
SHELBY TOWN BOARD WORKSHOP MEETING

4062 SALTWORKS ROAD

MEDINA, NEW YORK 14103

JANUARY 30, 2017 - 5:30 p.m.

RE: FRONTIER STONE, LLC
ECONOMIC AND FISCAL IMPACT OF THE PROPOSED STONE QUARRY ON THE TOWN OF SHELBY, ORLEANS COUNTY AND THE SURROUNDING AREA

REPORTED BY: DOREEN M. SHARICK, Court Reporter
FORBES COURT REPORTING SERVICES, LLC
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APPEARANCES:

SHELBY TOWN BOARD:

MERLE DRAPER, CHAIRMAN

WILLIAM BACON, COUNCILMAN

KENNETH SCHAL, COUNCILMAN

STEVEN SEITZ, JR., COUNCILMAN

MR. STALKER STALKER, COUNCILMAN

DARLENE RICH, TOWN CLERK

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CHAIRMAN DRAPER: Good evening, everyone. Welcome to the January 30 Special Meeting of Shelby Town Board. Before we start, this middle aisle, we really don't need. So if anyone is over here that has a obstructed view that would like to see what is being presented, there is plenty of chairs in the center and it's fine if we drag our chairs into the middle of this aisle. We don't need this aisle tonight.

We can take a couple of minutes to do that if you want to do that.

We are going to start in a few machines. I'm going to go over the general agenda for the evening. We are going to open with a pledge to the flag. As I said earlier, this is a special meeting of the Shelby Town Board. We class them as workshop meetings. A workshop meeting is held in a specific purpose whether it's to work on the budget, whether it's to hear a presentation. It's informational for the Town Board.

We have a series of speakers tonight. If you are here to speak, making a

presentation, please state your name before you speak so the stenographer can enter that into our minutes. We will have a stenographer tonight. Those minutes will be made public as soon as we have them. It does take her a couple of weeks to put them together and get them back to us.

I just want to clear a couple of things up. I had some emails from various folks asking why this meeting was not posted. Why it was not advertised in the Hub. Why the Hub didn't know about it. I just want to make a couple things clear. The official paper of the Town is the Batavia News. This meeting was set at the year end meeting in December. It was re-announced at the January meeting. It was posted on our web site. It was also posted under special notices in the web site. Some people are here at every meeting. They are well aware of this meeting. If you are not, you need to make yourself aware, but to insinuate anything else is just that, an insinuation.

Again, the purpose of the meeting is for

Frontier Stone to make a presentation to the Town Board. After the presentation, I'm going to give the Town Board an opportunity to ask questions of the presenters. Bethany and Dan, if you have questions, certainly please ask them as well. Once that's concluded, the Town Board is going to go with Mr. Spitzer into executive session or at least I'm going to ask him for an executive session. Assuming they make that motion, then we will have a discussion with Mr. Spitzer. And then we will adjourn. If you want to stay through the executive session, you can. You won't be in that room when we are speaking, but when we come out, I don't anticipate any further business. We're going to come out and adjourn. If you want to wait for that to happen, that's fine.

If you're presenting, I don't want you surprised when the Town Board does follow-up and checks on what you have presented. So if you take issue with that, so be it, but the Town Board commonly follows up on what's presented.

At this time I'm going ask everybody to stand for the Pledge of the Flag.

(The Pledge was said.)

MR. SPITZER: Just one point for the minutes, just a point for the minutes, simply because Joe and I are actually involved with litigation against a third party where this has come up. It's not an adjournment to an executive session. It's an adjournment to an attorney/client privilege session, which is actually an exception to the open meeting law.

CHAIRMAN DRAPER: Thank you. Who's the main presenter? You are Joe?

MR. BROWN: Kevin Brown.

CHAIRMAN DRAPER: Kevin Brown. Okay. I'll turn the presentation over to you. Again, if you would, just before you speak, please state your name so that Doreen can record that properly.

MR. BROWN: Mr. Draper, Mr. Schal, Good evening; Members of the Board, good evening. My name is Kevin Brown. I'm an attorney with Law Firm of Brown, Sharlow, Duke and Fogel

from Syracuse, New York. And for the last ten years I've been the Special Environmental Counsel for Frontier for the DEC permit application for the mine project.

I want to thank you tonight for taking time to hear from us. I know the Board Members have a lot of demands on their time and we appreciate taking the time with us and letting us tell our story here tonight.

There's a number of people here tonight. I think everyone knows Dina, Dina Barone, and a number of you do I believe. And her team has been helping us with our public outreach efforts with the quarry. We realized that a few years ago that we were behind the eight ball on that. We needed to get our story out and she's been working very hard to get our story out to the public and tonight, I believe I know she's provided to the Board -- you see a package on each of your desks. It has material that summarized the project generally and also goes through some of the many studies we've performed in the summary way. It will have information in there about

the DEC findings and the permit, what the result of that process has been thus far. There's information in there on the economic benefits of the quarry. I think you'll find that pretty interesting.

I know the study was in with the Town a few years ago. It has been updated, but it's very good information about the economic impact and the benefits of the quarry, employment, taxes, sales, use of vendors and then just having the product available here nearby is a very cost -- transportation cost sensitive because it's a bulk commodity. I do a lot of this work around the state and I tell the Boards is if you take the distance -- if you start paying as much to haul it as you pay for the material, you don't have enough of this material in your budgets, the infrastructure budgets can get cut in half or you know, you can cut what you can do in half or you can double your infrastructure budgets. That's just the nature of that business of providing the raw material for our whole built infrastructure.

This Town going back a long time had always had a lot of quarries. The Medina Sandstone is a very famous architectural stone we find all through the state. People are still taking pictures of some of the churches and armories built with that. That material employed thousands of people, a lot of good jobs and built a lot of good infrastructure in the state, public and the private.

Today, we don't use block stone any more. We use aggregate into cement mixtures and hot mix asphalt for the roads. It's much cheaper. That's the engineering these days and virtually, our entire built environment, this building we're in, the road outside, the bridges in town, churches, schools, hospitals, it all requires cement material made from high quality aggregate.

Aggregate stone we are looking to access here is out of the Lockport Dolomite Formation. It's a unique -- not totally unique stone, but it's a very high quality stone. A lot of formations aren't really

suitable for the products we need. There are the chemical and physical characteristics that are suitable for the good sound concrete and high friction aggregate for roads. So the material isn't everywhere, but it is here and there's a nice formation of it that you'll be hearing about here in a second. That's how we came to the Town. People ask why here. That's why. There is a very good source of material here.

What I've propose is I'll have -- I've two folks that can walk through the mine plan. One will walk through the mine plan and the other will walk through what we think in the course of our reviews, that probably the biggest issue and I know the Board's had a lot of public scoping sessions and hearings on the DEIS and I know that the wildlife refuge and the water issues was a big concern. And so over the years we did a lot of work on that. And we have somebody here to talk that through with you tonight.

I think we started this process years ago under the State Environmental Quality

Review Act, have to assess all potential impacts, identify them, fully assess them, and then you have to avoid them if possible and if it's not possible to avoid them, you have to mitigate them to the maximum extent practicable. I think tonight in these presentations you will see that we have done that as far as this quarry and this operation and in particularly, with respect to the refuge.

However, the Town's request two years ago, two issues were brought up to us. Mr. Charles Malcolm, the attorney, made comments into the DEIS. Said we need you to talk to the staff. We need you to work with staff and we need you to work with the I.N.W.R. That was in '14, I think that hearing.

We went ahead and with DEC as a facilitator. We did so. We had a meeting with the STAMP folks. And then we went through a process. It took about a year and a half to get through it. They were concerned because, you know, it's a

nanotechnology and semi-conductor facility that requires very quiet seismic conditions. They can't have any vibration when they are using those very precise calibrated instruments to semi-conduct or await for manufacturing. That was a tricky thing to look into. We ended up hiring Vibra-Tech, which is the gold standard of national firms that do blasting analysis and work and they worked.

We worked with Genesee County Economic Development Corporation folks and the STAMP folks and they brought on -- they have Colin Gordon, which is a firm out in the Silicon Valley, that does all the -- all the seismic work for all the semi-conductor and nanotechnology places in the states. That's what they do. We got into a process with them where -- and it took a while because our folks at Vibra-Tech presented a protocol for doing a test blast and for doing the modeling afterwards. Their experts reviewed it, sent it back to STAMP. Sent it over to us, we worked it around. And Mr. Schal, you were

there. We did a test blast. We set up I want to say it was about 80 -- 80 seismographs from the site and running down to the STAMP, proposed STAMP site, the STAMP site. And there was an accelerometer so sensitive if you tapped the ground 20 feet away with your hand, it would read. We did a test blast. That test blast was nothing like a normal blast. It had to be large enough to register down there. So we took one of the core holes that we had drilled at the site when we were assuring ourselves of the geology there for purposes of the resource and to make sure we did an adequate hydrologic analysis. We had a number of core holes and wells. We took one of those. Packed with I think six or 800 pounds of explosive. No timing delay. Nothing. This is a blast you would never set off for real, but we had to reach all the way down to the STAMP site. We set it off, got good readings and then it went into a modeling protocol. What happens, every geologic formation is a little different. They had to get the actual

readings of how the blast waves would propagate through the stone right here, you know, in this specific formation in order to do very detailed modeling that was necessary for Vibra-Tech, the design for us -- conduction blast that would work for us and also keep the nanotechnology and semi-conductor plant quiet. No vibration. We went through that. DEC checked it. Colin Gordon checked it and we came back with permit conditions, which are now in the DEC permit. That require us to meet VCE standards of right today before they even build anything there. It's monitored at the site and that's the standard for semi-conductor.

If they did a contract to put a nanotechnology in there, which is a more restrictive standard for that in this day, we have a permit condition that automatically triggers that standard. We have done the blast design to show we can blast here and still not disrupt their operation and then we monitor every time we blast.

It was an expensive and a lengthy process. In the meantime, we also reached out to -- and was facilitated by DEC, we met with Tom Roster and the staff people at the Wildlife Refuge there and we wanted to know if they had other concerns that we hadn't addressed. You know, early on U.S.G.S. submitted a comment letter, that we'll talk about here in a minute, that they addressed in our studies, but was there anything else. They went out to the site. They talked about water levels in there. As you know, they are all managed. The wetlands there, the marshes are all managed for certain levels. They drain them in the spring to dry them out and let certain plant species set up that are good for the waterfowl that go there. They grow. They flood them right away after that. They get a low level of water over them. The purpose of that is to prevent evasive species from setting up and those aren't good food for the geese. So they do flood them to a certain level. Later in the year, they flood them deeper depending on what target

waterfowl population they want to attract to that specific marsh area. They have a number of them. They control them for different populations. Some ducks need deep water, 48 inches; other ducks want 24 inches. They actually manage those to that level of precision.

There's also some grass, some areas they dry out every year. Those are for other species of migratory birds that they are trying to encourage to come there and move through.

So when they looked at our pumping rates, what will happen is, you know, our pumping rate will capture water, capture some water and we actually slow down to some extent the water. They were afraid -- they were concerned that our pumping would extend out into some of the (inaudible) -- not able to keep that area dry. Sam went out and met at the site. He will go through a lot of this in a minute. We ended up with a permit condition with I.N.W.R. Basically, we will ship the water, which is actually a big

advantage to them. We can put the water in whichever basin they want it in and help them manage their water over there.

And I only go through that story -- you're going to get a lot more detail here in a second, but I go through that story because that's the point where I started looking at this project differently, is all this time we've been talking to -- worried about do no harm, mitigate any impacts, minimize them.

That's the point where I realized we can actually help the refuge. I knew it would be an asset to have water there, but I think if you really honestly look at this project, you can see that eventually having a reservoir and we'll have the first reservoir in ten years, having reservoirs immediately adjacent to a wildlife refuge in the face of climate change that's projected over the next century, this could actually be just what the refuge would want to have to plan for resiliency in the face of climate change.

Last summer was a great example. We had DEC printing out advisories to hunters that

many of the marshes were dried up. You couldn't have as many takes this summer. They weren't handing out as many permits. We had a new SDA disaster farm irrigation.

A reservoir is the way to address those kinds of issues. And I think -- our look at this is, we've done everything we could to make sure we minimize those impacts. Certain that there is no trucks going through there any more. Our noise is actually less than ambient. We actually reduce the ambient noise. Now, compared to the farm equipment that's there today, now, I know that farm equipment doesn't run everyday, but neither does a quarry. The quarry moves around that site over time, the activity on the quarry.

So we will be at ambient 250 feet in in an area that has no overlooks or anything. We've agreed also with DEC to a permit condition that we will keep our activities further north, 350 feet further north in May, June and July during the breeding season for the birds. So you will get more on this, but I'm convinced we've done everything possible

and we will not have significant impacts on that -- on that refuge and everything I'm saying is that number is behind it and some of the best folks in the country have looked at it.

So with that, I'm going to pass the baton here to Jason Kappel. I'll give you a little bit of his background. He's kind of modest so I've got to tell you what he does. Jason is a Senior Geologist with Continental Placer, Inc., that are headquartered in Albany, New York, with offices in Harrisburg, Pennsylvania, and Laconia, New Hampshire. They are one of the leading national firms for mining, mine reclamation and environmental consulting on mining operations.

He has over 21 years experience in environmental assessment and permitting reviews including all areas of environmental compliance and emphasis on analysis and stormwater management, groundwater, water supply, noise impacts and mitigation, air emissions, and induced vibration and air

overpressure from bedrock blasting.

His work in mine development extends from initial geologic mapping and sampling to mine planning and environmental impact assessment and reclamation planning. He's developed mining and reclamation plans in New York, Vermont and Pennsylvania.

His expertise in the environmental field includes preparing Draft Environmental Impact Statements; compliance and regulatory audits for State Pollute and Discharge Elimination Systems. That's water discharges under the Clean Water Act; air impact analysis and permitting under the requirements under the Clean Air Act; fugitive dust assessments and controls and noise modeling, visual assessments, spill prevention and counter measure plans; stormwater permitting; stormwater modeling, and development of pollution prevention plans and Best Management Practices for stormwater management.

He's also been a lead investigator for several water supply projects, ranging from

large-scale municipal water supply investigations to water supply for residential housing developments.

His education, he has a Master's of Science in Geology and GeoChemistry from Rensselaer Polytechnic Institute and B. S. in Geology/Groundwater Hydrology from Rensselaer Polytechnic also, an RPI guy. I'll have, Jason, go ahead and run through our mine plan, our reclamation plan and some highlights of the Environmental Impact Assessments we performed for the last decade.

MR. KAPPEL: Thank you, Kevin. It's a pleasure to be before the Board tonight.

So I'd like to start I think with just some of the basics of a couple of points that Kevin brought up. One being the geology that we all live with everyday whether we realize it or not. The map that I have on the board in front of the Board and in front of the community is what we call a cross section. North is to the right. South is to the left. On the top of the cross section of the roads, the local roads are listed: Reed Road,

Lewiston, Tibbetts, Fletcher Chapel, Big Ford, Martin, so on and so forth. The site is also shown on this cross section.

And the point of this -- this cross section is to show the subsurface. What do we have below the farm fields and commercial and industrial areas that we see. As we were well to the south, Tonawanda Creek, Ledge Road, we go from what we call the Onondaga Formation down through the Camillus shale, the Syracuse Formation, a lot of shaling material down into the Lockport formation, which is the subject formation of our proposed site. In the vicinity of Ledge Road, the Lockport Formation is roughly 550 feet below the Earth's surface.

In our site, just south of Fletcher Chapel, we have what we call Glacial Overburden, which is the soil and subsoils that we all know very well and then we go immediately into the Lockport Formation. There is a small window within this part of New York where the Lockport is accessible without significant effort to remove either

material that is not useful for, as Kevin brought up, construction aggregates.

One can say, well, gees, the Lockport is right at 31A. The Lockport is almost exposed. Yes, it's very very thin and it's not economic viable in terms of its thickness and some things. So you have a sweet spot within a certain part of New York where the Lockport is accessible and is thick enough to develop, roughly 115 to 120 feet thick in the area of our proposed site.

So that's the point of one of the cross sections that's in your handout. That's why we included it. It gives you a sense of the roads where the Lockport occurs, where it can be accessed in a thickness that's useful and the sequence that's useful. One would say, well, what about below it. It seems to be hundreds and thousands of feet of material below it. You get into the Rochester, which is the shally formation. Again, it does not have the physical and chemical properties that Kevin mentioned for concrete, asphalt, high friction and so on and so forth. So

there is the Lockport, which is the dolomite, as Kevin mentioned, and it occurs in certain areas that we are fortunate to have at our site.

One would ask, why do the formations slope from north on the right to south on the left? That's what we call the dip. It's a regional dip. I won't say it's a vagary, but it's part of the structure the state down into Pennsylvania. And it's why we don't have this formation on this map. We don't have this formation in the area, but everybody is familiar with the Marcellus shale, which was a hot bed topic for quite sometime. That's why it occurs at six, 7,000 feet below grade in Pennsylvania where they are developing it, is this regional dip that we look at. So this is the natural structure of the rock formations. So having said that, I'll put this board away and we can come back to it later if the Board should happen to have any questions about it.

The next board I would like to show is our -- and I'll move it over here for the

audience, is our mine plan. The mine plan develops a roughly 215 acre dolomite Lockport Formation Quarry, Fletcher Chapel Road to the north, Sour Springs Road and then we're bound by the property line and into the preserve to the south. The parcel is 269 acres. We have four phases that we are developing for a total of approximately 172 acres. As we continue to point at the map Phase One, Phase Two, Phase Three, Phase Four and then the location of the processing plant.

The primary access into the facility will be off Fletcher Chapel. I'm going to point at the map and move my finger in a southerly direction. This is the primary ingress/egress point into what we call the processing area.

There are crossings under the Niagara Mohawk power line. I will point out by pointing at the map again. Niagara Mohawk runs in a north/south direction and our facility is on either side of the Niagara Mohawk power lines.

One thing that Kevin talked about, and

I'll briefly point out in terms of our mitigation of visual and noise impacts, are the robust and extensive berms as I'm pointing at the map at the brown areas. And the brown areas that are shown in this cross section, these are earthen berms made from material that we take from the area that we plan to excavate and to develop the Lockport. And we put these in what we call perimeter berms that are sloped and vegetated. And as I discussed, they are visual barriers, are visual impediments and they also are very very effective in terms of reducing noise that is generated from onsite operations. One other thing that Kevin mentioned is our seasonality or I want to take our seasonality and I will pick this up again when I discuss noise in more detail.

Typical operations in an aggregates industry and it depends on weather and it depends on contracts, but we are a seasonal operation and don't run typically December, January, February. We might do maintenance, winter maintenance so on and so forth, sell

some materials from stock piles, but in large extent, there is very minimal activity for roughly a quarter of the year.

So in terms of our mine plan, I've discussed the berms. We talked about the general layout again. Again, I'll point at the phasing, Phase One, Phase Two, Phase Three, Phase Four. Then I'll move to what we call our reclamation plan. Again, I'll move to over here so everybody can see.

After we have excavated the Lockport and we have developed the resource, what does this area become? Mr. Brown had mentioned a reservoir and what I want to show on this drawing is there are two lakes of two different sizes that will be developed after the quarry is complete.

We have, again, the Niagara Mohawk lines which will run down the north/south through the property. We have the 35.2 acre lake and then we have a 156.1 acre lake, which would be developed after this cessation of mining. I'll come back to this, but I just want to give my overview.

So in terms of impact, I have two more boards I would like to discuss and then this is a quick summary and I will be available for any questions that come up after all the presentations.

But what we have before you is a -- it's a large scale map. And it shows -- I'm going to point to the map, this area outlined in the center part, north center part of the map. It's called the site. This outlines our Phase One and Phase Four, our Phase Two and our Phase Three. Here we have Fletcher Chapel Road. We've got this Alabama down here to give you some sense. We've got the Oak Orchard. We've got the National Wildlife Refuge and then we're over in here to the Tonawanda State Park -- or state management area I should say.

The aggregate of these is roughly 19,000 acres. Our site, as we have talked about, is roughly 270 acres. So the colors on the map one might ask, why do we have yellow? Why do we have yellow and orange? These represent measured noise points, noise impacts or

existing noise in the area and how that noise affects or propagates into the wildlife areas.

So the yellow and I believe you have this in your handout, the yellow represents the distance of which we go into the refuge areas and the wildlife areas until we meet what's called ambient. So cars traveling, trucks traveling on the roadway, they have a certain distance their vehicle noise enters into the wetland, into the wildlife area.

Similarly, the farm equipment that we currently know operates on the facility propagates into the wildlife area a certain distance of a hundred feet. And then beyond that, you're back to what we call ambient or the conditions that exist pre-mining.

So we can see that there's relatively minor impacts on our wildlife areas. With the development of the quarry, again, I'm pointing to the site, we have a couple of impacts that we discussed, one would be our vibration from blasting as well as our noise particularly as we develop Phase One and

Phase Two.

The area that is hatched in orange on this map represents the distance with which we will propagate or have enhanced noise into the refuge area, in the wildlife area. That represents roughly 350 feet, that orange hatched area. If one were to take the amount of acreage that is, that's roughly 22 and a half acres of area in which we have enhanced noise or noise that goes into the wetland that's beyond ambient. When we compare that 22 and a half acres to the 19,000 acres of the wildlife areas that are shown on this map, it's .01 percent of the acreage that we're discussing in terms of our impacts.

We, as Mr. Brown has mentioned, have permit conditions which require us to mine in certain areas in Phase One and Phase Two during May, June and July so that we don't disrupt, although we don't feel we'll have any disruption to begin with, Songbirds and mating seasons. And so when that happens, this area becomes negligible, if at all, in terms of propagation into the refuge area.

So again, just to give somebody some perspective, we talked about the truck traffic. We talked about noise. We talked about vibration. We talked about water, groundwater impacts. We are really talking about 22 and a half acres over a system of 19,000 acres. So that gives you a sense of scale of what we're dealing with.

So I just want to run through more quickly now that we have set some of the background, some of the key areas that our Draft Environmental Impact Statement has touched on as well as some of the discussion that Mr. Brown and Mr. Gowan after me will have.

Surface water runoff. I'm going to put my mine plan back. There are no surface water features aside from some drainage flails that run north to south across the site. There are no streams. There's no trout streams so on and so forth that we're impacting. So surface water impacts on this current agricultural field are nonexistent and not part of the evaluation of this

project.

Air resources. The mining will be developed in, as I said, a phase sequence. We only develop an area that we need roughly a year or so in advance of the acreage we will affect. What I mean by that is, we don't come in and strip everything all at once and have a hundred and seventy-two acres of exposed surface. We develop an area. We figure we need X acres in a given year. That's what we develop. And the reason we do that is when you leave material in place until you need it, it helps with air resources, minimizes dust, minimizes runoff. So there is a methodology to develop the hard rock quarry that helps to mitigate by design some of the areas we are talking about in terms of impacts. So in terms of air resources, the facility will operate under what's called an air facility registration. Part of that has to do with the allowable emissions and we'll be in full compliance with our state air facility registration at the time.

The berms that I talked about for visual and noise mitigation and reduction also helps reduce wind borne dust that gets developed. It's a physical barrier to wind and having the berms in place will help with air resources. The berms, it's not shown on here on the figure, but they will be vegetated on both sides. And having that vegetated surface helps with the air resources and potential for wind borne dust.

I believe Mr. Brown did a thorough discussion of blasting. One thing that I will add in terms of blasting is that at the STAMP site there's a dedicated seismograph and accelerometer, I believe as well, which is being permanently installed I believe in the northeast corner of that property. And it will be there for monitoring for every blast. And the data from which will be collected in perpetuity for every shot that we take.

Traffic. Through negotiations and through discussion in terms of what is the best routing for the facility, as I mentioned

earlier on, there is a to be installed entrance of off Fletcher Chapel and that will be our primary ingress and egress point. We do have a -- we do have a secondary entrance off of Sour Springs Road, but this is more for, what will I say, employee traffic, the occasional maintenance vehicle. That's not a primary truck route.

Visual. I've talked about the berms. The berms that I've mentioned several times now will be 20 to 30 feet high. So they will be substantial in terms of their presence around the facility.

Wildlife impacts. There are no threatened or endangered species on the subject parcel. And then I've discussed our noise and/or blasting impact or discussion of potential impacts into the wildlife refuge.

The vibration is roughly 1,200 feet and the sound is roughly 350 feet into the refuge. And as I've said already, we have a permit condition that requires us to move 350 feet north when we develop Phase One and Phase Two to offset any potential impact into

that very small acreage of the wetland. I keep calling it a wetland, of the refuge area.

Back to our geology discussion very quickly, the overburden in this area, roughly 20 to 40 feet thick, that will be used to develop the overburden berms that I've discussed. I said the rock cut is 115 to 120 feet thick. Typical or initial production from the facility roughly 350,000 tons a year. Although, that is a market driven, market demand number, but it gives us some starting points to talk about.

Hours of operation. 6:00 a.m. to 6:00 p.m. Monday through Friday, 6:00 a.m. to 12:00 noon on Saturdays and then no operations on Sundays and legal holidays.

And I believe that's it for my summary. I will certainly answer any questions at the appropriate time.

MR. BROWN: Next I have Dr. Sam Gowan. Dr. Gowan, is the President of Alpha GeoScience in Clifton Park, New York. He has 40 years of experience working with state

agencies and including NYSERDA and DEC, municipalities, real estate developers, mining operations, energy projects, industrial facilities, commercial facilities and the work includes identifying groundwater sources, defining aquifer impact areas and developing water supply and emergency water supply plan. He's provided technical expertise in the areas of fractured trace analysis, water budget recharge analysis, aquifer identification and delineation, aquifer analysis and water shed delineation.

I'd like to say that Sam was the hydrogeologist for NYSERDA and DEC on the evaluation of fracking and the hydrofracking in New York State.

Dr. Gowan has conducted subsurface investigations and data evaluations for mine planning and mining impact assessments for coal, aggregate and salt mines throughout the country. His work has involved defining the quality and distribution of the mineral deposit, identifying geologic structures such as faults and fractures, assessing potential

impacts of groundwater and surface water to the mining operation and also the potential impact of the mine on those same hydrologic resources. He has evaluated the hydrogeologic impacts and groundwater conditions at approximately a hundred quarries and mines over his 40 years.

Dr. Gowan also conducts hydrologic evaluations of surface water for a variety of non-mining projects. These evaluations include monitoring of lake eutrophication, measuring stream flow rates, sampling for water quality and predicting flood discharges and average flow conditions.

Dr. Gowan has his PhD in Geology from Texas A&M University in 1985. Then the M. S. in Geology from Texas A&M University in 1981. B. A. in Geology from Colby College in 1976. He's a Licensed Professional Geologist in Pennsylvania, Texas, Illinois, Missouri and Kansas. You should know that New York pretty soon is going to license geologists.

DR. GOWAN: I'm licensed.

MR. BROWN: And Jason's is pending, so

we're going to have two New York licensed geologists here pretty soon. Professional affiliations include among others, Association of Engineering Geologists, Geological Society of America, Hudson-Mohawk Professional Geologists Association where he was Vice President from 1995-96, President from 1996-98. He was also New York State Council of Professional Geologists. He was Secretary from 1998-2002, President from 2003-2005 and Past President from 2005-2006. Being a PhD. I've got all his publications and a list of them so we won't use up all our time. So I won't read those.

Sam, if you could?

MR. GOWAN: Sam Gowan. I started on this project in 2008. I think the project's been going on since about 2002. The project started around 2002. I kind of came in in 2008. I was really asked to understand the hydrogeology, taking the site area and evaluate the relationship of the hydrogeology to water resources, the groundwater and the surface water in the area around the site.

Look at the impacts, what the site impacts would be on those water resources, addressing any concerns by stake holders and in the end, lately, I was asked to assess the relationship to climate change, what that's going to mean to the I.N.W.R.

Tonight, I'm going to focus on the relationship to the I.N.W.R. This map shows and really, it's a repeat of what Jason's already showed. You see the site and the refuge.

Now, I'd like to talk about the basis of how I arrived to understand the hydrogeology at the site. Really, I started with a basic premise and this is a conceptual diagram of the water table. The water table essentially -- and this is the way it looks all across New York State. It essentially mirrors the topography. So when you're in the upland areas and our site is kind of in the upland areas. It's below the surface. And as you come down into the refuge, the water table is pretty much right at the surface.

Now, the fundamental question is when

put in a quarry and you start to pump the quarry to keep it dry, that is going to draw the water table down. So what is going to be that impact on surface water and groundwater resources by doing that?

So our basic objectives when we come in to investigate what the impacts are, we wanted to find what that water table -- that existing water table is in the region around there. We want to determine what is the thickness of the aquifer that's going to be impacted and how far will the water table be drawn down in that aquifer and then in this particular case, what were the impacts on the I.N.W.R. by drawing that water table down.

So first thing is to determine the depth of the water table and typical way we do that -- we did at this site is put in monitoring wells and then measure the water level in these wells.

And this is the result. This is the site, the mine site. And what you're looking at with blue lines, that's an elevation contour. Just like topographic contours, we

also put elevation contours on the surface of the water, which is called the water table. The highest numbers there up in the northern end, Fletcher Chapel Road is along a ridge. That's the high ground. So it's no surprise the water table is higher up there and as you come down, the contours drop down as you go south towards the I.N.W.R. So I went ahead and I plotted that same map relative to the outline -- the outline of the I.N.W.R. is shown there in red. And you can see I put the arrows on that showed the direction of groundwater flow through that site existing conditions as flowing towards the I.N.W.R.

This is consistent with our understanding of the hydrogeology, groundwater is recharging in the upland areas. It's flowing towards the I.N.W.R. and then you can see the discharge into the streams, ponds and that's the way it operates and then same time we have surface water runoff as well. It's going down that slope.

So now that we know what our site hydrogeology looks like, now, we want to look

at the bigger picture. We want to try to map that distribution, that water table as it goes down to those discharge point. We measured -- this was the measurements we were making on Sour Springs Road where it crosses Oak Orchard Creek.

It also made the measurements in whatever springs we could find in the area and this happens to be one that's over at the intersection of Dunlap Road and Shelby Road.

So once we had that, now, we can create this regional groundwater flow map. And what you can see from this is, again, these are the contour lines that show the elevation of the water table going down towards Oak Orchard Creek and the purple lines, that's showing direction the ground water flows. It's going out to where its discharging.

Now, the next question is what happens when we start to pump this out of the quarry and this has to be done because you've got to maintain a dry quarry in order to operate. So you draw it down below the floor of the core. So the fundamental question is, is how

far down are we going to draw this? We had to determine this. This is a picture. You can't see it very well. This is on a U.S.G.S. Publication from 1964. This is the Lockport Formation over the Niagara Falls area. So this is the same formation that we're going to mine here as Jason was talking about. It has this characteristic that it has a seepage face that comes out. So it's a common misperception that when you dewater, you're drawing the water table all the way to the bottom of the quarry. And in fact, what happens is the water table comes out on your rock faces. So the draw down is to the top of where that leakage is coming in.

And the other question is, is where is the bottom? Unfortunately, you can't see this very well, but what I've marked here is I've marked the seepage face right here. This line is the bottom of the aquifer and that was the next challenge we had to do. And one thing we know about aquifers and anybody here that has a rock well, your most productive fractures are in close to the top

of the rock. And as you go down, your fractures -- your number of fractures decrease and then you'll get to a point where you're not having any fractures at all. So you, basically, have a dry rock hole going below your bottom fracture.

What we do is we take rock core and we have rock core that was taken from the site around 2001 or 2002. And I looked at those core to see where the water varying fractures are. Now, sometimes these cores come out and they are broken. They have fractures in them that were broken when they cored them. What we look for is fractures that we know were transmitting water when that core was taken. What we determined and, unfortunately, you can't see it on here, but we determined that the fractures -- the deepest these fractures went was between about 56 feet and 89 feet. So that maximum depth of 89 feet is the bottom of the aquifer.

So this line at the elevation where 89 feet is below the land's surface, the rest of this quarry is dry. That rock is dry. But

you got that water coming out of the aquifer and coming down in the quarry. That sets the boundary of how far down we are going to draw this water table.

So next thing we had to understand is how far is that water table going to be drawn down. How is it going to appear as its pulled down as it approaches the quarry? And the way we determined that is with pumping tests. A pumping test was run out there in the early 2000s. I don't remember the exact date, 2002, 2003, something like that. That was before I was on the project. We took that data and we determined from that you could tell how that aquifer was going to behave as it was drawn down by the pump. And we took the gradient from that and we also compared that to a U.S.G.S. study out in the power project out in the Niagara Falls area in the Lockport, that also gave us additional data as to how steep that gradient will be.

So at that point we determined that and we created this draw down map. The arrows now are pointing into the quarry and we are

showing draw down of the contours going into the quarry.

And then I want to show you the outer limit. This is the outer limit. Everything outside of this green line is not impacted by the draw down in the quarry. But I think it's important to see here that that draw down goes well out into the I.N.W.R. So the ground water draw down underneath the I.N.W.R. It comes down underneath some of these critical empowerments so that raised a concern for us.

Concern that we would draw down and pull the water out of the bottom of these empowerments. First thing we look at is the geology and Jason talked about the geology and talked about some of the types of unconsolidated materials that we're sitting on top of this rock. And the one thing that we noticed right away is that the areas where you have those empowerments like Center Marsh, School House Marsh, where we are having draw down, these are all underlane by silted clay. At least that's what the

geologic map told us. That low -- material what typically happens is it will perch those surface waters and the shallow water table you'll get a perched water table on top of the main water table that is down in the rock.

We weren't totally satisfied with that. So we got permission from Mr. Roster to go out into the marsh and pull cores. So we did that. We went out in the Center Marsh area and also out in School House Marsh and we pulled cores and confirmed that, in fact, it was the silt and clay that they mapped. So we were satisfied with that.

So that satisfied us that even though we were getting draw down in the bedrock aquifer, that we were not getting draw down in this superficial aquifer that is perched on those empowerments on the top.

Next thing we did was a water budget analysis. This is very powerful took. I won't get into this because it's a complex modeling system that we really established. I started doing this in the early 1980's

because I found it was the most powerful tool that I could use in these quarries in New York State particular, to try to understand how much water we would be dealing with.

Basically, the concept is, we've got groundwater flow and surface water flow and there's a finite amount of that water because we have a finite amount of precipitation. It all has to balance. It's a mass balance.

So what happens when we put the quarry in, is and I think Jason sort of touched on that a little bit, we are going to eliminate some surface water because we are putting this big quarry in the middle of that. Now, it's going to be direct precipitation into the quarry. So the run off normally would have gone off in the I.N.W.R. from that quarry is now in the quarry. We are going to draw groundwater back as well. And that groundwater, of course, was on its way out to Oak Orchard Creek. So we are cutting that off.

So first thing we looked at was the surface drainage basins and even though, as

Jason said, there are no specific streams in here, these basins take surface water now and they move them off to the refuge. What we found is there's two basins that are very similar in size that kind of split through the site.

So you've got Basin One that contains the Phase One area and Phase Four area. And Basin Two comes down, comes off the edge of what Jason referred to as Phase Two. Basin One goes into School House Marsh and Basin Two goes into School House Marsh.

When we saw this, we were originally looking at trying to do a water budget. We actually did a water budget for the whole project as if we were going to mine out the entire mine and keep the entire mine dry. At that point we realized, wait a minute. Phase One is entirely within Basin One. Why don't we use that as a reservoir. And I'll talk a little bit more what the significance of that is. So we did our water budget based on that single Phase One. Because once we are done with Phase One, we're going to use that -- we

are going to fill that Phase One up and use that to mitigate any impact. So what happens is, if you had the full quarry and you drew down the full area, that's going to have a bigger impact than if we just mined out Phase One, then fill that back in and that's going to bring the water table back up around Phase One and that will help us mitigate the impacts from the other phases.

So we did a water budget based on this. It's pretty busy. I don't want to get down in the weeds on this, but I just highlighted some points here in red. The top one is our current average annualized runoff is 185 gallons per minute out of Basin One. That's existing conditions. When we put that quarry in, the future discharge from the quarry, which is groundwater and direct precipitation, is going to be 445. For an increase down at the bottom of 259 gallons per minute annualized. So we're increasing that discharge out to that School House Marsh Basin One.

Well, I.N.W.R. had some concerns with

that because they saw this as an impact. We were increasing the flow and going to impact their ability to manage this. Kevin Brown indicated, they manage the water levels in there, but if we start increasing the inflow out there, they're going to have difficulty managing that. So we went over there, our technical team went over and met with Mr. Roster and some of the other technical staff and we came up with a resolution. And that resolution is that we can alternate that discharge because they change their -- in their management plan, they do different things over periods of two or three years they have these plans for increasing decreasing water level, but we can cooperate with them to discharge to different basins, different amounts and that sort of thing and they were very happy with that concept.

Now, I want to jump over to the DEC comments. And this is mostly pertaining to the I.N.W.R. Of course, they had concern that we could coordinate with the I.N.W.R. They were satisfied with that. In fact, I

should point out before I jump here, they also had concerns with water quality and the rate that we were going to discharge.

So based on our coordinated effort with the I.N.W.R., they went ahead and permit condition in the draft permit -- permit condition 14 and wrote right there that we would coordinate with them. We're required to coordinate with them, which we're very happy to do.

The water quality aspect. The DEC was concerned because sometimes these formations have water that's not very good quality. So they asked us to go and collect some groundwater samples from the wells we had on the site. We sampled seven wells. Here are the results. Again, sorry for a busy diagram, but I'll just highlight the ones that have exceedences. Iron, everything else was very clean. It's a good quality water except it's high in iron. Iron is not a health hazard, but the reason I put it in the standard is iron, when it's exposed to air, will discolor your fixtures, your porcelain.

It will stain them. That's why this is in the drinking water standard. So those levels are moderately high.

There's a slight -- the DDS is totally dissolved solids. The standard is 500, which we are slightly -- slightly above that standard. But everything else was good.

MR. SPITZER: I take it you've never had kidney stones. Mine were blamed on high -- from the Colorado River.

DR. GOWAN: Wow! How high was that?

MR. SPITZER: The Colorado River was at our city's water system was like rocks, so literally, it was higher than your numbers.

DR. GOWAN: One thing I want to point out here, is they used this number, 385.6 gallons per minute. The DEC, this is going back to their concern for the rate of discharge. They asked me to look, give an estimate of what I thought a spring snow melt runoff discharge rate would be and the highest groundwater rate and that's 385 and then they said, okay, we are going to set that as your limit. So we can't discharge

more than that in a given time. I think it comes to 500,000 plus gallons per day.

Now, I'd like to talk about the U.S.G.S. They did an analysis, an investigation. They didn't really have the criticisms of our approach, but they did express some concern that we were going to affect the Sour Springs or Sour Spring, which I think is a significance for the region.

I know Bill Kappel. He's one of the authors and we wanted to go out and investigate this. He said he was unable to tell us where the location was, but he did tell me that the location is somewhere east of Sour Spring Road and south of Oak Orchard Creek.

So they put a well in, U.S.G.S. did, as part of this investigation down here. It's marked in red. That's also south of Oak Orchard Creek and it's close. It's right along Sour Spring Road. So I figured that well, must be reasonably close. So I assumed it was reasonably close to that location. That location is outside of our groundwater

impact area and the fact -- what happens because the Oak Orchard Creek is the discharge zone for the aquifer, ground water that is coming from the south is flowing north through that area where the spring would be. So its water is coming from a different direction. It's coming from the south.

We also put a geologic cross section through. I know you saw some that Jason put up. This is a different cross section. That well that the U.S.G.S. put in is right here. The Lockport is the dark green. That's the formation that site is going to be mining. But where that well is, there's another formation sitting on top of it. I think Jason called it the Syracuse. Actually, it's the Salina Group. It's got the Vernon and then the Syracuse. And these are salt bearing units. They've got a lot of gypsum and this sort of thing, which is the source. That's the chemical source for the Sour Springs.

So we are not impacting those springs.

I'm very comfortable with the Hydrogeology and the geology. It's a different regime if you will, hydrogeology, flow regime.

Now, I'd like to talk about the comprehensive conservation plan for the refuge. They completed this in September, 2011. And six main goals in there and I just want to highlight the first two goals. I won't read these but what they talk about is maintaining through water level control in their empowerments, maintaining the habitat. And the second goal is also about maintaining the free flow of Oak Orchard Creek to maintain that as a part of their viable habitat.

But they have some issues and the issue is on the outlet and this is part of the reason that these wetlands exist here in the first place is there's restrictions because of the bedrock. Where the Oak Orchard Creek goes out to the north, bedrock -- Oak Orchard Creek rides right on the bedrock and the bedrock walls come in fairly tightly and that restricts the flow. So what happens in the

spring when you have a lot of run off and you have major flood events, the water can't get out fast enough. So the refuge has to do everything that they can to get that water out of that system. But where that hurts them is they are not able to hold enough water back to get them through in the late summer when the drought conditions occur.

This is a picture -- this is actually down in Harrison now, but it shows the bedrock sitting right on the bottom of the Oak Orchard creek.

Now, I'd like to talk about the affects of climate change. Climate change in Western New York, I know NYSERDA and several other groups have studied this extensively. And what they are envisioning is as the temperatures rise over the next decade, precipitation is going to increase, but that precipitation is going to be concentrated more in the winter and in the spring and we're going to have dryer conditions in the late summer. So you're going to have more evaporation and less rainfall late in the

year. So really it's going to create more streams of water, which makes it difficult for the management of the refuge and the refuge in the conservation plan it states, this comes out of that plan, that they have a Federal directive that they have to plan and mitigate for the affects of climate change.

And that brings us up to 2016, because I think 2016 for this region really was kind of an eye opener about what we're heading for here.

This is a map of the drought conditions and Orleans County right on the edge of it, which is really where the refuge is, right at the southern edge, that severe to extremely severe drought conditions. This map was put out on September 6th, 2016.

I was curious as to what this meant to the flow in Oak Orchard Creek. U.S.G.S. has a stream gauging station down near the Harrison Road bridge. Unfortunately, I didn't have a picture of that. I didn't realize I was going to need to talk about that. So I looked at this data from that and

the average annual discharge and if you go over on the right-hand column, that's gallons per minute, which is what we've been kind of talking about. I've got cubic feet per second in the middle column, gallons per minute on the right-hand side and the average flow is 73,000 gallons per minute, but I thought might be helpful to look at that driest part of the year, which is really September, going into October and into November, the driest part of the year.

Even though it's dry in the summer, but all your groundwater and everything has been dropping off and that's when your stream flow begins to really drop off. The average from 2009 to 2015, from that three month period is about 26, almost 27,000 gallons per minute. But September to November, 2016, it dropped to almost a third, 10,000, almost 11,000 gallons per minute. Discharge range during that period was 27 gallons per minute up to 31,000 gallons per minute, very extreme. As a matter of fact, there were 17 days in that period when that flow was less than 385

gallons per minute of allowable discharge. So you can see right from this data, having that ability to discharge into that system would be a great asset to the refuge to help maintain their flow conditions.

I just want to briefly point out that our capacity in Phase One when that -- if that's allowed to fill back up is 580 million gallons. And a flow capacity of all phases is 9 1/2 billion gallons. So in the future, when the quarrying is done, the refuge will have the ability to pump much higher rates than the 385 gallons per minute and to help them manage their wetland conditions.

And they will be able to pump discharge to either basin so have that ability and we will have that ability to do that.

So really in summary, groundwater resources of the refuge will not be impacted by the quarry. Any potential changes in the quantity of surface water resources will be mitigated by retaining flood water and discharging to alternate subbasins as requested by the I.N.W.R. And a water

retention capacity of the quarry during mining and after the end of mining will be an asset to the refuge for management and seasonal hydrologic extremes caused by climate change.

Thank you. Kevin?

MR. BROWN: Those are our two significant presentations. I know there's a lot of information in there and be happy to take questions.

You know, can I ask? Perhaps Dina could go through the package that we've provided and let you know what you have because there's a lot in there for reference.

MS. BARONE: It might help you to conform your questions. There is a site map in the left-hand side of your packet in case you need to refer to it for questions. You have plates one, two and three, which talk about the Lockport Formation and show it relative to the Town of Shelby.

Picking up on what Sam just talked about, you have got the NYSERDA Climate Change Study for New York State and you have

this part of New York State tabbed in yellow. We also have the DEC Advisory To Hunters on October 14th of 2016, of low water levels. We have the USDA Press Release from August 29th about the Drought in Orleans County complement that. We also have a NASA Climate Study for you to refer to. Relative to the economic and fiscal impact that Kevin spoke about, there is the 2013 Economic and Fiscal Impact Brief Report that as prepared if you want to refer to that. And then you have in the power point topically, what everybody went over this evening, you have some of the high points of the project overview. Again, plates one through three. The Iroquois Job Corps high points in case you have questions. It's kind of a summary in case you want to refer to it. STAMP, operational noise, blasting topics, dust, quarry dewatering and surface water discharge. The wildlife section of this power point answers a lot of the questions that the Shelby Town Board and residents have had about specific animals in the refuge and birds species. You will find

all of the answers here that all of you have posed and the public has posed. So you might want to review that before your questions. Further, we have more information that backs up the economic and fiscal impact report in the benefit section of the report and then a summary of the reclamation phase. And there is also a copy of the permit in case you have questions about the special conditions.

MR. SPITZER: Permit or draft permit, do we have a permit?

MS. BARONE: Draft permit.

MR. SPITZER: Actually, maybe you can tell us also where things stand with the permit, the SEQR and --

MR. BROWN: Sure. We've been through the issues conference, as you know, and ALJ -- we completed the issues conference some months ago. I think it was in April. The Administrative Law Judge issued a ruling and found no issues. There was a time to appeal sent out and procedure for appeal. And as commonly happens with pro se petitioners, they -- apparently Mr. DeMoi sent an email to

the commissioner, an exparte communication, that then cycled to the hearing office and they asked whether he would like to have that considered an as appeal. So it's now sitting in the office there. So that's what that is. There was -- again, I don't know that there's any basis. It was late. It was untimely. It was improper and there was no science in support of it at all.

MR. SPITZER: What I'm more interested in is just educating the Town Board and the public about how their role comes into affect. I would expect the next steps of the DEC would be to issue a permit and an FEIS or the FEIS and then ten days later, a decision in the permit or --

MR. BROWN: Or statement. Yeah, what should happen next once the appeal is resolved, the DEC should continue to findings and then issue the permit. That's what should happen.

MR. SPITZER: Once they issue the findings, ten days later the Town can get on with its own findings and its hearings on

your special use permits and overlay district requests, right?

MR. BROWN: Yes, sir. Yeah, right now we are still in that.

MR. SPITZER: Right, the Town literally has to wait until they're done to make a decision. So that's where everybody understands the timing of how the two interplay with each other.

MR. BROWN: Yes.

MR. SPITZER: Thank you.

CHAIRMAN DRAPER: Any questions from the Board? Bill?

MR. BACON: Reference the noise and dust, what about the people who live right by this, you know, the guys right to his backyard?

MR. STALKER: That's my question. You've got that yellow on the south side impacting the refuge. You say that's 22 and a half acres, correct?

MR. KAPPEL: Correct.

MR. STALKER: So it's 22 and a half acres on all four sides, correct? So it's 90

acres, correct?

MR. KAPPEL: Well, that's an interesting discussion because the ambient is different up near Fletcher Chapel. Your ambient is higher because of the roadway.

MR. STALKER: So it's more than 22 acres?

MR. KAPPEL: I'm sorry?

MR. STALKER: It's more than 22 acres?

MR. KAPPEL: No. What happens is we are -- we projected into the refuge. The ambient as you would imagine in the refuge is relatively low. So the impact can go in there a little bit further. When you're along Fletcher Chapel and you have I believe it's thirty-seven hundred cars a day or whatever the number is, the ambient number up here would be the existing sound level that you would experience today if you would walk out there is a higher than in the refuge. So our projection beyond our 30 foot high berms is not as significant in other parts of the site as you would be into the refuge. This is the most sensitive area. So you're

wanting to take that Math and applying it linearly is not appropriate for the setting we're in because of the surrounding roadways.

MR. STALKER: Okay. Second question, behind you, behind you. That brown indicates the berms?

MR. KAPPEL: Yes, sir.

MR. STALKER: Why is there no berm on the east side there, that whole stretch there?

MR. KAPPEL: Right here?

MR. STALKER: Yes, sir.

MR. KAPPEL: We put the berms in terms of where receptors may be and we set potential disturb there. So we have the option of putting a berm in here should we need it, but the berms were skewed towards where there are receptors.

MR. STALKER: Okay. That's to the left there. There's a driveway that goes out through that berm, correct?

MR. KAPPEL: Right here?

MR. STALKER: No, no. The other way, north. Your main entrance --

MR. KAPPEL: Yeah, correct, yup.

MR. STALKER: Not there? Oh, it's going to be in the Niagara Mohawk right of way?

MR. KAPPEL: I'll bring it.

MR. STALKER: I have that here.

MR. KAPPEL: Okay.

MR. STALKER: You're not showing a break in the berm on your property line.

MR. KAPPEL: I'm not sure where. Here?

MR. STALKER: Where the entrance is going to be for the trucks? Where --

MR. KAPPEL: The entrance for the trucks comes down off Fletcher Chapel in a southerly direction and comes in and makes a westerly turn into the processing plant on the south side of the berm.

MR. STALKER: Okay. It's not on the power company right of way?

MR. KAPPEL: No, sir. We do have the authority to cross power company right away.

MR. STALKER: You made the statement of 350,000 tons a year?

MR. KAPPEL: Yes, sir.

MR. STALKER: So that's approximately twenty-five hundred trucks in and out each -- 5,000 trucks a month, correct? 20 ton to a truck?

MR. BROWN: I'd have to do the Math here.

MR. STALKER: I did the Math.

MR. KAPPEL: How many trucks?

MR. STALKER: Twenty-five hundred trips in and twenty-five hundred trips out at 20 ton to a truck.

MR. BROWN: The reason -- I ask quick off the top of my head, but I want to go --

MR. STALKER: I went on seven months. You made the comment of seven months.

MR. BROWN: Let me get the actual numbers out of the report because -- so I'll look it up for --

MR. SPITZER: The traffic study I assume that's in the DEIS that's online?.

MR. BROWN: Yes.

MR. SPITZER: And the traffic --

MR. BROWN: And there's a traffic study also. There's a summary right here in this

document.

MR. KAPPEL: So your question, sir, twenty-five hundred trucks a month?

MR. STALKER: No, no -- yeah, a month in and out so that's 5,000 trips on that road. That's what I'm -- I'm just saying is that correct by what you said?

MR. KAPPEL: Well, the volume of thirty-five hundred, now, if that's spread -- if there's a large contract and that's spread differently over the months that you have discussed, but seven months I believe is very light. 12 months out of the year, my discussion talked about being shut down December, January and February, in there. So certainly, not seven. So I don't know if I can agree with the seven month operating season as you --

MR. STALKER: Somebody made that statement it was a seven month operation.

MR. BROWN: I'll find it in here, sir.

MR. KAPPEL: If that statement was made, that's a misstatement because a seven month operating season is way too short. So

I don't think the Math holds with the seven month operating season.

MR. STALKER: I wasn't the one that said seven months. Somebody out there said that.

MR. KAPPEL: Well, I'm just clarifying now, seven month is not appropriate. Your winter maintenance is December, January, February.

MS. DINA: March, too.

MR. KAPPEL: Sure, depends -- certainly, weather dependent.

CHAIRMAN DRAPER: Russ, there's not an open session.

UNIDENTIFIED SPEAKER: Oh, it's not.

CHAIRMAN DRAPER: It's not.

UNIDENTIFIED SPEAKER: I didn't know if you wanted to know --

CHAIRMAN DRAPER: Bill, anything further?

UNIDENTIFIED SPEAKER: It's National Grid.

MR. BACON: No.

CHAIRMAN DRAPER: Steven?

MR. SEITZ: Yes. Can you explain the

water? How is it being pumped out into these basins? So when that -- I mean is it a pipe that pumps it out? How does that work?

DR. GOWAN: It will be pumped out into a settling -- basically, on site feature and then it will channel out through a culvert underneath the power line.

MR. BROWN: Into settling basins, sequence of settling basins and those are all under a permit constriction. They can't be discharged unless they meet the standards for suspended solids and everything.

MS. BARONE: I think he wants to know how it's getting from the quarry to the refuge, correct?

MR. SEITZ: Yeah. How is that going to these basins? And then you talked about being able to separate them from one basin or another based on the needs of the refuge. So how does that work? How does it get across the power line? /Because we all know that there's a power line that runs behind there. How is that water crossing there?

DR. GOWAN: It will be to the culverts.

MR. SEITZ: So the culverts just -- and it can be shut off on your side, right?

DR. GOWAN: Right.

MR. SEITZ: When it's only accessed -- so when they stated they would need water, it would be up to you guys to actually go and make that movement?

MR. BROWN: Yeah, we have shown on the -- the permit condition on the map, we've showed -- we'll run the line over there. And it will be just up to them. They call us. They want us to move it over there. We shut it and it goes that way. We've set that up with them where we are going to discharge and how we are going to have the switch.

MS. BARONE: Discharge and also retain water for them.

MR. BROWN: We can switch between the two. That was sort of the big eye opener when Sam -- when they went out and we had realized we are right on that divide where we put this. And we can switch between basins just like that. Even when we have the first -- the first reservoir. So we now with all

this feed in here, we have the ability to store, redirect, utter discharge, whatever they need to manage their system.

And we actually met with Doug Sullivan and I have to preface this by saying we had a meeting with Doug Sullivan. They don't support this project. They're not opposed to this project. They haven't even looked at this project. The reason we reached out to them was we were looking at the mechanisms that were out there for partnering with the wildlife refuge. Sam talked about how the wildlife refuge is to partner. They actually have in their plan they need to start partnering with neighbors, communities and businesses, everything, because they have to build some resilience in these refuges. They are critical.

MR. SEITZ: I think we're going off topic a little bit.

MR. BROWN: No, what I'm saying is we spoke to them about partnering. They don't take any positions at all. But we went and talked to them about how we can do even more

planning about where this water can go and how it turns out, they get matching funds. So if we were to put funds into that, you know, they get matching funds to do all the planning. It was suggested we can do the planning for this piece of refuge here. Figure out the very best way to use this reservoir.

MR. SEITZ: So the projected site, so 75 years, right, is that what it's -- the span, that's without any additional phases down the road?

MS. BARONE: Four phases.

MR. SEITZ: But no additional at this point?

MR. BROWN: Right.

MR. SEITZ: So 75 years from now, we've got this pretty picture what it looks like 75 -- what is it to the residents of the Town of Shelby? Are they able to access that property? Does it turnover from Frontier to the Town? Does it turn to the refuge? How does that work?

MR. BROWN: We certainly would be more

than willing to discuss that with you. A process going forward with you for an overlay district and a special permit. We would be more than happy to discuss all of that with you. As the quarry transitions. We think looking at this as a refuge, those are the ideal conditions for Bald Eagles. Right now, there's no Bald Eagle habitat. The forests are too immature in that area for marshes. There's no reason the refuge plans in these types of windows, 15, 20 year windows, that they couldn't plan that as that quarry came to culmination and became two reservoirs, two lakes, it couldn't be habitat for Bald Eagles and --

MR. SPITZER: Mr. Brown, you actually said you were going to cover the reclamation plan, but I didn't actually hear anybody discuss the reclamation plan. So I know you said in your introduction you were going to do that.

MR. BROWN: Yes.

MR. SPITZER: I apologize if I missed it.

MR. BROWN: I apologize.

MR. KAPPEL: I apologize if I went too quickly, sir. So it's a very simple reclamation plan. It's what we call water based reclamation. So on the periphery in areas where we are above elevation 650 because that's the elevation of the anticipated elevation of the surface water bodies -- I'm sorry, 625. Around the perimeter, the area is graded. There is an approved seed mix or it is a seed mix which is offered in the Environmental Impact Statement, which those grasses would be placed. The upper six inches of soil which will be stripped from the area is set aside in dedicated stock piles for re-use in the future. That top soil will be spread in the areas and so in what are Phases One and Four, elevation 625, approximately water level 32 and a half acre lake or 32.2 -- or 35.2 acre lake and then Phases Two and Three, 156 acre lake. Again, water elevation of 625. Again, the same thing with areas surrounding the lake. Anything that's above that elevation

graded, seeded, as per the Reclamation Plan.

MS. BARONE: So you're looking at the potential for a wildlife refuge, a Bald Eagle habitat, a park, a lake, all that, walking paths, biking paths.

MR. SEITZ: But that's not stated now?

MS. BARONE: No, that could be --

MR. SEITZ: Right now it's just --

MS. BARONE: Large bodies of water, two reservoirs.

CHAIRMAN DRAPER: Put that map back up that they had in the beginning. It shows the two discharges, one to School House Marsh.

MR. SPITZER: That one.

CHAIRMAN DRAPER: Tell me the plan, again, to discharge to these two marshes?

MR. SEITZ: Basically, said two culverts?

CHAIRMAN DRAPER: I guess what I'm asking, School House Marsh on the opposite side of Sour Springs Road. So what is the plan to reach that?

MS. BARONE: Can I go back for a minute to Mr. Stalker's questions about the berms?

Actually, what you're going to have going on here is that the current landowner would be concurrently farming during Phase One. He would be concurrently farming all of the farmland that you see designated for Phases Two, Three and Four. That's also why some of the berms are not necessarily in there at this time. The existing landowner would also be concurrently farming where you see Phases Two and Three, while they are mining Phases One and Two.

MR. STALKER: My question was, made the comment that the berms help cut down on noise and dust and that there. There's nothing to the east from hitting those houses.

MS. BARONE: Correct. But the fact of the matter is that you're not necessarily going to have an operation there because there's still going to be farming.

MR. STALKER: There's no berm.

MS. BARONE: They're going to have the farming operation across.

MR. STALKER: There is no bern in the middle I'm saying to stop the dust from going

east.

MR. SPITZER: Will there be a berm there when the mining reaches that point --

MS. BARONE: Yes.

MR. SPITZER: -- Because it's not shown on your reclamation plan.

MS. BARONE: Well, you've got them farming on this side when stage one is going on.

MR. SPITZER: Okay. But eventually, your plan is to mine the whole area, correct?

MR. STALKER: The area on the right.

MS. BARONE: Correct.

MR. SPITZER: So when you get to the mining which is when the dust emissions would occur --

MS. BARONE: Yes.

MR. SPITZER: -- Will there be a berm there?

MS. BARONE: Yes, consist a berm.

MR. SPITZER: Where is that shown on the --

MR. STALKER: It's not shown.

MS. BARONE: It's not shown there.

MR. SPITZER: Okay. It's not shown on the Reclamation Plan I think that Mr. Kappel just showed us either.

MR. KAPPEL: Well, in the reclamation plan, the berms are not shown because the berms -- because we have taken the berms down.

MR. SPITZER: Taken the berms down?

MR. KAPPEL: Well, because you need to take -- in some areas you need to take the soil that's in the berms for reclamation.

MS. BARONE: The overburden is taken.

MR. KAPPEL: Right. So go ahead.

MR. SPITZER: I'm not quite sure and I apologize, but I'm trying follow-up with your question. I don't understand this reclamation plan then. Right now, you're basically proposing, as I understood it, to mine to the limits that the DEC permit draft permit allows.

MR. KAPPEL: Correct.

MR. SPITZER: What's the reclamation? You're not filling in the reservoirs, correct?

MR. KAPPEL: The reservoir is -- back fills with water.

MR. SPITZER: The reservoir is filled with water?

MR. KAPPEL: Correct.

MR. SPITZER: You then remove the berms. What do you do with that dirt?

MR. BROWN: There's slopes.

MR. SPITZER: Do you use it to create slopes?

DR. GOWAN: Slope and seeded.

MR. KAPPEL: Sloped and seeded in areas that are above the water table, correct.

MR. SPITZER: Sloped and seeded. But would the -- but that doesn't reduce the reservoir size?

MR. KAPPEL: No, sir.

MR. SPITZER: For example, you're not creating an island for wildlife?

MR. KAPPEL: No, there's no plan to do that.

MR. SPITZER: Yeah. You're not creating a recreational place for, you know, like -- you mentioned slope. Are there DEC

regulations about posts before it could be used for recreation about what the slope could be?

MR. KAPPEL: 50 feet into, the DEIS describes 50 feet. The first 50 feet, the water depth would not exceed five feet. It's for -- that's for environmental purposes. It allows certain species to develop. It's a safety factor. So once you know you're wet, you're wet. And that 50 feet. You're not dropping off into a hundred feet of water. So there's many reasons we that what we call latoral zone as well as a safety factor. If someone were to wander on to that, you don't get inundated over your head as soon as you step in the water.

MR. SPITZER: Speaking about safety, again, just following up, what is the security in the post mining era? Is it barbed wire fence, guards with machine guns? How do you keep kids out of this?

MR. KAPPEL Well, I think that dovetails into the discussion that we were just having as to what is the -- right now,

it will still end up being private lands and then if there is a discussion in terms of interfacing with the Town in the future. I'll leave that up to Mr. Brown to discuss, but at the conclusion of the mining, it's still private land. No different than if you had a pond on your property or something like that.

MR. SPITZER: Assuming it's still private land, what is the security at that point? Is there a fence around it?

MR. KAPPEL: No, no, there's no plan for a fence. Obviously, we have the utility right of way, which will be maintained. We have our access road will be maintained off of both roadways and the berms will be reduced as we have discussed. They will be graded here, but and maybe Kevin can weigh in on this, but my understanding is it's still private land and those -- the rules of accessing private land would still be in place.

MR. SPITZER: I understand that. I'm really asking about what Kevin would have

done status quo -- attractive nuisance.

MR. KAPPEL: Understood.

MR. SPITZER: Usually if you have a reservoir, you'd rather not have it without a fence. I'm just asking what your plans are. The road is a private road. Whether you maintain it or not, is your business.

MR. KAPPEL: Right.

MR. SPITZER: NiMo can do what NiMo does.

MR. KAPPEL: Right.

MR. SPITZER: But you have a situation that all mine owners face during operation and afterwards of it's private land. How do you keep kids out? What do you do?

MR. BROWN: It's a lake.

MR. SPITZER: Yeah.

MR. BROWN: It's a lake. We will have to work that through with the owner. We --

MS. BARONE: With the landowner.

MR. SPITZER: One last question if I may.

MR. KAPPEL: Yes.

MR. SPITZER: What's the -- 75 years

from now when it's two reservoirs and reclaimed, what's the taxable value? Is it anything other than zero?

MR. BROWN: I don't know. I'd have to --

MR. SPITZER: The DEC uses two hundred bucks for wetlands an acre. That's what they recommend. That's what most assessors across the State use. Assuming that it's built to your plan which, you know, as approved by the ALJ, what's the estimated taxable value in 75 years?

MR. BROWN: I'm not sure, sir. I'm not sure what the value would be as a reservoir either, if it was a water reservoir. I know this year farms were looking for water, needed water. I know the refuge is going to need water in the future. And so it -- may be it has great value as a reservoir for farmers and the water can be sold. Provide water downstate. There's a lot of property like that. I don't know what they tax them at. I know for the next number of years it will return a lot of tax value. I do have an

answer on your question. What's going to happen is you'll run a line. See that L shaped pond?

MR. SPITZER: No. Can you -- maybe somebody can point to it? I'm sorry. I have bad vision and it's hard to see. Thank you very much.

MR. BROWN: That's where we're pumping to for Basin Two based on drawings provided to --

MR. SPITZER: Can you do that, again, whoever did that?

MR. BROWN: On the I.N.W.R., they met in the field with I.N.W.R. I.N.W.R. pointed to where they wanted these discharges to reach. That L shaped pond right there and the other discharge was the original discharge point that we showed them.

CHAIRMAN DRAPER: So it is not School House Marsh far to the left?

DR. GOWAN: It goes to it.

CHAIRMAN DRAPER: It is or it is not?

DR. GOWAN: It goes to it.

MR. BROWN: It goes to it. It's a

stream.

DR. GOWAN: It will go through their natural drainage down through School House Marsh.

MR. BROWN: We ran the HydroCAD on all those. Right now, that's a little stream.

MR. SPITZER: So the L shaped thing is not shown on the site plan, but it would basically be to the east of Sour Springs Road? And here's what I'm looking at Mr. Gowan.

MR. BROWN: This is -- the basin plan is right at this whole thing. This is pretty simple. There is the two basins coming down, Basin One, Basin Two. And School House Marsh is a stream that flows right here. Right now, it flows down this ditch, from the farm fields and collects from the farms, flows down this ditch under the culvert and over here. That's how it goes in. So that's our original discharge point is that existing drainage conveyance. After meeting with the I.N.W.R. folks, they said you can also give a discharge, run a line and that's what was so

stunning. It's only a hundred feet or so is where these two flip over the other basin. We just run a line over there and discharge. Basically, I think it's configuration. And that flows down to Center Marsh. Water keeps moving. That's the design. We met with them in the field and agreed that we will turn it whichever way they want it going, we'll send it that way.

And later on, when we are over in two and we have the reservoir, we turn it on and off any time they want. We can do whatever they need.

MR. SEITZ: I have one more follow-up?

CHAIRMAN DRAPER: Go ahead.

MR. SEITZ: Right now, this is Frontier Stone putting the application in. They are the ones that are signing on in agreement to be able to do this. To be able to let the water out into -- with the wildlife refuge, correct? That's how it currently operates.

76 years from now, returns to private land. Is the agreement held for Frontier? Because at that point I would assume the

lease is done. And then the private land owner -- because if we don't have -- it's just going to go back to the private landowner as two lakes. How does that work? How is the benefit to the refuge going to continue on year 76? Is that built into the agreement that the private landowner is responsible to do that?

MR. BROWN: No, sir. Right now, it's built into the mining permit.

MR. SEITZ: With Frontier Stone?

MR. BROWN: With Frontier Stone, right. I think that would be a legitimate issue we can look at.

CHAIRMAN DRAPER: Anything else?

MR. SPITZER: You're talking about the pumping after the mining is done?

MR. SEITZ: Correct.

MR. SPITZER: Who operates the pumps in terms of who pays the electric bill for the pumps? You, Frontier or I.N.W.R.?

MR. BROWN: No, right now, Frontier.

MR. SPITZER: So Frontier is done with its operations in 25, 75, whatever number of

years. Who operates the pumps then?

MR. BROWN: It may be -- I don't know, but that's time -- this is something we haven't fully resolved yet. That is the type of thing we can resolve eventually through --

MR. SPITZER: Sir, I read this. And climate change is going to be worse in 75 years and in fact, you said so. So who's going to operate the pumps in 75 years? Yes or no. Who's going to operate them?

MR. BROWN: Well, the I.N.W.R. might because they -- they could need them.

MR. SPITZER: Have you given them title to the pumps contingent on the closing of the plant?

MR. BROWN: No, sir.

MR. SPITZER: Have they taken on the Federal Government? That's such an easy organization to work with. Have they actually taken on that responsibility?

MR. BROWN: No, but I do understand that they have a statutory obligation to plan for climate change. I do understand they have a partner.

MR. SPITZER: Actually, they have an executive order obligation. And I'm not so sure how long that particular executive order is going to stay in place given the current pace of executive orders that were issued in the last --

MR. BROWN: Yeah, that is possibly true.

MR. SPITZER: I think the Councilman has kind of hit on something, you know. Obviously, the community here is worried about a long term relationship and you are as well because you brought up climate change. Shouldn't there be presented by time we got to the Town permit, review a mechanism by which you will insure the ad infinitum, whatever that term should be. I'm sure I just butchered it, but should there almost be like a homeowners' association, some mechanism by which the benefit that you're claiming will stay on forever?

MR. BROWN: Yes, sir. I think we should meet. You're right. Moving to the next stage through DEC. DEC regulates what it

regulates. Now, we are coming to the Town. In the next step, after we get through, as you mentioned SEQR findings, we move forward with the Town and we can address -- we can talk about all these things. These aren't things we are adverse to talking about. We really think this quarry, which its plan for reclamation, can be an asset to the community, to the I.N.W.R. So far in this process, every time there's been an issue, we throw -- but every time there's been an issue, we've gone out and taken care of it. We went out and took care of STAMP. Charles -- you weren't there for that night. But Charles made a statement at the DEIS hearing and they said, got to figure out how it's going with STAMP. We got down, worked for a year. We spent tens of thousands of dollars and lots of time to get that sorted out.

MR. SPITZER: By the way, Kevin, is the data that you came up with for that testing on the web site as part of the EIS? In other words, one of the gentleman or you were talking about, how you did this vibration

test?

MR. BROWN: Sure.

MR. SPITZER: And I am familiar with Vibra-Tech and very good companies you used and the data was obviously generated. Is that public? Is that in the record?

MR. BROWN: There's your website and there's the official DEC. I know we went through there.

MR. SPITZER: You can just send me an email telling me where it is. That's an answer.

MR. BROWN: GEDC I --

MR. SPITZER: Or let me suggest to you and I do apologize to the Board for jumping in. Couple things. First, I would ask that you make sure the clerk get copies of all the power points and all the maps that were submitted tonight. So that it can all be in the record.

Second, I'm perfectly comfortable with you following up to the Board with -- you asked this question, please look to the DEIS on page X or please look on page Y. This is

intended to be a conversation. So it's not a quiz. So if you want to say here's the answer, that's fine.

But you know, just staying with the Councilman's question about reclamation, out in Joe's neck of the wood. Mendon did a really nice job with ponds where they built a really nice high-end residential area on reclamated mines. But they didn't allow them to literally carve out to every potential DEC inch. They actually preserved area to build a residential neighborhood. I think the same thing was done in Clarence and some other areas about that, where you end up then with taxable value of a high-end value.

Not meaning to put you on the spot tonight, because you don't have your calculator or your accountant with you, but clearly, in terms of looking at the reclamation and the long-term history, what opportunities are there to do reclamation that creates a taxable, viable residential community as opposed to just a couple of reservoirs? I know you have worked on some

of those so you know what I'm taking about.

MR. BROWN: This is a process with this Board that we hope to enter a dialog. These are all -- right now, this is where we are at with the DEC. Of course, I have to talk with both -- two parties out there to work forward to this. We are hoping to have a dialog over the next year.

MR. SEITZ: To me, it's important as it is today as in 76 years from today. So I just really want to stress that. That's all.

CHAIRMAN DRAPER: Ken.

MR. SCHAL: The depth of the quarry is a hundred feet, is that correct?

MR. KAPPEL: Just over, sir. An elevation of roughly 480 above sea level.

MR. SCHAL: That's the quarry with the overburden or just the quarry?

MR. KAPPEL: The minable section of the Lockport is 115 feet or so.

MR. SCHAL: Okay. The berms that you talk about, they are going to be vegetated. What are they vegetated with or they going to be maintained?

MR. KAPPEL: Yes, they will be. There is a seed mix that's in the DEIS that has a list of grasses that's typically a conservation mix. If some woody vegetation appears on a berm, we wouldn't go knock that down.

MR. SCHAL: So you're not going to mow it?

MR. KAPPEL: But the base of it in terms of the orientation of Fletcher Chapel, that would be maintained probably once a year.

MR. SCHAL: What's the projected life span of this project?

MR. KAPPEL: Estimates are currently 75 years.

MR. SCHAL: Phase One, what is the completion date of Phase one? How many years?

MR. KAPPEL: Obviously, depends on production rates, we are looking at ten years for Phase One.

MR. BROWN: Eight to ten.

MR. KAPPEL: Eight to 10.

MR. SCHAL: So there's no reservoir for the first ten years?

MR. KAPPEL: That is correct, sir. That's correct, sir.

MR. SCHAL: Water quality, we are discharging water into the refuge. How is the water quality control determined?

MR. KAPPEL: Right, and Mr. Gowan will weigh in on this, but I'll give you the quick answer. In terms of if you saw Mr. Gowan's cross sections, we're intercepting water, which currently flows to the refuge under current conditions. It may flow through the ground. So what we do is we will be intercepting that. It will come into the quarry. We have a series of settling ponds, which are shown on the mine plan map. We have also what are called sumps, which is where the water is collected and pumped out of. We don't drive through those. Typically, we don't mine in those areas. They are kept separate from the active vehicle movements within the quarry. We also have what will be called a New York State

Pollution Discharge Elimination System permit, a SPDES permit. And that SPDES permit has chemical and physical parameters that we would have to meet in order to discharge.

MR. SCHAL: So you are going to be testing the water before it's discharged?

MR. KAPPEL: According to the SPDES permit, there are different types of SPDES permit. There's what's called individual and multisector. And those permits have sampling requirements whether it's annual, whether it's monthly. So we would be in compliance with those permit requirements.

MR. SCHAL: You made mention of matching, where did that come from? What is that?

MR. BROWN: Well, that was -- again, I need to preface, once again, Ducks Unlimited takes no position on this project. Hasn't reviewed it. It's not for or against it, but we want to talk to them about how these partnerships work. We started looking into the refuge. And that's where were directed.

So what happens, if funds are contributed by someone like us as part of our plan, that money can be matched by grants either from Federal funds or from conservation groups. So the way it was explained to us, again, this was very -- this was a very brief meeting. We just asked how do we partner? How do we get involved in this? And they said, the best opportunity is to provide that and get matching funds.

MR. SCHAL: So you intend to donate to organizations?

MR. BROWN: Yes, I think in the original -- just the economic report, they were projecting some -- projecting donations right away. That's one that would make a lot of sense for us because it would allow them to expand their planning funds and allow even to look at exactly what more we can do here.

We will have that water available to redirect right away. I mean right away we are having some contribution, whether it's true until we have -- the real big value in this for water planning and management

happens in that eight to ten years when we finish Phase One and becomes a reservoir.

MR. SCHAL: It was made mention earlier a number of truck loads or truck traffic is going to be coming down that road. Do you realize those roads were not built to handle that volume and that tonnage of a load?

MR. BROWN: Yes, sir. All through the DEC process and the DEC permit, we have said we will do the work on the road, those roads to make them capable.

MS. BARONE: Frontier Stone.

MR. SCHAL: That's in the permit?

MR. BROWN: Full depth reclamation was written up, full depth reclamation.

CHAIRMAN DRAPER: We're probably going to bounce around a little bit. And I may ask some questions after Dan does. My brain doesn't function orderly as everybody's.

Still not clear about this School House Marsh discharge. Are we saying that creek already exists to reach School House Marsh?

MR. BROWN: School House Marsh, that complex, that water basin all drains together

running south. So there is a defined basin running out to --

CHAIRMAN DRAPER: I'll tell you. Maybe a little clearer. I want to understand -- I want you to understand why I'm asking. Is your plan to ask the Town for some type of easement to cross Sour Springs Road to get to that marsh or is it just naturally --

MR. BROWN: It's nowheres near Sour Springs Road.

MS. BARONE: It's east.

MR. SPITZER: It goes into a stream that already has a culvert on Sour Springs Road?

CHAIRMAN DRAPER: That's what I'm asking.

MS. BARONE: That's east.

CHAIRMAN DRAPER: Okay. The culvert exists.

DR. GOWAN: Now drains into the culvert here and then there's a little drainage here. We tried to walk through there and it is so dense.

CHAIRMAN DRAPER: If the culvert exists, that's fine. Mike Fuller, Highway

Superintendent.

MR. STALKER: Whose culvert is it?

CHAIRMAN DRAPER: Well, that's a good question. Whose culvert is it? Do we know?

MR. MIKE FULLER: There is a culvert under the power company's driveway but a small one.

CHAIRMAN DRAPER: Is it theirs or ours?

MR. FULLER: It ain't ours. It belongs to the power company.

CHAIRMAN DRAPER: Okay. But at some point if the quarry is on the east side of Sour Springs Road and School House Marsh is on the west side --

MR. FULLER: There is an existing culvert under Sour Springs Road.

CHAIRMAN DRAPER: Okay.

MR. SCHAL: And whose is it, ours?

MR. FULLER: That's ours. That's our culvert.

CHAIRMAN DRAPER: Okay.

MR. BROWN: It's the natural discharge right now, sir, that it flows down. Right now --

CHAIRMAN DRAPER: That's fine. I didn't realize it was there. I just wanted to know how we're crossing Sour Springs Road. If it's there, I'm good. Okay.

I drive it multiple times a day. So I'm going to have to take another look.

MR. BROWN: I misunderstood where the marsh started.

CHAIRMAN DRAPER: Okay. I understand, you know, as things progress, you have to have dialog with the Town, which is what you alluded to. I'm going to tell you, I'm very interested in post quarry plan. What I'm not interested in is talking to the Town, negotiating with the Town, how the Town and refuge would manage post quarry. I want -- that means tax money and somebody else pays. I want to know what your plan is. Not me help develop the plan. What is your plan post quarry. So we are going to need to know that.

I also looked at those contributions and I mean if you make contributions, that's your business. But it also says up to -- I think

it said initially 15,000 a year, up to 30,000.

MS. BARONE: Those are estimates from 2013, modest estimates.

CHAIRMAN DRAPER: Understood. But it says up to. Is there a minimum?

MS. BARONE: There's no minimum and there is no maximum.

CHAIRMAN DRAPER: I'm just asking. When it says up to, it always makes me suspect.

MR. BROWN: Yes.

CHAIRMAN DRAPER: I'll probably have more in a minute. Dale, any more?

MR. STALKER: Not yet.

CHAIRMAN DRAPER: Bethany, anything? Daniel?

MR. SPITZER: Okay. Can I ask a question about the mining plan. The blasting is going to go on from 9:00 to 4:00. How many times a day do you do blasting?

MR. BROWN: Once or twice a week.

MR. SPITZER: Once or twice a week.

MR. BROWN: Once or twice a week. A

blast, and again, the blast we did that day out there was a test blast to generate much larger than what we normally do. Not timed so it was all condensed into one. Interestingly, a well -- one of the wells it was a hundred -- a couple hundred feet away, expressed water. That well functions today. I also told them -- still delivers water. And that's consistent with those things. So the blasting itself happens once, perhaps twice a week. And really in the distance, it sounds like a rumble. It doesn't even sound like a clap of lightning. It sounds like a rumble of thunder. You know, you have operations around here.

MR. SPITZER: Mr. Kappel, when you did the noise map, is that noise you used was the blast limit or did you just use operations limit?

MR. KAPPEL: Operations.

MR. SPITZER: So the blast limit is what and the operations limit is what?

MR. KAPPEL: Well, when you talk about limits, certainly, we can talk about the

blast limit. There's a hundred and thirty-three decibel limit on what we call the air blast or the air overpressure.

In terms of the operations limit, you get into the ambient and different --

MR. SPITZER: What number did you use for that map?

MR. KAPPEL: Well --

MR. SPITZER: I understand. You can say what the ambient number is. I get that. Usually, a day time ambient that you use and a night time ambient.

MR. KAPPEL: Correct.

MR. SPITZER: We don't have to worry about the night time ambient because I don't think you're planning on doing any -- unless you're planning on running a crusher or something at night. I don't think you were. So we are really talking about day time ambient, right?

MR. KAPPEL: Correct.

MR. SPITZER: And there's a number usually that you use in order to come up with that map, correct?

MR. KAPPEL: Well, they are measured numbers. That's why I'm hesitating because the measured numbers -- this is one of those answers where we direct EIS.

MR. BROWN: That map is really all about -- it isn't about ambient around the quarry.

MR. SPITZER: I'm not asking him around the quarry. I'm asking him about the map he prepared.

MR. KAPPEL: Right. So the measured ambients are listed in the DEIS. There's a table and so the ambient is slightly different depending whether you're north, south, east or west around the facility.

MR. SPITZER: Sure. I think people understood that in your answer to the councilman that next to Fletcher Road is quieter than in the middle of the swamp.

MR. KAPPEL: Correct.

MR. SPITZER: But you also used a number for operational.

MR. KAPPEL: That varied depending on the piece of equipment.

MR. SPITZER: Sure. What number did you use to produce that map?

MR. KAPPEL: It depended on the piece of equipment. The crusher may have been 85. The loader could have been 79. And so what you do is you put that into model and then you aggregate those and you project them out.

MR. SPITZER: I don't have Kevin's experience with mining permits, but my memory is the DCC was always concerned about the DBA's at property lines. So what's the DBA limit at the property line under this permit?

MR. KAPPEL: Right, so we talked difference between ambient. So there's the Part 360 regulations.

MR. SPITZER: Well, that's landfills.

MR. KAPPEL: Right, but that has a defined, I believe it's -- whatever it is at the --

MR. SPITZER: Right, so that's what I'm used to is in 360 --

MR. KAPPEL: That's the difference between the two programs.

MR. SPITZER: So what Mr. Kappel was saying is landfill, the DEC has said thou shall not go over a number.

MR. KAPPEL: Right.

MR. SPITZER: In mining permits, it's a negotiated number as part of the permit conditions.

MR. BROWN: Correct.

MR. SPITZER: So my question is, what's the --

MR. BROWN: And for air blast, the number -- the air blast shall not exceed 133 DBA at the location of any dwelling, public building, school, church, learning institution going outside of the permit area. Now, that's 133 DB. The truth is, for human hearings that's equivalent to 62.5 DBAs. So that's the limit.

MR. SPITZER: I'll be nice to you and not ask you to explain DBA versus DBC.

MR. BROWN: Audible.

MR. SPITZER: Different limits. So the people understand that it's not a hundred thirty-three decibels in terms of how they

hear it. Because a jet engine is 109 and 133 DBA would actually break glass.

MR. BROWN: Yes.

MR. SPITZER: So the blast limit is basically -- so normally, I'm used to seeing a most -- again, I don't have anywhere near your experience, Kevin, but most of what I'm used to seeing is 50 decibels same as the 360 number is what the DEC puts on and what most communities put on is the limit at the property line is 50 decibels.

MR. BROWN: For operational noise. Now, blasting is different.

MR. SPITZER: Actually, most permits -- you know, from the Town's point of view, we don't care what you're doing. It's noise. Even if it's once or twice a week. We're concerned about noise. Is there a problem with the 50 decibel number?

MR. KAPPEL: Well, this map -- now that you brought that up, this map, the yellow represents actually greater than 50. So that's why it's identified as a potential impact.

MR. SPITZER: Sure.

MR. KAPPEL: So your number of 50 as worked into this map and this represents where potentially you could be above 50.

MR. SPITZER: In the refuge?

MR. KAPPEL: In the refuge and then surrounding roadways, you know, Sour Springs, so on and so forth. That is why the roadways are highlighted in yellow because you have some exceedence of 50 just by vehicle travel.

MR. SPITZER: Right. By the way, just so you know, my own background in dealing with joys of noise is in windfarms. So I get it, when the wind is really blowing, you can't hear the windfarm, but the issue is always when its start up and when it's low and then, of course, is a problem at night --

MR. KAPPEL: Right.

MR. SPITZER: -- Which you don't have to deal with. But off of the roadway like in someone's bedroom, are there sensitive receptives that will be over 50 decibels other than the refuge?

MR. KAPPEL: Yes.

MR. BROWN: Got thousands of pages of studies here. Without breaking them out, we are talking -- does that have the numbers?

MR. KAPPEL: So one of your requests was to send you a description within the DEIS of where you can find --

MR. SPITZER: Or the page number.

MR. KAPPEL: So we have our receptor map. This is where we physically setup our meters and took the ambient estimates and then we projected to these.

MR. SPITZER: Right.

MR. KAPPEL: So you start finding a lot of this on, you know, page 164, and then what we do is we establish the ambient. We start talking about our drills, our loaders, our crushers. We project.

MR. SPITZER: Right.

MR. KAPPEL: And then we say, okay, now, we're going to put in a 30 foot berm and if you're familiar with windfarms and how that works, there's a decibel reduction by virtue of having a barrier between where

you're working --

MR. SPITZER: It doesn't really work with windfarms.

MR. KAPPEL: Because they're so high.

MR. SPITZER: They're a little bit higher than most berms.

MR. KAPPEL: They work for us where we are because we are working on the ground.

MR. SPITZER: Exactly.

MR. KAPPEL: So we had recorded ambients of Ringneck Marsh was 48. School House Marsh was 54.8. The Job Center was 55.3. So that's the environment in which everybody exists currently. Those were the numbers. So even without mining, there is no projection to noise. The Job Corps is already at 55.3. So that number of 50 is a rule of thumb, but when you start measuring it, it could be slightly higher or slightly lower. And then so what we do, is we added on our different scenarios, of different vehicles moving, different pieces of equipment running. And when you put in your berms and you factor your barrier attenuation

for the berm as it's referred to, we are projecting out to residences 49.3, 52.2, 51.1. So we're in the range of what the current ambient is by virtue of -- several things happened. We're working against the face. We've got rock faces that are 50 feet high and then we've got a 20 to 30 foot berm on top of that. And as you'll be familiar, you know, there's up to 24 decibel DBA reduction in terms of having a significant barrier between the noise source and receptor.

MR. SPITZER: Sure. So when the DEC does their noise guidelines for their assessment --

MR. KAPPEL: Yup.

MR. SPITZER: And they will freely admit their guidelines are way out of date and not particularly well written although they still haven't updated them.

MR. KAPPEL: Can I interject there? I sat on the board that attempted to rewrite the noise policy.

MR. SPITZER: Attempted.

MR. KAPPEL: Well, we got to a draft and then the draft was promulgated and there was comments on it and it was never accepted and I sat on the board that worked with that with the DEC.

MR. SPITZER: And you have just explained to the entire audience why they trust the DEC so well.

MR. KAPPEL: Because I was involved?

MR. SPITZER: No. So current guidelines say that once you got above 6 DBA difference, it's starts to become noticeable and partially potentially irritating. Are there sensitive receptors that will -- other than the marsh because to my knowledge, nobody lives in the marsh, that will experience increases of over 6 DBA?

MR. KAPPEL: Absolutely not.

MR. SPITZER: So there's nobody who's looking at significant increases in the noise levels at their homes?

MR. KAPPEL: No, sir.

MR. SPITZER: Because that's really I think what the Board cares about is the

impact on people's homes.

MR. KAPPEL: Correct.

MR. SPITZER: And that's during all phases?

MR. KAPPEL: Yes, sir.

MR. SPITZER: Even when you move north, stay away from the refuge.

MR. KAPPEL: Yes, because as we work north, remember we are working against the 50 foot face and then we've got a 20 to 30 foot berm. So the people along Fletcher Chapel, we're at elevations that are up to 70 to 80 feet below where they are. And there's a significant attenuation of noise as we work to the north with working against that face. Then we're on the lower level. We can be over a hundred feet lower than the people living along that roadway.

MR. SPITZER: Okay. So the rock face in affect protects you, also?

MR. KAPPEL: Exactly.

MR. SPITZER: Except for the blasts because those are at 62 I think you said.

MR. KAPPEL: Right. And then the idea

the blasting is one to two times a week.

MS. BARONE: For 30 weeks.

MR. KAPPEL: Right. It's something that lasts between a second -- one and three seconds.

MR. SPITZER: How would you know the communities where you have a 50 decibel law or 40 decibel law and the air blast is at 62?

MR. BROWN: No, it's never been a problem. It just isn't. That's the permit condition because it's mining.

MR. SPITZER: I'm not talking about local laws. It's pretty common to have 50 decibels in local laws as the noise limit. How do you deal with it when the municipality has a lower limit?

MR. BROWN: Well, it's DEC.

MR. SPITZER: DEC is their regulations. I'm only talking about towns. They don't regulate.

MR. BROWN: I think because while you'll have a complaint on a blast sometimes if it's a cloudy day, they will go out and look. It's over. It's not that loud. It's

something like a clap of thunder. It's about what it is. And what we always have is pre-blast surveys. We try to respond. That's a good operating practice to have pre-blast surveys at all the houses and go out and make sure you respond. If somebody has an issue, you can nip it in the bud, half time. Sometimes you did it. The numbers, the levels they have are designed to avoid any damage to structures, the walls, plaster. Those are why those numbers are there, provided a long time ago. They were using them for years. Those are the numbers. If you need them, you probably won't cause -- usually, the best thing to do is go out and talk to the folks. If there is an issue, take care of it.

MS. BARONE: Got pre-blast surveys for residential, commercial structures within fifteen hundred feet, the final life of the mine.

MR. SPITZER: I have another question for you, Mr. Kappel. Can you go back to the map that had the one that's underneath there

that -- and I'll use the map or ask you to use the map. You did a cross section of the Lockport Formation or the formation that your mining in. Not on that. I don't want you to use that. I want you to use the map. Show the Town where is the sweet spot if you will, as Kevin described it, where does the Lockport -- where are the minable zones that make sense in this Town? Where does the Lockport rise up basically along -- it's, obviously, not just in one snapshot.

MR. KAPPEL: It's laterally expansive. There's the Lockport from well over in Niagara area. Where does that pinch out, Sam, as you work your way east?

MR. GOWAN: I'm not sure exactly where it is.

MR. KAPPEL: Your transmission. So certainly within the township the Lockport exists.

MR. SPITZER: So pretty much that whole area north of the refuge may be good mining area? On that criteria alone?

MR. KAPPEL: I will say that the

Lockport is expansive through this area and if there's some areas that are slightly higher, they have more glacial till or something. Lockport is deeper. I can't address that, but you will have undulations in that unconsolidated surface. And so the Lockport in our area where we're talking, our site is 20 to 40 feet down and I think you could find other areas in this part of New York State certainly where you would run into the same scenario.

MR. SPITZER: Mr. Brown mentioned there's other mines in Town. Do you know if they are mining within the Lockport?

MR. KAPPEL: There's the one and I can't remember.

MS. BARONE: Shelby Crushed Stone.

MR. KAPPEL: Shelby Crushed Stone is, yes.

MR. SPITZER: So there's other areas within the community that would make good mining locations for say expansion in say 75 years?

MR. PICCIOTTA: In 75 years, is that

your question?

MR. SPITZER: That's what I said.

MR. PICCIOTTA: I just want to make sure I heard your question.

MR. SPITZER: You did.

MR. KAPPEL: I think the answer to that is yes. I will tell you that Shelby Crushed Stone is in a thinner part of the Lockport and they don't enjoy the 115 to 120 foot thickness that would be at this site.

MR. SPITZER: And I apologize. I just want to make sure it's in the record and you actually moved your hand. Dr. Gowan may have actually helped you. Just show the direction from the proposed site sort of where the Lockport is moving across the Town so people understand where the potential mining zones are. All other things being equal in the town.

MR. KAPPEL: I'm going to qualify what I said and that I believe that the Lockport is expansive and exists throughout the entirety of the Township. I know certainly it continues to the west. You have some --

it's the way these formations were deposited, you know, 400 million years ago. They are not continuous across the State. So I was moving my hand in an easterly direction. You have in the middle part of the state, it gets very complicated with the geology in terms of what formations are continuing east and west and ones are what we call pinching out or becoming thinner. And certainly, under the Township, I believe the Lockport is pervasive.

MR. SPITZER: Thank you.

MR. KAPPEL: Sure.

MR. SPITZER: In terms of the dust, the councilman asked the question and I was curious, do you do like a fugitive dust map? Is that how you figure out what the dust areas are or how do you judge the dust?

MR. BROWN: There's calculations available. They do 42 calculations. We run the numbers. And you can do that and this actually runs out as a deminimous site under the DEC guidelines. However, there's best management practices for all mine sites that

will require us -- we're going to pave or pave the road or put aggregate on the road. Keep water trucks going. That's the job.

MR. SPITZER: So it's mostly the road that's the issue then in terms of dust emission? It's not the crusher or the mining?

MR. BROWN: No, the crushers are covered by NSPS or Triple Zero. Those new performance standards under Federal control. And those have to meet very low levels of -- as a matter of fact, when you start it up, you have to bring in a certified eyeball to check the start up and make sure we've got adequate controls.

MR. SPITZER: So does the DEIS have like a fugitive emissions map or something so that people right around it would know?

MR. BROWN: What it has -- is full of calculations -- full calculations on the roadways. The data is in there. That's why it's sometimes hard to answer a question because there's so much in here.

MR. SPITZER: Yeah, I'm actually asking

you a location.

MR. BROWN: The air resource section and what you have is the calculations. We didn't do -- if you're talking about an air modeling study, it's not required in this situation. It's deminimous.

MR. SPITZER: No, actually, I was thinking in terms of folks who may live near the facility, if they wanted to know whether they were likely to have a dust issue that they wanted to talk to you about in terms of a good neighbor agreement. For example, something like that, is there a map or something that's in there that would show them that they may potentially have a dust issue?

MR. BROWN: No, because there shouldn't. We're supposed to control the dust. We're not supposed to allow the dust off the site.

MR. SPITZER: That makes sense. I wanted to ask you, Dr. Gowan, about the first eight to ten years. I understand how the reservoirs could potentially help the

I.N.W.R. What's the impact on the I.N.W.R. before the reservoir is full.

DR. GOWAN: It's going start slow. So there's only going to be minimal loss of runoff in that 11.6 acres. And there's going to be a minimal amount of groundwater until we get down towards the bottom. So it's going to be a little bit of groundwater that's going to go through that eight to ten years increase. So it's going to be a very small amount of discharge in the beginning. That's going to be very very minimal volume impact, which is what the issue was in the end was --

MR. SPITZER: Too much volume as opposed to the dewatering, pulling things out, lowering the hydrological level. And there won't be any hydrological dropping during the first eight to ten years?

DR. GOWAN: There will be, but there is no impact to the I.N.W.R. by the groundwater draw down.

MR. SPITZER: Because they are outside of that circles of arrows?

DR. GOWAN: Even when it goes into the wetland because of that silt and clay, the I.N.W.R. is perched on top of that. So it's not really going to pull that down at all.

MR. SPITZER: So basically, the clay acts like a layer of rubber that keeps the water from getting drawn in?

DR. GOWAN: Yes, correct.

MR. SPITZER: Okay. And that's in the DEIS, also, how that was explained, correct?

DR. GOWAN: Our report is attached to the DEIS and that's all described in there.

MR. SPITZER: Okay. In terms of the water quality, you indicated slightly DDS but mostly higher iron. What's the impact on wildlife within the refuge of slightly higher iron levels?

DR. GOWAN: Iron actually precipitates out. That's why when you have high iron in your well and it comes out on your fixtures, as soon as it hits the oxygen in the area, it drops out.

MR. SPITZER: So the water that's going to be discharged is of the same quality as of

the drainage water that's currently going into the refuge?

DR. GOWAN: Yeah, in the groundwater when it comes in, it's cleaner looking. And these quarries don't really have a lot of suspended sediment. So it's going to be relatively clean appearing and also not going to have a lot of substances in it.

MR. SPITZER: And what governs that is your discharge permit has limits that --

DR. GOWAN: Correct.

MR. SPITZER: And who monitors the discharge permits other than the DEC? Is there annual say testing?

MR. KAPPEL: I was just going to say, if you under what's called an individual SPDES permit, you will sample monthly and you'll submit what's called a discharge monitoring report. That's due I believe day 28 of the month that you collect it and then you have an annual report as well. I believe it's February of the following year. So you'll be sampling up to 12 times a year. If you have a discharge, you'll be submitting an

annual report to the agency. And certainly, you know, once the information is submitted to the agency, it's public.

MR. SPITZER: How do you --

DR. GOWAN: I was going to say if you have a violation, if you exceed one of those parameters, you get a notice of violation. You have to address that. You've got to come up with a mitigation plan to remove whatever that constituent is that is exceeding the State limits.

MR. SPITZER: How do you keep solvents and other runoff that's normal in mining operations from entering this water?

DR. GOWAN: Actually, that is not really a problem in mining and if you're going to fill vehicles with fuel, you do it outside of the mine.

MR. SPITZER: So the crushers and all of those things are going to be taken outside of the mine to be filled? Maybe you can explain if you've got any secondary containment areas or what the other environmental protections are, Jason?

MR. KAPPEL: So you have a couple of regulations. We have the EPA involved and we have the State of New York. Once you have 1,101 gallons of hydrocarbs stored on your site, you have register your facility, register your tanks. There's placarding, dispensing requirements, secondary containment, filling on a concrete pad, so on and so forth. The EPA gets involved when you have over thirteen hundred twenty gallons with a spill prevention control and counter measures planned. It's called SPCC, is required. And that would take a detailed look at your facility, where do you fuel, how do you prevent drips, where are your spill kits. It goes through the entirety of how you are handling petroleum and/or chemicals on your site. Certainly, distance from water body separation. Not maintaining vehicles in open ground. Doing it in the garage on a concrete pad. You get into those best management practices, which would be part of those SPCC or there is another plan called a SWPPP, Stormwater Pollution Prevention Plan.

MR. SPITZER So I'm familiar with the SPCC. I've done it for gas stations. I've recently done one on a gas built next to the Scajaquada Creek. So that was real fun. Is this facility going to have SPCC?

MR. KAPPEL: If we have the threshold of fuel on site, we would be required to.

MR. BROWN: Right now, it's not planned. The plan is to have a refuel pad and to have a truck come in and refuel the mobile equipment.

MR. SPITZER: Rather than store on site?

MR. BROWN: Correct.

MR. KAPPEL: To answer your question, the plant, Kevin, is running on line power?

MR. BROWN: Right. The plant is running on line power. For the mobile equipment, the idea is to bring in and refuel on the pad.

MR. SPITZER: So the crusher is running --

MR. KAPPEL: So you won't have a generator. Gen sets will be running online

power.

MR. SPITZER: So you have a generator you mentioned. That brought up another question I had.

MR. KAPPEL: No generators. Line power.

MR. SPITZER: No back up generators either?

MR. BROWN: Not at this time.

MR. SPITZER: So that brings up a good question. Actually, you mention the climate change. Good for you. Did you do a greenhouse gas footprint analysis for this site?

MR. BROWN: I don't know. Probably not.

MR. SPITZER: I mean mining equipment is generally not on the --

MR. BROWN: No. Actually, what usually happens when you do mine sites, and I know National, the bigger thing is that cars come onto your site to bring people to work. That's tends to be the biggest problem.

MR. SPITZER: So you raise carbon --

excuse me, climate change as a benefit, but you didn't do a GHG study?

MR. BROWN: No, sir, it wasn't required. Here's the thing. We are raising climate change in condition to that water body, to those refuge -- to the refuge. I am certain that this will reduce greenhouse gases and climate change just because we are reducing all businesses by having more sites available. I mean that's --

MR. SPITZER: So really because that gets into your customer base and I would love for you to have a construction boom around here, but there isn't one. And if you've got one hidden, please share it with the Town Board because there isn't a lot of construction going on. And frankly, the three major projects besides yourselves that are proposed for Orleans County are two windfarms in the county and one in Somerset. Each of which will prevent significant development because you tie up land. I mean I do at lot of windfarms. You tie up a lot of acreage. That's what you need to do in

order to build them.

So how do you get this calculation that you're going to reduce hauling distances?

MR. BROWN: Well, what I'm looking at is I thought STAMP -- we spent tens of thousands of dollars reviewing STAMP in the last year and a half. You sent us to go review impacts of STAMP. That was at your request or your firm's request. We spent tens of thousands of dollars. We hired consultants.

MR. SPITZER: Yet Chuck did not get a single bottle of Scotch as a thank you from a single consultant. I tell you.

MR. BROWN: So we did do that work. We understand STAMP is a project that's viable. That could happen and we think there's a project right there. I guess you can project that nothing is going to happen here for the next 30, 40 years and I don't know whether your refuge will be there or not. I don't know. We are just putting these out here, folks. Trying to meet with you. Trying to talk to you about what we have been

suggesting.

MR. SPITZER: I think I speak for the Board in saying, we're very appreciative.

CHAIRMAN DRAPER: Absolutely:

MR. SPITZER: We have been asking for this and one of your consultants has been suggesting it for over a year and the Board is in favor of it. So we are very appreciative.

CHAIRMAN DRAPER: I don't think it's been a year. It's been a while.

MR. SPITZER: I'm getting old. It all seems a long time. We appreciate the conversation nature, but frankly, when I see your markets, and when I talk to people in your industry where the markets are, it's not Orleans County. It's, you know, where the things are being built. And they said, compared to other facilities and including Frontier facilities that are potentially running low in your market, you actually may have to haul. So you made the claim there's going to be a shorter distance. Do you actually have anything that backs that up?

MS. BARONE: We're getting -- requests a month on the web site.

MR. BROWN: And there are studies. Let me just translate that to the studies that are available that I think we did provide I hope some place. The study done by New York Construction Materials or with New York Construction Materials I think there was a study done by the --

DR. GOWAN: The state-wide study?

MR. BROWN: The state-wide study that just showed the cost as you start eliminating locations for aggregate stone right from the state. And what that would do to the thruway budget over the course of the next 30 years and what happens is you could eliminate one after another.

MS. BARONE: They received that last January.

MR. BROWN: Well, no, that went to the public.

MS. BARONE: I gave it to them.

MR. BROWN: Okay. And what you can see there is, as those quarries go away and more

hauling distance and more hauling costs are put in, the cost of all of the structure goes up by several billion dollars. That also correlates greenhouse gas. I don't know where the next project is. I guess STAMP isn't going to happen you're telling me.

MR. SPITZER: But STAMP is not going to take 75 years to build, even in New York. Maybe not 75 years. And you folks are not investing in this mine because of STAMP alone. I mean even if they have a contract for it. If STAMP gets built, I have no idea how much concrete they will use. I know that Solar City, for example, which is the largest project that was built in Western New York didn't use that much concrete at all compared to other things that they used. All of which were your tax dollars by the way, congratulations. But if you don't know, then how does the Town Board rely upon it? In other words, you've talked about quarries going away. We're not talking about a quarry going away. We are talking about a new quarry and your claim that it would reduce

but you actually did not do a GHG footprint analysis, correct?

MR. BROWN: No, sir. I don't believe there is a GHG. I don't believe there is one.

MR. SPITZER: You're not required to, but the DEC has -- if you were a state agency, you'd be required to and the new regs., they're still not saying you should, but they are in the still not requiring a SEQR, but you're not required to. Would you be willing to?

MR. BROWN: Right now, we are at -- I'll consider that. I'll consider it, you know.

MR. SPITZER: Well, you can see my concern. You're standing here talking about benefits on climate change. And it's your job to point out the benefits --

MR. BROWN: Sir, what we've done -- as we came in here, we are asked to evaluate the impacts of the refuge by, you know, this Town particularly as the publication of the DEIS asked us, to evaluate the impacts to the

refuge, talk to the refuge folks. Let's see what happens with STAMP. We spent another two years within the DEC process. We went to the refuge folks. We went to STAMP. We spent tens of thousands of dollars with STAMP. We sat with the refuge folks and asked them what we can do to help this refuge. That's when this -- as I said, we went from no harm, a DEIS to limit impacts, avoid them to Holy Cow. The more you looked at it and we found we could move between the basins. Talked with Dr. Gowan, he looks and he says, gees, this could be a great asset over time to the refuge. That's what that is. So I didn't come in here saying I'm the advocate or we're advocating we're going to cure climate change at this quarry. What we said is, that this operation could end up in the reclamation that is, it's a reservoir that would be very beneficial to a resource that everyone on this Board and everyone in this Town supposedly cares about. But if you don't and you don't think it's a concern that you should work on and at least look at and

at least have a discussion, that's fine. I mean that's fine.

MR. SPITZER: Let's make something clear to Mr. Brown. You made a presentation to us, which said there's a benefit to climate change, but have failed to do it -- excuse me, don't interrupt me until I'm done. You have failed to look at the cost that balance out that benefit. Do not come in here and say benefits without telling us as you did with noise impacts, with other impacts, without telling us both sides of the story. We're not fools and neither are you. You claimed a positive climate change impact; therefore, it is perfectly reasonable to ask what's your negative impact of the mining operation on GHG, which a climate change impact. There's nothing inappropriate about that question. It is completely inappropriate to suggest that you have a benefit without looking at all of the costs that lead to that benefit, correct?

MR. BROWN: Yes, sir.

MR. SPITZER: Thank you.

MR. BROWN: Framed that way, as looking at what I said, we have a reservoir to try to mitigate the impacts of climate change, not a direct affect on climate change. A mitigation to the impacts of climate change and warming on the refuge. That's what I was talking about --

MR. SPITZER: Fair enough.

MR. BROWN: And explain the greenhouse gas advantage to this operation.

MR. SPITZER: All right. But you have certainly no problem with addressing the greenhouse gas impacts, correct?

MR. BROWN: If we are going forward, we will --

MR. SPITZER: If you don't, just say no or if you want to say I want to talk to my client because I don't know how much it's going to cost, that would also be a really good answer.

MR. BROWN: That might be the best answer since a lot of studies --

MR. SPITZER: But you can see the whole purpose of the conversation --

MR. BROWN: Yes, sir.

MR. SPITZER: -- Was to have a two-sided conversation to address all things.

MR. BROWN: Yes, sir.

MR. SPITZER: Fair enough. So in terms of -- I mentioned a taxable value and as the supervisor said, we are looking at what you're proposing, not what could be, would be, should be, may be. There is no discussion at this point. There is no plan to turn things over. I don't see in any of the DEIS and I'll admit that I had Chuck and the other young people read it more that I did, I didn't see any plan to turn any easements over to the I.N.W.R. I didn't see any plan to turn the pumps over to I.N.W.R. There's no requirement in the DEC regulations for you to maintain those pumps or you know, there's a certain trust period where the trust fund is there for the reclamation close out. But once that's done, Frontier has a right to close its books and move on.

MR. BROWN: Quite frankly, sir, we are

trying to start that engagement with the refuge and found that the way that it's generally handled is through like (inaudible) so we reached out. As I said, we had a short meeting with Ducks Unlimited. But and again, they take no position on this project. And then we were told, basically, you know, they are not talking to us right now.

MR. SPITZER: Well, it's duck hunting season maybe. So those of you that are not familiar with ducks --

MR. BROWN: All those things are things we think we should explore and would want to explore.

MR. SPITZER: Okay.

MR. BROWN: And will explore.

MR. SPITZER: Okay. You mentioned the seven wells that were sampled. Is that you, Dr. Gowan? By the way, if you're Dr. Kappel, I apologize. I didn't see that on your card.

MR. KAPPEL: No.

MR. SPITZER: Did you sample any of the wells off site?

DR. GOWAN: No.

MR. SPITZER: So what will be the impact on the wells offsite?

DR. GOWAN: We've evaluated that and there's going to be draw down impacts. And we've got a mitigation plan. We're going to put drop cuts around the edge of the quarry and we've set up a monitoring plan. We are going to install wells and monitor changes as they occur from the very beginning of the mining. And if there's going to be impacts or impacts start to occur towards those wells, then we use the drop cut to recharge the aquifer and maintain water levels in those directions.

MR. SPITZER: So somebody's well runs dry, you investigate at that point? Somebody who's near the mine, obviously.

DR. GOWAN: The permit has a plan in it already, the arbitration agreement.

MR. SPITZER: But the permit isn't binding on the neighbors, obviously.

MR. KAPPEL: The permit says that if potable water is lost or impaired, that the

permit holder is required to replace that water source up and until the time it's either determined that they are the root cause of it or if they are not the root cause of the problem in that. So there is a hierarchy within the permit, whether it's loss of function of a well, whether it's reduction of groundwater head, quality as well and that's spelled out in the permit.

MR. SPITZER: How does that work, explain it for the folks here, day one, their well is dry. They think it's your fault, but they are not hydrologists. What do they do? How long does it take? When does your obligation to start providing them water begin? Just take people through it on sort of a laymen's term if you will.

MR. KAPPEL: There's a process to establish the water level prior to the initiation of mining. Same as we do what's called a pre-blast survey. We look at a home prior to blasting and that establishes a baseline from which we can then talk about future impacts.

MR. SPITZER: Can I stop you for a second there? How do you make sure that that's the right baseline as opposed to the 2016 worst case scenario?

MR. KAPPEL: The drop scenario?

MR. SPITZER: Yes.

MR. KAPPEL: Maybe I don't understand your question.

MR. SPITZER: My concern is that a baseline, for somebody like for my well, if I had a well, I'd want it to be a baseline based on a five year average as opposed to say 2016, where it was probably the driest.

MR. KAPPEL: As a hydrogeologist, can I tell you that that assumption wouldn't be what you would want as a homeowner.

MR. SPITZER: Okay. What's my assumption?

MR. KAPPEL: You'd want me to come out there on day one and have the water absolutely as high in your well as possible. You'd want a spring rain and a snow melt the day before I get there.

MR. SPITZER: Which means I don't want

you out there in 2016?

MR. KAPPEL: Right.

MR. SPITZER: So how do I make sure that your baseline isn't a 2016 baseline? How do you make sure that you're not in the lowest year or even in an average year?

DR. GOWAN: We will do that on the quarry. The quarry wells that we're putting in as specified by the DEC --

MR. SPITZER: But you're not going to do that as part of the --

DR. GOWAN: We will establish a baseline for monitoring.

MR. SPITZER: And you don't establish them to do a well survey?

DR. GOWAN: Don't need to.

MR. SPITZER: Don't need to?

DR. GOWAN: Don't need to.

MR. SPITZER: I interrupted you. Please continue. You've got your baseline, which is based on the -- we now know it's based on the quarry. So my baseline is based on the quarry.

MR. KAPPEL: You want it based on the

quarry because the quarry well is going to be pumped. So if I go to your house after you just took a shower or used the bathroom and your well pump kicked in, your well -- the water in your well could be quite low. And so there are vagaries and there are difficulties in terms of going to a residential well and establishing a baseline because you're using it everyday. So the wells that are on the periphery of the quarry won't be pumped and they'll be more -- we call them sentinel wells and we call them observation wells. So that they are unadulterated and unimpacted by pumping. They establish a groundwater head over time that we can monitor and then we can start to see if there's a decline in that average as you discussed.

MR. SPITZER: Okay. So I now have my baseline. My well is still dry. What happens to my well when I've called you and said it's dry?

MR. KAPPEL: Certainly, I will ask Kevin to step in on this, but if there's a

complaint to the DEC, that initiates an investigation.

MR. SPITZER: We're a friendly community. They call the mine owner.

MR. KAPPEL: You walk into the scale house and you say, I need to talk to somebody and then that initiates the process.

MR. SPITZER: How long is it before your requirement to compensate them or get them water?

MR. BROWN: The permittee must immediately supply water and this is out of the permit. The permittee must immediately supply water to dispense the impact to the property. The property must continue to supply water to the impacted property or properties unless and until the permittee can demonstrate to the satisfaction of the Department that the mining operation is not a contributing cause to the identified impacts. In the event that the impacted water supply is used as a drinking water source, potable water must be supplied. So we are dealing with both with farm irrigation water here and

with potable water.

MR. SPITZER: So the community understands that, in fact, you're guilty until proven innocent?

MR. BROWN: Right, that's the way the permit is written up. That's the permit condition that the DEC imposed.

MR. SPITZER: Did your study do any study after -- you have these two reservoirs you have to close, did your study indicate any impacts on the residential wells around the area or is that just a dumb question? You've got these now two reservoirs. What impact would there be on people's wells or things around the area? You talked a lot about the refuge. I'm talking about the wells around the mine that are owned privately. What would be the impact on them after when it's just these two giant lakes?

MR. PICCIOTTA: By the virtue of the reservoirs being in place --

DR. GOWAN: Actually, the reservoir is a big benefit to those wells because it's a huge -- it's a huge storage. You've removed

all of the rock and whatever else that's occupying that space. You filled that space with water.

MR. SPITZER: Thank you. I think I asked a lot of my other questions while I was interrupting everybody else. That's all I have got, sir. Thank you.

CHAIRMAN DRAPER: I'm going to ask the Board one last time, do you have any more questions from anybody?

MR. SEITZ: I have one more question.

CHAIRMAN DRAPER: Go ahead.

MR. SEITZ: I'm sorry to keep you guys. And thank you for answering all of these questions. We talked about what happens if somebody runs out of water. What happens if there's damage to the property, say a foundation? I'm not an expert when it comes to rock or I would assume a blast potentially could have some type of affect on home foundation. How is that taken care of by Frontier Stone?

MR. BROWN: I have to check. There's a lot of these permits. I want to make sure I

found the right one. Pre-blast survey, okay. Prior to engaging in blasting, the permittee shall conduct a pre-blast survey for residential and commercial structures, not owned or leased by the permittee, that are within 1,500 feet of the final life of mine boundary. So that's not even where exactly -- everything from fifteen hundred feet of this area.

Landowners within fifteen hundred feet of the life of mine boundary should be notified in writing that they have the right to have a qualified third-party conduct a pre-blast survey prior any blasting taking place at the quarry. The letter shall describe the procedure for making a pre-blast survey request to the company. The survey shall document the condition of the dwelling or structure and catalogue any pre-blasting damage or other factors that could reasonably be affected by blasting at the mine site.

Assessment of the appurtenances such as pipes, cables, transmission lines and water well systems, shall be limited to surface

condition or readily available data.

Copies of the completed pre-blast survey shall be provided to the person requesting the survey and to the Department. Survey reports and documentation of all contacted parties, including those that refused pre-blast surveys, shall be maintained by the Department. That's why I don't know these by heart. The Department writes these up for us.

MR. SEITZ: Okay. Could you explain that to us so that we can understand it? I don't quite grasp it. In the event that my house has a crack in the foundation, right, you guys blast three years from now, something happens. A lot of the residents that are behind you are in close proximity. So they have to get a pre-blast survey. They have to pay for that?

MS. BARONE: No.

MR. BROWN: No, no, we pay for it. That's why I read all through that. Anyone can ask for a survey.

MS. BARONE: Within fifteen hundred

feet.

MR. BROWN: Within fifteen hundred feet of the whole life of the mine and any area of this project (inaudible) and we would recommend everyone get a pre-blast survey. We'll pay for it. We have to pay for it under the Department permit. That data then documents here's the foundation. Here's the structure. It's all documented. It goes to the owner, to the DEC and to the quarry. Then if there is a blast, if you think something happened, call us. They go out. No, DEC usually shows up. If you have a blasting complaint like that, DEC will inquire what's going on there and often times they show up.

MR. SPITZER: Typical situation I'm familiar with is, if you do a pre-blast survey and a couple years later a homeowner notices that a one inch crack is a three inch crack. And generally, at that point it's your obligation to fix the crack because the presumption of the DEC is that that's what caused the widening of the crack. And again,

it's sort of guilty until proven innocent situation?

MR. BROWN: Not quite the same as with the water. With the water, it's definitely that. You've got to come in and start providing the water right away.

With the blast, there is a little more back and forth. What usually happens, generally most of those -- if you really looked over time all the sites and all the studies, really a lot of that is natural foundation settling stuff. So a crack that's this big, what in three years it's like this, often those are called in. DEC will always go out and look and we look at them and often times, the company will take care of that. But generally, that is a process you go through with DEC and find out whether it really was caused by the blasting.

I can tell you that these standards that are used, that they are in place for a long time. And so long as you're meeting your blasting limits and it's monitored, every blast is monitored, it should not cause any

damage to structures.

Now, here's the way DEC will explain this. We monitor every blast. So we have a blast that exceeds the numbers. They get the reports, too, every blast. If there's a problem with one of the houses around there, we're going to be paying for it the next day. You know, that's what happens. So every blast has a record that's reported to the DEC. Every house can have a survey, so it has its conditions. And these are pretty standard state-wide now, how these work. Again, if we exceed a number, what I would do if I were you, I'd wait and find out when we do exceed and call, then we will come in and fix it all.

MR. KAPPEL: I can add some detail. If there's a question in a home, the DEC has the authority to ask us to put in another seismograph to monitor the vibration of that home specifically. And then in your packet, you have the permit. Last page of the permit is what's called the Z Curve and the Z Curve has vibration thresholds and in there it

specifically mentions drywall, plaster and lathe and the simple way to think about this curve, is we always need to be below the line. And the data that Kevin is talking about, that's generated for each blast, you will plot on this graph where you fall relative to that line. It's very simple to see. Are you above it? Are you below? Are you on it? And then, you know, this becomes the basis for the conversation of what damage occurred, if any, associated with blast. Lots of times there is a question and then so we will put another monitor out if requested by the DEC to do so. The next blast will monitor that property specifically.

MR. SPITZER: You mention that there was a protocol that was derived as a result of the blasting and the testing at STAMP. Is that also in the permit that --

MR. KAPPEL: STAMP, yeah, it's very detailed in terms of when an occupant moves in. There's different criteria.

MR. SPITZER: I understand it's triggered until somebody moves in.

MR. BROWN: Those standards are the very -- you're just seeing the Z Curve. So what has to happen is we have to stay under those numbers at that location.

MR. SPITZER: If STAMP comes to be?

MR. BROWN: Well, no, right now, even before, even while they are just marketing the site, we have to put a monitor down there and keep those numbers below semi-conductor numbers before anything is even there. At the issuance of the permit, we have to do that.

MR. SPITZER: Does anybody know where STAMP stands? Nobody's been indicted to my knowledge. Maybe that's the problem. Thank you.

CHAIRMAN DRAPER: One last call for the Board? Anything else? All right. We want to thank everybody for coming. We want to especially thank Doreen. I told her she'd be here about 90 minutes. Might have gone over that by five or six. The lights are all on. I now we moved the chairs around. There's too many attorneys here for you guys

to trip leaving so be careful. Have a good night. Thank you for coming.

MR. BROWN: Thank you very much.

MS. BARONE: Thank you.

CHAIRMAN DRAPER: Oh, hang on. I forgot. Need a motion to adjourn?

MR. SEITZ: So move.

CHAIRMAN DRAPER: Is there a second?

MR. SCHAL: Second.

CHAIRMAN DRAPER: All in favor?

MR. STALKER: Aye.

MR. SEITZ: Aye.

MR. SCHAL: Aye.

MR. BACON: Aye.

CHAIRMAN DRAPER: Meeting is adjourned.

(Proceedings concluded at 8:20 p.m.)

C E R T I F I C A T E

I, DOREEN M. SHARICK, do hereby certify that I have reported in stenotype shorthand the proceedings in the matter regarding Frontier Stone, LLC, held before the Shelby Town Board Workshop Meeting, 4062Saltworks Road, Medina, New York, on January 30, 2017.

That the transcript herewith is a true, accurate and complete record of my stenotype notes.

Doreen M. Sharick

Doreen M. Sharick,

Notary Public.