**NS**
CO	**N/A**	**N/A**	**NS**
SO2	**N/A**	**N/A**	**NS**
Hydrocarbons	**N/A**	**N/A**	**NS**
PM/PM10	**N/A**	**N/A**	**NS**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control: 0.0
3. Potential Emissions: 103.8 lb/hour 39.4 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): N/A to tons/year	
6. Emission Factor: 2.246 lb/MMBtu Reference: Manufacturer provided emissions data	7. Emissions Method Code: 5
8. Calculation of Emissions: 2.246 lb/MMBtu x 254,000 gallons/yr x 0.138 MMBtu/gal = 78,726 lb/yr 78,726 lb/yr x 1 ton/2000 lb = 39.36 tons NOx/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: N/A	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Not applicable-this pollutant is not emissions limited	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control: 0.0
3. Potential Emissions: 13.91 lb/hour 17.53 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): N/A to tons/year	
6. Emission Factor: 1.00 lb/MMBtu Reference: Manufacturer provided emissions data	7. Emissions Method Code: 5
8. Calculation of Emissions: 1.00 lb/MMBtu x 254,000 gallons/yr x 0.138 MMBtu/gal = 35,052 lb CO/yr 35,052 lb/yr x 1 ton/2000 lb = 17.53 tons CO/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: N/A	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Not applicable-this pollutant is not emissions limited	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control: 0.0
3. Potential Emissions: 12.19 lb/hour 4.52 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): N/A to tons/year	
6. Emission Factor: 0.2578 lb/MMbtu Reference: Manufacturer provided emissions data	7. Emissions Method Code: 5
8. Calculation of Emissions: 0.2578 lb/MMBtu x 254,000 gallons/yr x 0.138 MMBtu/gal = 9,036 lb SO2/yr 9,036 lb/yr x 1 ton/2000 lb = 4.52 tons SO2/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: N/A	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Not applicable-this pollutant is not emissions limited	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Hydrocarbons/VOC	2. Total Percent Efficiency of Control: 0.0
3. Potential Emissions: 8.34 lb/hour 10.5 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): N/A to tons/year	
6. Emission Factor: 0.6 lb/MMBtu Reference: Manufacturer provided emissions data	7. Emissions Method Code: 5
8. Calculation of Emissions: 0.6 lb/MMBtu x 254,000 gallons/yr x 0.138 MMBtu/gal = 21,031 lb HC-VOC/yr 21,031 lb/yr x 1 ton/2000 lb = 10.5 tons HC-VOC/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: N/A	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Not applicable-this pollutant is not emissions limited	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 0.0
3. Potential Emissions: 1.5 lb/hour 1.55 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): N/A to tons/year	
6. Emission Factor: 0.0884 lb/MMBtu Reference: Manufacturer provided emissions data	7. Emissions Method Code: 5
8. Calculation of Emissions: 0.0884 lb/MMBtu x 254,000 gallons/yr x 0.138 MMBtu/gal = 3,099 lb PM/yr 3,099 lb/yr x 1 ton/2000 lb = 1.55 tons PM/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: N/A	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Not applicable-this pollutant is not emissions limited	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [x] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: General VE standard	

Visible Emissions Limitation: Visible Emissions Limitation ___ of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ___1 of __1

1. Parameter Code: N/A	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [x] Attached, Document ID: Attachment B [ ] Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: Attachment G [x] Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: N/A [ ] Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [x] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [x] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [x] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [x] Attached, Document ID: Attachment H [ ] Not Applicable

Additional Requirements for Air Construction Permit Applications

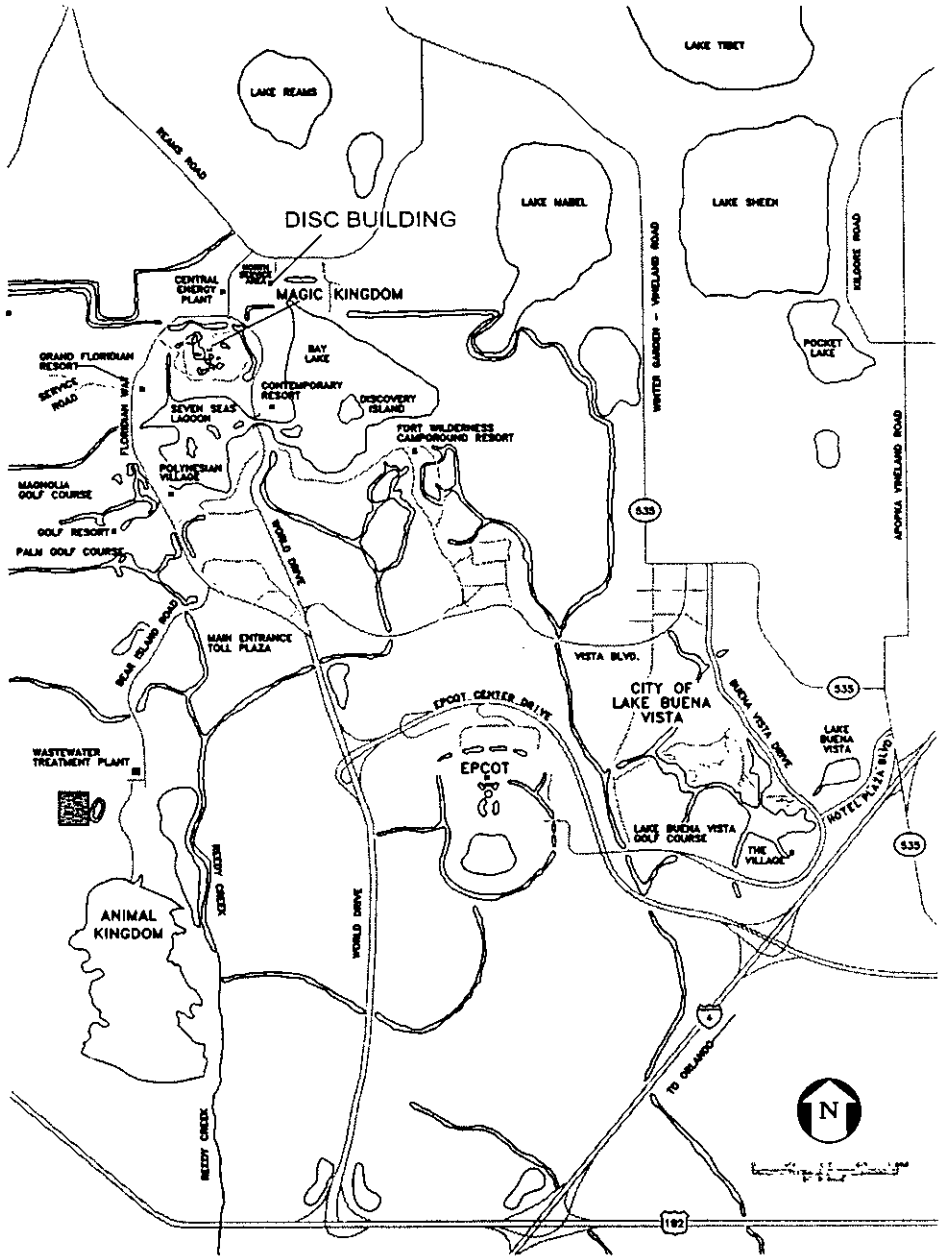
1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

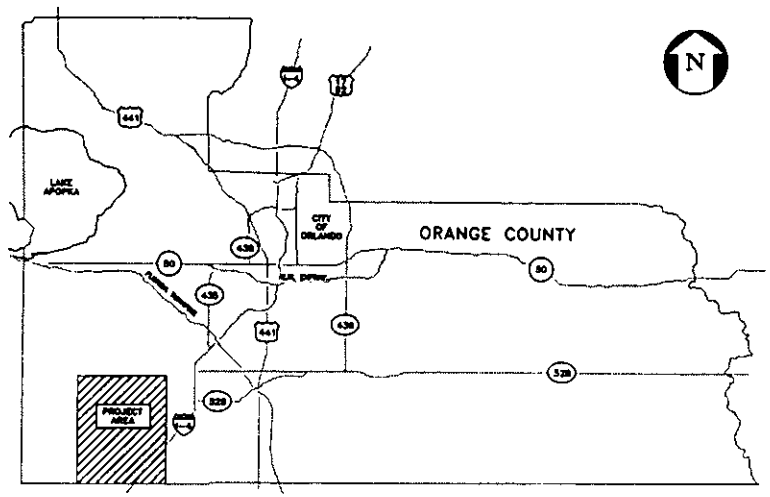
1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:_____
      ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

Additional Requirements Comment

This unregulated emissions unit has no control equipment.
Attachment H contains manufacturer specifications and emisssions rate information.



SITE LOCATION MAP

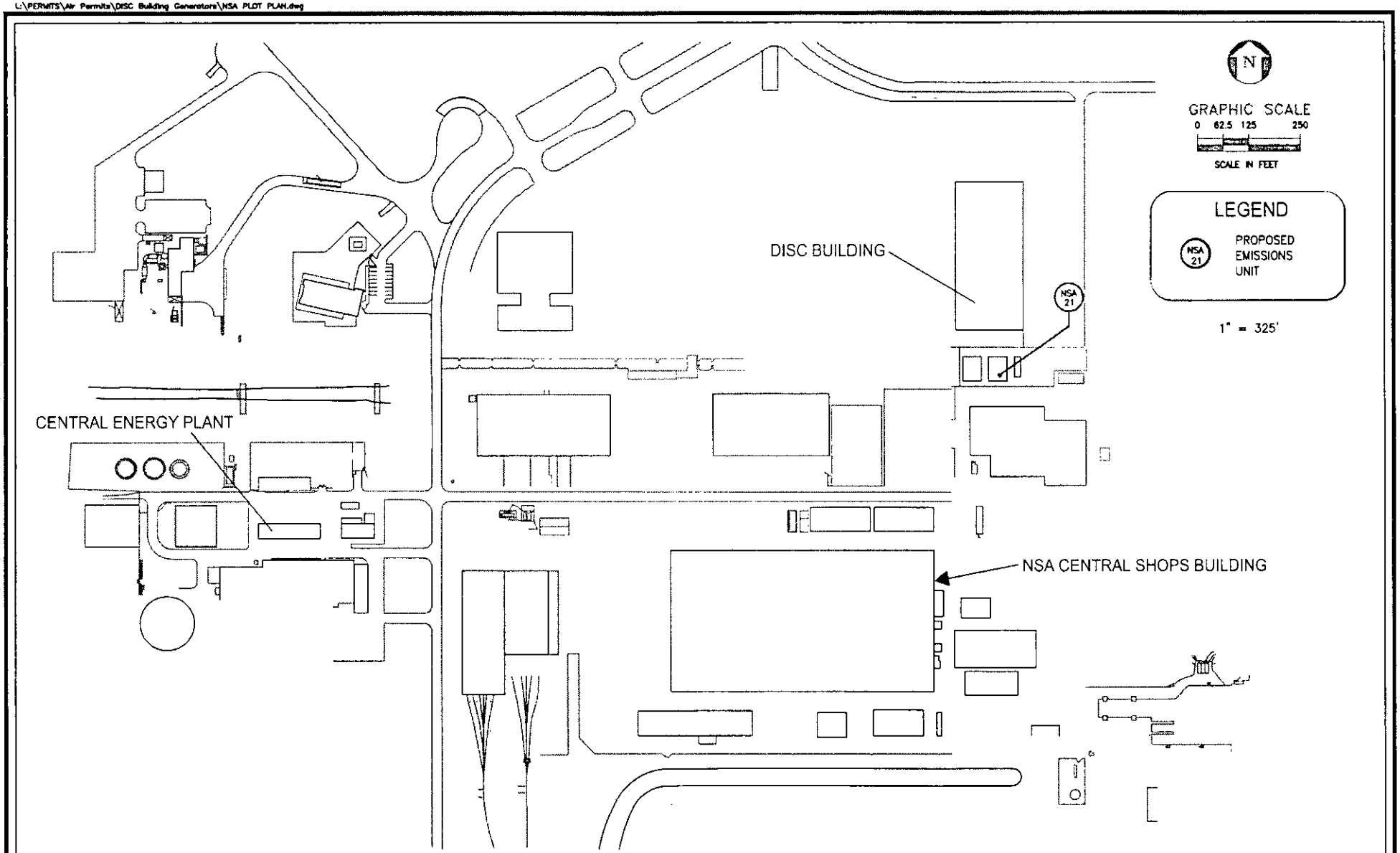


VICINITY MAP

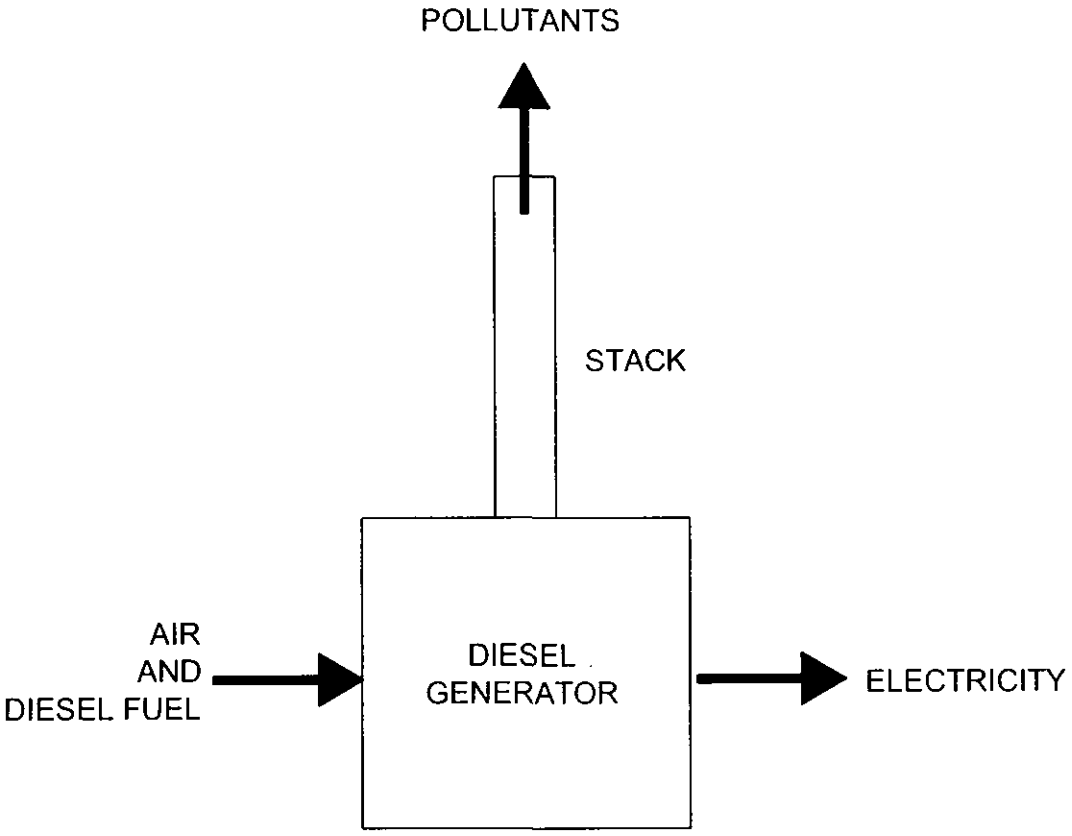
LOCATION MAP

ATTACHMENT A
LOCATOR MAP
DISC BUILDING GENERATORS

L:\PERMITS\Air Permits\DISC Building Generators\NSA PLOT PLAN.dwg



ATTACHMENT B
FACILITY PLOT PLAN
DISC BUILDING



ATTACHMENT C
PROCESS FLOW DIAGRAM
DISC BUILDING DIESEL ELECTRIC GENERATORS

ATTACHMENT D
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

During operations, the following techniques will be used to prevent unconfined particulate matter emissions on an as needed basis:

- Chemical or water application to:
    - Unpaved roads.
    - Unpaved yard areas.
    - Storage piles.
- Paving and maintenance of roads, parking areas, and yards.
- Landscaping and planting of vegetation.
- Confining abrasive blasting, where possible.
- Other techniques, as necessary.

ATTACHMENT F

RULE APPLICABILITY ANALYSIS

This emissions unit, when operated under the fuel usage limitation of 254,000 gallons per year, is an unregulated emissions unit. There are no applicable regulations that pertain to this unit, except for the Title V core list of regulations and the General Visible Emissions standard of 20% opacity.

ATTACHMENT E

DESCRIPTION OF PROPOSED CONSTRUCTION OR MODIFICATION:

EQUIPMENT SPECIFICATIONS AND EMISSIONS RATES

This permit application is being submitted to reclassify three conditionally exempt existing emergency generators as unregulated emissions units. The generators are being reclassified in order to allow greater operational flexibility at the DISC Building at the Walt Disney World Resort. The DISC Building houses all computer operations for the east coast of the Walt Disney Company. Since the computer systems are critical to the company's operation, the computers need to be protected from power losses or fluctuations. An existing uninterruptible power supply (UPS) has been deemed unserviceable and will need to be replaced soon and this project is ongoing. The existing emergency generators (which are operated only if a power failure has occurred) are being reclassified through this permitting action as a backup to the existing and future UPS, Once reclassified, these units are intended to be operated if there is a potential power outage, such as during heavy thunderstorms or hurricanes, in order to minimize any power fluctuations that may occur.

This attachment includes manufacturer's specifications of the generators and manufacturer's emissions test data. This data was used to calculate the potential emissions from the units in lieu of AP-42 factors.

DETROIT DIESEL SPECTRUM®

Model: 1750DS-4

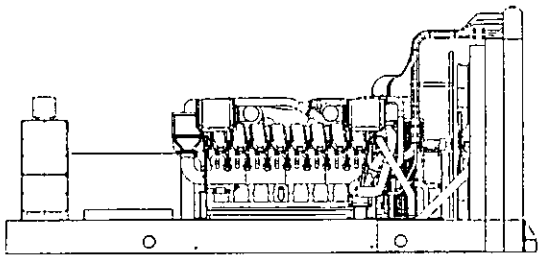
4 Cycle Diesel

380-4160 V

ISO 9001
NATIONALLY REGISTERED
DETROIT DIESEL SPECTRUM

Ratings Range

		60 Hz	50 Hz
Standby:	**kW**	1480-1750	1280-1540
	kVA	1850-2188	1600-1925
Prime:	**kW**	1340-1590	1160-1400
	kVA	1675-1988	1450-1750



Standard Features

- Your Detroit Diesel Spectrum® product distributor provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL-2200 listing.
- At 60 Hz the generator set accepts rated load in one step.
- The generator set complies with ISO 8528-5, Class G3 requirements for transient performance.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA).
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Generator features:
  - The brushless, rotating-field generator has broadrange reconnectability.
  - The pilot-excited, permanent-magnet generator (PMG) provides superior short-circuit capability.
- Other features:
  - Controllers are available for all applications. See controller features inside.
  - The generator set-to-skid mounting on 60 Hz models is direct mounting. The 50 Hz model mounting options include integral vibration isolation or direct mounting with spring isolators.
  - Electronic engine controls manage the engine.

Generator Ratings

				150°C Rise Standby Rating		130°C Rise Standby Rating		125°C Rise Prime Rating		105°C Rise Prime Rating	
Generator	**Voltage**	**Ph**	**Hz**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**
7M4052	220/380	3	60	1480/1850	2811	1480/1850	2811	1340/1675	2545	1340/1675	2545
	240/416	3	60	1620/2025	2810	1610/2013	2793	1470/1838	2550	1460/1825	2533
	277/480	3	60	1750/2188	2631	1750/2188	2631	1590/1988	2391	1590/1988	2391
	220/380	3	50	1480/1850	2811	1420/1775	2697	1344/1680	2552	1288/1610	2446
	230/400	3	50	1448/1810	2613	1348/1685	2432	1312/1640	2367	1224/1530	2208
	240/416	3	50	1380/1725	2394	1280/1600	2221	1256/1570	2179	1160/1450	2012
7M4054	220/380	3	60	1590/1988	3020	1590/1988	3020	1440/1800	2735	1440/1800	2735
	240/416	3	60	1750/2188	3036	1750/2188	3036	1590/1988	2758	1590/1988	2758
	277/480	3	60	1750/2188	2631	1750/2188	2631	1590/1988	2391	1590/1988	2391
	220/380	3	50	1540/1925	2925	1528/1910	2902	1400/1750	2659	1392/1740	2644
	230/400	3	50	1540/1925	2778	1540/1925	2778	1400/1750	2526	1400/1750	2526
	240/416	3	50	1540/1925	2672	1496/1870	2595	1400/1750	2429	1360/1700	2359
→ 7M4058	220/380	3	60	1750/2188	3324	1750/2188	3324	1590/1988	3020	1590/1988	3020
	240/416	3	60	1750/2188	3036	1750/2188	3036	1590/1988	2758	1590/1988	2758
	277/480	3	60	1750/2188	2631	1750/2188	2631	1590/1988	2391	1590/1988	2391
	220/380	3	50	1540/1925	2925	1540/1925	2925	1400/1750	2659	1400/1750	2659
	230/400	3	50	1540/1925	2778	1540/1925	2778	1400/1750	2526	1400/1750	2526
	240/416	3	50	1540/1925	2672	1540/1925	2672	1400/1750	2429	1400/1750	2429
7M4176	220/380	3	60	1750/2188	3324	1750/2188	3324	1590/1988	3020	1590/1988	3020
7M4292	347/600	3	60	1750/2188	2105	1750/2188	2105	1590/1988	1912	1590/1988	1912
7M4370	2400/4160	3	60	1750/2188	304	1750/2188	304	1590/1988	276	1590/1988	276
	1905/3300	3	50	1540/1925	337	1520/1900	332	1400/1750	306	1384/1730	303
7M4374	2400/4160	3	60	1750/2188	304	1750/2188	304	1590/1988	276	1590/1988	276
	1905/3300	3	50	1540/1925	337	1540/1925	337	1400/1750	306	1400/1750	306

RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. *Prime Power Ratings:* Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIS-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. GENERAL GUIDELINES FOR DERATION: *ALTITUDE:* Derate 1.5% per 305 m (1000 ft.) elevation above 1006 m (3300 ft.). Maximum altitude capability is 4572 m (15000 ft.) on 60 Hz and 6096 m (20000 ft.) on 50 Hz. *TEMPERATURE:* Derate 0.4% per 5.5°C (10°F) temperature above 25°C (77°F).

DETROIT DIESEL SPECTRUM

Detroit Diesel Spectrum
N7650 County Trunk LS
Sheboygan, Wisconsin 53083 USA
Phone 920-459-1877, Fax 920-459-1825
DetroitDieselSpectrum.com

Standard Features and Accessories

Additional Standard Features

- Alternator Protection (standard with Digital 550)
- Oil Drain Extension
- Operation and Installation Literature
- Pilot-Excited, Permanent-Magnet Generator (PMG)

Accessories

Enclosed Unit

- ❑ Sound Enclosure and Subbase Fuel Tank Packages
- ❑ Weather Enclosure and Subbase Fuel Tank Packages

Open Unit

- ❑ Exhaust Silencer, Critical
  60 Hz kits: PA-361608-SD, PA-361625-SD
  50 Hz kits: PA-361609-SD, PA-361617-SD
- ❑ Exhaust Silencer, Hospital
  60 Hz kits: PA-361610-SD, PA-361626-SD
  50 Hz kits: PA-361611-SD, PA-361626-SD
- ❑ Exhaust Silencer, Industrial
  60 Hz kits: PA-361615-SD, PA-361629-SD
  50 Hz kits: PA-361616-SD, PA-361623-SD
- ❑ Exhaust Silencer, Residential
  60 Hz kits: PA-361613-SD, PA-361628-SD
  50 Hz kits: PA-361614-SD, PA-361621-SD
- ❑ Flexible Exhaust Connector, Stainless Steel

Cooling System

- ❑ Block Heater
- ❑ City Water Cooling
- ❑ High Ambient Radiator
- ❑ Radiator Duct Flange
- ❑ Remote Radiator Cooling

Fuel System

- ❑ Flexible Fuel Lines
- ❑ Fuel Filter
- ❑ Fuel Pressure Gauge
- ❑ Subbase Fuel Tank with Day Tank

Electrical System

- ❑ Battery
- ❑ Battery Charger, Equalize/Float Type
- ❑ Battery Heater
- ❑ Battery Rack and Cables

Engine and Generator

- ❑ Air Cleaner, Heavy Duty
- ❑ Air Cleaner Restriction Indicator
- ❑ Bus Bar Kits (standard on 7M generators, 380-600 volt only)
- ❑ Generator Strip Heater
- ❑ Line Circuit Breaker (NEMA type 1 enclosure)
- ❑ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)
- ❑ NFPA 110 Literature
- ❑ Optional Generators
- ❑ Rated Power Factor Testing
- ❑ Safeguard Breaker (not available with Digital 550)
- ❑ Integral Vibration Isolation Mounting (50 Hz)
- ❑ Direct Mounting (50 Hz)
- ❑ Spring Isolators (50/60 Hz)

Paralleling System

- ❑ Load-Sharing Module
- ❑ Reactive Droop Compensator
- ❑ Remote Speed Adjust Potentiometer/Electronic Governor
- ❑ Voltage Adjust Potentiometer
- ❑ Voltage Regulator Relocation Kit

Maintenance

- ❑ General Maintenance Literature Kit
- ❑ Overhaul Literature Kit

Controller

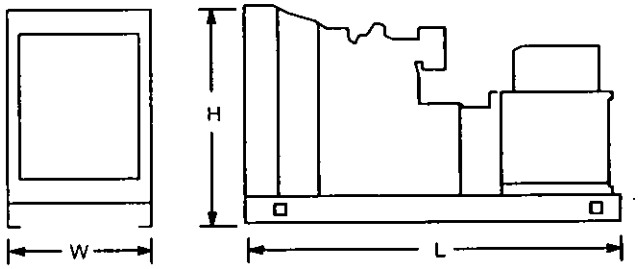
- ❑ Common Failure Relay Kit
- ❑ Communication Products and PC Software
  (Digital 550 controller only)
- ❑ Customer Connection Kit
- ❑ Dry Contact Kit (isolated alarm)
- ❑ Engine Prealarm Sender Kit
- ❑ Prime Power Switch
- ❑ Remote Annunciator Panel
- ❑ Remote Audiovisual Alarm Panel
- ❑ Remote Emergency Stop Kit
- ❑ Remote Mounting Cable
- ❑ Run Relay Kit

Miscellaneous Accessories

- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____

Dimensions and Weights

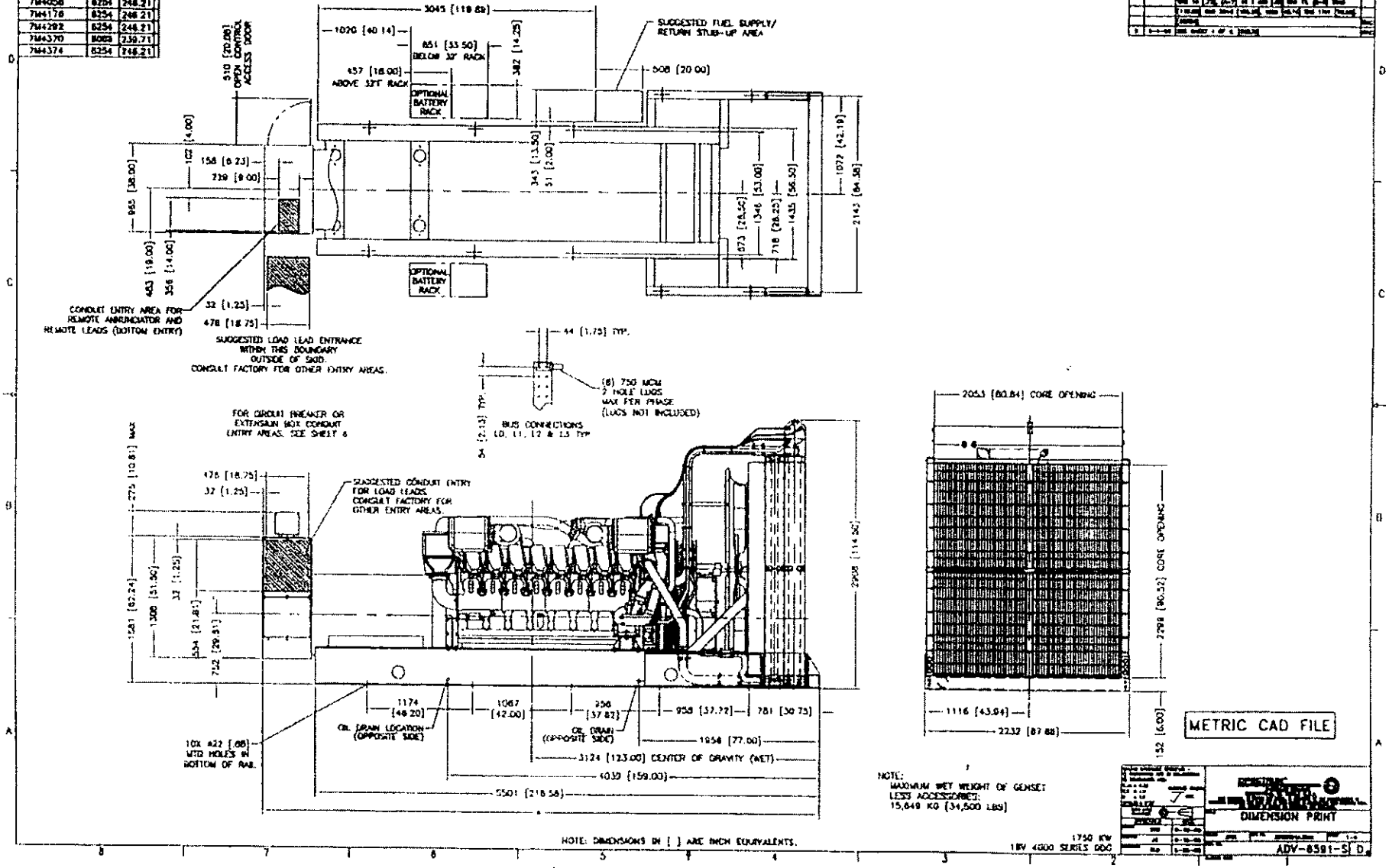
Overall Size, L x W x H, mm (in.):	6254 x 2232 x 2513 (246.21 x 87.88 x 98.94)
Weight (radiator model), wet, kg (lb.):	15649 (34500)



NOTE. This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

ALTERNATOR FRAME	DIM A	
7M4052	8089	739.71
7M4054	8254	748.21
7M4056	8254	748.21
7M5178	8254	748.21
7M4292	8254	748.21
7M4370	8089	739.71
7M4374	8254	748.21



METRIC CAD FILE

NOTE:
MAXIMUM WET WEIGHT OF GENSET LESS ACCESSORIES: 15,849 KG [34,500 LBS]

NOTE: DIMENSIONS IN [ ] ARE INCH EQUIVALENTS.

1750 KW 18V 4000 SERIES DOG

DIMENSION PRINT

ADV-8591-S D

Alternator Specifications

Specifications		Generator
Type		4-Pole, Rotating Field
Exciter type		Brushless, Permanent-Magnet Pilot Exciter
Voltage regulator		Solid State, Volts/Hz
Insulation:		
Material		Class H, Synthetic, Nonhygroscopic
Temperature rise		130°C, 150°C Standby
Bearing: quantity, type		1, Sealed
Coupling		Flexible Disc
Amortisseur windings		Full
Rotor balancing		125% 60 Hz, 150% 50 Hz
Voltage regulation, no-load to full-load (with <0.5% drift due to temp. variation)		3-phase sensing, ±0.25%
Unbalanced load capability		100% of Rated Standby Current
One-step load acceptance at 60 Hz		100% of Rating
Peak motor starting kVA:		(35% dip for voltages below)
480 V, 416 V	7M4052 (4 bus bar)	5500 (60 Hz), 4700 (50 Hz)
480 V, 416 V	7M4054 (4 bus bar)	7000 (60 Hz), 6600 (50 Hz)
480 V, 416 V	7M4058 (4 bus bar)	12500 (60 Hz), 8200 (50 Hz)
380 V	7M4176 (4 bus bar)	5400 (60 Hz)
600 V	7M4292 (4 bus bar)	4200 (60 Hz)
4160 V, 3300 V	7M4370 (6 lead)	5500 (60 Hz), 3000 (50 Hz)
4160 V, 3300 V	7M4374 (6 lead)	6200 (60 Hz), 3750 (50 Hz)

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state, volts-per-hertz voltage regulator with ±0.25% no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Detroit Diesel/MTU	
Engine: model	16V4000 (T163-7K36)	16V4000 (T163-7K16)
Engine: type	4-Cycle, Turbocharged, Intercooled	
Cylinder arrangement	16V	
Displacement, L (cu. in.)	65 (3967)	
Bore and stroke, mm (in.)	165 (6.5) x 190 (7.5)	
Compression ratio	13.7:1	
Piston speed, m/min. (ft./min.)	684 (2244)	570 (1870)
Main bearings: quantity, type	—	
Rated rpm	1800	1500
Max. power at rated rpm, kWm (BHP)	1900 (2550)	1686 (2260)
Cylinder head material	Cast Iron	
Crankshaft material	Forged Steel	
Valve (exhaust) material	High Alloy Steel	
Governor: type, make/model	DDEC Electronic Control	
Frequency regulation, no-load to full-load	Isochronous	
Frequency regulation, steady state	±0.25%	
Frequency	Fixed	
Air cleaner type, all models	Dry	

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust flow at rated kW, m^3/min. (cfm)	413 (14590)	325 (11520)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	407 (765)	507 (945)
Maximum allowable back pressure, kPa (in. Hg)	5.1 (1.5)	
Exhaust outlet size at engine hookup, mm (in.)	2 @ 254 (10)	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	24	
Ampere rating	70	
Starter motor rated voltage (DC)	Dual, 24	
Battery, recommended cold cranking amps (CCA):		
Qty., CCA rating above 0°C (32°F)	4, 950	
Qty., CCA rating below 0°C (32°F)	8, 1250	
Battery voltage (DC)	12	

Fuel

Fuel System	60 Hz	50 Hz
Fuel supply line, min. ID, mm (in.)	25 (1.0)	
Fuel return line, min. ID, mm (in.)	19 (0.75)	
Max. lift, engine-driven fuel pump, m (ft.)	—	
Max. fuel flow, Lph (gph)	1045 (276)	1068 (283)
Max. fuel pump restriction with new/used filter, kPa (in. Hg)	20 (6)/41 (12)	
Fuel filter	2, Secondary	
Recommended fuel	#2 Diesel	

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	230 (243)	
Oil pan capacity with filter, L (qt.)	250 (264)	
Oil filter: quantity, type	4, Spin-On	
Oil cooler	Water-Cooled	

Application Data

Cooling Systems

Radiator System	60 Hz	50 Hz
Ambient temp., standby rating, °C (°F)	45 (113)	
Ambient temp., prime rating, °C (°F)	45 (113)	50 (122)
Engine water capacity, L (gal.)	208 (55)	
Radiator system capacity, including engine, L (gal.)	613 (162)	
Engine jacket water flow, Lpm (gpm)	1669 (441)	1420 (375)
Charge cooler water flow, Lpm (gpm)	647 (171)	606 (160)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	610 (34680)	588 (33448)
Heat rejected to charge cooling water at rated kW, dry exhaust, and at innercooler coolant inlet temperature <57°C (135°F), kW (Btu/min.)	538 (30600)	342 (19436)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	1829 (72)	
Fan, kWm (HP)	60 (81)	49 (66)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	

High Ambient Radiator System	60 Hz	50 Hz
Ambient temp., standby rating, °C (°F)	50 (122)	—
Engine water capacity, L (gal.)	208 (55)	—
Radiator system capacity, including engine, L (gal.)	780 (206)	—
Engine jacket water flow, Lpm (gpm)	1669 (441)	—
Charge cooler water flow, Lpm (gpm)	647 (171)	—
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	610 (34680)	—
Heat rejected to charge cooling water at rated kW, dry exhaust, and at innercooler coolant inlet temperature <57°C (135°F), kW (Btu/min.)	538 (30600)	—
Water pump type	Centrifugal	—
Fan diameter, including blades, mm (in.)	2362 (93)	—
Fan, kWm (HP)	66 (88)	—
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	—

Remote Radiator System*	60 Hz	50 Hz
Exhaust manifold type	Dry	
Connection sizes:	Class 150 ANSI Flange	
Water inlet, mm (in.)	191 (7.5) Bolt Circle	
Water outlet, mm (in.)	191 (7.5) Bolt Circle	
Intercooler inlet/outlet, mm (in.)	152 (6.0) Bolt Circle	
Static head allowable above engine, kPa (ft. H_2O)	149 (50)	

City Water Cooling (CWC) System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Connection sizes:		
Water inlet, mm (in.)	*	
Water outlet, mm (in.)	*	

* Contact your local distributor for cooling system options and specifications based on your specific requirements.

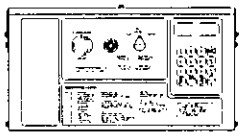
Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m^3/min. (scfm)†	1866 (65900)	1838 (64900)
High ambient radiator-cooled cooling air, m^3/min. (scfm)†	3118 (110000)	—
Cooling air required for gen. set when equipped with CWC or remote radiator, based on 14°C (25°F) rise and ambient temp. of 29°C (85°F), m^3/min. (cfm)	552 (19500)	499 (17700)
Combustion air, m^3/min. (cfm)	176 (6225)	125 (4414)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	67 (3825)	60 (3390)
Generator, kW (Btu/min.)	82 (4691)	76 (4320)

† Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Fuel Consumption	60 Hz	50 Hz
Diesel, Lph (gph) at % load	**Standby Rating**	
100%	433.2(114.4)	385.0(101.7)
75%	329.3 (87.0)	291:1 (76.9)
50%	229.4 (60.6)	198.7 (52.5)
25%	127.2 (33.6)	108.6 (28.7)
Diesel, Lph (gph) at % load	**Prime Rating**	
100%	394.4(104.2)	350.9 (92.7)
75%	302.8 (80.0)	265.7 (70.2)
50%	211.2 (55.8)	182.5 (48.2)
25%	118.5 (31.3)	100.3 (26.5)

Available Controllers



Digital 550 Controller
Audiovisual annunciation with NFPA 110 Level 1 capability.
Programmable microprocessor logic and digital display features.
Safeguard circuit protection standard.
12- or 24-volt engine electrical system capability.
Remote start, remote annunciation, and remote communication options.
Refer to M6-46 for additional controller features and accessories.

Microprocessor-Plus, 16-Light Controller
Audiovisual annunciation with NFPA 110 Level 1 capability.
Microprocessor logic, AC meters, and engine gauge features.
12- or 24-volt engine electrical system capability.
Remote start, prime power, and remote annunciation options.
Refer to M6-30 for additional controller features and accessories.

Standby Power Limit: 2550 bhp @ 1800 r/min

Summary

Rated Engine Speed, r/min	1800
Certification Code (CWC)	5409
US Nonroad Certification	Yes
EURO Nonroad (Stage 1) Certification	No
TA LUFT Compliance	No
IMO MARPOL 73/78 Annex VI Compliance	
Comments	

Test Conditions:
Inquiries should be sent to: George.Polson@Detroitdiesel.com

D2-Cycle Emissions

	Engine Load (g/hr)					
	10%	25%	50%	75%	100%	Total (g/bhp-hr)
NO_x	1,625	3,705	7,985	12,240	15,715	
CO	2,760	2,105	1,180	687	872	
HC	1,410	1,260	1,030	1,005	852	
SO_2 - with .5% sulfur content fuel	282	542	977	1,405	1,845	—
SO_2 - with .05% sulfur content fuel	28.2	54.2	97.7	140	184	—
Particulates	177	186	209	205	228	

Smoke Summary, Bosch No.

Smoke

ATTACHMENT E
EMISSIONS CALCULATIONS

Fuel Heat Value, mmBtu/gal 0.138
Annual Fuel Usage, gal 254000 (this is the maximum amount of fuel that can be burned to stay below 40 tpy of NOx)

Max Emissions	Emissions, lb/gal	Emissions, lb/hr	Emissions, lb/MMBtu	Annual Emissions, tons
NOx	0.3099	34.61	2.25	39.3559
CO	0.1380	4.64	1.00	17.5251
SO2	0.0356	4.064	0.2578	4.5176
PM	0.0122	0.50	0.0884	1.5485
HC	0.0826	2.78	0.60	10.4901

Section I Emissions rates

The following data was provided by the manufacturer:

	Engine Load				
Emissions Factor, g/hr	10%	25%	50%	75%	100%
NOx	1625	3705	7985	12240	15715
CO	2760	2105	1180	687	872
SO2- .5% S	282	542	977	1405	1845
SO2- .05% S	28.2	54.2	97.7	140.5	184.5
PM	177	186	209	205	228
HC	1410	1260	1030	1005	852
Fuel Usage (gph)		33.6	60.6	87.0	114.4

This is the conversion to lb/hr from the manufaturer's data:

Emissions Factor, lb/hr		25%	50%	75%	100%
NOx		8.161	17.588	26.960	34.615
CO		4.637	2.599	1.513	1.921
SO2- .5% S		1.194	2.152	3.095	4.064
SO2- .05% S		0.119	0.215	0.309	0.406
PM		0.410	0.460	0.452	0.502
HC		2.775	2.269	2.214	1.877

This is the conversion to lb/MMBtu from the manufaturer's data:

Emissions Factor, lb/MMbtu		25%	50%	75%	100%
NOx		1.760	2.103	2.246	2.193
CO		1.000	0.311	0.126	0.122
SO2- .5% S		0.257	0.257	0.258	0.257
SO2- .05% S		0.026	0.026	0.026	0.026
PM		0.088	0.055	0.038	0.032
HC		0.599	0.271	0.184	0.119

Section II Annual Emissions Calculations at Varying Engine Loads

Sample calculation for NOx at 25% load:
1.76 lb NOx/MMBtu x 0.138 MMBtu/gal = 0.2429 lb NOx/gal
0.2429 lb NOx/gal x 254,000 gallons/yr = 61,691 lb NOx/yr
61,691 lb NOx/yr ÷ 2000 lb/ton = 30.85 tons NOX/yr

Fuel input, gph @ 25%			33.6	
Emissions Factor, lb/MMBtu		Emissions, lb/gal	Annual Emissions, tons	
NOx	1.76	0.2429	30.85	
CO	1.00	0.1380	17.53	<---Maximum annual CO emissions
SO2	0.26	0.0355	4.51	<---Maximum annual SO2 emissions
PM	0.09	0.0122	1.55	<---Maximum annual PM emissions
HC	0.60	0.0826	10.49	<---Maximum annual HC emissions
Annual Fuel Usage, gal			254000	
Annual Operating Hours			7560	

ATTACHMENT E
EMISSIONS CALCULATIONS

Fuel input, gph @ 50%			60.6
Emissions Factor, lb/MMBtu		Emissions, lb/gal	Annual Emissions, tons
NOx	2.10	0.290	36.86
CO	0.31	0.043	5.45
SO2	0.26	0.036	4.51
PM	0.06	0.008	0.96
HC	0.27	0.037	4.75
Annual Fuel Usage, gal			254000
Annual Operating Hours			4191

Fuel input, gph @ 75%			87.0	
Emissions Factor, lb/MMBtu		Emissions, lb/gal	Annual Emissions, tons	
NOx	2.25	0.310	39.36	<---Maximum annual NOx emissions
CO	0.13	0.017	2.21	
SO2	0.26	0.036	4.52	
PM	0.04	0.005	0.66	
HC	0.18	0.025	3.23	
Annual Fuel Usage, gal			254000	
Annual Operating Hours			2920	

Fuel input, gph @ 100%			114.4
Emissions Factor, lb/MMBtu		Emissions, lb/gal	Annual Emissions, tons
NOx	2.19	0.303	38.43
CO	0.12	0.017	2.13
SO2	0.26	0.036	4.51
PM	0.03	0.004	0.56
HC	0.12	0.016	2.08
Annual Fuel Usage, gal			254000
Annual Operating Hours			2220

ATTACHMENT F

RULE APPLICABILITY ANALYSIS

This emissions unit, when operated under the fuel usage limitation of 254,000 gallons per year, is an unregulated emissions unit. There are no applicable regulations that pertain to this unit, except for the Title V core list of regulations and the General Visible Emissions standard of 20% opacity.

In addition, a MACT rule applicability analysis was performed to determine if the proposed RICE MACT is applicable to this emissions unit. The proposed rule was published in the Federal Register on December 22, 2002. The proposed rule states that existing compression ignition internal combustion engines are not subject to any specific requirements under the proposed rule. The contract for the construction of this emission unit was signed on November 26, 2002, so it is an existing unit, and not subject to the proposed rule. In a discussion with Cindy Phillips in December 2003, it was confirmed that it is considered an existing unit relative to the proposed MACT rule.

ATTACHMENT G
FUEL ANALYSIS

MARATHON ASHLAND PETROLEUM LLC

Louisiana Refining Division
Laboratory
P. O. Box AC Garyville, La 70051 (504) 535-2241

No. 2 Diesel/Fuel Oil
Certificate of Analysis #

http://webmail.cfl.rr.com/index.cgl

LIMS Identification Number:	AF72718
Tank or Vessel Sampled:	TK 300-1
Sampled by:	MAP
Date/Time Sampled:	5/22/02 2115

MARATHON ASHLAND LABORATORY DATA

		SPECIFICATIONS				
PARAMETER	ASTM TEST METHOD	HSD SOUTHEAST	HSD MIDWEST	LSD		TEST RESULTS
Product Sold As:		[ ]	[ ]	[X]		
API Gravity, @ 60 °F	D-4052	30 min.	30 min.	30 min.		32.8
Sulfur, wt.%	D-4294	0.50 max.	0.50 max.	0.05 max.		0.0340
Flash, PMCC °F	D93-A	140 min.	125 min.	140 min.		149
Color	D-1500	2.5 max.	3.5 max.	2.5 max.		<2.0
Colonial Haze Rating, max. @ 77 °F		2 max.	2 max.	2 max.		1
Viscosity, cSt @ 40 °C (104 °F)	D-445	1.9 min./3.4 max.	1.8 min./4.1 max.	1.9 min./3.4 max.		2.77
Carbon Residue on 10% Bottoms	D-524	0.35	0.35	0.35		0.15
Corrosion	D-130	No. 1 max.	No.1 max.	No 1 max.		1A
Ash, wt.%	D-482	0.01 max.	0.02 typical	0.01 max.		<0.001
Cetane Index	D-976	40 min.	40 min.	40 min.		45.2
Cloud Point, °F	D-5773			Midwest	Southeast	
Winter (8/1 -2/28)		+14 max.	+15 max.	+10 max.	+14 max.	
Summer (3/1 - 7/31)		+20 max.	+20 max.	+20 max.	+20 max.	9.5
Pour Point, °F	D-5949			Midwest	Southeast	
Winter (8/1 - 2/28)		0 max.	-15 max.	-15 max.	0 max	
Summer (3/1 -7/31)		+10 max.	+10 max.	+10 max.	+10 max.	-4
Distillation, °F	D-86					
90% Recovered		540 min./640 max.	540 min./640 max.	540 min./640 max.		616
Endpoint		690 max.		690 max.		651
Red Dye Content, mg/L						
Pipeline		1.5 min./ 2.5 max.	1.5 min./2.5 max.			
Terminal		11.9 min.	11.9			
Thermal Stability, Pad No.	Dupont F21-61	5 max.	5 max.	5 max.		2
Conductivity, picosiemems @ 20 °F	D-2624	50 min.	50 min.	50 min.		115

This COA was prepared from analysis performed on a sample of product from the above specified tank, obtained at the specified date and time.

Exceptions:

Marathon Ashland Petroleum Final Approval: Nicci Ruble Date: 5/24/02