Public Hearing Minutes
Grand Forks Proposed Municipal Solid Waste Landfill
February 2, 2009, 5:30 p.m. - 7:00 p.m.
Alerus Center, Grand Forks, North Dakota

My name is **Scott Radig**, I am the Director for the North Dakota Department of Health, Division of Waste Management, and I will be acting as hearing officer for this public hearing. I'll start off with a statement to explain how the process will work and go through with you a few information items and then we'll get started.

It is now 5:30 on February 2, 2009, at the Alerus Center in Grand Forks, North Dakota. At this time, I open this hearing.

If you have a prepared statement with you that you're going to be reading from, we'd like to receive a copy of that in writing if possible. We will be receiving comments in writing until February 5, 2009. We'll be reviewing all comments that are received, both verbally and in writing, and will review those comments. Based on those comments we will make a recommendation on the draft permit. There are three options that would be available. One would be to issue the permit as it was proposed; the second option would be to make modifications to that permit based on comments and information which we have received; and the third would be to make a recommendation to deny the permit. That recommendation will be going to the state health officer who will independently review the information provided, he will verify that all state law has been followed, and he will make the final decision on the permit.

If you are planning to provide comments this evening, please step up to the podium. There is a sign-in sheet there for people who are providing comments and testimony. Please state your name and sign that sheet that will help us with preparing the written transcript. This hearing tonight is being recorded and so I ask you to speak into the microphone, the microphones work pretty well so you don't have to lean in pretty close, however, just try to speak clearly. We do occasionally, every 45 minutes, have to change the tape and may ask you to pause briefly while we do that. If there's any questions on the process or procedure, I can answer those now . . . Yes?

Unknown speaker: Mr. Radig, for submitting written comments do you want those post marked a certain date or just do they need to arrive at your office by a certain date?

Scott Radig: They should be postmarked by the date that was published, I believe it's the 5th.

Unknown speaker: Was it the 5th or 4th?

Speaker Radig: It was the 4th, yes.

Unknown speaker: Will you except emails or...

Scott Radig: Email is fine too. This is not what is called an adjudicative hearing. Anybody who is providing comments/testimony will not be cross-examined, and in the same manner, the department of health will not be responding to comments this evening. We will take them all, and along with the written comments, we will respond to them together. And anybody may receive a written response to all the comments. There being no further questions to this

process this evening, we can start taking testimony. It is now 5:35 p.m. and we can begin.

1st speaker: Good evening my name is Frank Beaver (PDF transcript attached ?): Thank you for the opportunity to provide some insights here. I will try to keep this brief as possible and not duplicate a lot of the material that's been submitted so far. I've read a good deal of and like to say there's been a lot of comprehensive work that's been done on this project going back a number of years. But I'd like to make a few here that I think have been missed.

Starting with the geology of the site, this is a little bit unique area. The site we're talking about is glacial Lake Agassiz basin, and specifically within the center of Lake Agassiz lake plane. There are two geologic formations at this point that are common up and down the valley. There are the Sherak and the Brenna Formations and some other associated smaller units that have some interesting characteristics with respect to building.

You might note that in Grand Forks there are really no tall buildings or really, really heavy buildings, other than Engelstad Arena. It sits on pilings that were driven through this soft clay material. The problem that we face with engineering in this environment is that these two formations have no shear strength and have no compressor strength to speak of. You can park a drilling rig on top of a site and run the auger down 20-40 feet and let it set and turn, it'll turn all day and keep auguring this stuff out, it basically oozes and flows out of the hole. So it does not provide any kind of adequate foundation for anything. Buildings like the Engelstad Arena sit on pilings, bridges sit on pilings and so forth.

So that in a nutshell is the geology of the situation. Say you have an office, say at UND and a train goes by, it's like jelly sitting (?) on a tray(?). You can feel it in your office and in any of the buildings.

The second point here I will make before getting back to the Brenner formations is that the hydrology here. If you're in the middle of a lake basin, and with the river running through it, and along the river it's typically a groundwater discharge area. But glacial terrains are extremely varied. This is glacial lacustrine sediment overlying glacial till, and the only way you really know what you've got is when you drill a hole and you see what's there.

So beneath these sediments, they're like a mixed bag of sand, silt, clay and rocks. The hydrogeology of this area at the, if you go to Bedrock is one the most common formation, the Dakota Formation, sandstone, which flows this way from across the Williston Basin to the west. It sub crops along the river saline fluids...Lake Ardoch, North Salt Lake, Salt Lake Mirror near Grafton, etc, the groundwater flow in general is upward. And I don't think there's really any possibility that a landfill in the area that we're talking about is going to be contaminating any deep groundwater that this is not a recharge zone.

With respect to surface water, it's a different story. On top of the sediments you find a surficial aquifer. It varies in thickness, it varies in shape, it varies in conductivity. But you know rain falls in the valley, and the water flows and some of it runs off, and some of it percolates into the subsurface and moves away through common fractures in this area. You might say why/how does water flow through this gooey stuff that we're talking about here. Oddly enough, some of this stuff is fractured, and you can observe those just about any place here in the valley by taking a backhoe, digging a hole and watching the water run in from the little slits that you'll uncover. So there is water moving through the near surface.

That constitutes, I think, a relatively significant aquifer of fresh water. It's the water that's falling

on top of the salt water basically at greater depths. And I think that in a situation where North Dakota is considering piping water from the Missouri River to meet the needs of agriculture and municipalities in the Red River Valley, that it makes no sense at all to put any kind of facility that could possibly contaminate that resource in an area where it could be contaminated.

With the respect to overland flow and flooding, this pipe sits, what I would say, is on the edge of the flood plain and it would be subjected to overland flow, overland flooding. I know there's an elaborate diking system that been proposed here and planned and such things can be engineered to meet certain levels. I would be hard-pressed to make a statistical evaluation of whether that's a 100-year flood plain or a 500-year, or 1000-year flood plain boundary there. The point is, it's on the edge of a flood plain, if not in it, and sooner or later it was going to probably get wet above the level of the dikes, and if that's the case, then I don't know what the mitigation measures are going to be.

Another thing that goes along with that is erosion. If there's a site with municipal solid waste in it and the Red River moves and continues to move, it might end up eroding this site. There's a site along the English Coulee, not very far from the proposed site, in which an old city landfill is exposed along the creek and the contents are falling out into the English Coulee. I realize that one was an old one and certainly not engineered, but the city of Drayton for example, when the city was founded approximately 100 years ago, it was a long way from the water and sitting high up on the bank and they've never really had a flooding problem in Drayton. Even during the 1997 flood, the streets didn't get wet. They came close up to a few inches, but the river was lapping up against the base of the hill, they'd lost a number of streets, and now are losing Main Street because the river is moving west. And really there's no reason why that sort of phenomenon could not occur here.

In essence I think that if you're worrying about having water problems or having to deal with water problems, high water tables, etc., when siting a landfill, we shouldn't be there in the first place. Because a characteristic of a good landfill is that it be in an area where it would have a deep water table and it would not be over an aquifer that would have a significant amount of water in it and that would not seem to exist in the immediate area. That's another issue.

The design model that's proposed here, the consolidation problem, is one in which the loading of the earth will result in basically squeezing the water out of the clay minerals and the water sort of dissipates off to the side and flows away. And that is commonly a mechanism that explains how things happen under load in many areas. I don't think that that is particularly the best model for this particular setting, and I will try a little sketch over here... (Mr. Beaver walks away from microphone and voice trails off for approximately 10 minutes of his testimony and cannot be heard from microphone. During this time Mr. Beaver sketched and described Figures 1 and 2 which were included in his written testimony/comments.)

(Mr. Beaver returns to microphone) The landfill life overall will be basically forever. As I understand it, the working life of this thing is probably going to be decades and the liner life guarantee is one year, if I'm not mistaken. Now, what are you going to do about that, how are you going to fix that if that's the case? I pose that question as something you consider here. How do you keep track of that so you know what's really happening to it?

There are a couple other things here that you might follow on. One in general is that I mentioned earlier, I think the ideal solid waste site is the one the Solid Waste Management Program is one in which you recycle as much as you can, optimize it, make it a business – people pay you to take this waste – it's my understanding that the city makes money at this,

collecting waste from other cities. The best waste management plan is a marketing plan where you can turn it around and sell it somehow. And if there's anything left over that you can't sell, it's going in a landfill but the volume will be a lot smaller. Now there's all kinds of pros and cons that goes with that, but just so that I show it all to you for your consideration.

The other final thing here is that we have a treaty with Canada – The International Boundary Waters Treaty. If something goes wrong with this or any other facilities along the way, I would guess that the Canadian government would probably take issue with this as they did Garrison Diversion and other things along the way. If it gets bogged down in IJC proceedings, I don't think anyone appearing in this room will live to see the end of it. It's likely to go on for a long time. They move very slowly. I've been to those meetings. So I will be providing you with a copy of this. I'll mail it to you but if you have any questions, I'm willing to entertain them here. (Pause.)

Speaker Radig: Do you have anything else Mr. Beaver?
Speaker Frank Beaver: Thank you again for the opportunity to present this. (END)
Speaker Radig: Is there anyone else that would like to provide comments or testimony?

2nd speaker: (see attached PDF transcript) Hello, my name is **Raymond Wilkens** and my family and I moved to Section 12 in Rye Township 32 years ago. We purchased 30 acres of land which was nothing but a barley field when we bought it. We built a house, put a driveway, planted grass, shelter belt trees, dug a well, had a lot of livestock over the years and the wells took care of them.

In 1997, we ran the water into the house and used it ever since. Used it for cooking, drinking, watering a garden that grows vegetables we eat in summer, water cattle yet. A neighbor of mine put some cattle on it.

Now Grand Forks is going to put a landfill in the section adjoining us and it's estimated that it's going to cost 2.8 million dollars for the "mechanisms to manage storm water, which landfill critics fear could mix with garbage and contaminate the groundwater." They, too, must feel this a possibility or they would not be willing to spend the money. This causes me to question what effect it will have on my water, on the groundwater that runs to our gardens and watering holes in the neighborhood and the already high water table that runs in the ditches that borders the LaMoine Addition, where there's 48 families.

I'd like to reference a book called "Soils Survey of Grand Forks County, North Dakota" issued by the U. S. Department of Agriculture on May of 1981. This survey shows Section 13 to be almost 100% soil series 270 which they refer to as "Bearden silty clay loam saline." I have copied several pages from the report for your review. On page 57 are the following sanitary facility conditions of the soil series:

Septic tank absorption fields: severe wetness, percs slowly.
Sewage lagoon areas: Severe: wetness.
Trench sanitary landfills: Severe: wetness
Area sanitation landfills: Severe: wetness
Daily cover for landfills: Fair: too clayey, wetness

This does not sound like a safe place to build a landfill to me. I have heard talk of a possible water shortage in the years to come. Why should we take a chance of contaminating the water

we do have? We have been denied our right to vote. We will be denied the benefit of the doubt. When talking about the landfill began, the Grand Forks Herald published a map of where Grand Forks cannot build a landfill." Section 13 falls into that area as a FAA exclusion.

The current landfill is not full, it needs to be relocated because of the dangers to aircraft caused by birds the landfill attracts. A new landfill in Section 13 will also attract birds and also falls in the line of UND flight plans. Could the city not use an incinerator, recycling and composting to eliminate the attraction of birds to the current landfill? I believe they feel this would be too expensive.

A recent article in the Grand Forks Herald by Ryan Johnson states the Grand Forks Human Nutrition Service Center cut trash output by over 50% by recycling which also saves the center more than $5,000 a year. It cut its pickup deliveries from five to one, to two weekly. The bakery for which I work, recycles 65% of their waste products, 20% of the items deposited in landfills are food products which could be used for compost and recycling.

Fargo residents may pick up processed compost free of charge for use in their gardens. Motorola is beginning to use recycled plastic bottles in their production of their cell phones. An article by Neil St. Anthony, Star Tribune, tells of Vast Enterprises, a building-products concern in northeast Minneapolis, which will produce lightweight, thin bricks for Fabcon of Savage, Minnesota. These bricks are made of 95% of recycled tires and plastic and will remove about 7,500 tires, 220,000 plastic containers from landfills for every 50,000-square-foot structure that's built. That will save enough energy to heat the average home for 20 years. This is the way of the future and should be considered whatever it costs. After all, we are living in the 21st Century, not the 19th. Plastic containers are here today, but "forever in the landfill." We need to think of the future generations.

The city of Grand Forks claims it wants to "conserve farmlands." Grand Forks has 41 townships, approximately 1,368 square miles. I believe Rye Township, Section 13, is the only section that is 100% farmed. No houses/buildings, no tree lines, no CRP. Should it be turned into a landfill only to contaminate the land around it? The Red River Valley is known for its good farmland. This should be conserved.

Rye Township residents were allowed one hour between 6 and 7 to vote if they wanted the landfill. The result was 72 against, and 7 for. We were told our vote doesn't count. I decided to take a survey of Rye Township residents. There are 111 homes in Rye Township. I visited with as many residents as I could find at home. I obtained 176 signatures from residents over 18 who opposed the landfill in ET zoning. I sent a copy of these signatures to your office.

A short time ago, I believe the North Dakota Health Department said our county commissioners had the right to call a vote on the landfill matter. This meeting was opened with a motion that there will be no vote. It was too expensive. Three of the county commissioners live in the city. Rye Township doesn't have a large population or much money, but we should still have the right to vote, and have it count.

At your last meeting here in Grand Forks on December 18, 2009, several residents of Grand Forks were in favor of placing the landfill in Rye Township because they didn't want an increase in our garbage pickup. The estimated 8.4 million of the new landfill will have to be paid by someone. This sounds like an increase to me.

I realize people want to save money and are tired of the whole landfill issue. However, the

possible contamination of groundwater and other potential environmental nuisances associated with landfills, including disease transmissions and hazards created by rats, snakes, skunks, cats, dogs and other animals or vermin, odor production and accumulated litter as well as noise will be generated in our neighborhood from semi trucks and pay loaders, should take priority over time and money.

If Grand Forks wishes to accept garbage within a hundred miles of Grand Forks including cities in Minnesota, they should not be allowed to dump it in Section 13 of Rye Township and endanger the health and welfare of the 104 families that live within one mile of the proposed landfill as well as the safety of many UND North Dakota students that will be flying over the area.

On behalf of the residents of Rye Township, I urge you to deny the city of Grand Forks the land permit at this time. I thank you for your time and consideration. (End)

Speaker Radig: Thank you Mr. Wilkens.

3rd speaker: (see attached PDF transcript) My name is **Tammy Binstock**. My home is located approximately 200 feet from the proposed landfill site in Rye Township. As we have not been offered a formal buyout, I'm assuming that it'll be very difficult to sell our home to relocate to another area. Therefore, I would be remiss to not make my feelings known and offer my perspective on how this landfill would affect my life and that of my family.

Of the main concerns I have is the smell that would come from having a landfill just across the road from my home. We spend many of our evenings in the summer enjoying yard work and outdoor activities with our children. Most evenings we enjoy a campfire with family and friends. Is it fair for us to be forced inside on the summer days when the winds are blowing from the south? Along with the smell that a south wind would bring, litter and debris would also be blown directly into our yard.

I would guess that noise and traffic will increase in the area due to the heavy equipment needed to operate the landfill. My children enjoy inviting friends over to play in the summer as well as the winter. Having increased traffic around our home also poses a concern.

During the summer months, decomposing waste attracts flies. The flies will lay their eggs in the waste. This leads to an increased number of flies. I have a difficult time believing the waste can be completely covered every day to prevent this infestation. It is difficult to control the flies in the summertime, especially having dogs and horses on our farm. Living next to a landfill will make this even more difficult.

The last concern I have is the bird population that will come along with the landfill. If the waste is not covered as fast as it is brought into the landfill, the birds will be attracted to the area and likely cause a nuisance. Again, this is a concern for me with my children and their friends playing in our yard and around the farm.

The proposed landfill is proximity of over 100 residents within a one-mile radius. Our lives will be forever changed with the location using (pause/crying) of the proposed landfill. I urge the Department of Health to deny the city of Grand Forks this application for a municipal landfill permit. Thank you for your time. (End)

Speaker Radig: There have been a few more people who have come in. Everybody will have

an opportunity to speak if you'd like. Is there anyone else who would like to make comments?

4th speaker: My name is **Dan Rummel,** and I live in Rye Township. I'm going to make some comments on the nature of the ground out there and the water level. We have a house that's approximately three-quarters of a mile north where the landfill's going to be placed. The design of our house was affected by the ground that we built on.
The ground that we have out there is silt. And when it's wet, it becomes the consistency of butterscotch pudding. I'm not exaggerating when I say that. The year that we built our house, we had some rain that year. The only way we could possibly get into the site was our entire crew had to ride in on a crawler. You couldn't walk in it. You'd lose your boots, you'd darn near disappear up to your knees.

We had to redesign the house footings in order to handle this situation. Because we had a brick home and makes it heavier. It was recommended by engineers that we do a larger footing at the base of the house. We increased it by half, and went to a 3-foot rather than a 2-foot footing required by code. And I'm glad to say it does work. But without that we may have had troubles.

The other thing is we did dig test holes with a backhoe to see what kind of a water situation we had on our hands. And the hole we dug on the south end of the property, I asked my own (?) Where the proposed landfill was going to be, filled with water within four days. It came within 18 inches of the surface of the ground there. And it was consistent throughout the ground whenever we dug we ended up with water. And the house itself, we dug the hole, we poured the footings within 24 hours, and you had the block in the hole within 48 – we had water in about four days.

Without using that procedure, we would have never gotten that house built. We could have never moved the material in. We would have never succeeded in the process. Water is a big issue out there. The ground itself is very unstable. You have to deal with it with larger footings. So basically what has been told you on the charts and what not, and with what Mr. Beaver said, is absolutely "dead on."

I've had to deal with this type of ground out west of the city on different projects. It's consistently the same throughout. It can be dealt with but you can't place a heavy object on the ground without some sort of support – it'll disappear, and that type of ground goes all the way out to the air base. The construction that they use at the air base for the tarmac and runways and what not, especially for the parking area, was dug down approximately seven feet, they put tarmac down for a base, filled it with granular then they poured 3-1/2 feet of concrete just to hold the heavies that come in that take tremendous loads out of this air base and have for the last many years.

The comments that I'm making are basically trying to deal with the weight of the landfill. It's going to move. It's going to settle dramatically. And I do not think that area is a proper place for a landfill. Thank you. (End)

5th speaker: I'm Richard Gross, I don't live by the landfill that's south of town. A few years ago, the city talked about building a bridge across the river on the south end of town and that would have created a four-lane road into the neighborhood. And these people filled city hall because it would change their neighborhood. Kids walking to school, the drive backing into the driveway, the noise and they didn't feel it was fair for the city to zone after the neighborhood with there. These people were voters of course and I haven't heard that idea lately about that bridge. But I think out here, I don't live out there, but I really feel for these people. When they're

living there and the city coming in and rezoning it for a dump and yet they keep saying the market values of the property won't go down. And therefore, there's no need to compensate these people. I can't believe that. It would raise the cost of the landfill, but it really wouldn't. I think the users should pay for it and not the neighbors. I think all of those people living within a mile of that place are going to affected–their property is going to be affected. How can it be otherwise? And I just don't think that's fair.

And the health and welfare of the community are also important, not just the site for the landfill. Thank you very much. (End)

6th speaker: Hi my name is Jim Goulet (?), I live in Rye Township and live about a mile from the proposed site. In '96, '97, we had water back up way into our yards and so if the water goes back that far, if we've got a garbage dump further down the road, you know where that's going to go – right toward the river. That just gives you the idea that if there's a landfill there and any kind of extra water is going to wash it that way, any leakage or anything like that. I like to hunt, my family likes to hunt, we hunt around there and if you've ever been out there within a mile of the landfill, you walk in the area you've got to go home and take a bath because you smell so bad from walking through the area in the soils. And like I said, you've got to home and take a bath because it smells that bad.

And another thing I think I'm going to say is I can't really believe that we're even going through this landfill argument when the city has already been offered options to do different things. And I can't believe they haven't exhausted all the possibilities of doing something else besides putting in another landfill. I mean that's all we need is to be piling more garbage up for our kids to look at as they're growing up. I can't see that at all. We've got people at the university building missiles going up in the air. We've got so much ingenuity nowadays to do other things with it and I can't see that this is something we should be doing at all. Like I said our kids gotta grow up to see another landfill and it's not right at all.

I just think that there's a lot better options than this. I don't think the people, the citizens of Grand Forks, have actually been approached and asked for another idea...what their ideas of what to do with it. I've talked to a lot of people in Grand Forks, at the air base, I went (work?) out there and they've got the same idea I do...there should be something better done with it than just piling it up on the ground...just digging a hole and putting it in the ground again.

So I don't believe people have been asked and approached, they think there's been too much time and money spend running around trying to dump it in "Joe's" yard over there you know and there could be more positive things done. I guess that's one of my biggest beefs is...that they haven't put more time, money and consideration into doing something a little better with it, so that's about all I got to say. (End)

Speaker Radig: Would anyone else like to speak or provide testimony?

7th speaker: I'm Doug Goulding (see attached PDF transcript), I'm an attorney for the Grand Forks County Citizens' Coalition. I just have a couple of brief comments for you after I sign my name.

I'm here to simply remind, hopefully avoiding being redundant, but simply remind Solid Waste Management Division, of the legal standards which apply to landfill siting. Because I think there's a slightly false impression that's given from the applicant's materials that have been set forth and provided, which are comprehensive, but they're comprehensive in focus on primarily

the suitability of the geology, hydrology or soils.

And they're also comprehensive in examining what I call the landfill site exclusion factors. If you'll allow me to avoid giving extensive citations, I'll mail you something tomorrow with these legal citations because I'll just confuse myself and everyone else.

Again what I call the "exclusion factors" which I'm sure you're familiar – it's the list of factors after the general locational standard is stated, and where they state that these particular sites ought to be excluded, you know, the woody draws and big canyons exclusions. And I go back to the general locational standard which, if I can paraphrase a little bit, states that no solid waste management facility may be located in areas which result in impact on human health or environmental resources or in an area which is unsuitable because of reasons of topography, geology, hydrology or soils.

And I just want to emphasis to the department of health that the first part of that general locational standard is as important as the second part of the locational standard. And from my research the root of that first part of that general locational standard that the department of health has adopted is in the Federal Legislation Resource, Conservation and Recovery Act, we're using a little bit of archaic terminology, basically what they're talking about is the sanitary landfill here – we're talking about a permitted application for a permitted municipal solid waste facility. And I think those are interchangeable.

But basically, the congressional legislation states that it should only be classed as a permitted landfill only if there is no reasonable probability of adverse effects on health or the environment from disposal of solid waste at such facility. And again, I'll give you the citation to that in written material I submit tomorrow.

I think Mr. Beaver has addressed some of the important questions about hydrology or soils and I think several of the area landowners have stated much more eloquently than I could, their concerns that their health and their environmental resources are going to be impacted by siting a landfill in their area. I think Mr. Wilkens said there were 104 families within one mile of that and I think, I urge, the department of health to carefully look at what potential impacts might occur to those families in such close proximity to the landfill.

We know that the landfill is going to emit pollutants to the groundwater because the liner is not 100% impermeable. We know that landfills emit volatile organic chemicals into the atmosphere, we know that there are sources of pollution and I will conclude, again repeating, that I urge you to take a very careful look and a close look at the environmental effects on the human health in the area. (End)

Speaker Tillotson: Anyone else?

Speaker Radig: There were a few people that came in a little bit later, everybody is welcome to make their opinion heard or provide any additional information. Why don't we wait five minutes or so, and if we've got time and nobody has anything else to say.

I haven't seen any new people come in, that want to provide new testimony. If anyone else present that would like to provide testimony, comments regarding the proposed landfill?

8th speaker: Good evening, I'm Linda Ramell (name?) And I live in Rye Township. I just want to comment I believe there is going to be some sort of sound system to keep the birds away,

which is a cited problem in the existing landfill and potential for the new one. I heard they're going to have some boomers out there or something that will go off periodically. I think after many, many times and being a neighbor of the proposed landfill, that sound will be horrible. Pretty soon it will be okay, and in the future it'll be nothing. It won't bother me. I think the birds might be the same as me. The birds won't be bothered by that noise after awhile and what good would will a boomer do. It is a problem, the noise pollution will be bad, but we'll get used to it.

I don't want to get used to it. I don't think it's necessary. I also believe we're stewards of the land. We're an agricultural community. My understanding the land is zone A or agriculture. That's the purpose of it, that's our industry here. It should be remaining that way. Being stewards of the land, I was taught...you go to things, you work with things, you put things back as you found them, or better. I don't think any of this as putting things back, or better. Please consider denying the permit for the landfill. Thank you. (End)

Speaker Radig: I would also like to remind people we do have sign-up sheets. One is an attendance sheet and the other is if you'd like to receive a written response to all the comments. Thank you.

9th speaker: (see attached PDF transcript) Kyle Braaten from Manville, North Dakota. After the involvement that you guys have had in this thing, I believe it's going to be real tough to be completely objective, but that's what you're gonna need to do. Objective judgements are free from personal considerations or emotional perspectives. Subjective judgments are influenced by such personal consideration. I realize you guys might be emotionally attached to this thing and really want to see it just be done and gone, but right now is the time to set that aside and look at all the facts.

You guys are way more qualified than I am, I might mispronounce some these words, but work with me. Some of the simple stuff I haven't been able to read at all. For some reason this has become a voluminous application with lots of things incorporated by reference. But I've seen that it's only bailed and completely wrapped waste that will go into the landfill. Then I see references to waste not amenable to bailing. It'll be loose filled bailed. And I've seen pictures of bails where the ends were actually opened, not completely wrapped.

In this forum, I guess I may not be entitled to answers of any sort, but I think you really need to be aware if there are any inconsistencies, if I missed them I apologized, but you need to look into them. Without a very specific plan from the city, how can you issue a permit? And if you do issue it, how can you enforce it?

One of the things, North Dakota regulations say a waste must be spread and compacted in two-foot lifts. I understand the compaction provided by the bailer, but does North Dakota law and regulations allow bailing? If not, Grand Forks should have to go to have the rules changed before the permit is granted. What law or regulation does allow bailing? At least bails should be larger than(?) two feet high.

Another topic. Contrary to what's been reported by many city sources, I guess even in the in the legislative record, the city has not approached the Ferry Township Fire Protection District, also known as Manvele Fire, to provide fire protection. Grand Forks has said they will provide fire protection at the site. It's my understanding that the city at this time does not utilize portable water supply of tanker trucks and drop tanks. Maybe I missed it again, but how will Grand Forks fight the fires that can't be extinguished by the landfill personnel?

And now some of this stuff that may be a little deeper. The settlement calculations, they're based solely on soil consolidation. Really, that's the wrong calculation and mechanism. It should be fluid dynamics or even Archimedes Principal. And I'm sure you've picked up on this since Steve Tillotson has pointed out to me that the bailing facility out there actually floats. It's on Styrofoam, it's not designed to sink until consolidation occurs.

If somehow you've become satisfied using the consolidation as a mechanism for settlement, there's a few factors missing from Pete Burton's calculations. Burton's handwritten calculations specifically ignore the top ten feet and anything under 80 feet below ground surface. The top ten feet out there is very soft. There are differing opinions about what geological formations exist under portions of site at 80 feet below ground surface level. Burton's entire calculations should be considered invalid, and thus the design safety cannot be determined. It's been representative of 1.5. You gotta look into that.

And actually this is backed up from a statement from your department. Along the lines of, I cannot remember the exact words but, conditions in the Red River Valley will require creative engineering. I think you've heard that before or something very similar to it. Instead of creative engineering, they've just made the math fit the outcome that they wanted.

Captain Burton's calculations also don't consider any displacement. There are no allowances for mounting in areas that have begun sinking into the groundwater or next to those areas. In the Turtle River Township proposal, Pete made the same calculations based on the same convenient assumptions.

In the preparation memoranda for the City finance EIS, Patrick Plumly of Water and Earth Technologies, criticized Burns & McDonald for not including pathways to prepare for the water to escape as consolidation occurs. He asserted that without the designed pathways, the displaced water will disrupt and displace the adjacent liner causing damaging differential stresses. Burns & McDonald never addressed this and never changed the construction design. It is still not addressed.

In a recent personal conversation I had with Pete Burton, Bill Schefehic and Tom Brown, I asked where the water from consolidation will go? I only received an explanation that the water will just move out from the pours and be gone. I believe it was Burton who also calculated the liner stress and stretch. His calculations are way over simplified.

My high-school freshman daughter was able to duplicate those answers using the Pythagorean theorem. The calculation completely disregards the potential differential settlement and localized stresses beyond the tolerance allowed. It completely disregards potential subterranean anomalies. It doesn't address additional stresses that may be experienced at the anchor trench or around the sumps. The sump actually, I don't know if that's gonna be an additional stress, or if the sump is going to get closed up by (while) the clay is compressed or condensing into it. And of course, it's based on the incorrect assumption of the rate of settlement as I discussed earlier.

I have not heard the words lime stabilization in this proposal, but based on conditions at the site, I assume that lime stabilization will be needed. The liner stress calculations on differential settlement calculations give no consideration to potential ground heaving from ettringite and thaumasite formation. As you guys probably know, those are formed from their reactions between calcium from the lime stabilizer, reactive alumina, silicates and sulfates from the clayey soils in the ground waters in the area.

Heaving will vary based on the percentages of clay to sand and other soils. Burns & McDonald's report indicate that these levels do vary across the site. According to ASCE publications, American Society of Civil Engineers, "Lime treatment of Stewart Avenue in Las Vegas, Nevada, had induced heave in excess of twelve inches. Heaved areas are found to contain abundant thaumasite. Any relatively localized heave of twelve inches would be catastrophic to the liner system, yet it isn't considered."

Again, the question you got to think about to find the answer. Have you seen any evidence that the liner is not going to be constructed to the quality standards required without excessive ground heaving? Has it been done...this double-liner system...has it been done anywhere else in the state? Has it been done anywhere in the world that has a similar viscous foundation?

I haven't heard any consideration for the underground fractures that are present in our valley. I don't know if I just missed it or if it was ignored because it didn't fit neatly into Burton's calculations. Certainly, you'll reconsider the need to redo all calculations to redetermine how the fractured clay environment will affect settlement, groundwater gradient direction, and pollution monitoring effectiveness.

During the Turtle River proposal, Bill Schefchik said that an upward gradient was preferred because "water flows into a boat with a hole, the contents of the boat don't flow out." This site doesn't have an upward gradient. Now he states this site is better than Turtle River because it doesn't have an upper gradient. What is true?

Did this engineer's opinion change just because the location changed? When I did ask Bill about this, I got a smile and a nod. Since you're all closely involved in the design development, you'll know what else was manipulated.

So give that some thought if you would. It is not your responsibility to ensure a cheap landfill for Grand Forks. It is your responsibility to ensure the safety of our environment, and more important, the health of the citizens that will be affected by this landfill that will be there forever, not just plus thirty years post closure.

A new landfill in North Dakota should be built to the best design possible and should be in the best geological location possible. You all know the Red River Valley is not the best location. If you do see fit to kill this proposal, if you do not see fit to kill this proposal, at least rework it to a smaller, better designed and more reliable plan.

Why is this proposal for so many years of capacity? New technologies are being developed. Grand Forks' City Council said they're going to build a composter, that will be lower need for a landfill in our area. The whole design plan is really based on need calculations from 15-20 years ago. This may be the only municipal solid waste landfill that gets sited on your watch. Don't let it be an embarrassment to your legacy. I guess I've seen the amount 8.4 million to construct this landfill. I don't believe that includes operating costs, closure, monitoring, I think that if the real total price of this thing were made public, the alternatives would look a whole lot more palatable. That's all I got. (End)

Speaker Radig: Kyle, do you have any of that in writing? If you'd like to submit that in writing, it would be a lot easier for us to review all of your points. Thank you very much.

Are their any other comments or testimony anyone would like to provide?

10th speaker: Daryl Bran. 3702 Cherry Street here in Grand Forks. One thing I think maybe Doug talked about this a little bit but it seems like this liability and the risk involved with this proposed landfill in the Red River Valley, like we've talked about before, there's a study that said we should never have another one in the Red River Valley done by the health department in North Dakota.

It seems like, if I were going to approve that thing, I'd require a massive insurance insurance policy that would cover this issue if we ever had a leak, and we will have a leak. The current landfill is leaking, according to Mr. Tillotson, and the information that's in a study about that. And then the other landfill that we're talking about, the old, old one that wasn't designed very well that Mr. Beaver discussed, you know that one's falling out in the coulee right now. We know that we're polluting the water right now in the Red River. I guess we need to prove it by going out and testing that.

But, I think the bottom line is that if you're going to approve this permit, I think we should require the city of Grand Forks to have insurance. A massive amount of insurance to cover this if it leaks. And chances are it will because it's going to be there forever. And again, I think Frank Beaver mentioned this, it came up at the Turtle River landfill discussion is that all of them leak in time, and they're warranted for a year, so I hope you take that into consideration. Thank you. (End)

Speaker Radig: Anybody else? Since there are no other people who would like to provide any testimony tonight. I would like to show the record to show that it's now 6:55 p.m., and this hearing is now over. There will be still two more days till February 4, 2009, to provide written comments, and the address for that is 918 East Divide Avenue, Bismarck, North Dakota, North Dakota Department of Health, Division of Waste Management.

If you would like to provide comments by email, you can see me right after the meeting, I'll give you a business card with my email address on that. So thank you very much. (End)

End of tape number one, side one. No further transcript/tapes.

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