

CHEROKEE NATION ENVIRONMENTAL PROTECTION COMMISSION
Cherokee Nation Environmental Protection Office
206 E. Allen Road, Tahlequah, OK
March 5, 2009

PRESENT:

Commissioner: Mark Green via phone
Commissioner: Ed Fite
Commissioner: Marty Matlock via phone

STAFF AND GUESTS:

Nancy John, CNEP
Tom Elkins, CNEP
Roger Fields, CNE
Dena Geib, CNB
John Freise, CNEP
Bob Murray, CNWM Contractor
Nathan Moton, Guest
Jack Crittenden, Guest
Joe Crittenden, Tribal Councilor, Dist. 2
Doug Bane, CNWM
Laura Adair, CNEP

1. Commissioner Fite called the meeting to order at 9:30 A.M.
2. Commissioner Fite acknowledged and placed into the record the Record of Public Notice and meeting attendance.
3. Vote to amend/approve minutes was tabled until the next regular meeting.
4. Public Comment – must be relevant to the Cherokee Nation landfill or landfill floor design

Mr. Moton, concerned citizen, inquired about digging on the west side and “stuff” running out and off the hill. Mr. Bane asked if he was referring to the shale excavation, and Mr. Moton agreed. Mr. Bane responded by stating that it may be rain water and additional erosion control had been placed in that outfall. A rock dam with filter cloth has been built and run off should only be from excavation with watering done for dust control. Mr. Moton inquired if digging was taking place on the east side. Mr. Bane responded that they are putting material on the slope of the old cell as part of the construction project in addition to re-vegetating that area. Commissioner Fite inquired if the material being land applied is borrowed material from the new cell and Mr. Bane confirmed that it was shale from the excavation area.

Commissioner Fite stated that the special meeting today was to talk about an issue where it was determined that there is a void area for the liner and the staff opted for a special meeting to get input from the Commission. It is anticipated that an EPC meeting will be held soon at the landfill in anticipation of the re-opening of the landfill. Commissioner Fite asked Mr. Moton to continue to attend the EPC meetings to bring information from a stake holder’s position to the Commission so that the full Commission is aware of the thoughts of the “neighborhood”.

5. Cherokee Nation Sanitary Landfill
 - a. Liner Tie-in Discussion

1. Liner Tie-in Plan – Mr. Elkins summarized how new cell construction was going to tie-in with the older one. As part of the construction activities, excavation revealed an issue with previous construction activities that took place 3-4 years ago. A solution to the problem has been developed through engineering design and is being presented to the Commission for approval.

Mr. Murray, CNWM Engineer, provided a visual presentation to the Commissioners and meeting attendees. Images were compiled from digital terrain models and merged with original aerial topographic surveys to create a reflection of the condition of the site when construction began. Mr. Murray described the Pre-Subtitle D landfill location and the tie-in location. The next image was described as a composite model of all the certified quality assurance reports of what was supposed to have been built. In the foreground, looking down a slope, those were the benches that were built in two successive efforts. The lower area, the darkest gray, is the subtitle D sump and the first three ridges are the old original subtitle D. There would have been pipes extended up those ridges in sand packs. In the background it rises up the hill and that is where the liner was built up the side of the old pre subtitle D and was referred to as the tie-in cell. All designs were based on this information in terms of what the CQA people specified as having been constructed. CQA inspectors will go out to the field and physically survey certain aspects of the constructed liners. They use that information to build their reported model. There is a bump noted on the left hand side of cell 3 where it ties into the left hand side of the tie-in cell. This is not the way it was reported but it is the way it was built. About the first 15-17 feet of that coming in was not tied together. Evidently there was some type of construction access issue, they may have decided to come back and weld that, they reported that they did, but they didn't.

Commissioner Fite asked who "they" were. Mr. Murray stated the CQA, A & M Engineering stated that it had been welded, but it had not. Commissioner Fite asked if there was a possibility that the weld could have broke? Mr. Murray stated, I don't think so, there's a physical separation between the two liners. They were supposed to come in and physically put a piece between the two. Commissioner Fite asked if an engineer had certified that it had been welded? Mr. Murray stated yes. I think the Nation was going in good faith on the consultants that they had retained to do everything. This would have been prior to ICI taking over. This tie-in cell was constructed in 2005.

Mr. Bane stated that the cell was finished after ICI took over but it was started prior to and completed afterwards. The Nation was building it and A & M built it for the Nation. Commissioner Fite asked if A & M was responsible to the Cherokee Nation and not Gary Pitchlynn. Mr. Bane stated that was correct. Commissioner Fite asked, so Gary is not responsible, Mr. Bane said no.

Ms. Geib interjected that she has had a conversation with A & M, taken them to the site, they contest that this certified liner is where it should have stopped and we should have know that there was a "v" there. They do contest this and we're all still discussing this. Commissioner Fite asked again, whether there is a document that says, that A & M says it was welded and certified it was welded? Ms. Geib stated that the document they have provided shows a plat of liners. This is piece of number 78 on that plat and it says, welded to 77, 76 on these dates and times. It does not show on that plat where it was welded to the existing cell and that's what you're seeing there. Commissioner Fite said that he is trying to discern, whether he was hearing if A & M said it has been welded. Ms. Geib said that they did certify the liners without variance. Mr. Murray stated, that there are guys in the field looking at the weld patterns and a subcontractor that's actually going in there and cutting the sheets and placing them and like putting together a puzzle and welding. I think what happened, the subcontractor sheets probably show, "no, I didn't", but the way the language in the report reads, and certainly all the information I was furnished, shows it is continuous, no disconnect. The CQA report, the way most people would interpret it, is to say we have a continuous liner here, put the waste to it. In reference to the Cherokee Nation operated and/ or ICI operated waste placement efforts, I think they placed waste over an area in good faith. I designed something to connect to it, in good faith, based on... Commissioner Fite asked Mr. Murray if he thought there was a liner there based on his professional judgment. Mr. Murray said they sent me electronic files that showed it that way. Mr.

Murray stated they sent him drawings with big bold lines showing limits of pre subtitle D in these two areas and they connected. Commissioner Fite stated “that’s all I need”.

Commissioner Matlock requested the next formal EPC meeting to have an agenda item on how the landfill and Cherokee Nation are continuing to resolve the obvious conflict in the design implementations historically. Before that meeting, he requests a strategy from the landfill on how they are planning on moving forward.

Commissioner Green asked what damage have we done as a result of this, obviously we didn’t know and we were operating in good faith, but nevertheless, it was not connected. What does it cost to fix it in addition to do this work we’re doing anyway and do we have any obligations to report to this to EPA or whoever, and what is the responsibility of the contractor that didn’t do what he said he did? Those are issues that the Cherokee Nation and the legal department need to be considering.

Mr. Murray responded by stating that they were working on that and he has images of the recommended fix. Referring to the picture Design Cell 3 and 4 of his presentation, Mr. Murray described the area where cell 3 would be extended. This was an area of liner that was approved by the EPC back during the ICI tenure and it was originally intended to be a stop gap until we could get some other things approved. The troughs (in the referenced 3 areas) were going to tie on to the existing cell 3 as constructed by A & M. The tie-in was designed based on construction data furnished by A & M Engineering.

Mr. Murray continued by stating as the area was exhumed down to the sub-grade, that’s when we found the liners and the gap in between that wasn’t supposed to be there based on the information that we had. Commissioner Fite asked how big was the gap? Mr. Murray replied that it was about 20 feet long, starts off at about 8 feet by 8 feet and then goes twenty feet to nothing. This is the high point of these two liner systems, there was no liquid. There was no staining of the soil in the area. We were very fortunate that it was on the high points. There is no evidence of any leachate. There was no liquid leaking out of the garbage at the time. So, basically my conclusion is there has been no real environmental issue there because you would be able to tell it since it got exposed. The dirt did not even smell bad but we have not picked up any monitoring results either. I don’t think we are going to have any problem. We could explain this situation to Dr. Eric Adidas with EPA and he would draw the same conclusion as I did in my memo to you. It’s terrible it got this far but we’re very fortunate that there is no apparent environment damages as a result but we need to fix it.

Ms. Geib interjected that her first thought from a legal perspective, was, how do we know there is welding under there? So, we had the personnel from the landfill go back and cut into the waste mass to the point where we were sure it was welded at that point. We found the welds and where they stopped. Mr. Elkins stated that he was on sight then and asked Mr. Bane to define the whole scope of the area because we wanted to know what to present here. Commissioner Fite asked how far he went in, 10-15 feet? Ms. Geib stated about 15 feet. Mr. Murray stated that they were simultaneously excavating to find the leachate collection pipes that we would have been connecting to at these 3 troughs (referenced in the visual presentation). We excavated into the waste to the point where the survey location said they were and they weren’t there. I know from looking at some aerial pictures that they were put in. We know they are there. Where they show them in their as constructed record is not correct. It was at this point we stopped and decided that we needed to come up with an alternate solution. Since we’ve already got this area on left hand side (referenced in the visual presentation), where you see the little berm and the herringbone directed in and out of the page, we’ve got a sump that is being constructed there for a collection of leachate. We don’t have to tie-in that direction or expose the old cell 3 pipes and have the potential of damaging the liner systems. Go to picture, Revised Cell 3 and 4 (referenced in the visual presentation), this is doing it right by putting it all on one plane. The far right side you can see a slope going back up and across the top of it. The contractor shot the limits of HDPE liner, I then took the plane of the floor. I designed for the balance of the subtitle D that is going to go right to left as we continue to build the landfill. I

projected that plane on out to the right on a 1-2% and projected down on a 4 to 1, intersected it and designed it this way. Now we have one plane, one floor, it's all going to a sump that is newly constructed. We're going to repair the liner system and connect to it and not try to tie onto anything that is old, as far as leachate. We're tying the HDPE liner systems, making sure we've got positive drainage from all points to where it's going to a leachate collection system. This is my recommendation. This is the safe approach in my opinion. I've submitted drawings to Mr. Elkins.

Mr. Elkins stated that we were going into both subjects on the agenda. This seems like a better plan to begin with. The plan already called for a sump at the other end, why not make it a little bigger and run all the leachate this way? The real issue is that it is a modification of the plan that had to go through the EPC. Mr. Elkins stated that he thought it was a better plan. The real issue today is identifying that there was an issue with the other liner and to show how it can be fixed and fixed well.

Ms. Geib stated although they are moving the leachate to the left, we're still wanting to remediate the pond on the right side. It may require a small tank to hold the leachate. That would be the only change. We're still planning to get rid of the pond.

Mr. Murray stated that the original assumption was done by Teracon. The original engineers had all the leachate being stored at the SE corner of the landfill. Modern landfill practice is you really want to store your leachate up by the gate somewhere where the truck that comes to get it doesn't penetrate very far into the site. The direction I was trying to take the landfill design moves us in that direction. In successive meetings we can downsize the storage we need for cell 3, close out the old leachate pond which we are committed to do, place a sump and small storage vessel there and ultimately come back in and install a pump system that will pick up all leachate sumps and direct them to a central storage location up at the front of the landfill. I did not send you a file of the actual fix. What we have in the area where the liner panel is missing, we go in take away any waste that has fallen off the slopes since we exhumed it. We'll have nice clean ground, backfill that so there is a straight plane between the soil, come back and place a GCL system, a mat of sodium bentonite that is equivalent to a two foot clay liner. Lay that across the two HDPE liners that you're connecting and come back in with a 60 mil HDPE liner and weld that. It will be extrudate weld to those two locations. It will be a cut panel that will be form fitted, then come in on top of that with a geosynthetic drainage layer which is essentially a piece of plastic drainage material that is sandwiched between two fabrics. Put that down on top of it and then backfill with at least a foot or two of protective cover and then push the material back in leaving your liners you're going to tie with this successive effort exposed where you're able to tie to them. It will provide for positive drainage, basically the whole piece will drain back to cell 3 because the tie-in cell is 8 to zero feet higher across the area we're doing. I see no negative effects in terms of the subtitle D liner system. I don't see any problems associated with it. Commissioner Fite asked if Mr. Murray will be on site when the work is done? Mr. Murray stated that either he will be on site or the CQA we have hired will certify the construction. Mr. Murray stated that if the Commission wants him to be there, he will.

Commissioner Fite said that he thinks the Cherokee Nation is tired of the landfill raising ugly issues all the time and the mission of the Commissioners is to ensure the people of the Cherokee Nation and the State of Oklahoma that the landfill is done right. We keep bumping up against the wall with issues every time we turn around. I'm dumbfounded that an engineer certified that it had been welded. We're back on item 5.A on the agenda and I'll accept a motion for approval or denial of the liner tie-in plan as presented.

Item 5.A. - Liner Tie-In Plan

Commissioner Matlock moved to accept the plan as proposed. Commissioner Green seconded the motion.

Roll call vote:

Commissioner Fite – yes
Commissioner Matlock – yes
Commissioner Green – yes

Motion Approved

Item 5.B. – Landfill floor design

Commissioner Matlock made the motion to approve, Commissioner Green seconded the motion.

Roll Call vote:

Commissioner Fite – yes
Commissioner Matlock – yes
Commissioner Green – yes

Motion Approved.

6. No new business

7. Announcements

Scheduled meeting for next month, the first Tuesday of April at 9:30 A.M., April 7th, Cherokee Nation Environmental Program offices.

Commissioner Green made a motion to adjourn, Commissioner Matlock seconded, meeting adjourned.