TROY SAND & GRAVEL CO., INC.
NASSAU QUARRY, NEW YORK

NYSDEC Registration Air Permit Application

Prepared for:

Jude Clemente
President
Troy Sand & Gravel, Inc.
PO Box 8
34 Grange Road
West Sand Lake, NY 12196

Prepared by:

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Consulting Geologist
152 Ruhle Road
Malta, NY 12020
518-884-4975

Date: November 16, 2005

Revised: February 23, 2006

New York State Department of Environmental Conservation
Air Facility Registration

DEC ID

Owner/Firm

Taxpayer ID: 1 4 1 4 4 0 8 9 0

Name	Troy Sand & Gravel Co., Inc.						
Street Address	PO Box 171						
City / Town / Village	Watervliet	State or Province	NY	Country	USA	Zip	12189

Owner/Firm Contact

Name	Jude Clemente, President	Phone No.	(518) 674-2854

Facility

Name	Troy Sand & Gravel Co., Inc.		
Location Address	NYS Route 66		
- City / - Town / - Village	Nassau	Zip	12123

Facility Information

Total Number of Emission Points: 1

X Cap by Rule

Description

Tory Sand & Gravel proposes to operate an aggregate processing plant at their Nassau quarry. The plant will be composed of two crushers, one screen and multiple conveyors. Water spray will be used to control dust emitted from the aggregate processing equipment. A diesel genset will be used to supply electrical power to the aggregate plant. A fugitive dust control plan will be kept on-site at all times.

Standard Industrial Classification Codes

1422					

HAP CAS Numbers

- -	- -	- -	- -	- -	- -
- -	- -	- -	- -	- -	- -

Applicable Federal and New York State Requirements (Part Nos.)

200	201	211	212	215	60 Subpart 000

Certification

I certify that this facility will be operated in conformance with all provisions of existing regulations.

Responsible Official	Jude Clemente	Title	President
Signature	Jude Cl	Date	11 / 22 / 06

State Air Permit Application Supporting Data

New York State Department of Environmental Conservation
Air Permit Application

DEC ID	APPLICATION ID	OFFICE USE ONLY
	- - /	/ /

Section I - Certification

Title V Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information [required pursuant to 6 NYCRR 201-6.3(d)] I believe the information is, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Responsible Official	Title
Signature	Date / /

State Facility Certification

I certify that this facility will be operated in conformance with all provisions of existing regulations.

Responsible Official **Jude Clemente**	Title **President**
Signature	Date / /

Section II - Identification Information

Title V Facility Permit - New - Significant Modification - Administrative Amendment - Renewal - Minor Modification General Permit Title:	State Facility Permit - New - Modification General Permit Title:
- Application involves construction of new facility	- Application involves construction of new emission unit(s)

Owner/Firm

Name	**Troy Sand & Gravel Co., Inc.**						
Street Address	**34 Grange Road**						
City	**West Sand Lake**	State	**NY**	Country	**USA**	Zip	**12196**
Owner Classification	- Federal - State - Municipal **X** Corporation/Partnership - Individual					Taxpayer ID	**1 4 1 4 4 0 8 9 0**

Facility - Confidential

Name	**Troy Sand & Gravel Co., Inc.**		
Location Address	**NYS Route 66**		
- City /**X** Town/-Village	**Nassau**	Zip	**12018**

Project Description - Continuation Sheet(s)

The air permit application serves as background information for a State Registration Application for an aggregate processing facility.

The proposed aggregate plant will include 2 crushers,1 screen and multiple conveyors used to produce construction aggregate from bedrock. One diesel genset will be used to supply electrical power to the aggregate plant.

The permit is being designed to cap the entire facility below 25 tons of any criteria pollutant.

Owner/Firm Contact Mailing Address

Name (Last, First, Middle Initial)	**Clemente, Jude**					Phone No.	**(518) 674-2854**
Affiliation	**Troy Sand & Gravel Co., Inc.**	Title	**President**			Fax No.	
Street Address	**34 Grange Road**						
City	**West Sand Lake**	State	**NY**	Country	**USA**	Zip	**12196**

Facility Contact Mailing Address

Name (Last, First, Middle Initial)	**Clemente, Jude**					Phone No.	**(518) 674-2854**
Affiliation	**Troy Sand & Gravel Co., Inc.**	Title	**President**			Fax No.	**(518) 674-8006**
Street Address	**NYS Route 66**						
City	**Averil Park**	State	**NY**	Country	**USA**	Zip	**12018**

New York State Department of Environmental Conservation
Air Permit Application

DEC ID										

Section III - Facility Information

Classification

- Hospital - Residential - Educational/Institutional - Commercial **X** Industrial - Utility

Affected States (Title V Only)

- Vermont - Massachusetts - Rhode Island - Pennsylvania Tribal Land:_____
- New Hampshire - Connecticut - New Jersey - Ohio Tribal Land:_____

SIC Codes

1422												

Facility Description

- Continuation Sheet(s)

The facility will be composed of a portable stone crushing, screening

and conveying plant, and one diesel generator used to supply power to the operation.

Compliance Statements (Title V Only)

I certify that as of the date of this application the facility is in compliance with all applicable requirements: - YES - NO

If one or more emission units at the facility are not in compliance with all applicable requirements at the time of signing this application (the 'NO' box must be checked), the noncomplying units must be identified in the "Compliance Plan" block on page 8 of this form along with the compliance plan information required. For all emission units at this facility that are operating in compliance with all applicable requirements complete the following:

- This facility will continue to be operated and maintained in such a manner as to assure compliance for the duration of the permit, except those units referenced in the compliance plan portion of Section IV of this application.
- For all emission units, subject to any applicable requirements that will become effective during the term of the permit, this facility will meet all such requirements on a timely basis.
- Compliance certification reports will be submitted at least once a year. Each report will certify compliance status with respect to each requirement, and the method used to determine the status.

Facility Applicable Federal Requirements

- Continuation Sheet(s)

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
6	**NYCRR**	**201**	**7**	**2**					
6	**NYCRR**	**202**	**2**						
6	**NYCRR**	**211**		**3**					
6	**NYCRR**	**212**		**10**					
6	**NYCRR**	**215**							
6	**NYCRR**	**225**	**1**						
6	**NYCRR**	**225**	**2**						

Facility State Only Requirements

- Continuation Sheet(s)

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

DEC ID

Section III - Facility Information (continued)

Facility Compliance Certification - Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
6	**NYCRR**	**201**	**7**	**2**					

X Applicable Federal Requirement - State Only Requirement	**X** Capping	CAS No.	Contaminant Name
		NY210 - 00 - 0	**NOx**

Monitoring Information

- Ambient Air Monitoring - Work Practice Involving Specific Operations **X** Record Keeping/Maintenance Procedures

Description

Facility shall maintain oxides of nitrogen emissions equal to or less than 25 TPY during any 12 consecutive month period.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
24.9		**34**	**tons**

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	**annual maximum rolled monthly**	**05**	**monthly**	**09**	**annually**

Facility Emissions Summary **X** Continuation Sheet(s)

CAS No.	Contaminant Name	PTE (lbs/yr)	PTE Range Code	Actual (lbs/yr)
NY075 - 00 - 5	**PM-10**		**C**	
NY075 - 00 - 0	**PARTICULATES**		**D**	
7446 - 09 - 5	**SULFUR DIOXIDE**		**B**	
NY210 - 00 - 0	**OXIDES OF NITROGEN**	**49,800**		
630 - 08 - 0	**CARBON MONOXIDE**		**B**	
7439 - 92 - 1	**LEAD**		**A**	
NY998 - 00 - 0	**VOC**		**A**	
NY100 - 00 - 0	**HAP**		**A**	
50 - 00 - 0	**Formaldehyde**		**Y**	
91 - 20 - 3	**Naphthalene**		**Y**	
75 - 07 - 0	**Acetaldehyde**		**Y**	
71 - 43 - 2	**Benzene**		**Y**	

DEC ID											

Section III - Facility Information

Facility Emissions Summary (continuation)

CAS No.	Contaminant Name	PTE (lbs/yr)	PTE Range Code	Actual (lbs/yr)
100 - 41 - 4	**Ethyl Benzene**		**Y**	
106 - 51 - 4	**Quinone**		**Y**	
108 - 88 - 3	**Toluene**		**Y**	
1330 - 20 - 7	**Xylene**		**Y**	
- -	**Arsenic**		**Y**	
- -	**Beryllium**		**Y**	
- -	**Cadmium**		**Y**	
- -	**Chromium**		**Y**	
- -	**Hexavalent chromium**		**Y**	
- -	**Manganese**		**Y**	
- -	**Mercury**		**Y**	
- -	**Nickel**		**Y**	
- -	**Selenium**		**Y**	
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New York State Department of Environmental Conservation
Air Permit Application

DEC ID

Section IV - Emission Unit Information

Emission Unit Description - Continuation Sheet(s)

EMISSION UNIT: **1-NASSA**

Emission Unit 1-NASSA is composed of: an aggregate processing plant consisting of crushers, screens and conveyors; and a diesel genset used to supply power to the aggregate plant.

Building ? Continuation Sheet(s)

Building	Building Name	Length (ft)	Width (ft)	Orientation

Emission Point X Continuation Sheet(s)

EMISSION PT.: **GEN01**

Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section Length (in)	Cross Section Width (in)
830 - 1050	**6.4**		**8"**	**954**		
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal
	6250.7					

EMISSION PT.:

Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section Length (in)	Cross Section Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal

Emission Source/Control X Continuation Sheet(s)

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
CR1	**I**						**Lippmann-Milwaukee 50x62 Jaw Crusher**

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
369	**9**	**tons per hour**				

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
CR2	**I**						**Nordberg 1560 Cone Crusher**

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
436	**9**	**tons per hour**				

DEC ID

Section IV - Emission Unit Information

EMISSION UNIT: 1 - N A S S A

Emission Source/Control (continuation)

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
SC1	**I**						**Deister BHM Triple Deck Screen**

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
CON1	**I**						**conveyors**

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
G1	**C**						**Caterpillar Mod 3412**

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
975	**219**	**horsepower**				

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
WS	**K**				**061**	**water spray bars**	**homemade**

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

DEC ID

Section IV - Emission Unit Information

Process Information (continuation) - Continuation Sheet(s)

EMISSION UNIT **1 - N A S S A** PROCESS **P 0 1**

Description

Broken rock is sent through crushers as part of the stone processing operation. Crushed rock is sent to a triple deck screen where it is sized and separated. The aggregate is conveyed to stockpiles for later loading into trucks for sale and removal off-site.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description
		738,000	**0469**	**tons of material processed**

X Confidential - Operating at Maximum Capacity - Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		
	10	**200**		**Ground**

Emission Source/Control Identifier(s)

CR1	**CR2**	**SC1**	**WS1**				

EMISSION UNIT **1 - N A S S A** PROCESS **P 0 2**

Description

One diesel genset is used to supply electric power to the aggregate plant.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description

X Confidential - Operating at Maximum Capacity - Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		
	10	**200**		**ground**

Emission Source/Control Identifier(s)

G1							

DEC ID

Section IV - Emission Unit Information (continued)

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements **X** Continuation Sheet(s)									
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
1 - NASSA		**P01**	**CR1**	**6**	**NYCRR**	**200**							
1 - NASSA		**P01**	**CR1**	**6**	**NYCRR**	**201**							
1 - NASSA		**P01**	**CR1**	**6**	**NYCRR**	**212**							
1 - NASSA		**P01**	**CR1**	**40**	**CFR**	**60**	**000**						
1 - NASSA		**P01**	**CR2**	**6**	**NYCRR**	**200**							
1 - NASSA		**P01**	**CR2**	**6**	**NYCRR**	**201**							

Emission Unit	Emission Point	Process	Emission Source	Emission Unit State Only Requirements - Continuation Sheet(s)									
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
-													
-													
-													
-													

Emission Unit Compliance Certification - Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

- Applicable Federal Requirement - State Only Requirement - Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name

Monitoring Information

- Continuous Emission Monitoring
- Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
- Work Practice Involving Specific Operations
- Record Keeping/Maintenance Procedures

Description

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description

DEC ID

Section IV - Emission Unit Information

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements (continuation)									
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
1 - NASSA		**P01**	**CR2**	**6**	**NYCRR**	**212**							
1 - NASSA		**P01**	**CR2**	**40**	**CFR**	**60**	**000**						
1 - NASSA		**P01**	**SC1**	**6**	**NYCRR**	**200**							
1 - NASSA		**P01**	**SC1**	**6**	**NYCRR**	**201**							
1 - NASSA		**P01**	**SC1**	**6**	**NYCRR**	**212**							
1 - NASSA		**P01**	**SC1**	**40**	**CFR**	**60**	**000**						
1 - NASSA	**GEN01**	**P02**	**G1**	**6**	**NYCRR**	**200**							
1 - NASSA	**GEN01**	**P02**	**G1**	**6**	**NYCRR**	**201**							
1 - NASSA	**GEN01**	**P02**	**G1**	**6**	**NYCRR**	**212**							
1 - NASSA	**GEN01**	**P02**	**G1**	**6**	**NYCRR**	**227**							
-													

DEC ID

Section IV - Emission Unit Information (continued)

Emission Unit Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
40	**CFR**	**60**	**000**						

X Applicable Federal Requirement - State Only Requirement X Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1 - NASSA		**P01**	**CR1**	**NY075 - 00 - 5**	**PM 10**

Monitoring Information

- Continuous Emission Monitoring
X Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
- Work Practice Involving Specific Operations
- Record Keeping/Maintenance Procedures

Description

The fugitive emissions from the crusher shall not exceed 15 percent opacity based on a 6 minute average.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
15		**136**	**percent**

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
18	**6 minute average**	**14**	**as required**	**10**	**upon request**

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
40	**CFR**	**60**	**000**						

X Applicable Federal Requirement - State Only Requirement - Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1 - NASSA		**P01**	**CR2**	**NY075 - 00 - 5**	**PM 10**

Monitoring Information

- Continuous Emission Monitoring
X Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
- Work Practice Involving Specific Operations
- Record Keeping/Maintenance Procedures

Description

The fugitive emissions from the crusher shall not exceed 15 percent opacity based on a 6 minute average.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
15		**136**	**percent**

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
18	**6 minute average**	**14**	**as required**	**10**	**upon request**

DEC ID

Section IV - Emission Unit Information (continued)

Emission Unit Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
40	**CFR**	**60**	**000**						

X Applicable Federal Requirement - State Only Requirement X Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1 - NASSA		**P01**	**SC1**	**NY075 - 00 - 5**	**PM 10**

Monitoring Information

- Continuous Emission Monitoring
X Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
- Work Practice Involving Specific Operations
- Record Keeping/Maintenance Procedures

Description

The fugitive emissions from the screen shall not exceed 10 percent opacity based on a 6 minute average.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
10		**136**	**percent**

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
18	**6 minute average**	**14**	**as required**	**10**	**upon request**

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
40	**CFR**	**60**	**000**						

X Applicable Federal Requirement - State Only Requirement - Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1 - NASSA		**P01**	**CON1**	**NY075 - 00 - 5**	**PM 10**

Monitoring Information

- Continuous Emission Monitoring
X Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
- Work Practice Involving Specific Operations
- Record Keeping/Maintenance Procedures

Description

The fugitive emissions from the conveyors shall not exceed 10 percent opacity based on a 6 minute average.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
10		**136**	**percent**

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
18	**6 minute average**	**14**	**as required**	**10**	**upon request**

DEC ID

Section IV - Emission Unit Information

Emission Unit Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
6	**NYCRR**	**201**	**6**	**1**	**a**				

X Applicable Federal Requirement - State Only Requirement **X** Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1 - NASSA	**GEN01**	**P02**	**G1**	- -	

Monitoring Information

- Continuous Emission Monitoring
- Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
- Work Practice Involving Specific Operations
X Record Keeping/Maintenance Procedures

Description

Criteria pollutants will be capped at the source level such that the total of all sources will be below 25 tons during any 12-month rolling average. The limits on the genset will be on hours of operation.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	**annual max rolled monthly**	**05**	**Monthly**	**09**	**Annually**

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
6	**NYCRR**	**227**	**1**	**3**					

- Applicable Federal Requirement - State Only Requirement - Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1 - NASSA	**GEN01**	**P02**	**G1**		

Monitoring Information

- Continuous Emission Monitoring
- Intermittent Emission Testing
- Ambient Air Monitoring
- Monitoring of Process or Control Device Parameters as Surrogate
X Work Practice Involving Specific Operations
- Record Keeping/Maintenance Procedures

Description

No person shall operate a stationary combustion installation which exhibits greater than 20 percent opacity (six minute average), except for one six-minute period per hour of not more than 27 percent opacity.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
		136	**percent**

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
18	**6 minute average**	**14**	**as required**	**10**	**upon request**

DEC ID

Section IV - Emission Unit Information (continued)

Determination of Non-Applicability (Title V Only)

- Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

Emission Unit	Emission Point	Process	Emission Source	- Applicable Federal Requirement - State Only Requirement

Description

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

Emission Unit	Emission Point	Process	Emission Source	- Applicable Federal Requirement - State Only Requirement

Description

Process Emissions Summary

X Continuation Sheet(s)

EMISSION UNIT	1 - NASSA				PROCESS	P01
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined
NY075 - 00 - 5	PM10		100	90	124.3	03

PTE (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
12.0	23,989			03		

EMISSION UNIT	1 - NASSA				PROCESS	P02
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined
NY075 - 00 - 5	PM10		100	0	0.7	

PTE (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
0.7	1,365			03		

EMISSION UNIT	1 - NASSA				PROCESS	P02
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined
7446 - 09 - 5	Sulfur Dioxide		100	0	3.9	03

PTE (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
3.9	7,888			03		

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Section IV - Emission Unit Information

Process Emissions Summary (continuation)

EMISSION UNIT	1 - NASSA				PROCESS	P02	
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	
NY210 - 00 - 0	**Oxides of Nitrogen**		**100**	**0**	**23.4**	**03**	
PTE		Standard Units	PTE How Determined		Actual		
(lbs/hr)	(lbs/yr) (standard units)				(lbs/hr)	(lbs/yr)	
23.4	**46,800**		**03**				

EMISSION UNIT	1 - NASSA				PROCESS	P02	
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	
630 - 08 - 0	**Carbon Monoxide**		**100**	**0**	**5.4**	**03**	
PTE		Standard Units	PTE How Determined		Actual		
(lbs/hr)	(lbs/yr) (standard units)				(lbs/hr)	(lbs/yr)	
5.4	**10,725**		**03**				

EMISSION UNIT	1 - NASSA				PROCESS	P02	
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	
NY998 - 00 - 0	**Volatile Organic Compounds**		**100**	**0**	**0.7**	**03**	
PTE		Standard Units	PTE How Determined		Actual		
(lbs/hr)	(lbs/yr) (standard units)				(lbs/hr)	(lbs/yr)	
0.7	**1,375**		**03**				

EMISSION UNIT	1 - NASSA				PROCESS	P02	
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	
NY100 - 00 - 0	**Total HAPs**		**100**	**0**	**0.1**	**03**	
PTE		Standard Units	PTE How Determined		Actual		
(lbs/hr)	(lbs/yr) (standard units)				(lbs/hr)	(lbs/yr)	
0.01	**21**		**03**				

EMISSION UNIT	1 - NASSA				PROCESS		
CAS No.	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	
PTE		Standard Units	PTE How Determined		Actual		
(lbs/hr)	(lbs/yr) (standard units)				(lbs/hr)	(lbs/yr)	

New York State Department of Environmental Conservation
Air Permit Application

DEC ID

Section IV - Emission Unit Information (continued)

EMISSION UNIT	Emission Unit Emissions Summary			- Continuation Sheet(s)
-				
CAS No.	Contaminant Name			
- -				
ERP (lbs/yr)	PTE Emissions		Actual	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)
CAS No.	Contaminant Name			
- -				
ERP (lbs/yr)	PTE Emissions		Actual	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)
CAS No.	Contaminant Name			
- -				
ERP (lbs/yr)	PTE Emissions		Actual	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)
CAS No.	Contaminant Name			
- -				
ERP (lbs/yr)	PTE Emissions		Actual	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)

Compliance Plan

- Continuation Sheet(s)

For any emission units which are not in compliance at the time of permit application, the applicant shall complete the following

Consent Order

Certified progress reports are to be submitted every 6 months beginning ___/___/___

Emission Unit	Process	Emission Source	Applicable Federal Requirement									
			Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
-												

Remedial Measure / Intermediate Milestones	R/I	Date Scheduled

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Section IV - Emission Unit Information (continued)

Request for Emission Reduction Credits - Continuation Sheet(s)

EMISSION UNIT | - |

Emission Reduction Description

Contaminant Emission Reduction Data

Baseline Period ____/____/____ to ____/____/____

Reduction Date ____/____/____ Method

CAS No.	Contaminant Name	ERC (lbs/yr) Netting	ERC (lbs/yr) Offset
- -			
- -			
- -			

Facility to Use Future Reduction

Name | APPLICATION ID - - /

Location Address

- City / - Town / - Village | State | Zip

Use of Emission Reduction Credits - Continuation Sheet(s)

EMISSION UNIT | - |

Proposed Project Description

Contaminant Emissions Increase Data

CAS No.	Contaminant Name	PEP (lbs/yr)
- -		

Statement of Compliance

- All facilities under the ownership of this "ownership/firm" are operating in compliance with all applicable requirements and state regulations including any compliance certification requirements under Section 114(a)(3) of the Clean Air Act Amendments of 1990, or are meeting the schedule of a consent order.

Source of Emission Reduction Credit - Facility

Name | PERMIT ID - - /

Location Address

- City / - Town / - Village | State | Zip

Emission Unit	CAS No.	Contaminant Name	ERC (lbs/yr) Netting	ERC (lbs/yr) Offset
-	- -			
-	- -			

DEC ID											

Supporting Documentation

- P.E. Certification (form attached)
- List of Exempt Activities (form attached)
- Plot Plan
- Methods Used to Determine Compliance (form attached)

X Calculations

- Air Quality Model (_____ / _____ / _____)
- Confidentiality Justification
- Ambient Air Monitoring Plan (_____ / _____ / _____)
- Stack Test Protocols/Reports (_____ / _____ / _____)
- Continuous Emissions Monitoring Plans/QA/QC (_____ / _____ / _____)
- MACT Demonstration (_____ / _____ / _____)
- Operational Flexibility: Description of Alternative Operating Scenarios and Protocols
- Title IV: Application/Registration
- ERC Quantification (form attached)
- Use of ERC(s) (form attached)
- Baseline Period Demonstration
- Analysis of Contemporaneous Emission Increase/Decrease
- LAER Demonstration (_____ / _____ / _____)
- BACT Demonstration (_____ / _____ / _____)
- Other Document(s): _____ (/ /)

_____ (/ /)

_____ (/ /)

_____ (/ /)

_____ (/ /)

_____ (/ /)

_____ (/ /)

DEC ID											

P.E. Certification

I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments as they pertain to the practice of engineering. This is defined as the performance of a professional service such as consultation, investigation, evaluation, planning, design or supervision of construction or operation in connection with any utilities, structures, buildings, machines, equipment, processes, works, or projects wherein the safeguarding of life, health and property is concerned, when such service or work requires the application of engineering principals and data. Based on my inquiry of those individuals with primary responsibility for obtaining such information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name of P.E.

Signature of P.E.

Date _____ / _____ / _____

NYS License No.

Phone ( )

Calculation Sheets

Troy Sand & Gravel Co., Inc.
Nassau Quarry
Air Emission Summary

Annual Proposed Capping Limits

Plant	Fuel Use	Annual Prod.	Hours of Oper.	PM	PM10	PM 2.5	NOx	VOC's	SO2	CO	Total Haps
Process P01 - Aggregate Plant	NA	738,000	2,000	65,630	23,989	1,747	NA	NA	NA	NA	NA
Process P02 - Diesel Genset Power	104,000	NA	2,000	1,365	1,365	1,365	46,800	1,375	7,888	10,725	21
Haul Road Dust	NA	NA	NA	NA	NA	8,764	NA	NA	NA	NA	NA
Blasting	NA	738,000	2,000	NA	NA	369	NA	NA	NA	NA	NA
TOTALS (in pounds)				**66,995**	**25,354**	**12,244**	**46,800**	**1,375**	**7,888**	**10,725**	**21**
TOTALS (in tons)				**33.5**	**12.7**	**6.1**	**23.4**	**0.7**	**3.9**	**5.4**	**0.0**

Note - PM 10 and PM 2.5 emission factors for Diesel Genset Power use the factor for PM for conservative estimates.

Troy Sand & Gravel Co., Inc.
Nassau Quarry
Air Emission Summary

Annual Proposed Capping Limits
Process P01 - Aggregate Plant

Emission Source	Fuel Use	Annual Prod.	Hours of Op.	PM	PM10	PM 2.5	NOx	VOC's	SO2	CO	HAPs
Process P01 - Aggregate Plant	NA	738,000	2,000	65,630	23,989	1,747	NA	NA	NA	NA	NA
TOTALS (in pounds per year)				**65,630**	**23,989**	**1,747**	**NA**	**NA**	**NA**	**NA**	**NA**
TOTALS (in tons per year)				**32.8**	**12.0**	**0.9**	**NA**	**NA**	**NA**	**NA**	**NA**
TOTALS (in pounds per hour)				**32.8**	**12.0**	**0.9**	**NA**	**NA**	**NA**	**NA**	**NA**

Annual Proposed Capping Limits
Process P02 - Diesel Genset Power

Emission Source	Fuel Use	Annual Prod.	Hours of Op.	PM	PM10	PM11	NOx	VOC's	SO2	CO	HAPs
Process P02 - Diesel Genset Power	104,000	NA	2,000	1,365	1,365	1,365	46,800	1,375	7,888	10,725	21
TOTALS (in pounds per year)				**1,365**	**1,365**	**1,365**	**46,800**	**1,375**	**7,888**	**10,725**	**21**
TOTALS (in tons per year)				**0.7**	**0.7**	**0.7**	**23.4**	**0.7**	**3.9**	**5.4**	**0.011**
TOTALS (in pounds per hour)				**0.7**	**0.7**	**0.7**	**23.4**	**0.7**	**3.9**	**5.4**	**0.011**

Note - PM 10 and PM 2.5 emission factors for Diesel Genset Power use the factor for PM for conservative estimates.

Troy Sand & Gravel Co., Inc.
Nassau Quarry

Caterpillar 3412 Generator
975 HP Diesel Generator
Emission Calculations

Air Contaminant	CO	SO2		NOx	HC-TOC's	PM
AP-42 Emissions Factor	5.50E-03	8.09E-03	(s)	2.40E-02	7.05E-04	7.00E-04
Units	lb/hp-hr	lb/hp-hr		lb/hp-hr	lb/hp-hr	lb/hp-hr

Gr/HP-Hr x Hp x factor = lb/hr
Conversion Factor = 0.00221 lb/gr

Horsepower (HP) 975
Sulfur Content 0.5%

Hours of operation 2,000
Gallons per hour[3] 52.0 **Fuel Usage** 104,000

Criteria Pollutant Emission Calculations

		AP-42 Emission Factors[1]	
CAS#	**Name**	**lbs/hr**	**lbs/yr**
NY075-00-0	PM	0.68	1,365
NY075-00-5	PM_{10}	0.68	1,365
7446-09-5	SO_2	3.94	7,888
NY210-00-0	NOx	23.40	46,800
630-08-0	CO	5.36	10,725
NY998-00-0	VOC	0.69	1,375

[1]AP-42 emissions calculated by multiplying emission factor by horsepower. SO
is calculated by multiplying factor by percent sulfur content and by horsepower.
Annual emissions calculated by multiplying pounds per hour by annual hours of operation.

[3]AP-42 factor of 7,000 btu/hp/hr used to calculate gallons per hour. Diesel #2 fuel estimated to have 131,000 btu per gallon.

Troy Sand & Gravel Co., Inc.
Nassau Quarry

Caterpillar 3412 Generator
975 HP Diesel Generator
Emission Calculations

HAPs Emission Calculations

Hazardous Air Pollutant (HAP'S) Emission Calculations Diesel Fueled Generator			
CAS#	**Name**	**AP-42 Emission Factors[1]**	**Emissions[2]**
107-02-8	Acrolein	7.88E-06	0.1
75-07-0	Acetaldehyde	2.52E-05	0.4
71-43-2	Benzene	7.76E-04	11.1
50-00-0	Formaldehyde	7.89E-05	1.1
91-20-3	Naphthalene	1.30E-04	1.9
108-88-3	Toluene	2.81E-04	4.0
1330-20-7	Xylene	1.93E-04	2.7
	Total HAP's (Pounds per year)		**21**
	Total HAP's (Tons per year)		**0.01**

[1]Emission Factors in Pounds Per MMBTU

[2]Emissions in pounds per year. Calculation based on dividing the emission factor by 7.3 and then mulitplying the AP-42 emission factor by the total permitted fuel use

Troy Sand & Gravel Co., Inc.
Nassau Quarry
Permitted Hours

Emission Unit	Emission Source	Equipment Type	Rated TPH	Hours Per Day	Days Per Year	TPA	Em Factor PM10[a] (lb/ton)	PM10 (pounds)	Em Factor PM2.5[a] (lb/ton)	PM2.5 (pounds)	Em Factor PM[a] (lb/ton)	PM (pounds)
					Crushing & Screening							
1-NASSA	CR001	Primary Crusher - Jaw	369	10	200	738,000	0.00054	399	0.00054	399	0.0012	886
1-NASSA	CON01	Conveyor - from jaw	840	10	200	1,680,000	0.000046	77	0.000013	22	0.00014	235
1-NASSA	CON02	Conveyor - to cone crusher	436	10	200	872,000	0.000046	40	0.000013	11	0.00014	122
1-NASSA	CR002	Secondary Crusher - Cone	436	10	200	872,000	0.00054	471	0.00054	471	0.0012	1,046
1-NASSA	SC001	6x20 Diester TD Screen	805	10	200	1,610,000	0.00074	1,191	0.00050	805	0.0022	3,542
1-NASSA	CON03	Conveyor - to surge	200	10	200	400,000	0.000046	18	0.000013	5	0.00014	56
1-NASSA	CON04	Conveyor - from surge	200	10	200	400,000	0.000046	18	0.000013	5	0.00014	56
1-NASSA	CON05	Conveyor - to return to cone	200	10	200	400,000	0.000046	18	0.000013	5	0.00014	56
1-NASSA	CON06	Conveyor - from mid deck	200	10	200	400,000	0.000046	18	0.000013	5	0.00014	56
1-NASSA	CON07	Conveyor - to +4 pile	205	10	200	410,000	0.000046	19	0.000013	5	0.00014	57
1-NASSA	CON08	Conveyor - to -2 1/2 +1 1/8 pile	213	10	200	426,000	0.000046	20	0.000013	6	0.00014	60
1-NASSA	CON09	Conveyor - to -1 1/8 +0 pile	287	10	200	574,000	0.000046	26	0.000013	7	0.00014	80
						TOTAL EMISSIONS	**PM10 =**	**2,317**	**PM2.5 =**	**1,747**	**PM =**	**6,253**

Troy Sand & Gravel Co., Inc.
Nassau Quarry

AP-42 Unpaved Roads 13.2.2 -

E = [k(s/12 [equation 1a on page 13.2.2-4]

$E=[0.23(8.3/12)^{0.9}*(52/3)^{0.45}]$

E= 0.60 lb/VMT

E =size-specific emission factor (lb/VMT)s
k, a and b are empirical constants where:
k=2.3 for PM 2.5
a=0.9
b=0.45
s=surface material silt content (%)
w=mean vehicle weight in tons

Eext=E(365-p)/364
Eext= 0.38 lb/VMT

Eext = annual size-specific emission factor extrapolated for natural mitigation, lb/VMT
P = number of days in a year with at least 0.254 mm (0.01 in) of precipitation

Total PM 2.5 emissions per year

PM 2.5 emissions = Eext*VMT
PM 2.5 emissions = 0.38*18,450*1.25
PM 2.5 emissions = 8,764 lbs.

Projected maximum production per year = 738,000 tons
Haul truck capacity = 40 tons
Maximum round trip haul distance = 1.25 miles
Total haul truck trips = 18,450

Troy Sand & Gravel Co., Inc.
Nassau Quarry

Blasting Emissions

E_{PM10} = 0.00005B equation 1-4

E_{PM10} = PM_{10} emissions from blasting in pounds per ton dislodged

B=tons of stone dislodged

E=0.00005*(738,000 tons)

E= 369 pounds