

ADEQ

ARKANSAS
Department of Environmental Quality

June 7, 2016

Kirby Murray, Public Works Director
City of Berryville
PO Box 227
Berryville, AR 72616

RE: Tyson Poultry, Inc. - Berryville Industrial User Inspection (Carroll Co)
AFIN: 08-00034 NPDES Permit No.: AR0021792

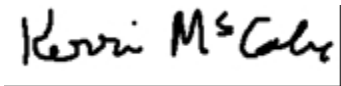
Dear Mr. Murray:

On May 10, 2016, I performed an Industrial User Inspection of the above-referenced facility in accordance with the provisions of the Federal Clean Water Act, the Arkansas Water and Air Pollution Control Act, and the regulations promulgated thereunder. A copy of the inspection report is enclosed for your records.

No violations were noted at the time of the inspection. Please refer to the attached inspection report for any comments.

If I can be of any assistance, please contact me at mccabe@adeq.state.ar.us or (501) 682-0642.

Sincerely,



Kerri McCabe
Inspector Supervisor
Water Division

cc: Kathy Nunez, Sr. Area Environmental Manager. Tyson Foods, Inc.,
Kathy.Nunez@tyson.com
Kevin Teter, Complex Environmental Manager – Berryville/Green Forest, Tyson
Foods, Inc., Michael.Teter@tyson.com



WATER DIVISION INSPECTION REPORT		
AFIN: 08-00034	PERMIT #: AR0021792	DATE: 5/10/2016
COUNTY: 08 Carroll	PDS #: 091111	MEDIA: WN
GPS LAT:	LONG:	LOCATION: Sample Point

FACILITY INFORMATION	INSPECTION INFORMATION
NAME: Tyson Poultry, Inc. - Berryville LOCATION: 110 West Freeman CITY: Berryville, AR	FACILITY TYPE: 1 - Municipal INSPECTOR ID#: 84022 S - State FACILITY EVALUATION RATING: N INSPECTION TYPE: Industrial User DATE(S): 5/10/2016 ENTRY TIME: 11:30 EXIT TIME: 13:00 PERMIT EFFECTIVE DATE: 11/30/2007 PERMIT EXPIRATION DATE: 11/30/2012

RESPONSIBLE OFFICIAL	INSPECTION PARTICIPANTS
NAME / TITLE: Kirby Murray / Public Works Director COMPANY: City of Berryville MAILING ADDRESS: 305 E Madison PO Box 227 CITY, STATE, ZIP: Berryville AR 72616 PHONE & EXT. / FAX: 870-423-4074 / EMAIL: kirbymurray@gmail.com CONTACTED DURING INSPECTION: Yes	NAME/TITLE/PHONE/FAX/EMAIL/ETC.: Kathy Nunez/Sr. Area Environmental Manager/Tyson Foods, Inc./ (479) 290-2210/kathy.nunez@tyson.com Kevin Teter/Complex Environmental Manager/Tyson Foods, Inc./ (870) 423-5516/Michael.Teter@tyson.com

AREA EVALUATIONS			
(S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Applicable/Evaluated)			
**	PERMIT	**	FLOW MEASUREMENT
**	RECORDS/REPORTS	**	LABORATORY
**	OPERATION & MAINTENANCE	**	EFFLUENT/RECEIVING WATER
**	SAMPLING	**	SLUDGE HANDLING/DISPOSAL
**	STORMWATER	**	FACILITY SITE REVIEW
**	SELF-MONITORING PROGRAM	**	PRETREATMENT
S	OTHER: IU		

SUMMARY OF FINDINGS

No violations noted during the inspection.

I would like to thank Ms. Kathy Nunez and Mr. Kevin Teter for their assistance in providing information and photographs for a presentation to be conducted for the USEPA Region 6 Inspector-Enforcement Workshop in Dallas, TX (June 2016).

GENERAL COMMENTS

On Tuesday, May 10, 2016 a reconnaissance inspection was conducted at the Tyson – Berryville pretreatment plant. This was not a formal, compliance inspection.

The site visit was to gather additional information for a presentation over poultry processing regarding direct dischargers and pretreatment of poultry process wastewater prior to discharge to a POTW for full treatment. Ms. Nunez had provided photographs and information regarding pretreatment of poultry process wastewater prior to the site visit (see attached), and the site visit was conducted to better understand the information provided.

The City’s permit has been administratively extended and the permittee is in the process of renewing the permit. The next scheduled CEI should be conducted by May 2016.

Tyson – Berryville has an IGP (ARR00A051) under AFIN 08-00002. A reconnaissance inspection was conducted in April 2015 due to a release of wastewater to a stormwater outfall. A full inspection of the IGP was conducted in June 2011. The facility is due another full compliance inspection of the IGP June 2016.

INSPECTOR'S SIGNATURE: <i>Kerri McCabe</i>	Kerri McCabe	DATE: 6/6/2016
SUPERVISOR'S SIGNATURE: <i>Jason R. Bolenbaugh</i>	Jason Bolenbaugh	DATE: 6/6/2016

POTW Pretreatment Program

Industrial Site Visit

Name of Industry: Tyson - Berryville

Industry Contacts: Kathy Nunez and Kevin Teter

Type of Industry: Poultry Slaughter and Processing

Date of Visit: May 10, 2016

- | | | | | |
|-----|----------------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------------|
| 1. | Significant industrial user: | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. | Pretreatment equipment or procedures? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. | Pretreatment equipment maintained and operational? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. | Hazardous waste generated or stored? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. | Proper solid waste disposal? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. | Solvent management/TTO control? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 7. | Suitable sampling location? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 8. | Appropriate self-monitoring procedures/equipment? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 9. | Adequate spill prevention? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 10. | Industry familiar with limits and requirements? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

Additional Comments: Site visit conducted to gather additional information regarding pretreatment of poultry processing wastewater prior to discharge to POTW.

Visit Conducted By: Kerri McCabe

Date of Report: June 6, 2016

Figure 1. Google Earth image dated April 24, 2014 of the Tyson – Berryville pretreatment plant with major components identified.



Tyson Poultry Inc.

Pretreatment of Poultry Waste Water

The Waste Water Pretreatment plant in Berryville, AR was originally constructed back in 1952 by Ocoma foods and treated the waste from the Company's Turkey Processing plant. The facilities were purchased by Tyson Foods in 1972 and converted to a Chicken Processing plant. The WW treatment plant has undergone numerous renovations over the years to accommodate processing plant expansions, processing changes, and variations in flow rates.

The processing plant expanded with the addition of the Further Processing department in 1989. This expansion coincided with the last major renovation to the Waste Water Plant with the addition of a 1.3 million gallon Aeration basin, and the installation of two PCL 120 FPEC DAF's, followed shortly by two 25K gallon Surge tanks. Flows peaked at 1.6 MGD at the WW plant back in the early 90's with the expansion of the Further Processing department. Processing changes has since phased the Evisceration, Breast Debone, and DSI departments out, leaving only the Further Processing and Dark Meat Debone departments. In its current state the treatment plant treats around .800 MGD.

In May of 2013, an additional 18K gallon surge tank was added, bringing the total surge capacity of the WW plant up to 68,000 gallons. Also at this time, there was a replacement of the old primary screens with two 1500 GPM IPEC secondary screens.

The pretreatment plant also supports the Bergman Feed Mill with the treatment of the feed mills boiler blow down water. This water is trucked into the facility 3 times per week and contributes around 900K gallons of water per year for treatment.

The first step in the treatment of the waste water is to pump the water from the head works of the treatment plant up to the screen room. Any large solids will be removed in this step.



After screening the water flows into one of three surge tanks that are plumbed together in parallel, providing equalization for surges in both loading and flow rates during the sanitation shift.



This is also the point in the treatment process that if any PH adjustments are needed, it is controlled by the use of CO2.



After any PH adjustments, the water is pumped to the first DAF unit where a three polymer GRAS chemical program is used to flocculate the tiny particles of solids.



Once flocculated the solids float to the top with the aid of dissolved air and skimmed off the top and stored in a sludge bay.



To effectively treat the Waste Water at the Berryville facility, two different classification of waste must be recognized and addressed in the treatment process 1) Insoluble BOD (Solids) and 2) soluble BOD (Dissolved solids). At this point in the treatment process over 95% of the Insoluble BOD has been removed by the first DAF unit. The water is then pumped out into the 1.3 Million gallon Aeration Basin. The basin currently is being operated with a .648 MG operating level which provides around 17 hours retention time. The biomass in the basin is managed to help facilitate the removal of any soluble BOD in the waste stream. A mixed liquor concentration of 900 mg/l is targeted. The basin is equipped with three 75 HP surface aerators and Three 125 HP Roots air blower on a grid system to help facilitate biological activity with dissolved air.



The Aeration basin, along with the 17 hour retention time will typically strip over 90% of the soluble BOD from the waste stream. The Bacteria, enzymes and Fungi that consume the soluble BOD do so by converting the Soluble BOD back into a solid.

The final treatment step is to pump the water back into the WW plant and run it through the final DAF unit to remove the solids that were generated from the Aeration Basin biological process.



In the fall of 2013 the pretreatment plant was issued a Total Phosphorous limit of 8 mg/l. Ferric Sulfate is a metal salt chemical that the pretreatment plant utilizes in the aeration basin and on the final DAF to help precipitate out any Phosphates in the waste stream. Along with the Total Phosphorous limit of 8 mg/l the pretreatment plant must also meet a BOD and TSS limit of 300 mg/l each. The treated discharge must also be within a PH range of 6 – 9, and is sent to the city POTW for full treatment.





Polymer makeup machines are utilized to maintain a consistent strength of solution with the mixing of the dry polymers. Chemical pumps are tied in directly with the Main PLC which enables the PLC to speed up or slow down the chemical pumps based off of flow fluctuation. This maintains a consistent chemical dosage amount regardless of changes within the flow coming into the WW treatment plant. This increases the effectiveness of the chemicals and also helps control chemical costs.





City of Berryville

Public Works Department
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305 East Madison
Berryville, Arkansas 72616

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E-mail: kirbymurray@gmail.com

September 6, 2016

Kerri McCabe
Inspection Supervisor – Water Division
ADEQ
5301 NorthShore Drive
North Little Rock, AR 72118-5317

RE: Berryville POTW Inspections (Carroll Co)
AFIN: 08-00034 NPDES Permit No.: AR0021792
AR0021792C

Dear Kerri,

On behalf of Mayor McKinney, I am providing the following responses to the Compliance Evaluation Inspection Report dated August 23.

Regarding violation 1 in the "Summary of Findings" section: the gravity thickener tank repair was completed on August 31 by applying hydraulic cement. The tank was placed online September 1 without any further seepage issues.



Gravity Thickener Tank – Repaired and In Service



Gravity Thickener Tank Launderer – Before and After Repair, Respectively

City of Berryville

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Regarding violation 2 in the "Summary of Findings" section: As specified in the inspection findings, moving forward we will use the detection limit in calculations for all lab reported values containing a less than (<) value. ADEQ Enforcement Analyst Jaqueline Trotta has been contacted regarding the submission of corrected DMRs, but no formal direction has been given at this time. Once the instruction is given, we will proceed accordingly.

On page 8 of the inspection report, we believe the difference is from using one half of values reported as "<". This will be remedied as noted above.

Regarding the discrepancy between the TSS "Reported Values" and "Calculated Values" on page 9 of the inspection report, it is our understanding that monthly averages are calculated over a calendar month and the "Saturday Rule" only applies to 7-day averages. The permit does not contain mass limits for 7 day averages and this is why the last data point in March is used calculating compliance with the 7-day average concentration limit and not for the monthly average mass limit.

Based on this information, it is our understanding that the "Calculated Value" results on the inspection form for the April TSS monthly averages should not have included the March data. Our monthly average calculations did not include the March data and were done as defined in the NPDES permit definitions section and in the ADEQ Reporting Requirements Handbook yielding the "Reported Value" 17.1 lbs/day.

Because of the "Saturday Rule", it is our understanding that the 7-day average calculations for the April DMR should have included that March data and did include that data for both our calculations (Reported Value) and on the inspection DMR Calculation Check (Calculated Value). Note the values were the same for Reported and Calculated.

On Page 3 of Part IA of the NPDES permit, the "Permit Values" for TSS are 300.2 Mass Mo. Avg. lbs/day, 15 Conc. Mo. Avg. mg/L, and 22.5 Conc. 7-day Avg. mg/L; Page 9 of the inspection report incorrectly lists the "Permit Values" as 20, 1, and 19 respectively. Similarly, the permit value listed on page 8 of the inspection report are not consistent with the NPDES permit.

If I can be of any assistance, please contact me at kirbymurray@gmail.com or 870-423-4074.

Sincerely,



Kirby Murray
Public Works Director
City of Berryville

KERRI,
I AM MAKING YOU
THE HARD COPY SINCE
THESE PHOTOS WILL COME
TO YOU IN BLACK & WHITE
IN THE EMAIL I SENT.
KIRBY

City of Berryville

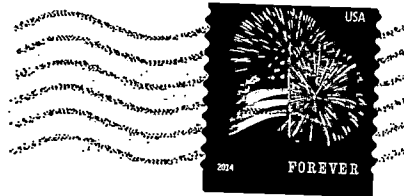
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Berryville, Arkansas 72616

NORTHWEST AR. P&DF

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06 SEP 2016 PM



KERRI McCABE

INSPECTION SUPERVISOR - WATER DIVISION

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NORTH LITTLE ROCK, AR.

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