CHEROKEE NATION ENVIRONMENTAL PROTECTION COMMISSION

Cherokee Nation Environmental Protection Office 206 E. Allen Road, Tahlequah, OK SPECIAL MEETING – September 10, 2009

PRESENT:

Commissioner: Mark Green via phone

Commissioner: Ed Fite

Commissioner: Marty Matlock

STAFF AND GUESTS:

Tom Elkins, CNEP
Dena Geib, CNB
Doug Bane, CNWM
Bob Murray, CNWM Contractor
Shawn West, CNEP
Jim Carrington, CNB
Melanie Knight, Secretary of State
Dwayne Fain, CN Risk Management
Kevin E. Hodges, SCS
David Stewart, CNB
Shawn Slaton, CNE
Laura Adair, CNEP

- 1. Meeting called to order by Commissioner Fite at 9:50 A.M. Roll call. All Commissioners present.
- 2. Commissioner Green acknowledged and placed into the record the Record of Public Notice.
- 3. Public Comment David Stewart commented that CNB is in attendance to answer any questions as the current operator of the Landfill to manage the reconstruction and getting it prepared to this point.
- Cherokee Nation Sanitary Landfill-Tabled from 8/25/09 meeting Consideration of a permit amendment (approve, deny, table for later consideration) - Mr. Elkins - proposed permit amendment: the Commission has received information pertaining to this amendment. From the CNEP's perspective it as seen as a business decision. We are concerned about how it is done. CNEP was concerned when it moved to CNB and are concerned about it moving here again. It is seen as a business decision. As long as the financial infrastructure is such that the integrity of the landfill can be maintained, CNEP is in agreement with the move. The construction of the new cell is a state of the art construction project. The only environmental issue we see at the landfill is the methane and this will be addressed under Item 5 in New Business. Commissioner Fite stated that his main concern has been the financial solidity of this project. In the past, lack of money has been an issue to buy equipment or properly run the landfill under different scenarios. The Cherokee Nation needs to ensure that whomever is going to be in control of this landfill is going to do it right. From a philosophical view point, the Cherokee Nation does not need a gaping hole in its armor related to a landfill which was developed in Adair County for the benefit of the Cherokee people. Mr. Fite stated there were some missteps in the past where we thought we were tooling up. We allowed folks like Fayetteville to contract with the Nation to bring waste here and we were not able to carry our end of the deal. If there are any blemishes at all then it undermines the credibility of not just the Cherokee Nation Environmental Commission and the program's office that oversees that work for the Commission but the Cherokee people at large. We want to be squeaky clean. If we change this permit today are we going to actually be in that position? I think that's a concern that CNEP has had all along. Mr. Stewart responded from a business standpoint. He stated there's been a little over 10 million spent to get this cell into a position where it is an asset ready to earn money. The cell is built

and it's ready to take trash without a lot of expense to rebuild it. I think you can be assured that other than just the ongoing day-to-day type maintenance, there's not going to be a significant capital infusion required. CNE provided capital to get the equipment in good shape. There are still a few things we need to do but substantially the equipment is repaired. The compactor is in and ready to go and other improvements have been made. We have spent a significant amount of time from a personnel and resource standpoint at CNB with internal audit, accounting, IT, and security to write all those procedures and get them in a position where we can hand them over to the landfill. We will continue to do the accounting and some of those shared services for the landfill. Training is now taking place for landfill staff. The third thing is that 1.5 million dollars have been assigned to the new entity, the Cherokee Nation, to provide seed capital and the working capital to operate. So you have money in the bank, good equipment, a good asset that is ready to take trash, policies and procedures in place and a shared service agreement that provides for the ongoing accounting services. All of these tings have been completed to the attorneys and Mr. Elkins satisfaction. CNB wants to ensure that your comments have been addressed and that this asset is ready to go in good shape. Mr. Fite expressed his appreciation and stated that it is a strong commitment but there are three legs that hold up the stool (social issues, economic issues and environmental issues). We have to make sure that all three legs are under the landfill and they don't fail and I'm concerned about the people that live around the landfill. The environment around the landfill will impact Cherokee people. If we think we can do it right this time then I don't see a problem with it. Secretary of State Knight stated that the Nation has been planning for this transaction. A concern of the Nation has been proper leadership at the Board level to oversee not only the business side of the operation but also the compliance side of the operation. CN looked to get local representation on that Board. We have one member on the Board from Stilwell, Rick Doherty. Tahlequah Mayor Purdy has agreed to serve on that Board. Both of those board members have passed through Rules Committee and are on their way to full council on Monday. Mayor Purdy is very qualified in landfill operations. His experience will be very valuable to that Board. There will be a third member appointed very soon to that Board of Directors. Leadership will be key for full time people devoted to overseeing the operations and compliance of the landfill. Another concern of the Tribe has been making sure that those board members are well briefed on the history that we've been through at the landfill. Also, CN realizes the importance of opening this cell and taking on new business. We also know that the proper reserves need to be in place for equipment and cell replacement and closure. We believe that those things are all covered to a satisfactory level. CN leadership needs to ensure that happens and I think they will. The Nation's perspective is to ensure that those board members are briefed and hit the ground running and know what our intentions are in regard to the long-term capacity of the landfill. Commissioner Matlock asked if there was a timeline for the appointment of a CEO. Secretary of State Knight responded that the board will make that decision. The Tribe will make some recommendations. There will be a full-time CEO as an employee of the landfill or we might engage in a management agreement with a firm to provide the management services of the landfill. Depending on the cost, their budget and what their goals are I would like the Board to come together and make that decision. We will provide those options to them to consider. Commissioner Matlock asked if that would be the person reporting to this Commission and the person we interact with on a routine basis as we move forward. Secretary of State Knight responded yes to this comment. Mr. Stewart stated that they have provided resumes and preliminary interview processes to the Nation in that regard. Commissioner Fite asked if the adjoining neighbors are all satisfied with the landfill next door, particularly Mr. Crittenden. Ms. Geib responded that Mr. Crittenden's property had been purchased. Mr. Moton still lives next to the landfill and he shares his concerns with us. He is open to speaking with Doug whenever he has concerns. His main concern is the birds that come around and that has yet to be resolved. Maybe it's a cover issue. Commissioner Matlock made a Motion to accept the modifications as proposed to the permit. Seconded by Commissioner Green. Roll call vote. The motion was unanimously approved and passed.

5. New Business – Ms. Geib requests that the methane issue be addressed. Mr. Elkins stated that this has been an issue that we have been following. There has been various ways this could have been handled. Construction is being finished and it needs to be done. Mr. Murray has been asked to

address this issue. Mr. Murray passed out information concerning this issue. Previously when he became aware of the landfill gas problems at wells 4, 5 and 6, there had been an addressing system proposed by the previous consultant. On this system we would drill into the waste mass and insert a vertical single point on a pattern vent system. My experience has been that those don't work or they don't work very efficiently. On this particular system, our monitoring points are too close to the waste mass. Spillover can occur through shallow stratum that will affect these monitoring points. The system I'm proposing is a trench system. I have concerns about drilling into a landfill where you can't see what you're drilling into and you're not sure of the bottom level. Commissioner Fite asked if the liner is compromised when you drill through it. Mr. Murray responded that when you drill through the liner obviously there is the potential to compromise. That is why I prefer the trench method because you can actually visually log what you're dealing with and when you see something that ceases to be landfill waste you can hold up. I've positioned this one based on records Doug and I have created in the absence of any records. There are some physical geometric things that you can predict somewhat. If you look at the detail that is actually one cross-section, this area is in an area that has a clay liner system. That leads me to believe that you actually have something that is retarding the gas below and it is coming out the side. That is my opinion. Gas is very unpredictable. This is a trench system that runs along the area in between the preponderance of landfill waste and the monitoring system. Mr. Murray stated that he is not 100% positive that it will prevent future gas migration. If this does not work, please move the monitoring system. That will involve some cost for taking down fences, building some dirt, etc. It is the next thing that needs to be done with future monitoring of the site. In fact it may come to the point where the federal regulation would require a more aggressive system. Those systems are out there and frequently can be done free of charge. Commissioner Fite asked how we could accomplish that task to the east where we're encroaching the creek. It should be done very carefully with a real aggressive re-vegetation program and/or rock infill program. You have to have something in the interim for your storm water pollution prevention plan so that it takes some of the shale being mined. We could begin to bring it up to a more level platform where you have something to work with. Over time we could use some of the rock that has been mined to create a stable slope. It would be very expensive wouldn't it? Yes it would. We already have a system that is approved in the approach which I think this is an improvement over what we have now. I think it is the first step, and then we will see how it will work. If this picks up the pathway, the gas will run through it. We've been focusing on paths of least resistance where nutrients can move. The only real concern on gas is that if you get real close to an emission point there can be some endangerment to personnel. The real problem environmentally is mixing the gas with surface or groundwater. Putting this system is place with the intermediate cap of two feet of additional shale the tendency is going to be for the gas to look for a different route of escape from this resistance. The commissioners asked if this retrofit would allow for capture and combustion down the road. Would carbon credits be available? Yes, it could be used for both was Mr. Murray's answer. It's a schedule 80 PVC system which is going to work with any kind of vacuum approach that you would use. They might want to put more vents into the system. Every one of these companies that come in do this stuff for the carbon credits all have the unique systems that they like to apply. The commissioners asked if this could become part of that system. Mr. Murray stated it could. Mr. Murray was asked if he had a sense that the landfill generates adequate methane for that sort of system. He stated that you have non-methane organic components as well as methane and we've done some preliminary looks that says this landfill, in its life, will cross that level where it can do it. Obviously, in the future, we need to look at that more. This moves in that direction? I think it's something that can absolutely become a part of that system. It's preferable to the system that has previously been approved. It's the best you can do without looking at a more aggressive active system and I don't think where we are in the life of the landfill it warrants us trying to implement that. You really need to do that with the closure system so that you're getting an integrated approach. I don't think it's time to start looking at trying to close certain areas of this until we've operational again. Commissioner Green asked Mr. Murray to repeat his last comment. I don't think it's quite time to start moving towards this other type of gas system because you would really need to be doing some closure on some slopes and I don't think you want to do that until you get back in operation and get your "sea legs". Then you can start programming in on an annual basis 3-5 acres

of closure. At that time, you're ready to really be working with these gas issues. Commissioner Green stated in the mean time we might fix the gas coming to these probes by basically cutting it off or installing an active system. Mr. Murray stated typically we have 15-20 feet of solid pipe down to where it is slotted, one of the things to be concerned with here would be air intrusion into the landfill and what that could do is cause higher temperatures. There are a number of things that could occur if air starts getting into your system and none of them are good. Mr. Green stated that as far as a passive system and trying to care of something in the meantime I'd say it could probably help but as far as actually putting it into an active system I don't know if I would use it all. As I understand it, in landfill ecology you want it to be an opposite of an aerobic system and that's what you're concerned about. You get too much air into it and it gets too hot and kills off the microbes. You end up with an aerobic system which does the opposite of what you want. I'm just saying if you're looking into tying this system into an active system I'd be very cautious about that. As far as using it now to stop whatever is migrating I think it probably would help and it would be fairly inexpensive. Just for clarification, what you're calling an active system is something that has a negative pressure and a vacuum. That gas has to be replaced by something. If you start pulling a vacuum in, you're going to start sucking air into those places. That's correct and that's why you have these things sealed off 15-20 feet under the surface in your slotted screen. You're really not typically dealing with the edges of the landfill. You're moving on up higher. You have a raise of influence around that vacuum which would take into account the portions along the perimeter so you'd have to calculate and know your vacuum. In the future I don't think you'll be able to use it. Is a motion needed? I believe this is a staff level decision.

- 6. Upcoming meetings and events Mr. Elkins stated that the next regularly scheduled EPC meeting would normally be scheduled for October 6th. Question regarding the appointment of two more EPC Commissioners. Mr. Elkins stated he made recommendations to the Chief but hasn't heard anything back from his office.
- Adjournment Motion made by Commissioner Matlock, seconded by Commissioner Green. Meeting adjourned.