

NEWTON GRAVEL PIT MINUTES

CITY OF MANITOWOC/DNR

March 11, 2015

Present: Dave Henderson – AECOM
Dan Koski, Kathleen McDaniel, Greg Minikel, Karen Dorow – City of Manitowoc
Tauren Beggs and Liz Heinen – WDNR

Action Items from Meeting:

- T. Beggs and D. Henderson will work out the exact locations of the two DNR required well nests. One will be located between the two lobes that will help with vertical delineation and potential delineation of the southern lobe. One will be located in the area of 35th and Viebahn to delineate the northern lobe. A third set of well nests could be placed at the City's discretion around the area of CTH CR and Viebahn to help in determining if there could be a second potential responsible party.
- Once well nest locations are determined, D. Henderson will collaborate with T. Beggs and put together a table of outcomes of well nest testing results and what they will mean.
- T. Beggs will review the suggested work plan for potable well testing moving forward and will advise on whether he agrees or if revisions need to be discussed. (See #3)
- T. Beggs will provide a letter to the City with DNR expected requirements moving forward so that the City and AECOM can begin planning the scope of work for 2015.
- T. Beggs will request D. Johnson attend our next team meeting.
- **Next meeting is scheduled for April 10, 2015 at 9:30 a.m. T. Beggs and L. Heinen requested to attend in person.**

Minutes:

1. 3504 CTH CR – Priority IAC Update
 - Mr. R. Bruenig had requested an agreement for work to be done at 3504 CTH CR. The City drafted an agreement and Mr. Bruenig refused to sign it. Mr. Bruenig has decided he would just like a work schedule of what will be done with dates. K. Dorow has reached out to Groundsource for a schedule. We will move forward with the work when a schedule is available.
2. 3403 CTH CR (Schnuelle) & 3023 CTH CR (Eberhardt) – Well house update
 - D. Koski had contacted a local carpenter work with the property owners to develop plans for the work. 3403 CTH CR was estimated at \$625 and 3023 CTH CR was estimated at \$5,000. It was too late in the year to get done. D. Koski is contacting the carpenter to get something more reasonable for 3023 CTH CR. He should have that information shortly. Well house will be for frost protection only - no overflow. L. Heinen was okay with this plan.
3. Work plan discussion for long term potable well testing, period and frequency of testing
 - We are done with the current work plan scheduled with the completion of the 4th quarter testing done in February 2015. D. Henderson suggested the following as a work plan for potable well testing moving forward:

- In terms of a long term sampling plan - annual sampling would be done for target zone wells. Every five (5) years sampling of sentinel zone wells. Any wells that have been replaced and tested clean become sentinel wells which will be sampled every five (5) years. Twenty-six (26) wells in the target zone would have annual testing and sixty-three (63) – includes target and sentinel - would have testing every five (5) years. That number may change depending on the northern area lobe if an additional RP is identified. T. Beggs will take that suggestion and look at it and get back to us. Discussion may come down to target zone wells. Sentinel should be ok.

4. Latest well testing results

- Nothing has really changed in the 4th quarter testing. There are a couple of cis detects that come and go. VC detect at 3504 CTH CR is back but below ES. This well is the one being replaced this spring.

5. DNR proposed special well casing area – regional deed restriction

- L. Heinen reported that the DNR is looking at placing a special well casing mandate in the area outlined on the map sent to City yesterday. Anyone within the special casing area would be required to construct the well with the new requirements from this point forward. Existing wells that have not been impacted will not be affected by this mandate. Letters will be sent to well drillers with the new requirements. There is no deed restriction - Well drillers are required to check for this before the well is drilled. In the past no other notifications would be given. The DNR would like to try something new. They would be mailing letters to property owners about the requirement and L. Heinen would like to meet with the town of Newton management to discuss why this is being done. There is a potential that this could go into the Town of Manitowoc and she would like to meet with them as well if this happens. L. Heinen will hear on Friday from her department about moving forward with the special casing requirement. There would be no public meeting on the topic at this point. Usually the DNR just does the special casing requirement and does not communicate with property owners or townships. This time via a letter they would change it up and give property owners and townships notification. K. McDaniel stated it makes sense to do this but our concern is the wording in the letter feeling that it implies that they are being required to replace their well. L. Heinen said that this is just for replacement or new wells, not for existing clean wells. Property owners will not be required to replace their clean wells. K. McDaniel discussed the cost increases for the well replacement and property owners expecting the city to pay for their new well or at least the difference. The DNR would not step in to make us pay for the well or for the difference in cost. The property owner could file a civil suit if the property owner feels the city should pay for a portion.
- D. Henderson had some questions about the area identified. In general special well casing area will help us get to closure. Map was reviewed and the western, southern and eastern limits were agreed upon. There was a question as to why city limits were included on the map. K. McDaniel stated we have an ordinance that wells cannot be drilled within the city limits. L. Heinen stated that the City does not have the authority to restrict well construction on parcels within the city limits. Within the city limits the only authority that can restrict well drilling is the DNR. It is her understanding that we cannot preclude anyone from putting a well within the city limits. We can require them to obtain a permit. That is why the city parcels are included in the restricted area. L. Heinen will work with Wendy Anderson or DNR engineer who works with water to get clarification on this point. In addition, the extent was not defined to the north and that is why the city

limits area was included. This is a question that will need to be answered before the special casing area is finalized. After considerable discussion it was decided to let the area stand as is. More than likely if a property owner wanted to put in a well for lawn watering it would be cost prohibitive anyway. L. Heinen will get clarification on her end regarding a municipality precluding a property owner from drilling a well and will pass on to the team.

- K. McDaniel requested review of the letter and giving comments back to the DNR. We would like to find a way to incorporate the DNR mandates with some of our requested changes.
6. DNR questions on permitted and private wells within City limits and in the Town of Manitowoc
- L. Heinen expressed concern about potable wells within the city limits that are in the target areas which we have not addressed. K. McDaniel stated she had done research on that early last year and there are no wells within the city limits in the target areas identified. There are currently 34 permitted wells within the city. K. McDaniel forwarded a current listing of all of the private wells that are permitted within the city limits to the team at the meeting. Permits come through Building Inspection and are kept on record in the Clerk's Office.
 - L. Heinen was also concerned about potable wells beyond Orchard Lane in the Town of Manitowoc. Do we have permitted wells within the area? T. Beggs and D. Henderson reviewed the map and discussed the potable well testing extent to the east and that we have determined the extent is ending at Orchard Lane. T. Beggs stated at this point we are not concerned about wells beyond Orchard Lane that may be in the Town of Manitowoc.
7. Peer memo discussion
- D. Henderson stated that the City feels that we are done with delineation. We have completed the 4th quarter testing with the exception of 3911 Blackhawk Ct. which is tentatively scheduled for April and he is working on reports. We need to discuss and determine potable well testing for the future; decisions need to be made about additional delineation and a pathway to remedial action.
 - T. Beggs stated that he looked to a more experienced peer to review the gravel pit. T. Beggs gave P. Collins all the information to review, it is a process they do.
 - T. Beggs stated he feels we will need to hit remedial action this year.
 - D. Henderson asked about additional horizontal and vertical delineation and new source questions.
 - P. Collins talked about doing additional transects in the delineation of potable well impacts. Potable well information does not delineate vertically. The team reviewed an AECOM map showing lobes within the target and sentinel zones. D. Henderson feels that this delineation shows a probable second source. City is uncertain about the northern area contamination based on the map. It was agreed that a transect on the west side of I43 will give us better vertical and horizontal delineation. The peer memo suggested that the City should place 4 well nests with 3 to 4 wells in each nest, which would cost the City about \$80,000 to \$100,000 and we are not sure we see value in that for the additional delineation. Two of the contaminated wells were in a gravel aquifer. The City is not sure if and how contamination from the gravel pit site could reach those wells based upon estimated travel times. The City is doing additional property ownership research to get more information about well depths in the area. This comes down to an

economic discussion. For the wells on Viebahn, the City may want to bring in watermain for those properties. It is estimated to be approximately \$300 - 350K for watermain installation. Who will pay for watermain if there is a second source and who will pay for investigation for potential second source to the north? The City team is having a meeting on Monday with Committee of the Whole to discuss the issue. Additionally, annexing into the City needs to be discussed. D. Henderson agreed that delineation to identify a second source area may be a good idea. T. Beggs stated that we will need to have a well nest to the northeast of Viebahn to see where the plume ends. D. Henderson stated that we are assuming groundwater flow on the north plume goes the same direction as the southern lobe. T. Beggs stated we have no information that confirms that. For site investigation purposes the DNR needs the extent defined. In terms of groundwater impact we don't know where it ends to the north.

- D. Henderson still has delineation questions and questions about a second source for the northern lobe. Our plume does not get into bedrock for about 80 acres. What is source for northern area hits? The City does not want to pay for additional investigation or for watermain if there is another source for the contamination to the north. We are assuming there is another source but we do not have the proof yet. Is there a partnership for additional investigation with DNR? T. Beggs stated from a DNR regulatory standpoint they have an RP so as far as funding there won't be anything from them.
- D. Henderson asked what additional investigation will get us to a second RP for the northern lobe area. How do we make the dotted line solid or disappear without the City spending \$100,000+. Is there potential for a well nest on County land by snowmobile bridge? T. Beggs feels that the spot by snowmobile bridge is too far north. We would really need three wells to give us additional information on gradients. This would be 9 -12 wells in the \$50,000+ range. We would need to decide three or four wells in each nest. If we choose to do additional investigation on the Viebahn area it is out of our pocket. The team felt we should do it technically so it either separates us or defines the plume for us. It was determined that three wells in a nest rather than 4 would probably be ok at this point. This is a conversation we will need to have with elected officials. The DNR will be requiring one well nest across north of Viebahn, west of 35th St. for delineation to the north and one between the two lobes near I43 for vertical delineation and separation between the two lobes and the one northwest would be the city discretion. Two well nests will be required and a third to tie it off. D. Henderson will put together a listing of what will happen if the well nests come back clean or not what it means. T. Beggs wants to take this back to P. Collins for his recommendation on what we plan to do. D. Koski says hi to P. Collins.
- No additional delineation needed to the south. Mr. Bruenig owns the land in the area where the monitoring well should go. Is it possible to get the DOT to allow us to put a well nest on DOT ROW near I43?
- Contamination is likely coming from bedrock and not sand and gravel. How are the two shallow wells in the center of the map explained? D. Johnson of the DNR central office in Madison looked at this data. He has mentioned the middle wells in sand and has a theory of what is going on. If we would like him to attend, T. Beggs would need to formally request it. T. Beggs will request that he come to the next meeting.

- To recap, we have delineated the south eastern limits. T. Beggs will work on a pathway forward and a decision tree. T. Beggs will keep L. Heinen in the loop as he has been doing. That way we can move ahead.
 - Page 2 of the memo discusses more aggressive remediation than what we have heard in the past. The City had approval for the source area capping (PCB's). In terms of going forward what will DNR want to see? T. Beggs felt aggressive remediation would be required. The City is at a point where they need to look at budgeting and writing a proposal for the work expected to be done in 2015. What is the proposal for the work? What is the DNR going to require? T. Beggs thoughts are offsite source remediation at the corner of T. Roberts property. P. Collins looked at the data and the highest area is on his property. It appears that the slug has come moved from the source to T. Robert's property and that is the new slug area. D. Henderson argued that it is a new source. D. Johnson has an explanation for that. T. Beggs asked if any free product recovery had been done yet. D. Henderson stated that minimal free product recovery had been done. T. Beggs stated a proposal should come from us and he would review it. The City feels we need direction from the DNR on what they are going to require for scope in order to provide the proposal they are looking for. Will the DNR require capping, mass reduction, groundwater treatment on or off site. Discussion about SVE as a popular method to get VC's out ensued. D. Henderson stated that different masses were dumped so we would need to characterize the mix of product. Capping will probably be required depending upon what is removed. If it is all dug out and hauled offsite potentially no cap would be required. Groundwater pump and treat for plume containment may be an option but there may be other answers with less long term maintenance. Looking to use sustainable energy, wind mills, siphoning with low energy pump and treat. T. Beggs indicated that treatment needs to be more aggressive with well replacement than with municipal water. Treatment would expect mass reduction, PCB's, LNAPL, groundwater treatments on and off site, capping. The city is requesting a written definition of what will be required to develop the scope of work moving forward and to present to Council as we ask for additional funds moving forward. The City would like some assurance that what we are spending money on is not a moving target.
 - Sentence in memo that was difficult for the City was, "Remedial cleanup goal would not be as strict if municipal water was used." The City talked with the DNR about this \$2.5 million option. At no point did the DNR mention that remediation requirements would be different if the City ran municipal water. The City did a budget estimate and cost wise it was more effective with wells. If the City would have known there was more favorable remediation options with municipal water it may have changed the decision. Closure conditions may have been worth the \$1,000,000 extra. When the City gets to negotiating what closure requirements will be this issue will need to be discussed. Keep in mind how that impacts the City in the future moving forward.
8. Discussion on additional delineation
 - Discussed above.
 9. Discussion on new source investigation (Viebahn area) – DNR assistance
 - Discussed above
 10. Remedial pathway for 2015
 - Discussed above
 11. Short form GIS information packet for BRRTS site

- T. Beggs has an internal memo that highlights what he needs to do for this. He will hold onto it until we have an approved remedial action plan and then will all go out on GIS.

12. Other topics

- T. Beggs asked if there has been discussion with the other causers from the gravel pit? K. McDaniel updated that she had a preliminary discussion last week with The Manitowoc Company. They are in the midst of reorganization. She is planning outreach to the companies that are still around. She also had a conversation with the former City Attorney from 1977 – 1994, P. Willis. Part of his recollection was they thought they would be closing the site in 1992 – 1994 time frame. The plan was to remediate, cap and close.

13. Schedule the next meeting

- Next meeting is scheduled for April 10, 2015 at 9:30 a.m. T. Beggs and L. Heinen requested to attend in person.