

FINAL ENVIRONMENTAL IMPACT STATEMENT

For the

**TROY SAND & GRAVEL CO., INC.
NASSAU QUARRY
Town of Nassau, Rensselaer County, New York**

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Date Submitted: December 14, 2006

Revised Date: March 26, 2007

Date of Acceptance:

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LIST OF ACRONYMS

DEIS	Draft Environmental Impact Statement
FEIS	Final Environmental Impact Statement
NYS	New York State
NYSDEC	The New York State Department of Environmental Conservation
NYSDOH	The New York State Department of Health
NYSDOT	The New York State Department of Transportation
OPRHP	The Office of Parks, Recreation and Historic Preservation
ROW	Right-of-way
SEQRA	State Environmental Quality Review Act
SPDES	State Pollutant Discharge Elimination System
SPL	Sound pressure level
SUP	Special Use Permit
SWPPP	Storm Water Pollution Prevention Plan
TEC	The Environmental Collaborative
TS&G	Troy Sand & Gravel, Co., Inc.
USBM	United States Bureau of Mines
USGS	United States Geologic Survey

1.0 INTRODUCTION

This Final Environmental Impact Statement (FEIS) has been prepared in accordance with Article 8 of the State Environmental Quality Review Act (SEQRA) of the Environmental Conservation Law and the implementing regulations set forth in 6 NYCRR Part 617. Part 617 provides the statewide regulatory framework and guidelines for consideration of this proposed Type 1 action. This FEIS addresses all comments with regard to the Draft Environmental Impact Statement (DEIS) for the Troy Sand & Gravel Co., Inc. proposed Nassau Quarry located off of New York State Route 66 in the Town of Nassau, Rensselaer County, New York (Project) as shown on the Figure on page 3. The project sponsor is Troy Sand & Gravel Co., Inc. (TS&G).

In review, a Mining Permit Application was submitted to the New York State Department of Environmental Conservation (Department) on December 4, 2003. A Notice of Incomplete Application (NOIA) was issued by the Department on December 26, 2003. A Special Use Permit (SUP) and Site Plan Application were submitted to the Town of Nassau on February 6, 2004. A copy of the SUP and Site Plan Application and forms are included in Appendix A of the DEIS.

In response to TS&G December 2003 application, in February 2004, the Nassau Town Board authorized the creation of a Mining Committee to review the Nassau Quarry proposal and to make a recommendation to the Town Board. After it was formed in February 2004, the Committee held numerous public meetings at which TS&G presented different aspects of the Nassau Quarry application to the public including: layout of the quarry, blasting, potential visual impacts, dust, truck traffic and groundwater. The plans submitted as part of the Mining Permit Application were revised in response to and in cooperation with the Town of Nassau and the public. The Mining Committee held numerous public meetings on the Nassau Quarry application, including meetings held on February 10, 2004, March 9, 2004, March 23, 2004, April 6, 2004, February 1, 2005, March 1, 2005, March 15, 2005, April 12, 2005, and May 3, 2005. The minutes of these Mining Committee meetings are included in Appendix A of the DEIS.

In a decision dated April 14, 2004, the Commissioner of the Department designated the Region 4 office of the New York State Department of Environmental Conservation as lead agency for the environmental review of the Project pursuant to SEQRA.

In a letter dated April 23, 2004, the Department of Environmental Conservation determined that the proposed action may have a significant effect on the environment and issued a Positive Declaration.

The Final Scope was accepted by the Department on April 27, 2005 and is included in the DEIS as Appendix B. The Final Scoping Document was issued by the New York State Department of Environmental Conservation following receipt of comments from Town of Nassau elected officials, members of the public, Town of Nassau Mining Committee

meetings and TS&G.

A DEIS was submitted to the Department on December 23, 2005 and the Department issued a Notice of Incomplete Application dated February 17, 2006 and a Review of Draft Environmental Impact Statement dated March 26, 2006. A revised DEIS that addressed the comments from the February 17, 2006 and March 26, 2006 letters was submitted to the Department on May 26, 2006.

The Department issued a Notice of Complete Application and Notice of Public Hearing dated June 7, 2006. Involved and interested reviewing agencies were solicited for comments on the DEIS to be incorporated into the public record.

A legislative hearing was held July 11, 2006 at St. Mary's Church Hall on Church Street in Nassau. At the hearing the Department announced that the deadline for public comment was being extended from July 21 to August 21, 2006.

In a letter to TS&G dated August 30, 2006, the Department requested that TS&G respond to comments received during the comment period. TS&G prepared a written response to comments dated September 26, 2006 and filed that response with the Department.

In a letter to TS&G dated November 6, 2006, the Department requested that a Final Environmental Impact Statement be prepared.

This FEIS addresses all substantive comments on the DEIS generated by involved agencies, other interested parties, and the general public. These were submitted in writing during the comment period and verbally during a Legislative Hearing on July 11, 2006.

For comprehensibility, this document has been arranged in a format similar to the DEIS. The comments, indicated by italic type, have been grouped under their most appropriate heading. Many of the public comments raised concerns similar to each other. To avoid repetition, a representative or more detailed comment was used for purposes of organizing responses for this document.

A complete list of public comments is presented at Appendix A, together with the source of the comment, relevant DEIS section, and pertinent section of this FEIS responsive to the comment. The Appendix B to this document presents all of the written correspondence received by the Lead Agency during the public comment period and Appendix C contains the Transcript of all oral and written comments received at the July 11, 2006 Legislative Hearing.

Figure 1. LOCATION MAP

2.0 DESCRIPTION OF PROPOSED ACTION

2.1 PROJECT PURPOSE, NEED AND BENEFITS

Comment:

The need for the greywacke from the proposed site is overstated.

Comment:

The DEIS suggests that the product from the mine will be used locally, but it also acknowledges aggregate deliveries to Utica, Syracuse, and New York City.

Comment:

The DEIS exaggerates the distance that will be saved by opening the quarry in Nassau.

Response:

The public need for aggregates, including local supply, was discussed in Section 2.1 of the DEIS.

Aggregate products are essential for the production of homes, buildings, roads, bridges, sidewalks, sewer lines and many manufactured products. Demand for aggregate products expands in direct proportion to:

1. Growth,
2. The health of the economy,
3. The desire of people to maintain and improve the quality of the environment in which they live and
4. The need to maintain and expand the infrastructure.

The extended area around the Nassau Quarry is experiencing growth but there is no local supply of NYSDOT approved crushed stone. Figure 2 in the previously submitted DEIS documented the driving distances of the closest approved NYSDOT approved stone source as being three towns (17 miles) away from the Nassau Quarry.

As previously stated in Section 2.1.4 of the DEIS and shown on Figure 2 on page 5 and Figure 3 on page 6, TS&G currently purchases NYSDOT approved stone from a variety of sources and hauls it to West Sand Lake to meet the growing local demand. These sources include the Pompa Brothers, Palette Stone, Callanan and LaFarge Quarry sites. The Nassau Quarry will eliminate the need to haul stone from all of the these locations and, therefore, the proposed mine will reduce the haul distance of TS&G Co. Inc.'s trucks by 3¼ to 44 miles in each direction or 6½ to 88 miles round trip.

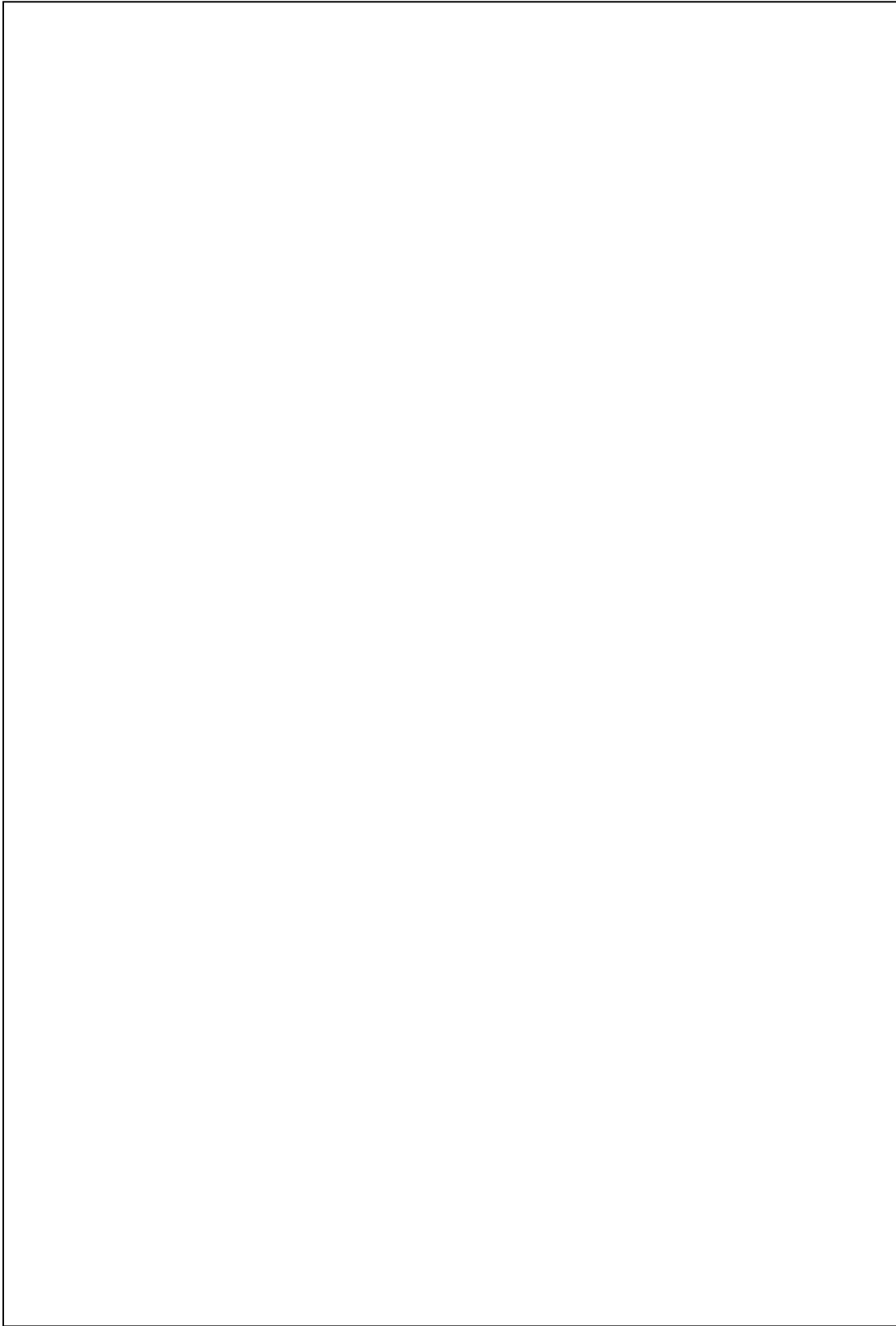


Figure 2. LOCATION OF CLOSEST NYSDOT APPROVED STONE SOURCES

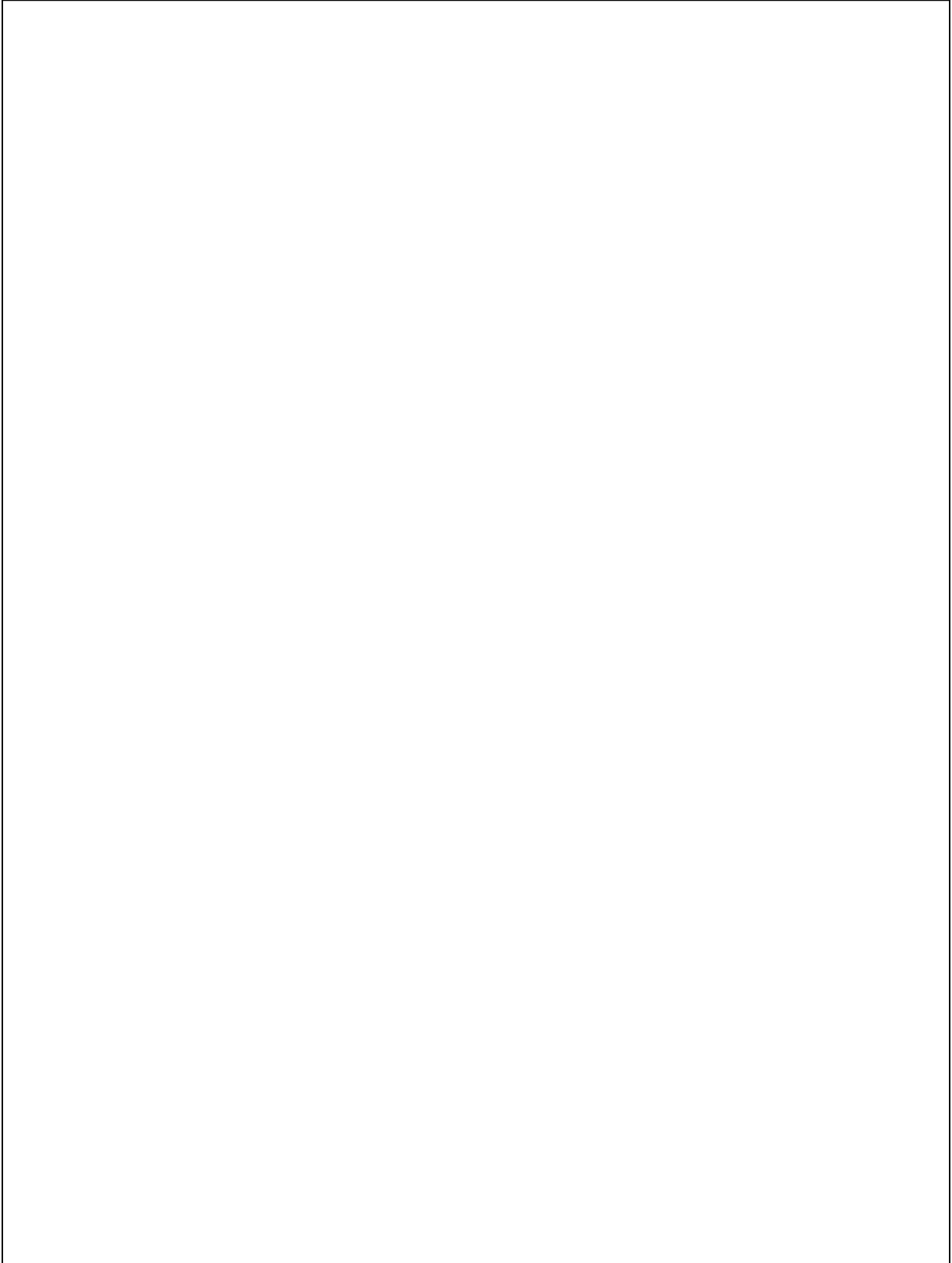


Figure 3. CURRENT HAUL ROUTES TO WEST SAND LAKE

Construction aggregate mining (sand, gravel and crushed stone) is a low price, high volume business and haul distance, being very expensive (fuel, labor and equipment), is a very important factor. Since haul distance plays such an important role in aggregates, traffic from this mine will not be “generated” as much as it will be diverted from other crushed stone sources. Aggregate mines do not increase the demand for their product. The demand for aggregate already exists. This required aggregate is being trucked into this area rather than being produced in this area. The net result of this mine will not increase the overall number of trucks regionally but will serve as an alternate location from which to buy aggregate. Since haul distance is a significant cost, having an alternate crushed stone location will serve to reduce haul distances for projects that are located closer to this mine than to other high quality crushed stone sources.

An overall reduction in haul distances will reduce the amount of fuel usage and emissions from trucks and also reduce the wear and tear on the infrastructure in direct proportion to the reduction in mileage traveled by the trucks.

2.2 LOCATION

2.2.1 Access

Comment:

The DEIS must clarify which access road will ultimately be used. Currently, it states that it may either be the current access road or an access road to be constructed about 80 feet south of the current access road.

Response:

The existing access road will continue to be used for site access. The access road will be widened, paved and the entrance shifted 80’ to the south to better accommodate truck traffic. Section 2.2.1 of the previously submitted DEIS stated that “Current access to the site is via an existing driveway from NYS Route 66 located to the west of the site. The driveway entrance will be shifted approximately 80 feet to the south, widened and paved.”

The two access road proposal for the Nassau Quarry was changed to one access road during the planning process. Section 1.0 of the DEIS and the Executive Summary of the Traffic Impact Study, included as Appendix H of the DEIS, stated: “In recognition of newly obtained clearing guidelines, the northern access road to NYS Route 66 that was proposed to be constructed in the previous submission has been removed and all access to the site will be via the existing entrance road.”

The location and extent of the proposed entrance improvement is shown on Figure 6 on page 56.

Comment:

Having only one access road to the site may pose a risk of emergency services not being able to enter the site when necessary.

Response:

A raised boulevard/median, no less than 25 feet in length and designed not to impede either line of sight or individual movements for any approach, will be installed to provide for emergency access. In the event of an accident at the entrance, the raised median will prevent vehicles from creating a total blockage of the site entrance.

This median was included in the plans submitted with the Traffic Impact Study in the DEIS and was discussed Section 1.2.A and the executive summary of the Traffic Impact Study.

The location of the raised median is also shown in this document on Figure 6 on page 56.

2.2.2 Zoning

Comments regarding zoning are grouped together in Section 9.3 of this document.

2.3 DESIGN AND LAYOUT

Comment:

The DEIS mischaracterizes the Town of Nassau as "remotely located"; the Town of Nassau should be characterized as a bedroom community.

Response:

The fact that the Nassau Quarry is remotely located does not contradict the description of Nassau as a bedroom community. Webster's Dictionary defines bedroom community as a town or city "...with most of its residents commuting to a nearby town or city to earn their livelihood. Unlike a suburb, which is adjacent to the urban area it serves, bedroom communities are sometimes quite some distance from the town or city providing employment."

The nearest off-site structure at the proposed Nassau Quarry Site is located about 1210 feet from the processing area and approximately 1300 feet from the excavation area at their closest points. There are approximately 10 homes within 2000 feet of the proposed excavation area. For comparison, a review of the current aerial photos of the closest NYSDOT crushed stone approved quarry, the Callanan Cropseyville Quarry located on the north side of NYS Route 2 in the Town of Grafton, shows that there are over 30

homes (more than three times as many as at the Nassau Quarry) within 2000 feet of the current mined area.

While some portions of the Town of Nassau are not rural, the following figures clearly show the area in the vicinity of the Nassau Quarry as being remotely located.

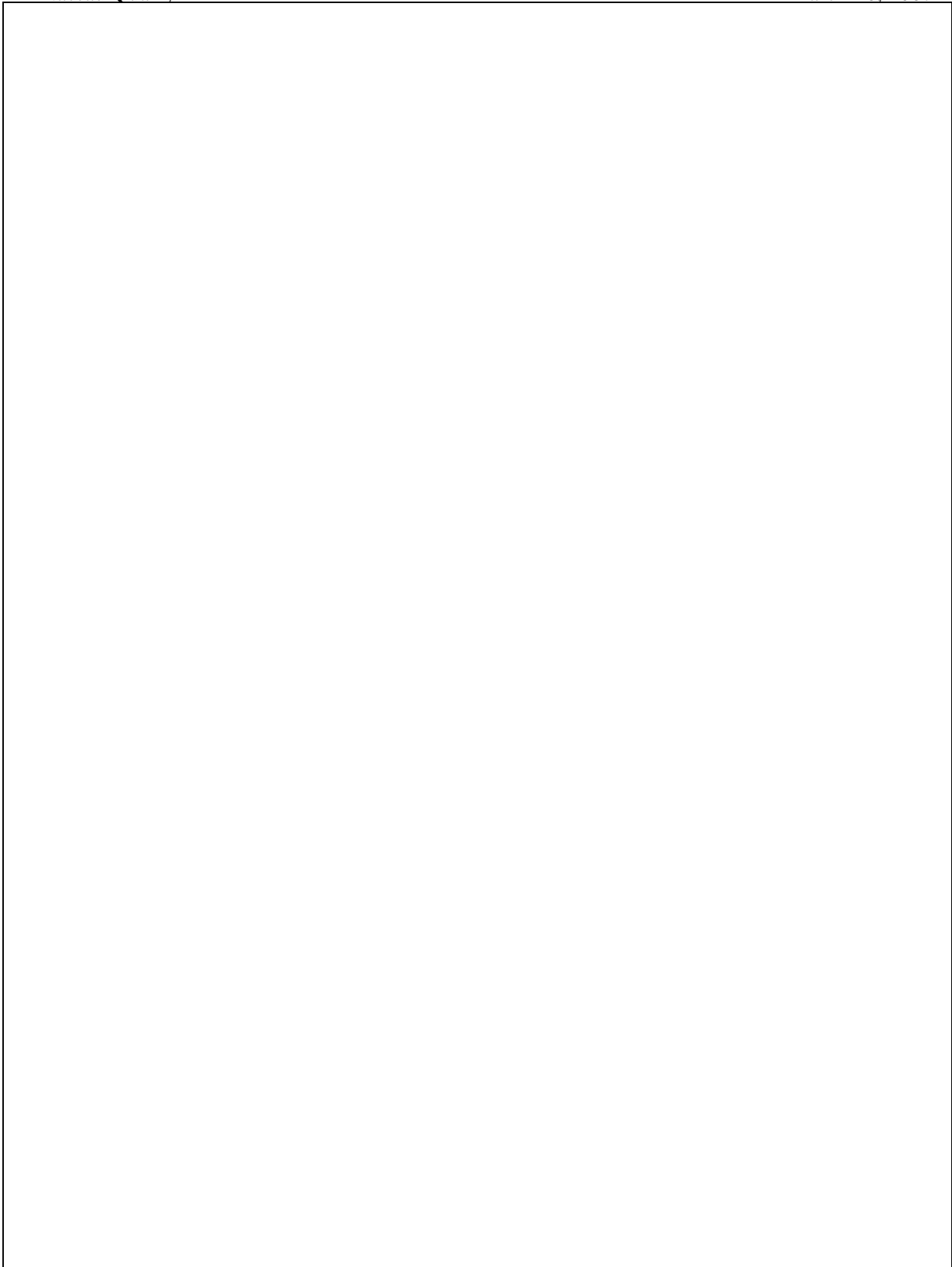


Figure 4. COMPARISON OF THE NASSAU AND CALLANAN CROPSEYVILLE QUARRIES

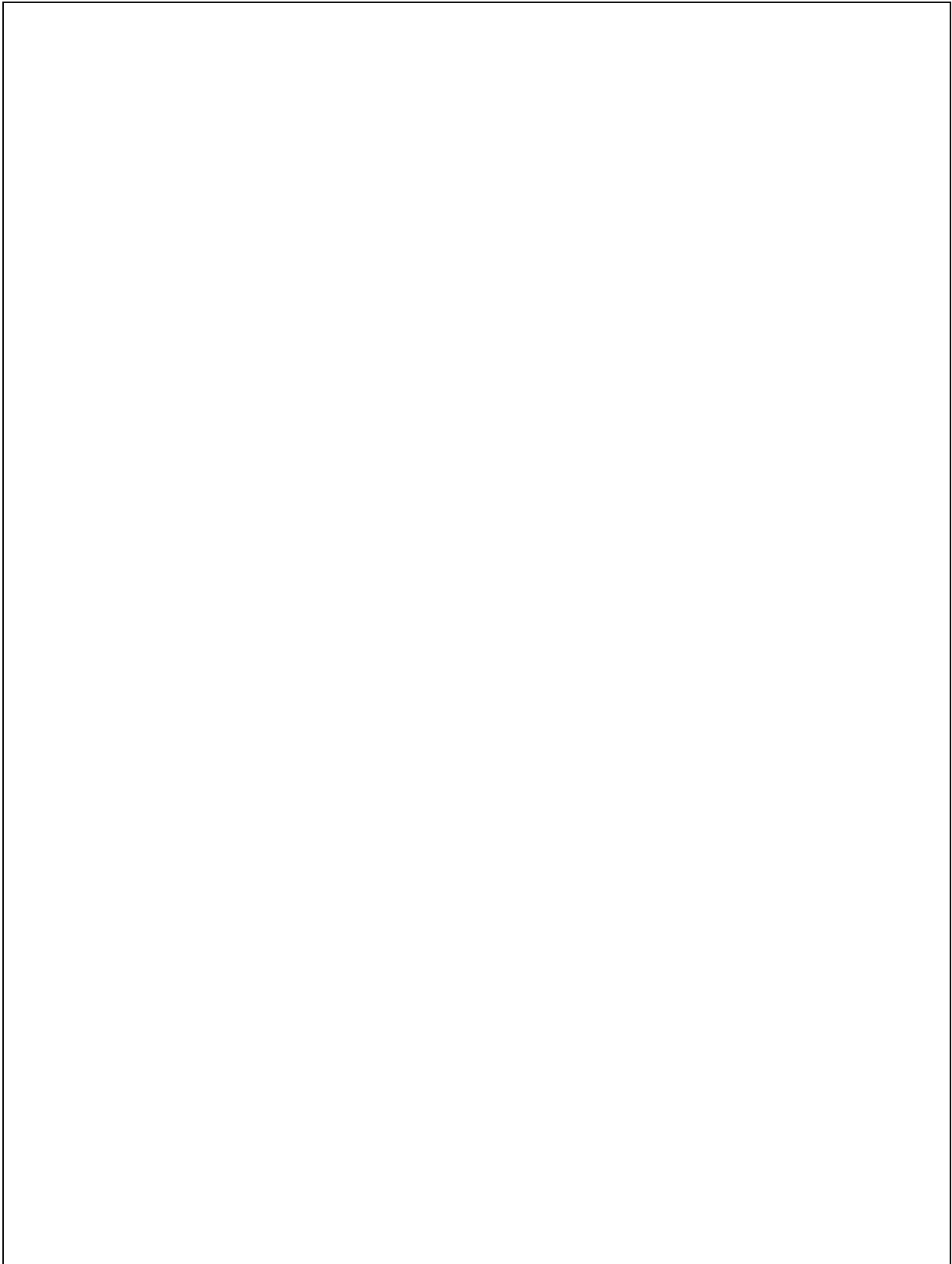


Figure 5. SITE PLAN MAP SHOWING SETBACKS

3.0 ENVIRONMENTAL SETTING

3.1 NATURAL RESOURCES

3.1.1 Geology

No comments were received regarding the geological analysis presented in the DEIS.

3.1.2 Water Resources

3.1.2.1 Groundwater

3.1.2.1.1 Location and Description of Bedrock Water-Bearing Units

Comment:

The DEIS mischaracterizes local groundwater usage as shallow dug wells and springs which might not be impacted by changing the groundwater pattern.

Response:

The second sentence under “Section 3.1.2.1.1 Location and Description of Bedrock Water-Bearing Units” must be taken in context with the first sentence. Section 3.1.2.1.1 reads, “The majority of groundwater wells in this portion of Rensselaer County are completed in the Nassau formation shale/argillite or the Rensselaer Graywacke Formation. Locally, residences tap shallow unconsolidated deposits with shallow dug wells or springs draining either the unconsolidated deposits or the bedrock units.” The term “locally”, in this context, does not mean all wells locally, but instead references the context of locally meaning “in isolated locations”. The Merriam-Webster Dictionary defines local as “of, relating to, or characteristic of a particular place: not general or widespread”. In the intended context the term “locally” relates to particular locations (such as the St. Pierre spring) that are not widespread. It is understood and was stated that the majority of water sources are bedrock wells (refer again to the first sentence that states: “The majority of groundwater wells in this portion (emphasis added) of Rensselaer County are completed in the Nassau formation shale/argillite or the Rensselaer Graywacke Formation.)

A thorough, site-specific Hydrogeologic Impact Assessment was prepared for the Nassau Quarry and was included in the DEIS. The study conservatively calculated and delineated the extent of the water table drawdown and determined that impacts to the quality or quantity of the groundwater will be insignificant for the following reasons:

1. The extent of impacts to the water table outside of the planned excavation area will be limited by the restricted recharge potential of the hillside,
2. The extent of impacts to the water table outside of the planned excavation area will

be limited by the low permeability of the Rensselaer Formation,

3. The elevation of the planned final floor will be above the elevations of the wells of all proximal users,
4. The distance to proximal water well users minimize the potential for impacts associated with excavation at the project site.

3.1.2.1.2 Bedrock Groundwater Recharge

No comments were received regarding the existing bedrock groundwater recharge conditions.

3.1.2.1.3 Groundwater Head Data

No comments were received regarding existing groundwater head data.

3.1.2.1.4 Bedrock Hydraulic Conductivities

Comment:

The blasting and groundwater sections of the DEIS (3.1.2.1 and 4.2.2.4) are based on computer models designed by the mining industry and they are not based on in field-testing in this area.

Response:

This comment is incorrect. The blasting and groundwater sections of the DEIS (Sections 3.1.2.1 and 4.2.2.4) are not based on “*computer models designed by the mining industry*”. Rather, the sections are based upon site-specific geology, known geologic principles, blast results from the Hankle Lumber project and studies prepared for the United States Bureau of Mines (USBM), the University of North Dakota and the University of Alabama. The study prepared for the USBM was designed and performed by an independent contractor/consulting firm, not the mining industry.

As stated in the Overview of Blasting and Best Management Practices, included as Appendix I of the DEIS, from 1997 to 2001, TS&G conducted a series of 39 blasts in the Rensselaer Graywacke as part of the widening of the Hankle Lumber mill yard on the east side of NYS Route 66. The ground vibration and air overpressure from these blasts was monitored, typically at four locations close to the blast site. The data from these blasts was used to help establish a correlation between predicted and actual peak particle velocity from blasting in the Rensselaer Graywacke.

The USBM study is also pertinent for the reasons outlined on pages 27-31 of the

Hydrogeologic Assessment. More than 745 blasts were monitored for potential impacts to water wells at one site alone in the USBM study.

The site-specific geology, blast results from the Hankle Lumber project, USBM studies, university studies and geological principles accepted in the professional community is the best available information and supports the findings and opinions set forth in the DEIS.

3.1.2.1.5 Present Uses and Level of Use of Groundwater

Comment:

There is no public water system in place that would prevent water problems associated with the proposed mine.

Response:

All residences in the vicinity of the Nassau Quarry rely on groundwater as their primary source of water and there is no public water system in place. This was discussed in Section 3.1.2.1.5 of the DEIS.

A thorough, site-specific groundwater study was prepared for the Nassau Quarry and was included in the DEIS. The study conservatively calculated and delineated the extent of the water table drawdown and determined potential for impact based on data collected from testing of on-site monitoring wells. The study concluded that changes to the water table will be localized and the potential for off-site impacts to wells or springs will be insignificant.

Comment:

Well testing should not be limited to a 2,000 feet radius; it should be expanded to 3,500 feet or more, especially where residences are located at an altitude higher than the proposed mine.

Comment:

Only 6 of 37 nearby wells were tested. Some residents requested well testing but never received it, others did not receive correspondence from TS&G because the correspondence was not sent to their permanent addresses, and some letters were returned unclaimed.

Response:

Distance of Well Investigation. Based on the geology and topography at the site and the planned excavation limits and in accordance with accepted hydrogeological standards and

practices, it was the professional opinion of Griggs-Lang Consulting Geologists, Inc. that a 1000' offset around the excavation area was sufficient distance for well investigations. Since the site is remotely located there are no residences within 1000' of the excavation limits. Consequently, the well investigation distance was increased to 2000' to include the closest residences.

The comment states that the radius "*...should be expanded to 3,500 feet or more, especially where residences are located at an altitude higher than the proposed mine*".

Expansion of the well investigation radius outward to some arbitrary distance, such as the requested 3500 feet, would not increase the protection of peripheral wells. The project has been planned, configured and designed to minimize these potentials. Residences located in excess of the 2000-foot radius are either located at elevations lower than the proposed final quarry floor (precluding the potential for dewatering of the wells) and/or are located across groundwater divides from the project site. These divides, largely coincident with surface water divides, including groundwater lows and highs, are existing entities. The groundwater-low divides already serve as the drainage or dewatering mechanisms for the surrounds. The planned excavation would do nothing to change this.

Consequently, any impacts to these wells (those at lower elevations than the planned quarry final floor or across groundwater divides (as lows)), would necessitate groundwater reversals of flow, flow from low-pressure regions to high-pressure regions (indirect violation of the fundamental tenets of groundwater flow) and wholesale dewatering of the intervening landform, in violation of groundwater flow principles and at flow rates necessitating hydraulic conductivities unachievable in a rock mass such as the Rensselaer greywacke.

Number of Well Investigations. In accordance with the NYSDEC Scoping Document, certified letter requests containing stamped self-addressed envelopes were sent out to properties located within 2000' of the planned mining limits (regardless of the presence of structures, in an effort to be conservative). The well inventory permission requests were sent out to all property owners (not just residences) where any portion of their property fell within 2000' of the excavation limits. The Nassau Quarry is remotely located and while there are approximately 37 parcels (whole or portions of) within 2000' of the excavation area, only 10 of those parcels contain houses that are within the 2000' radius.

Wells were inspected at all of the residences that responded to the request, which was six out of the ten total houses (60%) within 2000' of the excavation area. The deadline was extended by an extra week in case late permission forms were received.

Copies of the letters, permission forms and return receipts were included in the back of Appendix F of the DEIS.

3.1.3 Air Resources

3.1.3.1 Existing Air Quality Levels

Comment:

Background levels of particulate matter, NO_x, and other criteria pollutants from State Route 66 must be considered in the air quality impact analysis.

Comment:

Section 3.1.3.1 of the DEIS is inaccurate. More recent data suggests greater air quality problems in Rensselaer County than that suggested by the applicant.

Response:

The air quality data supplied in the DEIS was the most recent data available at the time it was prepared. Since then the 2005 air quality data has been released. Review of the most recent air quality data available from the NYSDEC website (<http://www.dec.state.ny.us/website/dar/baqs/aqreport/index.html>) shows that there is no appreciable change in the air quality in Rensselaer County over the 2004 data. The most recent NYSDEC data (2005) included on the following pages shows that the annual averages from the mid-1990's to present have not changed appreciably:

NYSDEC Region 4
Hudson Valley Air Quality Control Region

Annual Averages 1995 through 2005
Annual Arithmetic Mean (ppm) - Primary Standard
(12 month average not to exceed 0.03 PPM *)

Station	Site No.	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Loudonville	0101-33N	.003	.004	.003	.004	.004	.004	.005	.004	.004	.004	.005
Schenectady	4601-05N	.005	.005	.003	.003	.003	.003	.004	.004	.003	.004	.005

Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2005

Station	Site No.	One-Hour Averages		Running 3-Hour Averages					24 Hour Average (Calendar Day)				
				Maximum not to exceed 0.5 PPM more than once per calendar year *					Maximum not to exceed 0.14 PPM more than once per calendar year *				
				Observations	Highest Values, PPM Non-Overlapping			Observations	Highest Values, PPM Midnight - Midnight				
Total	% Avail	Total	>0.5 PPM	1 st	2 nd	3 rd	Total	>.14 PPM	1 st	2 nd	3 rd		
Loudonville	0101-33N	8,614	98	8,502	0	.027 [12/23, 09]	.026 [12/23, 12]	.024 [11/21, 23]	365	0	.023 [12/23]	.021 [12/11]	.018 [02/08]
Schenectady	4601-05N	8,633	99	8,517	0	.030 [12/23, 17]	.024 [12/23, 14]	.022 [11/21, 16]	365	0	.019 [12/23]	.017 [12/11]	.014 [11/21]

Table 1. SULFUR DIOXIDE – CONTINUOUS PULSED FLUORESCENCE

NYSDEC Region 4
Hudson Valley Air Quality Control Region

Annual Averages 1995 through 2005
Annual Arithmetic Mean (ppb) - Primary Standard
(12 month average not to exceed 30 PPB *)

Station	Site No.	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Dyken Pond	4153-03	0.9	1.6	1.7	1.6	1.5	1.5	(1.7)	xxx	xxx	xxx	xx
Grafton State Park	4153-04	—	—	—	—	—	—	(2.3)	2.2	2.0	1.6	1.9

Sampling at 4153-03 was terminated on 08/14/2001 and commenced at 4153-04 on 12/06/01.

Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2005

Station	Site No.	One-Hour Averages		Running 3-Hour Averages Maximum not to exceed 500 PPB more than once per calendar year *					24 Hour Average (Calendar Day) Maximum not to exceed 140 PPB more than once per calendar year *				
		Total Obs.	% Avail	Observations	Highest Values, PPB Non-Overlapping			Observations	Highest Values, PPB Midnight - Midnight				
				Total	>500 PPB	1 st	2 nd	3 rd	Total	>140 PPB	1 st	2 nd	3 rd
Grafton State Park	4153-04	7,404	85	7,292	0	19.7 [12/11, 02]	18.3 [12/23, 07]	17.9 [12/23, 10]	312	0	14.9 [12/23]	14.1 [12/11]	11.2 [11/21]

Table 2. SULFUR DIOXIDE – CONTINUOUS PULSED FLUORESCENCE (LOW LEVEL)

NYSDEC Region 4
Hudson Valley Air Quality Control Region

Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2005
(Average of last 3 years' annual means not to exceed 15 µg/m³ *; and average of 98th percentile for last 3 years not to exceed 65 µg/m³ *)

Station	Site No.	Total Obs.	Maximum Values			98 th Percentile				Quarterly Averages, 2005				Annual Mean			
			1 st	2 nd	3 rd	2005	2004	2003	3-yr avg	1 st	2 nd	3 rd	4 th	2005	2004	2003	3-yr avg
Albany Co. HD (F)	0101-13	119	41.6 [09/13]	41.1 [02/03]	35.9 [02/06]	35.9	32.4	34.0	34	13.3	11.3	13.5	11.6	12.4	11.2	12.2	11.9
Albany Co. HD (T)	0101-13	365	46.3 [06/26]	45.9 [09/13]	42.3 [06/25]	30.7	29.3	31.7	31	12.0	12.6	14.3	10.8	12.4	11.8	12.4	12.2
Loudonville (F)	0101-33	xx	xx	xx	xx	xx	xx	(33.0)	xx	xx	xx	xx	xx	xx	xx	(10.1)	xx
Schenectady (F)	4601-05	xx	xx	xx	xx	xx	xx	(32.6)	xx	xx	xx	xx	xx	xx	xx	(11.5)	xx

Sampling at 0101-13 was suspended on 10/19/01; sampling recommenced on 10/22/02.
Sampling was terminated at 0101-33 and 4601-05 on 03/31/2003.

Table 3. INHALABLE PARTICULATES (<2.5 MICRONS) – RUPPRECHT & PATASHNICK SAMPLER

NYSDEC Region 4
Hudson Valley Air Quality Control Region

Annual Averages 1993 through 2003

Annual Arithmetic Mean (ug/m ³)													
Station	Site No.	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	3 Yr Exp Val
Albany	0101-10	23	23	(17)	xx	xx	xx	xx	xx	xx	xx	xx	xx
Albany	0101-13N	23	25	21	21	23	21	xx	xx	xx	xx	xx	xx
Loudonville	0101-33	18	19	16	17	19	19	xx	xx	xx	xx	xx	xx
Cohoes	0102-03	18	21	(16)	xx	xx	xx	xx	xx	xx	xx	xx	xx
Hudson	1001-02	--	--	--	--	--	--	--	13	14	(19)	(14)	16

Sampling commenced at 1001-02 on 03/01/2000, was suspended on 10/03/2001, resumed on 07/01/2002, and was terminated on 09/30/2003.

Table 4. INHALABLE PARTICULATES (<2.5 MICRONS) - WEDDING SAMPLER

NYSDEC Region 4
Hudson Valley Air Quality Control Region

Annual Averages 1995 through 2005

Annual Arithmetic Mean (ppm)												
Station	Site No.	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Loudonville	0101-33	---	---	0.8	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.4
Schenectady	4601-05	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4

Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2005

Station	Site No.	One-Hour Average Maximum not to exceed 35 PPM more than once per calendar year *						Running 8-Hour Average (Non-Overlapping) Maximum not to exceed 9 PPM more than once per calendar year *					
		Observations		Highest Values, PPM				Observations		Highest Values, PPM			
		Total Obs.	% Avail	>35 PPM	1 st	2 nd	3 rd	Total	>9 PPM	1 st	2 nd	3 rd	Days > 9 PPM
Loudonville	0101-33	8,652	99	0	2.1 [02/01, 10]	1.9 [02/03, 10]	1.7 [02/03, 08]	8,721	0	1.4 [02/01, 14]	1.4 [02/03, 13]	0.9 [01/29, 10]	0
Schenectady	4601-05	8,637	99	0	3.5 [02/07, 22]	3.3 [02/02, 22]	3.3 [02/07, 21]	8,699	0	2.6 [02/08, 01]	2.3 [02/07, 02]	2.3 [02/03, 01]	0

Table 5. CARBON MONOXIDE – CONTINUOUS NON-DISPERSIVE INFRARED

NYSDEC Region 4
Hudson Valley Air Quality Control Region

Annual Averages 1995 through 2005
Annual Arithmetic Mean (ppm)

Station	Site No.	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Loudonville	0101-33N	.025	.024	.026	.026	.026	.022	.026	.027	.025	.025	.027
Schenectady	4601-05	.022	.020	.022	.022	.023	.021	.024	.024	.023	.021	.023
Grafton Lake State Park	4153-04	--	--	--	--	--	--	--	.037	.037	.035	.037

Sampling at 4153-04 commenced on 12/07/01

Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2005

Station	Site No.	One Hour Averages							4 th Highest Daily Maximum 8-Hour Average - Not to exceed an avg of 0.08 ppm during the last 3 years *			
		Observations			Highest Values, PPM				2003	2004	2005	Avg
		Total Obs.	% Avail	>.12 PPM	1 st	2 nd	3 rd	4 th				
Loudonville	0101-33N	8,582	98	0	.103 [06/27, 14]	.102 [06/09, 18]	.094 [06/25, 16]	.093 [06/08, 19]	.076 [06/29]	.072 [08/10]	.080 [06/26]	.076
Schenectady	4601-05	8,514	97	0	.099 [06/27, 15]	.092 [06/25, 16]	.092 [09/13, 17]	.090 [06/09, 15]	.078 [07/04]	.068 [04/30]	.077 [09/13]	.074
Grafton Lake	4153-04	8,248	94	0	.124 [06/09, 21]	.091 [06/27, 13]	.091 [06/25, 22]	.091 [07/26, 22]	.079 [07/02]	.076 [06/08]	.081 [06/27]	.078

Table 6. OZONE – CONTINUOUS UV LIGHT ABSORPTION

NYSDEC Region 4
Hudson Valley Air Quality Control Region

SULFATE FRACTION
Annual Averages 1993 through 2003 2003 Data Summary

Station	Site No.	Annual Arithmetic Mean, (ug/m ³)											Observations		Highest Values, ug/m ³			
		1993	94	95	96	97	98	99	2000	01	02	03	Total	%	1 st	2 nd	3 rd	
Albany (W)	0101-13	(4.6)	5.7	4.1	4.0	4.8	5.0	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Loudonville (W)	0101-33	4.4	5.2	3.4	3.7	4.9	4.9	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Hudson (W)	1001-02	---	---	---	---	---	---	3.9	4.1	(4.3)	(3.8)	43	70	20.0 [06/26]	14.0 [08/07]	12.4 [07/26]		

Sampling commenced at 1001-02 on 03/01/2000, was suspended on 10/03/2001, resumed on 07/01/2002, and was terminated on 09/30/2003

NITRATE FRACTION
Annual Averages 1993 through 2003 2003 Data Summary

Station	Site No.	Annual Arithmetic Mean, (ug/m ³)											Observations		Highest Values, ug/m ³			
		1993	94	95	96	97	98	99	2000	01	02	03	Total	%	1 st	2 nd	3 rd	
Albany (W)	0101-13	(0.9)	0.7	0.5	0.9	0.9	0.7	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Loudonville (W)	0101-33	0.6	0.5	0.4	0.7	0.8	0.6	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Hudson (W)	1001-02	---	---	---	---	---	---	0.3	0.5	(0.4)	(0.5)	43	70	2.8 [03/16]	2.1 [04/03]	1.6 [04/09]		

Table 7. INHALABLE PARTICULATES – SULFATE, NITRATE FRACTIONS

3.1.3.2 Existing Sources of Pollutants

Comment:

The Hankle Lumber Sawmill emissions should be included in the emissions calculation because the wind will carry the sawmill emissions with the mine emissions.

Comment:

Section 3.1.3.2 of the DEIS is inaccurate because it does not include in its assessment wood burning heating units.

Response:

Emissions from the Hankle Lumber Sawmill were not included in the emissions calculations because it is a completely unrelated source over 3000 feet away and not controlled by the applicant.

Residential pollution sources including lawnmowers, wood burning stoves and outdoor wood boilers were not included in the pollution source inventory because they are unregistered, and therefore exist in unknown quantities. While the exact number of residential pollution sources is unknown, background pollution (air quality) levels were provided in Section 3.1.3.1 of the DEIS and the newest background levels are provided above in the previous section.

All of the background air quality data sets presented in the DEIS and in this document were sampled at NYSDEC monitoring stations and this data accounts for all pollution sources.

3.1.4 Terrestrial and Aquatic Ecology

3.1.4.1 Vegetation and Wildlife

Comment:

DEC recommended that Griggs-Lang contact them in September 2004 to update the inventory of rare or state-listed species in the area of the proposed mine, but Griggs-Lang did not.

Response:

The referenced letter from the New York Natural Heritage Program states that “For most sites, comprehensive field surveys have not been conducted.” The letter goes on to state that: “This information should not be substituted for on-site surveys that may be required for environmental assessment.”

The New York Natural Heritage Program was not contacted in 2004 because a thorough, site specific, vegetation, wildlife and aquatic resource investigation was performed during the fall of 2003 and the spring and summer of 2004. Therefore, unlike “most sites”, a comprehensive field survey was conducted for this site.

Comment:

TS&G's environmental consultant inventoried the proposed mine site in 2003 and 2004 and identified two endangered plant species: acalpa virginica variety virginica (three-seeded mercury) and lycopodium complanatum (northern running pine). Therefore, DEIS is insufficient in that it claims that no protective plant species were observed in or adjacent to the proposed mine.

Response:

The Environmental Collaborative conducted a Rare Species Inventory on September 27, 2006 to address this comment.

The report concludes that:

“...it has been determined that no rare plant species occur on the proposed Nassau Quarry site. *Acalypha rhomboidea* or *A. virginica* var. *rhomboidea*, whichever nomenclature is preferred, is the Three-seeded Mercury that occurs in the parking area and gravel roadway. This species is not on the state or federal rare species list and is therefore not a protected plant species. *D. digitatum* is the Runningpine that occurs on the site and not *D. complanatum* as originally thought. Again, *D. digitatum* is not a state or federal rare plant species and is therefore not protected.”

A copy of the Rare Species Inventory report is included in Appendix E of this document.

Comment:

Whether timber rattlesnakes are present in the vicinity of the proposed mine must be more thoroughly investigated.

Response:

A thorough, site specific, vegetation, wildlife and aquatic resource investigation was performed during the fall of 2003 and the spring and summer of 2004 and no timber rattlesnakes were identified.

In addition, the New York State Department of Environmental Conservation has no

records of rattlesnakes, either present or historical, in Rensselaer County and the Department does not believe the species occurs in Rensselaer County. (A. Breisch, NYSDEC, personal communication with Roy Slack).

Comment:

The vicinity of the proposed mine currently supports a number of rare and valuable species, including flying squirrels, black bears, turkeys, fisher cats, beavers, and many species of frogs and turtles. It is also the nesting ground of the gray horned owl, and is home to many species of birds.

Response:

A thorough, site specific, vegetation, wildlife and aquatic resource investigation was performed during the fall of 2003 and the spring and summer of 2004. In addition, adjacent parcels and habitats were searched or visually assessed in the summer of 2004.

A rare species inventory was conducted on September 27, 2006 to specifically locate Three-seeded Mercury and Northern Running-pine.

No endangered or threatened wildlife or rare species listed by either the U.S. Fish and Wildlife Service or the New York State Department of Environmental Conservation were observed in or adjacent to the proposed quarry area.

A copy of the Vegetation, Wildlife and Aquatic Resources report was included in Appendix D of the DEIS and has been supplemented through the Rare Species Inventory report included in this FEIS at Appendix E.

3.2 HUMAN RESOURCES

3.2.1 Transportation

3.2.1.1 Size, Capacity, Condition and Current Level of Use

Comment:

The DEIS inaccurately states the width of the shoulders of some roads, including State Routes 43 and 66 and U.S. Route 20, which have shoulders of less than 3 feet in some areas.

Response:

Page 2 of the Traffic Impact Study, which was included as Appendix H of the DEIS, identified the background highway data source as the published NYSDOT Highway Sufficiency Reports. These reports are prepared by the NYSDOT and outline general highway conditions.

Actual shoulder widths will deviate from the general conditions along the length of any highway for a variety of reasons including repaving, maintenance practices and damage. The words 'generally' and 'approximately' are used in the Traffic Impact Study to describe the existing conditions due to variations that exist along highways.

The highways in their current condition, including the shoulder widths, are adequately handling trucks. The anticipated truck traffic from the Nassau Quarry will not significantly alter the existing conditions.

Comment:

The Traffic Impact Study uses data from the New York State Department of Transportation from 2001, 2002, and 2003, even though data from 2004 was available. The Traffic Impact Study should use the most recent data available.

Response:

Transportation Concepts collected site-specific continuous count data during 2004 for the Traffic Impact Study. This site specific was used for determining the potential for impact.

In addition to the site specific 2004 data, historic NYSDOT traffic data sources, including 2003 data, were studied to determine the historic annual growth of traffic along NYS Route 66 adjacent to the project study area. Based on the NYSDOT references it was determined that NYS Highway Route 66 has had an approximate 0.6 percent gain in traffic volumes per year in recent years. To be conservative, a 1% per year growth rate was used to project traffic volumes for 2006. Even with the conservative growth estimates, traffic on NYS Route 66 is only approximately 10% of capacity.

This information can be found in the Traffic Impact Study, which was included in Appendix H of the DEIS.

Comment:

The roads that might be used by trucks from the proposed quarry are winding, hilly, two-lane roads, with poor lines of sight.

Response:

The main routes that would be used by trucks are New York State Highway Routes 43 and 66 and U.S Highway Route 20. The traffic Impact Study that was included as Appendix H of the DEIS assessed the potential impact the level of use, safety and capacity of these highways. The study concluded that State and U.S Highways that the traffic from the mine will travel on could safely handle the number and type of trucks that will access the site.

3.2.2 Land Use And Zoning

3.2.2.1 Existing Land Use And Zoning Of Project Site And Surrounding Area

Comments regarding zoning are grouped together in Section 9.3 of this document.

3.2.3 Community Services

Comment:

The DEIS does not accurately identify fire and ambulance first responders. The DEIS fails to address the increased risk of fire and accidents resulting from the mine, and there appears to be no attempt to supply water for fire suppression. Further, the local fire company is not equipped to handle large industrial sites.

Response:

The closest State Trooper station is located at Town Hall, Route 66, Box 273, Sand Lake. The phone number is (518) 674-4440.

Rensselaer County identifies County fire and police service for the Town of Nassau as located at 392 Jefferson Hill Road, Nassau. The phone number is (518) 766-3559.

The NYSDOH and the Rensselaer County 2006 Officials and Services Directory (<http://www.rensselaercounty.org/2006%20Directory-completed%20for%20Website.pdf>) both identify Hoag's Corners Volunteer Ambulance as the closest ambulance service. It is located at 19 Town Garage Road, East Nassau and offers basic life support. The phone number is (518) 794-8652.

The NYSDOH and the Rensselaer County 2006 Officials and Services Directory (<http://www.rensselaercounty.org/2006%20Directory-completed%20for%20Website.pdf>) both identify the Hoags Corners Volunteer Fire District No. 1 as the closest fire station and non-transporting first response service. It is located at PO Box 218, 7237 NY Route 66, East Nassau. The phone number is (518) 766-5474.

Since no combustible structures are proposed to be constructed, the potential of fire and

accidents from the Nassau Quarry will be limited to incidents related to vehicles and equipment fires and/or accidents.

3.2.4 Demography

No comments were received regarding the discussion on demography presented in the DEIS.

3.2.5 Cultural Resources

3.2.5.1 Visual Resources

Comments regarding visual resources are grouped together and presented in section 4.2.2.1.

3.2.5.2 Historic And Archaeological Resources

3.2.5.2.1 Historic Areas And Structures

Comment:

The DEIS does not identify the dams and remains of dams from the 1800s that are located in the Tsatsawassa Creek and a local tributary.

Comment:

DEIS disregarded the Brainard and East Nassau properties that are eligible for the State Register of Historic Places.

Response:

In a letter to NYSDEC dated January 5, 2004, the Office of Parks, Recreation and Historic Preservation (OPRHP) requested an inventory of historic structures within and adjacent to the Nassau Quarry.

During the historical and archaeological investigation the A.E. Cole Farmstead Site (A08306.000078) was identified within the project property. A 50' buffer where no mining or ground disturbance will occur was established around the historic site to protect this resource.

In addition to documenting all historic resources within and adjacent to the site, TS&G exceeded the OPRHP requirement and identified potentially historic structures within the potential viewshed in a two-mile radius for the Visual Analysis. The old dams and the

Brainard and East Nassau properties were not identified because they are not located within or adjacent to the Nassau Quarry or within the potential viewshed.

OPRHP stated in its May 11, 2006 letter that “If the A.E. Cole Farmstead Site is excluded from the Life of Mine and is therefore protected, it is the opinion of the OPRHP that the project will have No Impact on historic properties in or eligible for inclusion in the State and National Registers of Historic Places.”

A map showing the farmstead site and buffer zone was included in Appendix K of the DEIS and copies of the letters from the OPRHP are included in Appendix D of this document.

3.2.5.3 Noise

Comment:

The receptor sites chosen to establish ambient noise levels are inappropriate because they are noisy locations that do not accurately reflect ambient noise levels in the surrounding area of the proposed mines. They falsely suggest higher levels of ambient noise.

Response:

The following response is from Bagdon Environmental’s Response to Comments on Noise Analysis, which is included as Appendix J of this document.

The four ambient monitoring locations used were the same locations identified in the approved scoping document and accurately reflect full day (13-hour) ambient sound levels at these locations.

The ambient monitoring locations were chosen to determine the ambient sound levels at the closest point of habitation in all directions around the Nassau Quarry. The ambient sound levels were measured at locations that accurately represent the sound levels in those areas.

Comment:

The DEIS does not indicate whether or not ambient noise levels were monitored on Saturdays.

Response:

The following response is from Bagdon Environmental’s Response to Comments on Noise Analysis, which is included as Appendix J of this document.

Following a conservative methodology, ambient sound levels were not measured on Saturdays for the following reasons:

1. Limited Hours of Operation. The potential for noise impact was determined for a 6 a.m. to 7 p.m. operation and Saturday operations are only proposed from 7 a.m. to 5 p.m. These reduced hours of operation on Saturday are proposed as a mitigation measure.
2. Traffic. The Traffic Impact Study, included at Appendix H of the DEIS, identified higher traffic volumes on the weekend than during the weekday. Higher traffic volumes will lead to a higher ambient sound level around the Nassau Quarry on Saturdays.
3. Weekend Activity. Around the site, increased activity during the weekend would lead to higher ambient sound levels than the weekdays. Increased weekend activities that contribute to higher ambient sound levels include lawn mowing, leaf blowing, ATVs, snowmobiles, dirt bikes and other recreational activities.
4. Projected Sound Levels. With the proposed mitigation measures in place, the worst-case projected sound levels from the mine were determined to be below the impact threshold using the weekday ambient sound levels. Therefore, impact thresholds would be even higher on weekends.

4.0 SIGNIFICANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES TO MINIMIZE ENVIRONMENTAL IMPACT

4.1 NATURAL RESOURCES

Comment:

The DEIS does not address how grasses and trees will be planted along the shelves. The DEIS does not indicate that the reclamation will begin in 5 years, despite oral assertions to that effect. The vast majority of the reclamation will not begin until 80+ years down the road, and the reclamation plan involves only 40,000 square feet of land in next 40+ years.

Response:

The following bench reclamation information is from the Mined Land-Use Plan which was included as Appendix C of the DEIS:

The quarry benches will be approximately 30 to 50 feet in height and 25 feet to 35 feet in width as shown on the Reclamation Plan Map included in Appendix C of the DEIS. The benches will be graded gently towards the face to retain moisture.

The faces will be stabilized by pre-splitting, controlled blasting, scaling or equivalent as each section of the final faces is completed. The portions of the benches planted to grasses and legumes will be covered with a layer of cover materials (overburden and topsoil) at least two feet thick. The portion of the benches that will be planted with trees will be covered with a layer of overburden materials at least four feet thick. TS&G will utilize on-site overburden materials. The uppermost six inches of cover materials will be soil capable of supporting and sustaining vegetation.

Grass seed for revegetation will consist of commercial grades of ¹:

Orchardgrass	5 lbs./acre
Tall Fescue	0 lbs./acre
Redtop	2 lbs./acre
<u>Birdsfoot Trefoil</u>	<u>5 lbs./acre</u>
Total:	22 lbs./acre

All legumes will be inoculated. Straw/hay mulch will be applied at 2 tons/acre (1 ton/acre if hydroseeded). The soils will be tested for pH and fertility at the time of reclamation and limed to achieve a pH of 5.5 or higher.

¹ Seed mixture recommendation from NYSDEC's New York State Revegetation Procedures Manual.

TS&G may substitute an equivalent seeding mixture and application rate recommended by the local U.S. Department of Agriculture Soil and Conservation Service.

In addition to grasses and legumes, planting will include trees. Bare root tree seedlings will be planted on the benches, as indicated on the Reclamation Plan Map, once the grasses and legumes have been established.

The tree species for planting will consist of a mix of native, non-invasive conifers and deciduous. Species of trees may include Red Maple (*Acer rubrum*), Sugar Maple (*Acer saccharum*), Striped Maple (*Acer pennsylvanica*), White Oak (*Quercus alba*), Red Oak (*Quercus rubra*), White Pine (*Pinus Strobus*), and Hemlock (*Tsuga Canadensis*), among others.

Two rows of seedlings will be planted on staggered eight foot by eight-foot centers. The species will be selected at the time of reclamation based on local nursery availability. Following the plantings of trees in areas undergoing reclamation, the trees will be inspected in detail every year.

Any trees that are dying or have died will be replanted in the early spring of each year. If it becomes apparent that a particular species of tree is not performing particularly well, it will be replaced with a species that is performing well.

To enhance the chance of successful rooting:

- The trees should be planted as soon after delivery as possible, preferably within one week
- Planting should be done soon after a good rainstorm or when soil moisture is high
- The roots should be spread out evenly to avoid J-rooting
- The soil around the roots should be properly compacted to avoid air pockets

In addition, the top few feet of rock in the bench floors will be fractured from blasting.

Mulch around the trees should be about one to three inches thick above the root flare zone and should be kept back from the trunks a few inches.

The applicant will contact the local soil conservation service for soil testing when grading of cover material is complete.

Concurrent Reclamation. Concurrent reclamation will be carried out in those portions of the faces and floor of the mine that have reached final grade and will serve to minimize the amount of open, affected area at one time. Concurrent reclamation will occur on all of the benches that reach final grade during phases 1-4. Concurrent reclamation of the quarry floor will begin during Phase 5 when the floor of the mine reaches final grade. Specific areas that will be reclaimed concurrently with mining were identified, by phase, on the Reclamation Plan Map included in the Mined Land-Use Plan which was included

as Appendix C of the DEIS. Figures identifying the location and extent of concurrent reclamation by phase have been prepared and are included in Appendix F of this document.

As shown on the figures in Appendix F, concurrent reclamation will begin during the early part of phase 1 (5+/- years from startup) and continue throughout the life of the mine. The following table summarizes the concurrent reclamation by phase:

Phase	Concurrent Reclamation Done During Phase	Total Concurrent Reclamation
Phase 1 Early	0.2 Acres	0.2 Acres
Phase 1 Middle	0.25 Acres	0.45 Acres
Phase 1 End	1.65 Acres	2.1 Acres
Phase 2 End	1.0 Acres	3.1 Acres
Phase 3 End	1.4 Acres	4.5 Acres
Phase 4 End	4.0 Acres	8.5 Acres
Phase 5 End*	35 Acres	43.5 Acres

*Reclamation of the quarry floor cannot occur until final grades have been reached.

Table 8. CONCURRENT RECLAMATION BY PHASE

4.1.1 Geology

No comments were received regarding impacts to geology.

4.1.2 Water Resources

4.1.2.1 Groundwater

Comment:

TS&G has dug into a major aquifer in the past.

Response:

Good unconsolidated aquifers are characterized by a high permeable matrix (usually sand and gravel) that can conduct groundwater and yield economically significant quantities of water to wells. Mining in these aquifers is not uncommon and many of the sand and gravel mines that extract sand and gravel from below the water table are in fact mining in an unconsolidated aquifer.

While mining below the water table in major aquifers is not uncommon, this is not proposed at the Nassau Quarry. The Nassau Quarry is located in an upland area and is not located in an aquifer.

Comment:

The DEIS does not address what impact the proposed mine will have on artesian wells.

Response:

Even though no artesian wells were identified in the well survey, excavation at the site has been purposefully configured and planned to ensure that the final floor remains well above not only the static water elevations of known well locations but also the ground surface elevation of other potential water sources within the same watershed, in the event that they are either artesian or spring fed. The DEIS and Hydrogeologic Assessment stated that “the final quarry floor will range in elevation from 970 to 980 feet msl and represents the maximum depth (lowest elevation) that drawdown can be achieved by the free-draining quarry. This elevation is higher than the water levels in all peripheral wells.” The head present in that portion of the hill that will be excavated has developed to drive water through rock that will be removed.

Groundwater, and associated head, will remain in the unexcavated periphery and within the excavated portion of the hill below the planed depth of excavation. This head will develop/remain to drive water through the residual rock mass toward lower pressure regions.

Additionally, excavation, as planned, will increase the volume of water recharging the bedrock groundwater regime by reducing slopes and corresponding runoff.

Comment:

The DEIS does not address the potential impacts or mitigation measures for the discharge of perchlorates that are often associated with blasting agents.

Response:

Perchlorate-containing blasting agents have very limited use in the mining industry (coal, metal and non-metal), and even less use in the aggregate industry. Perchlorate-containing commercial explosives and blasting agents are used in specialized high pressure, high-energy applications where water resistance is needed. These products are manufactured and used specifically as an alternative to nitroglycerin based explosives products and make up less than 0.4% of the commercial explosives market².

Since the perchlorate compounds are used up during detonation, the potential significant perchlorate contamination associated with blasting is attributable to pre-blast incidents such as improper spill cleanup.

Spill prevention measures for the Nassau Quarry were included in Appendix M of the DEIS.

Comment:

Questions remain as to the effect of drilling and blasting on current and future wells, and springs. Additional groundwater studies should be done prior to approval of the mining permit application.

Comment:

Blasting could contaminate drinking water with toxins from the Dewey Loeffel site and the former town landfill.

Response:

Wells. At the forefront of blasting research in the United States, the U.S. Bureau of Mines (now part of the U.S. Geological Survey) contributed much to the understanding of blasting impacts. The U.S. Bureau of Mines developed ground vibration recommendations based on more than 50 years of testing and blasting research by the U.S. Bureau of Mines, numerous investigative groups and individual seismologists. These blasting recommendations are widely used by regulatory agencies nation-wide because they were developed to preclude even minimal damage to the weakest building materials (drywall and plaster) in residential structures.

Underground structures and facilities, including wells, are far less susceptible to vibration damage than are aboveground structures. Since TS&G proposes to adhere to the USBM ground vibration recommendations to protect the weakest building materials, wells

² From *Perchlorate White Paper*, IME (Institute of Makers of Explosives).

should not be affected by blasting vibrations.

Additional information regarding blasting, water supplies and wells can be found on page 27 of the Hydrogeologic Impact Assessment which was included as Appendix F of the DEIS.

Landfill Sites. As stated in the Overview of Blasting and Best Management Practices, included as Appendix I of the DEIS, the “rock 15 to 20 feet beyond a blasthole is not damaged”. The USBM studies that were cited in the DEIS conclude that blasting may indirectly improve well yields within a few hundred feet of the blast by increasing the number of fractures that transmit and store water through rock breakage and stress relief. It is important to point out that the effect of the new fractures, not the new fractures themselves, can extend out a few hundred feet, maximum. Therefore, blasting at the Nassau Quarry will not affect the hydrology of the old Town landfill, which is located over 1.75 miles away and across several groundwater divides or the Dewey Loeffel Landfill which is located approximately 2.8 miles away and also across several groundwater divides.

The stress on the landfills from the blasting vibrations from the Nassau Quarry will be less than the everyday changes in temperature and pressure and from freeze/thaw action.

A conservative ground vibration calculation assuming large (6.5”) holes determined that the ground vibration at the Dewey Loeffel landfill would be 0.0068 inches/second. This level is de minimus and would be undetectable even with a blasting seismograph.

For comparison, the ground vibration from a heavy truck driving by the landfill would be approximately 0.0098 inches/sec at 30 meters (98.4 ft)³, approximately 50% greater than the conservative blasting vibration calculations.

Comment:

The DEIS did not include any study documentation to indicate the potential impact on the yield of the easterly groundwater aquifer or the impact that the diversion of water from the mining would have on the Tackawasick Creek, a Class C(t) trout stream that is cooled in the summer by the flows from groundwater recharge.

Comment:

The recharge area for a major aquifer is located in the vicinity of the proposed mine. That aquifer provides drinking water to Dunham Hollow residents, and mining may

³ From: Report on the Pre-design Studies of Noise and Ground Vibration for N.W.L.R.S., City of Calgary (October 1986).

impact the quality and quantity of water available to those residents.

Response:

The conclusion that groundwater quality and quantity will be negatively impacted due solely to the existence of an unconsolidated aquifer in the vicinity of the Nassau Quarry is not supported by the site-specific data collected and analyzed for the DEIS.

The “aquifer” identified by the USGS is the unconsolidated sand and gravel aquifer located to the east of the site. As shown on the Site Plan Map Showing Eastern Aquifer and Extent of Watershed, included as Appendix H of this document, the Nassau Quarry is located outside of this aquifer and only within an extremely small portion of the contributing watershed.

The Nassau Quarry when fully developed will intercept approximately 10.4 acres or 0.076% of the approximately 13,740-acre aquifer watershed. This amount of diversion will be insignificant and will not impact the unconsolidated aquifer or the Tackawasick Creek in that aquifer nor will it alter the temperature of neither the aquifer nor the Tackawasick Creek.

A thorough, site-specific Hydrogeologic Impact Assessment was prepared for the Nassau Quarry and was included in the DEIS. The study conservatively calculated and delineated the extent of the water table drawdown and determined that impacts to the quality or quantity of the groundwater will be insignificant for the following reasons:

1. The extent of impacts to the water table outside of the planned excavation area will be limited by the restricted recharge potential of the hillside,
2. The extent of impacts to the water table outside of the planned excavation area will be limited by the low permeability of the Rensselaer Formation,
3. The elevation of the planned final floor will be above the elevations of the wells of all proximal users, and
4. The distance to proximal water well users minimizes the potential for impacts associated with excavation at the project site.

4.1.2.2 Surface Water

Comment:

Logging will lead to increased erosion, and ultimately to increased turbidity and siltation in the local streams and Pike's Pond, which could affect the breeding ground for unique wildlife.

Comment:

The DEIS does not adequately address the impact that removal of vegetative cover and soils will have on the downstream water flow and velocity.

Response:

Runoff from the Nassau Quarry site flows to the west and east and south. Runoff from the Nassau Quarry property cannot flow north into Pikes Pond because there is a topographic high (Pikes Hill) between the site and the pond that prevents runoff from flowing in that direction.

The potential for increased erosion and sedimentation during stripping operations was fully discussed in the stormwater sections of the DEIS. A Stormwater Pollution Prevention Plan for Roadway Construction and Mining Activities has been prepared, which fully addresses potential stormwater runoff from site activities as well as mitigation measures to address potential runoff, both as to quantity and quality, in compliance with NYSDEC regulations. The Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan were included in the DEIS at Appendix M.

The proposed mitigation measures during site preparation include:

1. Temporary sediment traps⁴;
2. Stabilized construction entrances⁵;
3. Silt fences;
4. Storm drain inlet protection⁶;
5. Dust control;
6. Phased Construction; and
7. Concurrent revegetation.

Structural and vegetative measures were designed, constructed and maintained to meet or exceed the New York State Guidelines for Urban Erosion and Sediment Control, dated October 1997 and more specifically as follows:

Temporary Sediment Traps. Temporary sediment traps with dewatering devices will be constructed to intercept sediment laden runoff and trap sediment to protect drainage ways and property below the trap.

⁴ A temporary sediment control device formed by excavation and/or embankment to intercept sediment-laden runoff and retain the sediment.

⁵ A stabilized pad of aggregate underlain with filter cloth.

⁶ A permeable barrier installed around inlets in the form of a fence, berm or excavation around an opening, thereby reducing the sediment content of sediment-laden water.

Stabilized Construction Entrances. Stabilized construction entrances will be maintained during the construction phase of the Nassau Quarry, until the access road is paved, to prevent tracking of sediment off-site.

Silt Fences. Silt fences will be installed at the limit of construction activity to prevent siltation of adjacent areas.

Storm Drain Inlet Protection. Storm drain inlet protection will be installed to prevent sediment-laden runoff from entering the storm sewer system through catch basins in the roadway.

Dust Control. Dust control, including the use of water trucks, will be used to prevent surface and air movement of dust from disturbed areas.

Phased Construction. Construction will be phased and scheduled to provide for maximum level of protection of surface waters from stormwater runoff and sedimentation. Erosion controls will be installed prior to large-scale earthmoving activities.

Concurrent Revegetation. Immediately after site grading, all exposed areas will be mulched and vegetated with suitable ground cover or pavement. Areas that will be bare for a period of more than 14 days will be seeded for temporary vegetative cover.

All sediment and erosion controls will remain in place and maintained until ground cover is established.

An Erosion and Sedimentation Control Plan and Stormwater Pollution Prevention Plan (SWPPP), included as Appendix M of the DEIS, has been prepared and will be implemented. The Erosion and Sedimentation Control Plan and SWPPP incorporate the above-mentioned mitigation measures, which are designed to eliminate the potential for siltation and erosion.

The proposed mitigation measures during mining operations include:

1. Stormwater ponds;
2. Dust control;
3. Storm drain inlet protection;
4. Road paving; and
5. Concurrent reclamation.

Stormwater Ponds. A network of catch basins, culverts, drainage channels and stormwater ponds are proposed to be constructed at the Nassau Quarry to handle all of the stormwater runoff from the quarry and its contributing drainage basin.

The criteria for required water quality volume collection and treatment of 90% of the average annual stormwater runoff volume, as required by the SPDES Permit, was met or exceeded for all stormwater ponds.

Dust Control. Dust control, including the use of water trucks, will be used to prevent surface and air movement of dust from disturbed areas.

Road Paving. The entire length the access road will be paved. During operation of the mine, access roads within the site will be inspected on a daily basis and cleaned as necessary to control trackage onto public roads.

An Erosion and Sedimentation Control Plan and Stormwater Pollution Prevention Plan (SWPPP), included as Appendix M of the DEIS, has been prepared and will be implemented.

Comment:

The DEIS states that there may be "slightly" increased surface water, but does not define what is meant by "slightly".

Response:

The storm water control features that were proposed as part of the Erosion and Sediment Control Plan and Storm Water Pollution Prevention Plan (SWPPP) for Roadway Construction and Mining Activities (included as Appendix M of the DEIS) were specifically engineered so that there will be no impact to downstream flow, quality or quantity. The potential for impacts due to flooding are avoided because the flow rates of the treated water stormwater leaving the detention ponds during operation of the quarry are significantly lower than the peak runoff rates from pre-development. The pre-development and post-development off-site flow rates are located in Appendix C of the Erosion and Sediment Control Plan and Storm Water Pollution Prevention Plan (SWPPP) for Roadway Construction and Mining Activities (included as Appendix M of the DEIS).

The proposed plan meets and/or exceeds all applicable regulations and requirements for stormwater flow, quality and quantity.

4.1.3 Air Resources

Comment:

Sources of particulate matter include diesel trucks, diesel operated generators, diesel powered machinery, rock crushing, truck loading, drill rigs, wind erosion from stockpiles, blasting, and unpaved haul roads.

Comment:

Section 4.3.1 is inadequate because the combination of the mining activities' generation of particulates, and the contribution of particulate matter by the diesel operated machinery, have not all been considered, calculated, and evaluated.

Response:

All trucks and other mobile sources are required to comply with 6 NYCRR Subpart 217-5 and ECL 19-0320, which were enacted by New York State to protect the health, safety and welfare of its citizens.

Potential PM_{2.5} emissions at the Nassau Quarry were calculated for all regulated stationary sources. The air emission calculations determined that the entire operation at maximum production, based on the proposed operations hours, has the potential to emit 6.1 tons annually of PM_{2.5}. In accordance with NYSDEC policy, 6.1 tons per year is considered a de minimis source and no further evaluation or mitigation measures are required. By definition, de minimis sources do not have the potential to result in a significant impact.

All sources will be required to comply with all applicable current and future regulations.

Comment:

Upstate New York is considered in non-compliance for ozone and NOx. Steps must be taken to ensure that limits set forth in regulations and any permit are complied with by TS&G.

Response:

The Environmental Protection Agency considers the Albany-Schenectady-Troy area, including Rensselaer County, as a non-attainment zone for 8-hour ozone.

The Nassau Quarry will operate below all of the New York State thresholds for all criteria air pollutants and will only need an Air Facility Registration. As part of the air permit, TS&G will be required to maintain usage logs to demonstrate compliance with the self-imposed 2000-hour processing plant cap.

Comment:

Use of the AP-42 emission factors is inadequate, and should not be used to assess the impact of a proposed facility.

Response:

AP-42 emissions factors were developed by the EPA using data from actual emission sources and are an acceptable and conservative method for determining emissions.

Comment:

The New York State Department of Health should be involved in any decision making.

Response:

The New York State Department of Health is neither an interested or involved agency for this permit application. Trained NYSDEC staff review air pollution and air quality impacts, pursuant to State regulations implemented to protect the health, safety and welfare of the people, r.

Comment:

The mine should hook up to electric utility lines rather than being powered by diesel operated generators. DEC should examine the motive behind the applicant's decision to use generators rather than electric utility lines.

Response:

The generator that TS&G is proposing to use at the Nassau Quarry was included in the emission calculations. The emission calculations demonstrate that the Nassau Quarry will operate below the New York State air pollution thresholds and will not have an impact on the air quality. Therefore, discussions regarding alternative sources of electricity are not necessary.

4.1.3.1 Air Quality

Comment:

The statement in the DEIS that 12,200 pounds of fine particulate matter is insignificant is not accurate considering that 10% of children attending Donald P. Sutherland Elementary School in Nassau have asthma. The DEIS should more thoroughly address this issue.

Comment:

The processing plant should be enclosed in order to contain dust.

Response:

Potential PM_{2.5} emissions at the Nassau Quarry were calculated for all regulated sources and all sources where AP-42 emission factors were available. The air emission calculations determined that the entire operation at maximum production, based on the proposed operations hours, has the potential to emit 6.1 tons (12,200 pounds) annually of PM_{2.5}. In accordance with NYSDEC policy, 6.1 tons per year is considered a de minimis source and no further evaluation or mitigation measures are required. By definition, de minimis sources do not have the potential to result in a significant impact.

In addition, the proposed limit of 2000 hours for the processing plant and generator was very conservative because it was developed based on regulated pollutant thresholds and not actual production. 2000 hours of operation is the level where emissions from the site would reach the first regulated pollutant threshold: 25 tons of oxides of nitrogen. Other regulated pollutants will be emitted at lower rates than oxides of nitrogen and would only reach their regulatory thresholds beyond the 2000-hour limit.

To reach 2000 hours/year, the processing plant would have to operate for 10 hours/day for 200 days and would process approximately 738,000 tons (much higher than the anticipated volume of 160,000 tons/year). Actual processing hours would be considerably less than 2000 hours/year and would likely be closer to about 434 hours/year (21.7% of 2000 hours) based on the primary jaw crusher design capacity of 369 tons/hour. (160,000 tons per year / 369 tons per hour = 433.6 hours per year)

Since actual processing hours would be approximately 22% of the hours used in the emission calculations, a similar reduction factor (0.22) could reasonably be applied to the emission calculations, including particulate matter, to estimate the actual projected emission (as opposed to potential emission) levels at the Nassau Quarry.

However, the anticipated volume of 160,000 tons/year is not a production limitation. As stated above, based on the emissions limitation, up to 738,000 tons/year of stone can be processed at the Nassau Quarry and remain in compliance with emissions limitations under the Air Facility Registration Certificate. The 2000 hours for the processing plant and generator will be an enforceable limitation to ensure compliance with emissions limitations.

To minimize the amount of particulate matter emissions, all of the on and off-road equipment used at the Nassau Quarry must be in compliance with all State and Federal air quality regulations. An air permit application has been prepared and submitted and a Fugitive Dust Control Plan prepared. As described in the Fugitive Dust Control Plan included in Appendix L of the DEIS, dust will be controlled at the Nassau Quarry using the following methods:

- Wooded buffers surround the quarry. These buffers will be maintained until production begins in a new area.

- Overburden is typically stripped during the early winter and spring when soil conditions are not conducive for the generation of large amounts of dust.
- Stripped overburden is stored in berms or stockpiles on the mine floor and vegetated.
- Drills are equipped with dust control equipment including a shroud around the ground/drill hole interface and dust collectors.
- Dust from the drill rig dust collectors is incorporated into the processed material.
- Overburden is removed from the rock prior to blasting.
- The quarry will be worked as a hilltop pit. This design contains a central pit surrounded by perimeter quarry faces. Since the most activity occurs at the bottom of the faces, the overlying benches help screen the activity from the wind, reducing the wind velocity and reducing the potential for dust generation. The overlying benches also help contain any fugitive dust to the site.
- The stone has natural moisture content that helps bind finer grained particles together and minimize the generation of dust.
- Based on data averaged over the past five years in this area, there are over 100 days per year with precipitation of at least 0.01 inches. The amount of water applied to the unpaved portions of the haul roads will vary depending on amount the precipitation and the amount of dust being generated by equipment traffic. During dry conditions, the haul roads will be watered sufficiently so that the dust generated by equipment traffic is suppressed. A water truck will apply water to the roadways as needed, unless weather deems it unnecessary (moist conditions or precipitation).
- Vehicle speed on haul roads is controlled. Speed limit signs at the Nassau Quarry will be posted at 15mph.
- The site is remotely located from surrounding homes. The nearest off-site site home is approximately 1300 feet from the proposed excavation area at its nearest point.
- The processing plant will be operated in the center of the property, remotely located from surrounding homes.
- Once sufficient space has been opened up, the processing plant will be located on the mine floor, surrounded by high faces to reduce wind speeds and better contain fugitive dust.
- The stockpiled product retains dust control moisture from processing. In addition, the stockpile area will be routinely sprayed down with water when needed to control fugitive dust.
- Dust in the processing plant will be controlled by the following measures:
 - The natural moisture content of the rock fed to the plant.

- Addition of water sprays at key points in the processing plant, including the primary crusher and screens.
- Periodic removal of built up material around the processing plants.
- The entrance roads will be paved to control the generation of fugitive dust.
- The paved entrance roads will be swept as often as needed to control fugitive dust and trackage off-site.
- The conveyors will have belt scrapers that help keep the belts clean and reduce the amount of spillage from the conveyors. If the conveyors will be running without material for a prolonged period, they will be turned off to reduce fugitive dust. However, at least one full belt-length will be run without material at the beginning or end of the day when the material is being loaded or unloaded, respectively.
- Spillage will be cleaned up as needed to control generation of excessive amounts of dust and to keep the quarry clean. The frequency of cleaning up spilled material will vary depending on how much material is running through the plant and how much product is being produced during a given day.
- The quarry faces will be wet down with water as often is needed to mitigate potential dust impacts during blasting, to ensure that no visible dust escapes the property line.

Comment:

The DEIS should include a modeling analysis of air quality impacts because of the multiple emissions sources.

Response:

All stationary emission sources were analyzed by TS&G for the Nassau Quarry. The Nassau Quarry will operate below all of the New York State thresholds for air pollution and will only require an Air Facility Registration Permit. These thresholds were established by the State to protect the health, safety and welfare of its citizens. Modeling of pollutants that are below these government-established thresholds is not required by New York State regulation.

Comment:

The DEIS does not adequately address the impact of the mine on the air quality near eligible historic properties.

Response:

The Nassau Quarry will operate below all of the New York State thresholds for all criteria air pollutants and will only need an Air Facility Registration.

As described in the Fugitive Dust Control Plan included in Appendix L of the DEIS and outlined in previous responses, dust will be controlled at the Nassau Quarry using numerous mitigation measures.

Comment:

The DEIS's statement that the mine would not be of sufficient intensity to impact air quality is inaccurate, since the facility will be producing 66,995 pounds per year of particulate matter, 46,800 pounds per year of nitrogen oxides, 1,375 pounds per year of volatile organic compounds, 7,888 pounds per year of sulfur dioxide, 10,725 pounds per year of carbon monoxide, and 21 pounds per year of hazardous air pollutants (including 11.1 pounds per year of benzene).

Comment:

Section 4.1.3.1.4 is inaccurate in its statement that the proposed mine will not be of sufficient capacity to impact air quality, the inaccuracy of which is evidenced by the limitation on hours of operation to 2,000.

Response:

The proposed limit of 2000 hours per year for the processing plant and generator was very conservative because it was developed based on regulated pollutant thresholds and not actual production. 2000 hours of operation is the level where emissions from the site would reach the first regulated pollutant threshold: 25 tons of oxides of nitrogen. Other regulated pollutants will be emitted at lower rates than oxides of nitrogen and would only reach their regulatory thresholds beyond the 2000-hour limit.

To reach 2000 hours/year, the processing plant would have to operate for 10 hours/day for 200 days and would process approximately 738,000 tons (much higher than the anticipated volume of 160,000 tons/year). Actual processing hours would be considerably less than 2000 hours/year and would likely be closer to about 434 hours/year (21.7% of 2000 hours) based on the primary jaw crusher design capacity of 369 tons/hour. (160,000 tons per year / 369 tons per hour = 433.6 hours per year)

Since actual processing hours would be approximately 22% of the hours used in the emission calculations, a similar reduction factor (0.22) could reasonably be applied to the emission calculations to estimate the actual projected emission (as opposed to potential emission) levels at the Nassau Quarry.

However, the anticipated volume of 160,000 tons/year is not a production limitation. As stated above, based on the emissions limitation, up to 738,000 tons/year of stone can be processed at the Nassau Quarry and remain in compliance with emissions limitations under the Air Facility Registration Certificate. The 2000 hours for the processing plant and generator will be an enforceable limitation to ensure compliance with emissions

limitations.

Comment:

The 2,000 hour limitation on hours of operation does not include the proposed retail operation.

Response:

The 2,000-hour a year limitation on hours of operation is for the operation of the processing plant and generator. All trucks and other mobile sources associated with the retail aspect of the quarry will be required to comply with 6 NYCRR Subpart 217-5 and ECL 19-0320, which were enacted by New York State to protect the health, safety and welfare of its citizens.

Comment:

Any facility such as the proposed mine should be required to obtain a full New York State Air Facility Permit, or a Title V federal permit.

Response:

The Nassau Quarry will operate below all of the New York State thresholds for criteria air pollutants and will only need an Air Facility Registration. Neither a NYS Air Facility Permit nor Title V Federal Permit is required.

Comment:

Equipment such as bulldozers and front-end loaders should not be considered as exempt or trivial, and regardless of their exempt or trivial status, emissions from such sources should be included in the emissions calculation for determining general rule applicability of Title V, New Source Review, and Prevention of Significant Deterioration.

Comment:

Appendix L of the DEIS indicates only one stationary source of combustion at the diesel generator set; equipment operating at the site such as diesel loaders and trucks should be considered in the assessment of air emissions.

Comment:

The impact from short-term or 24-hour emissions should not be ignored, particularly

with respect to particulate matter. An impact analysis beyond the EPA's AP-42 emission factor calculation should be done on both long-term and short-term emissions.

Response:

Potential emissions at the Nassau Quarry were calculated for all regulated stationary sources. Assessment of air impacts using applicable AP-42 factors was completed by qualified and competent professionals in accordance with accepted industry standards and practices. All mobile sources, such as trucks, must comply with 6 NYCRR Subpart 217-5 and ECL 19-0320, which were enacted by New York State to protect the health, safety and welfare of its citizens.

Comment:

According to the EPA (2006), air pollution can make asthma symptoms worse and trigger attacks. There are two key air pollutants that can affect asthma, particle pollution is one of them. A hard rock quarry, no matter what size, will produce particle pollution. TS&G's DEIS does not adequately address this health care issue.

Comment:

The DEIS should include a health risk assessment that looks particularly at the effect of the mine on the most susceptible populations, including the children and elderly.

Comment:

The presence of silicates in fugitive dust will adversely affect the health and welfare of the surrounding community.

Comment:

The DEIS does not adequately address the particulate matter that will be produced by the mining operation and the consequent health effects associated with exposure to such particulate matter.

Comment:

Any properties downwind from the site will suffer a significant dust impact if the mine is permitted.

Comment:

The DEIS section regarding dust control is not realistic.

Response:

The Nassau Quarry will operate below the New York State thresholds for every air pollutant and will only require an Air Facility Registration Permit. These pollution thresholds were established by the State to protect the health, safety and welfare of its citizens and modeling of pollutants that are below these government-established thresholds is not needed.

As described in the Fugitive Dust Control Plan included in Appendix L of the DEIS and outlined in previous responses, dust will be controlled at the Nassau Quarry using numerous mitigation measures. Utilizing these mitigation measures, there should be no degradation to local or regional air quality.

4.1.4 Terrestrial and Aquatic Ecology

Comment:

The DEIS does not address the potential impact of the mine on the ecosystem of Pike's Pond and surrounding acreage, including several wetland areas.

Comment:

The DEIS does not attempt to address in any integrated way the changes and impacts of the mine on "ecoservices"

Response:

A thorough, site-specific groundwater study was prepared for the Nassau Quarry and was included in the DEIS. The study conservatively calculated and delineated the extent of the water table drawdown and determined potential for impact to the surrounding aquifer based on data collected from testing of on-site monitoring wells.

The Nassau Quarry will not draw down the level of Pikes Pond for three main reasons:

1. Elevation Difference. Pikes Pond is at elevation 800' +/- and the maximum depth of excavation at the Nassau Quarry will be 970-980', approximately 175' +/- above the elevation of Pikes Pond).
2. Groundwater Divide. The Nassau Quarry and Pikes Pond are separated by a topographic high which acts as a local groundwater divide.
3. Distance. Pikes Pond is approximately 2000' away from the closest point of proposed excavation and groundwater impacts were already determined to be insignificant for all receptors located closer than 2000'.

Comment:

Chestnut oak forests are located nearby, but the impacts of the proposed mine on such forests are not adequately addressed in the DEIS.

Response:

While several chestnut oaks were identified in the Vegetation, Wildlife and Aquatic Resources inventory, chestnut oak forests are not located on-site or within the vicinity of the project.

Comment:

DEIS does not adequately address the potential impacts on the Rensselaer Plateau, nor does it address how the Rensselaer Plateau will be protected despite the operation of the proposed mine.

Response:

The proposed Nassau Quarry site is located to the southwest of the Rensselaer Plateau. The Rensselaer Plateau is a rural area with a large percentage of wooded areas and open space.

The Nassau Quarry project will preserve open space in a variety of ways:

1. The Nassau Quarry, like other mines, is not a permanent land-use and will be returned to grassland and wooded land through reclamation.
2. While rural sprawl will likely continue to expand in the Town of Nassau, no other development would occur on the Nassau Quarry property, nor would the land be subdivided.
3. TS&G will only mine 89 acres of the 214-acre parcel. Approximately 60% of the property will never be affected by mining.
4. Mining will occur in phases and concurrent reclamation will commence during the first phase of mining and continue throughout the life of the mine.

Comment:

At-risk bird species use the Rensselaer Plateau and a forest track adjacent to the proposed mine site as breeding areas, but the DEIS does not adequately address the potential impacts on those breeding areas, nor does it address how such impacts will be minimized.

Response:

A thorough site specific investigation of wildlife, including birds, was conducted at the Nassau Quarry site and was included as Appendix D of the DEIS. No significant breeding areas or at risk bird species were found on-site⁷ during the site visits.

Comment:

The topography of the area will be altered in such a way as to create vertical drops and impassible barriers that will be dangerous and burdensome to wildlife that migrate through the area. There are methods of mining that would prevent the alteration of the topography in such a way.

Response:

The proposed Nassau Quarry is a small/medium sized quarry that will not be large enough to create an 'impassible barrier'. Wildlife will still be able to easily navigate around the quarry during operation and wildlife will use the site after the site is reclaimed to grassland and wooded land.

Comment:

The population of wood turtles, a species of special concern in New York, in the Tsatsawassa Creek, into which runoff from the site will eventually drain, will be endangered as a result of the proposed mine.

Response:

As shown on the maps included in Appendix M of the DEIS, all runoff from the site will be directed to the west. Since no runoff from the quarry will flow towards the direction of the possible wood turtle habitat, there is no potential for sedimentation into the Tsatsawassa Creek.

As shown on the Site Plan Map Showing Eastern Aquifer and Extent of Watershed included in Appendix H of this document, the Nassau Quarry only intercept approximately 10.4-acres of the 13,740-acre watershed (approximately 0.076%) for the Tsatsawassa Creek aquifer. This amount is insignificant and will have no impact on the Tsatsawassa Creek or the possible wood turtle habitat.

⁷ Two adult Peregrine Falcons (*Falco peregrinus*) were observed flying over the property on the morning of May 29, 2004. It is assumed that these birds are from nests in the Albany-Hudson River area, since there are no suitable nesting ledges or structures on or in the immediate vicinity of the mine property.

4.2 HUMAN RESOURCES

Comment:

The DEIS's considerations of potential impacts on humans ignore the fact that adjacent property owners use the adjacent land for outdoor recreation.

Response:

Adjacent landowners at TS&G's three other quarry sites continue to utilize their own property for outdoor recreation without interference or adverse impact from Troy Sand. Moreover, to the extent that the mining activities create biodiverse wildlife communities through the introduction of open rock faces (favored by large birds as noted in the New York State Open Space Conservation Plan), certain outdoor recreational activities, such as wildlife observation and bird watching, may be enhanced by the Quarry.

4.2.1 Transportation

Comment:

State Routes 66 and 43 and U.S. Route 20 are ill-equipped to handle the increased truck traffic that will result from the proposed quarry.

Comment:

The increased truck traffic will pose an inconvenience to other commuters.

Comment:

The increased truck traffic will increase the risk of serious motor vehicle accidents.

Comment:

Truck traffic is a source of resident annoyance, noise, and road erosion.

Comment:

The DEIS does not adequately address the noise of the increased truck traffic, nor does it adequately address the driving skill and behavior of the drivers.

Comment:

Children who wait for buses, enter and leave buses, ride buses, and return home from buses along routes that the trucks from the proposed quarry are expected to transport material may be at an increased risk of serious injury as a result of increased truck traffic.

Comment:

Increased truck traffic will adversely affect the interest of clients of members of the Brainard Artisans Guild if it is a known truck route since clients may view entering and exiting the sites of local studio spaces as being dangerous.

Comment:

Increased truck traffic will adversely affect the visual impact of the Brainard area with elevated truck traffic outside of local studio spaces.

Comment:

The level of operation proposed by TS&G may exceed the capacity of nearby intersections.

Response:

Potential Truck Traffic Related Impacts To Level of Use, Safety and Capacity. The traffic Impact Study that was included as Appendix H of the DEIS assessed the potential impact the level of use, safety and capacity of these highways. The study concluded that State and U.S Highways on which the traffic from the mine will travel on could safely handle the number and type of trucks that will access this site.

Local roads would only be used for local deliveries. The Nassau Quarry will not create a spike in local deliveries because quarries do not create demand. Trucks making local deliveries would have to use the same local roads regardless of the source from which it came from.

Potential Truck Noise Impacts. Federal regulations establish noise limits for medium and heavy trucks under 40 CFR, Part 205. All trucks over 4.5 tons (gross vehicle weight) are required to comply with these requirements.

A noise impact assessment was performed for trucks along the Nassau Quarry access road and was included in the Noise Impact Assessment located in Appendix G of the DEIS. The Noise Impact Analysis determined that with the implementation of the proposed mitigation measures there would be no impact from mining activities.

Truck Driver Skill and Behavior. Truck drivers are professionals who drive heavy vehicles for a living. TS&G operates a truck driver safety program. The program includes random drug testing and 8-hours a year of classroom truck driver safety training. Unsafe driving practices are not tolerated by TS&G and it is their policy that drivers who make unsafe driving decisions face immediate disciplinary action and/or termination.

Comment:

The DEIS should characterize all local roads as possible truck routes because the proposed site will be selling product at retail from the site itself. Some local roads are not intended to be used as truck routes and will therefore suffer considerable wear and tear and hazardous conditions.

Response:

Local roads would only be used for local deliveries. The Nassau Quarry will not create a spike in local deliveries because quarries do not create demand. Trucks making local deliveries would have to use the same local roads regardless of the source from which it came from.

Comment:

The New York State Department of Transportation "took exception" to the initial input of the Traffic Impact Study (by letter dated July 15, 2005), and therefore Appendix H had to be revised.

Response:

New sight and stopping distance recommendations were released during the application process and the New York State Department of Transportation requested that the Traffic Impact Study be updated and the distances included, a request with which TS&G complied.

The report was updated as requested and resubmitted. The Traffic Impact Study that was included in the DEIS included the updated sight and stopping distances.

Comment:

The traffic mitigation measures and the bases for the conclusions in Appendix H do not account for the unintended northbound truck traffic along State Route 66 that will result from the prohibition of left turns out of the proposed site.

Comment:

Considering that trucks leaving the site will be prohibited from turning left out of the site, and will therefore be required to head north initially, the DEIS does not clearly address in what manner the trucks will ultimately head south (including at what point, if any, the trucks will turn around on State Route 66).

Response:

The reference to no left turns on page 82 of the DEIS is a typographical error.

The two access road proposal for the Nassau Quarry was changed to one access road during the process of determining the completeness of the application. Section 1.0 of the DEIS and the Executive Summary of the Traffic Impact Study, included as Appendix H of the DEIS, stated: “In recognition of newly obtained clearing guidelines, the northern access road to NYS Route 66 that was proposed to be constructed in the previous submission has been removed and all access to the site will be via the existing entrance road.”

Comment:

The DEIS does not state any limit on the number of trucks that will be entering and leaving the site, and using the roads, other than that it will be limited by market demand.

Response:

The Traffic Impact Study identified 212,000 tons/year as the upper limit for the current impact assessment. Specifically the study states: “In regard to expansion of the site processing rate beyond the initial 160,000 tons per year an/or development that would create greater than a 10% increase in truck traffic (approximate 212,000 tons/year at current AADT), we recommend a supplementary traffic study of greater scope be conducted to determine larger areas of potential impacts.”

Comment:

The DEIS is inconsistent when it claims (in the sight distance analysis) that no mitigation is warranted for the intersection of State Routes 66 and 43, and (in Appendix H) that the intersection at Denault Corners has restrictive turning radii and limited sight distance as a result of horizontal and vertical curves.

Response:

This comment is incorrect. Page 16 of the Traffic Impact Study states: “Under the ’05 NYSDOT HDM criteria, this existing intersection [Route 43 and 66 at Denault Corners] exceeds all criteria for all conditions. No mitigation is warranted for this intersection as a result of this project development at this time.”

4.2.2 Cultural Resources

Comment:

Impacts to cultural venues along the southern truck traffic route were not explored in the DEIS. A revised DEIS should address the following: the effect of particulate matter on the finishing and refinishing efforts of craftsmen involved in furniture design, creation, and restoration; the effect of mine blasting and increased truck traffic on the restoration of antique music and sound equipment; the effect of vibrations from truck traffic and blasting on precision measuring, calibration, and cutting with precision instruments; and the effect of increased truck traffic on the willingness of persons to visit the cultural venues along the truck routes.

Comment:

The scope of DEIS with regard to impacts on historic properties is too limited considering the fact that truck traffic will be using a southern route to U.S. Route 20. The following eligible historic properties are not considered in the DEIS: (1) Brainard Historic District, Brainard Station Road; (2) Brainard Rural Cemetery, U.S. Route 20; (3) Snook House, U.S. Route 20; (4) 303 Kinderhook Lane; (5) Harmony Acres Farmhouse and Barn.

Response:

Potential Impacts From Truck Traffic. Traffic from the mine along the southern route (NYS Route 66 and U.S. highway 20) will be along existing highways that currently handle truck traffic and are designed to adequately handle the number and type of trucks that will access the site.

Potential Impacts From Diesel Truck Emissions. All trucks are required to comply with 6 NYCRR Subpart 217-5 and ECL 19-0320, which were enacted by New York State to protect the health, safety and welfare of its citizens.

Potential Noise Impacts From Trucks On Highways. Federal regulations establish noise limits for medium and heavy trucks under 40 CFR, Part 205. All trucks over 4.5 tons (gross vehicle weight) are required to comply with these requirements.

Potential Impacts From Blasting. A blasting impact assessment was performed for the closest residences around the site. The assessment determined: "Implementation of the proposed mitigation measures and adherence to the blasting BMP will insure that all blasts will be within the USBM standards for ground vibration and air overpressure and there should be no significant impacts due to flyrock. The potential for blasting will be mitigated so as to be insignificant." All of the sites referenced in this comment are located much further away from the site than the closest residences that were used for assessing potential blasting impacts and therefore, the referenced sites should not be impacted.

Particulate Matter. Potential PM_{2.5} emissions at the Nassau Quarry were calculated for all regulated sources and all sources where AP-42 emission factors were available. The air emission calculations determined that the entire operation at maximum production, based on the proposed operations hours, has the potential to emit 6.1 tons (12,200 pounds) annually of PM_{2.5}. In accordance with NYSDEC policy, 6.1 tons per year is considered a de minimis source and no further evaluation or mitigation measures are required. By definition, de minimis sources do not have the potential to result in a significant impact.

4.2.2.1 Visual Resources

Comment:

Appendix J of the DEIS does not adequately describe the visual portions of the project since the noise control berms proposed to mitigate the noise impact are not included. The DEIS only accounts for the top of the mine face.

Response:

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

The noise control berms will be constructed within the mining limits, as shown in the DEIS, prior to mining a particular phase and will be vegetated shortly after construction to allow vegetation to begin to grow and mature immediately. While the berms will vary in height between 10 and 30 feet, since the visual study assumed conservatively intervening vegetation at a height of 40 feet, the character of visible disturbance will not be noticeably different from the prepared photo simulations.

Comment:

The proposed 300 foot clear cut along State Route 66 should be incorporated into the visual impacts section.

Response:

An extensive vegetative buffer between NYS Route 66 and the site will be maintained throughout the life of the mine. The proposed vegetation removal along NYS Route 66 is at elevation 820-830' and the lowest portion of the proposed quarry excavation area is approximately 150' higher (at elevation 975-985'). As shown on Figure 6 on page 56, there will be more than 1000' of vegetative buffer between the edge of the vegetation

removal area and the excavation area and more than 900' between the vegetation removal area and the initial processing area.

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

As shown on the maps included in Appendix H of the DEIS and Figure 6 in the FEIS, the amount of vegetation that will be removed within the clear cut line along NYS Route 66 will be minimal and will be focused mainly around cutting back tall vegetation along the low area just north of the access road for improved site distance. Potential views of the quarry will not change as a result of this clearing.

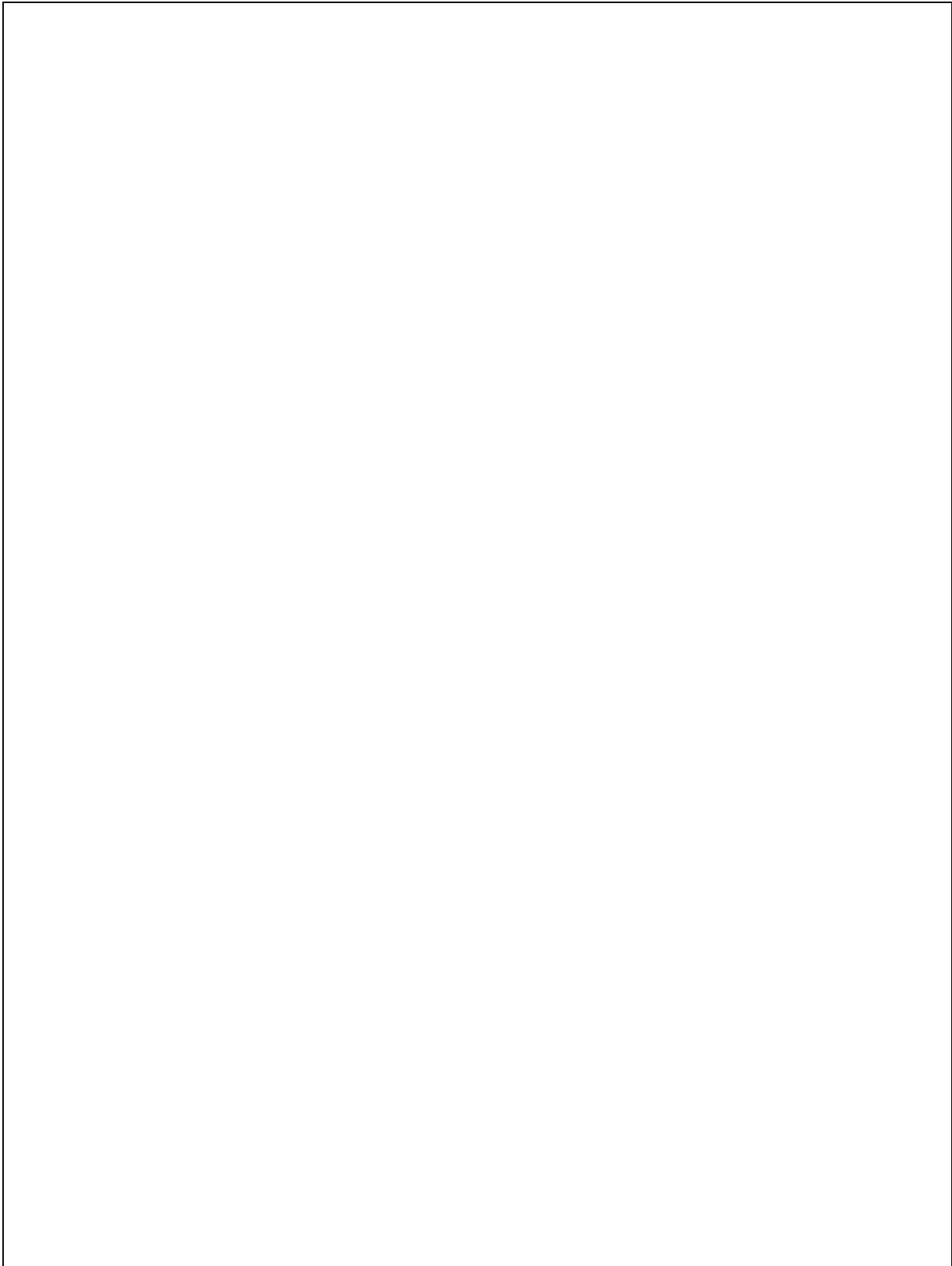


Figure 6. VEGETATION CLEARING FOR SIGHT DISTANCE IMPROVEMENT

Comment:

The visual analysis does not include any line of sight figures as required by the final scope for the DEIS.

Comment:

The visual impact study does not contain any line of sight cross sections, nor does it address the attendant impacts such as truck traffic and dust.

Response:

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

The NYSDEC Program Policy: Assessing and Mitigating Visual Impacts recommends using either graphic viewshed and line-of-sight profile analysis, or more sophisticated visual simulations and digital viewshed analysis, as needed. TS&G opted for the more sophisticated visual simulations and digital viewshed analysis over the simpler line of sight cross-sections to determine the potential for impact.

Comment:

The visual analysis conclusions are not adequately supported in the DEIS.

Response:

The Nassau Quarry Visual Study was prepared by a licensed landscape architect in full accordance with the New York State Program Policy: Assessing and Mitigating Visual Impacts.

The impact assessment was performed using two scenarios: end of phase 1 and full buildout. The full buildout scenario was identified as the worst-case scenario and is the scenario that the conclusions in the final impact assessment were based on. Impacts during operation of the quarry prior to the full buildout scenario will be less than the full buildout scenario.

Qualitative and quantitative analyses were performed to determine the potential for impact.

Quantitative Analysis. A quantitative analysis based on the viewshed maps, field survey, 3D Terrain Modeling, and Photo Simulations was used to measure potential impacts

specific to each receptor location provides specific information concerning the magnitude of project impacts on each viewing location.

Qualitative Analysis. A qualitative analysis based on the viewshed maps, field survey, 3D Terrain Modeling, and Photo Simulations was performed to determine potential impacts at receptor locations.

The following conclusions are drawn from evaluation of the composite results of the analyses.

- None of the viewing locations would be adversely visually impacted by the proposed project. Furthermore, the visual character of the study area will not be visually impacted as a result of this project.
- Of the viewing locations, with partial views of excavation, none of the locations would be significantly or adversely impacted by the altered views since no horizon line will be permanently altered, the visual exposure of the proposed excavation will be temporary and can be successfully mitigated by proposed reclamation.
- The effect of the excavation on the visible pattern is generally consistent with the character of the surrounding landscape in that the excavation will not significantly change the visible scale or character of the existing excavation area or surrounding landscape by permanently disrupting any critical visible horizon line.
- Taking into consideration the limited quantitative exposure of the proposed project, the implementation of proposed mitigation will diminish or completely block any qualitative discrepancies and successfully mitigate any visual impact of the proposed project.

Comment:

Viewshed maps are not up to date as they do not contain all current homes.

Comment:

CLA-1 and CLA-2 Viewshed Maps need more study points to determine the potential for views for accuracy.

Comment:

The view shed maps should be updated to include homes that are not currently on the maps, and the view shed maps should have more study points (specifically, along the western perimeter and more along the northern portion of the eastern perimeter) to ensure that the potential for views is accurate.

Response:

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

All public roads, Village and Hamlet areas, and specific homes potentially historically eligible were extensively inventoried during the field surveillance and photo assessment. Specific attention was given to areas where potential views were determined to exist from the viewshed map whether homes were located on the map or not. The extent of views along the public corridors in these areas is shown in the photos taken in the study. See visual receptor table and photo assessment. In addition, photo simulations were prepared at locations representative of worst case scenarios. See photo simulation exhibits A-D. While certain views may be additionally present on private property, the scope of the analysis is to determine the overall impact to the public.

Comment:

The proposed measures to mitigate the visual impacts are inadequate: each of the aspects of the analysis should be done on a phase by phase basis for each of the mine's phases, as well as for the post-mining era (every 10 years for 50 years following closure).

Comment:

The DEIS's reliance on visibility as the prime analysis factor fails to adequately weigh the importance of context. The knowledge of the presence of an industrial facility in a rural residential setting, coupled with occasional and in some cases long-term views, creates a discordant impression in the viewer's mind. The DEIS's analysis does not adequately account for this.

Comment:

The social and cultural perception by others of the Brainard area will be impacted since the quarry site can be seen from the hamlet of Brainard.

Response:

A licensed landscape architect prepared the Nassau Quarry Visual Study in full accordance with the New York State Program Policy: Assessing and Mitigating Visual Impacts.

The impact assessment was performed using two scenarios: end of phase 1 and full buildout. The full buildout scenario was identified as the worst-case scenario and is the

scenario that the final impact assessment was based on. Impacts during operation of the quarry prior to the full buildout scenario will be less than the full buildout scenario. Performing additional modeling for all of the intermediate phases is not merited for a project where the visual impacts have been shown to not be an issue under the worst-case scenario.

The following portion of this response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

While the hamlet area of Brainard is over 5 miles away from the quarry site and outside the standard radius for visual study, East Nassau was inventoried at the 5 mile radius and found to CLA SITE 3 of 5 have no views to the quarry site due to topography. Therefore, due to distance, topography, and orientation of the site from Brainard, the Hamlet of Brainard will not be visually impacted by the quarry site.

The following conclusions are taken directly from the Nassau Quarry Visual Study and included as Appendix J of the DEIS:

- None of the viewing locations would be adversely visually impacted by the proposed project. Furthermore, the visual character of the study area will not be visually impacted as a result of this project.
- Of the viewing locations, with partial views of excavation, none of the locations would be significantly or adversely impacted by the altered views since no horizon line will be permanently altered, the visual exposure of the proposed excavation will be temporary and can be successfully mitigated by proposed reclamation.
- The effect of the excavation on the visible pattern is generally consistent with the character of the surrounding landscape in that the excavation will not significantly change the visible scale or character of the existing excavation area or surrounding landscape by permanently disrupting any critical visible horizon line.
- Taking into consideration the limited quantitative exposure of the proposed project, the implementation of proposed mitigation will diminish or completely block any qualitative discrepancies and successfully mitigate any visual impact of the proposed project.

Comment:

The following properties should have been considered in section 4.2.2.1 of the DEIS: 7517 State Route 66; 505 Totem Lodge Road; and anywhere along County Route 23.

Comment:

The computerized photo simulations should be conducted again and should include views from 7515 State Route 66, 505 Totem Lodge Road, and the scenic overlook on South Road.

Response:

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

County Route 23 (referred to in the study as South Road) was inventoried and found to have minimal views of the project area due to the orientation of the excavation area. Portions of the project, visible from Route 23, is expected to be limited only to tree removal, see photos 22-24. The public travel corridors along Route 66 and Totem Lodge Road were evaluated extensively. While the viewshed map revealed that overlook areas along portions of Totem Lodge Road and Route 66 would potentially have views of at least some portions of the proposed project, the extent of views along the public corridors in these areas are shown in the photos taken in the study. See visual receptor table, photo assessment, and photo simulation exhibits.

Comment:

The statement in the DEIS that the quarry is well screened is inaccurate if the location from which a person is looking is on Gardner Hill Road, South Road, or many other spots in the Town and surrounding towns.

Comment:

Additional visual impact studies should be required.

Comment:

The effects of a deep hard rock mine in our rural community will have permanent effects upon the local viewshed. A complete study of the visual resources and the potential impacts should be conducted.

Response:

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

Community character. Contrary to the last comment above, the impact assessment in the Visual Study included a quantitative and qualitative analysis of the Nassau Quarry, which included the following criteria:

1. Duration and circumstance of view;
2. Distance of view;
3. Percent visible;
4. Visual character;
5. Short term and long term views.

Adequacy of Visual Study. A licensed landscape architect prepared the Nassau Quarry Visual Study in full accordance with the New York State Program Policy: Assessing and Mitigating Visual Impacts.

The impact assessment was performed using two scenarios: end of phase 1 and full buildout. The full buildout scenario was identified as the worst-case scenario and is the scenario that the final impact assessment was based on. Impacts during operation of the quarry prior to the full buildout scenario will be less than the full buildout scenario. Performing additional modeling for all of the intermediate phases is not merited for a project where the visual impacts have been shown to not be an issue under the worst-case scenario.

Viewshed Maps. The viewshed maps were developed using available USGS quads to analyze potential for impact to scenic and aesthetic resources as outlined in the NYSDEC Program Policy: Assessing and Mitigating Visual Impacts. Once the viewshed map was developed, public views from specific places (including hamlet areas and homes potentially historically eligible), which could be potentially visually impacted by the Nassau Quarry, were identified by field reconnaissance. An example of a new house that was included in the Visual Study is photo 19, which is a house that is still under construction.

Evaluation of the vantage points in the study area revealed that 9 receptors would have views limited to tree removal only and 22 receptors will have some view of excavation.

Impact Assessment. The following conclusions are taken directly from the Nassau Quarry Visual Study and included as Appendix J of the DEIS:

- None of the viewing locations would be adversely visually impacted by the proposed project. Furthermore, the visual character of the study area will not be visually impacted as a result of this project.
- Of the viewing locations, with partial views of excavation, none of

the locations would be significantly or adversely impacted by the altered views since no horizon line will be permanently altered, the visual exposure of the proposed excavation will be temporary and can be successfully mitigated by proposed reclamation.

- The effect of the excavation on the visible pattern is generally consistent with the character of the surrounding landscape in that the excavation will not significantly change the visible scale or character of the existing excavation area or surrounding landscape by permanently disrupting any critical visible horizon line.
- Taking into consideration the limited quantitative exposure of the proposed project, the implementation of proposed mitigation will diminish or completely block any qualitative discrepancies and successfully mitigate any visual impact of the proposed project.

Comment:

Alternative visual impact mitigation measures that avoid the banding effect created by bench reclamation should be analyzed and addressed in the DEIS.

Response:

The following response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

Banding as the result of bench reclamation is not an issue for the following reasons:

1. Lack of views into the quarry. As discussed previously and in the Visual Study included in the DEIS, views of the quarry will be very limited and most of the views will be of tree removal.
2. Modeling. The photo simulations that were done as part of the Visual Study used a wire-frame model of the quarry to determine potential for impact. The quarry benches were included in the wire-frame model and were taken into consideration during the potential impact analysis.
3. Phasing. The phase plan was designed to minimize views into the quarry during operation. A thorough discussion of the phase plan with maps was included in the Mined Land-Use Plan.
4. Vegetation. As discussed in the Mined Land-Use Plan and DEIS

text, the upper benches will be planted with a mix of native tree species, which will screen the faces behind them.

5. Concurrent Reclamation. As discussed in the DEIS text, concurrent reclamation will be performed during all six (6) mine phases and concurrent reclamation of the upper benches will begin during phase 1. Early reclamation of the upper benches will allow for substantial vegetative growth prior to the final mining phase. The final mining phase is the phase that the Visual Study identifies as the phase with a higher potential for views of the upper faces.

Comment:

The visual impact should be analyzed at the property line of the quarry.

Response:

Views of the quarry from the property line will be obscured by at least 200' of wooded land and vegetated perimeter berms from the north, east and south. Views of the quarry from west at the property line will be obscured by over 600' of wooded land. The extent of the wooded setbacks around the Nassau Quarry site are shown on Figure 5 on page 11 of this document.

The following portion of this response is from the Response to Comments letter report prepared by CLA Site, Landscape Architecture, Engineering and Planning, PC (CLA Site), which is included as Appendix K of this document.

A substantial vegetative buffer area will be maintained around the perimeter of the quarry. In addition perimeter vegetative berms ranging in height between 10 and 30 feet will be constructed prior to each phase of mining and will substantially mitigate views into the quarry. Vegetation thinning through the buffer area may be evident along portions of the property line, however, due to the vegetated berms, orientation, juxtaposition, and phasing of the excavation areas within the property itself, views of excavation at the property line will be limited.

4.2.2.2 Historic and Archaeological Resources

Comment:

The Town Historian should be involved in the decision making process regarding the proposed mine.

Response:

The Town of Nassau, including the Town Historian and its other officers, was an involved agency in the SEQR process of this application. Moreover, the Town of Nassau has actively participated in this SEQR process.

Comment:

The DEIS does not discuss the exploration of feasible and prudent alternatives or planning to avoid or mitigate the adverse impacts that the proposed mine and consequent truck traffic will have on the above-listed five eligible properties.

Response:

A thorough and complete environmental impact assessment, including numerous alternatives, was performed in accordance with the approved Scoping Document and to the satisfaction of the Office of Parks, Recreation and Historic Preservation.

The A.E. Cole Farmstead Site is an identified site (A08306.000078) located within the project property. A 50' setback from the agricultural components of the A.E. Cole Farmstead Site will be maintained and excluded from the Life of Mine, as recommended by the OPRHP in their May 11, 2006 comment letter, a copy of which is included in Appendix D of this FEIS.

Prudent alternatives were considered with the Town of Nassau Mining Committee. Significant changes including alternative footprint and increased setbacks were arrived at in conjunction with community and mining committee input.

Comment:

With respect to eligible historic properties, the visual impact, the impact from blasting, the impact from dust particulate, and the noise impact were not addressed by the DEIS.

Comment:

Historic view sheds in the area of the mine have not been adequately reviewed.

Comment:

The DEIS does not address the impact (visual, and that from blasting and truck and machinery emissions) on a large number of historic structures within a 2-mile impact zone, including Hoags Tavern in Hoags Corners, the Dunham Store on State Route 43 in West Stephentown, the entire series of Tiff Houses in the Dunham Hollow area, and the

Tifft Cemetery across the road from the proposed mine site.

Comment:

The DEIS does not address how the proposed mine will prevent historic structures' foundations from being damaged by vibrations from blasting.

Response:

Potential Visual Impacts. In addition to documenting all historic resources within and adjacent to the site, TS&G exceeded the OPRHP requirement and identified potentially historic structures within the potential viewshed in a two-mile radius for the Visual Analysis. Hoags Tavern and Hoags Corners Road were considered as part of this Visual Impact assessment. Please refer to table 1 and photo 27 in the Visual Analysis.

While the other referenced sites are located outside of the area identified as having a potential for visual impact, all of the applicable roads were investigated as part of the Visual Analysis.

CLA Site, Landscape Architecture, Engineering and Planning P.C. (CLA Site) performed a visual analysis for the Nassau Quarry and determined that none of the potential viewing locations will be adversely visually impacted by the proposed project. CLA Site also determined that the visual character of the study area would not be visually impacted as a result of the Nassau Quarry. The proposed mitigation measures, including increased vegetated setbacks and concurrent reclamation, effectively avoid and eliminate the potential visual impacts of the Nassau Quarry.

Potential Impacts From Blasting. A blasting impact assessment was performed for the closest residences around the site. The assessment determined: "Implementation of the proposed mitigation measures and adherence to the blasting BMP will insure that all blasts will be within the USBM standards for ground vibration and air overpressure and there should be no significant impacts due to flyrock. The potential for blasting will be mitigated so as to be insignificant." No damage will occur to homes if the ground vibration levels at the closest surrounding structures are kept within the USBM standards.

All of the sites referenced in this comment are located much further away from the site than the closest residences that were used for assessing potential blasting impacts. Therefore, they will not be significantly impacted.

Potential Air Quality Impacts. All of the on and off-road equipment used at the Nassau Quarry will be in full compliance with all State and Federal air quality regulations. An air permit application has been prepared and submitted and a Fugitive Dust Control Plan prepared. As described in the Fugitive Dust Control Plan included in Appendix L and outlined in previous comments, dust will be controlled at the Nassau Quarry using numerous mitigation measures.

Comment:

The DEIS does not adequately support its conclusion that there will be no impact on historic structures.

Comment:

The DEIS section 4.2.2.2 related to Historic Resources ignored relevant data.

Response:

The comments failed to identify which data was claimed to have been ignored or to identify an impact on historic structures which is not addressed by the DEIS. Accordingly, Troy Sand cannot address these comments in any greater detail other than to refer to the information contained in the and DEIS and the letter from OPRHP with which Troy Sand not only complied, but also went above and beyond the minimum requirements in order to ensure that any potential impacts to such historic structures would be avoided or eliminated.

4.2.2.3 Noise Level

Comment:

TS&G does not have a right of use. Accordingly, noise impact assessment and abatement planning should have been done at the boundaries of the mine property. Surrounding property should not be used as a buffer zone.

Comment:

Noise level and noise mitigation methods planned in the DEIS do not address the noise at the boundaries of the mine property, but instead are designed to mitigate the noise level at the designated receptors, all over 1,600 feet away.

Comment:

The combined noise levels at the boundaries of the mine property will likely exceed the current ambient sound level by well over the 6 dB required standard. The 200 foot setback is insufficient.

Response:

The term “right of use” is used in the NYSDEC Program Policy: Assessing and Mitigating Noise Impacts to describe a situation where local zoning allows for a use without the need of a special use permit. If a project has “right of use” then no noise evaluation is necessary as long as best management practices (BMPs) are incorporated into the operation plans. Specifically, the Program Policy states:

Situations in Which No Noise Evaluation is Necessary

When certain criteria are satisfied, the need for undertaking a noise impact analysis at any level is eliminated. These criteria are as follows:

- a. The site is contained within an area in which local zoning provides for the intended use as a “right of use”. It does not apply to activities that are permissible only after an applicant is granted a special use permit by the local government; and
- b. The applicant’s operational plan incorporates appropriate best management practices (BMPs [see Section V.C. Mitigation - Best Management Practices])for noise control for all facets of the operation. Where activities may be undertaken as a “right of use”, it is presumed that noise has been addressed in establishing the zoning. Any residual noise that is present following BMP implementation should be considered an inherent component of the activity that has been found acceptable in consideration of the zoning designation of the site.

Since a permit is needed from the Town of Nassau, the “right of use” designation was never applied to this project and a noise evaluation was prepared and included as Appendix G of the DEIS.

The following portion of the response is from Bagdon Environmental’s Response to Comments on Noise Analysis, which is included as Appendix J of this document.

The Noise Impact Assessment was prepared following the guidelines in New York State Department of Environmental Conservation's Program Policy: *Assessing and Mitigating Noise Impacts*. These guidelines specify that receptor locations be chosen at occupied areas near the project site. Section V.B.b - *Receptor Locations* states, "Appropriate receptor locations may be either at the property line of the parcel on which the facility is located or at the location of use or inhabitation on adjacent property. The property line should be the point of reference when adjacent land use is proximal to the property line." In the case of the Nassau Quarry Site, inhabited areas are not on the property lines, so these locations were not selected as receptor locations.

Section V.B.C entitled *Thresholds for Significant Sound Pressure Level (SPL) Increase* states, “Increases from 3 - 6 dB may have potential for adverse noise impact only in cases where the most sensitive of receptors are present.” This implies that in locations where sensitive receptors are not present, even higher impact thresholds would be suitable. The Guidance does not specify what higher impact thresholds might apply to uninhabited areas. so analysis of these areas was not conducted.

A document published by the USEPA in 1974 entitled *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with and Adequate margin of Safety* continues to be the basis for most state and local noise regulations. This document was produced to meet requirements of the federal Noise Control Act of 1972 and was meant to provide guidance to state and local governments, but not to set national noise standards. The noise guidelines in this document are primarily directed at preventing noise levels that may impact normal human activities such as damaging hearing, disturbing sleep or impacting speech communication in indoor and outdoor environments. As a result, the document provides guidelines that pertain to areas generally inhabited by humans. In active agricultural areas, standards are provided to protect against possible hearing loss. Thus, a level 70 dB Leq (24 hour average) is referenced. The document does not attempt to define a noise threshold for other unpopulated areas and states, "at this time it is not possible to identify an appropriate level to prevent activity interference and annoyance [in these areas]".

Since both state and federal guidelines focus on noise impacts in inhabited areas, these were the areas selected for analysis in the Nassau Quarry Noise Study.

Comment:

The DEIS did not address the potential of the method of mining creating an "amphitheater" or "echo" effect as mining progresses.

Response:

The following portion of the response is from Bagdon Environmental's Response to Comments on Noise Analysis, which is included as Appendix J of this document.

The amphitheater effect or canyon effect are terms commonly used to describe a phenomenon which can occur in urban environments causing street sounds to be reflected upward between tall buildings. The planar surfaces of tall buildings on either side of the street act as reflectors of the sound waves reflecting the waves back and forth and upward, with little attenuation resulting in sounds from the street being heard clearly at upper levels of the buildings.

This type of effect will not occur at Nassau Quarry due to the absence of uniform, planar surfaces directly opposite of each other and in close proximity to one another.

Perpendicular flat walls can reflect sound of a noise source back in the

direction of the source. This can potentially increase sound levels in the opposite direction if the reflected sound is added to the direct sound. In ideal circumstances, where the source and receiver are on a single plane perpendicular to the flat surface and the source is very close to the flat plane, the maximum amount of this effect is 3 dB (see *Handbook of Acoustical Measurements and Noise Control*, Third Edition, Cyril M. Harris, Figure 9.9, 1988). With complex sound sources, some frequencies will actually cancel due to phase reversal while others are reinforced, so the total effect is very difficult to predict. Since the quarry wall is rough and craggy, and not perpendicular to the plane of the source and receiver, this effect will be very much reduced, and was not judged to be significant enough to include in the noise analysis.

The potential for reflection, or echo, from the hillside to the west of the site is also insignificant for the following reasons:

1. Proximity of Noise Source to Surface. The closest surface to the west of the site is the hill to the west of NYS Route 66 which is over 1000' away. As stated in the Bagdon response above, in ideal circumstances a noise source needs to be very close (emphasis added) to a surface.
2. Uneven Surface. The vegetated hill side is very uneven and would provide a very poor reflective surface. As stated in the Bagdon response above, a flat surface is needed to effectively reflect sound.
3. Orientation of Sources and Surface. The east side of the western hill slopes upward and away from the site. As stated in the Bagdon response above, the source and receiver should be on the same plane perpendicular to the flat (reflection) surface. Any noise from the site that might be reflected would be reflected upward due to the orientation of the hill side.

Comment:

The DEIS did not include an identification of any impulse or impact type noises inherent in the operation of a mine, including loading rock into dump trucks and loading of material into crushing processors.

Comment:

Noise analysis must be done using special methodologies, not the LEQ, L90, or L10.

Response:

The following response is from Bagdon Environmental's Response to Comments on Noise Analysis, which is included as Appendix J of this document.

The equipment noise that was monitored for this study included a typical amount of impact noise that would be expected from operation of the mine and was thus accounted for in the analysis. For instance, the monitoring of the processing plant included the impact noise of rocks being dumped into the crusher. A variety of impact noises occur in the operation of mining equipment, and do not generally stand out significantly from the background equipment noise.

Noise impact analyses are commonly performed utilizing time-weighted average parameters such as Leq, L10 and L90. USEPA (1974) states, "In order to describe the effects of environmental noise in a simple, uniform and appropriate way, the best descriptors are the long-term equivalent A-weighted sound level (Leq) and a variation with a nighttime weighting, the day-night sound level (Ldn)." Since the mine will not operate at night, Ldn is not an appropriate value to use. Therefore Leq was chosen for the analysis.

Short duration sounds, which are measured by the parameters Lmax and Lpeak, are always higher than the time-weighted average level. Standards and guidelines for Lpeak levels are generally focused on preventing hearing loss. The peak off-site levels expected from the Nassau Quarry will be nowhere near the levels that could potentially cause hearing loss⁸.

Other than for protection against hearing loss, it is impractical to attempt to regulate Lmax and Lpeak levels since so many normal activities produce very high Lmax and Lpeak levels. For instance, slamming a car door or hammering nails can produce very high Lmax and Lpeak levels, which could exceed any reasonable threshold. Regulating these levels could unduly restrict normal activities on all properties.

Comment:

The DEIS did not document or address noises such as distinctive pattern pre-blast warning sirens, blasting with sequential techniques, and distinctive pattern post-warning sirens.

Response:

There will be no noise impact from impulsive noises related to blasting for the following reasons:

⁸ Approximately 100 noise events per day for ten years at a level of 125 dB are required to cause some permanent hearing loss (USEPA, 1974; page 25).

1. Infrequent Nature of the Noise. While blasting will occur as often as needed to meet market demand, blasting will likely only occur approximately once or twice a month for production shots and once or twice a week for development shots, impulsive noises related to blasting such as warning sirens and sequential blasting will only occur infrequently.
2. Remote Location. The site is remotely located with the nearest residence approximately 1300' from the closest portion of the excavation area.
3. Limited Blasting Hours. Blasting will be done between 10 a.m. and 5 p.m. Monday through Friday. Blasting will not occur on New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving and Christmas Day. These limited hours of blasting are proposed as an additional mitigation measure because blasting during the middle of the day and at similar times of the day reduces the human response to blasting.

Comment:

The noise of operating the Grizzly King Jaw Crusher is not adequately represented by the estimated noise reported in the Appendix G noise analysis.

Comment:

Make and model of the crusher is indicated as "not available" despite the scope's requirement that equipment sound levels be analyzed.

Response:

The following response is from Bagdon Environmental's Response to Comments on Noise Analysis, which is included as Appendix J of this document.

As stated in the Noise Impact Assessment, the crushing plant sound levels used in the impact assessment were from actual TS&G operating equipment measurements and were not estimated. This equipment is similar to the equipment that would be operating at the Nassau Quarry.

Comment:

The DEIS does not address how the auditory impacts of the processing plant will be minimized prior to moving the processing plant inside the quarry.

Response:

The following response is from Bagdon Environmental's Response to Comments on

Noise Analysis, which is included as Appendix J of this document.

The potential noise impacts from the processing plant were determined with the processing plant outside and inside of the quarry. Processing plant sound levels from both locations were discussed and the sound levels were presented on Tables 21, 24, 26, 28 and 30 in the DEIS.

The Noise Impact Analysis determined that with the proposed mitigation measures in place, the noise impacts at all receptor locations are reduced to acceptable levels.

Comment:

Noise of proposed mine will have a negative impact on the area, and property values will decline from the increased noise.

Response:

The following response is from Bagdon Environmental's Response to Comments on Noise Analysis, which is included as Appendix J of this document. Additional discussion regarding community character and property values is included in Section 9.2.

The noise assessment was made following the guidelines in New York State Department of Environmental Conservation's Program Policy: *Assessing and Mitigating Noise Impacts*. The Noise Impact Assessment concluded that the level of the increase in ambient levels was within the range considered to be acceptable under these guidelines.

Comment:

Conclusion of DEIS that there will be no noise impact is not adequately supported.

Comment:

Noise and commotion of proposed mine could affect birds and water fowl.

Comment:

The assertion that TS&G made on their EAF that the project will not produce operating noise exceeding the local ambient noise levels is not supported by the Noise Impact Assessment that was submitted as part of the DEIS.

Response:

The following response is from Bagdon Environmental's Response to Comments on Noise Analysis, which is included as Appendix J of this document.

The Noise Impact Assessment does not assert that the operating mine will not increase ambient noise levels. Any new activity in an area whether industrial, commercial, or residential will increase ambient noise levels. The Noise Impact Assessment did conclude that the level of increase in ambient levels was within the range considered to be acceptable under the NYSDEC Program Policy Memo: *Assessing and Mitigating Noise Impacts*.

Comment:

The DEIS does not address any alternatives to backup alarms, nor does it adequately address the option of mitigating noise by limiting the hours or berming.

Response:

The following response is from Bagdon Environmental's Response to Comments on Noise Analysis, which is included as Appendix J of this document.

Backup Alarms. All noise sources from the operation, including backup alarms, were factored into the Noise Impact Assessment. The sound levels of each proposed piece of mobile equipment, including the backup alarms, were obtained during mobile equipment sound level monitoring.

While radar activated backup alarms are usually only considered when the Noise Impact Assessment determines that there is a potential for impact, TS&G is proposing to voluntarily utilize them at the Nassau Quarry as part of their policy of best management practices.

Hours of Operation. While many quarries in New York State have no restrictions on hours of operation, TS&G has voluntarily agreed to limit hours of operation from 6 a.m. to 7 p.m. Monday through Friday and Saturday 7 a.m. to 5 p.m. with no operations on Sundays or New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving and Christmas Day. These hours of operation are proposed as a mitigation measure.

On average, the proposed quarry will begin daily equipment inspection and maintenance and warming up equipment between 6 a.m. and 7 a.m. Monday through Saturday, loading trucks and operating the processing plant at 7 a.m. and operate until 3:30 p.m. Monday through Saturday. The mine will operate in the additional hours when construction projects

require material be delivered by 7 a.m.⁹ or during periods of peak market demand.

Berms. The use of berms as a noise impact mitigation measure was considered and is a proposed mitigation measure at the Nassau Quarry. A discussion regarding the size, location and construction of the berms was included in Section 4.2.2.3.2 of the DEIS.

4.2.2.4 Blasting

Comment:

There are residences, roads, and school bus routes nearby that might be impacted by a flyrock incident.

Response:

Causes of Flyrock. Flyrock is the result of improper blast design and implementation. Many of the same causes of excessive overpressure levels can also lead to the potential for flyrock. *The Blasters' Handbook* (1998) specifically identifies the causes of flyrock as:

1. Excessive amounts of explosives;
2. Explosives loaded into voids, crevices, mud seams, or other incompetent material;
3. Inadequate amount of or ineffective stemming;
4. Shots which are over- or underconfined;
5. Poor delay timing patterns or delay detonators firing out of sequence;
6. Spacing and burden exceeding the depth of the borehole.

Flyrock Mitigation. The primary means of controlling flyrock is through proper blast design and delay timing. Any pattern which over or underconfines the explosives or one with insufficient stemming or burden can cause material to be thrown up in the air rather than allowing any horizontal movement.

The following mitigation measures to prevent flyrock are proposed at the Nassau Quarry:

1. The Overview of Blasting and Best Management Practices Plan, included as Appendix I of the DEIS will be implemented at the Nassau Quarry.

⁹ This is included as a requirement of some NYSDOT and private jobs. Many job sites have insufficient room to store material the night before.

2. The blast area and the face to be shot will be carefully measured prior to laying out the shot. This will include the use of a blasters' rod, face profiling, and whatever other sophisticated tools are needed.
3. The face to be shot will be carefully inspected for structural abnormalities (such as voids or large cracks) prior to the blast design.
4. Proper spacing between drillholes will be factored into the blast design and care will be taken to ensure that sufficient burden/confinement exists for each hole.
5. A licensed blaster will lay out all shots in accordance with the blast design. Spacing between drill holes will be measured and monitored.
6. Drill holes will be carefully aligned and drilled to specified depths as per the blast design. The driller will log each hole and will document the presence of water, mud seams, fractures and other important factors. The blaster will review, in detail, the drilling results in consultation with the driller and the blast design will be adjusted, if necessary.
7. All drill holes will be measured to insure that they have been drilled to the proper depths. Once all holes have been measured, and the blast design verified, the loading of explosives will begin.
8. Care will be taken to ensure that the holes are properly and adequately stemmed with crushed stone. Drill holes will not be stemmed with drill cuttings. The selection of proper stemming material is a key factor in producing proper fragmentation.

Comment:

The DEIS does not address what independent entity will monitor blasting to ensure that it is done safely and in compliance with regulations.

Response:

An independent contractor that is insured and trained in the use of seismographs will be used by TS&G to monitor all blasts at the Nassau Quarry to ensure that ground vibration and air overpressure is in compliance with the USBM recommendations. Blast monitoring records for every blast will be maintained by TS&G and will be made available to NYSDEC upon their request.

Comment:

The only limit on blasting is "market demand," which is insufficient.

Response:

As stated in the Overview of Blasting and Best Management Practices, included as Appendix I of the DEIS, blasting will be done between 10 a.m. and 5 p.m. Monday through Friday. Blasting will not occur on New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving and Christmas Day.

These limited hours of blasting are proposed as an additional mitigation measure because blasting during the middle of the day and at similar times of the day reduces the human response to blasting.

Blasting at the Nassau Quarry will be done as many times a year as is necessary to meet market demand. This will typically be up to twice per week during development and about twice per month during typical production.

The number of blasts a year will vary based on a variety of factors including but not limited to:

1. Number of development shots vs. number of production shots,
2. Size of working face and
3. Market demand.

Blasting limits are typically employed as a mitigation measure at locations where there is a large number of nearby receptors and/or sensitive receptors such as a hospital.

Placing additional blasting limits at the Nassau Quarry is unnecessary due to its remote location, low number of receptors, significant distance to the closest receptor, lack of nearby sensitive receptors and the proposed limited blasting hours.

Comment:

The DEIS does not adequately address the impacts of blasting on nearby foundations.

Comment:

Testing blasts conducted in Pennsylvania does not accurately reflect the effect of blasting in the area of the Town of Nassau, below which lie fault lines.

Response:

Potential Ground Vibration Impacts On Nearby Foundations. At the forefront of blasting research in the United States, the U.S. Bureau of Mines (now part of the U.S. Geological Survey) contributed much to the understanding of blasting impacts. After more than 50 years of testing and blasting research by the U.S. Bureau of Mines, numerous

investigative groups and individual seismologists, the U.S. Bureau of Mines developed ground vibration recommendations. These recommendations are widely used by regulatory agencies nation-wide because they were developed to preclude even minimal damage to the weakest building materials (drywall and plaster) in residential structures.

As stated in the DEIS, TS&G proposes to adhere to the USBM ground vibration recommendations which were developed to protect the weakest building materials. Ground vibrations adhering to the USBM recommendations should not impact foundations, which can withstand much higher ground vibrations.

Trained professionals will conduct blasting following the guidelines that were outlined in the Overview of Blasting and Best Management Practices, included as Appendix I of the DEIS. Every blast will be monitored to assure that ground vibration is well below the U.S. Bureau of Mine guidelines. Hole spacing and the pounds per delay will be adjusted, as needed, to keep ground vibration within the U.S. Bureau of Mine guidelines for all residential structures.

Ground Vibration Calculations. The ground vibration calculations are based upon site-specific geology, known geologic principles, blast results from the Hankle Lumber project and studies prepared for the United States Bureau of Mines.

As stated in the Overview of Blasting and Best Management Practices, included as Appendix I of the DEIS, from 1997 to 2001, TS&G conducted a series of 39 blasts in the Rensselaer Graywacke as part of the widening of the Hankle Lumber mill yard on the east side of NYS Route 66. The ground vibration and air overpressure from these blasts was monitored, typically at four locations close to the blast site. The data from these blasts were used to help establish a correlation between predicted and actual peak particle velocity from blasting in the Rensselaer Graywacke.

Comment:

The DEIS does not address how homes that are not yet built will be affected by ground vibrations from the mine.

Response:

As stated in the DEIS, TS&G proposes to adhere to the USBM ground vibration recommendations which were developed to protect the weakest building materials. Blasting at the Nassau Quarry will be designed to meet these guidelines at all existing and future structures around the quarry.

5.0 ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

No comments were received regarding unavoidable impacts.

6.0 ALTERNATIVES

6.1 ALTERNATIVE DESIGN AND TECHNOLOGIES

No comments were received regarding alternative designs and technologies.

6.2 ALTERNATIVE SITES UNDER APPLICANT'S CONTROL

No comments were received regarding alternative sites under applicant's control.

6.3 ALTERNATE CONSTRUCTION/OPERATION SCHEDULING

Comment:

Hours of Operation should be further limited, such as to 9am to 5pm weekdays, and no operation on weekends. Further, the DEIS is unclear as to whether "operation" includes secondary activities, such as truck maintenance.

Comment:

The hours of operation are not sufficiently defined, leaving a loophole for operating at any hour if the demand exists.

Response:

While many quarries in New York State have no restrictions on hours of operation, TS&G has voluntarily agreed to limit hours of operation from 6 a.m. to 7 p.m. Monday through Friday and Saturday 7 a.m. to 5 p.m. with no operations on Sundays or New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving and Christmas Day.

On average, the proposed quarry will begin daily equipment inspection and maintenance and warming up equipment between 6 a.m. and 7 a.m. Monday through Saturday, loading trucks and operating the processing plant at 7 a.m. and operate until 3:30 p.m. Monday

through Saturday. The mine will operate in the additional hours when construction projects require material be delivered by 7 a.m.¹⁰ or during periods of peak market demand.

Minor maintenance activities such as electrical work, as required by MSHA, may occur at the site outside of normal working hours. Major equipment work will occur at the West Sand Lake facility.

6.4 ALTERNATIVE LAND-USES

6.5 NO ACTION

Comment:

The DEIS did not include the "no action" alternative of a quarry and processing operation below the threshold levels specified in the Mined Land Reclamation Law. Another alternative not addressed in the DEIS that should have been was an operation in conformance with existing Town zoning regulations. An additional alternative to consider was residential development.

Response:

The DEIS reviewed several alternative scenarios in Section 6.0, including the "no action" alternative in Section 6.5. The DEIS analyzed potential impacts associated with no mining taking place on the Nassau site. This is commonly referred to as the "no build" alternative, and interprets "no action" as no construction or operation at all. The commenter states that the "no action" alternative should have included an analysis of mining on the site below the DEC-jurisdictional volume limitations. This theory is also known as the "as of right" alternative, rather than "no build". However, courts have found that "no action" under SEQRA means "no build" rather than "as of right", and the DEIS is compliant. See e.g., *Horn v. International Business Machines Corp.*, 110 AD2d 87, 493 NYS2d 184 (2d Dept. 1985), *leave to appeal denied*, 67 NY2d 602, 499 NYS2d 1027 (1986). The DEC SEQRA Handbook has provided that for private actions (such as the TS&G Nassau Quarry), an analysis of not undertaking the action satisfies the "no action" alternative.

¹⁰ This is included as a requirement of some NYSDOT and private jobs. Many job sites have insufficient room to store material the night before.

7.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Comment:

The DEIS does not fully address the fact that quarrying this mountain is not a sustainable use of land and resources.

Response:

The New York State Legislature has recognized the importance of mining in its establishment of the Mined Land Reclamation Law. As set forth in the Law,

The Legislature hereby declares that it is the policy of this state to foster and encourage the development of an economically sound and stable mining industry, and the orderly development of domestic mineral resources and reserves necessary to assure satisfaction of economic needs compatible with sound environmental practices. The legislature further declares it to be the policy of this state to provide for the management and planning for the use of these non-renewable natural resources and to provide, in conjunction with such mining operations, for reclamation of affected lands; to encourage productive use including but not restricted to the planting of forests, the planting of crops for harvest, the seeding of grass and legumes for grazing purposes, the protection and enhancement of wildlife and aquatic resources, the establishment of recreational, home, commercial and industrial sites; and to provide for the conservation, development, utilization, management and appropriate use of all the natural resources of such areas for compatible multiple purposes...

Thus, when the Nassau Quarry is implemented, a nonrenewable resource, stone for use as crushed stone aggregate, will be irreversibly and irretrievably committed. However, the demand for construction aggregates and other stone products has historically remained at a uniformly constant level. It is assumed the demand will remain at a similar, if not higher level in the future. If the materials within the project area are not utilized, construction aggregates of potentially inferior quality will be obtained from other, more distant and potentially less environmentally sound sites.

In conclusion, the Quarry will further the goals of the MLRL which already addresses the use of land and natural resources within the State.

8.0 GROWTH INDUCING ASPECTS

No comments were received regarding growth inducing aspects.

9.0 OTHER REGULATORY CONSIDERATIONS

9.1 RECORD OF COMPLIANCE

Comment:

Because TS&G has violated permit conditions in the past, DEC should require that a full-time environmental monitor be present to ensure that they are observing the permit conditions related to hours of operation and maximum production limits. In the alternative, other steps must be taken to ensure that TS&G complies with permit conditions.

Comment:

The State of New York has found TS&G in violation of permit conditions or in violation of New York State laws on five separate occasions, and the company has openly admitted to violating its mining permits.

Comment:

At its West Sand Lake facility, TS&G violated a prohibition on flyrock in 2002, generated air blasts in excess of maximum limits in 2002, and commenced construction of a hot asphalt plant without first obtaining necessary permits in 2001.

Comment:

The New York Attorney General fined TS&G at the request of the DEC and sixty-three citizen letter complaints, concerning issues ranging from health complaints to property damage.

Comment:

TS&G was found to be in violation of the following permit conditions: conducting 49 blasts in a year in which they were to be limited to 10; conducting 11 out-of-season blasts; blasting twice in excess of specified peak particle velocity; blasting once in excess of specified decibel limits.

Comment:

When TS&G applied for a renewal of their permit in 2003 at the West Sand Lake facility,

DEC treated the application as a new application, and modified the permit for three reasons: (1) continued noise blast vibration effect on wells and dust complaints by nearby residents; (2) material new information from studies of facility operations and impacts; and (3) non-compliance with the existing SAPA extended mining permit.

Comment:

The statement in the DEIS that TS&G only has violated permit conditions related to blasting is inaccurate.

Comment:

TS&G admits that that it violated permit conditions in that it blasted on 11 separate dates during months in which blasting was not permitted. This acknowledgment was negotiated down from the original action against TS&G that alleged 63 separate permit violations beginning in 1997.

Comment:

The DEIS does not report that TS&G acknowledged 11 significant violations.

Comment:

TS&G has an "extensive" list of violations and a "lousy" compliance record, including "willful" and "deliberate" violations.

Comment:

The compliance history of TS&G must be more thoroughly examined.

Comment:

TS&G has committed 63 permit violations.

Response:

At Section 9.1 of the DEIS, a discussion concerning the Department's Record of Compliance Enforcement Guidance Memorandum DEE-16 was presented. While it was noted that the Guidance Memorandum is expressly intended for the sole use and guidance of DEC personnel, it was used in the DEIS as reference for a discussion on the compliance history of TS&G with respect to the operation of its quarry in West Sand Lake, as identified in the DEIS scoping process. Further, Section 9.1 of the DEIS reviewed the operational history of TS&G's West Sand Lake facility from a compliance perspective, acknowledging and explaining the facts and circumstances which led to the execution of three consent orders by TS&G with the Department. Of these three consent orders, two were directed at blasting activities in conjunction with the quarry, and one was directed at the erection of hot mix asphalt batch plant equipment in the quarry area.

During the public comment period on the DEIS, certain comments were received concerning TS&G's record of compliance. Specifically, commenters alleged that the compliance record of TS&G and its related company, Bonded Concrete, Inc., constitute a pattern of non-compliance such that the Nassau Quarry permit should not be issued. These comments allege "five rulings" against TS&G and Bonded Concrete, Inc. in "recent years". Specifically, the commenters allege the following:

1. In 1993, TS&G failed to apply to renew the permit for its mine in Stephentown until after its permit expired. Appellate Division, Third Department in *Stephentown Concerned Citizens v. Herrick*, 223 AD2cd 862 (3rd Dept. 1996) in 1996. In *Stephentown*, the 3rd Department enjoined TS&G from further operation at its Stephentown facility until a new permit was issued.
2. A second violation occurred in 1994, when DEC issued a modified order of consent prohibiting TS&G from maintaining an unauthorized discharge pipe to dispose of its wastewater and requiring TS&G to build a "Department approved system of infiltration ponds."
3. A third violation, in 2000, was a court ordered consent decree against TS&G for 63 permit violations etc. that the applicant discussed in section 9.1. This is discussed on page 122 of the DEIS, from the point of view of TS&G.
4. A fourth violation of a DEC consent order, dated August 3, 2001, fining TS&G \$20,000.00 for starting construction on a hot batch asphalt plant without a permit. An order of consent, issued on August 3, 2001 fined TS&G and ordered it to dismantle the facility.
5. A fifth, and most recently documented violation was a DEC consent order from July 11, 2002. DEC fined TS&G for committing a blasting violation that both exceeded noise limits and propelled material onto the rear passenger side of a moving vehicle.

During this period of time, 1993 through the present, TS&G has been the permittee or operator of twenty (20) mines. The violations noted affect two (2) mines. Eighteen of the twenty mines operated by TS&G, or 90%, have been without violation. Further, TS&G has not engaged in intentional behavior to violate permit standards; rather, the violations arose out of misinterpretation of permit requirements at two sites. This is further discussed below.

The characterization of TS&G (including its related company, Bonded Concrete, Inc.), as a scofflaw is not accurate, and improperly characterized TS&G's business practices,

overall operational history and compliance record. Further, the comment fails to provide complete information on which to render an opinion concerning TS&G's compliance history. Section 9.1 of the DEIS provided a factual discussion concerning the compliance record at TS&G's West Sand Lake Quarry, as identified in the public scoping process. The following information supplements that discussion.

First, while the comment concerning TS&G's Stephentown mine cites to *Stephentown Concerned Citizens v. Herrick*, 223 AD2d 862 (3rd Dept. 1996), the commenter fails to state that the Department (which continued to review and process the MLRL Permit renewal application during the litigation) issued a MLRL Permit renewal within days of the court decision. The whole issue centered on whether DEC could grant SAPA status (State Administrative Procedures Act) to TS&G to continue operation of the Stephentown mine while its permit renewal application was being reviewed by the Department. In point of fact, the dispute raised by the "Stephentown Concerned Citizens" was not limited to the cited case. Rather, the litigation was continued by the "Stephentown Concerned Citizens" after the noted court decision. The litigation centered not on operational issues at the Stephentown facility, but on zoning issues concerning the nonconforming use status of the facility. The Appellate Division, Third Department later held that the facility had maintained its status as a nonconforming use and therefore was allowed to continue its operation. A copy of that court decision, cited as *Stephentown Concerned Citizens v. Herrick*, 246 AD2d 166 (3rd Dept. 1998), is attached to this FEIS as Appendix G. After the Department issued the MLRL Permit renewal, as discussed above, the "Stephentown Concerned Citizens" brought a legal challenge against both the Department and TS&G concerning that permit. Again, the Appellate Division, Third Department, in a third decision, upheld the MLRL Permit renewal, and the facility continues in operation to this date. A copy of the third Appellate Division decision, cited as *Stephentown Concerned Citizens v. Herrick*, 280 AD2d 801 (3rd Dept. 2001), is attached to this FEIS as Appendix G.

Second, concerning the West Sand Lake Quarry, while the comment asserts that the Consent Decree entered into in 2000 was "for 63 permit violations", the Consent Decree did not find 63 permit violations. To the contrary, and as discussed at Section 9.1 of the DEIS, although investigated at the time, no violation of peak particle velocity or air blast was found concerning blasting activities at the West Sand Lake Quarry. The Consent Decree found only that eleven (11) blasting events had occurred during the months of December, January, and February at the facility.

The factual background of this matter, as discussed in the DEIS, is important to consider. Prior to 1996, the consolidated material at the TS&G West Sand Lake facility was removed by mechanical means; that is, by means of hammering and ripping the rock. To improve the method of extraction, TS&G applied for an MLRL Permit modification to allow blasting as the method for removing rock at the West Sand Lake facility. In conjunction with that permit modification application, TS&G prepared an Environmental Impact Statement. Ultimately, the Department accepted the Environmental Impact Statement as complete, and issued the MLRL Permit modification to allow blasting activities. It is important to note that the text of the conditions attached to the MLRL

Permit modification allowing blasting activities at the West Sand Lake Quarry did not include an expressed limitation on the number of blasts which could be conducted on an annual basis, nor identify any months during which blasting was prohibited (see copy of Mined Land Reclamation Permit included as Appendix G). Rather, the MLRL Permit modification incorporated the Environmental Impact Statement prepared for the blasting modification, in which a projected number of blasts on an annual basis were presented. As TS&G began blasting activities at the West Sand Lake Quarry, an effort was made to find an appropriate blasting pattern to reduce impacts on surrounding properties to the maximum extent achievable. Toward that end, and specifically on March 19, 1997, TS&G advised the Department in writing that it was researching with experts the possibility of modifying the blast pattern to further reduce vibration levels, thereby reducing potential impacts upon surrounding properties. TS&G notified the Department that the new design would result in smaller blasts tonnages from each blast, which would therefore result in an increased number of blasts per year to achieve the same yearly production. This effort was undertaken to both achieve its required annual production while at the same time further reducing potential impacts on surrounding properties. TS&G's letter to the Department dated March 19, 1997 is included in this FEIS at Appendix G. At no time had TS&G interpreted the MLRL Permit to limit the number of blasts on an annual basis at the West Sand Lake facility. Moreover, no objection from the Department to the March 19, 1997 letter was ever received by TS&G. Accordingly, TS&G altered its blasting pattern in its effort to reduce impacts and complaints from neighboring properties. TS&G sent blast notices for all blasts to the Department between 24 to 48 hours before each blast, without comment from the Department.

However, notwithstanding this prior written notification, the Department, after receiving several complaints from neighboring property owners in 2000, interpreted the MLRL Permit as limiting the number of blasts at the TS&G West Sand Lake Quarry to a total of ten per year. Given this interpretation, and notwithstanding the prior written notification, the Department did commence an enforcement action against TS&G in 2000. Ultimately, TS&G entered into the Stipulation of Settlement and Consent Decree with New York State dated November 8, 2000, and agreed therein to specifically limit the blasts at its West Sand Lake facility to a total of ten per year, with which it has complied since that time. As noted above, the Consent Decree did not find any violation of peak particle velocity or air blast. In point of fact, the only violations found under the 2000 Consent Decree were:

Troy Sand acknowledges and admits that it has violated the permit conditions in that blasting occurred on eleven (11) separate dates during the prohibited months of December, January, and February.

The subject MLRL Permit did not have express general or special conditions pertaining to number of annual blasts or prohibited months for blasting activities. Rather, the Permit incorporated by reference the Environmental Impact Statement for the permit modification to allow blasting. The EIS assumed ten large blasts per year, and therefore indicated that blasting would not be required in the winter months. When the mode of operation changed to a greater number of smaller blasts, the winter months were needed

to maintain yearly capacity. TS&G believed that the prior notification and discussion with DEC approved this operational change. DEC later interpreted the Permit as prohibiting blasting during the months of December, January and February, and ultimately TS&G agreed to an express permit condition to that effect. Thus, rather than evidencing an intent to disregard applicable law or permit conditions, this event supplies evidence of TS&G's consideration of impacts of its quarry operations on surrounding properties. It is also evidence that TS&G does not ignore the Department with respect to its quarry operations, but rather seeks to coordinate and communicate with the Department to both achieve compliance with permit conditions and regulatory requirements as well as address any concerns raised by neighboring property owners. To characterize TS&G's operational history as in disregard of permit conditions and regulatory requirements, and in ignorance of impact upon neighboring properties, is a gross mischaracterization, and is wrong.

Third, while the comment asserts that a 2001 DEC Consent Order required TS&G to dismantle an asphalt plant at its West Sand Lake facility, that is not accurate. Prior to the Consent Order, TS&G had already filed with the Department its application for an Air Registration Certificate for the operation of the asphalt plant. Again, TS&G had communicated with DEC Region 4 staff that it sought to start erecting the batch equipment, but would not operate that equipment, and thus would not operate an air source, unless and until the Registration Certificate was issued. TS&G did begin to assemble some of the asphalt equipment, but TS&G did not operate any of the asphalt equipment at any time prior to the Consent Order. To be complete, the Consent Order required the asphalt equipment to be taken down unless an Air Registration Certificate was issued. In point of fact, the Department issued the Air Registration Certificate shortly after the Consent Order. A copy of the Air Registration Certificate is attached to this FEIS at Appendix G. There have been no compliance issues concerning the asphalt plant operation following issuance of the Registration Certificate.

When the full facts of these matters are reviewed, it becomes clear that the commenter is wrong in characterizing TS&G as continually ignoring the law and operating without regard to permit conditions. To state that TS&G engages in "deliberate and willful violations" is a gross mischaracterization. To the contrary, TS&G remains in close communication with the Department and its mining specialists concerning its facility operations, and the Department closely monitors those operations, including TS&G's blasting activities.

9.2 COMMUNITY CHARACTER AND PROPERTY VALUES

Comment:

The DEIS's statement that "mines are open space" is inaccurate; the statement is quoted from a former DEC director who was pro-mine. Mines should be characterized as intense industrial use, rather than as open space.

Comment:

The DEIS does not address the New York State Open Space Conservation Plan, adopted in 2002 and updated in 2005.

Response:

The Nassau Quarry is consistent with the New York State Open Space Conservation Plan in that the creation of the Quarry will provide more diverse habitats for wildlife and plant life. The Open Space Conservation Plan (at page 24) states “Open upland areas depend on disturbance of some kind to maintain their condition. Without disturbance, these areas will naturally become forests over time. The soil will become enriched with dead plant material, trees will invade and the distinct plant assemblage of the open area will be lost.” Moreover, the Plan (at page 25) also notes that “cliffs and caves are exposed rock formations. Cliffs are vertical exposures of resistant rock with little soil and support unique species of lichens and ferns, as well as provide habitat...” “Caves are either natural rock formations or abandoned mines. These areas are especially important for bats which are beneficial animals because they consume significant numbers of biting insects.”

Through its clearing and mining activities, Troy Sand will actually be introducing biodiversity into an area which is predominantly forested and therefore lacks the variety of plant life and wildlife which open uplands and cliffs will provide. The information contained within the DEIS is therefore consistent with the observations and planning recommendations of the New York State Open Conservation Plan.

As noted in the DEIS, the Nassau Quarry project will preserve open space in a variety of ways:

1. The Nassau Quarry, like other mines, will not be a permanent land-use and will be returned to grassland and wooded land through reclamation.
2. While rural sprawl will likely continue to expand in the Town of Nassau, no other development would occur on the Nassau Quarry property, nor would the land be subdivided.
3. TS&G will only mine 89 acres of the 214-acre parcel. Approximately 60% of the property will never be affected by mining.
4. Mining will occur in phases and concurrent reclamation will begin during the first phase of mining and continue throughout the life of the mine.

Comment:

Nearly 60% of the East Greenbush Central School District 2006–2007 budget will be funded by local property tax levies. DEC should consider the regional impact of this proposal as decreasing property values and decreasing growth in the Town of Nassau could impact taxpayers in the East Greenbush Central School District.

Comment:

Two of the reasons that property values in the Town of Nassau are lower than property values in surrounding areas are the repeated threat of industrial mining and the Dewey Loeffel site.

Comment:

Appraisers must consider externalities in determining property values. Blasting at a nearby mine is such an externality.

Comment:

Property values will decrease whenever there is a mining application pending or a nearby mine in operation.

Comment:

A reduction in property values from the operation of a nearby mine will adversely affect the funding of local emergency services.

Comment:

The mine will have substantial negative effects on property values in East Nassau.

Comment:

The scale of this project is too large for the community.

Comment:

Conclusion in § 9.2 that there will be no impact on transportation is not adequately supported throughout the rest of the DEIS.

Comment:

The community character of the Town of Nassau will be adversely affected by the proposed mine.

Comment:

Lands adjacent to the site will not be suitable for future residential development, which will result in a decrease in the values of those properties.

Comment:

Taxpayers will leave the area if the mine is approved.

Response:

Community Character. Community character is the distinguishing physical and social quality of a region, town, city, village, or hamlet. This character is shaped by natural, cultural, societal, and economic forces over time. Any development that affects the physical and/or social quality of a region has the potential to affect the community character.

Background. The proposed Nassau Quarry will be a small-medium sized quarry. The site is located in a rural area containing a mix of scattered residences and wooded areas. New York State Highway Route 66 runs along the western boundary of the project property and is the major north-south road in this area. The numerous proposed measures outlined below mitigate the potential impacts to the maximum extent practicable.

As shown on Figure 5 on page 11, large wooded areas will be left between the life of mine area and surrounding properties for the duration of the operation. On the project property the wooded setbacks from the processing and mining areas range from a minimum of 200 feet in the southern and northeastern area, more than 700 feet to the east, and more than 800 feet from NYS Route 66 to the west. The wooded areas are a mix of deciduous and coniferous trees.

Description and Effectiveness of Proposed Mitigation Measures. This site was chosen by TS&G, in part, because it is located in a rural area near its West Sand Lake Plant, has very few neighbors and can be readily screened from surrounding properties.

The mine plan was laid out to take into account the need to minimize all potential impacts. The proposed mitigation described in detail throughout the DEIS mitigates the potential impact to community character to the maximum extent practicable. These measures are summarized below:

1. Limited hours of operation: Many quarries in New York State have no restrictions on hours of operation. TS&G has voluntarily agreed to limit hours of operation to 6 a.m. to 7 p.m. Monday through Friday and Saturday 7 a.m. to 5 p.m.
2. Increased Setbacks: The New York State legislature gave sole authority to regulate mining, including setbacks, to NYSDEC. NYSDEC requires a setback of at least 25 feet from all property lines, rights-of-way and easements. As part of this application, TS&G has voluntarily agreed to increase the setbacks from all

adjacent properties as appropriate to contain impacts. These increased setbacks are shown on Figure 5 on page 11.

3. Green Space: Almost 60% of the project property will never be mined and will serve as a permanent vegetated buffer zone.
4. Protection of Surface Water: No sediment from mined areas will be allowed to drain offsite.
5. Noise Barriers: The majority of equipment operation will occur on the mine floor where it will be well screened by the mine faces, perimeter berms and thick vegetated buffer zones.
6. Perimeter berms: Perimeter berms for soil storage and noise, dust and visual mitigation will be graded with side slopes not to exceed one vertical on two horizontal and vegetated to grasses and legumes.
7. Paved Entrance Road: The entire length of the entrance road will be paved to mitigate dust and tracking of material. The paved access road will also mitigate potential erosion and sedimentation issues.
8. Truck entrance signs will be placed on NYS Route 66 if requested by the NYSDOT.
9. Directional mining will be employed to better screen the operating equipment and mined areas from surrounding properties.
10. Reclamation will occur concurrently with mining. This practice will keep to a minimum the amount of mined and unvegetated area.
11. A water truck equipped with spray nozzles or equivalent will wet down haul roads in regular use as often as needed to control fugitive dust.
12. All equipment will be kept in good working order with operating mufflers in good repair to help reduce noise levels.
13. No hazardous wastes or toxic chemicals will be stored or disposed of at the site
14. Fueling of equipment will be done by fuel truck equipped with an automatic shut off valve.
15. Fueling operations will be done with caution and attended at all times.
16. The fuel delivery lines and fuel tanks will be inspected each day the equipment is in operation and repairs made as needed to prevent accidental spillage.
17. Maintenance and repair will be done to insure equipment is kept in good working order.
18. In the unlikely event of a spill, the NYSDEC Spill Hotline will be contacted immediately and clean up done in accordance with their recommendations.
19. Concurrent reclamation will be performed on all benches as soon as they reach final grade.
20. All mined areas will be reclaimed to grassland and wooded land.

21. All equipment will be removed from the life of mine area prior to the completion of final site reclamation.
22. The final mine floors will direct water in a generally east to west direction, roughly mirroring pre-mining conditions.

Assessment of Significance of Potential Impacts to Community Character. The Nassau Quarry, as proposed, does not have the potential to impact the community character of the Town of Nassau or of Rensselaer County for the following reasons:

1. There will be no visual impact. Over 98% of the land within five (5) miles of the quarry was determined to not have views of the quarry due to vegetation and/or topography. The majority of areas with views will only have views of tree removal. No location will see changes in the ridgeline. Please refer to Section 4.2.2.1 of the DEIS for additional discussion on visual impact.
2. There will be no impact to historic structures. As described in Section 4.2.2.2.5 of the DEIS, there are no historic structures with significant views of the quarry.
3. There will be no noise impacts as a result of the quarry. Since the quarry will not impact the closest neighbors, there will not be any regional noise impacts. Additional information on the potential for noise impacts can be found in Section 4.2.2.3 of the DEIS.
4. There will be no transportation impacts. The largest increase in truck traffic is projected to be only 2% over the existing levels, a negligible increase. Additional information on the potential for transportation impacts can be found in Section 4.2.1 of the DEIS.
5. Mining preserves open space. Mines are open space and the Nassau Quarry will be kept that way for many years into the future ¹¹.

The site is remotely located in a rural area with a few scattered residences. The planned mitigation measures thoroughly address all potential impacts from the mine. The mine was purposely designed to be thoroughly screened from surrounding properties. The proposed operation extensively mitigated to the maximum extent practicable as described above will not be inconsistent with the existing community character.

Property Values. Comments received raised in general manner a concern regarding the operation of the Nassau Quarry having a negative impact on surrounding property values.

The Department has consistently held that potential impact upon property values is not, in and of itself, an issue for consideration under the MLRL or SEQRA. Rather, the issue of

¹¹ Environmental Forum: "Sustainable Development and Mining", Perspectives on New York's Mined Land Reclamation Law, Albany Law School, April 17, 1998.

property value must be considered in light of the overall balancing of environmental, social, and economic impacts of an action. Thus, in *Matter of William E. Dailey, Inc.*, DEC Ruling, April 5, 1995, the Department stated:

Based on prior commissioner's decisions, the effect of the proposed project on property values cannot alone be an issue for adjudication. In the September 28, 1992 Interim Decision in the *Matter of Kearney Gravel Company*, the Commissioner stated that "[p]rior decisions of the Department have already determined that there is no basis to examine potential reduction in property values caused by a mining operation (*In the Matter of William E. Dailey, Inc.*, Interim Decision of the Commissioner, May 14, 1992)." In the January 20, 1989 Interim Decision in the *Matter of the Application of Red Wing Properties, Inc.*, the Commissioner held that "[n]either the Mined Land Reclamation Law (ECL Article 23 Title 27) nor its implementing regulations (6 NYCRR Parts 420-426) permit consideration of the diminution of property values in the surrounding community as a criteria by which to judge a mining application."

It's noted that the ECL 23-2703 "Declaration of Policy" for the MLRL lists "to protect and perpetuate the taxable value of property" among its objectives. DEC reiterated this language in the MLRL's implementing regulations at 6 NYCRR 420.2 "Scope" which states that the regulations "shall be interpreted to carry out the policies of the State to foster and encourage the development of an economically sound and stable mining and mineral industry, and ...to protect and perpetuate the taxable value of properties ..." This language does not make protection of taxable value a permit issuance criterion, but, rather, makes it a goal. It means that where varying interpretations of the regulations are possible, those favoring protection of taxable value are to be chosen.

Property values are again mentioned in 422.3(b) pertaining to reclamation plans where it is stated that "[b]asic reclamation shall include: ...the protection and perpetuation of the taxable value of property." Here the protection and perpetuation of the taxable value of property is a requirement rather than a goal. However, this requirement pertains to reclamation rather mining. No one here made an offering to show that the taxable value of property would not be protected by the reclamation proposed.

Later, in *Matter of Lane Construction Company*, DEC Ruling, February 22, 1996, the Department stated:.

While SEQRA explicitly calls for a balancing of environmental, social and economic impacts, it has been interpreted consistently, in mining and other permitting cases, to require that beneficial social or economic impacts from a project may be found to offset adverse environmental impacts that

cannot be completely mitigated or avoided. *In the Application of Wilmorite*, Commissioner's Decision May 24, 1982 and *In the Application of Pyramid Crossgates*, Commissioner's Decision November 28, 1980) Adverse economic or social impacts have been recognized in this equation only to refute an applicant's allegations of economic or social benefits which offset unmitigatable environmental harm. (See, *Red Wing Properties, Inc.*, Interim Decision of the Commissioner, January 20, 1989; *Matter of Dailey*, Interim Decision of the Commissioner, May 14, 1992; *Matter of Kearney Gravel*, Interim Decision of the Commissioner, September 28, 1992; *Matter of Tompkins County Board*, Issues Ruling, March 30, 1990)

While this result may seem callous, any other interpretation would be unworkable. In this case, according to the intervenors' offers of proof, even the possibility of a mine in the community has caused property values to plummet. Were this factor alone found to be a sufficient reason to deny a permit, there might never be another mine or landfill or recycling center or other necessary or beneficial public or private facility sited in New York. Today the public is wary of changes and distrustful of the government's will or ability to control adverse impacts. The purpose of careful and thorough environmental reviews such as this is to assure that adverse environmental impacts of a project are mitigated or avoided, or that benefits from the project outweigh any adverse impacts which cannot be completely mitigated or avoided, and thus provide a clear net benefit to the community. (See, *Red Wing, supra*)

Therefore, allegedly adverse impacts to the existing local economy, such as harm to local businesses, reduction in property values and diminished tax revenues, are relevant in SEQRA review only in response to the applicant's argument that the economic benefits of a project outweigh any environmental harm which cannot be mitigated.

Thus, the full analysis of potential impacts set forth in the DEIS must be considered. Here, the Applicant has shown that potential environmental impacts have been eliminated or mitigated to the maximum extent practicable. The Applicant does not rely on beneficial economic impacts to offset adverse environmental impacts that cannot be avoided or mitigated. Accordingly, alleged adverse economic impacts should not be considered because the Applicant has not offered economic benefits as a means to offset unmitigatable environmental harm.

It is noted that in a recent decision, the Department reviewed an expert submission citing two studies in New York showing that mining activities do not depress property values. See *Matter of Joint Galusha*, DEC Ruling, October 1, 2001.

In this matter, at the legislative hearing, Matthew Ryan, a local real estate investor spoke about local property values. Matthew Ryan stated that he lives near the Cropseyville

Quarry and had recently invested in property around the Nassau Quarry site. Mr. Ryan stated that property values of houses around the quarries in Cropseyville have not suffered as a result of the mining operations there. Mr. Ryan went on to say the Cropseyville Quarry has improved his quality of life and that he was looking for additional investment property near the Nassau Quarry for the same reason.

The Cropseyville Quarry, a comparably sized nearby quarry, has not affected property values. There are numerous new homes with very high property values located within several thousand feet of the Cropseyville Quarry. Mr. Ryan stated that his house, which is located about ½ mile or 2600 feet away from the Cropseyville Quarry, has increased about 250 percent in value. Another person that resides close to the Cropseyville Quarry is State Senator Joe Bruno. The Bruno family's farmhouse is located approximately 2000' away from the Cropseyville Quarry excavation area.

Conclusions. The project, as proposed, will be a thoroughly mitigated operation. The planned measures outlined above mitigate the potential impacts to community character to the maximum extent practicable. Mining in compliance with the requirements of SEQRA and the Mined Land Reclamation Law and rural residential land-uses are not incompatible. In fact, most mines are located in such rural areas. All potential impacts, short and long term, were identified and have been mitigated to the maximum extent practicable. The Nassau Quarry will not negatively affect the community character or property values because it will not be seen, heard or significantly increase truck traffic.

9.3 ZONING

Comment:

The local zoning law does not permit a mining project of this scale.

Comment:

The location of the proposed mine is such that the adjacent properties are used or will be used for residential purposes. Allowing a mine in that location would defeat the purposes of zoning and planning.

Response:

Town of Nassau zoning issues were described in the DEIS at Section 2.2.2. As discussed at the end of that DEIS section, the Nassau Town Board adopted a moratorium concerning mining applications on January 19, 2006. That moratorium had a 6-month duration, and expired in or about the end of July 2006. Prior to the expiration of that moratorium, the Town of Nassau, on July 20, 2006, adopted Town of Nassau Local Law No. 4 of 2006, which purportedly prohibits all sand and gravel mining in excess of the NYSDEC jurisdictional limits, and further purports to prohibit all hard rock mining,

regardless of quantity or volume. The Department determined the MLRL Permit application and DEIS to be complete prior to Nassau's purported zoning change.

Local Law No. 4 of 2006 is both procedurally and substantively defective, and is illegal. TS&G has commenced litigation against the Nassau Town Board, among others, concerning this purported local law. *See Troy Sand & Gravel Co., Inc. v. Town Board of the Town of Nassau et al*, Rensselaer County Index No.: 219221.

In addition, and in reliance upon Local Law No. 4 of 2006, Town of Nassau Supervisor Raymond Seney sent a letter to TS&G, purportedly "rejecting" TS&G's municipal applications on this action (including special use permit and site plan applications). This letter by the Nassau Supervisor is likewise illegal, and is the subject of litigation commenced by TS&G against the Town. *See Troy Sand & Gravel Co., Inc. v. Town Board of the Town of Nassau et al*, Rensselaer County Index No.: 219221.

These issues concerning attempts by the Town of Nassau to zone out mining in the Town, and the Town's attempt to stop TS&G's application and mining project, is a local dispute and outside the scope of SEQRA or the pending MLRL Permit application before the Department. In this matter, TS&G alleges that Nassau Local Law No. 4 of 2006 is illegal, and is currently the subject of litigation. TS&G, as the applicant, continues to state that mining is a permitted use at the subject location, although the matter is now subject to litigation. According to applicable law and Department guidance and policy, as discussed below, the Department must continue to process the MLRL Permit application and SEQRA documents based solely on the content of that application and all coordinated technical and environmental reviews set forth in the Environmental Impact Statement.

The Department has no authority to decide disputes concerning local approvals. *See Hingston v. New York State Department of Environmental Conservation*, 202 AD2d 877, 609 N.Y.S. 2d 446 (3rd Dept. 1994); *Town of Poughkeepsie v. Flacke*, 84 AD2d 1, 445 N.Y.S. 2d 233 (2nd Dept. 1981), *lv. denied*, 57 NY2d 602, 454 N.Y.S. 2d 1026 (1982). As the court observed in the *Town of Poughkeepsie* case:

It is fundamentally clear that the jurisdiction of [the] Department under the ECL does not include authority to adjudicate legal issues concerning compliance with local government zoning. It is equally clear that SEQR [sic] did not intend to confer, directly or indirectly, any such authority. *Town of Poughkeepsie*, 84 AD2d at 5.

Further, the Department's regulations require the Department to continue to process the state permit application despite the existence of a dispute concerning local zoning compliance for the action. *See e.g. Matter of 4Cs Development Corporation*, ALJ Ruling No. 2 (New York State Department of Environmental Conservation, March 7, 1996).

This procedure was confirmed by the Department in Technical Guidance Memo MLR 92-2. In that Guidance Memorandum, issued May 4, 1992, the Department states that if comments are received after a completeness determination concerning an MLRL Permit

application is made such that mining is prohibited at the subject location, the Department will “proceed to permit issuance or denial solely based on the content of the application and all coordinated technical and environmental reviews. The permit, if one is issued, will not contain any special conditions regarding local prohibition if one exists, beyond the general advisory that issuance of a DEC permit does not relieve the applicant of the need to obtain any required local permits or approvals.”

Thus, the issue of local zoning compliance is secondary, and must follow the completion of the Department’s review and consideration of the MLRL Permit application and SEQRA documents. Local zoning is not part of the Department’s review.

9.4 CUMULATIVE IMPACTS

Comment:

DEC should be sure to consider all the issues the Town is currently facing when analyzing the DEIS, including all the mining applications, the Dewey Loeffel site, the Nassau Lake pollution, Impact Auto, the Hankle Lumber sawmill, the issues with local and state roads, and other nearby mines and similar operations.

Comment:

The DEIS should analyze the cumulative impacts of the TS&G mine and the other two mine applications.

Comment:

The Traffic Impact Study should include the possibilities of an additional two mines, which have applications pending.

Comment:

The air quality impact should be studied as though all three mining applications were under review.

Comment:

The cumulative noise impacts of three mines should be analyzed in the DEIS because two other mining applications are pending.

Response:

The SEQRA Regulations provide that the Lead Agency must consider, in assessing the significance of a proposed action:

Reasonably related long-term, short-term, direct, indirect and cumulative impacts, including other simultaneous or subsequent actions which are:

- (i) included in any long-range plan of which the action under consideration is a part;
- (ii) likely to be undertaken as a result thereof; or
- (iii) dependent thereon.

6NYCRR Section 617.7(c)(2). Impacts resulting from projects other than the one immediately under consideration must be considered, then, when the projects are related to one another by a long-range plan, likely sequential action, or interdependency.

The SEQRA Regulations also provide that cumulative impacts should be analyzed “where applicable and significant.” 6 NYCRR Section 617.9(b)(5)(iii). Cumulative impact assessment is applicable where the action is deemed to integrally related with other projects, through a common plan of development either by the applicant(s) or by the municipality.

The New York Court of Appeals has ruled upon the issue of cumulative impact analysis under the SEQRA Regulations. The Court has identified those circumstances under which the projects themselves are not part of the same plan by one or more sponsors, but do satisfy the “relatedness” necessary for cumulative impact review. In *Long Island Pine Barrens Society, Inc.* the Planning Board of the Town of Brookhaven, AD NY2d 500, 606 NE2d 1373, 591 NYS2d 982 (1992), the Court ruled that for purposes of determining environmental significance, the Lead Agency is required to consider “cumulative effects of projects other than the one immediately proposed” only if the actions are related, including actions proposed in areas in which there are “actual municipal development plans.” *Pine Barrens*, at 513.

In the absence of projects that actually depend on one another or that are part of one overall plan by one or more project sponsors, i.e. interdependent road systems or infrastructure, the Court explained that municipal development plans can provide the “cohesive framework” for cumulative review. *Pine Barrens* at 514. Courts have found such plans expressed in special development districts. *CEG Save the Pinebush Inc. v. City of Albany*, 70 NY2d 193, 512 NE2d 526, 518 NYS2d 943 (1987) (project part of a government plan to balance commercial development with ecological integrity through the creation of a special Pine Barrens Development District); *Chinese Staff and Works Association v. City of New York* 68 NY2d 359, 502 NE2d 176, 509 NYS2d 499 (1986) (Project within special Manhattan Bridge District created to preserve residential character of China Town).

According to the Court in the *Pine Barrens* case, consideration of cumulative effects of various projects is not legally required in environmental impact assessment unless (i) the municipality has a special development district or regulatory structure, as opposed to a mere general policy, or (ii) the various projects are actually interdependent with one

another, through road system, infrastructure, or otherwise. *See Pine Barrens* at 512-513; *See also Village of Tarrytown v. Planning Board of the Village of Sleepy Hollow*, 292 AD2d 617, 741 NYS2d 44 (2d Dept. 2002) (other proposed development in Town was independent from project under consideration and not part of an overall development plan by the municipality such that cumulative impact analysis was not required; *Village of Westbury v. Department of Transportation*, 75 NY2d 62, 549 NE2d 1175, 550 NYS2d 604 (1989) (construction of interchange and widening of roadway were actually related and cumulative effects must be considered).

Further, the New York State Department of Environmental Conservation, in its SEQRA Handbook, provides that cumulative impacts are impacts on the environment that result from the incremental or increased impact of an action when the impacts of that action are added to other past, present, and reasonably foreseeable future actions. Cumulative impact assessment must be done under the circumstances where one action is an interdependent part of a larger action or included as part of any long range plan; one action is likely to be undertaken as a result of the proposed action or will likely be triggered by the proposed action; and, one action cannot or will not proceed unless another action is taken or one action is dependent on another.

Here, the non-related actions cited by the commenter are independent, not reliant in any way on the TS&G action or integrally related in any way whatsoever. The TS&G action is a separate, independent action, which is properly analyzed independently under SEQRA. Cumulative impact assessment is neither legally required or warranted on this action.

9.5 MISCELLANEOUS COMMENTS

Comment:

The air facility permit registration of the DEIS has not been signed and certified by a responsible official to demonstrate the truth, accuracy, and completeness of the information on the application form.

Response:

A signed copy of the air facility registration is included as Appendix I of this document.

Comment:

The time lines and comparison between phases should be drawn because the initial scoping documents were drafted based on the original mining planning maps, which have since changed.

Response:

Predicting market demand for crushed stone is difficult so determining timelines for phases can only be approximated. The approximate timelines of the phasing are included on the Concurrent Reclamation Figures that are included in Appendix F of this document. These figures approximate the phasing out to 40-50 years.

The original phase plan has been updated to incorporate increased setbacks, input from the Town Mining Committee meetings and visual mitigation measures.

Comment:

The DEIS is not clear about whether the mine would be permitted to mine an additional fifty foot excavation.

Response:

The alternatives identified in the DEIS are not proposed because they were determined to be inferior to the proposal. The proposed operation is the plan that is described in detail in the main body of the DEIS and the Mined Land-Use Plan and is the same proposed operation that is studied in all of the environmental impact assessment reports included in the DEIS.

Comment:

The approval of the mine will impact the residents of West Sand Lake.

Response:

The material hauled from the Nassau Quarry to the West Sand Lake Plant will replace the stone that is currently hauled in from other sites that are further away. Section 2.1.4 of the DEIS states:

“Troy Sand & Gravel Co., Inc. currently trucks in NYSDOT approved crushed stone to its West Sand Lake Facility from a variety of different sites, located up to 44 miles away, to meet the growing local construction demands. The Nassau Quarry will provide local municipalities, contractors and Troy Sand & Gravel Co., Inc. with a nearby source of high quality construction aggregate.

The Nassau Quarry will reduce the overall amount of fuel usage and emissions from trucks and wear and tear on the infrastructure in direct proportion to the reduction in mileage traveled by the trucks. Of the

quarries from which TS&G currently purchases NYSDOT approved stone, the closest, the Callanan Cropseyville Quarry, is over 40% farther away from the West Sand Lake Site than the Nassau Quarry. The farthest quarry that TS&G currently hauls NYSDOT approved stone to West Sand Lake, the Pompa Brothers Milton Quarry, is over 460% farther away than the Nassau Quarry.

A local source of high quality construction aggregate will help keep aggregate prices down and reduce overall truck traffic. Less trucking will result in an overall reduction in emissions and less wear and tear on the regional infrastructure.”

Comment:

The mine will prevent nearby landowners from using their land for livestock.

Comment:

The DEIS fails to address the impacts the mine will have on a local organic farm operation.

Response:

The Quinn property, located to the east of the proposed quarry, maintains a stable of horses. During the legislative hearing, Carole Quinn expressed her support for the quarry and also submitted a letter to that effect. The transcript from the legislative hearing is included as Appendix A and copies of all comment letters received are included as Appendix B of this document.

Other farming/agricultural operations that were identified during the receptor inventory were all located far enough away from the project site that much closer receptors were chosen for impact assessment.

Comment:

There are different dates on two of the DEIS's available for public inspection.

Comment:

There are multiple revisions to the DEIS (April 2006 and May 2006).

Response:

The May 24, 2006 DEIS is the most current DEIS and is the version that was accepted by

the NYSDEC. Copies of the current DEIS were made available at the Nassau Town Hall, Library and at NYSDEC Region 4 headquarters. In addition, a full digital version of the DEIS was made available on-line at www.griggs-lang.com/public.