IN THE UNITED STATES DISTRICT COURT FOR THE

NORTHERN DISTRICT OF OKLAHOMA

W. A. DREW EDMONDSON, in his)
capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA and)
OKLAHOMA SECRETARY OF THE)
ENVIRONMENT C. MILES TOLBERT,)
in his capacity as the)
TRUSTEE FOR NATURAL RESOURCES)
FOR THE STATE OF OKLAHOMA,)
)
Plaintiff,)
)
vs.)4:05-CV-00329-TCK-SAJ
)
TYSON FOODS, INC., et al,)
)
Defendants.)

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VOLUME I OF THE VIDEOTAPED

DEPOSITION OF INDRAJEET CHAUBEY, PhD, produced as a witness on behalf of the Plaintiff in the above styled and numbered cause, taken on the 27th day of January, 2009, in the City of Tulsa, County of Tulsa, State of Oklahoma, before me, Lisa A. Steinmeyer, a Certified Shorthand Reporter, duly certified under and by virtue of the laws of the State of Oklahoma.

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Exhibit 17

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A About 35 percent is forest. So that's about
90 percent, and rest are in other categories.
Q All right. Do you know what the approximate
percentage of the urban area is in the Illinois
River watershed? 09:28AM
A So it has to be less than 10 I would think.
More like 6 or 7 percent; no more than that.
Q Based on your knowledge and skill and
education, training and experience, including
reading published literature, do you have an opinion 09:28AM
what is the primary method used for poultry waste
disposal?
MS. LONGWELL: Object to form.
A Yes.
Q What is that opinion? 09:28AM
A Land application, surface application of
poultry litter.
Q All right. From your review of published
literature, do you have any knowledge of
approximately how long land application of poultry 09:29AM
waste has occurred in the IRW?
MS. LONGWELL: Object to form.
A Can you ask that question again?
Q I will. From your review of literature or
other sources, do you have knowledge of 09:29AM

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1 approximately how long poultry waste has been
2 generally land applied in the IRW?
3 MS. LONGWELL: I'm just going to state a
4 continuing objection to the term waste. I think
5 that's traditional, but that way I'm not going to 09:29AM
6 continue to object just because you use that word.
7 MR. GARREN: All right.
8 A Yes.
9 Q Approximately how long have you learned that
10 would be? 09:29AM
11 A For a long time. I mean, since poultry
12 industry has been concentrated in northwest
13 Arkansas.
14 Q All right. When I use the term waste, let me
15 maybe define that so that you and I have an 09:29AM
16 understanding, too. I define waste as the
17 excrement, the bedding material and things such as
18 feathers or wasted feed and moisture that occurs
19 that's taken out of the house at the conclusion of
20 the growing session, sometimes commonly referred to 09:30AM
21 as poultry litter in Arkansas. Do you know the term
22 poultry litter?
23 A Yes.
24 Q And can you tell me what you understand the
25 term poultry litter would mean? 09:30AM

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A So if the total numbers that you measure at Highway 59 bridge does not change, if that stayed the same, then percentage of point source contribution would decrease and percentage of non-point source contribution would increase, but if 10:41AM the numbers go down similarly, then you may have to look at that data.

Q Okay. In your professional experience and review of published literature, are you aware of any published paper that contradicts the findings and 10:41AM conclusions shown in Exhibit 8?

MS. LONGWELL: Object to form.

A No.

Q Based on the numbers on Table 2, Page 6 that you talked about earlier, the 1.8 million kilograms 10:42AM in 1997 versus the total input of 3.1 million kilograms, and based upon your knowledge, skill and education and training, including review of published literature, do you have an opinion whether poultry production practices of land applying waste 10:43AM is a substantial contributor of the phosphorus to the overall phosphorus loads within the watershed?

MS. LONGWELL: Object to form.

MR. GEORGE: Object to form, vague, calls for an expert opinion that's not been found by this 10:43AM

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1 witness.
2 A Yes.
3 Q And what would be that opinion?
4 MR. GEORGE: Same objection.
5 A Based on inputs, poultry litter is the 10:43AM
6 dominant source of phosphorus in the watershed.
7 Q All right. Is there anything else in your
8 knowledge, experience that you rely on in making
9 that opinion besides this Table 2?
10 MS. LONGWELL: Object to form. 10:43AM
11 A Other litter from this watershed and other
12 watersheds and published journals and reports from
13 others.
14 Q All right. Let's talk a little bit about some
15 terminology. Are you familiar with the term surface 10:44AM
16 runoff and -- well, let me just ask that. Are you
17 familiar with that term?
18 A Yes.
19 Q In a hydrologic concept, can you tell the
20 court what that means? 10:44AM
21 A What it means is when it rains, part of the
22 precipitation travels through the soil surface or
23 land surface, and that is primarily the surface
24 runoff. It can also represent some of the water
25 that travels partially through the subsurface but 10:44AM

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W. A. DREW EDMONDSON, in his capacity as ATTORNEY GENERAL OF THE STATE OF OKLAHOMA and OKLAHOMA SECRETARY OF THE ENVIRONMENT C. MILES TOLBERT, in his capacity as the TRUSTEE FOR NATURAL RESOURCES FOR THE STATE OF OKLAHOMA,	)
Plaintiff,	)
vs.	) 4:05-CV-00329-TCK-SAJ
TYSON FOODS, INC., et al,	)
Defendants.	)

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VOLUME II OF THE VIDEOTAPED

DEPOSITION OF INDRAJEET CHAUBEY, PhD, produced as a witness on behalf of the Plaintiff in the above styled and numbered cause, taken on the 2nd day of March, 2009, in the City of Tulsa, County of Tulsa, State of Oklahoma, before me, Lisa A. Steinmeyer, a Certified Shorthand Reporter, duly certified under and by virtue of the laws of the State of Oklahoma.

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Q A considerable amount of it is unshaded areas; would you agree?

MR. BOND: Object to form.

MS. TUCKER: Object to form.

MS. LONGWELL: Object to form. 09:34AM

A Yes.

Q Based on the studies we've talked about and the published literature, your experience and education, do you have an opinion whether there is sufficient evidence to establish that phosphorus is 09:35AM transported, phosphorus and nitrogen is transported from waste-applied fields in runoff to the waters of the Illinois River watershed?

MS. TUCKER: Object to form.

MR. BOND: Object to form.

MS. TUCKER: Object to form.

MR. FREEMAN: Object to form.

MS. LONGWELL: Object to form. Calls for an undisclosed expert opinion.

A Yes. 09:35AM

Q What is your opinion?

MR. BOND: Same objection.

MS. HILL: Objection.

MS. TUCKER: Same objection.

MS. LONGWELL: Object to form. 09:35AM

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1 MR. FREEMAN: Object to form.
2 A Phosphorus is transported from the areas which
3 are treated with poultry litter.
4 Q Are you, sir, the only one in the scientific
5 community to draw such a conclusion? 09:35AM
6 MS. LONGWELL: Object to form.
7 MS. TUCKER: Object to form.
8 MS. HILL: Object to form.
9 A No, I am not. Number of studies have been
10 published. 09:36AM
11 Q And are those very recent studies or are they
12 of some vintage, if you will?
13 A There were studies in '80s and '90s before I
14 started looking at it, early '90s before I started
15 looking at it. 09:36AM
16 Q All right. Can you tell the court the names
17 of some authors that you're aware of that have drawn
18 similar conclusions that you've just told us about
19 today?
20 A Dwayne Edwards or D. R. Edwards has done lots 09:36AM
21 of studies in this area. Dr. Tommy Daniel or T. C.
22 Daniel. Dr. Andrew Sharpley. Dr. Tom Simms, I
23 believe he's a professor somewhere in the Delmarva
24 Peninsula area. He has published. There has been a
25 number of studies. 09:37AM

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Q Do you recall generally how those differences -- what they are, what you observed when you tested both?
A It has been a while since I published those.
Q It's not a memory test. If you don't remember, that's fine. 09:41AM
A Yeah.
Q Okay. Have you seen any studies or published materials that concern poultry waste from different bird types would act any different than poultry litter or manure from broilers let's say? 09:41AM
MS. HILL: Object to form.
A Ask the question one more time.
Q Have you seen any studies or published materials concerned with poultry waste from different bird types indicating that it would act different than poultry from broilers, poultry waste? 09:41AM
MS. HILL: Same objection.
A So generally speaking the amount of -- there will always be some losses taking place from the areas treating with -- treated with the poultry waste. The level of magnitude may be different depending upon the consistency and the physical chemical characteristics of the sources. 09:42AM
Q I'm going to hand you Exhibit No. 6, Dr. 09:42AM

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