DOCKETED

Docket Number:	17-SPPE-01
Project Title:	McLaren Backup Generating Facility
TN #:	222097
Document Title:	Application for Small Power Plant Exemption for McLaren Backup Generating Facility - Appendix E-2 Part 2
Description:	N/A
Filer:	Patty Paul
Organization:	DayZen LLC
Submitter Role:	Applicant Representative
Submission Date:	1/5/2018 12:13:57 PM
Docketed Date:	1/5/2018

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Form ICE
Internal Combustion Engines

4. EMISSION POINT/STACK INFORMATION ☐ *Check here if the engine has more than one stack or has a continuous pollutant emission monitor and complete one Form P for each emission point..*

Emission point number P _____ *(If unknown leave blank)* ■ New ☐ Existing

Stack outlet height from ground level *(ft)* 45.17

Diameter of stack outlet *(inches)* 20.08 or Outlet cross-section area *(square inches)* _____

Direction of outlet *(check one)* ☐ Horizontal ■ Vertical End of outlet *(check one)* ■ Open/hinged flap ☐ Rain cap

Exhaust rate at typical operation *(acfm)* 25630 Exhaust temperature at typical operation *(°F)* 891.9

5. RISK ASSESSMENT INFORMATION.

Distance from engine to the property line of the nearest residence *(ft)* 801.37 or *(check if)* ☐ Greater than one mile

Distance from engine to the property line of the nearest school[1] *(ft)* _____ or *(check if)* ■ Greater than 1000 ft

Describe the nearest non-residential, non-school site *(check one)* ☐ Industrial ■ Commercial ☐ Hospital

☐ Day care center ☐ Other _____

Distance from engine to the property line of the nearest non-residential, non- school site*(ft)* 132.4 or ☐ Greater than one mile

1. *K-12 and more than twelve children only.*

6. FUEL DATA *Complete the table below for each fuel burned. If you are using a fuel other than those listed in the fuel code table, attach a* ***fuel analysis*** *indicating the higher heating value, sulfur content, and nitrogen content. Please clearly indicate the measurement unit that corresponds to the information you are submitting.* ☐ *Check here if you are using more than two fuels, and attach a copy of this page listing the additional fuels.*

Primary Fuel		Secondary Fuel	
Fuel Code[1]	98	Fuel Code[1]	
Name	ULSD	Name	
Maximum Fuel Use Rate[2]	214.2 *gal/hr or SCF/hr*	Maximum Fuel Use Rate[2]	*gal/hr or SCF/hr*
Annual Fuel Usage[3]	10710 *gal/yr or therm/yr or SCF/yr*	Annual Fuel Usage[3]	*gal/yr or therm/yr or SCF/yr*
Typical Heat Content[4]	*BTU/gal or BTU/SCF*	Typical Heat Content[4]	*BTU/gal or BTU/SCF*
Sulfur Content[4]	*wt% liquids or ppmv gases*	Sulfur Content[4]	*wt% liquids or ppmv gases*

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐
Others – ☐ Check here and attach a separate list under each fuel used.				

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐
Others – ☐ Check here and attach a separate list under each fuel used.				

1. *Fuel Codes:* Diesel (**98**) Bio Diesel B100 (**815**) Bio Diesel B20 Blend (**816**) Gasoline (**551**) Natural Gas (**189**) Landfill Gas (**511**) Digester Gas (**493**) Liquid Petroleum Gas (LPG) (**160**)
2. *Maximum fuel use rate units: gallon/hr for liquid fuels and SCF/hr for gaseous fuels. (SCF =Standard Cubic Foot)*
3. *The annual fuel usage is the actual or projected engine fuel consumption over a rolling 12-month time period. Annual usage units: gallons for liquid fuel, therms for natural gas, and SCF for other gaseous fuels. (therm = 100,000 BTUs, BTU =British Thermal Unit)*
4. *If you are using diesel, natural gas, or gasoline, you may skip this entry. Heat content units: BTU/gallon for liquid fuels, BTU/SCF for gaseous fuels. Sulfur content* units: weight % for liquid fuels, ppmv for gaseous fuels. (ppmv = parts per million by volume)
5. *Emission factors may be reported as gram/brakehp-hr, or as lb per gallon, or as lb per therm, or as lb per SCF.*
6. *See the Control Efficiency/Emission Factor Basis Code table under Section 3 on page 1 of this form.*
7. *Place a check in this column if the emission factor applies to emissions after abatement by an add-on abatement device.*

7. CERTIFICATION I hereby certify that all information contained herein is true and correct. *(Please sign and date this form)*

SPENCER MYERS	Director of Construction		12/20/17
Name of person certifying (print)	Title of person certifying	Signature of person certifying	Date

Approved By: _____ Date: _____ Entered By: _____ Date: _____

(District Use Only)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105
Engineering Division (415) 749-4990
www.baaqmd.gov fax (415) 749-5030

Form ICE
Internal Combustion Engines

*Form ICE is to be completed for all internal combustion engines except turbines. (For turbines, submit Form C). Submit one form for each engine. If this is a new engine or a modification to an existing engine, you must also complete Form HRSA Health Risk Screen Analysis. Additional forms and all District regulations and rules are available on the District's web site. Contact your assigned permit engineer or the Engineering Division at the above telephone number if you need assistance completing this form. Please include the engine manufacturer's **equipment specifications**.*

1. SUMMARY ☒ New Construction ☐ Modification ☐ Loss of Exemption

Company Name: Vantage Data Centers Management Co, LLC. Plant No.*:
Source Description: Diesel Generator Source No.*: 30 *(If unknown leave blank)*
Initial Date of Operation: ASAP *(Not required for modification of an existing permitted source)*
Operating Schedule: *Typical hrs/day* 0.5 *Days/week* 1 *Weeks/yr* 50 *Maximum hrs/day* 24

2. ENGINE INFORMATION ☐ *Check here if applying for a multiple location permit. (See Reg. 2-1-413 for requirements)*

Engine Type: *(Check one)* ☒ 4 Stroke ☐ 2 Stroke Compression Ignition (Diesel) or ☐ 4 Stroke ☐ 2 Stroke Spark Ignition
Engine Manufacturer: Caterpillar Model: C175-16 Model Year: 2017
EPA/CARB Engine Family Name: HCPXL106.NZS Engine Serial No.: unknown
Engine Displacement: 5155.8 *(cu in)* Maximum rated output *(bhp)*: 4423 Typical load as % of bhp rating: 60
Is this an emergency/standby engine? ☒ Yes ☐ No

(Complete and check all that apply)

Certification: ☐ EPA Certified ☐ CARB Certified CARB Executive Order No.: Ramboll Environ
☐ None *(If None is checked, please indicate below the items applicable to this engine.)*
☐ Naturally aspirated ☐ Supercharged ☐ Turbocharged ☐ Inter-cooled ☐ After-cooled
☐ Timing retard ≥ 4° ☐ Lean-burn ☐ Rich-burn

Primary Use: ☒ Electrical generation ☐ Cogeneration ☐ Pump driver ☐ Fire pump driver
☐ Compressor driver ☐ Tub grinder driver ☐ Other:

3. ABATEMENT DEVICE INFORMATION *Complete this section only if the engine exhausts to an add-on abatement device.*
☐ *Check here if the engine has more than one add-on abatement device and complete a separate Form A for each additional abatement device.*

Abatement device number: A 30 *(If unknown leave blank)* ☒ New ☐ Existing
Device type: ☒ Diesel catalyzed particulate filter ☐ Oxidation catalyst ☐ Selective catalytic reduction (SCR)
☐ Non-selective catalytic reduction (NSCR or 3-way catalyst) ☐ Other: Johnson Matthey CRT +
Make, Model, and Rated Capacity: Johnson Matthey CRT +

Abatement device control efficiencies at typical operation *(Use the basis codes listed below. If unknown leave blank)*

Pollutant Name	Wt % Reduction	Basis Code
Particulates	85	9
Organics	70	9
Nitrogen Oxides		
Sulfur Dioxide		
Carbon Monoxide	80	12/20/20
Others – ☐ Check here and attach a separate list of pollutants. Include the basis code and the control efficiency.		

Control Efficiency/Emission Factor Basis Codes: *(Submit supporting documentation if available)*

(1) Source testing or other measurement by plant
(2) Source testing or measurement by BAAQMD *(District use only)*
(3) Specification from vendor
(4) Material balance by plant using knowledge of process
(5) Material balance by BAAQMD *(District use only)*
(6) EPA Document AP-42 Emission Factors
(7) Taken from literature other than AP-42
(8) Guess
(9) EPA/CARB Certification

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Form ICE
Internal Combustion Engines

4. EMISSION POINT/STACK INFORMATION ☐ *Check here if the engine has more than one stack or has a continuous pollutant emission monitor and complete one Form P for each emission point..*

Emission point number P _____ *(If unknown leave blank)* ■ New ☐ Existing

Stack outlet height from ground level *(ft)* 45.17

Diameter of stack outlet *(inches)* 20.08 or Outlet cross-section area *(square inches)* _____

Direction of outlet *(check one)* ☐ Horizontal ■ Vertical End of outlet *(check one)* ■ Open/hinged flap ☐ Rain cap

Exhaust rate at typical operation *(acfm)* 25630 Exhaust temperature at typical operation *(°F)* 891.9

5. RISK ASSESSMENT INFORMATION.

Distance from engine to the property line of the nearest residence *(ft)* 801.37 or *(check if)* ☐ Greater than one mile

Distance from engine to the property line of the nearest school[1] *(ft)* _____ or *(check if)* ■ Greater than 1000 ft

Describe the nearest non-residential, non-school site *(check one)* ☐ Industrial ■ Commercial ☐ Hospital ☐ Day care center ☐ Other _____

Distance from engine to the property line of the nearest non-residential, non- school site*(ft)* 132.4 or ☐ Greater than one mile

1. *K-12 and more than twelve children only.*

6. FUEL DATA *Complete the table below for each fuel burned. If you are using a fuel other than those listed in the fuel code table, attach a* ***fuel analysis*** *indicating the higher heating value, sulfur content, and nitrogen content. Please clearly indicate the measurement unit that corresponds to the information you are submitting.* ☐ *Check here if you are using more than two fuels, and attach a copy of this page listing the additional fuels.*

Primary Fuel		Secondary Fuel	
Fuel Code[1]	98	Fuel Code[1]	
Name	ULSD	Name	
Maximum Fuel Use Rate[2]	214.2 *gal/hr or SCF/hr*	Maximum Fuel Use Rate[2]	*gal/hr or SCF/hr*
Annual Fuel Usage[3]	10710 *gal/yr or therm/yr or SCF/yr*	Annual Fuel Usage[3]	*gal/yr or therm/yr or SCF/yr*
Typical Heat Content[4]	*BTU/gal or BTU/SCF*	Typical Heat Content[4]	*BTU/gal or BTU/SCF*
Sulfur Content[4]	*wt% liquids or ppmv gases*	Sulfur Content[4]	*wt% liquids or ppmv gases*

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐
Others – ☐ Check here and attach a separate list under each fuel used.				

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐
Others – ☐ Check here and attach a separate list under each fuel used.				

1. *Fuel Codes:* Diesel (**98**) Bio Diesel B100 (**815**) Bio Diesel B20 Blend (**816**) Gasoline (**551**) Natural Gas (**189**) Landfill Gas (**511**) Digester Gas (**493**) Liquid Petroleum Gas (LPG) (**160**)
2. *Maximum fuel use rate units: gallon/hr for liquid fuels and SCF/hr for gaseous fuels. (SCF =Standard Cubic Foot)*
3. *The annual fuel usage is the actual or projected engine fuel consumption over a rolling 12-month time period. Annual usage units: gallons for liquid fuel, therms for natural gas, and SCF for other gaseous fuels. (therm = 100,000 BTUs, BTU =British Thermal Unit)*
4. *If you are using diesel, natural gas, or gasoline, you may skip this entry. Heat content units: BTU/gallon for liquid fuels, BTU/SCF for gaseous fuels. Sulfur content* units: weight % for liquid fuels, ppmv for gaseous fuels. (ppmv = parts per million by volume)
5. *Emission factors may be reported as gram/brakehp-hr, or as lb per gallon, or as lb per therm, or as lb per SCF.*
6. *See the Control Efficiency/Emission Factor Basis Code table under Section 3 on page 1 of this form.*
7. *Place a check in this column if the emission factor applies to emissions <u>after</u> abatement by an add-on abatement device.*

7. CERTIFICATION I hereby certify that all information contained herein is true and correct. *(Please sign and date this form)*

SPENCER MYERS	Director of Construction		12/20/17
Name of person certifying (print)	Title of person certifying	Signature of person certifying	Date

Approved By: _____ Date: _____ Entered By: _____ Date: _____
(District Use Only)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105
Engineering Division (415) 749-4990
www.baaqmd.gov fax (415) 749-5030

Form ICE
Internal Combustion Engines

*Form ICE is to be completed for all internal combustion engines except turbines. (For turbines, submit Form C). Submit one form for each engine. If this is a new engine or a modification to an existing engine, you must also complete Form HRSA Health Risk Screen Analysis. Additional forms and all District regulations and rules are available on the District's web site. Contact your assigned permit engineer or the Engineering Division at the above telephone number if you need assistance completing this form. Please include the engine manufacturer's **equipment specifications**.*

1. SUMMARY ■ New Construction ☐ Modification ☐ Loss of Exemption

Company Name: Vantage Data Centers Management Co, LLC. Plant No.*:
Source Description: Diesel Generator Source No.*: 31 *(If unknown leave blank)
Initial Date of Operation: ASAP *(Not required for modification of an existing permitted source)*
Operating Schedule: *Typical hrs/day* 0.5 *Days/week* 1 *Weeks/yr* 50 *Maximum hrs/day* 24

2. ENGINE INFORMATION ☐ *Check here if applying for a multiple location permit. (See Reg. 2-1-413 for requirements)*

Engine Type: *(Check one)* ■ 4 Stroke ☐ 2 Stroke Compression Ignition (Diesel) or ☐ 4 Stroke ☐ 2 Stroke Spark Ignition
Engine Manufacturer: Caterpillar Model: C175-16 Model Year: 2017
EPA/CARB Engine Family Name: HCPXL106.NZS Engine Serial No.: unknown
Engine Displacement: 5155.8 *(cu in)* Maximum rated output *(bhp)*: 4423 Typical load as % of bhp rating: 60
Is this an emergency/standby engine? ■ Yes ☐ No

(Complete and check all that apply)

Certification: ☐ EPA Certified ☐ CARB Certified CARB Executive Order No.: Ramboll Environ
☐ None *(If None is checked, please indicate below the items applicable to this engine.)*
☐ Naturally aspirated ☐ Supercharged ☐ Turbocharged ☐ Inter-cooled ☐ After-cooled
☐ Timing retard ≥ 4° ☐ Lean-burn ☐ Rich-burn

Primary Use: ■ Electrical generation ☐ Cogeneration ☐ Pump driver ☐ Fire pump driver
☐ Compressor driver ☐ Tub grinder driver ☐ Other:

3. ABATEMENT DEVICE INFORMATION *Complete this section only if the engine exhausts to an add-on abatement device.*
☐ *Check here if the engine has more than one add-on abatement device and complete a separate Form A for each additional abatement device.*

Abatement device number A 31 *(If unknown leave blank)* ■ New ☐ Existing
Device type: ■ Diesel catalyzed particulate filter ☐ Oxidation catalyst ☐ Selective catalytic reduction (SCR)
☐ Non-selective catalytic reduction (NSCR or 3-way catalyst) ☐ Other: Johnson Matthey CRT +
Make, Model, and Rated Capacity: Johnson Matthey CRT +

Abatement device control efficiencies at typical operation *(Use the basis codes listed below. If unknown leave blank)*

Pollutant Name	Wt % Reduction	Basis Code
Particulates	85	9
Organics	70	9
Nitrogen Oxides		
Sulfur Dioxide		
Carbon Monoxide	80	12/20/20

Others – ☐ Check here and attach a separate list of pollutants. Include the basis code and the control efficiency.

Control Efficiency/Emission Factor Basis Codes: *(Submit supporting documentation if available)*
(1) Source testing or other measurement by plant
(2) Source testing or measurement by BAAQMD *(District use only)*
(3) Specification from vendor
(4) Material balance by plant using knowledge of process
(5) Material balance by BAAQMD *(District use only)*
(6) EPA Document AP-42 Emission Factors
(7) Taken from literature other than AP-42
(8) Guess
(9) EPA/CARB Certification

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Form ICE
Internal Combustion Engines

4. EMISSION POINT/STACK INFORMATION ☐ *Check here if the engine has more than one stack or has a continuous pollutant emission monitor and complete one Form P for each emission point..*

Emission point number P _____ *(If unknown leave blank)* ■ New ☐ Existing

Stack outlet height from ground level *(ft)* 45.17

Diameter of stack outlet *(inches)* 20.08 or Outlet cross-section area *(square inches)* _____

Direction of outlet *(check one)* ☐ Horizontal ■ Vertical End of outlet *(check one)* ■ Open/hinged flap ☐ Rain cap

Exhaust rate at typical operation *(acfm)* 25630 Exhaust temperature at typical operation *(°F)* 891.9

5. RISK ASSESSMENT INFORMATION.

Distance from engine to the property line of the nearest residence *(ft)* 801.37 or *(check if)* ☐ Greater than one mile

Distance from engine to the property line of the nearest school[1] *(ft)* _____ or *(check if)* ■ Greater than 1000 ft

Describe the nearest non-residential, non-school site *(check one)* ☐ Industrial ■ Commercial ☐ Hospital ☐ Day care center ☐ Other _____

Distance from engine to the property line of the nearest non-residential, non- school site*(ft)* 132.4 or ☐ Greater than one mile

1. *K-12 and more than twelve children only.*

6. FUEL DATA *Complete the table below for each fuel burned. If you are using a fuel other than those listed in the fuel code table, attach a* ***fuel analysis*** *indicating the higher heating value, sulfur content, and nitrogen content. Please clearly indicate the measurement unit that corresponds to the information you are submitting.* ☐ *Check here if you are using more than two fuels, and attach a copy of this page listing the additional fuels.*

Primary Fuel		Secondary Fuel	
Fuel Code[1]	98	Fuel Code[1]	
Name	ULSD	Name	
Maximum Fuel Use Rate[2]	214.2 gal/hr or SCF/hr	Maximum Fuel Use Rate[2]	gal/hr or SCF/hr
Annual Fuel Usage[3]	10710 gal/yr or therm/yr or SCF/yr	Annual Fuel Usage[3]	gal/yr or therm/yr or SCF/yr
Typical Heat Content[4]	BTU/gal or BTU/SCF	Typical Heat Content[4]	BTU/gal or BTU/SCF
Sulfur Content[4]	wt% liquids or ppmv gases	Sulfur Content[4]	wt% liquids or ppmv gases

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐
Others – ☐ Check here and attach a separate list under each fuel used.				

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐
Others – ☐ Check here and attach a separate list under each fuel used.				

1. *Fuel Codes:* Diesel (**98**) Bio Diesel B100 (**815**) Bio Diesel B20 Blend (**816**) Gasoline (**551**) Natural Gas (**189**) Landfill Gas (**511**) Digester Gas (**493**) Liquid Petroleum Gas (LPG) (**160**)
2. *Maximum fuel use rate units: gallon/hr for liquid fuels and SCF/hr for gaseous fuels. (SCF =Standard Cubic Foot)*
3. *The annual fuel usage is the actual or projected engine fuel consumption over a rolling 12-month time period. Annual usage units: gallons for liquid fuel, therms for natural gas, and SCF for other gaseous fuels. (therm = 100,000 BTUs, BTU =British Thermal Unit)*
4. *If you are using diesel, natural gas, or gasoline, you may skip this entry. Heat content units: BTU/gallon for liquid fuels, BTU/SCF for gaseous fuels. Sulfur content* units: weight % for liquid fuels, ppmv for gaseous fuels. (ppmv = parts per million by volume)
5. *Emission factors may be reported as gram/brakehp-hr, or as lb per gallon, or as lb per therm, or as lb per SCF.*
6. *See the Control Efficiency/Emission Factor Basis Code table under Section 3 on page 1 of this form.*
7. *Place a check in this column if the emission factor applies to emissions after abatement by an add-on abatement device.*

7. CERTIFICATION I hereby certify that all information contained herein is true and correct. *(Please sign and date this form)*

SPENCER MYERS	Director of Construction		12/20/17
Name of person certifying (print)	Title of person certifying	Signature of person certifying	Date

Approved By: _____ Date: _____ Entered By: _____ Date: _____
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1. SUMMARY ☒ New Construction ☐ Modification ☐ Loss of Exemption

Company Name: Vantage Data Centers Management Co, LLC. Plant No.*:
Source Description: Diesel Generator Source No.*: 32 *(If unknown leave blank)
Initial Date of Operation: ASAP *(Not required for modification of an existing permitted source)*
Operating Schedule: *Typical hrs/day* 0.5 *Days/week* 1 *Weeks/yr* 50 *Maximum hrs/day* 24

2. ENGINE INFORMATION ☐ *Check here if applying for a multiple location permit. (See Reg. 2-1-413 for requirements)*

Engine Type: *(Check one)* ☒ 4 Stroke ☐ 2 Stroke Compression Ignition (Diesel) or ☐ 4 Stroke ☐ 2 Stroke Spark Ignition
Engine Manufacturer: Caterpillar Model: C175-16 Model Year: 2017
EPA/CARB Engine Family Name: HCPXL106.NZS Engine Serial No.: unknown
Engine Displacement: 5155.8 *(cu in)* Maximum rated output *(bhp)*: 4423 Typical load as % of bhp rating: 60
Is this an emergency/standby engine? ☒ Yes ☐ No

(Complete and check all that apply)

Certification: ☐ EPA Certified ☐ CARB Certified CARB Executive Order No.: Ramboll Environ
☐ None *(If None is checked, please indicate below the items applicable to this engine.)*
☐ Naturally aspirated ☐ Supercharged ☐ Turbocharged ☐ Inter-cooled ☐ After-cooled
☐ Timing retard ≥ 4° ☐ Lean-burn ☐ Rich-burn

Primary Use: ☒ Electrical generation ☐ Cogeneration ☐ Pump driver ☐ Fire pump driver
☐ Compressor driver ☐ Tub grinder driver ☐ Other:

3. ABATEMENT DEVICE INFORMATION *Complete this section only if the engine exhausts to an add-on abatement device.*
☐ *Check here if the engine has more than one add-on abatement device and complete a separate Form A for each additional abatement device.*

Abatement device number A 32 *(If unknown leave blank)* ☒ New ☐ Existing
Device type: ☒ Diesel catalyzed particulate filter ☐ Oxidation catalyst ☐ Selective catalytic reduction (SCR)
☐ Non-selective catalytic reduction (NSCR or 3-way catalyst) ☐ Other: Johnson Matthey CRT +
Make, Model, and Rated Capacity: Johnson Matthey CRT +

Abatement device control efficiencies at typical operation *(Use the basis codes listed below. If unknown leave blank)*

Pollutant Name	Wt % Reduction	Basis Code
Particulates	85	9
Organics	70	9
Nitrogen Oxides		
Sulfur Dioxide		
Carbon Monoxide	80	12/20/2[illegible]
Others – ☐ Check here and attach a separate list of pollutants. Include the basis code and the control efficiency.		

Control Efficiency/Emission Factor Basis Codes: *(Submit supporting documentation if available)*
(1) Source testing or other measurement by plant
(2) Source testing or measurement by BAAQMD *(District use only)*
(3) Specification from vendor
(4) Material balance by plant using knowledge of process
(5) Material balance by BAAQMD *(District use only)*
(6) EPA Document AP-42 Emission Factors
(7) Taken from literature other than AP-42
(8) Guess
(9) EPA/CARB Certification

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Form ICE
Internal Combustion Engines

4. EMISSION POINT/STACK INFORMATION ☐ *Check here if the engine has more than one stack or has a continuous pollutant emission monitor and complete one Form P for each emission point..*

Emission point number P _____ *(If unknown leave blank)* ■ New ☐ Existing

Stack outlet height from ground level *(ft)* 45.17

Diameter of stack outlet *(inches)* 20.08 or Outlet cross-section area *(square inches)* _____

Direction of outlet *(check one)* ☐ Horizontal ■ Vertical End of outlet *(check one)* ■ Open/hinged flap ☐ Rain cap

Exhaust rate at typical operation *(acfm)* 25630 Exhaust temperature at typical operation *(°F)* 891.9

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Distance from engine to the property line of the nearest residence *(ft)* 801.37 or *(check if)* ☐ Greater than one mile

Distance from engine to the property line of the nearest school[1] *(ft)* _____ or *(check if)* ■ Greater than 1000 ft

Describe the nearest non-residential, non-school site *(check one)* ☐ Industrial ■ Commercial ☐ Hospital ☐ Day care center ☐ Other _____

Distance from engine to the property line of the nearest non-residential, non- school site*(ft)* 132.4 or ☐ Greater than one mile

1. *K-12 and more than twelve children only.*

6. FUEL DATA *Complete the table below for each fuel burned. If you are using a fuel other than those listed in the fuel code table, attach a* ***fuel analysis*** *indicating the higher heating value, sulfur content, and nitrogen content. Please clearly indicate the measurement unit that corresponds to the information you are submitting.* ☐ *Check here if you are using more than two fuels, and attach a copy of this page listing the additional fuels.*

Primary Fuel

Fuel Code[1] 98 Name ULSD

Maximum Fuel Use Rate[2] 214.2 *gal/hr or SCF/hr*

Annual Fuel Usage[3] 10710 *gal/yr or therm/yr or SCF/yr*

Typical Heat Content[4] _____ *BTU/gal or BTU/SCF*

Sulfur Content[4] _____ *wt% liquids or ppmv gases*

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐

Others – ☐ Check here and attach a separate list under each fuel used.

Secondary Fuel

Fuel Code[1] _____ Name _____

Maximum Fuel Use Rate[2] _____ *gal/hr or SCF/hr*

Annual Fuel Usage[3] _____ *gal/yr or therm/yr or SCF/yr*

Typical Heat Content[4] _____ *BTU/gal or BTU/SCF*

Sulfur Content[4] _____ *wt% liquids or ppmv gases*

Emission Factors *(Optional)*

Pollutant Name	Emission Factor	Units[5]	Basis Code[6]	Abated Factor (√)[7]
Particulates				☐
Organics				☐
Nitrogen Oxides				☐
Carbon Monoxide				☐

Others – ☐ Check here and attach a separate list under each fuel used.

1. *Fuel Codes:* Diesel (**98**) Bio Diesel B100 (**815**) Bio Diesel B20 Blend (**816**) Gasoline (**551**) Natural Gas (**189**) Landfill Gas (**511**) Digester Gas (**493**) Liquid Petroleum Gas (LPG) (**160**)
2. *Maximum fuel use rate units: gallon/hr for liquid fuels and SCF/hr for gaseous fuels. (SCF =Standard Cubic Foot)*
3. *The annual fuel usage is the actual or projected engine fuel consumption over a rolling 12-month time period. Annual usage units: gallons for liquid fuel, therms for natural gas, and SCF for other gaseous fuels. (therm = 100,000 BTUs, BTU =British Thermal Unit)*
4. *If you are using diesel, natural gas, or gasoline, you may skip this entry. Heat content units: BTU/gallon for liquid fuels, BTU/SCF for gaseous fuels. Sulfur content* units: weight % for liquid fuels, ppmv for gaseous fuels. (ppmv = parts per million by volume)
5. *Emission factors may be reported as gram/brakehp-hr, or as lb per gallon, or as lb per therm, or as lb per SCF.*
6. *See the Control Efficiency/Emission Factor Basis Code table under Section 3 on page 1 of this form.*
7. *Place a check in this column if the emission factor applies to emissions <u>after</u> abatement by an add-on abatement device.*

7. CERTIFICATION I hereby certify that all information contained herein is true and correct. *(Please sign and date this form)*

SPENCER MYERS	Director of Construction		12/20/17
Name of person certifying (print)	Title of person certifying	Signature of person certifying	Date

Approved By: _____ Date: _____ Entered By: _____ Date: _____

(District Use Only)

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-1 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 8 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 3400 cfm (cubic feet/min) OR _____ $meters^3$/second
8. What is the typical temperature of the exhaust gas? 1022 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data. www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-2 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one)

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2 Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6 Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept. of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source

*K-12 and more than twelve children only

Form HRSA

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375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-3 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one)

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2 Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4 Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5 Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept. of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-4 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source.				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one).
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one) ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept of Education data www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-5 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet) Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-6 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one):

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept. of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-7 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source*				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 640.9 feet OR _____ meters
4. Describe the nearest nonresidential property (check one). ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from *source* to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-8 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ☒ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.5	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ☒ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ☒ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ☒ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-9 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one):

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept. of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-10 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet) Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source.

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-11 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:

Source Description: Diesel Generator

Source No.: S-12 (if known) Emission Point No.: P- (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-13 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	*Building with source*				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one)

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note. Helpful website with California Dept of Education data. www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-14 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one):

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4. Describe the nearest nonresidential property (check one). ■ Industrial/Commercial OR ☐ Other _____

5 Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note. Helpful website with California Dept of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-15 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one):

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2 Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4 Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note Helpful website with California Dept of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-16 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one).

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2 Distance from source (stack or building) to nearest facility property line = 83.4 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 628.4 feet OR _____ meters

4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6 Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-17 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-18 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one)
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note. Helpful website with California Dept of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-19 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet) Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source.				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data. www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-20 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-21 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-22 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet) Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-23 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source.				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one)
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one). ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-24 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one).

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters

4 Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5 Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept. of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-25 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet) Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units. ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source.				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one).

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters

3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters

4. Describe the nearest nonresidential property (check one) ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note. Helpful website with California Dept of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-26 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one):

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters

3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters

4 Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5 Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-27 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building Use Lines B2-B9 for buildings surrounding the source (within 300 feet) Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one)
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-28 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ☒ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ☒ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ☒ vertical
6. Is the stack outlet: ☒ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ☒ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one)

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters

4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note Helpful website with California Dept. of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source*

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-29 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source:				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
WEBSITE: WWW.BAAQMD.GOV

Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-30 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one).
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one) ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

IMPORTANT: For any permit application that requires a Health Risk Screening Analysis, fill out one form for each source that emits a Toxic Air Contaminant(s) [or for a group of sources that exhaust through a common stack]. Emissions can be from a discrete point source (with stack) or a source with fugitive emissions (area or volume source). You must provide a plot plan (drawn to scale, if possible) and a local map (aerial photos are recommended), which clearly demonstrate the location of your site, the source(s), property lines, and any surrounding buildings [see attached example]. Label streets, schools, residences, and other businesses. List major dimensions of all buildings surrounding the source in Section C.

Plant Name: Vantage Data Centers Management Co, LLC. Plant No.:_____

Source Description: Diesel Generator

Source No.: S-31 (if known) Emission Point No.: P-_____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions. Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1. Indicate the area where the source is located (check one):
   - ☐ zoned for residential use
   - ☐ zoned for mixed residential and commercial/industrial use
   - ■ zoned for commercial and/or industrial use
   - ☐ zoned for agricultural use
2. Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters
3. Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters
4. Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____
5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters
6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

   [Note: Helpful website with California Dept. of Education data: www.greatschools.net]

   Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source.

*K-12 and more than twelve children only

Form HRSA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 Beale Street, Suite 600, San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030 OR 4949
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Health Risk Screening Analysis

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Plant Name: Vantage Data Centers Management Co, LLC. Plant No.: _____

Source Description: Diesel Generator

Source No.: S-32 (if known) Emission Point No.: P- _____ (if known)

SECTION A *(Point Source)*

1. Does the source exhaust at clearly defined emission point; i.e., a stack or exhaust pipe? ■ YES OR ☐ NO
   (If YES continue at #2, If NO, skip to Section B)
2. Does the stack (or exhaust pipe) stand alone or is it located on the roof of a building? ■ alone OR ☐ on roof
   Important: If stack is on a roof, provide building dimensions on line B1 in Section C.
3. What is the height of the stack outlet above ground level? 45.17 feet OR _____ meters?
4. What is the inside diameter of the stack outlet? 20.08 inches OR _____ feet OR _____ meters
5. What is the direction of the exhaust from the stack outlet? ☐ horizontal OR ■ vertical
6. Is the stack outlet: ■ open or hinged rain flap OR ☐ rain capped (deflects exhaust downward or horizontally)
7. What is the exhaust flowrate during normal operation? 25630 cfm (cubic feet/min) OR _____ meters^3/second
8. What is the typical temperature of the exhaust gas? 891.9 degrees Fahrenheit OR _____ degrees Celsius
   (Skip Section B and Go on to Section C)

SECTION B *(Area/Volume Source)*

This section applies to fugitive emissions that are NOT captured by a collection system nor directly emitted through a stack or other emission point. Volume sources have fugitive emissions generally released within a building or other defined space (e.g., dry cleaner, gasoline station canopy). Area sources are generally flat areas of release (e.g., landfill, quarry).

1. Is the emission source located within a building? ☐ YES (go to #2) OR ■ NO (go to #3)
2. If YES (source inside building), provide building dimensions on line B1 in Section C
   a. Does the building have a ventilation system that is vented to the outside? ☐ YES OR ☐ NO
   b. If NO (ventilation), are the building's doors & windows kept open during hours of operation? ☐ YES OR ☐ NO
3. If NO (source not inside building), provide a description of the source, dimensions, & indicate location on plot plan.
   Generator located outside in an enclosure.

(Go on to Section C)

SECTION C *(Building Dimensions)*

Provide building dimensions Use Line B1 only for building with source/stack on the roof or with fugitive emissions inside building. Use Lines B2-B9 for buildings surrounding the source (within 300 feet). Distance and direction are optional if map and/or aerial photo are adequately labeled with locations of buildings. Check one for units: ■ feet OR ☐ meters

B#	Building name or description	Height	Width	Length	Distance To Source	Direction To Source
B1	Building with source				n/a	n/a
B2	McLaren Building 1	106	203	207	38	S
B3	McLaren Building 2	106	203	208	44	S
B4	McLaren Building 3	106	177	188	63	SE
B5	Commercial Building	32	300	330	132	N
B6	Commercial Building	21	246	279	155	W
B7	Commercial Building	8.9	33	101	296	SW
B8	Commercial Building	21	120	449	241	NE
B9	Commercial Building	12.8	37	65	299	SW

NOTE: Label buildings by B# on plot plan, map and/or aerial photo. Provide comments below for any details that need additional clarification (e.g., list buildings that are co-occupied by your employees and other workers, residents, students, etc).

Location of stacks, data center buildings and commercial buildings are included in Figure 5 in the HRA memo.

(Go on to Section D)

SECTION D *(Receptor Locations)*

NOTE: Indicate on maps or aerial photos the residential and nonresidential areas surrounding your facility.

1 Indicate the area where the source is located (check one)

☐ zoned for residential use ☐ zoned for mixed residential and commercial/industrial use

■ zoned for commercial and/or industrial use ☐ zoned for agricultural use

2 Distance from source (stack or building) to nearest facility property line = 89.6 feet OR _____ meters

3 Distance from source (stack or building) to the property line of the nearest residence = 801.3 feet OR _____ meters

4 Describe the nearest nonresidential property (check one): ■ Industrial/Commercial OR ☐ Other _____

5. Distance from source (stack or building) to property line of nearest nonresidential site = 132.4 feet OR _____ meters

6. Distance from source to property line of nearest school* (or school site) = _____ feet OR ■ Greater than 1,000 feet

[Note: Helpful website with California Dept of Education data: www.greatschools.net]

Provide the names and addresses of all schools* that have property line(s) within 1,000 feet of the source:

*K-12 and more than twelve children only

Data Form A
ABATEMENT DEVICE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 Beale Street, Suite 600. . . San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 1
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 1 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 1,022 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

Data Form A
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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 2
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 2 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 3
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 3 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 4
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 4 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 5
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 5 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 6
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 6 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 7
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 7 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 8
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 8 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 9
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 9 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 10
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 10 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 11
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 11 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 12
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 12 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 13
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 13 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 14
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 14 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

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Data Form A
ABATEMENT DEVICE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 15
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 15 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

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Data Form A
ABATEMENT DEVICE

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 16
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 16 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 17
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 17 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 18
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 18 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 19
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 19 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 20
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 20 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 21
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 21 S- _____ S- _____ S- _____ S- _____
   S- _____ A- _____ A- _____ A- _____ A- _____ A- _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ A- _____ A- _____ A- _____ P- _____ P- _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 22
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 22 S- _____ S- _____ S- _____ S- _____
   S- _____ A- _____ A- _____ A- _____ A- _____ A- _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ A- _____ A- _____ A- _____ P- _____ P- _____

Person completing this form: Ramboll Environ Date: 12/20/2017

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ABATEMENT DEVICE

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 23
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 23 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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ABATEMENT DEVICE

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 24
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 24 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 25
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 25 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 26
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 26 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

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1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 27
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 27 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

Data Form A
ABATEMENT DEVICE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 Beale Street, Suite 600. . . San Francisco, CA 94105. . . (415) 749-4990 . . . FAX (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 28
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 28 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

Data Form A
ABATEMENT DEVICE

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for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 29
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 29 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

Data Form A
ABATEMENT DEVICE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 30
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 30 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

Data Form A
ABATEMENT DEVICE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 31
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 31 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

Data Form A
ABATEMENT DEVICE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Vantage Data Centers Management Co, LLC. Plant No: _____ (If unknown, leave blank)
2. Name or Description Diesel Particulate Filter Abatement Device No: A- 32
3. Make, Model, and Rated Capacity Johnson Matthey CRT +
4. Abatement Device Code (See table*) 69 Date of Initial Operation ASAP
5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are **immediately** upstream?

   S- 32 **S-** _____ **S-** _____ **S-** _____ **S-** _____
   S- _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____ **A-** _____
6. Typical gas stream temperature at inlet: 892 °F

If this form is being submitted as part of an application for an ***Authority to Construct***, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation,* completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes *(See Table**)*
7.	Particulate	85.00%	9
8.	Organics	70.00%	9
9.	Nitrogen Oxides (as NO_2)		
10.	Sulfur Dioxide		
11.	Carbon Monoxide	80.00%	9
12.	Other:		
13.	Other:		

14. ☐ Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.
15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are ***immediately*** downstream?

    S- _____ **A-** _____ **A-** _____ **A-** _____ **P-** _____ **P-** _____

Person completing this form: Ramboll Environ Date: 12/20/2017

(revised 4/12/16)

*ABATEMENT DEVICE CODES

Code	DEVICE
	ADSORBER (See Vapor Recovery)
	AFTERBURNER
1	CO Boiler
2	Catalytic
3	Direct Flame
4	Flare
5	Furnace-firebox
6	Other
	BAGHOUSE (See Dry Filter)
	CYCLONE (See Dry Inertial Collector and Scrubber)
	DUST CONTROL
68	Water Spray
	DRY FILTER
7	Absolute
8	Baghouse, Pulse Jet
9	Baghouse, Reverse Air
10	Baghouse, Reverse Jet
11	Baghouse, Shaking
12	Baghouse, Simple
13	Baghouse, Other
14	Envelope
15	Moving Belt
16	Other
	DRY INERTIAL COLLECTOR
17	Cyclone, Dynamic
18	Cyclone, Multiple (12 inches dia. or more)
19	Cyclone, Multiple (less than 12 inches dia.)
20	Cyclone, Simple
21	Settling Chamber, Baffled/Louvered
22	Settling Chamber, Simple
23	Other
	ELECTROSTATIC PRECIPITATOR
24	Single Stage
25	Single Stage, Wet
26	Two Stage
27	Two Stage, Wet
28	Other
	INCINERATOR (See Afterburner)
	INTERNAL COMBUSTION ENGINE CONTROL
69	Catalyzed Diesel Particulate Filter
70	Non-Cat. Diesel Part. Filter w/ Active Regeneration
71	Diesel Oxidation Catalyst
72	Oxidation Catalyst
	KNOCK-OUT POT (See Liquid Separator)
	LIQUID SEPARATOR
29	Knock-out Pot
30	Mist Eliminator, Horizontal Pad, Dry
31	Mist Eliminator, Panel, Dry
32	Mist Eliminator, Spray/Irrigated
33	Mist Eliminator, Vertical Tube, Dry
34	Mist Eliminator, Other
35	Other
	NO_X CONTROL
66	Selective Catalytic Reduction (SCR)
67	Non-Selective Catalytic Reduction (NSCR)
73	Selective Non-Catalytic Reduction (SNCR)
	SCRUBBER
36	Baffle and Secondary Flow
37	Centrifugal
38	Cyclone, Irrigated
39	Fibrous Packed
40	Impingement Plate
41	Impingement and Entrainment
42	Mechanically Aided
43	Moving Bed
44	Packed Bed
45	Preformed Spray
46	Venturi
47	Other
	SETTLING CHAMBER (See Dry Inertial Collector)
	SULFUR DIOXIDE CONTROL
48	Absorption and Regeneration, for Sulfur Plant
49	Claus Solution Reaction, for Sulfur Plant
50	Dual Absorption, for H2S04 Plant
51	Flue Gas Desulfurization, for Fossil Fuel Combustion
52	Reduction and Solution Regeneration, for Sulfur Plant
53	Reduction and Stretford Process, for Sulfur Plant
54	Sodium Sulfite-Bisulfite Scrubber, for H2S04 Plant
55	Other
	VAPOR RECOVERY
56	Adsorption, Activated Carbon/Charcoal
57	Adsorption, Silica
58	Adsorption, Other
59	Balance
60	Compression/Condensation/Absorption
61	Compression/Refrigeration
62	Condenser, Water-Cooled
63	Condenser, Other
64	Other
	MISCELLANEOUS
74	Soil Vapor Extraction Abatement System
65	Not classified above

**BASIS CODES

Code	Method
0	Not applicable for this pollutant
1	Source testing or other measurement **by plant**
2	Source testing or other measurement **by BAAQMD**
3	Specifications from vendor
4	Material balance by plant using engineering expertise and knowledge of process
5	Material balance **by BAAQMD** using engineering expertise and knowledge of process
6	Taken from AP-42 ("Compilation of Air Pollutant Emission Factors," EPA)
7	Taken from literature, other than AP-42
8	Guess

(revised: 4/12/16)

Form Appendix H

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600. . . San Francisco, CA 94105. . . (415) 749-4990. . . FAX (415) 749-5030
Website: www.baaqmd.gov

APPENDIX H

ENVIRONMENTAL INFORMATION FORM

(To Be Completed By Applicant)

Date Filed: 12/21/2017

General Information

1. Name and address of developer or project sponsor:
   Vantage Data Centers Management Co, LLC.
2. Address of project: 725 Mathew Street, Santa Clara, CA

   Assessor's Block and Lot Number: _____
3. Name, address, and telephone number of person to be contacted concerning this project:
   Spencer Myers, smyers@vantagedatacenters.com, (408)-712-4387
4. Indicate number of the permit application for the project to which this form pertains:
   TBD
5. List and describe any other related permits and other public approvals required for this project, including those required by city, regional, state, and federal agencies:
   Please see City of Santa Clara City File No. CEQ2016-01023 / PLN2016-12246

   http://santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/167/3649
6. Existing zoning district: _____
7. Proposed use of site (Project for which this form is filed):
   Data center with backup generators

Project Description

8. Site size.
9. Square footage.
10. Number of floors of construction.
11. Amount of off-street parking provided.
12. Attach plans.
13. Proposed scheduling.
14. Associated project.
15. Anticipated incremental development.

16. If residential, include the number of units, schedule of unit sizes, range of sale prices or rents, and type of household size expected.

17. If commercial, indicate the type, whether neighborhood, city or regionally oriented, square footage of sales area, and loading facilities.

18. If industrial, indicate type, estimated employment per shift, and loading facilities

19. If institutional, indicate the major function, estimated employment per shift, estimated occupancy, loading facilities, and community benefits to be derived from the project.

20. If the project involves a variance, conditional use or rezoning application, state this and indicate clearly why the application is required.

Are the following items applicable to the project or its effects? Discuss below all items checked yes. Attach additional sheets as necessary.

	Yes	No
21. Change in existing features of any bays, tidelands, beaches, or hills, or substantial alteration of ground contours.	☐	■
22. Change in scenic views or vistas from existing residential areas or public lands or roads.	☐	■
23. Change in pattern, scale or character of general area of project.	☐	■
24. Significant amounts of solid waste or litter.	☐	■
25. Change in dust, ash, smoke, fumes or odors in vicinity.	☐	■
26. Change in ocean, bay, lake, stream or groundwater quality or quantity, or alteration of existing drainage patterns.	☐	■
27. Substantial change in existing noise or vibration levels in the vicinity.	☐	■
28. Site on filled land or on slope of 10 percent or more.	☐	■
29. Use of disposal of potentially hazardous materials, such as toxic substances, flammables or explosives.	☐	■
30. Substantial change in demand for municipal services (police, fire, water, sewage, etc.).	☐	■
31. Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc.).	☐	■
32. Relationship to a larger project or series of projects.	☐	■

Environmental Setting

33. Describe the project site as is exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

34. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.). Attach photographs of the vicinity. Snapshots or Polaroid photos will be accepted.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

12/20/17
Date

Signature

For _____

(Note: This is only a suggested form. Public agencies are free to devise their own format for initial studies.)

RAMBOLL ENVIRON

ENVIRONMENT
& HEALTH

MEMO

Date: **December 20, 2017**

To: **Gregory Stone, Bay Area Air Quality Management District**

From: **Shari Libicki, Julia Luongo**

cc: **Spencer Myers, Vantage Data Centers**

Michael Stoner, Lake Street Ventures

Subject: **Health Risk Assessment in Support of the Application for the Authority to Construct Thirty-Two (32) Emergency Diesel-Fueled Generators (Plant #TBD)**

Ramboll Environ US Corporation (Ramboll Environ) prepared a health risk analysis (HRA) for 32 proposed emergency generators to be located at 725 Mathew Street (the "Site") in Santa Clara, California (See **Figure 1**). The HRA accompanies an application to the Bay Area Air Quality Management District (BAAQMD) for authority to construct (ATC) the proposed new backup generators. The 32 diesel-fueled emergency standby generators are to be installed in the data center known as McLaren. The locations of the proposed emergency generators, stack locations, and building names are shown in **Figure 2**.

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San Francisco, CA 94111
USA

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F +1 415 398 5812
www.ramboll-environ.com

The purposes of this emissions inventory and health risk evaluation are to estimate the potential non-emergency emissions and the related health impacts that may result from the non-emergency operations of the proposed emergency generators at the Facility. The only sources considered in this HRA are diesel-fueled emergency generators. As such, the BAAQMD recommends using diesel particulate matter (DPM) as a surrogate for all toxic air contaminant (TAC) emissions from diesel-fueled compression-ignition internal combustion engines, according to Footnote 6 of Table 2-5-1 of Regulation 2-5. Thus, DPM is the only compound that will be evaluated for this HRA.

Ramboll Environ used the US Environmental Protection Agency (USEPA) recommended air dispersion model, AERMOD version 16216r, to estimate ambient air DPM concentrations in the vicinity of the Facility. Air dispersion modeling requires the use of meteorological data that ideally are spatially and temporally representative of conditions in the immediate vicinity of the site under consideration. Ramboll Environ used surface meteorological data from the San Jose Airport for years 2009 through 2013, with upper air data collected at the Oakland Airport for the same time period. The BAAQMD provided Ramboll Environ with processed meteorological data that can be used directly in AERMOD.

All modeling files are included with this application.

OPERATIONAL SCENARIO

Potential health effects for projected DPM emissions are evaluated for nearby populations using residential, sensitive, and worker exposure assumptions for cancer risks that are consistent with the District's HRSA Guidelines.

Based on the air dispersion modeling results, Ramboll Environ then developed quantitative estimates of cancer risks associated with residential, sensitive, and worker exposure to DPM that may be emitted from the proposed generators.

SOURCE PARAMETERS

The Facility includes 32 total diesel-fired emergency generators, each of which was modeled as an individual point source. For use in AERMOD, Ramboll Environ determined source parameters (*e.g.*, location, height, temperature, stack diameter, and stack exit velocity) of the emission stack sources based on information from the Facility and plot plans. Sixteen (16) generators will be located behind Building 1 and the other 16 will be behind Building 2. Behind each building, eight generators will be at ground level and one generator will be stacked on top of each of the eight, for a total of sixteen. All exhaust stacks will be ducted to the same height. Engine operating information can be found in **Table 1a** and **Table 1b**, corresponding to the 3-MW Caterpillar and the 500-kW Generac Power Systems generators, respectively. **Figure 3** shows in detail the locations of the 32 proposed source stacks that are included in the HRA with their corresponding source ID. From here on, the "Project" refers to all 32 sources.

Table 2 shows the generator stack source parameters input to AERMOD. Source elevations were determined using the United States Geological Survey (USGS) National Elevation Dataset (NED).[1]

Each source was modeled with a unit emission rate (1 gram per second [g/s]) so that impacts could be determined in post-processing the modeling data. That is, Ramboll Environ performed unit rate dispersion modeling.

Receptor Grid

Ramboll Environ modeled a fine grid with 25-meter spacing, out to 500 meters from the site and 50-meter spacing out to 1 kilometer from the Site. Receptor elevations were determined using the NED files. Modeled receptors are shown in **Figure 4** and modeled buildings (with labels corresponding to the building labels in the attached permit forms) are shown in **Figure 5**.

Post-Processing/Emissions

The output of the unit rate dispersion modeling is a dispersion factor with units of micrograms per cubic meter per g/s [$(\mu g/m^3)/(g/s)$]. The dispersion factor was multiplied by an actual emission rate for each generator to calculate the concentration in $\mu g/m^3$ at each receptor. The engines have been certified by EPA to meet Tier 2 emissions standards, so EPA certification emission factors (based on EPA engine family) for PM_{10} coupled with the diesel particulate filter (DPF) abatement efficiency were used to calculate DPM emission rates. **Table 3** presents maximum annual emissions from each generator. The annual emissions of PM_{10} were used as the modeled DPM emission rate for each generator.

[1] http://ned.usgs.gov/usgs_gn_ned_dsi/viewer.htm

RISK CHARACTERIZATION METHODS

Potentially Exposed Populations: This assessment evaluated off-site receptors potentially exposed to Project emissions. These exposed populations include residential and recreational receptors at a nearby soccer field. Cancer risk and chronic hazards were evaluated for the residential, recreational, and worker locations.

Exposure Assumptions: The exposure parameters used to estimate excess lifetime cancer risks due to Project emissions were obtained using risk assessment guidelines from OEHHA (2015) and draft guidelines from the BAAQMD that indicate how the BAAQMD would integrate the 2015 OEHHA Guidelines (BAAQMD 2016), unless otherwise noted, and are presented in **Table 4**. Based on the TACs considered, the only relevant exposure pathway is inhalation, so this HRA considers inhalation exposure only.

For offsite residential receptors, Ramboll Environ selected conservative exposure parameters assuming that exposure would begin during the third trimester of a residential child's life. Ramboll Environ used 95th percentile breathing rates up to age 2, and 80th percentile breathing rates above age 2, consistent with BAAQMD guidance (2016). Off-site residents were assumed to be present at one location for a 30-year period, beginning with exposure in the third trimester.

For offsite recreational soccer receptors (at the nearby indoor soccer facility), Ramboll Environ selected exposure parameters using the conservative assumption that a child would be located at the soccer facility starting at age 2, then that same child would continue to be exposed by participating in activities at the facility as they got older. The child was assumed to be present one day a week for one hour per day for a full 30 years. Exposures used the 95th percentile 8-hour moderate intensity breathing rate from the OEHHA guidelines.

Calculation of Intake: The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The intake factor for inhalation, IF_{inh}, can be calculated as follows:

$$IF_{inh} = \frac{DBR * FAH * EF * ED * CF}{AT}$$

Where:

IF_{inh}	=	Intake Factor for Inhalation (m^3/kg-day)
DBR	=	Daily Breathing Rate (L/kg-day)
FAH	=	Fraction of Time at Home (unitless)
EF	=	Exposure Frequency (days/year)
ED	=	Exposure Duration (years)
AT	=	Averaging Time (days)
CF	=	Conversion Factor, 0.001 (m^3/L)

The chemical intake or dose is estimated by multiplying the inhalation intake factor, IF_{inh}, by the chemical concentration in air, C_i. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given in the OEHHA Hot Spots guidance (2015).

Age Sensitivity Factors: The estimated excess lifetime cancer risks for a resident child was adjusted using the age sensitivity factors (ASFs) recommended by OEHHA (2015). This approach accounts for an "anticipated special sensitivity to carcinogens" of infants and children. Cancer risk estimates are weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to two years of age and by a factor of three for exposures that occur from two years through 15 years of age. No weighting factor (i.e., an ASF of one, which is equivalent to no adjustment) is applied to ages 16 to 30 years. **Table 4** shows the ASFs used in the cancer risk estimation.

Estimation of Cancer Risks: Excess lifetime cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). The CPF of DPM is shown in **Table 4**.

The equation used to calculate the potential excess lifetime cancer risk for the inhalation pathway is as follows:

$$Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF \times ASF$$

Where:

$Risk_{inh}$	=	Cancer risk; the incremental probability of an individual developing cancer as a result of inhalation exposure to a particular potential carcinogen (unitless)
C_i	=	Annual average air concentration for chemical ($\mu g/m^3$)
CF	=	Conversion factor (mg/µg)
IF_{inh}	=	Intake factor for inhalation (m^3/kg-day)
CPF_i	=	Cancer potency factor for chemical$_i$ (mg chemical/kg body weight-day)$^{-1}$
ASF	=	Age sensitivity factor (unitless)

Estimation of Chronic HQ: The potential for exposure to result in adverse chronic noncancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) to the noncancer chronic reference exposure level (cREL) for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient (HQ). To evaluate the potential for adverse chronic noncancer health effects from simultaneous exposure to multiple chemicals, the chronic HQs for all chemicals are summed, yielding a chronic HI. In this case, the annual average concentration of DPM is divided by the cREL of DPM, which is 5 $\mu g/m^3$, to yield the chronic HI.

$$HQi = Ci / cREL$$

Where:

HQi	=	Chronic hazard quotient for chemical i
HI	=	Hazard index
Ci	=	Annual average concentration of chemical i (µg/m3)

cRELi = Chronic noncancer reference exposure level for chemical i (µg/m³)

Table 5 contains the Project source-related estimated excess lifetime cancer risk for the maximally exposed individual sensitive receptor (MEISR) and worker (MEIW). Both residential and recreational soccer facility receptors are considered sensitive receptors. The estimated excess lifetime cancer risk is 0.27 in a million (0.27×10^{-6}) for the MEISR and is 1.2 in a million (1.2×10^{-6}) for the MEIW. The estimated non-cancer hazard index (HI) is 0.0013 for the MEISR and is 0.0037 for the MEIW. The MEISR values presented are for the sensitive receptor with the highest cancer risk and non-cancer HI, but the maximum for each health endpoint do not occur at the same receptor. Since Project risks are above 1.0 in a million, the proposed new sources must implement TBACT per Rule 2-5-301. Based on the current BACT/TBACT handbook,[2] TBACT for emergency diesel-fueled engines is achieved for the proposed new engines since their emissions rate of DPM is less than 0.15 g/bhp-hr. All proposed new engines meet TBACT. Total Project health impacts are below the limits of Rule 2-5-302, specifically cancer risk of 10.0 in one million and chronic HI of 1.0.

[2] http://www.baaqmd.gov/~/media/files/engineering/bact-tbact-workshop/combustion/96-1-3.pdf?la=en

Table 1a
Emergency Generator Emission Factors
McLaren Project, Application for 32 New Generators
Santa Clara, California

Generator Information

Make	Caterpillar
Model	C175-16
USEPA Tier	2
USEPA Engine Family	HCPXL106.NZS
Generator Output at 100% Load (kilowatt)	3,000
Engine Output at 100% Load (horsepower)	4,423

Control Efficiency (DPF) Information

Make	Johnson Matthey
Model	CRT® Particulate Filter System

Pollutant	Uncontrolled Emission Factors[1] (g/hp-hr)	Control Efficiency at 100% Load	Controlled Emission Factors[2] (g/hp-hr)
NO_x	4.2	0%	4.2
ROG	0.18	70%	0.05
CO	1.3	80%	0.25
SO_2[3]	0.0055	0%	0.0055
PM_{10}	0.067	85%	0.010

Notes:

1. Uncontrolled Emission Factors are from USEPA Engine Family Certification.
2. Controlled Emission Factors are the USEPA Engine Family Certification emission factors with reductions assuming a Johnson Matthey CRT® Particulate Filter System on each engine.
3. The SO_2 emission factor is based on AP-42, Chapter 4, Table 3.4-1 and assumes the fuel oil has 0.0015% Sulfur content.

Abbreviations:

CO - carbon monoxide
g - Gram
hp - Horsepower
hr -Hhour
NOx - Oxides of nitrogen
ROG - Reactive Organic Gases
SO2 - Sulfur Dioxide
PM - Particulate Matter
USEPA - United States Environmental Protection Agency

References:

Johnson Matthey Proposal No. GR-394 to Peterson

Peterson Power Systems. 2015. Manufacturer's Performance Data for Model C175-16.

USEPA. 1996. AP-42 Chapter 3.4: Large Stationary Diesel and All Stationary Dual-fuel Engines. Available at: https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

USEPA. 2015. Large Engine Certification Data for Model Year 2015. Available at: https://www3.epa.gov/otaq/documents/eng-cert/nrci-cert-ghg-2015.xls.

Table 1b
Life Safety Generator Emission Factors
McLaren Project, Application for 32 New Generators
Santa Clara, California

Generator Information

Make	Generac Power Systems
Model	SD/MD500
USEPA Tier	2
USEPA Engine Family	HCPXL15.2NZS
Generator Output at 100% Load (kilowatt)	500
Engine Output at 100% Load (horsepower)	762

Control Efficiency (DPF) Information

Make	Johnson Matthey
Model	CRT® Particulate Filter System

Pollutant	Uncontrolled Emission Factors[1] (g/hp-hr)	Control Efficiency at 100% Load	Controlled Emission Factors[2] (g/hp-hr)
NO_x	4.0	0%	4.0
ROG	0.072	70%	0.022
CO	1.2	80%	0.24
SO_2[3]	0.0055	0%	0.0055
PM_{10}	0.067	85%	0.010

Notes:

1. Uncontrolled Emission Factors are from USEPA Engine Family Certification.
2. Controlled Emission Factors are the USEPA Engine Family Certification emission factors with reductions assuming a Johnson Matthey CRT® Particulate Filter System on each engine.
3. The SO_2 emission factor is based on AP-42, Chapter 4, Table 3.4-1 and assumes the fuel oil has 0.0015% Sulfur content.

Abbreviations:

CO - carbon monoxide
g - Gram
hp - Horsepower
hr -Hhour
NOx - Oxides of nitrogen
ROG - Reactive Organic Gases
SO2 - Sulfur Dioxide
PM - Particulate Matter
USEPA - United States Environmental Protection Agency

References:

Johnson Matthey Proposal No. GR-394 to Peterson

Generac Power Systems. 2017. Manufacturer's Performance Data for Model SD/MD500

USEPA. 1996. AP-42 Chapter 3.4: Large Stationary Diesel and All Stationary Dual-fuel Engines. Available at: https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf

USEPA. 2015. Large Engine Certification Data for Model Year 2015. Available at: https://www3.epa.gov/otaq/documents/eng-cert/nrci-cert-ghg-2015.xls.

Table 2
Source Modeling Parameters
McLaren Project, Application for 32 New Generators
Santa Clara, California

Source ID	Building	Engine Manufacturer and Model	Source Modeling Parameters			
			Stack Height	Stack Diameter	Stack Temperature	Stack Velocity
			m	m	K	m/s
S1	1	Generac SD/MD500	13.77	0.20	823.15	49.34
S2		Caterpillar C175-16	13.77	0.51	750.85	59.23
S3						
S4						
S5						
S6						
S7						
S8						
S9						
S10						
S11						
S12						
S13						
S14						
S15						
S16						
S17	2	Caterpillar C175-16	13.77	0.51	750.85	59.23
S18						
S19						
S20						
S21						
S22						
S23						
S24						
S25						
S26						
S27						
S28						
S29						
S30						
S31						
S32						

Abbreviations:

K - Kelvin

m - Meters

m/s - Meters per second

Table 3
Maximum Annual Emissions
McLaren Project, Application for 32 New Generators
Santa Clara, California

Source ID	Building	Engine Manufacturer and Model	Operation		Controlled Emission Factors					Maximum Annual Emissions				
			Maximum Engine Load	Maximum Annual Hours	NO_x	CO	ROG	SO_2	PM_{10}	NO_x	CO	ROG	SO_2	PM_{10}
			hp	hr	g/hp-hr					tons/year				
S1	1	Generac SD/MD500	762	50	4.0	0.24	0.022	0.0055	0.010	0.17	0.010	9.0E-04	2.3E-04	4.2E-04
S2		Caterpillar C175-16	4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S3			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S4			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S5			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S6			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S7			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S8			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S9			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S10			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S11			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S12			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S13			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S14			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S15			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S16			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S17	2	Caterpillar C175-16	4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S18			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S19			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S20			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S21			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S22			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S23			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S24			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S25			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S26			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S27			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S28			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S29			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S30			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S31			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
S32			4,423	50	4.2	0.25	0.053	0.0055	0.010	1.0	0.062	0.013	0.0013	0.0025
									Total Emissions	**32**	**1.9**	**0.40**	**0.042**	**0.076**

Abbreviations:

CO - Carbon monoxide
g - Grams
hp - Horsepower
hr - Hours
Nox - Oxides of nitrogen
PM10 - Particulate matter
ROG - Reactive organic gases
SO2 - Sulfur dioxide

Table 4
Exposure Parameters, 2015 OEHHA Methodology
McLaren Project, Application for 32 New Generators
Santa Clara, California

Receptor Type	Receptor Age Group	Exposure Parameters								
		Daily Breathing Rate (DBR)[1] (Resident: L/kg-day, Soccer Child L/kg-hr)	Exposure Duration (ED)[2] (years)	Fraction of Time at Home (FAH)[3] (unitless)	Exposure Frequency (EF)[4] (days/year)	Conversion Factor (CF) (m^3/L)	Averaging Time (AT) (days)	Age Sensitivity Factor (ASF)[5]	Cumulative Intake Factor, Inhalation (IF_{inh}) (m^3/kg-day)	Inhalation Cancer Potency Factor (CPF) for DPM
Offsite Resident	3rd Trimester	361	0.25	1	350	0.001	25,550	10	0.68	1.1
	Age 0-<2 Years	1,090	2	1	350	0.001	25,550	10		
	Age 2-<16 Years	572	14	1	350	0.001	25,550	3		
	Age 16-30 Years	261	14	0.73	350	0.001	25,550	1		
Worker	Age 16-70 Years	230	25	1	250	0.001	25,550	1	0.056	
Soccer Child	Age 2-<16 Years	65	14	N/A	52	0.001	25,550	3	0.0066	
	Age 16-30 Years[6]	30	16	N/A	52	0.001	25,550	1		

Notes:

1. Daily breathing rates reflect default breathing rates from OEHHA 2015 as follows: Resident: 95th percentile for 3rd trimester and age 0-<2 years; 80th percentile for ages 2-<9 years, 2-<16 years, and 16-30 years. Soccer Child: 95th percentile moderate intensity for all ages.
2. The total exposure duration for operation reflects the default residential exposure duration from Cal/EPA 2015.
3. Fraction of time at home (FAH) was conservatively assumed to be 1 for all age groups for residential exposure. FAH is not applicable to recreational soccer receptors.
4. Exposure frequency reflects default exposure frequency for residents from Cal/EPA 2015. For Soccer Child receptors, it was assumed that children would attend the soccer facility once a week for 52 weeks.
5. Based on Cal/EPA 2015.
6. Exposure for children using the soccer facility was assumed to start at age 2 since children younger than 2 cannot participate in the activities at this facility. For operational exposures, 30-year exposure was evaluated starting at age 2 and the 16-30 year breathing rate was assumed for ages 16-32.

Calculation:

$IF_{inh} = DBR * ED * FAH * EF * CF / AT$

$IF_{inh,cumulative} = \sum IF_{inh,i} * ASFi$

Abbreviations:

Cal/EPA - California Environmental Protection Agency
DPM - Diesel Particulate Matter
L - Liter
kg - Kilogram
m^3 - Cubic meter

Reference:

Cal/EPA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment (OEHHA). February.

Available online at: http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

Table 5
32 Proposed Generators Operational Health Risk Impacts
McLaren Project, Application for 32 New Generators
Santa Clara, California

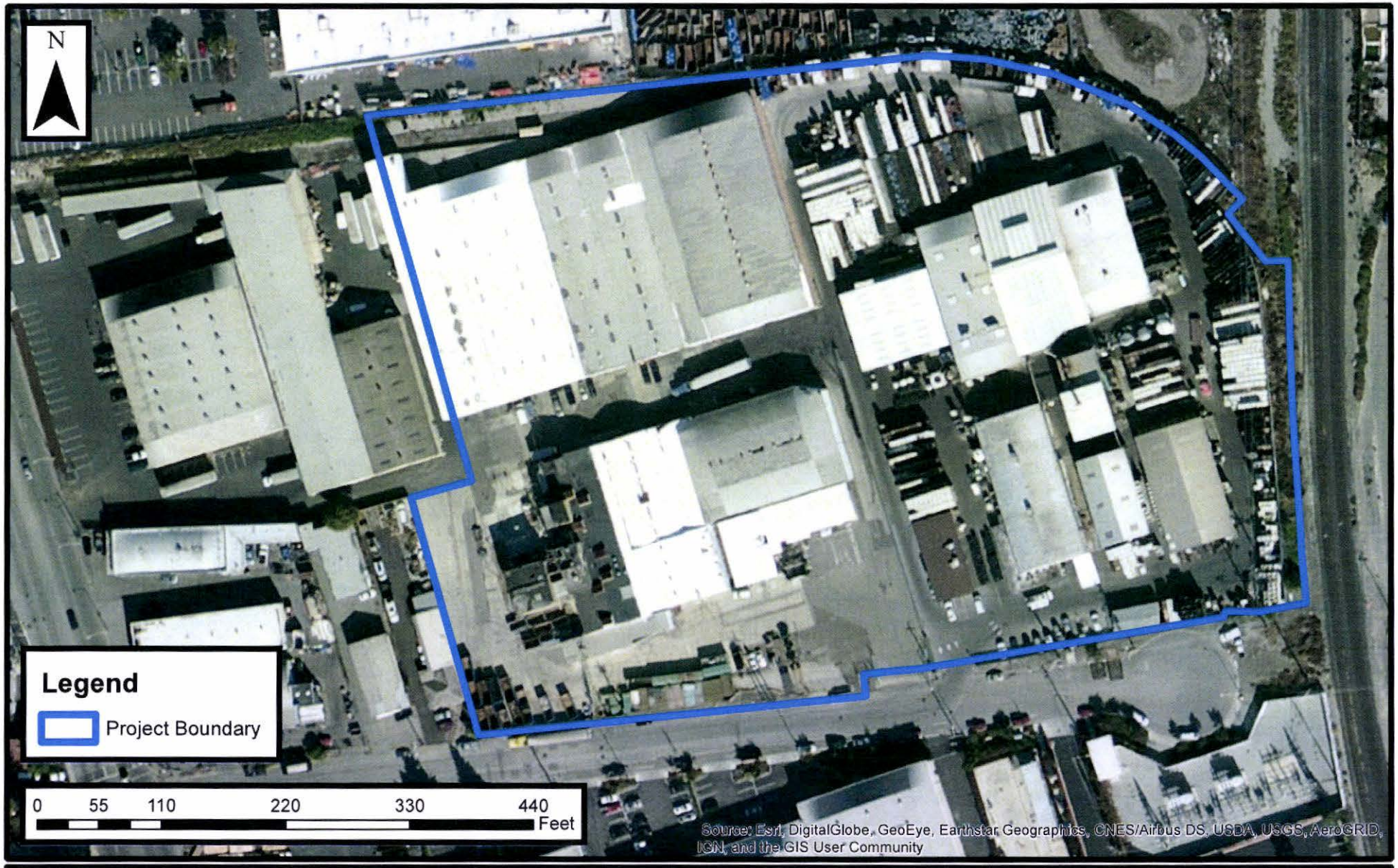
Receptor Type	Cancer Risk Impact (in one million)	Chronic Hazard Index (HI)	Location of Receptor	
			UTMx	UTMy
Resident MEISR[1]	0.27	7.4E-05	593,075	4,135,550
Soccer Child MEISR[1]	0.048	0.0013	593,275	4,135,650
MEIW	1.2	0.0037	593,262.27	4,135,696.70
Limit in BAAQMD Reg 2-5 302	10	1.0		

Notes:

1. The maximum cancer risk and maximum chronic HI occur at two different sensitive receptor locations.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
HI - Hazard Index
MEISR - Maximally Exposed Individual Sensitive Receptor
MEIW - Maximally Exposed Individual Worker
UTM - Universal Transverse Mercator coordinate system



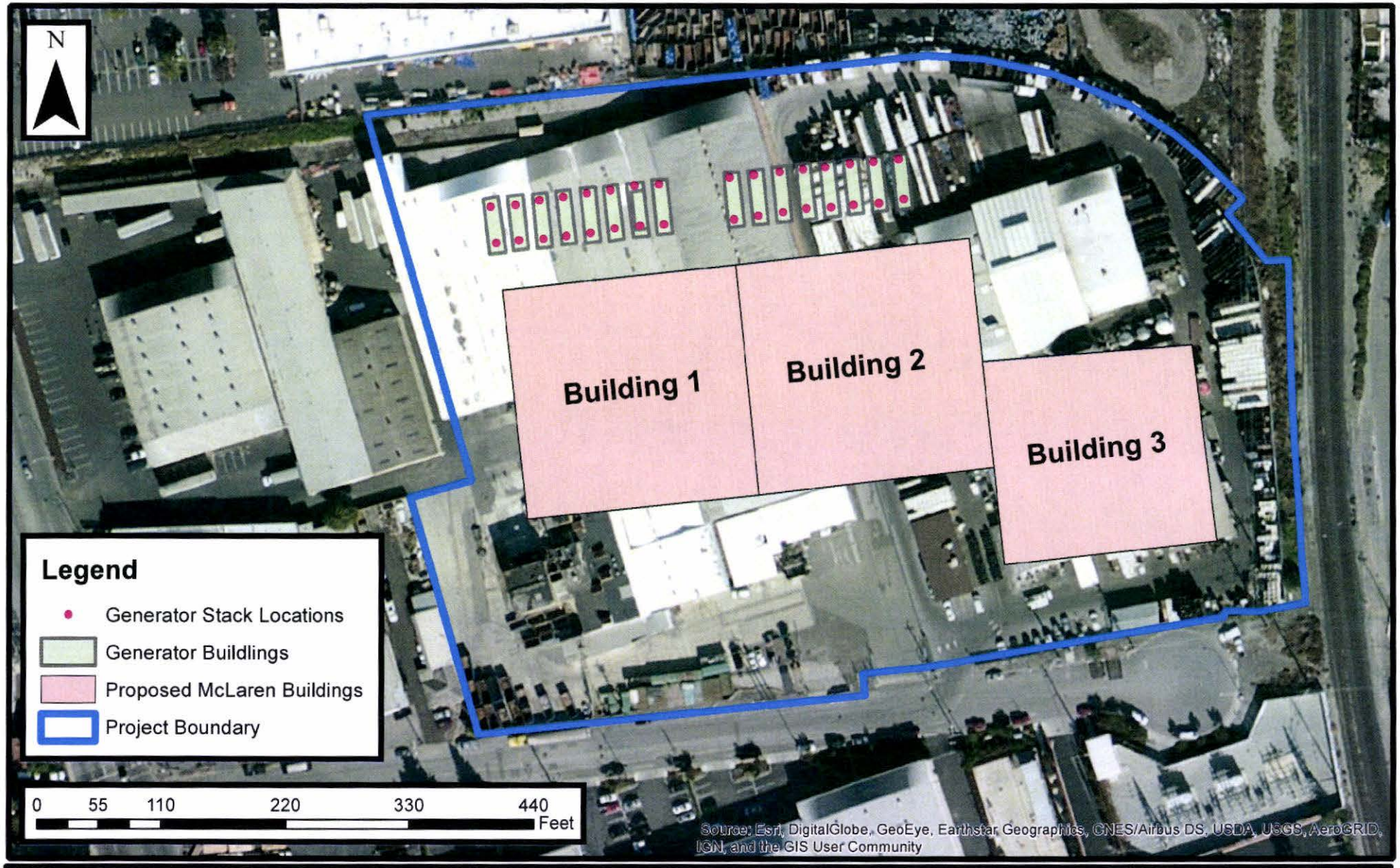
RAMBOLL ENVIRON

DRAFTED BY:

DATE:

Proposed Project Boundary
McLaren Project
Vantage Data Centers
Santa Clara, California

FIGURE
1
PROJECT

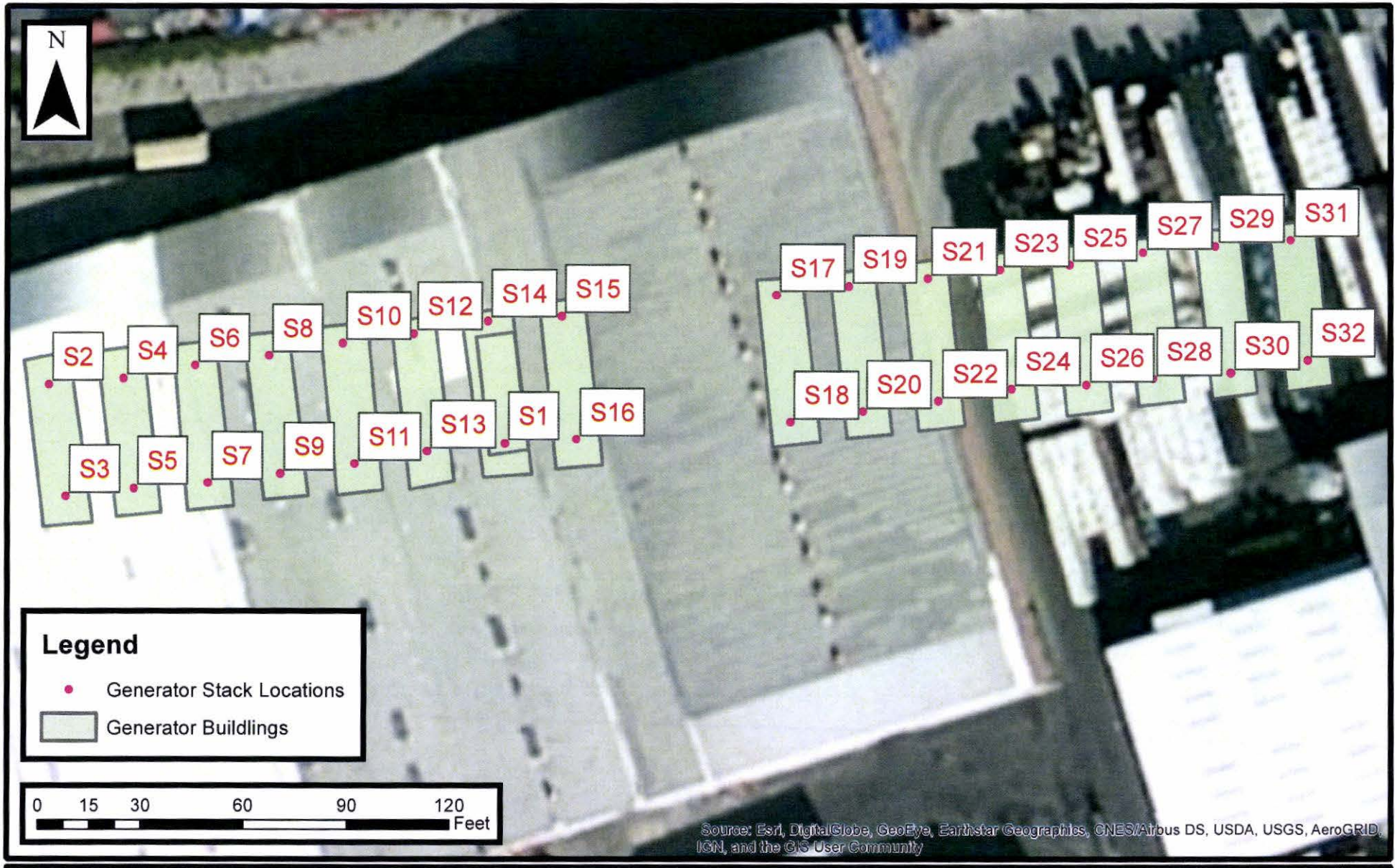


RAMBOLL ENVIRON

DRAFTED BY: | DATE:

Generator and Onsite Building Locations
McLaren Project
Vantage Data Centers
Santa Clara, California

FIGURE
2
PROJECT

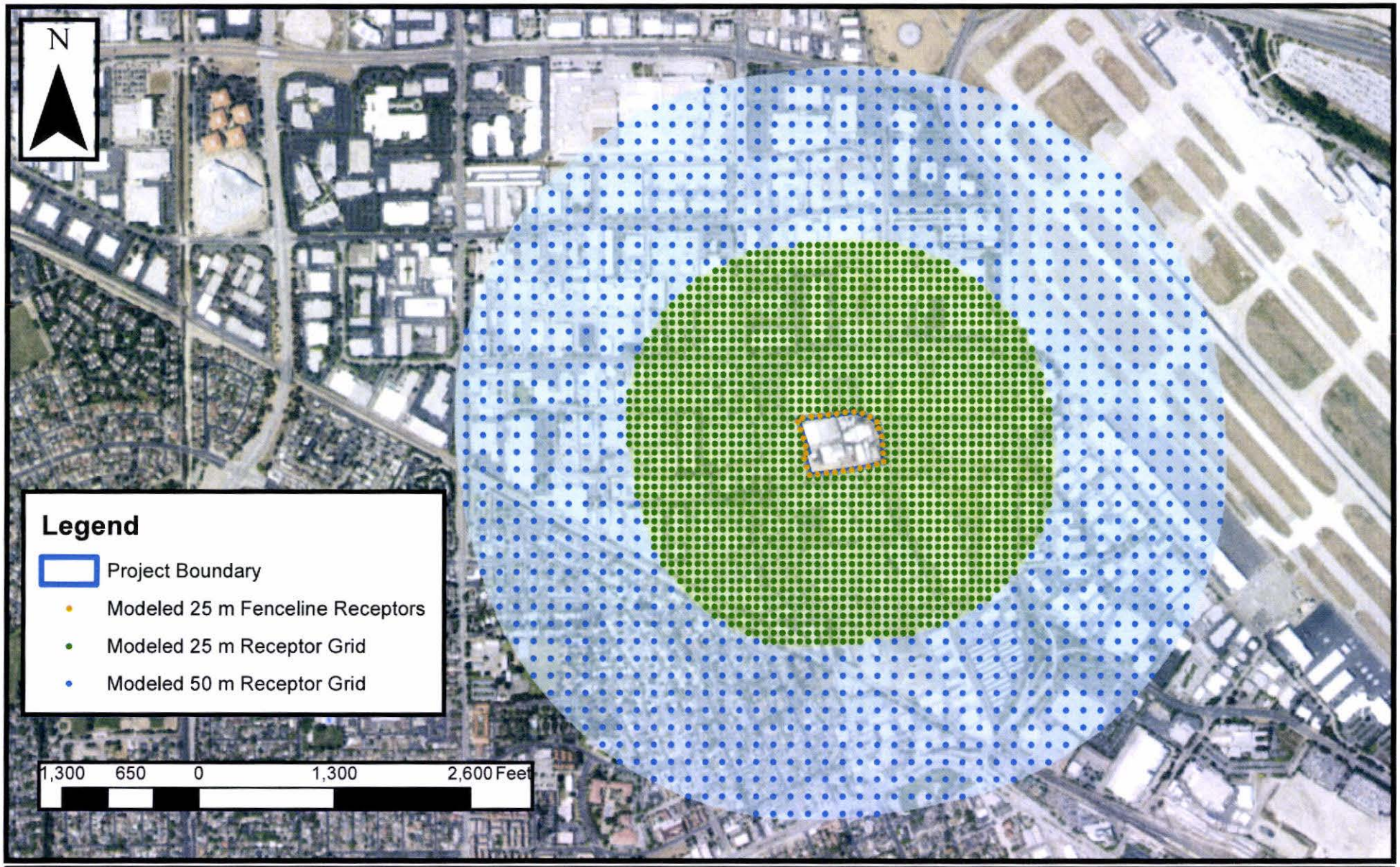


RAMBOLL ENVIRON

DRAFTED BY: | DATE:

Generator Stack Locations
McLaren Project
Vantage Data Centers
Santa Clara, California

FIGURE
3
PROJECT



RAMBOLL ENVIRON

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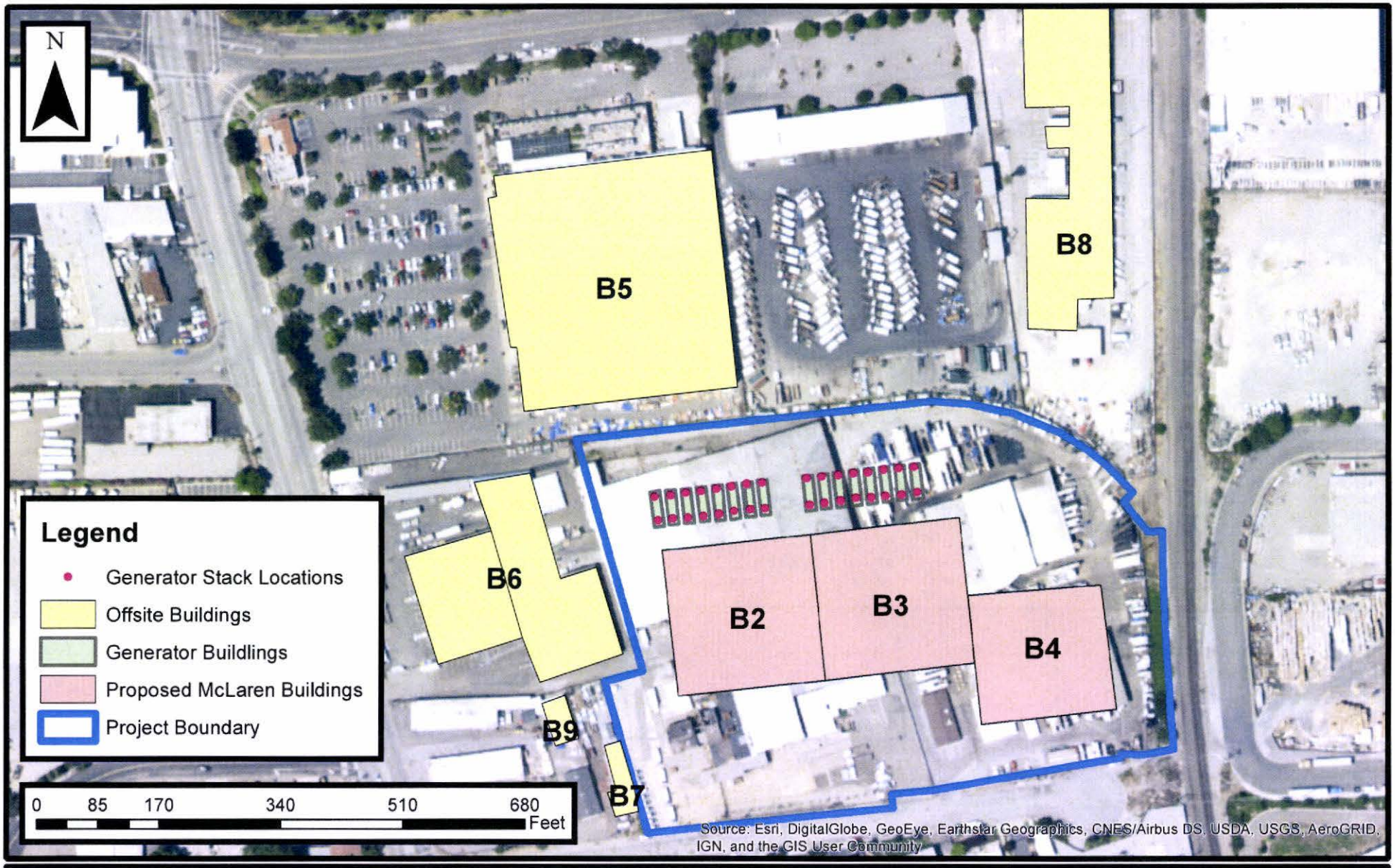
Modeled Receptor Locations
McLaren Project
Vantage Data Centers
Santa Clara, California

FIGURE
4
PROJECT



RAMBOLL ENVIRON

DRAFTED BY: | DATE:

Generator, Onsite and Offsite Building Locations
McLaren Project
Vantage Data Centers
Santa Clara, California

FIGURE
5
PROJECT

MANUFACTURER'S PERFORMANCE DATA

MODEL: C175-16 DI SCAC DRY MANIFOLD
DATA REF NO.: DM8448-06
GENSET RATING (W/F FAN): 3000.0 EKW STANDBY 60 HERTZ @ 1800 RPM
CERTIFICATION YEAR: 2015 CERT AGENCY: EPA
SERVICE CLASS: STATIONARY EMERGENCY >560 BKW

GENERAL PERFORMANCE DATA

GEN W/F EKW	ENG PWR BHP	FUEL RATE LB/BHP-HR	FUEL RATE GPH	EXHAUST STACK TEMP DEG F	EXHAUST GAS FLOW CFM	O2 (DRY) IN EXH (VOL) %	H2O IN EXH (VOL) %
3000.0	4423	0.339	214.2	891.9	24620.0	9.6	8.85

EMISSIONS DATA

Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D 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:

EPA and CARB Tier 2

MAX Limit - GM/HP-HR

CO	NOX + HC	PM
2.6	4.8	0.15

EPA ENGINE FAMILY NAME: FCPXL106.NZS

"D2 CYCLE CERT LEVELS" for the engine family are:

GM/HP-HR

CO	HC	NOX	NOX + HC	PM
1.1	0.36	3.97	4.3	0.08

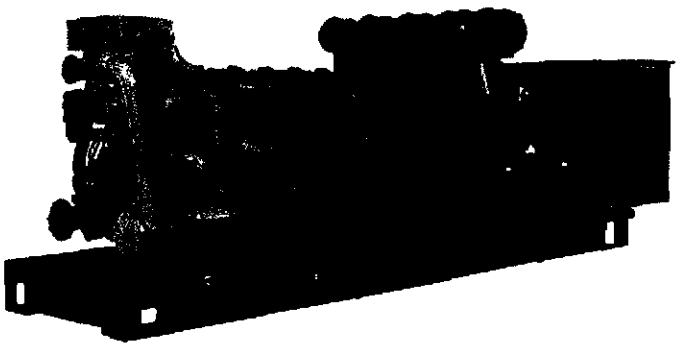
CALCULATION OF SOX

SOX = 2.997E-5 * FUEL RATE (LB//HR)

Generator Data from Project Applicant

Description	Value
Make	Caterpillar
Model Type	C175-16
Generator Output (at 100% load) (kW)	3000
Engine Output at 100% Load (horsepower)	4,423
Engine Output at 25% Load (horsepower)	1,246
KVA	3,750
Voltage	12,000V-4P-3W
Temp Rise	130degC
Overall Dimension	720"x156"x260"
Fuel	
Fuel Type	Diesel
Fuel Flow (gal hr)	571 maximum
Fuel Consumption@ 100% (gal/hr)	213.2
Fuel Consumption@ 25% (gal/hr)	82.9
Fuel Tank Capacity (gal)	6,000
Diesel Fuel Sulfur Content	0.0015%
Air Flow	
Cooling Air (SCFM)	103,578
Combustion Air (SCFM)	9,354.6
Exhaust Flow	
Flow Rate at 100% Load (cfm)	24,561.2
Flow Rate at 25% Load (cfm)	12,165.9
Exhaust Gas Temperature at 100% Load (C)	894 9
Exhaust Gas Temperature at 25% Load (C)	817.8
Back Pressure (kPa)	6 7 max allowable
Emissions Data	
EPA Tier	2
NOx + NMHC (g/hp-hr) [g/ kw-hr]	4.3
CO (g/hp- hr)	1 1
PM (g/hp-hr)	0 08
Particulate Filter System	Johnson Matthey
NOx Reduction (g/hp-hr)	N/A
CO Reduction (g/hp-hr)	0.22 (80%)
PM Reduction (g/hp-hr)	0.01 (85%)
Stack Data	
Stack Height (feet)	22
Stack Inside Diameter (inches)	28
Testing Data	

Engine Testing Duration (normal testing) **Annual number of hours of testing at 100% Load** **Annual number of hours of testing at 25% Load** **Annual number of days that testing would occur on - 100% Load** **Annual number of days that teting would occur on - 25% Load**	year round - all engines are required to be available 24/7/365, and maintenance can occur on any day and at varying load levels. To the extent possible, allowance of 50 hours per year, as provided by the CARB ATCM, Section 93115, title 17, CA Code of Regulations, Executive Order, and acceptable by the District is desired. Hourly or daily limits, and any limits of how many engine tests can be performed on would be problematic. TBACT and BACT is being satisfied by use of diesel particulate filters and CARB certified engines to achieve applicable short term standards for PT, NOx, POC and CO. Ultra low sulfur fuel (CARB certified) is being used to minimize SO2. NSPS and NESHAP short term emission standards will also be met. BAAQMD Significance Threshold for project operations (NOx < 10 tons/year, ROG < 10 tons/year, PM10 < 15 tons/year, PM2.5 < 10 tons/year) will also be met.



Caterpillar is leading the power generation marketplace **with Power** Solutions engineered to deliver unmatched **flexibility, expandability**, reliability, and cost-effectiveness

Specifications

Generator Set Specifications	
Minimum Rating	2500 ekW (2500 kVA)
Maximum Rating	3100 ekW (3100 kVA)
Voltage	220 - 13800 Volts
Frequency	50 Hz or 60 Hz
Speed	1500 or 1800 RPM

Generator Set Configurations	
Emissions/Fuel Strategy	Low Fuel Consumption, U.S EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

Engine Specifications		
Engine Model	C175-16 SCAC, V-16, 4-Stroke Water-Cooled Diesel	
Compression Ratio 50 Hz	16:7:1	
Compression Ratio 60 Hz	15 3 1	
Aspiration	Turbo Aftercooled	
Governor Type	ADEM™ A4	
Fuel System	Common Rail	
Bore	175 mm	8.89 in
Displacement	84.67 L	5155.88 in³
Stroke	220 mm	8.66 in

C175-16 ACERT
3000 ekW/ 3750 kVA/ 60 Hz/ 1800 rpm/ 12470 V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

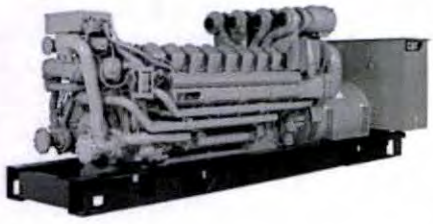


Image shown may not reflect actual configuration

C175-16 ACERT
3000 ekW/ 3750 kVA
60 Hz/ 1800 rpm/ 12470 V

	Metric	English
Package Performance		
Genset Power Rating with Fan @ 0.8 Power Factor	3000 ekW	
Genset Power Rating	3750 kVA	
Aftercooler (Separate Circuit)	46.0 ° C	114.8 ° F
Fuel Consumption		
100% Load with Fan	810.7 L/hr	214.2 gal/hr
75% Load with Fan	625.8 L/hr	165.3 gal/hr
50% Load with Fan	493.6 L/hr	130.4 gal/hr
25% Load with Fan	305.0 L/hr	80.6 gal/hr
Cooling System[1]		
Engine Coolant Capacity	303.5 L	80.2 gal
Inlet Air		
Combustion Air Inlet Flow Rate	276.7 m^3/min	9772.2 cfm
Max. Allowable Combustion Air Inlet Temp	55 ° C	131 ° F
Exhaust System		
Exhaust Stack Gas Temperature	477.7 ° C	891.9 ° F
Exhaust Gas Flow Rate	725.6 m^3/min	25620.0 cfm
Exhaust System Backpressure (Maximum Allowable)	6.7 kPa	27.0 in. water

CAT

C175-16 ACERT
3000 ekW/ 3750 kVA/ 60 Hz/ 1800 rpm/ 12470 V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

Heat Rejection		
Heat Rejection to Jacket Water	1379 kW	78436 Btu/min
Heat Rejection to Exhaust (Total)	3149 kW	179063 Btu/min
Heat Rejection to Aftercooler	N/A	N/A
Heat Rejection to Atmosphere from Engine	147 kW	8336 Btu/min
Heat Rejection to Atmosphere from Generator	178 kW	10123 Btu/min

Alternator[2]	
Motor Starting Capability @ 30% Voltage Dip	7879 skVA
Current	174 amps
Frame Size	3020
Excitation	PM
Temperature Rise	130 ° C

Emissions (Nominal)[3]		
NOx	3113 9 mg/Nm³	6.1 g/hp-hr
CO	325.6 mg/Nm³	0.7 g/hp-hr
HC	40.7 mg/Nm³	0.1 g/hp-hr
PM	13.0 mg/Nm³	0.0 g/hp-hr

DEFINITIONS AND CONDITIONS

1. For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory

2. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics Generator temperature rise is based on a 40° C ambient per NEMA MG1-32

3. Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle

SD500 | 15.2L | 500 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

Standby Power Rating

500 kW, 625 kVA, 60 Hz

Prime Power Rating*

450 kW, 563 kVA, 60 Hz

*EPA Certified Prime ratings are not available in the US or its Territories
*Built in the USA using domestic and foreign parts

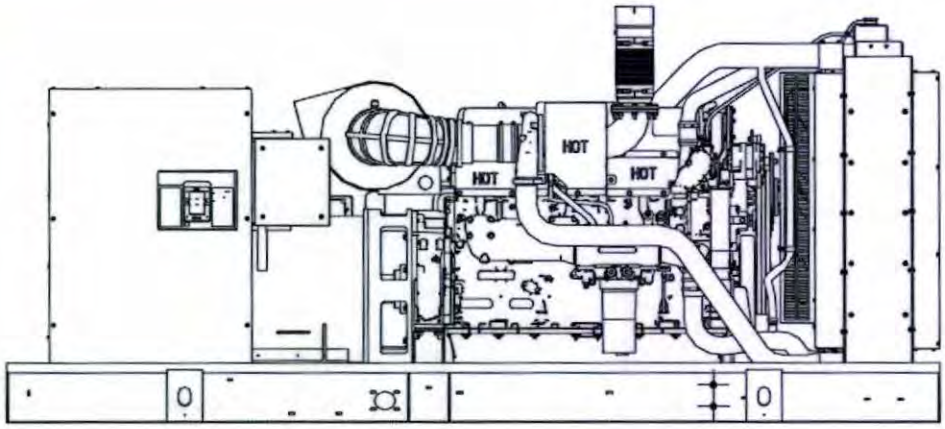


Image used for illustration purposes only

Codes and Standards

Generac products are designed to the following standards:

UL2200, UL508, UL142, UL489

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

NEMA ICS10, MG1, 250, ICS6, AB1

ANSI C62.41

IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD500 | 15.2L | 500 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

STANDARD OPTIONS

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Critical Exhaust Silencer (Enclosed Only)
- Factory Filled Oil & Coolant
- Radiator Duct Adapter (Open Set Only)

Fuel System

- Primary Fuel Filter

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension
- 120 VAC Coolant Heater

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Amortisseur Winding
- Permanent Magnet Excitation
- Sealed Bearings
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Rust-Proof Fasteners with Nylon Washer to Protect Finish
- High Performance Sound-Absorbing Material
- Gasketed Doors
- Air Discharge Hoods for Radiator-Upward Pointing
- Stainless Steel Lift off Door Hinges
- Stainless Steel Lockable Handles
- Rhino Coat™ - Textured Polyester Powder Coat

ENCLOSURE (if selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (L1 & L2)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Air Discharge Hoods for Radiator-Upward Pointing
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- Rhino Coat™ - Textured Polyester Powder Coat

TANK (if selected)

- UL 142
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve in Supply and Return Lines
- Rhino Coat™ - Textured Polyester Powder Coat
- Stainless Hardware

CONTROL SYSTEM

Control Panel

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- 2-Wire Start Compatible
- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 15 Channel Data Logging
- 0.2 msec High Speed Data Logging
- Alarm Information Automatically Comes Up On the Display

Alarms

- Oil Pressure (Pre-Programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-Programmed High Temp Shutdown)
- Coolant Level (Pre-Programmed Low Level Shutdown)
- Low Fuel Alarm
- Engine Speed (Pre-Programmed Over Speed Shutdown)
- Battery Voltage Warning
- Alarms & Warnings Time and Date Stamped
- Alarms & Warnings for Transient and Steady State Conditions
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

SD500 | 15.2L | 500 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Block Heater (Coolant)
- Crankcase Heater (Oil)
- Critical Grade Silencers
- Fan and Belt Guard (Optional)
- Flexible Fuel Lines Included with Base Tank
- Stone Guard (Open Set Only)

ELECTRICAL SYSTEM

- Battery
- 10A UL Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET

- Gen-Link Communications Software (English Only)
- 8 Position Load Center
- Alarm Horn
- Extended Factory Testing
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty
- 7 Year Extended Warranty
- 10 Year Extended Warranty

ENCLOSURE

- Standard Enclosure (Weather)
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- IBC Seismic Certification
- 180 MPH Wind Kit
- AC/DC Enclosure Lighting Kit

CONTROL SYSTEM

- 21-Light Remote Annunciator
- Ground Fault Indication and Protection Functions
- Engine Run Relay 10A (1-NO, 1- NC)
- 120 VAC GFCI outlet
- Oil Temperature Indication
- Remote Relay Panel (8 or 16)
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem

TANKS (Size On Last Page)

- Electronic Fuel Level
- Mechanical Fuel Level

ENGINEERED OPTIONS

ENGINE SYSTEM

- Fluid Containment Pans
- Coolant Heater Ball Valves

ALTERNATOR SYSTEM

- 3rd Breaker Systems
- Unit Mounted Load Banks

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4) - H Panel Only

GENERATOR SET

- Special Testing
- Battery Box

ENCLOSURE

- Motorized Dampers
- Intrusion Alert Door Switch
- Customer Color

TANKS

- Overfill Protection Valve
- UL 2085 Tank
- ULC S-601 Tank
- Stainless Steel Tank
- Special Fuel Tanks
- Vent Extensions
- 5 Gallon Spill Containment Box
- Dealer Supplied AHJ Requirements

RATING DEFINITIONS

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition.

SD500 | 15.2L | 500 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
Cylinder #	6
Type	In-Line
Displacement - L (cu in)	15.2 (927.56)
Bore - mm (in)	137 (5.39)
Stroke - mm (in)	171 (6.73)
Compression Ratio	16.0:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	4-Valve
Piston Type	Aluminum
Crankshaft Type	I-Beam Section

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow
Crankcase Capacity - L (qts)	45 (47.55)

Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Centrifugal Type, Belt-Driven
Fan Type	Pusher
Fan Speed (rpm)	1658
Fan Diameter - mm (in)	927 (36.5)
Coolant Heater Wattage	1500
Coolant Heater Standard Voltage	120 V

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Carburetor	ASTM
Fuel Filtering (microns)	Primary 10 - Secondary 2
Fuel Inject Pump Make	Electronic
Injector Type	MEUI
Engine Type	Pre-Combustion
Fuel Supply Line - mm (in)	12.7 (0.5) NPT
Fuel Return Line - mm (in)	12.7 (0.5) NPT

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) 12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	WEG
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<3%
Telephone Interference Factor (TIF)	<50
Standard Excitation	Permanent Magnet
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

SD500 | 15.2L | 500 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

OPERATING DATA

POWER RATINGS

		Standby
Three-Phase 120/208 VAC @0.8pf	500 kW	Amps: 1735
Three-Phase 120/240 VAC @0.8pf	500 kW	Amps: 1504
Three-Phase 277/480 VAC @0.8pf	500 kW	Amps: 752
Three-Phase 346/600 VAC @0.8pf	500 kW	Amps: 601

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

		480 VAC					
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	500	457	686	914	1143	1371	1600
Upsize 1	642	471	707	943	1179	1414	1650
Upsize 2	832	757	1136	1514	1893	2271	2650

		208/240 VAC					
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	500	429	643	857	1071	1286	1500
Upsize 1	689	543	814	1086	1357	1629	1900
Upsize 2	723	571	857	1143	1429	1714	2000

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)
12 (3.7)

Total Fuel Pump Flow (Combustion + Return) gph (lph)
121 (457)

Diesel - gph (lph)

Percent Load	Standby
25%	10.5 (39.7)
50%	19.5 (73.8)
75%	23.7 (89.7)
100%	31.2 (118.1)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby
Coolant Flow per Minute	gpm (lpm)	114.1 (432)
Coolant System Capacity	gal (L)	264 (999)
Heat Rejection to Coolant	BTU/hr	1,198,080
Inlet Air	cfm (m^3/min)	30,582 (866)
Max. Operating Ambient Temperature (Before Derate)	°F (°C)	104 (40)
Maximum Radiator Backpressure	in H_2O	0.50

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m^3/min)	1483 (42)

ENGINE

		Standby
Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	835
Piston Speed	ft/min	2020
BMEP	psi	366

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m^3/min)	3400 (96)
Max. Backpressure (Post Silencer)	in Hg (Kpa)	2.01 (6.8)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1022 (550)
Exhaust Outlet Size (Open Set)	mm (in)	127 (5)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

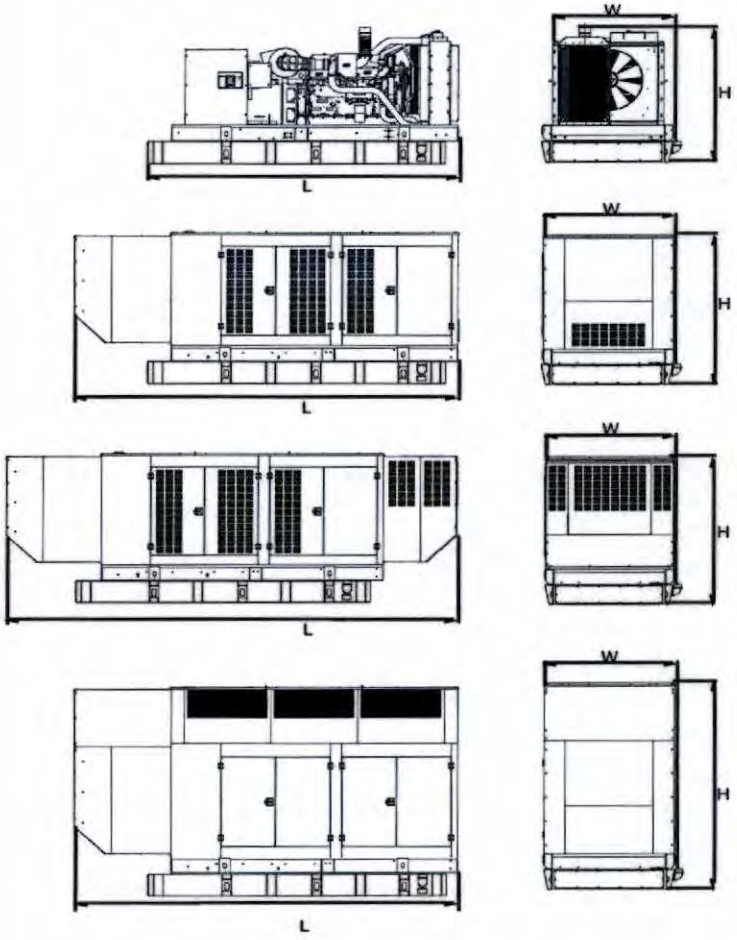
SD500 | 15.2L | 500 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

DIMENSIONS AND WEIGHTS*



OPEN SET (Includes Exhaust Flex)

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg)
No Tank	-	154.4 (3923) x 71 (1803) x 67 (1702)	10580 (4799)
10	334	158.5 (4026) x 71 (1803) x 81 (2057)	12255 (5559)
32	1001	158.5 (4026) x 71 (1803) x 103 (2616)	13180 (6228)
32	1001	228 (5791) x 71 (1803) x 103 (2616)	13730 (6228)
64	2002	290 (7366) x 71 (1803) x 103 (2616)	15430 (6999)

STANDARD ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	207.4 (5268) x 71 (1803) x 80 (2032)	1999 (907)	869 (394)
10	334	207.4 (5268) x 71 (1803) x 94 (2388)		
32	1001	207.4 (5268) x 71 (1803) x 116 (2946)		
32	1001	228 (5791) x 71 (1803) x 105 (2667)		
64	2002	290 (7366) x 71 (1803) x 116 (2946)		

LEVEL 1 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	247.5 (6285) x 71 (1803) x 80 (2032)	2782 (1262)	1291 (586)
10	334	247.5 (6285) x 71 (1803) x 94 (2388)		
32	1001	247.5 (6285) x 71 (1803) x 116 (2946)		
32	1001	247.5 (6285) x 71 (1803) x 105 (2667)		
64	2002	290 (7366) x 71 (1803) x 116 (2946)		

LEVEL 2 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	207.4 (5268) x 71 (1803) x 114 (2899)	3330 (1510)	1522 (692)
10	334	207.4 (5268) x 71 (1803) x 128 (3251)		
32	1001	207.4 (5268) x 71 (1803) x 150 (3810)		
32	1001	228 (5791) x 71 (1803) x 139 (3531)		
64	2002	290 (7366) x 71 (1803) x 150 (3810)		

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Generac Power Systems, Inc. | P.O.Box 8 | Waukesha, WI 53189
P: (262) 544-4811

Part No 0197160SBY
Rev. D 09/21/15

GENERAC | INDUSTRIAL POWER

STATEMENT OF EXHAUST EMISSIONS
2017 PERKINS DIESEL FUELED GENERATOR

The measured emissions values provided here are proprietary to Generac and it's authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

Generator Model:	**SD/MD500**	EPA Certificate Number:	**HCPXL15.2NZS-001**
kW_e Rating:	**500**	CARB Certificate Number:	**Not Applicable**
Engine Family:	**HCPXL15.2NZS**	SCAQMD CEP Number:	**545376**
Engine Model:	**2506C-E15TAG3**	Emission Standard Category:	**Tier 2**
Rated Engine Power (BHP)*:	**762**	Certification Type:	**Stationary Emergency CI**
Fuel Consumption (gal/hr)*:	**31.2**		**(40 CFR Part 60 Subpart IIII)**
Aspiration:	**Turbo/Aftercooled**		
Rated RPM:	**1800**		

*Engine Power and Fuel Consumption are declared by the Engine Manufacturer of Record and the U.S. EPA.

Emissions based on engine power of specific Engine Model.
(These values are actual composite weighted exhaust emissions results over the EPA 5-mode test cycle.)

CO	NOx + NMHC	PM	
1.43	**5.02**	**0.07**	Grams/kW-hr
1.06	**3.73**	**0.05**	Grams/bhp-hr

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA protocol, which is typically accepted by SCAQMD and other regional authorities.
- No emissions values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and local agencies must be consulted by the permit application/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811

Doc No. 10000009887
Rev. A 01/09/17

Emissions Control System for Peterson

7/20/2015

Proposal Submitted
By

Johnson Matthey
Catalysts

Stationary Source Emissions Control
900 Forge Avenue
Suite 100
Audubon, PA. 19403-2305

SSEC Sales Person
Robert Bono (bonorp@jmusa.com)
27412 Aliso Creek Road, Suite 210
Aliso Viejo, CA 92656
(949) 297-5229 office
(949) 297-5210 fax

Johnson Matthey Proposal No. GR-394

DESIGN PARAMETERS

The following conditions were used to design the CRT® Particulate Filter System:

Table 1. Design parameters at 100% load

Engine	**Caterpillar**
Model Number	**C-175-16**
Application	Generator
(kW)	(3000)
Operating Hours per Year	TBD
Number of Systems	3
Type of Fuel	ULSD
Design Exhaust Flow Rate, ACFM	24,561
Design Exhaust Temperature, °F	895
Recommended Size Load Bank/kW for Regeneration using CRTdM™	1500
Maximum Allowable Engine Back Pressure	26.9 " H_2O
Typical (full load) Clean Back Pressure*	18 " H_2O
Typical (full load) Operational Back Pressure*	22.7 " H_2O
*Across JM Product Scope of Supply	

Table 2. Emissions Data (all values in gms/Bhp-hr at 100% load)

Pollutant	Inlet Level	Outlet Level	% Reduction
CO	1.13	80% Reduction	80
PM	0.05	85% reduction	85
NO_x	6.22	NA	NA
HC	0.13	70% Reduction	70

Johnson Matthey has calculated the appropriate catalyst volume and equipment required based on the above design parameters supplied. If actual operating conditions vary from above conditions more catalyst or filters may be required for the system to achieve desired destruction efficiencies. For this reason all operating conditions must be closely reviewed as different conditions will void the warranty.

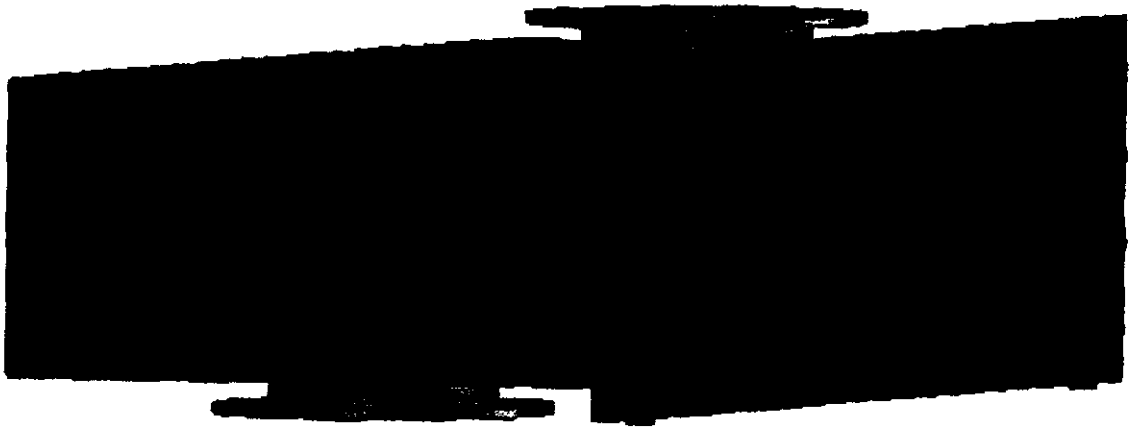
In addition, CRTdM Alarms must be responded to in the recommended manner, and sufficient load must be used to regenerate the CRT(+) unit, when necessary.

Johnson Matthey

OPERATION AND MAINTENANCE MANUAL

Rectangular CRT®(+)
(Continuously Regenerating Technology)

Emissions Control System



JOHNSON MATTHEY
STATIONARY SOURCE EMISSIONS CONTROL
400 Lapp Rd.
Malvern, PA 19355

Rev 0
August 2009

Johnson Matthey CRT®(+) System

General

Particulate matter (PM) from diesel engines is a toxic air contaminant that is a precursor to respiratory illness and is a potential cause of cancer. The California Air Resources Board (CARB) has adopted measures to reduce PM emissions from diesel engines in California. By doing so, California, the state that leads the Nation in environmental standards, provided the example for other states to follow; making strict national PM limits an urgent and viable possibility. Johnson Matthey has met this emissions control challenge by developing and patenting a proven technology that significantly reduces PM from diesel engines. The Johnson Matthey CRT ® (+) (Continuously Regenerating Technology) Diesel Particulate Filter (Figure 1) is a passive emissions control system that continuously collects and converts the PM to CO_2, H_2O and ash. In addition, the CRT ® (+) Diesel Particulate Filter reduces the carbon monoxide (CO) and hydrocarbon (HC) in the engine exhaust to CO_2 and H_2O. This passive technology does not require any external or supplemental heat source to regenerate the filter. The 1st stage of the CRT ® (+) Diesel Particulate Filter comprises an oxidation catalyst followed by a filter in the 2nd stage; each mounted in its own bulkhead and installed in a metal housing. Multiple catalysts and filters are arrayed in their respective bulkheads in larger housings to accommodate larger engines and higher exhaust flow rates.

Principles of Operation

NO_x (Oxides of Nitrogen), CO, HC, and PM are all present in diesel exhaust. The PM includes carbon soot, SOF (Soluble Organic Fraction), sulfate, water and ash. All of these exhaust components enter the CRT ® (+) Diesel Particulate Filter inlet port and pass through the catalyst. The catalyst (Figure 2), which contains highly-active platinum group metal(s), is designed to oxidize the incoming gases. The oxidation reaction results in the formation of CO_2, H_2O, and NO_2, which enter the filter (Figure 3). Soot particles are collected in the filter and the NO_2 reacts with the soot, in a combustion reaction, to form CO_2, H_2O and NO. These products of soot combustion then exit through the side walls of the filter. Combustion of soot in an NO_2 rich environment occurs more efficiently and at a lower temperature than in an O_2 rich environment. The CRT ® (+) Diesel Particulate Filter can regenerate at a temperature as low as 465°F, far outperforming any other particulate filter including catalyzed soot filters (CSF). The ash portion of the PM, which also passes through the catalyst and is collected in the filter, will remain in the filter. Periodic cleaning of the filters(s) to remove ash at scheduled maintenance intervals is required. The filter maintenance interval is determined by the back pressure developed in the exhaust and the limit allowed by the engine specification. The back pressure and temperature are monitored with the CRTdm diagnostic module supplied with the CRT ® (+).

CRT® (+) Specification

a. Approvals

The CRT ® (+) Diesel Particulate Filter is verified by the California Air Resources Board for emergency standby and prime stationary diesel engines and conditionally verified for pump engines. It is verified as a Level 3 device (> 85% PM reduction) for engines with a particulate emission rating of 0.4 g/bhp-hr or less.

b. Makeup of CRT®(+)	The CRT®(+) Diesel Particulate Filter comprises a catalyst and a filter or a multiple array of catalysts and filters in a metal housing.
c. Composition of Catalyst	The catalyst contains highly dispersed platinum group metal(s) deposited on a metallic flow through substrate.
d. Filters	Filters are ceramic cordierite wall-flow type. Quantity provided is dependent upon the exhaust gas flow rate, temperature and composition.
e. Housing	Models CRT(+)1 through CRT(+)12: The housing is constructed of 304 stainless steel or A36 CS and contains a bulkhead for the catalyst and filter module sleeves. The filter and catalyst are accessed by removing a bolted flat cover. A V-Band clamp secures the filter to the sleeve. The catalyst is mounted in the sleeve behind the filter and is secured with a locking nut. Models CRT(+)1A and CRT(+)1MD: The housing is constructed of 409 Stainless steel and have a segmented design that permits easy separation of the filter and catalyst from the housing.
f. Performance	The CRT®(+) Diesel Particulate Filter will provide the following minimum reductions: - PM by a minimum of 85% - Carbon Monoxide (CO) by 80% - Hydrocarbons (HC) by 70%
g. Filter Regeneration	The CRT®(+) Diesel Particulate Filter will regenerate at a minimum temperature of 465°F.

Monitoring

Each Johnson Matthey CRT®(+) Diesel Particulate Filter is supplied with a CRTdm diagnostic module. *This device logs exhaust temperature and back pressure when the* engine is operating. The CRTdm requires a 24 volt DC power source. It has an RS232 interface and comes with software to download the data onto a portable computer. It has alarm points which can be set to indicate the increase in back pressure based upon the engine manufacturers' specifications. The CRTdm is invaluable as a monitoring device and helps the operator to define the maintenance schedule. It emits an alarm when a preset backpressure level is exceeded, and it can serve as a data logger to continuously monitor the exhaust temperature and back pressure.

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER DE-08-009-08

Pursuant to the authority vested in the California Air Resources Board (ARB) by Health and Safety Code, Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code section 39515 and 39516 and Executive Order G-14-012;

This action relates to Verification under sections 2700 through 2711 of title 13 of the California Code of Regulations

Johnson Matthey Inc.
CRT(+) Diesel Particulate Filter

ARB has reviewed the request by Johnson Matthey Inc. for verification of the CRT(+) diesel particulate filter (DPF). Based on an evaluation of the data provided, and pursuant to the terms and conditions specified below, the Executive Officer of the ARB hereby finds that the CRT(+) DPF reduces emissions of diesel particulate matter (PM) consistent with a Level 3 device (greater than or equal to 85 percent reductions) (California Code of Regulations (CCR), title 13, sections 2702 (f) and section 2708) and complies with the ARB January 1, 2009, nitrogen dioxide (NO_2) limit (CCR, title 13, section 2702 (f) and section 2706 (a)). Accordingly, the Executive Officer determines that the system merits verification and, subject to the terms and conditions specified below, classifies the CRT(+) DPF as a Level 3 Plus system, for use with stationary emergency standby and prime generators using engine families listed in Attachment 1.

This verification is subject to the following terms and conditions:

- The engine must be used in a stationary application associated with emergency standby or prime generators.
- The engines are model years 1996 or newer having the engine family names listed in Attachment 1.
- The engine must be a Tier 1, Tier 2, Tier 3, Tier 4i with a rated horse power between 50 and 75 or over 750, or Tier 4 Alt 20% NOx and PM certified off-road engine meeting 0.2 grams per brake horsepower hour (g/bhp-hr) diesel particulate matter (PM) or less based on certification or in-use emissions testing (as tested on an appropriate steady-state certification cycle outlined in the ARB off-road regulations – similar to ISO 8178 D2).
- The engine must be in its original certified configuration.
- The engine must not employ exhaust gas recirculation.
- The engine must not have a pre-existing selective catalytic reduction system.
- The engine must not have a pre-existing oxidation catalyst.
- The engine must not have a pre-existing diesel particulate filter.
- The engine must be four-stroke.
- The engine can be turbocharged or naturally-aspirated.
- The engine must be certified in California.

- Johnson Matthey Inc. must review actual operating conditions (duty cycle, baseline emissions, exhaust temperature profiles, and engine backpressure) prior to retrofitting an engine with the CRT(+) DPF to ensure compatibility.
- The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
- The engine must not be operated with fuel additives, as defined in section 2701 of title 13, of the CCR, unless explicitly verified for use with fuel additive(s).
- The other terms and conditions specified in Table 1.

Table 1: Conditions for the CRT(+) DPF

Parameter	Value
Application	Stationary Emergency Standby and Prime Power Generation
Engine Type	Diesel, with or without turbocharger, without exhaust gas recirculation (EGR), mechanically or electronically controlled, Tier 1, Tier 2, Tier 3, Tier 4i with a rated horse power between 50 and 75 or over 750, or Tier 4 Alt 20% NOx and PM certified off-road engines meeting 0.2 g/bhp-hr diesel PM or less based on certification or in-use emissions testing.
Minimum Exhaust Temperature for Filter Regeneration	The engine must operate at the load level required to achieve 240 degrees Celsius (°C) for a minimum of 40 percent of the engine's operating time and an oxides of nitrogen (NOx)/PM ratio of 15 @ ≥ 300°C and 20 @ ≤ 300°C. Operation at lower temperatures is allowed, but only for a limited duration as specified below.
Maximum Consecutive Minutes Operating Below Passive Regeneration Temperature	720 Minutes
NOx/PM Ratio Requirements	NOx/PM ratio of at least 8 with a preference for 20 or higher.
Number of Consecutive Cold Starts and 30 Minute Idle Sessions before Regeneration Required	24
Number of Months of Operation Before Cleaning of Filter Required	Filter cleaning is not required till after 150 half-hour cold starts with associated regenerations or 1000 hours of emergency/standby use or 6 to 12 months of prime operation depending on hours of operation, maintenance practice, and oil used. The CRTdm, which monitors engine exhaust back pressure and temperature will determine the actual cleaning interval and provide an alert when filter cleaning is required.
Fuel	California diesel fuel with less than or equal to 15 ppm sulfur or a biodiesel blend provided that the biodiesel portion of the blend complies with ASTM D6751, the diesel portion of the blend complies with title 13 (CCR), sections 2281 and 2282, and the blend contains no more than 20 percent biodiesel by volume. Other alternative diesel fuels such as, but not limited to, ethanol diesel blends and water emulsified diesel fuel are excluded from this Executive Order.
Verification Level	Level 3 Plus Verification: • PM - at least 85% reduction • NO_2 - meets January 2009 limit

The CRT(+) DPF consists of an oxidation catalyst and diesel particulate filter, referred to as a catalyzed passive continuously regenerated diesel particulate filter, and a backpressure monitor and data logger combination, CRTdm. A schematic of the approved label is shown in Attachment 2. Labels attached to the DPF and the engine must be identical.

This Executive Order is valid provided that installation instructions for the CRT(+) DPF do not recommend tuning the engine to specifications different from those of the engine manufacturer. The product must not be used with any other systems or engine modifications without ARB and manufacturer written approval.

Changes made to the design or operating conditions of the CRT(+) DPF, as exempted by ARB, which adversely affect the performance of the engine's pollution control system, shall invalidate this Executive Order. As such, no changes are permitted to the device.

If Johnson Matthey Inc. plans to make changes to the design of CRT(+) DPF, the ARB must be notified in writing of any changes to any part of the CRT(+) DPF. Any changes to the device must be evaluated and approved in writing by ARB. Failure to do so shall invalidate this Executive Order.

Marketing of the CRT(+) DPF using identification other than that shown in this Executive Order or for an application other than that listed in this Executive Order shall be prohibited unless prior approval is obtained from ARB.

As specified in the Diesel Emission Control Strategy Verification Procedure (title 13 CCR section 2706 (g)), the ARB assigns each Diesel Emission Control Strategy a family name. The designated family name for the verification as outlined above is:

CA/JMI/2008/PM3+/N00/ST/DPF01

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, Johnson Matthey Inc. is responsible for record keeping requirements (section 2702), honoring the required warranty (section 2707), and conducting in-use compliance testing (section 2709).

Johnson Matthey Inc. must ensure that the installation of the CRT(+) DPF system conforms to all applicable industrial safety requirements.

A copy of this Executive Order must be provided to the ultimate purchaser at the time of sale.

Proper engine maintenance is critical for the proper functioning of the diesel emission control strategy. The owner and/or operator of the engine on which the diesel emission control strategy is installed, is strongly advised to adhere to all good engine maintenance practices. Failure to document proper engine maintenance, including

keeping records of the engine's oil consumption, may be grounds for denial of a warranty claim.

In addition, ARB reserves the right in the future to review this Executive Order and verification provided herein to assure that the verified add-on or modified part continues to meet the standards and procedures of CCR, title 13, section 2222, et seq. and CCR, title 13, sections 2700 through 2711.

Systems verified under this Executive Order shall conform to all applicable California emissions regulations.

This Executive Order does not release Johnson Matthey Inc. from complying with all other applicable regulations.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order.

Executive Order DE-08-009-07 is hereby superseded and is of no further force and effect.

Executed at Sacramento, California, this 22nd day of August, 2016.

Richard W. Corey
Executive Officer
by

Cynthia Marvin, Chief
Transportation and Toxics Division

Attachment 1: Johnson Matthey CRT(+) Diesel Particulate Filter Off-Road Certified Engine Family List (0<=0.2 g/hp-hr PM)
Attachment 2: Diesel Emission Control System Label

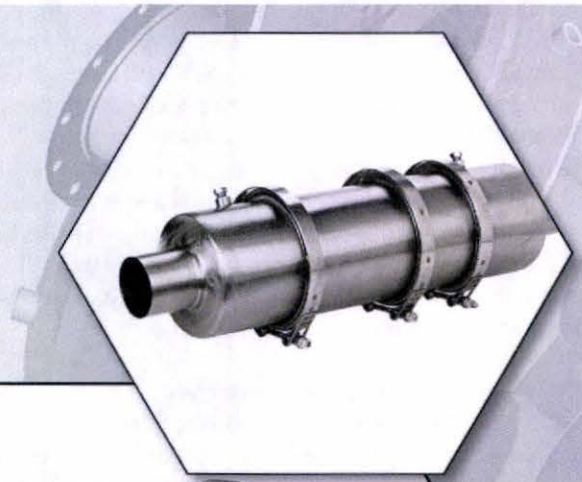
Johnson Matthey

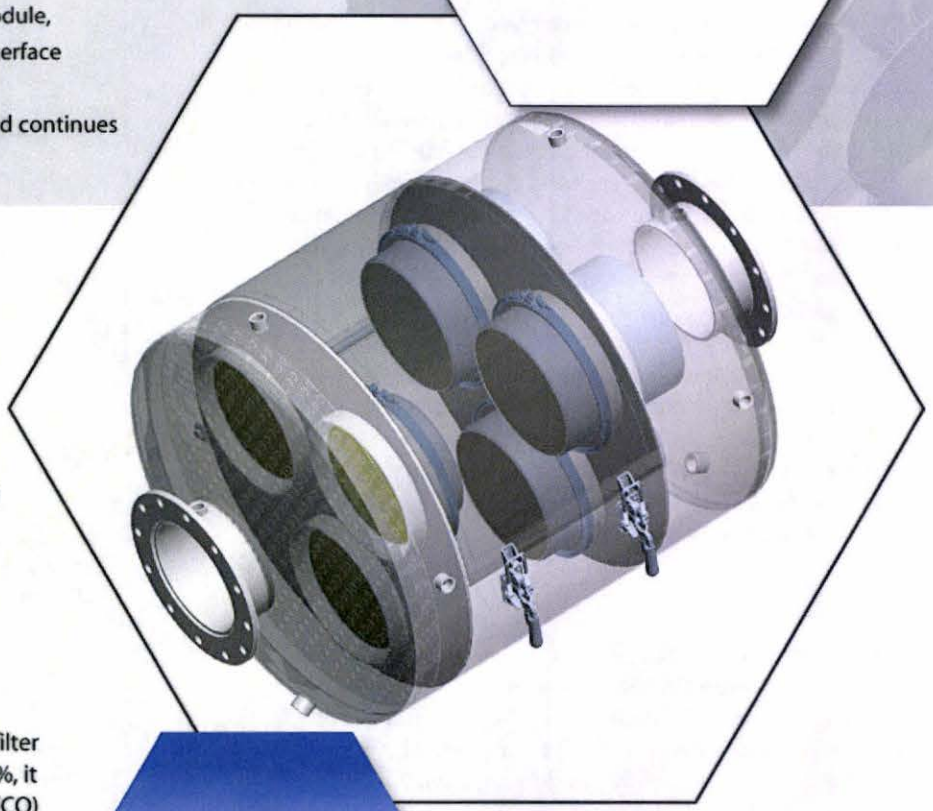
CRT® Particulate Filter System

Johnson Matthey Sets the Standard for Stationary Diesel Engine PM Emissions Control

Benefits:

- Reduces PM, HC and CO by over 90%
- Verified by CARB for emergency backup power, prime power and pumping
- Multiple-filter design enables the CRT to be used on all engine sizes
- Modular design for ease of installation, routine service and easy maintenance
- Self-cleaning for convenience and ease-of-use
- No supplemental heat or fuel required
- For optimal performance, operates with Ultra Low 15ppm Sulfur diesel, which is now widely available nationally
- Each unit is equipped with the CRTdm diagnostic module, with data-logging, alarm capability and computer interface
- Housed in stainless steel for strength and durability
- PM collection/filtration begins when engine starts and continues for the entire run time





Johnson Matthey CRT®, Continuously Regenerating Technology

The **CRT®** (Continuously Regenerating Technology) Particulate Filter is Johnson Matthey's patented technology for the control of emissions from diesel engines. It is the first PM control technology that has been verified by the California Air Resources Board (CARB) for application to all stationary diesel engines, including:

- Emergency Back-Up Power
- Prime Power
- Pumping

This advanced passive regenerating diesel particulate filter system not only reduces particulate matter (PM) by 90%, it also reduces hydrocarbon (HC) and carbon monoxide (CO) by 90% or more, which exceeds CARB requirements.

Engineering Innovation Makes the CRT® Uniquely Superior

Based on a number of unique design factors, the Johnson Matthey **CRT** is engineered to ensure optimum effectiveness. While other filter systems may require an external

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Johnson Matthey

Stationary Source Emissions Control

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Johnson Matthey

CRT® Particulate Filter System

Verified by CARB for emergency backup power, prime power and pumping

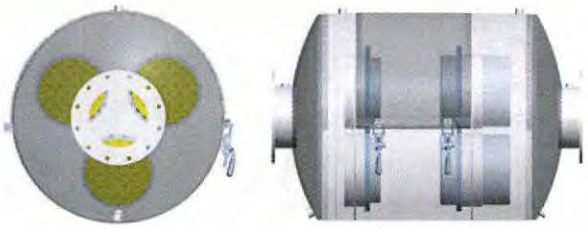
heat source or a catalyst coating on the filter, Johnson Matthey employs a novel two-component design in which the catalyst is separate from the filter. This allows for maximum catalyst and filter performance. The catalyst is positioned before the filter to convert NO into NO_2. The NO_2 then oxidizes the soot that is collected on the filter to regenerate the filter. The soot is combusted at a much lower temperature than is normally required. In fact, the **CRT** enables the filter to be regenerated at a temperature that is 20% lower than other filters on the market. NO_2 generation is the key to the oxidation of soot collected by the wall flow filter and is the heart of the Johnson Matthey patent. The catalyst also converts CO and HC into CO_2 and water.

The significantly lower operating temperature of the Johnson Matthey **CRT** is compatible with typical diesel exhaust temperatures, so no supplemental heat is required. Using a "flow-through" platinum coated catalyst, the soot travels directly through the catalyst and is captured on the filter. As a result, the catalyst is kept free of soot, ensuring that it performs at the highest level possible. Soot is trapped on the filter where it's then destroyed by the NO_2 produced by the catalyst. This coordinated operation between the catalyst and filter makes the **CRT** highly efficient and effective.

What's more, the Johnson Matthey **CRT** utilizes passive regeneration during which soot trapped on the filter is automatically burned off to clean the filter. This is in contrast to active regeneration employed with other filters, during which diesel fuel or an electrical current is used to heat up the filter. This active approach has the dangerous potential to cause a fire.

Proven Success

For 40 years, Johnson Matthey has been the global leader in the emissions control industry. When it comes to performance, Johnson Matthey's **CRT** System has proven to be the superior solution for mobile heavy-duty diesel engines, with over a 120,000 **CRT** systems installed worldwide. Now, the **CRT** is also proving to be the best choice for PM emissions control in stationary diesel engines. The leader—Johnson Matthey—continues to be the best choice for all engine emissions control applications.



FILTER TECHNOLOGIES

Comparison of CARB verified particulate filter technologies for stationary diesel engines

	JOHNSON MATTHEY CRT® FILTER SYSTEM	OTHER FILTER SYSTEMS
Filter technology	Catalyst + ceramic filter	Catalyzed ceramic filter or Burner and SiC filter
Regeneration technology and temperature	Passive: @ 240°C for 40% of duty cycle, or 5 hours @ 300°C after every 200 consecutive hours < 240°C	Passive: @ 300°C for 30% of duty cycle or 2 hours, whichever is longer Active regeneration required: 0.1 PM : < 375°C 0.2 PM : < 405°C 0.3 PM : < 420°C 0.4 PM : < 435°C
NOx / PM Ratio	15 @ > 300°C 20 @ < 300°C	
Full CARB verification	• Emergency backup • Prime	• Emergency backup
Conditional CARB verification	• Pumping	• Pumping
Diesel engine family applicability	≤ 0.4 g/bhp-hr PM	Passive: ≤ 0.1 g/bhp-hr PM Active: ≤ 0.4 g/bhp-hr PM
Verification level	3 (> 85% PM reduction)	3 (> 85% PM reduction)
Maximum consecutive minutes at idle	720	Passive 240 Active 720
# of cold starts idle time after each cold start	24 30 minutes	12 to 24 10 to 30 minutes
Max. hours before filter cleaning	5000 project specific	2000 to 5000 project specific

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