

1 **MINUTES OF THE SPECIAL MEETING OF THE BOARD OF ZONING APPEALS OF**  
2 **HENRICO COUNTY, HELD IN THE BOARD ROOM OF THE COUNTY**  
3 **ADMINISTRATION BUILDING IN THE HENRICO COUNTY GOVERNMENT**  
4 **COMPLEX, ON THURSDAY, JUNE 16, 2005, AT 7:00 P.M., NOTICE HAVING BEEN**  
5 **PUBLISHED IN THE RICHMOND TIMES-DISPATCH MAY 26 AND JUNE 2, 2005.**  
6

Members Present: R. A. Wright, Chairman  
James W. Nunnally, Vice-Chairman  
Elizabeth G. Dwyer,  
Helen E. Harris  
Richard Kirkland, CBZA

Also Present: David D. O'Kelly, Assistant Director of Planning  
Benjamin Blankinship, Secretary  
Paul Gidley, County Planner  
Priscilla M. Parker, Recording Secretary  
Ann B. Cleary, Recording Secretary

7  
8 Mr. Wright - I call the meeting of the County of Henrico Board of Zoning  
9 Appeals to order. Would you stand for the **Pledge of Allegiance**.

10  
11 This is a special meeting called by the BZA of Henrico County to determine whether the  
12 conditional use permit UP 9-2004 issued to Tidewater Quarries, Inc. on April 22, 2004  
13 should be revoked or amended.  
14

15 Use permit UP 9-04 was issued on April 22, 2004, pursuant to Sections 24-52(d) and  
16 24-103 of the Henrico County Code.  
17

18 Section 24-52(d) permits conditional uses by special exception for the operation of a  
19 quarry provided: "(2) The special requirements in Section 24-103 are complied with, in  
20 addition to any others ordered by the board in accordance with Section 24-116(c) of the  
21 Code."  
22

23 Section 24-103(e) provides: "All equipment used for the production or transportation of  
24 materials shall be constructed, maintained and operated in such a manner as to  
25 eliminate as far as practicable noise, vibrations or dust which are injurious or annoying  
26 to persons living in the vicinity."  
27

28 Section 24-116 grants to the Board of Zoning Appeals the authority to impose  
29 requirements or conditions in addition to those expressly stipulated in this chapter for  
30 the particular use.  
31

32 The Board of Zoning Appeals granted this permit subject to the following conditions,  
33 among others, and I just refer to two, because these two are pertinent to what the  
34 complaint is that we have before us tonight.

35  
36 1. This use permit is subject to all requirements of Section 24-103 of Chapter 24 of  
37 the County Code.

38  
39 2. Blasting shall be conducted in conformance with standards promulgated by the  
40 Virginia Department of Mines, Minerals and Energy and shall not endanger the public  
41 health or safety. The amount of explosives shall be limited to 1,000 pounds per time  
42 delay. Blasting shall not be conducted when atmospheric conditions would produce  
43 undesirable effects. The operator shall submit a record of all blasting to the Planning  
44 Office every three months.

45  
46 The County has received numerous complaints of noise and vibrations and damage to  
47 homes from homeowners in the vicinity of the Tidewater Quarries operation.

48  
49 To revoke or amend this permit, the BZA must have convincing evidence and proof that  
50 public health or safety has been endangered by the Tidewater Quarries operation and  
51 that Tidewater Quarries has not operated in such a manner as to eliminate as far as  
52 practicable noise, vibrations or dust which are injurious or annoying to persons living in  
53 the vicinity.”

54  
55 Mr. Blankinship, please add anything you have and provide the rules for this hearing.

56  
57 Mr. Blankinship - Thank you, Mr. Chairman. I am going to speak just for a  
58 moment to outline the history of the County's approval for this quarry, and then we  
59 are going to ask everyone who wants to speak in terms of alleging Tidewater  
60 Quarries may have violated one of these conditions. We will ask everyone to  
61 speak, one at a time. Come down to the podium. The meeting is being tape  
62 recorded, so we will ask you to speak directly into the microphone on the podium.  
63 You can lift it up or lower it, if necessary. Please state your name and please spell  
64 your last name and state where you live. After everyone who wants to speak along  
65 those lines has had an opportunity to speak, we will then invite the representatives  
66 of Tidewater Quarries to address the complaint that has been raised, and to offer  
67 their side of the story, if you will. And, as the Chairman said, the main question  
68 before the Board of Zoning Appeals is whether they have violated the conditions of  
69 their use permit.

70  
71 The first use permit for this property was granted in 1965 and in 1966 they had a  
72 renewal of that use permit, and at that time a condition was placed on the use  
73 permit stating that no blasting is to be permitted which endangers the general  
74 public. Our use permits required annual renewal at that time, and so they had that  
75 renewed annually from 1965 to 1971, and then starting with 1972, they were  
76 renewed every two years. In 1974, the condition regarding blasting was changed  
77 or a second condition regarding blasting was added that stated the amount of  
78 explosives shall be limited to a maximum of 1,000 pounds per time delay. The use  
79 permits, as I mentioned, were renewed every two years from 1972 to 1986, and

80 then starting with 1989 they were approved for five-year periods, in 1989, 1994  
81 and 1999 and 2004, and Mr. Chairman mentioned 2004 as the current approval.

82

83 The condition regarding blasting on the 2004 permit reads as follows:

84

85 "Blasting shall be conducted in conformance with standards promulgated by the  
86 Virginia Department of Mines, Minerals and Energy and shall not endanger public  
87 health or safety," and that is the question before us this evening in a nutshell. I  
88 think it is whether the operation of Tidewater Quarries and particularly their blasting  
89 has endangered the public health or safety. And we will entertain speakers in  
90 whatever order they wish to come to the podium.

91

92 Mr. Wright - If everyone desiring to speak would come forth, please.  
93 You are going to be sworn by Mr. Blankinship.

94

95 Mr. Blankinship - How do you want to handle swearing, Mr. Chairman.

96

97 Mr. Wright - I tell you what. Let me do it this way. Anyone who  
98 might speak tonight either way, or if you think you might speak, please stand and  
99 we will swear everybody in at one time, because our proceedings must be sworn,  
100 and that way if you later decide you don't want to speak, fine, it won't hurt. It  
101 won't cost you anything. Everyone who thinks you might speak, please stand and  
102 raise your right hand and be sworn.

103

104 Mr. Blankinship - Do you swear the testimony that you are about to give is  
105 the truth, the whole truth, and nothing but the truth, so help you God?

106

107 The People in Unison - Yes.

108

109 Mr. Wright - Thank you very much. Now be seated and come right on,  
110 the first person who wants to speak. Come and please identify yourself, state your  
111 name.

112

113 Mr. Beir - My name is Steve Beir. I have lived in Hartley Plantation  
114 since 1994. We, as you noted...

115

116 Mr. Wright - Would you give us your address, where you live.

117

118 Mr. Beir - Oh, I am sorry, 6020 Old Hartley Place.

119

120 Mr. Wright - Is that 6020?

121

122 Mr. Beir - Yes.

123

124 Mr. Wright - Old Hartley. All right. Thank you.

125

126 Mr. Beir - I'd like to mention that we moved in the residence in  
127 1994, in February, when you approved, back in 1994 when you approved their  
128 permit, and after that it was every five years, unknown of any type of quarry in the  
129 area. Obviously one would be concerned to move into an area if you knew there  
130 was a quarry. We experienced vibrations, explosions and didn't know what they  
131 were. Hartley Plantation at that time was half of the size that it is today and as we  
132 started to experience these vibrations, started doing some research to find out if  
133 there was a quarry, and I don't believe it was until about five years ago that we  
134 were aware that there was a quarry. In that time we have experienced much  
135 damage to the house. We have had cabinets fall off the wall completely. We can't  
136 prove without a doubt that it was caused by the explosions. When the explosion  
137 happens, enough damage happens exactly at that time, that over time the weight  
138 and stress of the materials in your cabinets that have been loosened will come off.  
139 We have two small children, thank God that were not in the room at the time. We  
140 have had shelving fall off. We have cracks in our walls. We have a driveway that  
141 has lots of cracks with about a six inch foundation within the concrete, as well as  
142 other neighbors around us experiencing the same thing. When you are in the home,  
143 you experience a large vibration and we went out on Tuesday night when they had  
144 the informational session at the quarry and they tried to educate the homeowners  
145 of what they are doing, and I don't doubt that they are following the guidelines that  
146 they have been awarded, but the guidelines they were awarded was before there  
147 were residents within that area, and we are 2500 feet away from that facility.  
148 When the vibrations are going off, you can actually see windows shaking. If you  
149 are outside or inside, you feel the vibration, obviously stronger within the home.  
150 Because of the structure of the house, the vibration builds up and resonates  
151 throughout the house where things will fall off the walls. We have cracks in the  
152 walls, etc. So, the other thing I would like to at least bring to you is that the  
153 permits that they have been awarded over the past five years have not been  
154 communicated to the homeowners to come out and say that there are problems  
155 going on, and they are coming out here saying "We are within your guidelines" and  
156 they are being awarded. What we are experiencing though is that once we were  
157 notified and Mr. Glover brought us in here in April, is a lot of attention, obviously by  
158 the media, which could be good or bad, based on our home values, but we are able  
159 to now get the attention of you to see that there is a problem happening, and when  
160 the homeowners are aware that we can come here and talk to you, something can  
161 happen, and hopefully suspend their permit until further investigation is done to  
162 understand engineering and structural damage that could be caused to the houses.  
163 I spoke to a woman on Tuesday night living in Overhill Farms for 30 years, who has  
164 been complaining and has gotten no where. Now that there are many residents  
165 within Winterberry and Hartley Plantation voicing what is happening, all of a sudden  
166 now hopefully something can be done.

167

168 Mr. Wright - Just a second. Do we have any questions by members of  
169 the Board at this point.

170  
171 Mr. Nunnally - I'd just like to add one thing. You said that you could see  
172 the windows vibrating. Could you see them yourself?

173  
174 Mr. Beir - Yes, I have, sir.

175  
176 Mr. Nunnally - You have.

177  
178 Mr. Beir - My wife stays at home during the day, so she  
179 experiences it more than I do. I have played hooky from work a few times, so I  
180 have been there. As a matter of fact, don't quote me, the last week, either  
181 Tuesday or Thursday I came home for lunch and at approximately 1:00 p.m. there  
182 was a blast. There were no sirens as there should be that we heard. Another  
183 neighbor behind us was also at home and heard that explosion and you could see  
184 the windows. I mean, are they structurally going to break? I don't know. But you  
185 see the movement. A year and a half or two years ago when there was an  
186 earthquake in Richmond and people were saying, "My God, this was amazing." It  
187 was nothing compared to what the blasts are like within the neighborhood, and  
188 according to the quarry they are doing 40 blasts a year, and I don't believe Henrico  
189 building codes withstand the earthquake requirements of Los Angeles and they  
190 have earthquakes every six months to a year, maybe, and these are 40 blasts a  
191 year that these homes are not designed to withstand.

192  
193 Mr. Wright - Thank you, sir.

194  
195 Mrs. Harris - I have a question. The duration of the vibrations when  
196 you hear the blast, you contrast it to the earthquake.

197  
198 Mr. Beir - The earthquake lasts longer, there is no doubt, but it is  
199 not as severe. The bass frequency is not as low. The best I explained it, and I  
200 talked to the quarry about this. If you take a speaker in a home audio speaker and  
201 you take a small one, it doesn't have much bass, because the frequency within that  
202 cabinet, the air movement is very light. You put it in a bigger cabinet, you are  
203 going to get that bass moving because there is more air moving. Take a 3600  
204 square foot cabinet and move that air, and you feel that vibration. So, it is not just  
205 the explosion within the quarry, but what is coming up into the ground and it is  
206 continuous after that explosion is done that you feel within the residence.

207  
208 Ms. Dwyer - So you have been living in that house since 1994.

209  
210 Mr. Beir - That is correct.

211

212 Ms. Dwyer - You have lived there 11 years?  
213  
214 Mr. Beir - Yes.  
215  
216 Ms. Dwyer - And how many times have you complained to the County  
217 about this situation?  
218  
219 Mr. Beir - To be honest, I didn't really realize we had that route;  
220 ignorance on my part. Up until Mr. Glover called the meeting and we said, "Wow,  
221 we can finally do something about this." We contacted the quarry directly. We  
222 had the cabinets fall off our wall. They had an examiner come out. We have had  
223 them put the meters in our backyard which, of course, proves they are within the  
224 realm of what they can do. I question whether that is the correct measurement.  
225 Not within the house, where the vibrations are stronger. When the insurance  
226 inspector came out and he looked around and he saw the amount of damage, he  
227 was amazed. Amazing he is no longer part of the quarry. They had somebody else  
228 come out and we were denied our claim for \$400 for cabinets, not much, based on  
229 what people now here are claiming damage to be. It is hard to prove because there  
230 is not an explosion and a direct affect. It is over time and we have cabinets today  
231 and everybody has seen on television on the news where the cabinets in the  
232 kitchen are separating from the wall. We have cracks in our walls, and after 11  
233 years, settling is done. So it is hard to say that it is our settlement. Our house  
234 was built by a different builder than anybody else within our subdivision and  
235 everybody else is experiencing the same thing, so there is a lot of commonality  
236 here. In yesterday's *-Dispatch* in the Metro section, front page, they talked  
237 about the quarry blasting and what was happening here tonight, and right below it  
238 was an article about 295 exit ramp onto Staples Mill Road going westbound with  
239 huge potholes and cracks, exposing the bars within the concrete. Amazing how  
240 this coincidence occurred. Whether they are related I don't know, but I think it  
241 questions whether we should investigate to see if those are causing other damage  
242 to something like that.  
243  
244 Mr. Wright - Any other questions? Thank you very much.  
245  
246 Mr. Beir - Thank you.  
247  
248 Ms. Dwyer - Mr. Chairman, if I may make a suggestion, we do have a  
249 lot of speakers tonight and as I am looking at the first speaker, it might be helpful if  
250 the speakers limit their remarks to their own experiences rather than expanding on  
251 other people's experiences.  
252  
253 Mr. Wright - We want to hear from everyone, but we don't want to be  
254 here all night. If we could limit it just to your experiences, sir, I would certainly  
255 appreciate it.

256  
257 Mr. Rhodes - Sure. My name is Brian Rhodes. I live in Summerberry,  
258 at 5364 Springfield Road, and I will try to keep my comments limited. I think the  
259 first speaker did a very good job of summarizing probably what most everybody in  
260 the room is experiencing. My personal experience is I moved in my house in 2000,  
261 in the summer of 2000, and I was the first owner, and the home since I moved in,  
262 the first experience I ever had with it was some cracks. I had a cracked window  
263 downstairs. I really didn't know, it was a new construction house right after I'd  
264 moved in. I thought it was a little odd that there was a cracked window and no  
265 signs of any damage or anything like that that you usually see, some type of break  
266 in the glass. There was nothing there, so I didn't really think anything of it, just  
267 had the glass repair person come in and fix the glass. Thereafter, about six more  
268 months, another upstairs window cracked. Same exact design. A long crack all the  
269 way across, diagonally across the window. No pattern again of any damage, so it  
270 would be difficult for me to prove, but in a brand new construction house, it is  
271 unlikely that two windows cracked to me for no apparent reason. Other things,  
272 one of the biggest things I have currently in the house, are my rear porch. The  
273 screens will not close, and when you put a level on the side where the screen is off  
274 to the right-hand side, when you go to slide it to the left-hand side, that side has  
275 actually shifted down at an angle, so it is level on the bottom but at the top it is  
276 angled down and the screen door will no longer close. I haven't got an estimate on  
277 what exactly it is, but obviously, something has caused in the foundation to lower  
278 the foundation and I can no longer close the screen door at all. And I have had a  
279 few people look at it, but they said they don't even know how to fix it. Numerous  
280 nail pops, a crack in a downstairs drywall piece that probably goes about this long.  
281 That happened several years ago. Haven't fixed it yet. Let's see. The stairwell,  
282 there is a piece of the stairwell that has separated, also a piece in my hardwood  
283 floor that has separated by about a quarter of an inch. All things that don't seem  
284 very common with a new construction house. Again, like the first speaker said, it  
285 is very difficult to prove, but I am in the real estate business and feel our new  
286 construction houses, and even in the builders that build a large number of homes,  
287 like my home was built by Eagle, don't tend to miss this many things, although it is  
288 possible. It just seems too much when it is this many people in common that have,  
289 I think, similar experiences to my home that causes suspicion, that I can't define  
290 what public health and safety is, but I know my home has been damaged, I believe,  
291 because of this, and it is a major concern to me, and I believe people in this room,  
292 as well as in other neighbors who could not be here this evening.

293  
294 Mr. Wright - All right, sir. Thank you very much. Any questions.

295  
296 Mr. Wood - My name is J. Early Wood, 13155 Overhill Drive, Glen  
297 Allen. Hanover County. I have been living in Overhill Farms since 1955. Probably  
298 in the early 1970s I had my feeling about the quarry and I expressed them at that  
299 time, very vocal. Wasn't too many of you people around at that time because it

300 was still boondocks out in the country, but anyway, Mr. Glazebrook and I went  
301 over and talked to him and he said, just as nice as he could be, said "I'd like to  
302 come over and put a seismograph in your backyard sometime." So we made  
303 arrangements to do that. This was in 1973, and back in those days, all the radio  
304 they had was one in the truck, and so the driver came up and said "We will be  
305 blasting in five minutes" so I stood there and they set the blast off and the  
306 seismograph went over and man, I felt the world had come to an end. So, they  
307 said, "We'd like to set off another blast and it will take about 25 minutes or so  
308 before we can do this." So, we talked and so forth and finally the driver came up  
309 and said they were going to set it off in about three minutes, so Mr. Glazebrook  
310 handed me some ear plugs and said that I wished you'd do this for me. So I stuck  
311 the earplugs in my ear, leaned against the tree, looked at the seismograph and it  
312 came on further than before. I felt nothing, because I could not hear anything. My  
313 home, I moved into it in 1955. It was built by a very shoddy builder, constructor. I  
314 didn't know they were still out there. I want to tell you why. After about 15 years  
315 I filled up all the cracks in my house. I don't have any cracks in there now. My  
316 front porch had sunk in before the quarry ever got there. I replaced that. I don't  
317 have any cracks in there. I know the people speaking here tonight are very sincere.  
318 You have to draw a conclusion of whether they are sincerely wrong or sincerely  
319 right. My greatest concern in this area, living a little over 2000 feet away from the  
320 quarry and "el dumbo" up there is the dump exploding, and you can tell me what  
321 you want to, but they are going to have a big explosion there one day. You think  
322 they are having a blast now, you wait until that dump goes off. I have been  
323 watching it fill up and building for 50 years, so you know we are here for safety  
324 and I just wanted to throw that in. If I can help you and answer any questions, I  
325 am willing to do so.

326  
327 Mrs. Harris - I do have a question. Could you identify, Mr. Wood,  
328 would you identify your property in proportion to 295?

329  
330 Mr. Wood - If you go up 33, I live right on the other side of the  
331 Overhill Swimming Lake. The man who built my house was one of the builders of  
332 Overhill Lake. He was also a partner in the building of my home. He was a sawmill  
333 operator.

334  
335 Mr. Kirkland - Mr. Wood, I gather from your testimony you are saying  
336 you have no damage to your house.

337  
338 Mr. Wood - I had no damage to my house after I fixed the original  
339 cracks and so forth that was caused by a shoddy built house. I am wondering how  
340 many of the builders and real estate agents and contractors are here tonight.

341  
342 Mr. Kirkland - Mr. Wood, may I ask you one more question? Exactly  
343 how many feet are you from the blasts?

344  
345 Mr. Wood - A little over 2000 feet. I can hear the traffic on 295  
346 much plainer than I can the quarry.

347  
348 Mr. Kirkland - Have you ever been any closer than 2000 feet, because I  
349 know the blasting is progressing across the quarry. It is not being blasted in the  
350 same place. Have you ever been any closer than 2000 feet?

351  
352 Mr. Wood - I was over at the Lake at the time back in woods, up on  
353 the hill, that adjoins the quarry, yes.

354  
355 Mr. Kirkland - OK, thank you.

356  
357 Mrs. Beir - Yes, hi. How are you. Jewel Beir and I am at 6020 Old  
358 Hartley Place, and I am kind of the spouse of the spouse who was the first speaker,  
359 who was Steve Beir. I have lived at 6020 Old Hartley Place for 11 years. I feel  
360 like within 11 years the settling should have done whatever it is going to do within  
361 the first five to seven years. I am experiencing now additional cracks that I am  
362 seeing, creaking in my floor, my sliding glass door is not, it is off. I also have two  
363 small children. I have an eight year old which would have been six at the time that  
364 the cabinetry came off of the wall and, thank God, that he was not there, because I  
365 did think that was actually what the sound was, was that my child had fallen in the  
366 garage on the steps, so I took off running like any caring Mom to go pick up my  
367 child, and it was not my child. It was cabinetry that was totally across the floor or  
368 the substance from the cabinetry, which, thank God, my washer and dryer caught  
369 it. I mean, had that of been a child, what would it have done to that child? What if  
370 I hadn't had the washer and dryer to catch it? What if my son had been there? I  
371 mean, are we going to have somebody hurt over this? I wouldn't want to see a  
372 child or a senior. I have tremendous cracks. You guys have seen the articles and  
373 stuff. It is every seam. You know these builders are reputable. Yes, we have  
374 some things that go wrong and we sit there and we repair it, but every seam or  
375 something, it shouldn't be separating. I have one of the best builders throughout  
376 the state or throughout Richmond. I know. I did my investigation. He is the only  
377 one, I totally brought him in to build my home where I live. I mean I was so excited  
378 to find him. I feel like at this point what I am actually doing is, and all of us. We  
379 have, you know you take your life savings, you put it in your home, and real estate  
380 is probably one of the best investments right now to put our finances in, but I feel  
381 like this is something with seniors that we have, or myself, if I go to resale. What  
382 am I going to be, what kind of burden is it going to cost me? I want people to  
383 drive through saying, "I want to live there." And that is what we all want. We  
384 want that 30, 40, 50% return, and I feel like what we are doing is going to be  
385 passed on to our children at this point, and we are actually putting a financial  
386 impact on them, because they are not going to get that return, and I am really  
387 saddened by that. My house has taken a major impact. I have cracked windows.

388 We are repairing it at our own expense. The quarry, I called them when the  
389 cabinetry came out. They were very nice at coming out and looking at it. We did  
390 have someone from the, their insurance adjuster come out and he reviewed it, and I  
391 never got a phone call back. I had to keep saying, "OK, where are they?" So,  
392 finally, within a year I finally said, "OK, you guys, I need an answer." The next  
393 thing, the gentleman that was there, he was no longer there. I guess he got  
394 transferred or wherever he went. A new lady, she came out. She reviewed it and  
395 then she gave me a number to call. I waited and when I called it at that point I got  
396 my letter back. I just feel like, it is not, these homeowners are taking some impact.  
397 Yes, I know, there are some things that maybe we need to repair, but you  
398 shouldn't have to run around your house with a spackle can and a spackle in your  
399 hand wondering where is the next one going to be. When is it going to be? I mean,  
400 two weeks ago I was sitting in my garage. I felt the vibration in my garage. I  
401 mean, the earthquake, and to reiterate on that. That was two years ago.  
402 Everybody, I mean people saying, "Jewel, did you feel that? Did you feel that?" I  
403 was like no. I mean I was in my car. I wasn't in a building. But, at the same  
404 point, I finally turned around and I said, "You know what? You guys have got to  
405 stop. I feel more than that in my house." And I was being honest from my heart.  
406 You do. You feel such a major vibration. They came up and they set up a rector  
407 scale and it was outside. And when they did that, and the quarry was nice enough  
408 to do that. They gave us the time they were going to do the blast. At the time  
409 that they did the blast it was nowhere near what I had felt. It was just like it was a  
410 small one, but there was very little vibration, no movement, nothing at all to where  
411 you get these major jolts, and I mean they do. You get a vibration, you feel it, you  
412 see it, and I mean my walls and every section I am having separate. It is noticing  
413 it. Any questions?

414  
415 Mr. Nunnally - I had a question. You said you felt the vibration in your  
416 garage?

417  
418 Mrs. Beir - Yes, I did. I was sitting on the step.

419  
420 Mr. Nunnally - Did you hear a blast at that time?

421  
422 Mrs. Beir - Actually I heard it, but I felt more of the vibration because  
423 I was outside. And yes I did, but I didn't hear the sirens go off at that point.

424  
425 Mr. Nunnally - Thank you.

426  
427 Mr. Wright - Thank you, ma'am.

428  
429 Mr. Gobble - How are you doing? My name is Chris Gobble and I live at  
430 5533 Jones Mill Drive.

431

432 Mr. Wright - Can you spell your last name?  
433  
434 Mr. Gobble - Gobble.  
435  
436 Mr. Wright - What was the address again?  
437  
438 Mr. Gobble - 5533 Jones Mill Drive. It is in the Summerberry  
439 Subdivision, better known as Winterberry. It is a part of Winterberry. It is also an  
440 Eagle built house. I have two family members that work for Eagle and one of  
441 which no longer works there. The other one does, and I have confirmed that any of  
442 the problems that we have had have not been a part of Eagle's quality, because  
443 that name has come up a couple of times I wanted to clarify that. I built a house  
444 new in 1999, July of 1999, and in the past three years since I have owned the  
445 house I have noticed dramatic cracks in my ceiling on the second floor. The  
446 kitchen cabinets have started to pull away from the wall. I have an exterior pole on  
447 the front porch that is starting to crack and separate from the house, and we've  
448 looked at possibly settling. Settling normally happens in the first couple of years  
449 with a house and I feel like I have noticed dramatic booms when I have been there  
450 or when my wife has been there at the house, and I have a real estate license, as  
451 well. I am a native of Richmond and I've seen a lot of real estate deals here in  
452 Richmond and I feel that not only have I had some damage to my house, but I am  
453 worried as far as investment goes, all the publicity that this has created for resale  
454 value and investment and protecting my investment that this could potentially  
455 cause my house to not appreciate at the same rate that it would if it weren't for  
456 the quarry. That is one of my largest concerns, even on top of the damage, which  
457 may be hard to prove. It is the potential resale value that is going to diminish.  
458  
459 Mr. Kirkland - Mr. Gobble, when you bought your home did you know  
460 the quarry was there?  
461  
462 Mr. Gobble - No, I did not.  
463  
464 Mr. Kirkland - And you said you deal in real estate?  
465  
466 Mr. Gobble - Yes.  
467  
468 Mr. Kirkland - How close are you to 295? I am trying to locate your  
469 house here on the map. I can't really tell.  
470  
471 Mr. Gobble - It is off of Springfield Road.  
472  
473 Mr. Kirkland - I see Jones Mill here. Are you all the way to the back of  
474 the Summerberry Subdivision?  
475

476 Mr. Gobble - I am on the right-hand side cul-de-sac closer to Springfield  
477 versus the opposite direction that would be closer to 295. I am at the end of that  
478 cul-de-sac, I am in that cul-de-sac.

479

480 Mr. Kirkland - Thank you.

481

482 Mr. Wright - Thank you very much.

483

484 Ms. Martin - Hi. My name is Debbie Rose Martin. I live at 5400 Jones  
485 Mill Drive over in Summerberry. I have lived in our home since, we moved in our  
486 home in February of 2000. The first thing I want to bring up is that back last year  
487 in 2004 the Board of Zoning Appeals sent out their notification concerning the  
488 hearing. This letter only went to people who lived directly behind 295. I called Mr.  
489 Blankinship and I confirmed that at that time. I wanted to know who was getting  
490 these letters, because my neighbors across the street did not get the letter. We did  
491 not know there was a quarry when we moved in our house. The first time I heard  
492 the blast I thought my heat pump had exploded. I, at that time was taking care of  
493 small children in my home, and, of course, it never failed that it always passes  
494 during that time?

495

496 Mr. Kirkland - Approximately when was that that you heard the first  
497 blast?

498

499 Ms. Martin - Probably about a month or so maybe after I moved in the  
500 house and we weren't informed that there was a quarry. My big thing was, you  
501 know, great, right now we have all this media attention and stuff finally, but a year  
502 ago I sent a letter to Mr. Blankinship. I was unable to attend the meeting. I tried to  
503 get people involved in it then, but because of the short period of time that I got the  
504 notification stating that there was a meeting, there wasn't enough time to organize  
505 to get people more involved to find out what was going on. That was my big  
506 concern was that you all were only notifying people that were directly behind 295.  
507 It affects more people than that.

508

509 Mr. Kirkland - Excuse me. Mr. Blankinship, would you explain the rules  
510 on who is contacted for these cases.

511

512 Mr. Blankinship - Yes. She knows this already because she said we had  
513 discussed it, but the State law requires the County to notify whose property  
514 immediately adjoins the applicant's property or property across the street. And we  
515 have considered 295 to be a street for that purpose, because that does involve  
516 more people than if we did not notify across 295, but that is a standard process  
517 that we follow throughout the County, and it is actually prescribed by State law  
518 and everyone in the State follows that same procedure.

519

520 Ms. Martin - At that time I was unable to attend the meeting so I  
521 faxed a letter to Mr. Blankinship, and, you know, at that time I strongly urged the  
522 Board not to grant this permit again. Unfortunately I was unable to be there to  
523 voice myself. I understood that my letter wasn't even looked at basically. It was  
524 put in a file.

525  
526 Mr. Blankinship - No, that letter was distributed to the Board members.

527  
528 Ms. Martin - OK. Well, that is not the impression that I got, but I also  
529 at that time requested that the County send someone out to my house to let me  
530 know, a structural engineer, to guarantee that these damages, were not causing  
531 any damage to my home. That never was addressed. Basically, I never heard  
532 anything from Henrico County Board of Zoning Appeals concerning my letter.  
533 Since then we've had the cracks around our ceiling. We've had - our fireplace has  
534 a crack in it, our garage has a crack in it. You know, the first couple of years, we  
535 were thinking they were settling things. Well, it continued to keep happening. We  
536 have nail pops that keep happening. I have a tile in my bathroom that one day it  
537 cracked, but it is in a place where it is not an easy place for it to crack along the  
538 outside walls. Again, you know, I have repaired and repaired. I have even gotten  
539 to the point all of my walls in my house are textured. Textured ceilings so that if  
540 they start cracking again, I am not going to notice it, but, you know, what is going  
541 to end up happening is I am probably am going to notice it over a time period. The  
542 blasts are very loud like someone had mentioned about the earthquake. When that  
543 earthquake happened, if the way it continued, I am adjusted. Is that another blast?  
544 But it wouldn't stop, so we realized then after we heard the next day that it was an  
545 earthquake. They are loud. Our house shakes. It is disruptive to small children that  
546 live in there. I mean, there is a noise. We have lived behind 295, so I have the  
547 295 noise. That is tolerable compared to these blasts. Yes, we were initially, I  
548 was told, we did hear the sirens occasionally, and I was told by, and I don't know  
549 who, told me that we should always hear the sirens. Well, one day I didn't hear  
550 the siren, and I questioned. I called the quarry and Mr. Kerns was very nice to  
551 come out and talk to me, but then I was informed then, "No, we don't have to hear  
552 those sirens before and after a blast" which again concerns me. At least when I  
553 heard them I knew it was going to happen. Again, I strongly urge the Board of  
554 Zoning to not grant, to revoke the permit. You have a lot of people out here  
555 complaining, you know, because of the structural damage. I haven't had anybody  
556 come up to my house and examine it underneath. I know I have neighbors that  
557 have and I am sure they will tell you what they have found, but that is basically all I  
558 have to say. Yes, ma'am.

559  
560 Mrs. Harris - Let me have your address please, again.

561  
562 Ms. Martin - It is 5400 Jones Mill Drive and I am up here at the other  
563 end closest to 295.

564  
565 Mr. Wright - OK. Thank you very much.  
566  
567 Ms. Martin - OK. Thank you.  
568  
569 Mr. Pemberton - Hello. I am J. T. Pemberton, and I live at 10816 Staples  
570 Mill Road, and since 1963 I have had three homes at that approximate same  
571 location. One of those homes had plastered ceilings and walls and I have had zero  
572 problems in relationship to the quarry and the traffic, too. I just haven't had any  
573 problems and I guess I haven't asked anybody at the quarry or anyone. They have  
574 several buildings right there on top of where they blast. Are they having problems  
575 with their buildings? I also have a Class A Contractors License and, you know, I  
576 am familiar with homes, not the ones that I have built, but, you do have settling  
577 problems, and some of these problems I have heard could very easily be caused  
578 by the contractor. You can be a good contractor, but you still deal with sub-  
579 contractors and you depend on whoever you have working for you. You cannot  
580 micromanage or you cannot watch everything that is done, so I am in favor. I see  
581 no problem with the quarry. They are good neighbors as far as I am concerned and  
582 I would like to see them just continue doing like they have been doing in the past.  
583  
584 Mr. Wright - Any questions?  
585  
586 Mrs. Harris - Do you reside in Henrico County?  
587  
588 Mr. Pemberton - Yes. I live about a quarter of a mile from 295, probably  
589 not even a quarter of a mile, probably about an eighth of a mile, right where  
590 Mountain Road is one side and Springfield is on the other side. From Hartley  
591 Plantation by the way the crow flies, I am probably just a hop, skip and a jump  
592 going right through the woods, so whatever would affect Hartley would certainly  
593 my property.  
594  
595 Mr. Wright - Thank you, sir. Please. Everybody will have a chance to  
596 make remarks when you come to the podium. Yes, ma'am.  
597  
598 Ms. Baldacci - Hi. How are you all this evening? My name is Gladys  
599 Baldacci. It is spelled B like in boy, aldacci. I reside at 6012 Old Hartley Place and  
600 I have prepared my notes. I hope I will be brief. In June, 1999 we purchased land  
601 at Hartley Plantation from FFN Realty, Inc. We were never advised that there was  
602 a quarry located on Staples Mill Road, just across I-295 from our lot. Hartley  
603 Plantation was established in 1993 and we were one of the last houses to be built  
604 in this section. We never thought to investigate local zoning. Had we tried to  
605 check out the surrounding environment, we would have never known that the  
606 Tidewater Quarry was located just across I-295 from us, since there is no visible  
607 sign from Staples Mill Road. We secured a builder to build our all brick custom

608 home. We had previously seen the same house that our builder built in Wyndham,  
609 and he made a few minor changes. We felt very strongly about our builder and the  
610 workmanship that we had seen in several of his previously built houses. I might  
611 add that we have contacted the owners of this home in Wyndham and they have  
612 not had any of the problems that we are experiencing. Since I was still working  
613 when construction began, the only time we went to see the progress of our house  
614 was in the evening and on weekends. We never knew blasting was going on  
615 during the day. It wasn't until I retired that I started experiencing these booms  
616 which shake the entire house. It feels like you are experiencing an earthquake.  
617 You can definitely feel the rumble. Not knowing where these booms were coming  
618 from, we called the County of Henrico to see if they knew. We were told that it  
619 was coming from a blasting that was going on in a quarry located across I-295.  
620 We were also told the quarry had a five-year permit, that they were adhering to all  
621 of the rules and regulations, and that there wasn't anything that we could do about  
622 it. We received a letter from Mr. Glover advising us of a meeting on April 2  
623 regarding the blasting. We attended that meeting and it was then at that time that  
624 we realized other people were experiencing similar problems in their home. We are  
625 experiencing wall seams cracking going up our stairway, sheet rock shifting, and a  
626 crack in the tile around the Jacuzzi, which by the way we have never used. We are  
627 in our 70s. We attended the information fair given at the quarry on Tuesday night,  
628 June 14. We talked with several representatives and took home the information  
629 sheets which we read. They seem to think that what we are experiencing is just  
630 typical, that it goes on everywhere. So, now we feel our voice has fallen on deaf  
631 ears. In summary, we feel the blasting has had a direct effect on the damages that  
632 we are experiencing. We need to repair damages to our home to secure our  
633 investment and make sure this doesn't happen again. For this reason, strong  
634 consideration should be taken before we allow this blasting to continue.

635  
636 Mr. Wright - Thank you very much. Any questions? All right. Next.

637  
638 Ms. Susan Dibble - Hi. Good evening. I am Susan Purvis Dibble and I reside  
639 at 10299 Longest Road, and like most of the speakers here tonight, in 1999 I built  
640 what I thought was my dream home and to this day I still have my crystal and my  
641 china packed away, because I am afraid to put it in the dining room. My husband  
642 being in the building industry built our home, so if you want to know if there is a  
643 builder here, well he is here. And he built my home, and we built it together.  
644 Believe it or not, I can swing a hammer. I can use a screw gun and I am pretty  
645 good at those things, and I am very disturbed by the fact that my home is being  
646 shaken and we do have cracks. I don't believe that our damage is as extensive as  
647 those folks in Hartley Plantation. Our first experience with Tidewater Quarry  
648 occurred on the day that we poured our garage slab. We heard a siren. We heard  
649 a blast and we felt the vibration and it could best be described as startling and it  
650 caused our workers who were in boots working the concrete to go off balance. So I  
651 know that it does throw people that are working off balance, and so I did call at

652 this time the Planning Office and did a little research and basically at that time  
653 discovered that it was a special use permit. There was very little I could do or very  
654 little I had time to do, because my focus was elsewhere. Then we had a baby, and  
655 my focus changed, and I became very concerned about having a baby and the  
656 house shaking. We have a two-story brick home and I was very concerned about  
657 having a blast occur while I was coming down the stairs while carrying the baby.  
658 Again, I called the County and did a little bit of research, but again my focus at this  
659 time was elsewhere. Well, on August 1, 2001, as my son was pulling himself up  
660 on a end table, we had a blast, and it caused my son to fall and he hit his head.  
661 My first call was to the police department. He came out, because I felt I should file  
662 a report, and then my second call again was to the Planning Office to find out what  
663 direction I needed to go in. In the meanwhile, on the 15<sup>th</sup> of August, we had  
664 another blast, and I work out of my home, and at this time I was at home taking  
665 care of my son. The blast occurred. The window cracked. Immediately I called the  
666 quarry and they did come out and we filed a claim. I ordered a window. I  
667 purchased the window. My husband installed the window, and then I sent the bill  
668 to their insurance company, who responded to us that they would not honor our  
669 \$75 claim, because we could not prove beyond a doubt that the blast had cracked  
670 my window. I don't know what else I could do, and I am very concerned because I  
671 don't know how to prove that they are shaking my house and breaking my glass.  
672 So, also, on August 15 my husband filed a formal complaint with the Department  
673 of Mines, Minerals and Energy, and the gentleman came out to our house and did  
674 some research, and we have a letter from him that the majority of the blast had  
675 been shot on the fourth level of the mine and the shaft that was on the 15<sup>th</sup> of  
676 August was shot on the third level due to high water on the fourth level due to a  
677 recent rainfall in the area, and I tell you this because I know that when you have  
678 had a lot of rain, and they haven't been able to blast and get their rock, well, you  
679 had better watch out, because that is when the big one is coming, and so the  
680 gentleman from Minerals and Mines came out to our house. He monitored several  
681 shots and on the 30<sup>th</sup> of August I also invited two representatives from the Planning  
682 Office to come to my house. We had two blasts on this particular day. The first  
683 blast, again, I would describe as startling. I knew what it would feel like because I  
684 had felt it before, but it was very startling to these people from the County, and I  
685 know so, because on the second blast I watched one of the gentlemen reach out  
686 and put his hand on a chair to steady himself just before the blast, and they do  
687 admit to the fact. Yes, I did feel your house shake and definitely there is some  
688 activity going on there that should be looked at, but because the blasting is within  
689 the State requirements, there is nothing that the County can do at this time, and  
690 that is pretty much the last that I have heard from the County, that because this  
691 mine is regulated, based on State maximum blasting requirements, because there is  
692 very little that the County itself could do, and I guess, I was born and raised in  
693 Henrico County and I believe in Henrico County, and I believe we do provide an  
694 excellent quality of life, and this is not reflective of the quality of life that Henrico  
695 County provides. And what I would recommend is that, I am not familiar with the

696 Code, or what it is going to take, but I would appeal to the Board here tonight to  
697 please look into these limits. These limits are too high. The State limits are too  
698 high. Henrico County doesn't function based on State limits. We set our own  
699 limits. Henrico County has a fabulous road and drainage system because Henrico  
700 has designed that system that far exceeds any limits that the State has. These  
701 State limits that regulate this particular mine are way too high, and these people  
702 here tonight deserve the quality of life that the rest of the residents in Henrico  
703 County are enjoying. Thank you.

704

705 Mr. Blankinship - Could you tell us your address again, please?

706

707 Ms. Dibble - 10299 Longest Road. I am approximately 3/4s of a mile  
708 west of 295. I am, unfortunately, and I hate to say that on record, but I do,  
709 because I believe in Henrico County, but I am in Hanover County. I have talked to  
710 the officials of Hanover County and it was the Hanover Police Department that told  
711 me that even though my children are being knocked down, there is nothing that  
712 they could do, and they didn't even file a report, because I tried to get a copy of it.

713

714 Mrs. Harris - Ms. Dibble, do you live near Overhill?

715

716 Ms. Dibble - Yes, ma'am, and my response to those gentlemen would  
717 be that my research has indicated that not only is the geology but the elevation  
718 effects how much air blasts you receive. I am much higher than the Overhill Lake  
719 people, and if you look at the geology, it is different in the area because there are a  
720 lot of factors that determine what the effects of the air blast will be on the  
721 particular property. And I might also add that the Mining Bureau made  
722 recommendations to the quarry with regard to blasting techniques. I believe there  
723 are some alternative blasting techniques that the quarry could and should look into,  
724 but only if they are required to do so, and if they are monitored more closely.

725

726 Mr. Wright - Thank you, ma'am.

727

728 Ms. Mulligan - Good evening. My name is Regina Mulligan. I live at  
729 5356 Springfield Road and we purchased our house in 2000, and the previous  
730 owner had only been there not a year. We purchased the house. The realtor, I  
731 don't know if she knew about it or not, but the previous owner did and we were  
732 not made aware that there was a quarry. I work from home. I feel the blasts  
733 weekly. My computer shakes. I am on the second floor. The entire house shakes.  
734 The ceiling in our kitchen, the sheet rock shifted. That had to be repaired. The  
735 skylight in our bathroom upstairs is completely cracked around the entire skylight,  
736 and the cracks are now heading for the wall. I invite all of you to come sit in my  
737 home right before a blast. When the blast occurs, we are now able to look on the  
738 computer. They have a web site that tells us when it is going to occur. Before  
739 that, I would have to run down my stairs before my dog came to the sliding glass

740 doors. The outside of my house, the paint is all scratched and the rubber pulled off  
741 because the dog is terrified. So, I have to go down and bring the dogs in. I just  
742 can't believe that the constant shaking over time will not destroy a foundation or  
743 crack it. I, too, asked for a structural engineer to come out. I was not even  
744 responded to. That is all I have to say.

745

746 Mr. Wright - Thank you very much.

747

748 Ms. Williams - Hi. My name is Sylvia Williams. I live at 5352  
749 Springfield Road. We purchased our house July 1, 2004, and we were never made  
750 aware of a quarry or any type of blasting. Actually, I didn't know anything about it  
751 or what may be happening until my neighbor, Regina, who spoke right before me,  
752 came to my driveway as I was coming in one day and wanted to know if I had  
753 received a letter. This was early March. And I said, "Yes, but I didn't think it  
754 pertained to me so I threw it away." I had no idea what it was about. She  
755 proceeded to tell me the things that happened. I said, "Wait a minute. I came  
756 home early one day, probably about four months before this, and I said I felt  
757 something." I was downstairs in my great room sitting kind of in the middle of the  
758 room, in a recliner, up against the wall where the fireplace is, and it like, I had just  
759 set down and all of a sudden looking out my back sliding glass door, I felt the wall  
760 here was coming down and looking through my sliding glass doors, I could see the  
761 two windows in the front of my house shaking. I mean just literally shaking. It  
762 really scared me, and I thought "Oh, my God. What is this?" So, I got on the  
763 phone and I called my son who had just left the house, and I said, "Did we have an  
764 earthquake?" He said, "No, I didn't feel anything." And then it happened again, so  
765 as he was telling me the story, that is why I said "Wait a minute. I was home one  
766 day and it happened." It does really shake the whole house. If that is what it was  
767 the day I was home, it literally shakes the house. Since we purchased our house,  
768 we bought it from a young couple with one young child. We went in the house at  
769 night, as we were viewing the house. All the lights were on. We didn't notice  
770 anything wrong. The house was just immaculate. If you come in there now, you  
771 will find a lot of nails that have backed out of the walls, you will see cracks around  
772 where the bay window is in the kitchen. Where anything goes out that is not a lot  
773 of support, so where that goes out, or where there is a larger opening, you will see  
774 more cracks. You can walk in now as you are going into the dining room with a  
775 bigger opening. There is one huge crack coming down the wall and I don't know  
776 what else to say. I did not come to the first meeting. I am here now, but I would  
777 just say - I would invite all of you all to randomly pick any of these houses that  
778 people are complaining about and go sit in the house as the blast is going to occur,  
779 with the same amount of force as it did the day that I was there. It is tremendous.

780

781 Mr. Nunnally - Ms. Williams, you said you purchased this house in 2004,  
782 so how old was it when you bought it?

783

784 Ms. Williams - The house seemed like it was in perfect condition, but as  
785 I said, when we went and looked at the house to sign a contract, it was at night,  
786 but all of the lights were on.

787  
788 Mr. Nunnally - Yes, but how old was the house then when you bought  
789 it?

790  
791 Ms. Williams - I believe the house was built in 2000.

792  
793 Mr. Nunnally - Thank you.

794  
795 Ms. Dwyer - The letter that you mentioned that you threw away, was  
796 that a County letter or some other letter?

797  
798 Ms. Williams - I think it was a County letter. I believe it may have been  
799 from Mr. Glover. I think it was in a yellow envelope or a yellow piece of paper. I  
800 do remember that, and I am like, oh this doesn't pertain to me, so I just threw it  
801 away, and I do want to state one thing in response to looking at the picture here  
802 where I can pick my house out, it is a lot closer to this quarry than a house that  
803 would be over on Mountain and Springfield and Staples Mill Roads. That is not  
804 even on the picture, really. I just wanted to add that.

805  
806 Mr. Wright - Thank you very much.

807  
808 Mr. Woolwine - Hello. My name is Derek Woolwine. I live at 5417 Jones  
809 Mill Drive. We purchased our house about five years ago as well, and I will never  
810 forget the very first week that we moved in, my wife calling me three times that  
811 week talking about the furnace exploding or she wanted me to get somebody out  
812 there to take a look at it to make sure the house wasn't going to blow up. I am in  
813 construction, so luckily somebody went out there pretty quickly and in fact she  
814 went out there twice and assured me that we weren't going to have an explosion,  
815 that the furnace was working properly. It was only a few weeks later that we  
816 learned that the quarry was blasting and that was causing the vibration and the  
817 shaking of the house. I understand the nail pops. I understand wood shrinking,  
818 contracting. I, too, have a crack running diagonally across the window in an  
819 upstairs bedroom. That is unusual. That takes a lot of force to twist the window  
820 so hard that you are going to crack the glass. I have taken a window that is not in  
821 a house and twisted it as hard as I could, and I could not get it to break, so  
822 something caused that. It wasn't simply sitting in a hole that caused the crack  
823 running diagonally. What I would like to do is ask a rhetorical question of what the  
824 thought process was of the Board oh so many years ago when this was first  
825 approved. Now how long has 295 been built? How long was it on the books?  
826 How does that relate to when this was approved? I would surmise that they knew,  
827 because of only giving certain amounts of time that this permit was good for. They

828 knew that eventually that they would outgrow this area and that the County would  
829 need for them to stop, and I just think that this is the time to stop. It is affecting  
830 the people who live in this County adversely. I think that has been proven and I  
831 think you have heard it from everybody. And I think it is time that it has outgrown  
832 its usefulness where it is. Thank you.

833  
834 Mr. Wright - Thank you.

835  
836 Ms. Darr - Hi. My name is Tammy Darr and I live at 5409 Jones Mill  
837 Drive, about 1500 feet from the edge of the quarry. I have pictures. I don't know  
838 if I can give them to you or not.

839  
840 Mr. Wright - Sure. Thank you.

841  
842 Ms. Darr - I have a safety issue. The first picture that you see is a  
843 picture of the children in our neighborhood, our cul-de-sac down there, who come  
844 over to my house to play all the time, who at quiet time will sit on the floor and  
845 watch television, you know, to try to calm down a little bit, you know, mellow out.  
846 Above the floor where they lay is a mirror on our fireplace. It weighs about 70  
847 pounds and is about three feet by four feet. On January 25, this past year, there  
848 was a blast that lifted it off of its nails, which are in studs, lifted it up off its nails  
849 and dropped it onto the floor. I called Tidewater and they did come over and Mr.  
850 Kerns did offer to pay for the mirror. But my concern wasn't the mirror being  
851 replaced or anything. My fear was "What if there had been kids laying there?" If  
852 the vibration or the shaking, or whatever you want to call it is that severe that it  
853 can lift a 70 pound mirror up off the wall and drop it onto the floor, how do we  
854 know that the next blast tomorrow is not going to do the same thing and those  
855 children are going to be laying there watching TV? I really do feel like this is a  
856 safety issue, but there are also pictures of the cracks, some of the cracks in our  
857 house. We have had our downstairs ceilings re-hung because they were sagging.  
858 That was September of last year. They now need to be re-hung again because  
859 they are sagging, and they have been attached with screws, not with nails typical  
860 of the construction in the area to assure that it would not come down, but it is still  
861 coming down. I have invited Vibratex and Tidewater and Henrico County to come  
862 and stand in the house when it blasts, not just to feel it, but you watch the cracks.  
863 You can watch it happen, but nobody will come. Nobody will come and monitor  
864 how much does a house actually shake, even though the ground only moves 2  
865 inches per minute. What comes up the wall? Nobody is telling us, helping us with  
866 this. I did call to have somebody come from the outside into our house to monitor  
867 the vibrations, but everyone that I spoke with did not want to come in, or if they  
868 came in they did not want to be used in any kind of proceedings because they did  
869 not want to be accused of bringing down the quarry. We don't have that option.  
870 No place, I called all the way to Petersburg and up to Fredericksburg. Nobody  
871 would come in. The County wouldn't come in, Vibratex or Tidewater hasn't come

872 in to monitor it. How do we know? They want us to prove. How can we? They  
873 won't even come in and watch it happen, because you can watch the cracks  
874 separate as the walls shake. You can hear our house pop. You feel like your house  
875 lifts up and sets back down. It is not, it is not a common thing. I can't imagine  
876 that all of these things that we are experiencing, you know, aren't from one  
877 common cause. There is only one common theme that we all have. Not our  
878 builders, or washers or vacuum cleaners or garbage disposals. It is all one thing. It  
879 is Tidewater Quarries that we all have in common. We just ask that you please  
880 consider that at least having them come out, further investigation. Rule it out for  
881 us. You know, make us feel safe, that we live in a County that we are trusting is  
882 watching out for us. Thank you.

883  
884 Ms. Dwyer - Who did you call that wouldn't come out to test for you?  
885

886 Ms. Darr - Every single phone number in the yellow pages.  
887

888 Mr. Nunnally - Under what?  
889

890 Ms. Darr - Structural engineer, the vibration. We got on the internet  
891 and tried to track down some people. Anybody that did anything with vibration  
892 monitoring. Most of them said to go through residential. The ones that do, there  
893 was only one person actually that was willing to even come out, but would not  
894 come out and let us use them as "This is what they are saying." They wouldn't do  
895 it, not only do they have to worry about this local area, but these people go out of  
896 state. You know, they don't want to be tied to bringing down a quarry. I mean,  
897 he was very honest about it, but, for our peace of mind he would come, but we  
898 couldn't use it if we found out it was the cause, and it was \$70 an hour for him,  
899 \$70 for each of the machines that he uses. He would use two. He would use one  
900 outside and one inside. You know, you are talking quite a bit of expense to not be  
901 able to come and say, "Hey."  
902

903 Mr. Wright - Thank you very much.  
904

905 Ms. Donovan - Hello. My name is Michelle Donovan. I live at 9138 Old  
906 Hartley Drive. I moved into my house in July of 2003 and was unaware of the  
907 blasting that went on or that a quarry existed. I used to be home on Thursdays and  
908 Fridays and during those times I experienced the blasting first hand and like  
909 everyone else here, it does shake the whole house. The windows shake. It is  
910 worse inside the house than it is if you are out. I am right backed up to 295. I can  
911 hear the whistles when they blow, so I know when it is going to happen. I have  
912 been outside. It is not so bad outside. Some of you have had site monitors outside  
913 and I would assume that if they were inside they would register higher. I don't  
914 know if anybody can guarantee us that there is not going to be permanent damage  
915 to our house, or that will reimburse us in 10 or 20 years when we find out there is

916 major damage to our house, or if we want to resell, will our value be as good as  
917 other places than what we have been focused on and it has been reported on. I  
918 have two small children in the house,3 and 5. Over my five-year old's bed I have a  
919 large picture window, which I will remove tonight, because I don't want it to fall  
920 down. I would hate to see a business be put out because of us, but I think in  
921 responsibility of the County and in the zoning... and going on in such close  
922 proximity. Something needs to change.

923  
924 Mr. Kirkland - When did you acquire your house, Ms. Donovan?

925  
926 Ms. Donovan - July, 2003. The house was built. I think it was finished  
927 in 2000.

928  
929 Ms. Dwyer - Which subdivision do you live in?

930  
931 Ms. Donovan - Hartley Plantation.

932  
933 Mr. Kirkland - When you moved in your house in 2003, was there any  
934 damage to any walls or anything, anything kind of painted up or what?

935  
936 Ms. Donovan - Not that we were aware of. There is our countertop in  
937 our kitchen separating from the wall. I don't know if that is directly related to the  
938 quarry. That is the biggest damage. Overhead light in the kitchen constantly has to  
939 reconnected every three months or so. It kind of separates out from the electrical  
940 socket. My concern is the long-term damage that could happen that would make  
941 the house unlivable.

942  
943 Mr. Wright - Thank you very much.

944  
945 Mr. Taylor - My name is Allen Taylor. I live in the Summerberry  
946 Subdivision at 5529 Jones Mill Drive, and like everybody else that has voiced  
947 complaints here, my wife moved into the home in June of 1999. It was a brand  
948 new home. We have had nail pops. We've got cracks in the plate around the  
949 fireplace. We, too, have had a window that has had the diagonal crack in it. I just  
950 replaced that for \$60 at Lowe's. I've got cracks in the driveway today that I can't  
951 credit, not necessarily to some thinking, but again, there are numerous cracks there  
952 that could be attributable to the blasting. I work out of the home. I have a home  
953 office. I travel some, but I am there often enough to hear the sirens that everybody  
954 else has heard here to experience the blast, and it is not just the noise of the blast  
955 that causes the vibration. It is actually you hear the blast, which is very loud, and  
956 then you actually get a percussion through the ground that comes afterwards and  
957 shakes the whole house. That is what really happens when you are at the time of  
958 the blast. And, again, it is strong enough and my home office is on the second  
959 floor, and you feel the whole house shake, and the day, I can't credit the day that

960 the window broke, but I do know that one day I was in the house after one of the  
961 blasts, heard a loud pop. It sounded almost somebody had dropped a book flat on  
962 the table top, and it was loud enough for me to go downstairs to see what it was.  
963 I couldn't find anything. It was probably about two or three weeks later when my  
964 wife and I were sitting in the kitchen and I looked up at the window and I thought it  
965 was moisture actually on the window and then I noticed the whole window was  
966 cracked across. That is what we have had to replace. And I am not going to  
967 belabor the point. The damages are similar to what other people have had. I may  
968 not have had the extreme in terms of some of the cracks and what have you, and  
969 we live on the upper end of Jones Mill Drive at the further end from the quarry. We  
970 are not directly across 295. But I do want to read one quote. Somebody kind of  
971 touched on it here. This was in the article in the paper yesterday, and this was by  
972 Doug Redinko of Vibratex in Hazelton, Pennsylvania, and he said, talking about the  
973 threshold for damages set at two inches per second of particles moving and the  
974 average data at Tidewater showed movement of only 0.2 inches per second. He  
975 says the vibration levels are not great enough to cause damage, adding that using a  
976 vacuum cleaner or garbage disposal or washing machine would cause a higher  
977 vibration level than the levels given off by blasting at the quarry. Now I will  
978 challenge anybody in this room to come to my house and sit through a blast and  
979 tell me that is a vacuum cleaner. That is all I have got to say.

980  
981 Mr. Wright - Thank you very much.

982  
983 Ms. Canty - Good evening. My name is Yvonne Canty and I live at  
984 5416 Wintergreen Road. This is the first time I have attended one of the meetings  
985 and I know there has been a lot of conversations that I have.

986  
987 Mr. Blankinship - 5416...

988  
989 Ms. Canty - Wintergreen Road. I am right off of Springfield Road in  
990 the first section of Winterberry. My name is Canty, C A N T Y. I relocated here  
991 from Pennsylvania around 1995 and when I first moved into the subdivision I was  
992 probably like one of the first houses built there. There were no other houses  
993 around. It was a wooded area. They hadn't even built the other side that you  
994 were talking about tonight, but I can understand and I do feel the vibrations, and I  
995 do feel the moving of the house, because when they first started occurring, I would  
996 be upstairs in my bedroom and I would say to my daughter, "Did you hear that  
997 noise?" I said, "Well, maybe it is coming from across the street where they are  
998 building the new homes." I said, "Maybe it is coming from over there." But as  
999 time goes on and on, the blast just continues, and it does shake the house and I  
1000 have cracks upstairs and downstairs and I do have the nail popping, and it is a very,  
1001 very scary time, when you are hearing it. You think the whole house is sinking.  
1002 You don't know where it is coming from at first, but now, you know, I can identify  
1003 where it is coming from, so I don't have a lot to say, but I do experience it and like

1004 I said, I was one of the first houses in that community since around 1995. Thank  
1005 you.

1006  
1007 Mr. Wright - Thank you, ma'am.

1008  
1009 Mr. Woods - Hi. My name is Doug Woods and I live at 6105 Old  
1010 Hartley Place. I built this house, or had it built, a custom built house, in 1995, and  
1011 it was my dream home to live in the rest of my life, and I have it built with Dryvit,  
1012 and I don't know if you all are familiar with that. That is the only Dryvit home in  
1013 the neighborhood and I think I was smart to do that, not knowing at the time that  
1014 the quarry was over there. Dryvit has the ability to have flexibility to move in and  
1015 out, so when we get these down blasts, my walls absorb a lot of that and it  
1016 doesn't do the cracking, but I do have a few cracks in my home and I do have a  
1017 window as we speak today with a diagonal crack across one of the top half-round  
1018 windows is still there. I was fortunate enough to be able to retire about six years  
1019 ago, so I spend a lot of time at home, and my home has five levels, and two levels  
1020 are garages with concrete floors. They are not cracked, but I have been on every  
1021 level when this dynamite has gone off and it has shaken my house violently. And I  
1022 also have to question what I have read about approximately 40 blasts a year. I  
1023 don't think that is quite true, because many people say two blast, it is anywhere  
1024 from two to maybe three or four a week, not consistently, but it is certainly more  
1025 than 40 a year, in my opinion. The point I am making is that I am there often and I  
1026 have been through several hundred blasts over 10 years, and I did go out there in  
1027 1997 and I did find out about it after our house was built, and I did do the tour, and  
1028 I did see them blow things up and explain it to us, and they were nice about it.  
1029 And I did come out here when they tried to get the working permit to work around  
1030 the clock, and fortunately, there were enough of us to stop that. The thing I'd like  
1031 to point out is we keep talking about the blasts and the vibrations of that. The  
1032 sound blast from that is what I think is getting everybody here, and we certainly  
1033 feel it.

1034  
1035 Mr. Townsend - How are you doing? My name is W. J. Townsend and I  
1036 live at 9208 Meltonberry Court and I will give you a second to look at that, because  
1037 I feel like I am probably the closest house to the quarry. And I have some of the  
1038 crack issues and all that have been expressed, but I would like to address the part  
1039 of the nuisance end of it. When I moved into my house, it was brand new in 2000,  
1040 and at that time obviously I didn't know there was a quarry there, and even  
1041 knowing, I don't know that that would have made a difference because I didn't  
1042 know what to expect. But I want to try to drive one point, I have a pace maker  
1043 and I would challenge anybody here if I have a fire cracker, and you know I have a  
1044 fire cracker, and I light it and throw it to you, are you ready for the impact? And  
1045 2000 feet away we are talking about one ton of dynamite. If I tell you the time,  
1046 and you know what is going to happen, are you ready for the impact? Thank you.

1047

1048 Mr. Wright - Does anyone else desire to speak? We don't want to  
1049 deny anybody. You have to come to the mike. This is all being recorded. We have  
1050 to record it. You have to come to the microphone if you want to ask whatever.  
1051  
1052 Mr. Levy- My name is Mark Levy and I don't live near the quarry.  
1053  
1054 Mr. Wright - Please state your name, please.  
1055  
1056 Mr. Levy - Mark as on a piece of paper and Levy as in blue cheese.  
1057 The observation, and I live by the way up in the Fox Hill development which is just,  
1058 oh maybe, a quarter of a mile from the airport up there.  
1059  
1060 Mr. Wright - From the airport?  
1061  
1062 Mr. Levy - From the airport, that is Hanover County Airport.  
1063  
1064 Mr. Wright - And what is your address?  
1065  
1066 Mr. Levy - It is 9111 Fox Hill Race Court. That is four words.  
1067 Hanover County, Mechanicsville, 23116.  
1068  
1069 Mr. Kirkland - You are in Hanover County?  
1070  
1071 Mr. Levy - I am in Hanover County. That is correct, and I am here  
1072 because I read the article in the paper yesterday, and I can only characterize what  
1073 the gentleman said about this situation as being obfuscation and I have had to run  
1074 around all day and have developed a small set of questions which I would like to  
1075 have answered, preferably under oath. The first of these is about the geology  
1076 there, the depth of bed rock, the type of rock, both the blasted and the bed rock,  
1077 the face dimensions of the blast, which as from the diagram of the photograph  
1078 here, obviously, can be considerably different from one blast to another. The  
1079 curvature of the face and the angles of the blast, the depth of the top four holes  
1080 from the surface, and length into the rock, the maximum displacement velocities  
1081 and the fusion. That is the first point of obfuscation which I observe where they  
1082 said that the average value was .2 inches per second. That is not the maximum  
1083 value. It is the maximum damage which produces the most damage, and is not a  
1084 linear puncture. It would be at least the square of the rate of change, and would  
1085 also would be dependent upon exactly how long that maximum velocity occurred.  
1086 The location of the monitoring positions relative to the blast face and homes,  
1087 location of homes. There has been a considerable amount on that last period there.  
1088 Have all the blasts been monitored because there can be a great variation in what  
1089 happens from blast to blast and, in fact, there would be a, shall we say, in taking  
1090 an average, to get that point .2 number, that you could have one number which  
1091 was say 5 which is well above the limit, and 10 or 15 of them that were done at

1092 .1, so that the average would be down to essentially .2. It would not be effected  
1093 by that maximum value. I have been running around all day and I had to write  
1094 these up in about five minutes just before I had some dinner, and then dashed  
1095 down here, and the second point of obfuscation was, it was not a quotation other  
1096 than a part of it. It said the vibration levels are not great enough to cause damage,  
1097 he said, and this, by the way, I assume this was Doug Redanko, the vibration tech,  
1098 and that was a quote, followed by in the paper he said, adding that using a vacuum  
1099 cleaner, a garbage disposal or a washing machine would create a higher vibration  
1100 level than the levels given off by blasting a quarry. Now, I happen to be a physicist  
1101 and I am well aware that the rate of motion is proportional to the frequency of the  
1102 source. The frequency from blasting is essentially a small earthquake, in addition to  
1103 an air blast, and that is essentially a low frequency type of thing, so I would also  
1104 want to know what the lower limit and the upper limit of their seismometers say,  
1105 because seismometers usually filter out the lowest frequencies, which is to say is  
1106 where the 2/10s were in fact there or more, the duration of that would be longer  
1107 than would be detected by the seismometers. Similarly, the seismometers has an  
1108 upper frequency limit, so it will not, in fact, even detect something like a vacuum  
1109 cleaner or dish washer, so to make that comparison, I would consider essentially  
1110 false. It is misdirection. There is an old story about the Jesuits being accused of  
1111 killing a man and a dog, and who brought out the dog to prove that that was not  
1112 true. This is the same sort of thing. I would point out that the location of those  
1113 seismometers is rather critical with respect to the face, which is big and involved in  
1114 a blast. If they are too close, then what happens is that the ground motion, if they  
1115 are, in fact, measuring ground motion rather than just air motion, would reach their  
1116 seismometers spread over a period of time from one end of the blast to the other  
1117 end of the blast, whereas the effective result further away would see all of that at  
1118 the same time or very close to the same time, which means that the amplitude and  
1119 the rate on it would be greater at a distance. This depends upon how much area,  
1120 how wide the blast occurs over. By the way, one thing I did not get on this list  
1121 because I did it in such a rush and that is the method of detonation of the blast. If  
1122 the method of detonation is electrical so that all of the charges are exploded  
1123 simultaneously, this would cause a much higher peak than it would if the blast  
1124 were to have been set off sequentially, for instance, by a long set of fuses. I don't  
1125 know which they were doing, but that would be an additional question, which I  
1126 would add to those, because it makes a big difference in what the net effect, how  
1127 much of a damaging effect there could be from those blasts. The most interesting  
1128 thing was the fact that they took an average on something which the peak of  
1129 values are the matters of importance. That's it.

1130

1131 Mr. Wright - Thank you very much.

1132

1133 **AT THIS TIME THE BOARD TOOK A FIVE-MINUTE BREAK.**

1134

1135 **THE BOARD RECONVENED.**

1136  
1137 Mr. Wright - At this time we will hear from Tidewater Quarries.

1138  
1139 Mr. Wilson - Good evening, Mr. Chairman, members of the Board, Mr.  
1140 Blankinship. My name is Jack Wilson. I am an attorney with Hunton and Williams  
1141 here in Richmond, and I am here this evening on behalf of Tidewater Quarries.  
1142 With me this evening are Danny Willard, who is the President of Tidewater  
1143 Quarries, Richard Mattingly, who is the Vice President with Tidewater Quarries,  
1144 Tom Kern, who is the plant manager at the Springfield Quarry, the quarry  
1145 associated with this use permit, and then Doug Redanko, who is an expert with  
1146 Vibratech, who has been mentioned earlier this evening. My hope is that I will be  
1147 able to answer the questions that arise, but I have got them as my backup if need  
1148 be.

1149  
1150 Before I begin I do want to acknowledge the discussion that the various citizens  
1151 who have preceded me to this podium have made. Clearly, Tidewater Quarries  
1152 recognizes their concerns and sympathizes with their concerns and damage they  
1153 have been experiencing in their homes, and I know I have, and others with  
1154 Tidewater Quarry have taken careful notes as each of the citizens has spoken this  
1155 evening, and let me also say that we recognize that tonight's hearing is really the  
1156 first step in an on-going process to address those concerns in a way that is  
1157 satisfactory to our new neighbors. I may also add that we are confident that with  
1158 the science and technology of mining operations that we can peacefully co-exist  
1159 with our new neighbors. Let me also mention that in the staff report that I believe  
1160 all of you received and that we received, there were a number of questions that  
1161 were raised by the staff in their report and as I go through my presentation, I will  
1162 be addressing them as appropriate. We also got some questions from Mr. Levy  
1163 that were raised, and I am going to do my best to address those in my presentation  
1164 as well.

1165  
1166 Let me talk briefly about the quarry and its history. As has been mentioned, the  
1167 quarry is a rock quarry mining granite and that material is used in the construction  
1168 industries, environmental protection, erosion and sediment control devices, road  
1169 building, etc. It is a very vital component of our County and our Commonwealth.  
1170 The process used to fracture the granite to get it out of the ground is using  
1171 explosives, which create larger rocks, and these large rocks are then processed in  
1172 commercially smaller sizes at the plant and then shipped out to various users.  
1173 Now, one of the questions, the third question actually in the staff report is whether  
1174 there are other methods other than blasting that would permit the continued  
1175 operations at the quarry, and the answer in short is no. There really are no other  
1176 viable methods of extracting the rock, other than using explosives, which, as I will  
1177 discuss in my presentation, can and is done in a manner that will have no  
1178 detrimental impact on surrounding structures. The quarry, as was mentioned in the  
1179 staff report, was first opened in 1965, and since then, as best we can count, there

1180 have been 17 different conditional use permit renewals, the most recent being in  
1181 April 2004, and at the 2004 renewal, there was no citizen opposition at that  
1182 meeting speaking against the renewal of the permit. Let me give a quick overview  
1183 of the quarry that you can identify some of the various components, so that we can  
1184 make sure we are all oriented.

1185  
1186 First of all, clearly, we have I-295 here. The quarry boundary is shown on this  
1187 map. Not all of the quarry property, because it actually goes out to Staples Mill  
1188 Road. The County Landfill is located in this area and then we have the new  
1189 subdivisions of Hartley Plantation, Winterberry and Summerberry. The processing  
1190 plant that I made mention of earlier is located in this area of the quarry. This is  
1191 where essentially the larger rocks that are extracted from the face of the quarry are  
1192 processed into smaller commercially saleable components, whether they be large  
1193 rocks, rip rap, or smaller pieces for gravel. That is all done here. Then you've got  
1194 the scale house where the trucks enter and exit out to Staples Mill Road.  
1195 Obviously this area here is the pit itself, where all of the blasting activity takes  
1196 place. Now, one of the questions raised, actually the first question raised by staff  
1197 in the staff report is whether the location of the blasting has changed over time,  
1198 and whether it has actually moved closer to the affected neighborhoods, and what  
1199 I've got here, and, unfortunately, I just got this today, because I didn't have a  
1200 whole lot of time to get it, in response to the staff report, and I tried to use it on  
1201 the overhead and it just really didn't show very well, but basically using the same  
1202 methods you can see up there, (referring to rendering), this is the portion of the  
1203 quarry located next to the landfill. This blue line right here shows where the top of  
1204 the quarry was located as of November 4, 1998. This red line here shows where  
1205 the top of the quarry was as of January 6, 2004, (referring to rendering) so this is  
1206 the area where most of the activity has occurred. What is important to note is that  
1207 this line here has not changed. This is the edge of the quarry closest to the  
1208 subdivision and there has been no change in that direction really over the last six  
1209 years, or clearly since most of these homes have been constructed. Most of the  
1210 activity has been in the westerly direction towards the landfill.

1211  
1212 Ms. Dwyer - Before we lose that point, may I ask a question, Mr.  
1213 Chairman.

1214  
1215 Mr. Wright - Sure.

1216  
1217 Ms. Dwyer - If the quarry can be moving to the west, wouldn't the  
1218 homes on the western portion of this picture be more affected now than it would  
1219 have been earlier?

1220  
1221 Mr. Wilson- Clearly the activity has moved a little bit closer to here,  
1222 and we'd probably be closer to the homes that are in this area than when it was  
1223 obviously further back, but these homes in here, this is the 1998 aerial photograph

1224 and none of those homes are even located in that area at this time, so, again, most  
1225 of the activity that has occurred has been in this area within the last six years. So,  
1226 it probably hasn't been a significant change that homes in here would feel because  
1227 since they have been there, the activity has been occurring.  
1228

1229 Also, let me mention that in the 40-year history of this quarry, this is, to the best  
1230 of our knowledge, the only time that we can identify that there has been a Show  
1231 Cause Hearing related to any of the quarry operations. Clearly, there was nothing  
1232 else mentioned in the staff report that would suggest that at any time in the history  
1233 of the quarry that there had been a Show Cause related to any of its conditions.  
1234

1235 Again, as we start this evening, we need to recognize that first and foremost that  
1236 this is a quasi legal proceeding and really the burden is on those seeking to revoke  
1237 the use permit to show that Tidewater Quarries has violated the condition of the  
1238 permit, and as the Chairman mentioned at the outset, that evidence needs to be  
1239 convincing evidence that the Tidewater Quarries has violated its condition.  
1240 Specifically the condition that we are talking about tonight is Condition No. 22  
1241 which relates to blasting. That condition contains two elements. The first is that  
1242 the blasting must be in conformance with Virginia Department of Mines, Minerals  
1243 and Energy Standards, and the second is that the amount of explosives is limited to  
1244 1,000 pounds per time delay. Those two are very objective standards set in place  
1245 to ensure that if those standards are established that there is not an endangerment  
1246 to the public, health and safety, and so if you can establish that the objective  
1247 standards are being met, you can, therefore, establish that the public is being  
1248 protected. So, what I want to do first of all is look at both of those two elements  
1249 separately. Each of you has a notebook that was prepared and under Tab 1 of that  
1250 notebook are two reports from the Department of Mines and Mineral Energy that  
1251 show complete compliance with all of those standards. Again, the first element of  
1252 Condition No. 22...

1253  
1254 Ms. Dwyer - Excuse me, Mr. Wilson. I have a question about your  
1255 earlier statement. Condition No. 22 says "Blasting shall be conducted in  
1256 conformance with the standards of the Virginia Department of Mines and shall not  
1257 endanger the public health and safety." It seems to me that those are two separate  
1258 elements that if one could, that is not meant to be in favor of one side or the other,  
1259 I am just trying to clarify the condition. At any rate, it seems to me that there are  
1260 two elements that one could comply with the mine standards, but then there is a  
1261 separate question as to whether beyond that, the safety of the public has been  
1262 endangered.  
1263

1264 Mr. Wilson - And I will address the actual public health and safety  
1265 component as separately and apart, but I think the only way you could establish,  
1266 perhaps, that there has been a violation or endangerment of the public health and

1267 safety would be to look at some of the objective standards that the State has put in  
1268 place to ensure that the public is protected.

1269  
1270 Ms. Dwyer - Well I understood you to say that if the standards are  
1271 met, then there is no public endangerment. That was your earlier statement.

1272  
1273 Mr. Wilson - I will show you that even beyond complying with those  
1274 two standards, that there is no endangerment to the public, health and safety.

1275  
1276 Mr. Kirkland - I agree with Ms. Dwyer. We have two separate issues  
1277 there.

1278  
1279 Mr. Wilson - I will address that issue as well. But again, going back,  
1280 first of all, to the first element, under Tab 1, are the reports from the Department of  
1281 Mines, Minerals and Energy. The first report is a report that was provided to Mr.  
1282 Kerns, and again, I have highlighted the language on the first page of that report  
1283 that indicates that the record, seismograph report, ground vibration, air blast levels  
1284 are within the deemed and prescribed limits, and that is a report, printed date June  
1285 2 of this year.

1286  
1287 Ms. Harris - We received an inspection report dated April 19, 2005  
1288 and this one is dated June 2. I noticed that under the safety regulations for drilling,  
1289 we have a category checked here as S on the April report, but that is not checked  
1290 on the June 2 report. Do you know why?

1291  
1292 Mr. Wilson - I am not sure what report you are referring to from April.

1293  
1294 Ms. Harris - They seem to be identical reports, but they are different.  
1295 I just checked. Mr. Blankinship, can you see?

1296  
1297 Mr. Blankinship - If you look at the key just above the safety regulations,  
1298 the S means it was satisfactory. Nothing there means that they did not inspect  
1299 that particular element of the operation, so they may have inspected explosives one  
1300 day and drilling a different day.

1301  
1302 Mr. Wilson - This inspection, the June 2 one, the one I've got in the  
1303 tab was related to the blasting explosives, that is the issue before us this evening.

1304  
1305 Ms. Harris - OK. I just wondered why the difference in the reports.

1306  
1307 Mr. Wilson - Again, just the difference of inspection that was  
1308 conducted and the report that was generated based on the inspection that was  
1309 conducted. More recent than even that is the letter that is also behind Tab 1, a  
1310 letter dated June 8, 2005, to Mr. Silber, the Director of Planning, and if you will

1311 look at Page 2 of that letter from Mr. Banner, who is a mine inspector supervisor. I  
1312 highlighted the language there that again reads that these readings are well within,  
1313 or all within the stated limits for ground vibration and air blasts and comply with  
1314 the regulations, and further indicates that he has reviewed all the blasting records  
1315 from 2003 to the present and they are all in compliance with the State regulations.  
1316 So, again, before you this evening one of the components of Condition No. 22, had  
1317 Tidewater Quarries complied with all the new regulations, the two reports from  
1318 earlier this month indicate that they have been in full compliance. They reviewed  
1319 all the records and there have been no violations of the standards since this permit  
1320 was issued in 2004.

1321  
1322 Ms. Dwyer - On that point on the seismograph readings, were the data  
1323 supplied average data or were they looking at maximum readings?

1324  
1325 Mr. Wilson - They were looking at each individual blast report. They  
1326 would show the actual seismograph readout from each of the blasts that were  
1327 conducted during the period of time.

1328  
1329 Ms. Dwyer - So there was no averaging, in other words.

1330  
1331 Mr. Wilson - And I will show you later on how that is done in a later  
1332 exhibit, but you are correct. No averaging was done looking at each one of the  
1333 blasts.

1334  
1335 Mr. Wilson - Then the second component of Condition No. 22 again is  
1336 to ensure safety is that there was a 1,000 lb. per time delay maximum, and under  
1337 Tab 2 of the notebook, you will see the various reports. Each one of these is  
1338 submitted to the County on a quarterly basis and if you will go over to the column  
1339 maximum pounds per delay, you can see that throughout the duration of this  
1340 permit, there has never been an instance where the quarry has had an excess of  
1341 1,000 pounds per delay, and this permit was issued on April 22, which starts about  
1342 on Shot 13, on the first page, you will see that that shot was 737 pounds on April  
1343 28, is the highest there has been since this permit was issued. So, again, based on  
1344 the data submitted to the County and available for inspection, the quarry has been  
1345 well within the 1,000 per ton delay maximum required in Condition No. 22, which  
1346 also then goes to the second question raised by the staff in the report and that is  
1347 whether the frequency and the severity of the blasting has changed over time. And  
1348 the answer to that can be seen in the blast reports that have been submitted to the  
1349 County for several years. Generally, and this has not changed in the last few  
1350 years, there are between 35 and 45 shots per blast at the quarry per year. They  
1351 are not spaced evenly. It is not that there is one a week. Some weeks there could  
1352 be two in a week, and then you may skip a week, but on average, 35 to 45 blasts  
1353 per year, and that has been fairly consistent. Thus far this year there have been 26  
1354 blasts. As the exhibit at Tab 2 shows, the amount of explosives used per delay

1355 has, in fact, been decreasing since this permit was last renewed in 2004. As you  
1356 go work your way back through Tab 2, you can see the maximum times per delay  
1357 where at the beginning of the permit they were in the 700 to 600 range, and as  
1358 you get more recent, they are in the 300 pound to 400 pound range.

1359

1360 Ms. Dwyer - Why is that?

1361

1362 Mr. Wilson - I will explain that there has been a difference of approach  
1363 in how the quarry is blasting, different methods that they are using, and I will get  
1364 into this a little bit later, lowered some of the shelf height at which they blast.  
1365 Some don't require as much explosives. A number of the blasting techniques that  
1366 have been put into place to further reduce the pounds per delay that are necessary  
1367 to extract the rock for the business.

1368

1369 Ms. Dwyer - I noticed that there were eight blasts in March of this  
1370 year and if you would blast during other months in the preceding year, why were  
1371 there so many blasts in March?

1372

1373 Mr. Wilson- That one I would have to turn over to one of the plant  
1374 managers.

1375

1376 Ms. Dwyer - Has he been sworn?

1377

1378 Mr. Wilson- He was earlier, yes, ma'am. This is Tom Kern. He is the  
1379 plant manager.

1380

1381 Mr. Kern - Tom Kern, Plant Manager. Your question was about the  
1382 amount of blasts or number of blasts in March. That was more because of the  
1383 factor of the size of the blasts that we have. We need a certain amount of stone  
1384 broken up to crush and produce for that stone. They were a lot smaller shots so  
1385 that we had to increase the amount of times we shot for that month. It is based  
1386 on our sales and the needs for what we have for our sales.

1387

1388 Ms. Dwyer - So it might be a function of the fact that the maximum  
1389 pound per delay was smaller in March, so they had to have more frequent blasting  
1390 in order to extract the amount of rocks you needed.

1391

1392 Mr. Kern - It depends on the location of where we are in the quarry,  
1393 and it may have been a smaller size shot, and smaller face height on that.

1394

1395 Ms. Harris - And in view of the complaints we have heard tonight and  
1396 the letters we have received, do you think that 50 blasts a year, we've already had  
1397 25, and we have half a year to go now. Do you think that is excessive?

1398

1399 Mr. Kern - Again, I think the issue is not, and we can talk later on  
1400 about the frequency of blasts, and that is one of the things that we will discuss, I  
1401 think, through the presentation, the pros and cons of less frequent blasts and so  
1402 forth, but again, I think, and I don't have any reason to believe that the quarry is  
1403 going to be far out of its normal range of 35 to 45 blasts per year. It is 26 now  
1404 roughly half way through the year and if it continues at the same pace, it would be  
1405 at 52, which would be seven more than usual, but, again, based on the history, we  
1406 would expect somewhere between 35 and 45 blasts.

1407  
1408 Mr. Wright - You had 40 in 2004, I believe.

1409  
1410 Mr. Kern - And again, it varies, anywhere between 35 and 45 on an  
1411 annual basis. That is about right.

1412  
1413 Ms. Dwyer - And our conditions do not limit the number of blasts per  
1414 year or limit the frequency in any way.

1415  
1416 Mr. Kern - No, it doesn't. Again, it talks about compliance with the  
1417 State standards and the pounds per delay.

1418  
1419 Mr. Wright - We limit the hours and the days of the week.

1420  
1421 Mr. Kern - We do limit the hours, Monday through Friday, between 9  
1422 and 5, but not the number of blasts on an annual basis.

1423  
1424 Mr. Wright - And so I guess what I wanted to reinforce there, that  
1425 shows again we've got the two objective standards in Condition 22, the Division of  
1426 Mines, Minerals and Energy Standards that we have to meet and the reports show  
1427 that we are in full compliance with the State standards. The second objective  
1428 criteria in the condition is that we have to be at 1,000 pounds per time delay or  
1429 less, and we have shown through the reports that that requirement has also been  
1430 satisfied, and I believe that meeting those two objective standards helps insure that  
1431 the public is protected and that the health and safety of the public is protected.  
1432 And that is what I want to address some of those other things in a bit more depth,  
1433 so that I can provide some comfort to the citizens that even with those limits, the  
1434 health and safety of the public is being protected. As we have had some  
1435 discussion this evening from some of the citizens who have spoken, a blast or shot  
1436 at the quarry actually produces two separate effects. You've got a ground  
1437 vibration and then the air over pressure, and both of those effects can be measured  
1438 and there are scientific studies to show the effects of each of those on people and  
1439 on structures. Now, if I can do this right, and in your book at Tab 3 is the data  
1440 that shows the vibration from the blast out at the quarry. And it is a little bit  
1441 complicated, just because again we are not using averages. We are trying to use  
1442 the specific blast data for 2003, which are the blue dots, 2004 which are the green

1443 dots, and 2005 which are the pink dots. Each of those blasts the data is shown on  
1444 this graph, and there are two components that we look at when we are trying to  
1445 determine whether we are acting in compliance with safety regulations. First of all,  
1446 this line here that I am showing (referring to rendering) is the threshold for  
1447 structural damage. The scientific study has shown that if you are blasting below  
1448 the peak particle velocity shown at this line, that damage to structures will not  
1449 occur. This is the level at which damage will occur to dry wall, which is the most  
1450 sensitive component in a house. If you had plaster, the line would actually go  
1451 down here. We did hear a gentleman earlier speak about how he had in one of his  
1452 homes plaster ceilings and plaster walls and had not experienced any damage. His  
1453 house would be more sensitive than those were dry wall. So, this is the level at  
1454 which if you are below, no damage to dry wall should occur, dry wall being the  
1455 most sensitive component of a house. No structural damage will occur. If you are  
1456 above this line, then damage is possible, not by any means certain, but if you  
1457 exceed that threshold, damage is a possibility.

1458  
1459 Ms. Dwyer - May I ask a question about this study? What was  
1460 considered damage to dry wall in this study?

1461  
1462 Mr. Wilson - This study comes from the U. S. Bureau of Mines and it is  
1463 a long-time scientific study and I assume it cracks the sheetrock.

1464  
1465 Mr. Redenko - Doug Redenko at Vibratech Engineers. The study  
1466 originates from the U. S. Bureau of Mines and what the criteria is for is to preclude  
1467 damage to residential type structures, and as the attorney said, it is for the most  
1468 sensitive part of the structure, which is the plaster interior of the structure and it is  
1469 to preclude the opening of cracks or the lengthening of existing cracks in plaster on  
1470 lathe-type construction, which is an older type of construction versus modern  
1471 drywall.

1472  
1473 Ms. Dwyer - So, there is a crack in drywall or separation of drywall?

1474  
1475 Mr. Redenko - It is the weakest part of the drywall, which would be  
1476 where the two panels come together and are taped over and then spackled.

1477  
1478 Ms. Dwyer - That is what this study would have considered damage?

1479  
1480 Mr. Redenko - Yes, threshold damage is that minimum level.

1481  
1482 Mr. Wright - Can we get a copy of that study to see what conditions it  
1483 was conducted under and how it was carried out?

1484  
1485 Mr. Redenko - Yes, sir. We can provide you with that, sir.

1486

1487 Ms. Dwyer - There have been some concerns about glass, as well.  
1488 How does glass rate in terms of sensitivity to vibration?

1489  
1490 Mr. Redenko - Yes. The Bureau of Mines has also studied that aspect of  
1491 it and the component of blasting that is most sensitive to, let me back up. When  
1492 they blast there are two things that happen. There is a vibration that travels  
1493 through the ground and then there is an air concussion that travels through the air,  
1494 and the criteria for the air concussion is to preclude damage to the window panes  
1495 of the glass. The level that the Bureau of Mines has selected is a function of the  
1496 microphone, the frequency of the microphone that is utilized. The microphones  
1497 that are utilized at the Tidewater operation are 2 hertz microphones, so that level  
1498 is 133 db. The level that it would take to cause damage to a properly constructed  
1499 window is about 170 db. If it were a poorly constructed window, that level would  
1500 be around 140 to 150 db, so the 133 db level is significantly below the damage  
1501 threshold for glass.

1502  
1503 Ms. Dwyer - Could ground vibration cause glass damage or damage to  
1504 windows as well?

1505  
1506 Mr. Redenko - If the level were exceedingly high above this particular  
1507 site, above the dry wall criteria, yes.

1508  
1509 Mr. Kirkland - Wouldn't it make a difference where these studies were  
1510 conducted? I mean, we have different conditions of the soil, we have different  
1511 topography. Would a study conducted somewhere be applicable to the situation  
1512 that is here?

1513  
1514 Mr. Redenko - The Bureau of Mines studied this particular phenomena  
1515 for over 60 years.

1516  
1517 Mr. Kirkland - Where?

1518  
1519 Mr. Redenko - Various parts of the United States.

1520  
1521 Mr. Kirkland - Have they done a study here at Tidewater Quarries?

1522  
1523 Mr. Redenko - I don't believe there was a study done at that Tidewater  
1524 Quarry, but the data that the Bureau of Mines collected was at various mining  
1525 operations, aggregate operations, limestone, granite, coal, construction blasting, all  
1526 different types of blasting. They looked at a variety of types of structures, sizes,  
1527 heights, ages, over this 60-year period of collecting data, and this particular criteria  
1528 was the culmination of a series of research papers that were put together prior to  
1529 development of that particular criteria along with the data that was collected during  
1530 this research.

1531  
1532 Mr. Wright -                   Something this significant, could the study be done here  
1533 to determine the impact of this particular operation? We have hundreds of homes  
1534 out there that are experiencing difficulty. These are not pipe dreams. These people  
1535 have physical problems.

1536  
1537 Mr. Wilson -                   And again, I think, Mr. Chairman, one of things that we  
1538 will address is on a going forward basis is what can we do to work with this  
1539 community, work with these neighbors to further investigate on their concerns,  
1540 their issues, what problems they are experiencing, what solutions there are to those  
1541 problems, but again, as I mentioned earlier, I think the staff report mentioned there  
1542 could be other issues at play other than the quarry that are causing these problems.  
1543 And one of the things that we will propose later on is creating a mechanism where  
1544 we can have an ongoing relationship and dialogue with those citizens who have  
1545 those concerns, who are experiencing those problems with their homes, so that we  
1546 can try to get to the bottom of what is causing those problems.

1547  
1548 Mr. Kirkland -                I don't know how it is going to help anything, unless you  
1549 have some scientific data. When you set this blast off, it doesn't affect these  
1550 houses over here?

1551  
1552 Mr. Wilson -                And that would be part of that process, first identifying  
1553 and collecting the data, then working with those to do the testing and analysis that  
1554 would need to be done, because, again, if it is a function of the quarry, then the  
1555 quarry will then look to see what it can do to correct the situation, but it is just as  
1556 easily likely that all that work and investigation may show that it is from a cause  
1557 unrelated to the blasting, could be related to, as the staff report mentioned, the  
1558 shrink swell soil in that area, could be related to vibrations from 295, any number  
1559 of other possibilities, but I think it is now incumbent on the quarry to work with  
1560 these communities to try to identify specifically what is causing their concerns.

1561  
1562 Mr. Wright -                We have had no reports. Our staff has monitored this.  
1563 We have no reports that you have violated these conditions, these limits. We know  
1564 that. If we had, we'd of been on you long ago. You have complied with these  
1565 conditions, but the conditions may not be sufficient to protect the properties in the  
1566 vicinity.

1567  
1568 Mr. Wilson -                And as I mentioned in the beginning, this is really the first  
1569 step of a process to try to get to the bottom of the problems that these citizens are  
1570 experiencing with their homes. Some of them may be related to settling or other  
1571 issues, but we are going to try to work with these communities to try to identify  
1572 what those problems are, and then figure out solutions to those problems, and if  
1573 that results in modifying operational characteristics of the quarry, clearly that would  
1574 be something that would need to be done. But before we start modifying

1575 conditions at the quarry, sometimes those could be counter productive, and I am  
1576 getting way off my presentation now, but the notion that has been discussed, the  
1577 frequency of the blast. Is there a certain frequency? Well, the number of blasts,  
1578 for example. Yes, we could clearly reduce the number of blasts in order to maintain  
1579 the quarry and an operation characteristic those blasts levels might have to be  
1580 higher. So, there is going to be the trade off of less frequent blasts with a higher,  
1581 perhaps more powerful blast, or do we go to much smaller blasts, but do them  
1582 more often. Those are the types of discussions that we think we want to have  
1583 with the community to try to get some consensus in the community as to how best  
1584 to address their concerns. Again, from tonight's standpoint, what we are looking  
1585 at, what is sort of the legal process of "Are we in violation of our permit?" and  
1586 when I looked at the objective standards and Condition No. 22, we are not in  
1587 violation.

1588

1589 Mr. Wright - We know that. We don't know about the other part of it.

1590

1591 Mr. Wilson - The only evidence that we have before us in terms of  
1592 data is, No. 1, this charge here which is the only established standard that we have  
1593 before us. Again, from the U. S. Bureau of Mines says this, based on 60 years of  
1594 study, several sites around the country, that this is the threshold for damage or  
1595 potential damage. If you are below what Tidewater Quarry consistently is, and  
1596 these are not averages. These are all of the data points for the last two and a half  
1597 years and at no point, no blast, has Tidewater ever exceeded that threshold. That  
1598 is the only standard we have before us tonight. So, when we look at that  
1599 standard, yes we have heard concerns about sheet rock cracking, and I am not  
1600 minimizing those at all, but we can't automatically say because Tidewater is  
1601 blasting that those sheet rock cracks are caused by the blasting. The only object to  
1602 that we have is this, and it doesn't show that to be the likely result.

1603

1604 Let me go to the next tab, which is in your book behind Tab 4. This is a  
1605 comparison of vibration levels from various activities. One of the most important  
1606 things I think to know here is that at the very bottom of this scale, again as the  
1607 velocity increases, either the perception or the damage will increase. You can see  
1608 at the very lowest threshold is the human perception for vibration, and that is  
1609 consistent with everything we have heard tonight. People will feel a blast or a shot  
1610 at the quarry, because the human body is very sensitive and will register, will react  
1611 and feel that particular vibration. As you work up the scale, you can see that this  
1612 is the average vibration level from blasting at Springfield Quarry. That is the  
1613 average of all the dots that you saw on the previous page. Clearly that level is in  
1614 excess of the threshold for human perception, so there is no doubt that people feel  
1615 the blasting at Tidewater Quarry. But what we need to do is again go back up to  
1616 here (referring to rendering), which is the threshold for cracking of drywall, and  
1617 again that threshold is much higher than the average vibration level at Tidewater  
1618 Quarry, and, again, is much higher than any single blast at Tidewater Quarry from

1619 2003. Some of these other activities that are identified here, vibration levels due to  
1620 human activity, and now I, for one, I have four kids. When they are in and out of  
1621 school, slamming the doors, up and down the steps, the house shakes. Those are  
1622 the types of activities that are included in that draft. Some of those vibrations from  
1623 a door slamming, throwing the book bags on the floor, running up and down the  
1624 steps, get to these levels where the whole house shakes. You've got issues out  
1625 here. You have to be at this threshold (referring to rendering), this level of vibration  
1626 at the far extreme to get cinderblock cracking. The foundation cracking that we are  
1627 talking about is well in excess of any of the vibrations that are occurring from  
1628 Springfield Quarry. This chart is not big enough. I'd be halfway to the American  
1629 flag up here to show the threshold level for concrete cracking. For the driveways  
1630 and so forth, are by 10 times if not more than the vibrations at the quarry.

1631  
1632 Ms. Dwyer - Looking at this chart, this may be true, I assume, say for  
1633 a single incident, like, for example, a single blast versus or the average blast versus  
1634 a typical blast or environmental activity, but this doesn't show effect over time of a  
1635 multiple impact, and that is a question that I have about the activity – they've been  
1636 doing this for 40 years, and people will probably be living in their homes for long  
1637 periods of time, so while an individual circumstance might not rise to the level of  
1638 breaking plaster or dry wall, the cumulative effect of that over time may have that  
1639 damaging effect.

1640  
1641 Mr. Wilson - And that is a concern that we, again, we had an  
1642 information fill which was mentioned earlier. We had that on Tuesday night and so  
1643 we heard that concern voiced Tuesday night, and again we have heard it this  
1644 evening. And the question was, well again, even though the vibrations from each  
1645 individual blast are well below the threshold for damage, would the cumulative  
1646 effect of those vibrations cause structural fatigue and long-term damage, and so  
1647 that was something I had planned on addressing, and the answer is that the  
1648 cumulative effect of blasting over time is built into those permissible limits that we  
1649 talked about on the previous graph with the dots, and again that is part of that  
1650 study that has been tested and proven, and the reason is, that in order to have a  
1651 cumulative effect, you must exceed the criteria repeatedly for damage. If you are  
1652 not creating any damage or exceeding the criteria on a regular basis, you are not  
1653 going to have any cumulative effect and structural damage on a long-term basis.  
1654 And so, if you have repeated violations below that threshold, there is no damage  
1655 that can occur whether on an individual basis or on a cumulative basis, based on  
1656 the studies that have been done by the U. S. Bureau of Mines. That is factored  
1657 into that threshold line that we looked at on the chart with the dots on it.

1658  
1659 Ms. Harris - I have a question. This comparison of vibration levels  
1660 was prepared by whom?  
1661

1662 Mr. Wilson - This was prepared by Vibratex based on studies both  
1663 from the U. S. Bureau of Mines and other data that they looked at, and again, for  
1664 example, the threshold cracking for dry wall number is the number that we looked  
1665 at before on the chart that showed the threshold for damages.

1666  
1667 Ms. Harris - I find it difficult to believe that the average vibration level  
1668 compared to the vibration from vacuuming, for garbage disposal or a washing  
1669 machine is more. I have a problem with believing that.

1670  
1671 Mr. Wilson - Let me have Mr. Redanko explain that to you.

1672  
1673 Mr. Wright - We have got to have quiet to get this hearing on, please.  
1674 Let's be fair. Nobody jumped on you or made any remarks when you all were  
1675 testifying. Let's let these people put their case on, please.

1676  
1677 Mr. Blankinship - Can you specifically address Mr. Levy's questions about  
1678 the frequency of those vibrations?

1679  
1680 Mr. Redanko - Sure. The purpose of this graph was for informational  
1681 use. A lot of times I get questions. Well, we measure in terms of peak particle  
1682 velocity and the levels from the blasting are .1 or .2. Well, what does that feel  
1683 like? And I guess my comments were taken out of context and what I did for this  
1684 particular graph is I looked for everyday activity that people would be familiar with,  
1685 and basically took our seismograph that we normally monitor blasting with and  
1686 subjected it to those everyday activities to see what those levels were. For  
1687 comparison purposes for individuals that may not have experienced a blast or not  
1688 familiar with what is .1 or .2 inches per second, so that was the purpose of this  
1689 particular graph to give you that feel, because I get asked that question all the time.

1690  
1691 Mr. Blankinship - The frequencies of these vibrations. Could it be true that  
1692 a washing machine, for example, causes more displacement but at a higher  
1693 frequency, and, therefore, causes less damage.

1694  
1695 Mr. Redanko- Well, again, the purpose of giving you the comparison  
1696 was to give you an idea of what the amplitude was, what does it feel like. The  
1697 frequency of the blasting, as we saw from the graph, was typically between 10  
1698 and 20 Hz. The frequency of some of these things, it would vary, depending on  
1699 the speed of the motor. I don't know what the speed of the motor of a washing  
1700 machine is or the garbage disposal, or something like that, but we could measure  
1701 the time history and we could see what that frequency was. I don't have that  
1702 information available to me right now, but, again, the intent of it was, is for  
1703 comparison purposes of what is that level of vibration. And I could have easily  
1704 said, "OK, let's set the seismograph up next to the Interstate Highway and measure  
1705 the amplitude of the vibration from the Interstate Highway to give you a

1706 comparison or that type of thing. What I did, as I said, I set up the sensor on the  
1707 floor and I ran a vacuum cleaner next to the sensor. I sat the sensor up on my  
1708 counter top and ran the garbage disposal in my home. I set up the sensor near my  
1709 wife's washing machine to see what level of vibration that was, so that was the  
1710 purpose of this particular graph.

1711  
1712 Ms. Dwyer - Measuring human perception, the earthquake that we had  
1713 not too long ago, and several people have mentioned that, and I experienced that,  
1714 too, so that will help me maybe appreciate the perception. How does that  
1715 earthquake, in terms of human perception, compare to a blast?

1716  
1717 Mr. Redanko - The earthquake, can we go back to that one (referring to  
1718 rendering)? The permanent seismograph that is at Tidewater Quarry actually  
1719 recorded the earthquake and the level that the seismograph recorded of that  
1720 particular earthquake was in this level right here, the upper range of most of the  
1721 data at the Tidewater Quarry. It was about .14 or .12 inches per second, but an  
1722 earthquake is an entirely different animal than blasting. An earthquake typically  
1723 produces much lower frequency, ground vibrations, typically on the order of .1, .2,  
1724 .3 Hz. The duration of the earthquake is much longer than the duration of ground  
1725 vibration from blasting. Most of the duration of the vibrations from blasting at  
1726 Tidewater Quarry are about a second, whereas the earthquake is several seconds  
1727 long. And then finally, the amplitude of the vibration from an earthquake would be  
1728 a function of where you are with respect to the earthquake. I don't know where  
1729 the particular epicenter of this earthquake was, but earthquakes typically occur at  
1730 some depth within the subsurface, oftentimes several kilometers, and the epicenter  
1731 may be several kilometers away from the Tidewater Quarry, but yet it was strong  
1732 enough and it traveled far enough that by the time it reached the Tidewater Quarry  
1733 that level of vibration was very similar to the levels that were produced by the  
1734 blasting. To give you an idea of the power of an earthquake, we are all familiar  
1735 with Richter magnitudes, and if you look at the energy that would be produced, say  
1736 by a magnitude 6 earthquake, in order to produce a magnitude 6 earthquake, the  
1737 energy from that earthquake would be equivalent to detonating all the explosives  
1738 that are ever consumed in the United States in a whole year, at one time. That is  
1739 the power and the energy of a magnitude 6 earthquake, so it is a very large  
1740 dynamic event compared to the blasting.

1741  
1742 Ms. Dwyer - How similar is that in terms of human perception?

1743  
1744 Mr. Redanko - In this particular case, yes, the perception of that  
1745 amplitude was about the same, the difference being the frequency and the duration  
1746 of that particular event.

1747  
1748 Ms. Harris - At what depth are you blasting?

1749

1750 Mr. Redanko - The depth in the quarry is, I believe, about 150 feet  
1751 below the surface, in general. The quarry is in benches, so at some times that  
1752 distance may vary by 50 to 100 feet, depending on what bench the blast is on.

1753

1754 Ms. Harris - And has that increased over the years?

1755

1756 Mr. Wilson - Most definitely it has increased over the years, but in the  
1757 most recent time, probably not, but I think the bottom elevation of the quarry is  
1758 about 200 feet below the surface.

1759

1760 I intend to address some of those questions that Mr. Levy had raised and I think we  
1761 have already addressed a few of them, and will continue to address them. One of  
1762 the questions, again, has been whether the numbers were averages and I have  
1763 already indicated those were not averages, but those are individual data points. I  
1764 also questioned whether only some or all of the blasts were monitored, and I think I  
1765 indicated all the blasts were monitored, and I will address some of those other  
1766 issues, but that one, for example, what is the bench height? Normally, there is  
1767 between 40, 50, perhaps 60 feet. We are down about 200 feet to the bottom of  
1768 the pit, below ground level. This is granite, Petersburg, so those are the types of  
1769 questions, but I think we have answered some of them, and I will continue to  
1770 answer those as we go through to do the presentation.

1771

1772 Let me go to the next chart, which is a little bit busier and you may have a more  
1773 difficult time reading the specific data points, but those aren't as critical as just the  
1774 general view that you get with this. The third chart is, again, and it is behind Tab 5  
1775 of your notebook. This is, you recall I mentioned that there are two components of  
1776 a blast. You have got the ground vibration, which we have been discussing thus  
1777 far, and the second component is the air over pressure, and that, Ms. Dwyer, is the  
1778 question you had raised about where does glass break, where was the problem  
1779 with glass breakage? And that is what this chart represents. Again, the blue area  
1780 are the blasts from 2003, the pink from 2004, and the green the blasts in 2005.  
1781 Again, this is the graph that measures the air pressure, what the people feel that  
1782 hits against the house, a rattle or shakes the windows, or whatever they were  
1783 experiencing. You can see, perhaps, down at the bottom, and the two notes, you  
1784 can see the second note that the air over pressure level required to crack a  
1785 windowpane is 150 db. The standard recommended is 133 db. The 133 db. Line  
1786 is represented there at the yellow on this chart, and again, so the 150 db. well  
1787 above the chart, and that is the level at which you would experience breaking of  
1788 glass, based on all of the scientific studies. This, again, shows the recorded data  
1789 from the Tidewater Quarries that the permanent seismograph, as well as a portable  
1790 seismograph, that had been located in around Hartley Plantation, Winterberry and  
1791 Summerberry since 2003. Clearly there was one that reached closer to the  
1792 maximum standard, but still well below the recommendation. What is important to  
1793 note here, again, and as I mentioned earlier, was some changes in the blasting

1794 technology and the blasting techniques are those generally on a downward trend.  
1795 You can see from 2004 you are probably averaging in this range, in 2005,  
1796 averaging a much lower air pressure or air over pressure a number. But again, what  
1797 this chart does and shows as did the previous ones is that based on all of the  
1798 scientific data that is available to the industry, that the numbers that are being  
1799 produced by Tidewater Quarries are well below the threshold for damage and,  
1800 therefore, when you couple that objective data with the scientific standards that  
1801 are in the industry, couple that with compliance with the State standard, couple  
1802 that with compliance with the County's requirements of the thousand pound per  
1803 time delay, there is absolutely no legal basis to conclude that Tidewater Quarries is  
1804 in any way in violation of Condition No. 22 of the Conditional Use Permit.

1805  
1806 Let me also just address some of the practicalities of the blasting at the quarry.  
1807 First, the operations of the quarry are governed by many Federal, State and local  
1808 agencies, ranging from ATF because of the explosives involved, down through the  
1809 State, as we discussed, down to the County Planning Department. All of those  
1810 agencies have various oversight responsibilities to assure that both the public and,  
1811 in fact, the employees health and safety are protected, with respect to the  
1812 operations of this quarry. When it comes to blasting, violation of any of the  
1813 requirements, from any of those agencies, could have severe consequences,  
1814 ranging from fines to revocation of the permit, to a number of significant  
1815 consequences, and, again, in the 40 years that this quarry has been in operation,  
1816 we are unaware of any sanction related to blasting at the quarry. The quarry has  
1817 never violated the limits established by the County, or the State, and be assured if  
1818 there was some such violation, Tidewater Quarry's internal procedures would never  
1819 permit a repeat occurrence. Most likely, had there ever been a violation, the  
1820 Virginia Department of Mines, Minerals and Energy, as well as Henrico County,  
1821 would have the operations of the quarry under a much closer microscope, and so  
1822 clearly it is in Tidewater Quarry's interest to insure that it is well below the  
1823 standards that have been established by all the regulatory agencies from a safety  
1824 standpoint and to insure that the public's safety is protected. So, clearly,  
1825 Tidewater Quarry's interest is to insure that the public health is protected and the  
1826 data that we have presented shows that it is in full compliance with those  
1827 requirements. So, let me again just summarize the scientific data shows that the  
1828 blasting at the quarry, based on the scientific data, coupled with the experienced  
1829 data from the quarry, can't be the cause of the damage to the homes that the  
1830 citizens are concerned about tonight based on all of the data we had before us.  
1831 Again, that is not to say that these citizens can't feel the vibrations, because they  
1832 can, and you saw the level at which the human body can perceive these vibrations  
1833 is much lower than the level, for example, that dry wall can be damaged. So the  
1834 fact that these citizens feel the vibrations and then see damage to their homes, it is  
1835 logical for them to assume that the vibrations are causing the damage. But again  
1836 the objective scientific data shows that that is not the case. It is also important to  
1837 note that the staff report, as I mentioned before, suggested at least two other

1838 issues might be involved in this situation and could be contributing or causing the  
1839 damage to the citizens' homes. There was reference in the staff report to I-295,  
1840 the increased traffic and the vibrations caused by 295 and the truck traffic on that,  
1841 as well as the issue of shrink swell soil and the impact that that can have on  
1842 foundations and homes. I live in Chesterfield County, so I am well aware of the  
1843 shrink swell problems that Chesterfield County has experienced, and know the  
1844 damage that swelling and shrinking of soil can cause to homes, similar to the  
1845 damage we are hearing about tonight. And so that is an issue

1846 that I think clearly needs to be explored, and I think Tidewater Quarry will want to  
1847 be part of that exploration.

1848  
1849 In short, there is no legal or scientific basis to conclude and there has been no legal  
1850 or scientific evidence presented here tonight to support the allegation that  
1851 Tidewater Quarry has violated Condition No. 22 of UP-9-2004 and clearly nothing  
1852 presented tonight draws that necessary, convincing legal clause or link between the  
1853 damages the citizens are discussing and the operations of the quarry. Now that  
1854 said, I could be finished, because that essentially is what I think our burden was  
1855 tonight to show that we are not in violation of Condition 22 of the permit.

1856  
1857 But that is not where I want to stop tonight, because I think that it is important  
1858 that we also communicate to you and the community that Tidewater Quarries  
1859 wants to be a good neighbor. As we talked about, it has been in operation for 40  
1860 years, and really for 30 of those 40 years, it was all alone. There were no homes  
1861 near it. There were no citizens, no new homes being built, etc. It now knows  
1862 clearly that housing developments have moved closer to its operations and it can no  
1863 longer operate without an ongoing dialogue with its neighbors, and it needs to  
1864 make sure that it operates in a way that is sensitive to their concerns. In fact, soon  
1865 after Mr. Kern became the plant manager, he undertook some efforts unilaterally,  
1866 on his own, prior to receiving any notice of this process or any significant number  
1867 of complaints. He undertook some efforts to change the blasting techniques, to  
1868 further reduce the effect of the blasting. He changed the type of explosives to a  
1869 different type that would minimize or further reduce the impact. Changed the  
1870 actual blasting company that he contracted with, because he wanted to get a  
1871 company that was more comfortable working with. He reduced the bench height in  
1872 the quarry. We have had some discussion on that. Reducing the bench height  
1873 reduces the amount of explosives that would be necessary to generate the rock.  
1874 He altered the time of the sequence of the delay in the blast, to further move the  
1875 vibration levels higher out of the range where damage could occur, or people could  
1876 feel the house vibrating.

1877  
1878 He increased the stemming in each of the holes, and that is one of the blasting  
1879 techniques that he implemented to further minimize the impact on the community,  
1880 and these are the changes that were implemented earlier this year, and those  
1881 results were the ones you could see on this graph. Those changes were  
1882 implemented in this time frame, and since that time frame you can see generally,  
1883 for example, the air pressure, air over pressure reducing. When you get back to  
1884 this first chart, you can see that the pink dots, which are the 2005 dots, are lower  
1885 and further on this axis than they had been in previous years. Those are the effects  
1886 of the changes in the blasting techniques that Mr. Kerns implemented.

1887  
1888 I think it is also important to note that we did hear a number of concerns from  
1889 citizens this evening, but in my notes a lot of those were in the 1999-2000 time  
1890 frame. Clearly they are still experiencing the vibrations, but some of the concerns  
1891 that they voiced relate back into the earlier time period when these numbers, for

1892 example, were much higher than they are now. So, I think that is important to  
1893 note.

1894

1895 But even though Tidewater Quarries has on its own implemented some changes in  
1896 the blasting procedures, it wants to work even closer with its neighbors. As we  
1897 discussed before, Tidewater Quarries had the first of several planned informational  
1898 fairs on Tuesday of this week, where citizens could come and speak with the  
1899 various quarry experts on an informal basis, to get answers to their questions, and  
1900 we think it was a successful inaugural fair. What Tidewater Quarry proposes to do  
1901 and will do is create a citizens liaison committee. What that will do is foster on-  
1902 going dialogue between the quarry and its neighbors. This committee will have  
1903 representatives from the various neighborhoods, representatives from the industry,  
1904 representatives from Tidewater Quarry, where they will meet on a regular basis to  
1905 discuss the operation and discuss the concerns, and there the community can  
1906 discuss, as we have already made mention, the pros and the cons of more frequent  
1907 but less powerful blasts, versus less frequent but more powerful blasts. Those are  
1908 the types of discussions I think that it will be important that the community have,  
1909 with a full understanding of the quarry and its operations. And that will just take  
1910 some time to get the education level there, so the people can understand the  
1911 various impacts before we make a quick change that might actually be counter  
1912 productive. Tidewater Quarries has implemented these community liaison  
1913 committees at other locations and have found them to be very successful. In fact,  
1914 we had sort of a small example of that with respect to this particular quarry. In  
1915 1999, Mr. Shaughnessy, who lived in Hartley Plantation, was an opponent of the  
1916 quarry. Mr. Shaughnessy was one who was interested in the operations of the  
1917 quarry, worked with Tidewater Quarry, learned about the quarry, asked for and  
1918 received a seismograph to be installed on his property. By the time the permit  
1919 came up for renewal in 2004, Mr. Shaughnessy was the one person who came  
1920 before you and spoke in support of Tidewater Quarry's permit renewal. We believe  
1921 that ongoing dialogue and information to the community can help alleviate some of  
1922 the concerns that these citizens have and Tidewater Quarry will do that. We have  
1923 already had three people who signed up at the Information Fair to serve on this  
1924 committee and, in fact, another seven people signed up to get a tour of the quarry,  
1925 and again, what this committee will study are the issues that these particular  
1926 neighborhoods they are facing, the concerns they have, study those issues,  
1927 determine the causes of their concerns and their damage and then collaboratively  
1928 develop the solutions to those problems. Among the things that the community  
1929 liaison committee could consider would be the implementation of an automatic  
1930 telephone or e-mail notification system. We have heard some people this evening  
1931 discuss their concern that they are not aware when a blast is going to occur, so  
1932 one of the things that this committee could explore is whether the communities  
1933 would like to be notified by phone or by e-mail prior to a blast. And again, there is  
1934 an expense associated with that, and if there is not a real desire to do it, then  
1935 Tidewater could use that money for other purposes. So, rather than say tonight we  
1936 are going to implement that at whatever cost, I think that is something the

1937 community working with this committee to decide whether it is important. If they  
1938 decide it is important, Tidewater is committed to doing it.

1939  
1940 We are also talking to this committee to perform some of the structural analysis of  
1941 the homes that some of the residents here tonight talked about wanting to have  
1942 done, but couldn't get done for either expense reasons or other. This committee  
1943 that we are proposing to be created would do that. They would look at some of  
1944 these houses, create a baseline study of these houses and then be able to monitor  
1945 them over time. Again, we believe that will educate the community to show that  
1946 the effects that they are experiencing are unrelated to the quarry. Alternatively, if  
1947 it does show that there is some effect, then Tidewater will then know that it is  
1948 something they have to address, and if there is a means of addressing the  
1949 operation, it is willing to do that. And so again, that is something that this  
1950 community liaison committee will do. They would probably study the various  
1951 cracks, determine whether they are growing, try to correlate those expansions to  
1952 vibration activity from the quarry or other sources. We would probably be installing  
1953 temporary seismographs at those houses, so obviously we could measure the  
1954 vibrations. Also, perhaps this committee would be interested in exploring some of  
1955 the soil studies that are raised by the staff report and the shrink swell soil issue.  
1956 Again, it is in Tidewater Quarry's interest to determine the cause of the damage to  
1957 these homes, and if it is for a reason unrelated to their activity, they want to assist  
1958 their neighbors and point them in the right direction to get their problems solved.

1959  
1960 Another idea that the community liaison committee may implement is to install an  
1961 additional permanent seismograph in one of the affected subdivisions, either in  
1962 Winterberry or Summerberry. Clearly there is already one in Hartley Plantation that  
1963 is the basis for a lot of the data that we have before us this evening. They also use  
1964 portable seismographs at various locations, and you have heard some of the  
1965 citizens talk about that tonight, that Tidewater had come out and put a  
1966 seismograph in their yard to measure one or two particular blasts. Another  
1967 permanent seismograph that would provide even more data may be something the  
1968 committee may think worthwhile to do. Again, what would be done is to study the  
1969 operational characteristics of the quarry to determine whether altering anything in  
1970 the quarry could have a meaningful affect on the neighbors. Again, we could be  
1971 talking there about the frequency of the blasts, the level of the explosives. But  
1972 again, without some of the back and forth dialogue, based on the scientific data we  
1973 have before us, there isn't anything that the quarry is causing, and so we need to  
1974 work with the community to see, more or less, on a trial and error basis, are there  
1975 things that the employee can do differently that might actually have a meaningful  
1976 affect and meaning for impact on the neighbors, and all of those undertakings by  
1977 the community liaison committee will, of course, be funded by Tidewater Quarries.  
1978 That doesn't mean that Tidewater Quarries will pick the various experts. The  
1979 committee will do that. There will be some criteria established to ensure that  
1980 whoever is picked to do a structural analysis or whatever is an impartial third party,  
1981 but Tidewater would be the one through the CLC (Community Liaison Committee)  
1982 to fund those activities. And so I think that really is the basis to establish an

1983 ongoing dialogue, to try to reach solutions to the problems that these citizens are  
1984 experiencing. For us to tonight say we are going to reduce this or change that may  
1985 actually be counter productive. At a certain level of pounds per delay, you would  
1986 actually increase the vibrations, because if there is not enough of an explosive to  
1987 actually release the rock, to fracture the rock, all of that vibration stays in the  
1988 ground, and so if it isn't powerful enough to break the rock, you are actually going  
1989 to keep all of that vibration in the ground and could cause even more problems or  
1990 effect for these people to feel. So, that is why for tonight that they were going to  
1991 lower this or change that could actually be counter productive to the concerns of  
1992 the citizens, so what we propose again is this committee to be created and work  
1993 closely with Tidewater to develop solutions to the concerns that these citizens  
1994 have.

1995  
1996 From a legal basis, again, there is no basis to revoke the permit. Condition No. 22  
1997 is being satisfied. The objective standards are being met, the data, the scientific  
1998 data, when you look at the blast data from the quarry shows that we are not  
1999 endangering the public, health or safety. In fact, we are not endangering property.  
2000 All of the levels, every blast, since this permit was issued in 2004, have been  
2001 below all of those established standards, and you have got no evidence before you  
2002 tonight to suggest otherwise. Clearly, there are people feeling vibrations, and that  
2003 is expected, but feeling a vibration does not rise to the level of endangerment of  
2004 public safety, but again, we want to work with this community, because they are  
2005 now our neighbors and we intend to work with them closely on an on-going basis.

2006  
2007 Mr. Wright - Question. You haven't answered Mr. Levy's question I  
2008 don't think.

2009  
2010 Mr. Wilson - I thought I had. Let me see. I've got most of them here.  
2011 The geology again, geology is Petersburg granite, the depth to the bedrock is 40 to  
2012 60 feet below the homes generally in this area. The face dimensions of the blast  
2013 are roughly the height of the benches, 40 to 60 feet, generally 40 to 50 feet. The  
2014 width is roughly 150 to 175 feet, so that is the general parameters of the blast.  
2015 The angles of the face are near vertical but they are not smooth, obviously. They  
2016 have been blasted away and quarried away, but they are roughly vertical. The  
2017 length of the bore holes is about 40 to 60 feet. The particle's velocity varies as we  
2018 see on the graph from .02 to .36, and the frequency varies from 7 to 25 Hz.  
2019 Again, that was shown on the earlier graph. The depth from the top of the hole  
2020 relative to the top of the quarry is approximately 150 feet. Again, have all the  
2021 blasts been monitored? The answer to that is yes, and that is the data point that  
2022 you see on the graph. These, I apologize, didn't get answered.

2023  
2024 These dealt with the actual parameters of the seismograph. The lower limit of the  
2025 seismograph is .008 inches per second, and the upper limit of the seismograph is  
2026 5.12 inches per second. The frequency range is 2 to 250 Hz. The sample rate is  
2027 1,000 samples per second. The microphone range is 7.2 to 0.0365 psi and the  
2028 microphone lower limit is 2 Hz.

2029  
2030 Mr. Kirkland - What do all of your studies show and all of this technical  
2031 data and so forth show that a blast should knock a 70 pound mirror off of the wall  
2032 or other objects off of a mantel? Should there be that much vibration?  
2033

2034 Mr. Wilson - Again, the vibrations would be experienced in the house,  
2035 but I have had my pictures fall off the wall. I don't live anywhere near a quarry,  
2036 and it is because my 11 year old came home from school and shut the door. So  
2037 the vibrations in a house occur...  
2038

2039 Mr. Wright - Wait a minute. These were observed when the blast  
2040 occurred? This is testimony. The siren goes off. The blast occurs and the picture  
2041 falls off of the wall or the mirror falls off the mantel or whatever, and in my way of  
2042 thinking, the blast should not be severe enough to cause that.  
2043

2044 Mr. Wilson - And Mr. Chairman, I don't know that I heard necessarily  
2045 that the people observed the testimony tonight was uniform, that they actually  
2046 heard the blast, felt the vibrations, and saw the mirror fall off.  
2047

2048 Mr. Wright - I am going to review all of this, but I made notes and I  
2049 caught that. Blast occurred and the thing happened.  
2050

2051 Mr. Wilson - Well, I know one of the complaints, for example, that had  
2052 been forwarded to Tidewater, once this process started was specific dates that a  
2053 mirror fell off the wall. Clearly I wanted to determine what happened, and the  
2054 specific date was identified in the e-mail that a bathroom mirror fell off the wall.  
2055 Once I got that e-mail I immediately contacted the quarry and said, "Did you blast  
2056 that day?" The answer was no. They did not blast that day.  
2057

2058 Mr. Wright - We had testimony tonight that it happened right after a  
2059 blast, and it is going to be in the record, and I just wanted to ask you that. Does  
2060 that conclude your presentation? One other question, "Would Tidewater Quarries  
2061 be willing to be involved in a survey conducted at Tidewater Quarries to establish  
2062 these limits in the neighborhood?  
2063

2064 Mr. Wilson - I think that would be something the committee that I  
2065 talked about would explore and if that is something the committee thinks wants to  
2066 be done, then clearly Tidewater Quarries, through this committee, would work on  
2067 that, as well. If they can't, then I think the bottom line and the message I want to  
2068 leave with you, Mr. Chairman, and members of the Board, is that Tidewater  
2069 Quarries wants to work with these communities. It wants to make sure that their  
2070 concerns are being addressed, but it doesn't want to automatically assume that all  
2071 of the problems that all of these citizens are experiencing are related to the  
2072 operations of the quarry. Those that are will be addressed by the quarry. Those  
2073 that are not, we hope that we can point the citizens to the right cause and point  
2074 them to the right solution. Some of them may not be the quarry. Most of them

2075 may not be the quarry, but those that are will be addressed by the quarry, but until  
2076 they actually get this committee formed, we are not going to be able to figure out  
2077 which ones are and which ones are not.

2078  
2079 Ms. Dwyer - How do you propose to determine that? How do you  
2080 propose to determine what might be caused by the quarry and what might be  
2081 caused by what other source?

2082  
2083 Mr. Wilson - Well, again, what we would propose to do is just do  
2084 something, for example, for some of the homes, and we would select, or this  
2085 committee would select the homes that would go through, for example, this base  
2086 line structural analysis that would actually go in, measure the current structural  
2087 integrity of the house, do the various measurements, install the various measuring  
2088 equipment, and then monitor them. And with the blast data that we have, we will  
2089 be able to know when did we blast and then see what the effect was on a  
2090 particular house that is being monitored, and if we can see that some of the  
2091 changes, or some of the things that are happening in that house correspond to a  
2092 particular blast event, then that is the evidence, I think, that Tidewater would need  
2093 to be able to start looking at what can it do to modify its operations. But without  
2094 that, we don't have anything to suggest that these concerns are not the shrink  
2095 swell soil problem, are not repeated violations from truck traffic on 295, are not  
2096 settling, other issues, and that is all I am suggesting. This committee would  
2097 establish a base line and then work from that to work with these citizens.

2098  
2099 Mr. Wright - Thank you very much. This concludes the hearing.

2100  
2101 Ms. Dwyer - Mr. Chairman, we do have some information in our  
2102 packets from, I guess this is the County on the shrink swell soil issue, and no one  
2103 has spoken to that from the County, and I wonder if there is someone here who  
2104 can speak to that issue.

2105  
2106 Mr. Nunnally - Mr. Chairman, I'd be interested in hearing that, too.

2107  
2108 Mr. Wright - Is there anybody here that can speak to the shrink swell  
2109 soil?

2110  
2111 Ms. Dwyer - Have you been sworn?

2112  
2113 Mr. Revels - No, actually I did not raise my hand.

2114  
2115 Mr. Blankinship - Would you raise your right hand? Do you swear the  
2116 testimony you are about to give is the truth, the whole truth, and nothing but the  
2117 truth, so help you God.

2118  
2119 Mr. Wright - Please state your name for the record.

2120

2121 Mr. Revels - My name is Greg Revels. I am the Building Official for the  
2122 County of Henrico. With respect to the shrink swell soils issue, I can tell you that  
2123 the soils maps for the County do show a substantial amount of suspect expansive  
2124 soils in Summerberry and Winterberry, and a much smaller percentage in Hartley  
2125 Plantation. At the time the subdivisions were developed, we did have in effect a  
2126 soils testing evaluation policy which required that any soils on suspect lots would  
2127 have to provide a soils test from a laboratory indicating whether or not they were  
2128 moderate or high shrink swell soil potential in those soils. Those that did have that  
2129 condition would be subjected to engineering design on the foundation system, and  
2130 that would be followed through with on the inspections process to make sure that  
2131 that engineering design was followed. I did pull a number of the complaints that  
2132 were filed. It did show damage inside the dwellings, and went back and pulled  
2133 those old permits and inspection records and everyone of them did show that there  
2134 were soil tests, engineered foundation designs, and inspections that confirmed  
2135 compliance with those engineering designs.

2136  
2137 Mr. Wright - What does that mean?

2138  
2139 Mr. Revels - What it should mean is that the foundation system for  
2140 these homes was designed and constructed in accordance with the soil  
2141 characteristics that existed on those lots.

2142  
2143 Mr. Wright - So when you have a shrink soil condition, you can design  
2144 the home in such a way that it wouldn't affect it?

2145  
2146 Mr. Revels - And that is exactly what the policy is intended to  
2147 address.

2148  
2149 Mr. Wright - And that was done.

2150  
2151 Mr. Revels - Yes, it was.

2152  
2153 Mr. Wright - OK. Any further questions?

2154  
2155 Ms. Dwyer - Do we have anyone from VDOT. I think there was some  
2156 mention in the staff report that Virginia Department of Transportation might be  
2157 doing a study of traffic and the possible impacts of traffic on the neighborhoods.

2158  
2159 Mr. Kirkland - Mr. Blankinship, did you check into that? Was there any  
2160 damage to 295 from all these blasts or anything?

2161  
2162 Mr. Blankinship - We were able to get the traffic counts, which were left  
2163 on the table for you this evening, but it is essentially just the raw data. We have  
2164 not received back any comments regarding whether that particular stretch of 295  
2165 has suffered more damage than any other particular stretch of 295, or whether  
2166 VDOT has had any other experience based on the quarry.

2167  
2168 Ms. Dwyer - Did we ask VDOT for that information?  
2169  
2170 Mr. Blankinship - Through Public Works. Yes.  
2171  
2172 Ms. Dwyer - And we haven't received it?  
2173  
2174 Mr. Blankinship - What we received back was the traffic.  
2175  
2176 Mr. Wright - They didn't give us anything else?  
2177  
2178 Mr. Blankinship - Not in any detail.  
2179  
2180 Mr. Wright - We have finished the testimony. We have read the  
2181 *Times-Dispatch*. We have got all of that information. The *Times-Dispatch*, that is  
2182 general information. I don't know how accurate it is. I haven't checked it out and  
2183 you know how that goes. I don't get into that. Anything else, Mr. Blankinship that  
2184 you know we ought to have to come before us?  
2185  
2186 Ms. Dwyer - The County then has not done any other studies of this  
2187 issue in terms of evaluating or conducting its own seismographic studies or  
2188 anything of that nature.  
2189  
2190 Mr. Blankinship - I don't know of anybody at the County who is qualified  
2191 for that kind of test.  
2192  
2193 Mr. Wright - What is the pleasure of the Board?  
2194  
2195 Mr. Kirkland - Mr. Chairman, we have received a lot of data tonight and  
2196 got a lot of comments here. I am still reading through some of them. Plus, I really  
2197 would be interested in getting the data from the State of Virginia on 295. I did  
2198 read the article in the paper, but I haven't seen anything that could be damage from  
2199 this that is going that far coming across there. So, I would like to make a motion  
2200 that we take this under consideration until our next meeting, and we make a  
2201 decision then, with no further testimony except the one item that I have requested,  
2202 the VDOT report.  
2203  
2204 Mr. Wright - Not the next meeting. You mean the July meeting?  
2205  
2206 Mr. Kirkland - The July meeting. The next July meeting.  
2207  
2208 Ms. Dwyer - What specifically do you want from VDOT?  
2209  
2210 Mr. Kirkland - I want them to tell me if there has been any undue  
2211 cracking or any damage to the interstate pavement or concrete. That is concrete,  
2212 so it would take a rather good jolt, but the sub-structure or the base under it, or

2213 whatever. I know it is in bad repair, but I think that is due to a lot of snow, but I  
2214 just want to know if there was any damage to any off ramps which border along  
2215 the quarry, or any of that type of thing.

2216  
2217 Ms. Dwyer - So we would basically be asking VDOT to do a study of  
2218 the roadway in that vicinity and determine if...

2219  
2220 Mr. Kirkland - And if they have a report on hand, just give it to Mr.  
2221 Blankinship through our Department of Public Works and we get, and I just want to  
2222 read it, but I think we have gotten enough information on everything else, but I've  
2223 got to read through some more of these comments.

2224  
2225 Mr. Wright - All right. Is that a motion that we take it under  
2226 advisement and get this other additional information and have time to review  
2227 everything that has been presented in detail, and make a decision at our July  
2228 meeting.

2229  
2230 Mr. Kirkland - That's correct.

2231  
2232 Ms. Dwyer - Will we have minutes of the meeting?

2233  
2234 Mr. Wright - I am going to ask that we have the minutes.

2235  
2236 Mr. Blankinship - We will turn those around as quickly as we can. We are  
2237 not going to do them on our regular schedule. We are going to rush them.

2238  
2239 Mr. Wright - We want to have it all documented so we can have it  
2240 ahead of time.

2241  
2242 Mr. Kirkland - I'd like all of the people and the comments they made  
2243 listed right out, so I can read them again. I've got notes here, but I might have  
2244 missed some stuff.

2245  
2246 Mr. Wright - That's a motion. Do I hear a second?

2247  
2248 Mr. Nunnally - Second.

2249  
2250 Mr. Wright - Any further discussion? All in favor say aye. All opposed  
2251 say no. So ordered. The hearing is concluded.

2252  
2253 Upon a motion by Mr. Kirkland seconded by Mr. Nunnally, the Board **deferred** this  
2254 matter to its meeting on July 28, 2005.

2255  
2256 Affirmative: Dwyer, Harris, Kirkland, Nunnally, Wright 5  
2257 Negative: 0  
2258 Absent: 0

2259  
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2271

There being no further business, the meeting was adjourned.

Russell A. Wright, Esq.

Chairman

Benjamin Blankinship, AICP

Secretary