

Chairman Lee Hall called the meeting to order at 1:30 p.m. Supervisors present: Rodney Shearer and Dennis Luckenbaugh. Others present: Township Manager Joy Strausbaugh, Solicitor William Poole, Gil Picarelli and Greg Hertz of KPI Technology. In the audience were Earle Wolfe and Nelson Brenneman of the Sewer Authority, Gary Gregory and Donna Yingling of Gregory Contractors, Scott Ruth (Mr. Gregory's attorney) and Mike Stiely, Manager of CSD Inspection Dept.

The purpose of this special meeting was announced - to consider restoration of the roads due to sewage system construction and any other business at hand. The meeting was properly advertised.

I. General Public Comment

None at this time

II. Engineer's Report

Mr. Picarelli opened by saying that NCT directed KPI to hire a firm that could do compaction testing in several areas where sewer line installation had been done. This issue came to light after the Roadmaster and Road Foreman had witnessed a trench that was not compacted until the 8 foot level. Advantage Engineering was hired to do the compaction testing by a nuclear moisture density gauge. The Township Road Foreman ran the backhoe and the Roadmaster and Greg Hertz were present on behalf of the Township.

Mr. Hertz stated that the Road Foreman had arbitrarily picked some sights for testing in the Country Manor Development area on Country Manor Road. The testing was done on April 18th. The testing was done approximately 12-16" down, pulling the lifts back. There were three (3) areas done. Down below the 16" level, all of the tests failed below 90%. During restoration of the testing sites, compaction tests were done at the different levels as witnessed by Mr. Brenneman.

At the third site tested, about 8" down, a piece of curbing about 3' long was pulled out, which was used for backfill. Mr. Hertz presented pictures of the testing. The contract documents call for 95% compaction on PENNDOT roads and 98% compaction on non-PENNDOT roads. The top layer testing was in the 90 percentiles, everything else was below that down to the low 80 percentiles. Mr. Hall asked how the testing is done. The testing is done by moisture density which is taken back to their labs and tested. Mr. Picarelli added, that eventually, all of this will be paved over and done and will that settle for the Township to fix? KPI has not seen the inspection reports yet. Mr. Stiely presented them to KPI at this meeting.

Mr. Gregory questioned how the test areas were dug open? The digging was done by backhoe and then tested. The backhoe would loosen it up, according to Mr. Gregory. With all the rain and snow that we had this year, the roads would have settled down two (2) feet if the compaction tests were as low as the Township stated. Mr. Gregory was required to have a two (2) year maintenance contract.

Mike Stiely asked to talk. He is the Manager of the Inspection Department for CSD. He was questioning the technique used for the testing. CSD does not test 2A Modified backfill and dig down into it. You can test soil: you dig down so far and take a flat shovel and chisel it, because if you penetrate one spot, you can no longer do an accurate density test. You have to do the same thing here - if you turn even one stone over, you are not going to get the same compaction results. CSD will not re-test 2A Modified. They will do soils, but will not do the 2A Modified. It cannot be done accurately. Mr. Picarelli disagreed. Mr. Stiely continued to refute the test results. Donna Yingling questioned if the testing was done on a main line. Mr. Hertz stated it was an 8" line in Country Manor

Estates. She stated that testing was required every 50' along a main line. Mr. Gregory questioned why the road didn't settle over the winter. Mr. Hertz initially questioned the Road Foreman about the sites he had chosen, because the road had not sunk in that area. Mr. Gregory continued to maintain that the test will never come out right, no matter where you do them. Mr. Hall questioned when the tests would come out right - only upon initial installation, according to Mr. Gregory. Mr. Gregory stated that the Township should just let the base in and take the money for the final restoration. Mr. Hall questioned what started the compaction issue in the first place. Mr. Shearer stated that the Road Foreman and the Road Master had been out and witnessed an area where the contractor had filled in 8' before any compaction was done. Shearer went on to say that the operator admitted he did this - if it happened there, it happened other places. In the spring of last year, Mr. Brenneman had questioned the compaction at several places and the Township was basically run off the job. Now the Township digs it up and finds curbs. Mr. Gregory questioned the location of the curbs. Mr. Shearer indicated that the Township can take Mr. Gregory down and dig up more curbing: there is more curbing in the same ditch. Mr. Hall questioned when it is a good test. Mr. Stiely stated that testing is accurate upon installation, when the material is not being disturbed from down below, you're not digging down thru it. Mr. Stiely pointed out that tests had been done - it was set up thru the Sewer Authority and Terry Myers as to the frequency of the tests. The testing was done every fifty (50') feet on the roads: there was no decision to test each individual lift up thru the different depths. It would have been too costly. It would require trench boxes for extra safety for the inspectors. Mr. Picarelli stated he understands the theory behind the decision; however, the operator admitted that he had not compacted until 8' of fill had been added. Mr. Hall asked what the minimum tests results are to be. Mr. Stiely replied that they are looking for 95%. When areas failed, they had to be dug open and re-compacted. Mr. Stiely added that when this Sewer project started, CSD was also the Township engineer: they were looking out for the good of the Township as well as the Authority. They were not trying to favor one side or the other. The key factor here is the inspection and compaction of the backfill, not the testing. Mr. Stiely professed faith in all of the years experience that his inspectors have, and the many other sewer projects in other municipalities is testament that the roads have not settled. The Township Manager questioned where the inspectors were when the curbing ended up as backfill. Mike's theory on that issue is that he does not know where the stone was dumped on the job site along side of the road and when the backhoe dug into the pile he scooped up the piece of curbing. An inspector could be right there and not see it. The Manager pointed out that out of three (3) tests, is it coincidence that we located several pieces of curbing? That is a 33% coincidence.

Mr. Hall questioned where are we at this point? Mr. Gregory stated that once a final inspection is done, the maintenance period starts. Final inspection is done visually. Final restoration will start in some areas in the next couple of weeks. Restoration is done over the trench areas only. Mr. Gregory went on to explain that no matter how much compaction or sealing is done, several years down the road that seam will crack open. What Mr. Gregory explained at the previous meeting, was that the Township should let the contractor put the base in and take the money allotted for the top and let the Township put it on later. Mr. Gregory continued to contest the test results, saying the compaction was loosened up by digging into it. Mr. Stiely did agree that compaction tests could be done to a certain range of error. On the deep lines, the inspector watched the contractor use the Hoepac to compact the fill as they came up until they got up to a point that they could test it. Mr. Stiely brought along all of the inspection reports which he gave to KPI. One of the things required in inspection reports on a daily basis is comment on compaction. Attorney Ruth spoke up - the Township and the Sewer Authority need to communicate. What is going on here today does not constitute an emergency. The Chief

Inspector is on vacation, no one even knows what is in those reports - why does this meeting have to be called within an hour's notice. There should be better co-ordination. Chairman Hall questioned the hour notice - Gregory Contractors was notified an hour before to attend this meeting. The Manager explained that this meeting was properly called and advertised over the weekend. This meeting was scheduled for the Township to find out specifically what is occurring with restoration. It was not scheduled to meet with the inspectors or the contractors - it was scheduled to go over the compaction test results with our Engineer. It was advertised so that if any action needed to be taken, it could be. This meeting was to see what the problems are so that the Township can notify the contractor and Sewer Authority of what the Township expectations are: we are not here to solve this issue today. Obviously, the contracts are between the Sewer Authority and the contractor, but if there is an issue with the bonds being released or related issues, the Township wants everyone to be put on notice. The Solicitor continued by saying, no one person sitting at this table can make those decisions, they must be made by this body as a whole.

Chairman Hall questioned if the Sewer Authority had been made aware of this issue yet - only by hearsay. Gil interjected that this was to be a workshop setting with the Engineer informing the Board of what their findings were. It was to be a fact finding session of what the Supervisors had requested the Engineers to do, what the Engineers found and discuss what they wanted to do about it.

Ms. Yingling stated that if the Township was doing fact finding, they should be looking at all sides of the story to get all the facts. The Manager added that it helps if each side can act independently and get all their ducks in a row before meeting with all of the factions. The Township wanted the facts to take to the Sewer Authority - after all, these are their contracts.

Chairman Hall addressed the issue as a whole, stating that everyone has had their say, all we can do is register our concerns with the Sewer Authority. Mr. Hall opened the floor for any further comments on this issue. Hearing none, the Board will move on. Ms. Yingling will co-ordinate with the Township Manager and get the Township a copy of the maintenance bond and will supply a copy of the substantial completion reports as they become available, since those dates will affect the maintenance periods.

In a somewhat different vein, Mr. Picarelli said that Mr. Gregory had stated that they are getting ready for a final inspection for final restoration on some of the areas. Mr. Gregory said the intent is to have Nelson and the Road Foreman go around with the contractor and show them what they are planning to do. Mr. Picarelli stated to the Board that this should be co-ordinated with the Township, so that they are comfortable with what is planned for final restoration. Mr. Wolfe said that the public is under the misconception that the roads will be totally resurfaced as soon as the sewer installation is completed. Mr. Hall questioned why New Salem Boro did immediate restoration to their roads. Mr. Gregory pointed out that those roads are settling badly - the Boro used dirt for fill, rather than stone. That was not a good move as there is a great deal of settlement already. Mr. Shearer pointed out that either Nelson or Russell should meet with Gregory and show them where the rest of the concrete is in Country Manor and have them fix that area up right away. Mr. Gregory pointed out that the laterals that extend into the road ROW are not being compacted properly. Mr. Shearer questioned CSD if the compaction on the laterals is being inspected and if the contracts called for that. Mr. Stiely indicated that the Sewer Authority employee Brenda Trowbridge had called him before they started interviewing the inspectors, and his recommendation to her was that the air testing was not to be done in the pipe until they had witnessed the compaction of the trenches. If there is damage of the pipes, it happens during the compaction, so the air testing should not precede the compaction. If the plumbers dig back

close to the edge of the roadway, the stone rolls back into their trenches, weakening the roadway causing sinkage.

In discussion about how to handle the problem at hand, Chairman Hall mentioned the spot testing and that some problems and deficiencies have been located, do we go to the Sewer Authority and lay the problems in their laps? Mr. Shearer informed the Board that he had clearly announced at the meeting held at Gregory's field office with CSD in attendance that we are not going to fight with them or argue with them or question things, we are going to get someone in and do the testing. No one at that meeting had a problem with the Township doing that. No one mentioned a word about the validity of the testing or objected at all. Not until we got the negative results did anyone question the validity of testing. What do we do now? The Manager stated that the problem should be put back in the Sewer Authority's lap and let them come up with a solution. It should be done formally: let the Solicitor write a letter listing our objections and disclose our findings. Earle Wolfe added that the Sewer Authority wants things done correctly also. Rodney indicated that the Township should have taken closer watch when the Road Master and Road Foreman kept coming back to the Township complaining about the compaction, rather than letting CSD run them off the job. Shearer pointed out that the Sewer Authority paid three (3) full time inspectors to see that this type of work would not happen. They had originally planned on two (2) inspectors, but when Gregory put the third crew on, the Authority approved a third inspector. With full time inspection, concrete should not have gotten into the trenches as backfill. Shearer questioned Mr. Wolfe and Breneman if they were aware that the compaction tests were only going to be taken on the surface. No. Shearer went on to tell that on State jobs that he had worked on for H & H, they had to do tests on every twelve (12) inch lift. If an inspector got comfortable with the contractor, they might allow larger lifts, but **no** machine can properly compact eight (8) foot of material. Mr. Shearer stated that the Board needs to make the Sewer Authority aware of the situation, have Advantage Engineering give a confirmation in writing on the testing done and get a copy of that to the Sewer Authority. Earle Wolfe questioned how the Sewer Authority can judge whether what is happening in the field is correct or not. They have the professionals coming and standing before the Authority saying here are the things that have been done and here is the paperwork to prove it. Then you have two (2) engineers sitting here today in disagreement over the validity of the testing done. Mr. Hall reiterated that all of this work has been done, tests show deficiencies, now what do we do about it? Mr. Picarelli pointed out that the contract documents would cover the Sewer Authority if the work were not done right. The Township pointed out that they are not looking for the contractor or Authority to go through all those streets and redo them. That is not what the Township is looking to do. Shearer stated if the Township were to do more tests and find the same, surely the Sewer Authority would not be releasing the contractor's bond when what he did was not right.

Greg Hertz brought the Board's attention back to the test results. The test results got worse as the dig got deeper. The portion on the top was pretty tight. In looking at the photos, he pointed out that down on the lower lifts, even the wall starts to drop down. This is an indication that the top layer was being rolled and tamped, but in the lower lifts, the compaction went down as well. Advantage can verify all of this information. Gregory has been installing sewer lines for 35-40 years - he knows that when an inspector is on site, they pretty well conform to what is expected of them, but as soon as the inspector is absent, they take advantage of that situation. Obviously, all of the lines cannot be exposed and looked at, but the maintenance period could be extended for a year or two.

Earle Wolfe expressed his opinions as a member of the Sewer Authority. He has questions about who is right. Their paid professional (CSD) has been telling them that everything is alright. Now

the Township has a professional giving them a different opinion. In his opinion, if there were more test sites, he would have stronger feelings about the situation. If CSD and Gregory did their jobs as called for, they certainly should not object to more testing; however, there is still the question of the legitimacy of the testing methods. The question was raised, who would pay for additional testing? Greg felt the documents say if there are any questions on the test results, the contractor would have to pay. Whether the contractor would be willing to pay under these circumstances is questionable. The Chairman questioned how important it is to the Township at this point to bring this to a head, to determine if there is a general problem with compaction or not. The cost for the testing was \$45 per hour plus trip time, about \$400-\$500 for the three (3) tests done. It is not an accepted theory that the curb was accidentally scooped up as suggested by the inspector. Shearer questioned Wolfe whether he would like to see more test results. Wolfe replied that the test results in front of us certainly raise a red flag.

Solicitor Poole attempted to summarize the progression of events that need to happen. First of all, talk to Advantage Engineering about the question from CSD as to the legitimacy of the tests. Have them put their professional opinion in writing. Additional testing, at this point with questions on the legitimacy, would be foolish. Secondly, KPI will scan the inspection documentation provided by CSD today. Gil interjected that this Board needs to lay their findings back in the lap of the Authority and ask what they are going to do about it. Earle replied that the Authority should have something more in front of them to give them basis to question Gregory and CSD. After all, the Authority has a whole box of papers from CSD and Gregory which is telling them everything is fine and dandy. The inspection reports will most likely reference compaction. Step 3 may be additional testing.

Mr. Wolfe expressed reluctance to test areas of concern located by reading the inspection reports - in his opinion, this is showing mistrust of CSD. Gil pointed out that even setting the testing aside, there were two (2) areas for concern. First, the contractor's operator admitted not compacting an eight (8) foot fill. Second, a very large chunk of concrete was located in a trench over a sewer main. These two (2) items alone leave room for doubt. Also of concern, there was at least one or more chunks of concrete in the same trench that were visible, but not unearthed.

KPI will contact Advantage for verification of the testing. They will also go through the inspection reports for further information. Rodney stated if the Sewer Authority does not pursue more tests, the Township will. If there is still question about legitimacy of the findings, Rodney stated that the Township will go back and re-test the areas that the Township restored. After discussion, it was decided not to have Nelson locate the concrete for Gregory yet; see what the Sewer Authority wants to do first.

Greg asked who does the final inspections for release of the bonds - Terry Myers. Another issue for discussion is damage to the roadways beyond the trenching areas. Some areas have really broken down from having the equipment on and over them. Gregory alluded that there was no base on some of the roads. What limits of final restoration are going to be there in those cases? The Manager pointed out that in the meeting held at Gregory's field office, there was agreement by all parties that the Township would meet with Gregory before final restoration was done to let them know the Township's expectations. The suggestion is still on the table that the Township take the approximate \$700,000 for road restoration and use that for better roadway restoration on their own. Earle pointed out that some of the roads did not have a very good base, such as Tunnel Hill Road. That was not a good road before the construction started. Greg added that better care should be taken in those areas, limiting equipment contact, etc. On the other hand, Earle pointed out that the entrance to Whispering Springs Drive was totally destroyed by the dump trucks hauling fill into the Markey lots. Gregory did come in

and patch that area, but it was not dug out and done properly. Track damage to the roads has to be accounted for - that type of vehicle tears up the roadways. The contract called for rubber to be used under the tracked vehicles.

III. Old Business

A. The Bentz Road ROW for LRD Enterprises was mentioned. Gil pointed out that the ROW does not specifically nail down the location of the pipe. It may be to our advantage to have it that way until after the pipe is installed. Solicitor Poole is okay with that. That leaves a little leeway in case of hitting rock or something. The Solicitor added that a section can be added that "upon completion an as-built drawing will be prepared and provided to both parties". Bill asked if that is a named creek or an unnamed tributary. The consensus is that it is an unnamed tributary.

Hearing no other business at hand, **Motion** by Shearer to adjourn, second by Hall. All members voted aye; motion carried. The meeting adjourned at 3:16 p.m.

Respectfully submitted,

Joy Ann Strausbaugh, Secretary