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December 27, 1974

Arkansas Public Service Commission
BY C. Dyke

MEMORANDUM OF MEETING WITH DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY OF ARKANSAS ON DECEMBER 16, 1974 AT THE OFFICES OF THE DEPARTMENT IN LITTLE ROCK, ARKANSAS

On December 16, 1974, Ray Neal and I met with representatives of the Department of Pollution Control and Ecology at their offices in Little Rock, Arkansas for the purposes of determining what could be done to make our waste water and air emission permit applications acceptable. Those representing the Department of Pollution Control and Ecology were Mr. Ladd Daviews, Mr. Neal Woomer, and Mr. Hanna. Later, Mr. Jarrel Southall sat in while we were discussing the air permit.

I told the group that time was pressing for the construction of Flint Creek, we do not know how we will serve our customer load in 1978 without Flint Creek, and we must do something to get moving on these permit applications. I told the group that perhaps we had hurt ourselves by not concentrating as much on the water discharge aspect of our permit applications as we had on the air emission aspect. I reviewed that we have five power plants operating, three in Texas and two in Louisiana, and each of these has a water discharge permit and we have a good record in meeting the regulatory requirements of those permits. On the other hand, we do not have an air emission permit for any of the plants, and at Flint Creek we will be burning coal; therefore, the major thrust of our efforts did concern air. One of the members of the Pollution Department noted that they had never permitted a cooling lake at a power plant in Arkansas. It is obvious that the routine to us was not routine to them.

I went on to note that we recognize that we are in difficulty concerning the water discharge; however, I did not think that the problems are as serious as they might appear. I noted that our purpose of asking for this meeting was to determine what will be necessary from the standpoint of the Department of Pollution Control and Ecology to assure them and make them comfortable that we will meet the requirements of the State of Arkansas. Once knowing this, we will either indicate our willingness to meet these conditions or let them know that we cannot meet them, and in any event, maybe we can move forward. I told the group that it appears almost impossible to get the first pickle out of the jar insofar as permits in Arkansas are concerned. I told them that it was different working in Arkansas from working with the regulatory authorities in Texas and Louisiana; whether or not that was good or bad I would not discuss, but it was different. Now, I believe that we know some of those differences and can better work with the regulatory authorities in Arkansas.

I told them that we have solved some of our problems:

1. We have a signed agreement with the City of Siloam Springs for supplemental water for the Flint Creek lake; a copy was handed to Mr. Davies.
2. We have applied to the Department of Soil Conservation and Water for a permit for dam construction. I also told them that earlier Mr. Neal had been in contact with the Department concerning dam construction and

they had indicated they did not want to do anything until after the Public Service Commission had acted. It was not until we were in the hearings before the Public Service Commission that we realized the importance of this dam permit. Also, Mr. Neal told the group that earlier the Department of Soil Conservation and Water had indicated this dam was across an "intermittent stream" and they had indicated that no discharge to the downstream waters would be required. We told the group that December 17 was the last day for comments from the public in regards to the dam permit and that, to our knowledge, the Department had received one letter; this was from Mr. Nelms who represented one of the environmental groups in Northwest Arkansas. Furthermore, we told the group that to our knowledge Mr. Nelms had only asked that the Department of Soil Conservation and Water not take action until the Public Service Commission had taken action on our application. We did note that the morning paper indicated the Department had decided a public hearing concerning this application would be necessary, and again we cannot get the first pickle out of the jar.

I told the group that it is our understanding that one of the major obstacles is our belief that the State of Arkansas does not have jurisdiction over the quality of the water within the lake and that our obligation is to meet the water regulations at the discharge of the lake to the downstream waters. I told the group that we now acknowledge that the State of Arkansas laws do place jurisdiction of the water quality in the lake to the Department of Pollution Control and Ecology and that we are requesting that the water in the lake be exempted from the regulations concerning temperature and dissolved oxygen only. I told the group we are requesting this exception because:

1. The lake will be constructed on fee property owned by Southwestern Electric Power Company and the Arkansas Electric Cooperative Corporation.
2. The purpose of the lake is to provide cooling for the power plant.
3. Even if cooling towers were to be used for cooling purposes it would be necessary in this location to construct the lake to provide reliable make up to the cooling towers.
4. The lake will result in additional shore line for use of animals and so forth.
5. Fish will be raised in the lake.
6. If the lake can be used by the public without jeopardizing the primary purpose which is to act as a cooling medium for the power plant, then the public will be allowed to use the lake.
7. It is anticipated that the water shed of the lake will not provide enough water in very dry years and an agreement has been reached with the City of Siloam Springs to provide supplemental water to the lake.
8. In our judgment, the lake provides the most acceptable manner from an environmental standpoint for providing cooling water for the plant.

We asked if they would be receptive to this type of request. After quite a bit of conversation the indications are firmly that the Department of Pollution Control and Ecology is receptive to this request.

I told the group that with the understanding that they are receptive to such a request we would like to convince them that we will meet the temperature requirements to the downstream water and dissolved oxygen requirements to the downstream waters. The pollution group then said that they must wait and see whether or not the Department of Soil Conservation and Water will require a downstream release. I told them that we were still having trouble getting that pickle out of the jar. Ray Neal informed the group that as far as he knew, only one landowner (King) will be between our dam and Flint Creek and that we would be willing to release water in reasonable quantities needed by the landowner. This landowner also has access to Flint Creek. This did not satisfy. I told the group that in their brief they had indicated that the present uses of Little Flint Creek included fish and wildlife propagation, stock watering, and esthetic purposes provided by the exceedingly clear water and virtually pollution free water of Little Flint Creek and that I would like to proceed on what the Department of Pollution Control and Ecology needs for their permit application. Mr. Davies asked if we could release by pumping or leakage three cubic feet per second or maintain a flow of three cubic feet per second in Little Flint Creek. Ray Neal told him that we could not. After further conversation Mr. Davies asked what we might expect as the maximum leakage rate from the dam; Mr. Neal told him one to two cubic feet per second and this is in the environmental report. Mr. Davies asked if we could live with the stipulation of maintaining a minimum flow of two cubic feet per second in Little Flint Creek, and we told him that we could. Again, Mr. Neal told Mr. Davies that even though we could live with this we strongly prefer a permit which will require us to release water as needed, rather than maintaining a minimum flow in Little Flint Creek. The Department of Pollution Control and Ecology insisted on a minimum flow of two cubic feet per second in Little Flint Creek, and we agreed.

Mr. Neal then proceeded to tell the group how we expected to meet the temperature and dissolved oxygen regulations at the discharge of our lake. Mr. Neal said that he contemplates we will install a pump with capacity of approximately 1,000 gpm at the discharge to the downstream waters which will take its suction at a point in elevation below our designed low water elevation. The pump will discharge into a spray system located at the top of the spillway. This spray system will consist of sprays similar to those used at the Arsenal Hill Plant. The sprays will act to lower the temperature below 90°F. and will aerate the water to insure an adequate dissolved oxygen level. The pumping system will be used under the following conditions:

1. During the late spring the lake level will be drawn down so that we will enter the summer with an elevation approximately six inches below that of the spillway. This will prevent the flow of water over the spillway when temperatures of the water at the spillway are above 90°F. unless abnormal rainfall occurs. If the rain should be so great as to again fill the lake it is almost certain that the temperature will be less than 90°F. If in the late spring rainfall is so great that we cannot draw down the lake by the pumping system, we will continue to

pump through the spray system so long as any flow of water from the lake is over the spillway and the temperature is 90° or above.

2. If it is necessary to pump water from the lake to maintain the minimum flow of two cubic feet per second in Flint Creek the pumping will be done through the spray system.
3. Any pumping from the lake will be done through the spray system regardless of the time of the year.

Mr. Neal noted that we would have preferred to use a siphon system to remove water from the lake; however, this would have resulted in the sprays' being put at the foot of the dam and would have prevented efficient action of the spray system to lower the temperature.

The pollution group talked quite a bit about how the system could be designed to convince them that the regulations would be met. Mr. Woomer wanted a study of the lake to be made to determine the anticipated temperatures in various regions of the lake and at various elevations. Ray Neal and I told the group that such a study would be worthless. In the first place, we don't have confidence in such a study. In the second place, if such a study was made, then anyone could attack the study and pick it all to pieces. It seemed to us that the only reasonable thing to do is to design the spray system to meet the most adverse conditions. We explained to the group that the most adverse conditions are a temperature of 102°F. for the water with the highest wet bulb temperatures experienced in July and August at the location. We had some discussion of the 102°F., but we explained to the group that we were tying this to the highest temperature anticipated at the inlet to the power plant. The dam is a bit out of the circulation path and by taking the suction to the pumping system at a lower depth it seemed to us that anyone should be assured that we were specifying the most adverse conditions. Mr. Davies asked what would happen if the temperature to the plant exceeded 102°F. and we explained to him that we would experience a rapid reduction in efficiency and capability of the unit if the temperature does exceed 102°F. After further discussion these conditions were accepted and in a revised application the plans of the spray system will be submitted together with a plan of the pumping system and calculations indicating that we will be in compliance with temperature and dissolved oxygen regulations. Considerable discussion centered around the possible oxygen content of any leakage through the dam which would supply downstream. It was agreed that leakage might possibly come from the lower level of the lake and might possibly be deficient in oxygen. We agreed this was a possibility and that in the event that the water was deficient in oxygen we would take steps to aerate the water before it left property owned by the Company.

The pollution group indicated that in our application they would like some information concerning the proposed sewage treatment facilities both during construction and during the operation of the plant. Sewage treatment facility permits will be issued separately; however, this permit application will briefly describe what we have in mind. This will be done.

The pollution group continues to want information concerning the derivation of the predicted heavy metals in the ash basin. The original calculation indicated a heavy metal concentration which would exceed the regulations; however, a revised calculation indicated concentrations which would be in compliance. The revised calculations were based on information received from the Comanche Plant of Public Service Company of Colorado in Pueblo. Mr. Neal will state this in the application and will state that the same coal will be used in our plant as in the Comanche Plant and give any other reasons we have that the concentrations in our plant will be comparable to those in the Comanche Plant. This must be covered in detail; it will be done. Also, the pollution group will want to know the basis for the original concentration calculation; this will be done.

In our original permit application we requested maximum and average concentrations for various items such as BOD and COD. The pollution group would like to know how we arrived at these concentrations. We explained to them that we used the experience gained at Wilkes Power Plant to arrive at the concentrations. This will be stated in the application, and we will also include in the application the copy of the permit for Wilkes Power Plant, and a description of the lake at Wilkes Power Plant pointing out the similarities with the lake at Flint Creek for the purpose of indicating that essentially the same concentrations can be anticipated at Flint Creek as are experienced at Wilkes Plant. This will be done in detail.

The pollution group asked that we state in our application how we will dispose of chemical waste used for chemical cleaning of various power plant equipment such as boilers. We explained to them that this discharge would be placed in an open pit and the water would be allowed to evaporate; it would never be placed in the lake. This is perfectly satisfactory, but it needs to be put in the application; it will be done.

The pollution group asked that we explain in detail what type of monitoring we expect to do. I suggested that we set up a self reporting system similar to that used in Texas. This self reporting system will be subject to the approval of the Department of Pollution Control and Ecology. We will specify in the application the tests which will be run, the procedure to be followed in running the tests, the time interval of the tests, and so forth. We will enclose two or three monthly reports submitted to the Texas Water Quality Board as a part of the self regulating system, and we will prepare a suggested report form. We will include in the application a discussion of the method of handling boiler blow down and low level-high volume waste such as from the demineralizer. We will state in the application that we will meet the EPA requirement for these wastes and state those requirements.

We had a brief discussion with Mr. Southall and Mr. Davies concerning the air permit. In an effort to determine the chimney height which would be agreed to by the pollution control people Mr. Southall stated that he wanted to stay with the two and one-half rule. After returning to Shreveport we discovered that the two and one-half rule will result in a chimney height of 540 feet which is less than the 565 to 600 feet Mr. Southall said would be required in his testimony before the Public Service Commission. Mr. Neal has a call in to Mr. Southall to determine what height he needs; that height will be agreed to in a letter which amends our permit application. Also, Mr. Southall requested that we state that

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we will meet the federal requirements for monitoring of emissions; this will be done. Also, Mr. Southall asked us to make a brief description of the ambient air monitoring program that we have in mind. I told him that we had planned to follow his suggestion of coming up with a program subject to his approval which would be administered and run by an independent entity such as the University of Arkansas for a period of some five years. This is suitable to Mr. Southall.

Near the conclusion of the meeting I told the group about my conversation of last week with Mr. Foster of the Arkansas Public Service Commission. I told them that Mr. Foster had asked me to call and let him know the results of the meeting and I wanted to know if there was any objection from this group; Mr. Davies said this would be fine.

I went to Mr. Davies' office to call Mr. Foster. He requested that Mr. Arnold write him a letter indicating what had happened in our meeting, and he said he will need the same information which we submit to the Department of Pollution Control and Ecology.

Before the meeting with the pollution group broke up the need for a public hearing was discussed. It was brought out that some time ago the Commissioners had said there would be a public hearing; however, the conversation indicated that the Commissioners were not so sure at this time. At any rate, they do not have to have a meeting. We did discuss the type of hearing they will have. It seems to be informal, much like the hearings we have experienced in Texas. As I understand it, there will be no cross examination or questions by anyone other than the pollution control people. If someone else wants to make a statement they can. An attorney is not required.

Ray Neal believes it will take about a month or a little longer to get this information together for the new application for the water discharge; I am encouraging Ray to do it in three weeks, and I believe he can with all our help.

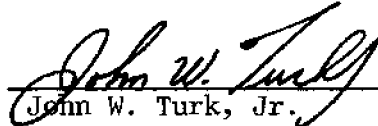

John W. Turk, Jr.

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STATE OF LOUISIANA

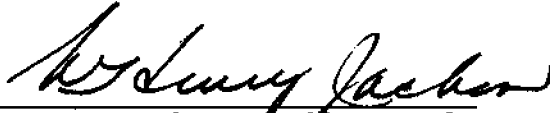
PARISH OF CADDO.

BEFORE ME, the undersigned authority, on this day appeared John W. Turk, Jr., who, first being duly sworn, stated on oath that he is Vice President of Southwestern Electric Power Company, and duly authorized to make this affidavit; that the Memorandum of Meeting to which this affidavit is attached contains a true and correct account of what transpired at said meeting and the conclusions reached by Southwestern Electric Power Company and the Arkansas Department of Pollution Control and Ecology.



John W. Turk, Jr.

SUBSCRIBED AND SWORN TO before me, the undersigned, a Notary Public in and for the Parish of Caddo, State of Louisiana, this the 30th day of December, 1974.



Notary Public, Caddo Parish,
Louisiana.

My commission expires: _____

Notary Public in and for
Caddo Parish, Louisiana
My Commission # 100 100