MANDAN REMEDIATION TRUST (MRT)
April 2, 2013

Meeting: 234th Official Meeting
Date: April 2, 2013
Location: Mandan City Hall, 205 2nd Ave. NW
Time: 10:00 A.M.

The MRT meeting was called to order by Jim Neubauer. Dave Glatt and Fritz Schwindt were present. Scott Radig and Marilyn Mertz, North Dakota Department of Health were present.

Minutes. March 5, 2013 minutes.

Motion. Glatt moved to approve the March 5, 2013 minutes as adjusted; second by Schwindt. All ayes. Motion carried.

Bank Statement. The Bank of North Dakota statement for the period ending February 28, 2013 shows a balance of $7,540,195.38. Payments that went through last month are for wastewater charges and LBG. We have interest of $289.48. We acknowledge receipt of the statement.

Pay Request. Received LBG's bill for $19,518.66 dated March 24, 2013. Radig indicated it was pretty typical. There were no issues. They have incorporated their adjusted rates.

Motion. Schwindt moved to approve LBG's payment of $19,518.66; second by Glatt. All ayes. Motion carried.

Pay Request. City of Mandan's bill for $15,493.93 for water, sewer, MDU charges for the first quarter of 2013. No issues.

Motion. Schwindt moved to approve payment to the city of Mandan in the amount of $15,493.93 for first quarter utilities; second by Glatt. All ayes. Motion carried.

Pay Request. City of Mandan's wastewater charges for $790.67 covering February 1 through February 28, 2013. Radig indicated the charges are about average.

Motion. Glatt moved to approve payment to the city of Mandan $790.67 for the wastewater charges for the month of February; second by Schwindt. All ayes. Motion carried.

Task Orders. Radig provided the final signed copy for the 2013 Task Orders.

Manifold Closure. Radig will start looking at potentially closing down certain manifolds. Department staff went through all the fluid data and put it into the Department's GIS system each with different colors and different set of manifolds and also the monitoring wells that are within that area. They used a period of 3 years not 2 for the official closure guidelines to be a little more conservative. They went back 3 years for any of the wells that had greater than 0.1 of a foot at any point at the "x" sign or the plus sign. You can see there are certain pockets of fuel that would not qualify, but other areas definitely are looking pretty good (i.e., absence of free-product).

Neubauer - So the wells with the “x” do not qualify for closure—at least for the past 3 years.

Radig – It doesn’t make sense just to operate 1 or 2 wells if you run the manifolds full cycle. Up north there is only 1 well, monitoring well, No. 12, either that or 1407 on the southeast side of the LEC.

Schwindt – There was one that was 1405 or 1408, 5 or 8 one of those wells in there seems like there has been free-product.

Radig – If there was, it has been less than the 0.1 of a foot. This is just preliminary. We have to refine it a little bit more.

Neubauer -- On the light green we start at the northwest—the yellow triangle those are all on separate manifolds, right? Blue octagons? Green octagons?

Radig – Yes. It is all on separate manifolds.

Glatt – What kind of vapors?

Radig – I don’t think you can differentiate vapors. You would have to completely shut everything down except one manifold for a period of time to test the vapors.

Schwindt – I don’t think they have ever done that.

Glatt – Biorespiration rates if they start to fall off would indicate that and there is less fuel there.

Radig – They have only been doing that in 3 separate areas. Not in every single manifold.

Glatt – So the ultimate endpoint here that we would pick some manifold to shut down.

Radig – If we want to start cutting down expenses.

Schwindt – To me it looks like we could probably look really closely at manifold 1200, 1300; don’t know about all of 1300, and then the 2100, 2200.

Neubauer – So everything north of First Street?

Radig – There’s that one well that has that hot spot.

Schwindt – I just as soon keep that manifold 1400 because we have had stuff on the north side of First Street.

Glatt – What do you have to do to find this, Scott?

Radig – We could look back only at the past 2 years if we wanted to be less conservative.

Glatt – It's starting to identify some areas.

Neubauer – Do you think there have been adequate fluctuations of the groundwater to make it?

Radig – For the past 3 years, it has fluctuated quite a bit.

Neubauer – So we're just not sitting on a dry spell or a wet spell or anything like that?

Radig – We've been through both.

Glatt – Would we be looking at shutting it down, not necessarily totally abandoning it, but shutting down each one?

Radig – That's what I would think we would shut it down for a while and maybe cycle it back on after a period of time just to see what happens.

Glatt – Just to see how the adjacent well systems react.

Schwindt – I would guess that anything north of First in general, has only been vapor extraction.

Radig – Right. Haven't all the wells in the parking lot east of the Iverson building have those been abandoned?

Schwindt – Yes. Those are all done.

Radig – Then way down in the southwest corner 3100. A couple of wells close to there.

Schwindt – Did we ever have much for free-product in that area?

Glatt – Where was that old gas station?

Neubauer – That would be the dark green.

Schwindt – It is in the 3200 area.

Glatt – I'm kind of surprised on 3000 and 3400.

Neubauer – Not much there at all.

Schwindt – The 3400, 12 and whatever the other one was 7 or I guess I don't recall there being much of anything on the one well. The north well, I think, did. I don't remember the south one having much of anything.

Radig – That was about 3 years ago, it had a little bit. So we are on the conservative side on this map.

Glatt -- What would the process be? Let's give it a shot on a couple of those manifolds. I think based on this map you can cut 1200 and 1300 right now.

Radig – And probably the 2200 as well.

Schwindt – I guess what I would like to see is similar to what we did on the 3500 when we looked at that. I think LBG presented all the data for each one of the wells from what I remember. Historical or whatever it is and then they just showed it all. Well 1204 this is the history of the whole thing.

Radig – We have their database and that is basically what we did to make this map we went through the whole history of all these.

Glatt – I think additional documentation would be helpful if we show a graph where it kind of just falls off.

Schwindt – You could put it in a graph form.

Glatt – What data are you going to have?

Radig -- I'm not following what you are saying as falling off.

Glatt – In the beginning part you get the point of diminishing returns you are recovering something, but there is not much there. So what data did we have for the 1200? It is vapor extraction for the whole time.

Radig – Well, they are doing fluid level measurements.

Glatt – But that's not the total remediation.

Schwindt – We don't have any data on vapors at all.

Radig – That's hard to quantify. As a whole system, they can do it, but not in individual areas.

Glatt – Just for a while, they were testing and there was nothing. I was wondering what measurements were for that and now that's dropped off and that shows we are starting to get a change from anaerobic decomposition. So what additional information do we have on these wells other than fluid?

Radig -- That's all we have got.

Schwindt – That's really what we looked at on the 3500 and 3400 series when we looked.

Radig – Right, just the fluid levels. We didn't look at any vapor data.

Glatt – As long as you have all these other systems running, if it starts slipping back to methane you would think you would be drawing it from these other manifolds.

Radig – You will get a certain radius of influence, but I don't think it is going to go all the way. Let's say, you are operating manifold 1400, I don't know if you are going to draw a whole block away from some of those on the 1200 manifold.

Glatt – No.

Schwindt – I guess what I would like to see is all the data points on 3100, 1200, 1300, 21, 22 and 23.

Radig – Actually lay out a graph for each one or just a table.

Schwindt – Just a table showing all the data whatever it is. Glatt agreed.

Radig – It is a humongous spreadsheet. It will just be pages of data tables of each well, the date and fluid measurements.

Glatt – Get all that data first for 1200 and see what it looks like. Based on that, we can tweak the type of data we want.

Radig – Just start with the 1200 for next month? We can do more.

Glatt – You can just send that out. How much work is it to do all of them? If it is a lot of work, just do one of them to see what we are looking for. I don't want you to do all of them and we say that is not quite what we were supposed to do.

Schwindt – I think it is just a matter of going in and selecting the wells and generating the data, right?

Radig – Pretty much--you can do a query which will pick out any wells that exceed or any measurements that exceed whatever number we pick. In this case 0.1 and we could make the spreadsheet and automatically have it highlight the ones that are in excess – every other one is good to go.

Neubauer – Is there a way on the manifold outside city hall you've done the liquid measurements. There is no free-product showing in that stuff?

Radig – Right.

Neubauer – How do you measure the vapor?

Radig – You can't.

Neubauer – Write everything down and see what comes into the main building. You can't stick anything in that manifold and say OK what's coming.

Schwindt – You will probably have to break into the SVE line. You could probably put some kind of sampling tap in there I would guess from where its plumbed from the manifold going back to wherever it goes to the treatment building. You could probably isolate that manifold by physically breaking into that line and putting some kind of sampling tab and then you could analyze the gas from that particular manifold.

Radig – Yes.

Glatt – We could ask LBG, too. At what point would they shut down a manifold because we are thinking there are some manifolds that could be shut down?

Schwindt -- What we used at the Iverson building was just free-product. We didn't go to vapor.

Glatt – Understood.

Neubauer – I guess we could look at that. They would be able to tell us if they have even been operating. I don't think they have much at all. We looked at the MDU bill for this location to see what we got going on there.

Schwindt -- My understanding the way they had been operating the system historically was that they cycled the SVE system between the manifolds. They would run this one for a certain amount of time a couple of hours or whatever then they would switch to this one and then switch to this one and switch to this one. That is my understanding of how they operated the system.

Neubauer -- Something sticks in my mind if they were not getting anything on the north side of Main Street, should we be continually cycling. I don't know if they ever devised a system to not run stuff north of First. I could be wrong.

Schwindt – I don't think they shut any completely down other than the one over here. I think they have continued to cycle the SVE periodically. What that cycle is I don't know.

Radig – For next month's meeting, we should probably get them on a conference call and talk about it.

Schwindt – One of the issues with trying to do vapor analysis now is we don't have anything to compare it to. We have this data that shows 10. Is that high, low or medium or what is it?

Glatt – Didn't we start out with some methane concentrations?

Radig – Not from individual manifolds. Overall, they know that the system is way down from what it used to be. When they started out it was so hot they had to bleed in extra air to get it so the RTO would cook it all off.

Glatt – I guess where I'm going is any additional lines of justification to shutting down the system is helpful. We don't have the gas information, so what are we using for justification other than there is no free-product? It doesn't mean that there are no vapors.

Schwindt – That's true, but I think that Closure Strategy only talks about free-product. And it doesn't say that there is no free-product. It's less than 0.1.

Radig – I guess what I would like to do in the Closure Strategy is none.

Glatt – Yes or as clean as you can get it.

Radig – But if you do have a spot where it is just not disappearing it's kind of just hanging in there it gives that option to go up to a 0.1.

Schwindt – I guess that is why I would like to see the raw data from these so you can

see how often when they were sampled and also whether there was anything showing up. I think visually like this it helps you kind of organize. It does for me. It helps me organize my thoughts a little bit more about this manifold.

Radig – That's why we wanted to make it into a map instead of just having a big sheet because in the database the extraction wells are easy to identify because they are all identified by numbers, like 1300, 2100 or whatever, but the monitoring wells all have weird names like BK7W4 so you can't just look at a table and say well where the heck is that? So that is why we had to put it on a map.

Schwindt – We appreciate that. This is helpful for me. But like I said before we actually say OK let's do away with the manifold, I would like to look at the raw data similar to what we did over at 3500.

Glatt – You were looking at 1200; 1300?

Schwindt – 2100 and 2200 and maybe 3100 and 2300.

Radig – 2400 doesn't have anything either. The yellow ones in the middle is where that clay plug area is.

Neubauer – Interesting, do you know where Starion is? Is it in the southeast corner where they found that stinky stuff?

Schwindt – More in the center of the building a little toward the south end and then the north end, kind of more in the middle of the building.

Glatt – Clay is not going to remediate as well.

Schwindt – If you want to include 2400 that's fine, but I guess to me I would like to look at the fringes to begin with.

Glatt – That will be a good start. It's about one-third of the system.

Radig – Should I call Brad [Peschong] or Ken to see if they want to sit in on a discussion next month?

Schwindt – Let's look at the data first.

Radig – OK.

Schwindt -- If you want to go ahead and see if they would be available, I don't have a problem with that.

Neubauer – If the data raises some red flags or something like that.

Schwindt – I guess I can try to contact Rusty Krikava to see how they have been operating the system and send an email or something to you guys too. Then you will have that as a background.

Glatt – Is there any geological reason why we are seeing…in these wells over here and

clay… in here? Why we are seeing free-product over in this area? For the most part, it is getting fairly clean down here.

Neubauer – There was an old oxbow.

Radig – There was that old curve.

Glatt – At MW12?

Schwindt – I didn't realize that there was—of course that being a monitoring well that one normally isn't reported to us, I suppose.

Radig – It would be included on their maps, but we haven't normally gotten a table of their readings every quarter. Let's see what their map shows for the last one.

Schwindt – I remember the one on the south side of the building rather than that particular well. Here's one from Oct. 2007 and it shows red in that area, red on the southeast corner of the LEC there is some free-product.

Glatt/Radig – Can't be much.

Neubauer – These maps coincide pretty well.

Schwindt – Here is December-November of 2011 showing the same spot.

Glatt – At the end of the day there may be some free-product in there we can't get rid of.

Schwindt – These are historically—it still shows the same areas. We can go all the way back from when we first started. This is early 2011. This graph is only through January 2010 (groundwater). That would have been in 2011 when it went up, right?

Radig – It started to go back up.

Schwindt – We reached basically the same height up here, I think? It must have gotten pretty close up there. And now we are back here.

Glatt – It would be nice to see how they are operating the drain tile system at the LEC. I would actually like to see the water come up again to see how well that works.

Neubauer – Test it again.

Glatt – Buildings that were a problem when we had the gross contamination have either been torn down or remediated--the Furniture First lot.

Radig – The Berube building has the ventilation system installed.

Glatt – It had more gasoline. It was more benzene.

Schwindt – I don't remember that.

Glatt – They have been taken care of so if the water table would come up even with 0.1

of a foot under it should seem to help. It definitely has changed, which is a good thing. Does anybody talk about it anymore other than us sitting here once a month?

Neubauer – No. At this point, it is extremely quiet other than the Starion call when they called 3 or 4 months ago. Other than that we don't hear.

Schwindt – And they really didn't have any issue in the bank itself, it was just that once they got into the soil below the lower level of the concrete.

Glatt – They had some issues at one time too.

Neubauer – Either with smell or those kinds of contaminants.

Glatt – It wasn't so much diesel fuel, it was more solvents.

Neubauer – But now have not heard.

Schwindt – What about the city commission? Any interest on their part at all?

Neubauer -- There are not only city there is other public that want to know how much money may be available after remedidation is done.

Glatt – That's going to come up again as soon as we start shutting down parts. We can concentrate on those couple of areas and have the others shut down and feel comfortable that nothing comes back.

Schwindt – If we start closing down parts of the system that will reduce some of our cost so there are fewer areas to maintain (electrical, water…). That might give us a spare pump or two on the vacuum system. I don't think we are at the point where we can start closing down some of the remediation buildings. We are still getting stuff over at the fire hall. It's going to take a while.

Schwindt – I haven't talked to anybody about the system whether there are any issues.

Neubauer – Did Chief Nardello talk to you about relocating the warning siren that sits on top of the fire station between the pole and the remediation yard or somewhere on the main building by the tracks? So I asked him to call LBG if where they were looking was going to be an issue. They didn't see an issue with that so more electrical.

Radig – Why would they move that?

Neubauer – Because when that big siren rotates and does its thing on top of the fire station, it jiggles everything and that is not such a good thing. The parapet on top—it's not good to have that vibration on top. We moved it. I think it used to be on 2 poles on the back of the fire station. We got rid of the poles and put it on top of the parapet. Because we have an opportunity to move that, we would like to get it off of there and save the parapet. We will get better coverage too because Library Square I is right there and it hits that so if we can move it off a little bit, it will wake up the new American Bank Center folks.

No further business.

Next Meeting. May 14, 2013 at 10:00 a.m.

Adjourn Meeting. Glatt moved to adjourn at 10:58 a.m.; second by Schwindt. All ayes. Motion carried.