

DEQ Response to Comments Regarding the Proposed WLA for OOWA/Solae/PICC

Comments received in response to the September 21, 2007 public notice are listed as follows:

- A. Three letters from OOWA's attorneys (Doerner, Saunders, Daniel, & Anderson) dated 10/02/07, 11/05/07 and 12/05/07, along with three expert opinions and two CDs of referenced materials.
- B. Expert opinion: Apex's report by Ron Jarman (a CD was included)
- C. Expert opinion: The AquaEter report by Michael R. Corn (a CD was included)
- D. Expert opinion: TetraTech's report by Jon D. Nelson
- E. Three letters from Orchids Paper Products' lawyers, J. Derek Hardberger dated 11/02/07, 11/05/07 and 12/05/07
- F. Letter from the Cherokee Nation's Administrator for Environmental Programs, Jeannine Hale
- G. Letter from the Secretary of Commerce and Tourism, Natalie Shirley
- H. Letter from the State Chamber of Commerce's Senior Vice President for Government Affairs, Ronn W. Cupp
- I. Letter from the Pryor Area Chamber of Commerce (PACC)
- J. Letters from State Senator Mary Easley
- K. Letters from State Senator Sean Burrage
- L. Letters from State Representative Ben Sherrer
- M. Comments from Kevin A. Easley, CEO, Grand River Dam Authority (GRDA)
- N. Letter from Mayes County Commissioners Alva Martin, Larry Ramsey, Melvin Pritchett
- O. Letter from the Town of Chouteau's Mayor, Jerry Floyd
- P. Letter from City of Pryor Creek's Mayor, Jimmy J. Tramel
- Q. Letter from Solae's Operational Manager, Cheri Lowe
- R. Letter from the MidAmerica Plant Managers Association's (MPMA) President, Jack A. Letbetter
- S. Letter from the OSU Center for innovation and Economic Development's President and Director of External Relations, Dr. Joseph W. Alexander

Due to the volume and similarity of the comments received, the DEQ did not respond to each individual comment letter. Instead, we summarized and combined the similar comments and then responded to the summarized comments. The capital letters at the beginning of the summarized comments in the following section represent the letters next to the entities above.

The summarized comments are as follows:

1. (A, E) Orchids Paper Products Co. and Oklahoma Ordnance Works Authority (OOWA) requested to extend the public comment period. Orchids Paper Products Co., OOWA and several other parties requested a public meeting regarding the proposed wasteload allocations.

Response #1: The public comment period was extended from November 5, 2007 to December 5, 2007. A public meeting was held in the City of Pryor Creek on October 19, 2010.

2. (F) The State must ensure that water quality based permit limits, including both concentration and loading limits, are established. Technology based limits are not acceptable. All limits should be based on federally approved water quality standards and ensure a significant margin of safety.

Response #2: Technology-based limits are acceptable if the limits also meet all water quality standards. The proposed limits will meet water quality standards with an acceptable margin of safety.

3. (F) More information is needed as to why there are no limits proposed for bacteria and nitrogen compounds.

Response #3: Fecal Coliform bacteria limits are already included in the Water Quality Management Plan for the OOWA and combined OOWA/Solae discharges. Fecal Coliform limits have been added to the Plan for the PICC discharge. Other proposed revisions relate to DO-demanding substances and will only affect DO-related permit limits. Other non-DO-related limits such as bacteria, pH, etc in current permits will stay in effect. Due to the nature of the industrial processes that are sources of the waste water, there is no need for technology-based permit limits for nitrogen compounds at this time. OOWA, Solae and PICC are required to monitor and report their discharge levels of nitrate. No limits for ammonia are proposed at this time. However assumed values for ammonia levels in the discharges, based on effluent monitoring, were included in the WLA model. As long as these levels are maintained, ammonia reductions would not be necessary to meet water quality standards. A footnote has been added to the WLA that will require continued monitoring of ammonia in the discharges. If in the future the effluent ammonia loading from the PICC or combined OOWA/Solae discharge consistently exceeds the assumed level on which the WLA is based, the WLA will have to be updated to account for the added loading. This will also be a condition of the discharge permits.

4. (A, F) Data used in modeling is too old and may not represent current conditions.

Response #4: The water quality data used to calibrate the model is over 10 years old. The flow data used to project the permit limits are up to date. It is not uncommon to use data over 10 years old in water quality modeling. The age of the data does not affect its usefulness for model calibration. Once the model is adequately calibrated, the inputs can be adjusted to reflect current or future conditions and the model will produce acceptable predictions of system response.

5. (F) A comprehensive biological assessment should be conducted to verify stream and water quality conditions.

Response #5: The Oklahoma Water Resources Board conducts biological assessments for Oklahoma streams which are incorporated into the Integrated Water Quality Report. The data which were collected are adequate for wasteload allocation purposes.

6. (F) It is unclear whether appropriate stream flows for Pryor Creek were accounted for in the analyses. The Neosho River was listed on the 2004 303(d) list as not meeting water quality standards. Additional verification is needed that the river is meeting standards and that the proposed modification will not adversely affect water quality. If the River is not meeting standards for a particular pollutant, no increased load of that pollutant should be allowed.

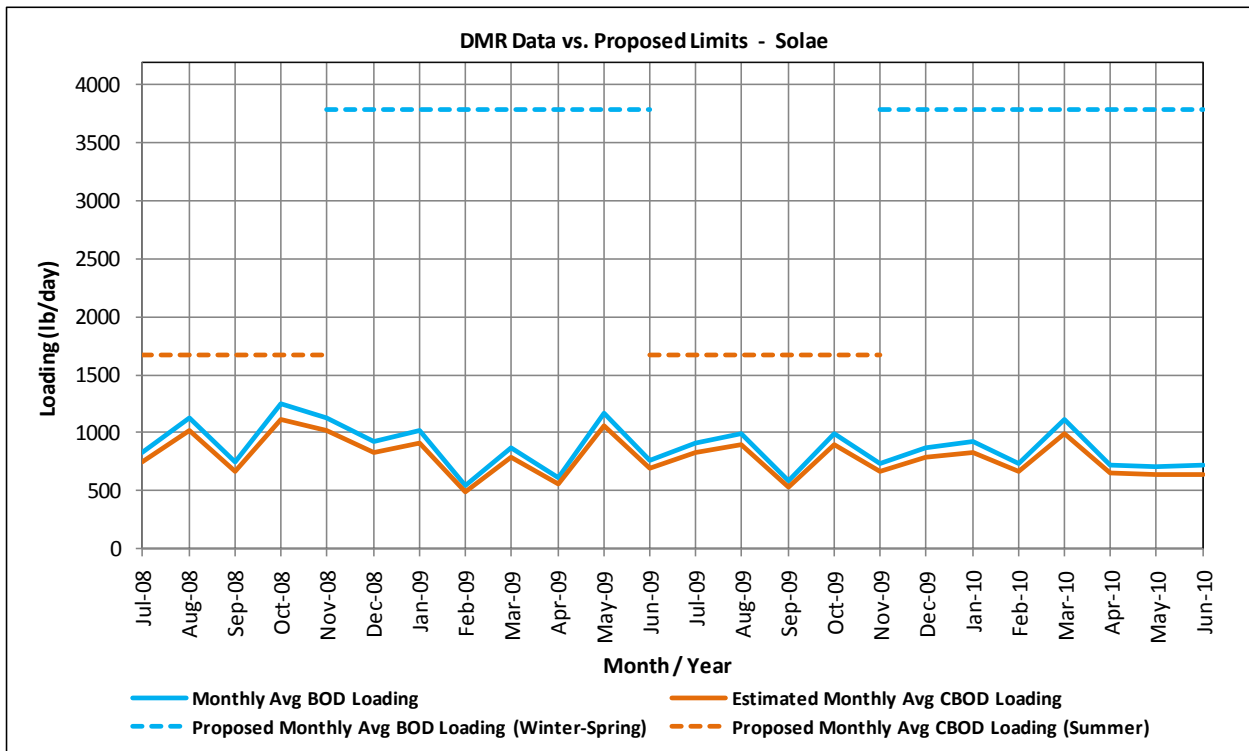
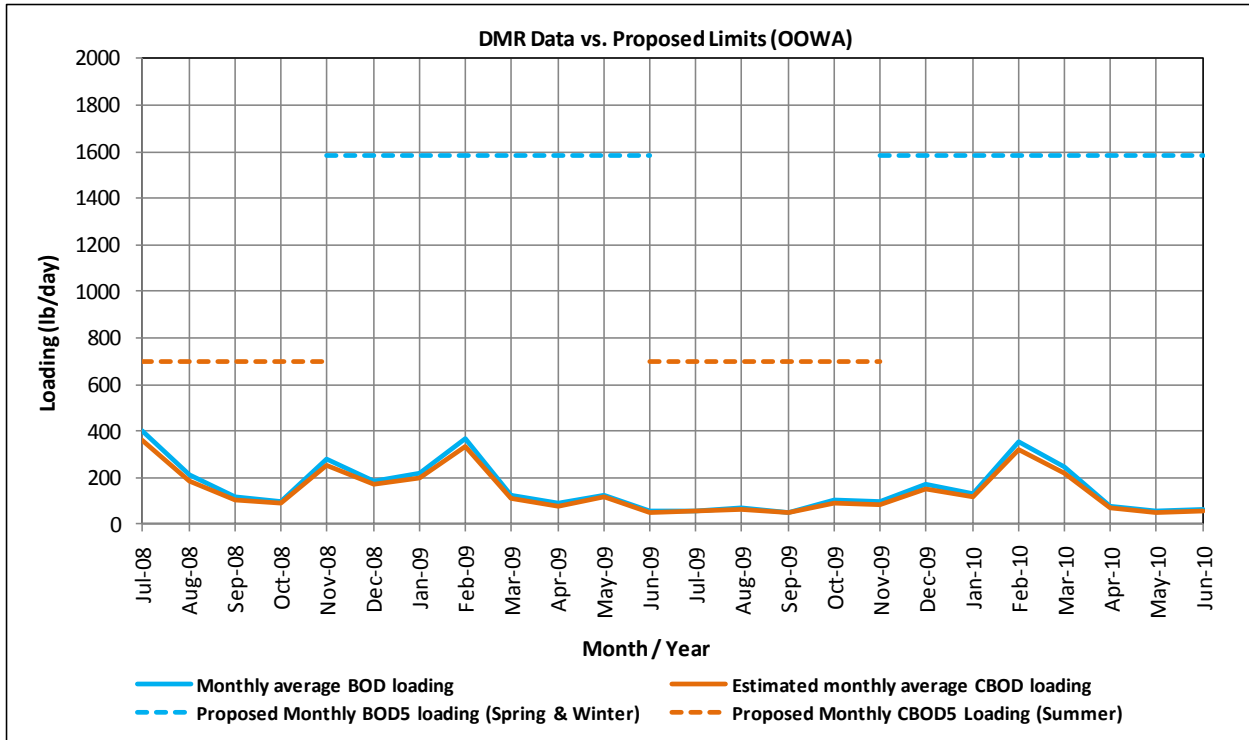
Response #6: The flow from Pryor Creek was correctly accounted for in the QUAL2E model. The Neosho River is included on the 2008 303(d) list for low DO impairment. The proposed limits represent a 56% load reduction for the summer season and no reduction for the other seasons. There is no load increase proposed in this revised wasteload allocation.

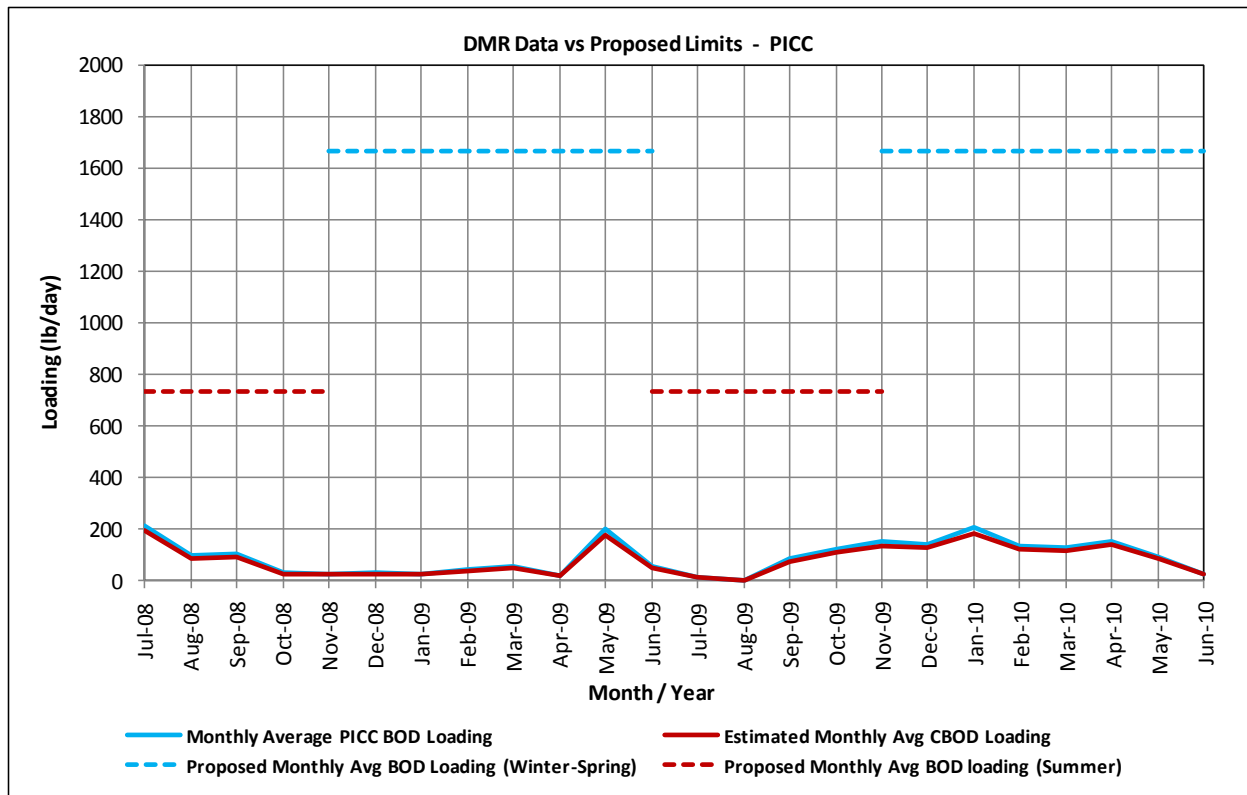
7. (A, Q) Processing the wasteload allocation and the permit should happen consecutively and not concurrently. Any action on the permit should be delayed until the wasteload allocation is finalized.

Response #7: Due to the prolonged public comment process for this wasteload allocation, it was not practical to process the wasteload allocation and the permit concurrently. The revised wasteload allocations (WLA) will be finalized before the new permits are issued.

8. (A, D, E) MidAmerica Industrial Park has low utility rates which are important for growth and economic development. Imposing the reduced wasteload allocations as proposed would stop growth of the Park and result in undue economic hardship.

Response #8: Actual performance data for the facilities over the past two years is shown in the graphs below along with the proposed wasteload allocations. These data show that the pollutant loads actually discharged by OOWA, Solae and PICC are significantly and consistently lower than the proposed wasteload allocations. The proposed wasteload allocations will not halt further development of the Park. Indeed, MidAmerica Industrial Park still has room to grow even with its current treatment capacity. The provision of additional treatment capacity in the future could allow for additional growth.





9. (A, D, E) The OOWA wastewater treatment plant cannot meet the proposed WLA for BOD with the loading from current industries in the park. Additional industries could not locate to the park.

Response #9: Please refer to Response #8.

10. (A) The work plan for the modified WLA study was submitted to the ODEQ by AquAeTer on June 28, 1995. The ODEQ approved the proposed field investigation on July 31, 1995. AquAeTer submitted a revised report to the OOWA on October 13, 1997. The report states that the annual 7Q2 flow was “technically invalid” for the Grand Neosho River, and used monthly 7Q2 flows and monthly temperatures for the spring, summer and winter seasons. Internal e-mails from the ODEQ indicate that the model would be “technically acceptable” as soon as the EPA Region 6 approved that seasonal 7Q2 flow and corresponding temperatures. However, the ODEQ reneged after 2000 and ultimately required AquAeTer to submit a report in 2006, over its objections, upon which this WLA is based.

Response #10: DEQ neither recommended nor agreed that monthly 7Q2 and monthly temperatures would be allowable for wasteload allocation development. Before the water quality standards change in 2000, use of the annual 7Q2 flow was required by the Oklahoma Water Quality Standards. The Standards change in 2000 allowed seasonal 7Q2 flows and seasonal temperatures to be used for WLA development, as was done in this study. Oklahoma’s Water Quality Standards have never allowed for use of monthly 7Q2 flows and monthly

temperatures for WLA development. Any references to acceptance pending EPA approval of WQS revisions allowing use of seasonal 7Q2 and seasonal temperature relate to seasonal flows and temperatures, not monthly flows or monthly temperatures. One email appears to discuss the “option” that the model could be run using monthly 7Q2 and seasonal temperature. However, the purpose of that exercise was not clear and the same email also says the model will be run using seasonal 7Q2 and seasonal temperature. There is no indication that any WLA resulting from conditions other than using a seasonal 7Q2 and seasonal temperature would be acceptable or approvable. Other correspondence both before and after that email makes it clear that seasonal flows and seasonal temperatures are required by the Water Quality Standards.

11. (A, B, E, Q) Monthly flows and monthly temperatures should be used as the basis of the model to develop proposed WLAs. OWRB shares this view and adopted changes to the Water Quality Standards in 1997 that were intended to allow this approach and overcome ODEQ objections. ODEQ has been arbitrary and capricious by not applying the OWQS as intended by OWRB.

Response #11: The commenters would prefer to use monthly 7Q2 flows and monthly temperatures for WLA development. However, only seasonal 7Q2 flows and seasonal temperatures were adopted by the OWRB and approved by the EPA in 2000. Use of monthly 7Q2 flows and monthly temperatures was neither considered, contemplated nor adopted. Seasonal 7Q2 flows and seasonal temperatures were used in the model for the proposed wasteload allocations, as stipulated in Oklahoma’s Water Quality Standards. OWRB agrees that our interpretation of the Water Quality Standards is appropriate. (See attached letter of December 22, 2010)

12. (A, B, E) Oklahoma’s Water Quality Standards are adopted by OWRB. The Courts show great deference to an agency’s interpretation of its own rules. ODEQ has not followed the Standards or the OWRB interpretation of the Standards that allow WLA modeling based on monthly flows and monthly temperatures.

Response #12: OWRB agrees that our interpretation of the Water Quality Standards is appropriate. We have followed the WQS and the WQS do not allow use of monthly 7Q2 and monthly temperature for wasteload allocation development. Also refer to Responses #10 and #11.

13. (A, C, Q) The issue is the interpretation of the amended Water Quality Standards adopted in 1998. ODEQ wants to interpret the amended Standards the same as the earlier Standards, which would nullify the amendment. The amended Standard uses the work “corresponding”, which was intended by OWRB to allow the modeling approach advocated by OOWA. The low flow and high temperature conditions required by ODEQ never actually occur in nature.

Response #13: As explained in Responses #10 and #11, the referenced change to the Water Quality Standards adopted in 1998 and approved by EPA in 2000 allows for use of seasonal 7Q2 flows and seasonal temperatures. Prior to that change, the annual 7Q2 flow was required to be used for all seasons. The DEQ interpretation of the Standard is not the same before and after the 2000 revision and the revision is not “a legal nullity”. The 2000 revision allows for use of

seasonal flows and temperatures, as was done in this study. OWRB agrees that our interpretation of the Water Quality Standards is appropriate.

Use of the word “corresponding” was intended to link the seasonal temperature to the seasonal 7Q2 for the corresponding season. In other words, the seasonal temperature for the winter season is to be used with the 7Q2 for the winter season, etc.

The claim that “low-flow and high temperature conditions never actually occur in the same month” or that the modeled conditions do not occur in Nature is not true. The flow in this part of Neosho River has been regulated since 1963. Flow data from January 1, 1964 through December 31, 2009 were obtained for the USGS station (USGS 07191500) on the Neosho River at HW 412 Bridge. A 7-day moving average flow was calculated. Then the minimum 7-day flow for each season was recorded together with the month in which it occurred. These statistics are shown in the following table:

Summer Season	Occurrences of Seasonal Minimum 7-day Moving Average Flow
June	4
July	2
August	8
September	8
October	24

As shown in the above table, in 10 out of 46 years (21.7%) the minimum 7-day moving average flows occurred in either July or August when the temperature was the highest during the summer season. Therefore, the statement “Because flows in the River are modified by the upstream dam, the low-flow and high temperature conditions never actually occur in the same month” is false.

14. (A, E) The ODEQ has acted in an arbitrary and capricious manner.

Response #14: The DEQ believes that all rules were followed properly. The DEQ has applied the rules in this case in the same way we have applied the rules to all other permittees consistently throughout the State.

15. (A, B, E) ODEQ has not followed the CPP which states that “loading allocations that will be implemented to achieve water quality standards in the future must account for foreseeable increase in pollutant loading.” (page 157) Potential for growth has not been considered.

Response #15: The key words are “to achieve water quality standards”. As projected by the calibrated QUAL2E model, the facilities have been allocated the maximum amount of CBOD loading the river can handle in the summer season and still meet the water quality standards. Any increase in the WLAs may put the river in danger of violating Oklahoma water quality standards. The proposed WLAs do consider and allow for future growth. See Response #8.

16. (A, E, Q) The ODEQ has not followed EPA technical guidance from 1997:

In areas where it can be shown that the 7Q10 will occur in a month with lower temperature, then the appropriate combination should be used rather than each of the extreme values. For example, critical low flows frequently occur during October in the northeast. An appropriate approach in such cases would be to define the 7Q10 and temperature conditions for each of the critical months (e.g. June-October), determine which month is most critical, and use that month in allocation calculations.

EPA, *Technical Guidance Manual for Developing Total maximum Daily Loads, Book II, Part I B-5* (March 1997).

Response #16: The citation is from an appendix of the guidance manual that presents sample problems, not the guidance itself. First, the critical low flow in Oklahoma is the 7Q2, not the 7Q10. Using the 7Q10 would be even more restrictive. Secondly, Oklahoma is not located in the northeast United States, the setting of the cited example. Therefore, the above referenced “guidance” is not applicable to Oklahoma. In any case, no EPA guidance cannot supersede duly adopted rules.

The USGS flow data show that critical low flows do occur in any given month during the summer season (please refer to statistics in Response #13).

17. (A, B, E, M, G) The ODEQ has not considered possible increases in stream flows due to minimum releases from upstream dams that may occur in the future. GRDA is studying such increased flow releases.

Response #17: It has been almost five years since DEQ first became aware of the possibility of an increase in minimum flows from the upstream dam. However, no consistent flow increase has ever materialized. Grand River Dam Authority’s (GRDA) most recent study report was disapproved by the Federal Energy Regulatory Commission (FERC) on December 29, 2009. We don’t know when or if an increase in minimum flow will actually occur. Wasteload allocation studies cannot be based on speculation about what critical low flows may be in the future.

18. (A, B, G) The WLA uses data from 1995 and the model does not reflect current watershed conditions.

Some of the specific conditions cited that may have changed include:

- The quantity or quality of other dischargers in the study area.
- Land use and associated nonpoint source loadings.
- Additional treatment at the OOWA facility.
- Impairment status of the Grand Neosho River.
- Availability of newer sampling methods and equipment.
- Increased background flow in the river due to minimum daily releases from the Kerr Dam.

Thus, any WLA based on the current model would be invalid, and likely to result in “absurd consequences” contrary to Oklahoma Law.

Response #18: The water quality data used in this WLA study is the best available data. The model was calibrated to simulate conditions when the data was collected. The conditions listed above would not be expected to affect the model calibration. More recent low flow, temperature, and effluent data were used in determining the proposed WLAs. Therefore, the DEQ believes the study is still valid and does not result in any “absurd consequences”. See also Response #4, #17 & #30.

19. (A) In any permitting situation, the environment is the most important issue. However, if the environment can be protected, and economic development can occur alongside a protected environment, then this is the best of all worlds. All environmental agencies make permitting decisions every day, based upon good science, and balancing the interests of economic development against the potential impacts to the environment. Here, the ODEQ permitting decisions, and the WLA are not based upon good science, and will have the effect of putting the OOWA WWTP out of compliance virtually from the time the permit limits come into effect, and will destroy further economic development in the crown jewel of economic development in Oklahoma, the MidAmerica Industrial Park.

Response #19: Available information shows that the OOWA WWTP can comply with the proposed WLA and still have room for growth. See also Response #8.

20. (A, G, H, J, K, L, M, N, O, P, R, S) Stakeholders from around Oklahoma as well as state and local government officials have expressed concerns about the proposed WLA revisions. Letters from the following people were submitted by OOWA in an attachment:

- 1) Kevin A. Easley, CEO, GRDA
- 2) Sean Burrage, Oklahoma State Senate
- 3) Mary Easley, Oklahoma State Senate
- 4) Ben Sherrer, House of Representatives, State of Oklahoma
- 5) Larry Ramsey, et al., Board of County Commissioners, Mayes County, Oklahoma
- 6) Jimmy J. Tramel, Mayor City of Pryor Creek
- 7) Jerry Floyd, Mayor, Town of Chouteau
- 8) Ronn W. Cupp, Senior Vice President, the State Chamber of Oklahoma
- 9) Barbara Hawkins, President, Pryor Area Chamber of Commerce
- 10) Dr. Joseph W. Alexander, President and Director of External Relations, OSU Center for Innovation and Economic Development Inc.
- 11) Jack A. Ledbetter, President, MidAmerica Plant Managers Association

The common concerns expressed in these letters are summarized as follows:

- MidAmerica Industrial Park is important to the economy of northeast Oklahoma;
- Park employment is very important to the nearby businesses and local communities.
- The park relies on low utility costs and available capacity to grow;
- The ODEQ should not require more restrictive limits.

Response #20: Clean water and a healthy environment are also important to growth and prosperity, a concept embodied in our environmental laws. The Clean Water Act and the Oklahoma Pollutant Discharge Elimination System Act prohibit DEQ from adopting a WLA or issuing a permit that does not comply with Oklahoma’s Water Quality Standards. The current

WLA does not comply with Oklahoma's Water Quality Standards during the summer season. The proposed revisions will result in compliance with Water Quality Standards. Also see Responses #8 and #19.

21. (A, B) Oklahoma's Water Quality Standards and implementation rules allow several options for determining flow and temperature conditions. Site-specific conditions should be used instead of rigid agency interpretations.

Response #21: As stated previously, the DEQ followed all the rules which allow the use of site specific seasonal (not monthly) 7Q2s and temperatures in wasteload allocation studies. Site specific conditions were used in this study. Monthly 7Q2 and monthly temperature as advocated by AquAeTer do not represent "real world" conditions. The options included in the cited rules are not applicable to this study. Also see Responses #10, #11 and #13.

22. (A, B, E) Grand River Dam Authority is studying minimum flow releases from its dams upstream of the discharge. ODEQ should consider the proposed flow conditions and impact on the WLA.

Response #22: Please refer to Response #17.

23. (A, D) The OOWA wastewater treatment plant cannot meet the proposed limits with current industries plus the new Gatorade plant.

Response #23: The Gatorade plant was closed and therefore no longer contributes to the OOWA wastewater treatment plant. Also see Response #8.

24. (E) Even though an interested party, Orchids was not part of the WLA evaluation process and did not have any direct contact from ODEQ regarding the WLA. The failure to include Orchids in the WLA process and to provide it direct notice of the proposed modification is not compliant with applicable notice requirements found in the CPP nor with federal regulations found at 40 CFR 25. Further, the Notice of the Proposed Modification did not provide enough information on its own to support substantive comments. As an example, it appears that a preliminary WLA model was run in 1996, then rerun in 1997 and in 2006 per ODEQ's mandated input changes. It is interesting to note that the 1997 model indicated that there was ample assimilative capacity of 18,163 lbs/day of BOD5 for the crucial month of October. This assimilative capacity has been since reduced radically to a daily maximum of 6701 lbs/day due to modeling input changes. However, the expected summary of the inputs and outputs their respective basis for each of the modeling runs were not found in the provided records. As such, the absence of this critical information prevents the thorough evaluation of the basis for the Proposed Modification and the projected reduction in BOD5 load. In short, the public has been denied the opportunity to fully evaluate the Proposed Modification.

Response #24: Orchids Paper Products Co. (Orchids) has a production facility located in the Mid-America Industrial Park. Orchids' wastewater is an indirect discharge to OOWA's treatment facility. Therefore, Orchids' wastewater is included in OOWA's wastewater discharge. The three direct discharge permit holders, OOWA, Solae and PICC, sponsored the WLA study on Neosho River and hired a consultant, AquAeTer, to conduct a stream survey and QUAL2E modeling for the study. None of the indirect dischargers in Mid-America Industrial

Park were directly involved in the WLA study. In effect, the interests of the indirect dischargers were represented by OOWA. Any coordination with their customers would be the responsibility of OOWA. DEQ and OOWA met numerous times regarding the WLA study and the proposed wasteload allocations for OOWA. DEQ followed all public participation requirements for revisions of the Water Quality Management Plan in this proceeding, including distribution of public notices to parties who have requested to be included on a contact list for such notices. All records related to this proceeding are available to anyone upon request under the Open Records Act.

25. (E) Incorrect input variables were used in the WLA modeling:

- Wrong input variables were used for temperature and low flow: the ODEQ required AquAeTer to run modeling utilizing the lowest critical flow and highest critical temperature without regard for the coincidental month of occurrence;
- Reduced effluent loading due to treatment was not factored into the model: a review of available ODEQ file material did not provide any information that confirmed the model accounted for the additional treatment installed and operated by OOWA and Solae since 1997;
- The model should be based on a single discharge point as to OOWA and Solae.

Response #25: DEQ believes that the input variables cited above were correctly used in the QUAL2E modeling:

- *DEQ followed the requirements of Oklahoma's Water Quality Standards for temperature and flow. Also see Responses #10, #11 and #13.*
- *Treatment type or capacity has no impact on the assimilative capacity of the Neosho River or on the WLAs for OOWA and Solae. However, the provision of additional treatment capacity in the future could allow for additional growth and still comply with the proposed WLAs. See Response #8.*
- *OOWA's discharge and Solae's discharge were treated as one single discharge point in the model.*

26. (A, G, K) MidAmerica Industrial Park is important to the economy of northeast Oklahoma and a solution that does not halt all growth should be found. No action should be taken until GRDA completes its studies of minimum upstream flow releases.

Response #26: The Grand River Dam Authority (GRDA) study report was disapproved by the Federal Energy Regulatory Commission (FERC) in 2009. Please also refer to Responses #8, #17 and #20.

27. (A) The ODEQ has arbitrarily and capriciously disregarded not only the OWRB standards, but also its own regulations and policies regarding WLAs and OPDES permit limitations. For example, the water quality standards provided the default values for the appropriate seasonal temperatures associated with a particular fishery class, applicable season data, and the associated criterion for dissolved oxygen. Okla. Admin. Code 785:45 app. G. However, ODEQ regulations allow the use of a different seasonal temperature if site-specific data of sufficient quantity and quality are available:

The seasonal regulatory temperatures specified in the OWQS shall be modeled as background conditions unless site-specific data is available. If at least one year of average daily stream temperature values is available the upper 90th percentile value calculated from the dataset for the season will be used.

Okla. Admin. Code 252:690-3-60(2). The *Continuing Planning Process*, a document issued by the ODEQ with contribution from the OWRB and the Oklahoma Corporation Commission, further provides:

In those cases, where sufficient site-specific data is available, the appropriate seasonal temperature should be calculated as the upper 90th percentile value of the average daily temperatures for the season *or a portion thereof*, if appropriate.

CPP 121 (emphasis added). Thus in situations like the OOWA's where ample site-specific data are available, ODEQ guidance clearly authorizes the use of a monthly alternative to the seasonal temperatures.

*Response #27: DEQ has followed all applicable rules in this proceeding and has applied them in a consistent manner. The rules do allow using site-specific seasonal temperatures and in fact site-specific seasonal temperatures were used in the development of this proposed WLA. The cited reference to the DEQ rules allow for use of a seasonal temperature calculated as "the upper 90th percentile value **calculated from the dataset for the season**" (emphasis added). This rule clearly does not allow for use of a monthly temperature. Rather the site specific temperature is to be calculated from "the dataset for the season". Provisions of the CPP do not supersede duly adopted rules. "Because the CPP is not promulgated by the DEQ as a rule, implementation procedures found in OAC 785:46 and OAC 252:690 take precedence over those outlined in the CPP, should there be any inconsistencies." (CPP, page 60) In any case, it would not be "appropriate" to calculate a temperature based on a portion of the season in this case since measured stream values show that high temperature and low flow do coincide at various times over the summer season. Please see Response #13.*

28. (C) Everyone involved agreed to use the steady state model, QUAL2E, which is stipulated under the Oklahoma Administrative Code (OAC) 252:690-3-62(1), as follows:

"Complex models are appropriate for complex systems, multiple discharges, or large systems involving point source discharges of 1.0 MGD or more. Typical models include various versions of QUAL2, RIVERMOD, HSPF, and the Basins system."

Since QUAL2 is a steady-state model, one of the ways to force the model to project accurate critical conditions under dynamic low flow and temperature conditions is to model monthly low flows and the corresponding temperatures that occur during these projected low-flow conditions within the same month. If the model is not run in this manner, the result is an artificial condition in which a low flow that occurs in October is paired with a high temperature that occurs in July or August, creating a condition that cannot occur in nature and therefore does not reflect the true WLA.

By making multiple model runs with monthly flows and temperature, the QUAL2E model better represents the River dynamics than a single flow and temperature condition.

Response #28: The QUAL2E model is a steady state model which has been widely used to determine WLAs for facilities like OOWA in Oklahoma and across the nation. Oklahoma's Water Quality Standards and implementation rules require WLAs to be set for critical conditions using a seasonal 7Q2 and seasonal temperature. The approach advocated by AquAeTer would artificially increase the regulatory flow input to the model. Even the smallest "monthly 7Q2" during a season is always greater than the "seasonal 7Q2" required by Oklahoma regulations. Measured stream values show that high temperature and low flow do coincide at various times over the summer season so a "condition that cannot occur in nature" has not been created. Also see Responses #10, #11, #12 and #13.

29. (E) DEQ failed to provide the public any basis for its allocation between PICC, Solae and OOWA thus preventing a deliberate, fair allocation process.

Response #29: The basis for the new wasteload allocations between PICC, Solae and OOWA was provided in AquAeTer's report. The proposed wasteload allocations for these three facilities were calculated by applying the same percent reduction rate to their current wasteload allocations for the summer season. This is a commonly used and widely accepted method for allocating loads and is specifically listed in the CPP and the DEQ Water Quality Standards Implementation Plan (OAC 252:690, Appendix A).

Comments received at the public meeting:

A public meeting was held in Pryor on October 19, 2010. There were 15 people that attended the meeting. Written comments were received at the meeting from the following commenters:

- a. Larry Williams, MidAmerica Industrial Park , dated July 14, 2008
- b. Jason Stutzman, MidAmerica Industrial Park, dated September 24, 2010
- c. Harriett Dunham, Century 21 Neokla, Inc., dated October 19, 2010
- d. Ronald C. Reiser, RCB Bank, dated October 19, 2010
- e. Ivan B. Williams, Williams Construction, dated October 19, 2010

The following people made oral comments which were recorded at the meeting:

- I. Ms. Linda Martin
- II. Ms. Harriett Dunham
- III. Mr. Jason Stutzman
- IV. Mr. Larry Williams
- V. Mr. Ivan Williams
- VI. Mr. John Hawkins
- VII. Mayor Jimmy Tramel

These comments are summarized and similar comments combined below. The letters and numbers shown above are used to identify the commenters in the summary.

30. (a) With the assistance of OOWA's consultant, Dr. Ron Jarman, Larry Williams submitted a comment letter on the proposed 2008 303(d) list on July 14, 2008 as it relates to dissolved oxygen in the Neosho River.

Response #30: The Oklahoma Water Resources Board (OWRB) recommended adding the dissolved oxygen impairment for this segment of Neosho River (OK121600010280_00) based on extensive DO monitoring data demonstrating impairment. The 2008 303(d) list has been approved by the EPA. This has no bearing on this WLA study.

31. (b, III) Jason Stutzman (Director of Environmental Affairs) with OOWA submitted a comment letter dated September 24, 2010 regarding a draft permit and fact sheet for OOWA.

Response #31: This comment letter is related to a draft permit rather than the proposed wasteload allocations. It will be addressed through the permitting process.

32. (c, d, e, II, III, V, VI) Mid-America Industrial Park is important to the economy of northeast Oklahoma. More growth would be possible if the OOWA permit limits are not reduced.

Response #32: Please refer to responses # 8, #19 and #20.

33. (I) Ms. Linda Martin, Special Environmental Counsel for the OOWA, objected to the entire proceeding not being transcribed, incorporated the OOWA comments of December 5, 2007 and September 24, 2010 for the record, and stated that OOWA did not accept the accuracy of the slide presentation at the meeting by declining to comment on the slides.

OOWA reserves all of its rights and makes no admissions legal or factual.

Response #33: The ODEQ's public meeting procedures for WLAs or TMDLs, as specified in the CPP, consist of three parts: 1). Presentation; 2). Questions and Answers; 3). Formal comments. Parts 1 and 2 are informal and are not a part of the administrative record. Formal comments for the record are recorded or transcribed. The previously submitted comments are included and have received a response.

34. (IV) Jason Stutzman: I would like to request respectfully that the ODEQ staff follow up on that question that I had earlier regarding whether or not a staff member committed to a 15 percent safety factor as opposed to the 20 percent safety factor. What I'm requesting of the ODEQ staff is literally a review of the files regarding a commitment on behalf of a DEQ staff member regarding the use of the 15 percent safety factor as opposed to a 20 percent safety factor and if indeed there is such a commitment there, will the ODEQ management honor that commitment?

Response #34: The DEQ files were reviewed for references related to margin of safety (MOS). A DEQ letter to Jason Stutzman dated June 23, 2005 stated that the 20% MOS as calculated by AquAeTer was actually only approximately 15% if the MOS was calculated correctly. The MOS is based on the total assimilative capacity of the river system, not the permitted discharge loadings as AquAeTer calculated it. A 15% MOS is the minimum required by the Oklahoma

CPP. According to the AquAeTer report, all parties agreed to model only the permitted loadings with 20% MOS (which is equivalent to a correctly calculated 15% margin of safety) during the April 24, 2006 meeting. The selected margin of safety is appropriate.

35. (VII) Mayor Jimmy Tramel: All I want to say is that as Mayor of Pryor, the industrial park is the life blood of the community. Without the community -- without the industrial park we don't have the jobs, so we don't have the schools, we don't have the infrastructure for Pryor to grow. As you all know or you may not know, the city of Pryor is totally dependent upon sales tax to fund the services of the community. We're the only state in the United States that is totally dependent on sales tax. So we're a separate entity and we work close together. And so the industrial park does their thing, they bring businesses in; people come to live in Pryor and to shop in Pryor. Anything that we do that impacts their ability to bring businesses into Pryor impacts our quality of life in Pryor, Oklahoma. And we don't want that to happen. We want to sustain and improve our quality of life. And in doing so we need to make sure that we can bring businesses, top notch businesses, and whatever it takes to do that that's what we need to do. Okay. We do not need to change the standards; we just need to go forward with what we've got.

Response #35: Please refer to responses #8, #19 and #20.

208 INDUSTRIAL FACT SHEET

FACILITY:	Oklahoma Ordnance Works Authority (OOWA)	CITY/TOWN:	PRYOR
LEGAL:	SE S10, T20N, R19EIM	COUNTY:	MAYES
NPDES #	OK0034568	SIC CODE:	4952
STATE FACILITY NUMBER:	I-46000270		
OPERATIONS DESCRIPTION:	OOWA is a State-beneficiary public trust which manages the Mid-America Industrial Park, operates a potable water treatment plant (WTP) serving the industrial park.		

OUTFALL NUMBER: **Outfall 007** (via Outfall 008)
 WASTE WATER DESCRIPTION: Combinations of process wastewaters, vehicle wash waters, non-contact cooling water, cooling tower blowdown, boiler blowdown, treated groundwater remediation wastewater and water treatment plant filter backwash plus sanitary wastewater from a small residential community near the industrial park.

TREATMENT PROCESS: **Sequential Batch Reactor with UV disinfection**

EVALUATION TYPE: **Calibrated Water Quality Model**

RECEIVING STREAM:	Neosho River	SEGMENT:	121600
STREAM CLASS:	Perennial		
CRITICAL EFFLUENT FLOW(MGD): (Highest 30 day average flow, enter the value or <u>not available</u>)	2.11	POINT OF DISCHARGE	SE/SW/SE, Section 10, Township 20N, Range 19EIM
DESIGN AVG. DAILY FLOW (MGD):	4.6	LATITUDE:	N 36° 13' 13"
		LONGITUDE:	W 95° 16' 01"
7 DAY 2 YEAR LOW FLOW (MGD):	189 Summer 1274 Spring 369 Winter		

WASTELOAD ALLOCATION: For Dissolved Oxygen Demanding Substances (Final Discharge only, no internal monitoring points)	Summer Limits (Jun-Oct): 697 lb/day CBOD ₅ , 2138 lb/day TSS Seasonal Limits (Nov-May): 1584 lb/day BOD ₅ , 2138 lb/day TSS Year round: Fecal coliform: 200 organisms/100 ml monthly geometric avg and 400 organisms/100 ml daily max
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OUTFALL NUMBER: **Outfall 008[‡]**

WASTE WATER DESCRIPTION: The discharge through Outfall 008 consists of the combined flows through Outfalls 004 (See 208 for Solae) and 007

RECEIVING STREAM:	Neosho River	SEGMENT:	121600
STREAM CLASS:	Perennial		
		POINT OF DISCHARGE	SW/SE/SE, Section 14, Township 20N, Range 19EIM
		LATITUDE:	N 36° 12' 23" N
		LONGITUDE:	W 95° 14' 44" W

WASTELOAD ALLOCATION	pH values shall be between 6.5 and 9.0 Fecal coliform: 200 organisms/100 ml monthly geometric avg and 400 organisms/100 ml daily max
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‡ Monitoring of ammonia loading will be required. If in the future the effluent ammonia loading from the discharge consistently exceeds the assumed level on which this WLA is based, the WLA will have to be updated to account for the added loading.

EPA APPROVAL DATE: **Pending**
 RECORD LAST UPDATE: 1/6/2011

208 INDUSTRIAL FACT SHEET

FACILITY: Pryor Industrial Conservation Corporation (PICC) CITY/TOWN: PRYOR
LEGAL: Sections 14, 15, 22 and 23, Township 20N, COUNTY: MAYES
Range 19EIM
NPDES # OK0000272 SIC CODE: 2621
STATE FACILITY NUMBER: I-46000220
OPERATIONS DESCRIPTION: PICC operates a discharging wastewater treatment system providing supplemental treatment for process wastewater from the Georgia-Pacific and NGC Industries paper plants in the Mid-America Industrial Park, plus treated and disinfected domestic wastewater from the Georgia-Pacific plant.

OUTFALL NUMBER: **Outfall 001[‡]**

WASTE WATER DESCRIPTION: **Process wastewater**

TREATMENT PROCESS: **Two flow-through facultative lagoons operated in series**

EVALUATION TYPE: **Calibrated WQ model**

RECEIVING STREAM: **Neosho River**

SEGMENT: **121600**

STREAM CLASS: **Perennial**

CRITICAL EFFLUENT FLOW(MGD):

POINT OF DISCHARGE

(Highest 30 day average flow, enter the value or not available)

4.47

NW/SE/SE, Section 23, Township 20N, Range 19EIM

DESIGN AVG. DAILY FLOW (MGD):

3.7

LATITUDE: **N 36° 11' 34"**
LONGITUDE: **W 95° 14' 46"**

7 DAY 2 YEAR LOW FLOW (MGD):

Summer Limits (Jun-Oct): 732 lb/day CBOD₅,

WASTELOAD ALLOCATION:

Seasonal Limits (Nov-May): 1665 lb/day BOD₅,

For Dissolved Oxygen Demanding Substances (Final Discharge only, no internal monitoring points)

**Year round limits: 2415 lb/day TSS
pH 6.5 - 9.0**

**Year round: Fecal coliform: 200 organisms/100 ml monthly geometric avg
and 400 organisms/100 ml daily max**

‡ Monitoring of ammonia loading will be required. If in the future the effluent ammonia loading from the discharge consistently exceeds the assumed level on which this WLA is based, the WLA will have to be updated to account for the added loading.

EPA APPROVAL DATE: **Pending**
RECORD LAST UPDATE: **1/6/2011**

208 INDUSTRIAL FACT SHEET

FACILITY:	Solae Company	CITY/TOWN:	PRYOR
LEGAL:	NE/SW and NW/SE Section 10, T20N, R19EIM	COUNTY:	MAYES
NPDES #	OK0034568	SIC CODE:	2075
STATE FACILITY NUMBER:	I-46000500		
OPERATIONS DESCRIPTION:	Solae operates a plant producing soy protein isolates and related intermediate products from soybean flakes. The facility produces a soy whey wastewater.		

OUTFALL NUMBER: Outfall 004 (via Outfall 008)			
WASTE WATER DESCRIPTION: Process wastewater			
TREATMENT PROCESS: Four anaerobic basins with two extended aeration basins with clarifiers/nitrification/denitrification			
EVALUATION TYPE: Calibrated Water Quality Model			
RECEIVING STREAM:	Neosho River	SEGMENT:	121600
STREAM CLASS: Perennial			
CRITICAL EFFLUENT FLOW(MGD): (Highest 30 day average flow, enter the value or <u>not available</u>)	2.65	POINT OF DISCHARGE	NW/SE/SE, Section 10, Township 20N, Range 19EIM
DESIGN AVG. DAILY FLOW (MGD):	3.3	LATITUDE: LONGITUDE:	N 36° 13' 25" W 95° 16' 03"
7 DAY 2 YEAR LOW FLOW (MGD):	189 Summer 1274 Spring 369 Winter		

WASTELOAD ALLOCATION: For Dissolved Oxygen Demanding Substances (Final Discharge only, no internal monitoring points)	Summer Limits (Jun-Oct): 1670 lb/day CBOD ₅ , 5642 lb/day TSS Seasonal Limits (Nov-May): 3795 lb/day BOD ₅ , 5642 lb/day TSS
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OUTFALL NUMBER: Outfall 008 [‡]			
WASTE WATER DESCRIPTION: The discharge through Outfall 008 consists of the combined flows through Outfalls 007 (See 208 for OOWA) and 004			
RECEIVING STREAM:	Neosho River	SEGMENT:	121600
STREAM CLASS: Perennial			
		POINT OF DISCHARGE	SW/SE/SE, Section 14, Township 20N, Range 19EIM
		LATITUDE: LONGITUDE:	N 36° 12' 23" W 95° 14' 44"

WASTELOAD ALLOCATION	pH values shall be between 6.5 and 9.0 Fecal coliform: 200 organisms/100 ml monthly geometric avg and 400 organisms/100 ml daily max
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[‡] Monitoring of ammonia loading will be required. If in the future the effluent ammonia loading from the discharge consistently exceeds the assumed level on which this WLA is based, the WLA will have to be updated to account for the added loading.

EPA APPROVAL DATE: Pending
RECORD LAST UPDATE: 1/6/2011



**STATE OF OKLAHOMA
WATER RESOURCES BOARD**

www.owrb.ok.gov

December 22, 2010

Shellie Chard-McClary
Oklahoma Department of Environmental Quality
707 N. Robinson
Oklahoma City, OK 73102

Dear Ms. Chard-McClary:

This letter is in response to our recent conversation regarding the Oklahoma Department of Environmental Quality's (ODEQ) interpretation, and subsequent implementation, of the dissolved oxygen criterion in the Oklahoma Water Quality Standards (OWQS). Specifically, to determine allowable loads, the seasonal 7Q2 and applicable seasonal temperature are determined for seasons with the dates established in Table 1 of Appendix G. The use of monthly temperatures or flows in lieu of seasonal temperatures or flows is not included in the approved OWQS. Consequently, ODEQ has appropriately implemented the dissolved oxygen criteria in this permit.

If you have any questions or comments, feel free to call either Phil Moershel or myself at the OWRB at (405) 530-8800.

Sincerely,

Derek Smithee, Director
Water Quality Programs Division