

**Minutes of the Special Called Meeting
Of the Board of Mayor and Aldermen
Of the Town of Thompson's Station, Tennessee
March 27, 2012**

Call to Order:

The Special Called Meeting of the Board of Mayor and Aldermen of the Town of Thompson's Station was called to order at 6:00 p.m. on the 27th day of March, 2012, at the Thompson's Station Community Center with the required quorum. Members and staff in attendance were: Corey Napier, Mayor; Ron Barrett, Alderman; Sarah Benson, Alderman; Nina Cooper, Alderman; Brinton Davis, Alderman; Greg Langeliers, Town Administrator; Doug Goetsch, Town Recorder; Todd Moore, Town Attorney; Richard King, Building Codes Official; and Wendy Deats, Town Planner. The meeting was advertised in the March 23, 2012 edition of the *Tennessean* Newspaper, on the Town's website, and postings around Town.

Pledge of Allegiance.

Minutes:

The minutes of the March 13, 2012 meeting were previously submitted. Alderman Cooper made a motion to accept the minutes as submitted. Alderman Barrett seconded the motion and the minutes were unanimously approved.

Announcements:

There were no announcements.

Discussion and Consideration of a Plan of Action for the Repair of Cell #2 of the Town's Regional Wastewater Treatment Plant, Including Board Review of the Town's Consultant's Agreement, Report and Recommendations, and the Solicitation of Bids for the Project Components:

Mayor Napier provided the Board with some background and history of the problems with Cell #2 of the Regional Wastewater Plant.

Investigation:

Bruce Meyer with Sheaffer Wastewater Solutions LLC provided the Board with a timeline of the investigation of the liner failure of Cell #2. The initial problem was noticed in late April, 2010. Consultants examined the liner in June, 2010 and found problems with liner welds and clay condition around the hole in the liner. In June, 2011 the area under the hole in the liner was excavated and groundwater pumped out of the opening. In August, 2011 the aerators and piping in Cell #2 were removed and the bottom clay was tested in several areas and found to be moderately well-compacted. In October, 2011 several groundwater monitoring wells were installed and the groundwater data was collected over a four-month period and analyzed by BDY Environmental LLC..

Summary of Field Work, Reports and Observations:

Mr. Meyer stated that there has not been a definitive cause found that explains how the hole in the liner developed. Early on, it was thought that groundwater fluctuations had caused the clay sub-liner

to be washed away exposing the liner to rocks, causing the hole. Further investigation suggested that leaks from the liner welds were more significant in this process, although groundwater was also a concern. Except for the area around the hole, the clay sub-liner seemed to be in good condition. Since June, 2010, the water level in Cell #2 has not been more than two feet above the bottom of the cell. Additional testing and examinations were done by consultants, contractors and liner suppliers. A third-party engineering firm, Littlejohn Engineering Associates, then reviewed the reports and concurred with the decision to leave the bottom of Cell #2 at its existing level.

Mr. David Jackson with BDY Environmental provided the Board with an analysis of the groundwater monitoring results. BDY concluded that:

1. Water table fluctuations in the Cell #2 vicinity are within an expected range for that site's hydrologic setting and do not appear to be of sufficient scale to have caused a failure of the Cell #2 liner.
2. When Cell #2 is empty or near-empty, groundwater enters via the excavated pit and likely along the top of shallow bedrock exposed in the western wall of the cell, near the pit.
3. The elevation of the water table at times sinks below the bottom of Cell #2, depriving it of support from the hydrostatic support it provides. When the cell is holding wastewater the absence of this support could cause the liner to herniate into a void and rupture.

Conclusion of the Investigating Team:

Mr. Meyer stated that it was the conclusion of the investigating team that:

1. Repair Cell #2 by repairing the clay sub-liner, install an upgraded synthetic liner system with upgrades to the air supply system and install an internal baffle.
2. Can not justify raising the bottom of the cell, which would substantially increase the cost of the repair as well as cause the loss of treatment capacity.

Proposed Cell #2 Repairs:

Mr. Meyer outlined the repairs that are being proposed:

1. Remove the existing liner on the bottom of Cell #2 as well as approx. 15 feet of side slope.
2. Repair and fill the original hole.
3. Inspect the exposed bottom and side slope clay and compact as necessary.
4. Re-grade the upper berm, install new influent line and ensure proper top seal.
5. Install a new liner system (Fabri-Net and a 60 mil. HDPE liner).
6. Reinstall aerators and install additional aeration laterals.
7. Install an internal floating baffle to divide Cell #2 into two treatment zones.
8. Final inspection and conductivity test of the liner.
9. Fill Cell #2 to minimum working volume using Cell #1 effluent.
10. Cell #2 is now operational.

Proposed 2012 Repair Schedule:

April – mid-May:	Engineering plans and specifications, bid packages and TDEC submittal.
May – June:	Bidding and contractor selection.
July – August	Start construction and earthwork completion.
September	Liner installation
October	Aeration and baffle installation.
November	Final testing and begin filling Cell #2

Mr. Meyer anticipated that this will require three bids: earthwork, liner installation and aeration installation.

Mr. Meyer identified some “keys to the game” for a successful project.

1. Fast start – get started on the engineering, drawings and bid packages right away.
2. The right team – right experience and project management help.
3. Quality control and testing during contraction.
4. Funding available when needed.

Questions from the Board:

Alderman Cooper asked if the existing liner could be repaired versus replaced. Mr. Meyer replied that there are too many issues with the liner welds to be confident of continuing its use, as well as current recommendations are to use a thicker liner than the existing liner.

Mayor Napier asked about the comparative costs of this repair approach versus the idea of filling the bottom of the cell. Mr. Meyer estimated a cost of this plan to be as much as \$750,000 and the plan to fill the bottom to be substantially higher. Additional discussion followed on the utilization or disposal of the old liner.

Alderman Benson asked whether water could be channeled under the liner to mitigate the groundwater issue. Mr. Meyer stated that the underliner would allow for some air or water to flow between the liner and the clay sub-liner, but a separate drain system under the liner was not being considered at this time. Mr. Langeliers stated that the initial response by TDEC to the idea of a drain system was not favorable.

Alderman Cooper asked whether the new liner had to be against the clay or could it be against the old liner. Mr. Meyer responded that the new liner could be against the old liner or the clay.

Alderman Davis asked what the liner warranty would be for the new liner. Mr. Meyer replied that the liner was warranted for five years and the installer workmanship usually was warranted for one to two years. Additional discussion followed on how to test the liner and the clay compaction, including the possible use of ground-penetrating radar to look for voids.

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Mayor Napier stated that initially it was suggested that it may be necessary to fill the bottom of Cell #2 above the highest groundwater level because it was believed that might be the likely cause of the liner failure. Since then, additional evidence seems to indicate that groundwater fluctuation may not be the cause. Mr. Meyer explained that the groundwater monitoring wells had provided data that led the team to conclude that filling the bottom was not necessary. Mr. Langeliers stated that the evidence indicated that the large additional cost to fill the bottom could not be justified.

Alderman Benson asked for an explanation of the use of the baffle. Mr. Meyer stated that the baffle divides Cell #2 into two treatment areas, with treated water being moved from the one side of the baffle to the other side as the cell was filled.

Alderman Cooper asked about how bids would be solicited. Mr. Meyer stated that bid packages would be prepared and advertised for bid. The Town is in charge of the bid process and hope to get four or five bids. He has spoken to design engineers, but one has not been selected yet.

Planning Commissioner George Ross asked Mr. Langeliers whether there a possibility to pursue recourse against the original liner installation for the faulty welds. Mr. Langeliers replied that at one time the liner installer indicated a possible willingness to assist in the repairs and it might be possible that they could be part of the repair process.

Motion and Vote of the Board:

Alderman Benson made a motion to direct Staff to proceed with repairs to Cell #2 according to the recommendations of the investigating team. Alderman Davis seconded the motion and it was unanimously adopted.

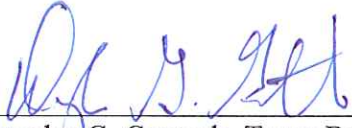
Community Input and Concerns:

No one came forward to speak.

There being no further business, the meeting was adjourned at 7:00 p.m.



Corey Napier, Mayor

Attest: 

Douglas G. Goetsch, Town Recorder