UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

NOV 14 2012

Dave Phelps, Supervisor, Construction Permit Section
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Windsor Heights, Iowa 50324

RE: John Deere Foundry Project 12-305 Prevention of Significant Deterioration Permit Comments

Dear Mr. Phelps:

On October 15, 2012, the United States Environmental Protection Agency (EPA) Region 7 received notification of the Iowa Department of Natural Resources' (IDNR) intent to issue a Prevention of Significant Deterioration (PSD) construction permit to John Deere Foundry (John Deere) to modify the existing foundry in Waterloo, Iowa. We have completed our review of the draft permits and have the following comments.

Comment #1: On page 3 of the final permit application, John Deere indicated that there would not be an increase in potential emissions from the installation of the new induction furnace (EU 005-IF). John Deere appears to have based this assessment on the fact that the emission limit from the existing baghouse, that will control emissions from EU 005-IF along with the emissions from two existing furnaces, is not changing. John Deere therefore did not include any increase in emissions associated with EU 005-IF. While emissions from the new equipment may emit within the allowable limit set in a previous permit, EPA believes that there will be additional loading to the baghouse resulting in an increase in actual emissions from EU 005-IF. It appears John Deere's methodology either: (1) would be considered project netting (i.e., taking into account some emissions decreases associated with this project without conducting a complete netting analysis) or (2) does not account for the increase in emissions from EU 005-IF since the actual emissions are currently far enough below the permitted emission limits such that, with the addition of the new furnace, the actual emissions will increase but will remain below the permitted limit. It appears that IDNR may not have concurred with John Deere either since permit 98-A-957-P6 (EP IFBH) includes a PM_{10} limit of 1.05 pounds per hour from the new induction furnace. However, it is less clear to EPA whether the 1.05 pounds of PM_{10} per hour is included in the project emission increase calculations. EPA recommends that IDNR ensure that the increase associated with EU 005-IF is included in the project emission increase calculations. EPA further recommends that IDNR ensure that "project netting" was not allowed in the PSD applicability determination and that, if any emission decreases were assumed in the project emission increase calculations, IDNR should either remove the emission decreases or require John Deere to prepare a complete netting analysis.

Comment #2: EPA notes that IDNR's project emission increase calculations as indicated on page 6 of the Fact Sheet does not appear to match John Deere's calculations in Table 1 of the final application. For instance, IDNR lists the PM_{10} increase as 14.3 tons per year and John Deere lists the increase as 0.87 tons per year. EPA recognizes that John Deere's Table 1 does not include increases associated with debottlenecked emission units. Even including increases from debottlenecked emission units, which were included in total as an attachment to an email dated August 16, 2012 from John Deere to IDNR, the project emission increases as calculated by IDNR and John Deere do not appear to match. Unfortunately it does not appear that either IDNR or John Deere prepared a complete listing of all emission units impacted by this project (new units, modified units, and debottlenecked units) and the emission increases that will occur from those emission units. EPA was unable to locate any details how IDNR arrived at the project emission increase totals listed in Table 3 of page 6 of the Fact Sheet. EPA recommends that IDNR follows its past practices by providing a detailed list that includes all of the increases associated with this project, including new, modified, and debottlenecked emission units for the public record.

Comment #3: To expand on comment #2, EPA was unable to locate a detailed listing of all the debottlenecked emission units associated with this project and their associated emission increases. The only document that EPA was able to locate that addressed debottlenecked emission units was the attachment to the August 16, 2012 email referenced in comment #2. This document only listed the total emission increase from all debottlenecked units but did not provide the specific emission increase on an emission unit basis. EPA recommends that IDNR make available a detailed list of debottlenecked emission units and their associated emission increase. Without the detailed breakdown, it would be impossible for not only EPA and the public to independently verify the emission increase calculations but also IDNR. In addition, John Deere has received permits for several projects over the last couple years as indicated by IDNR's website and the list of emissions units being debottlenecked as a result of this project would be needed to determine whether this project should be combined with other recent projects to determine PSD applicability. Finally, any assumptions made in any previous permitting actions based on an emission unit being bottlenecked should be reviewed to determine if those assumptions are still valid. EPA recommends that IDNR follow its past practices by obtaining the detailed debottlenecking calculations and making them publicly available to verify that none of the above situations are occurring.

Comment #4: EPA was not able to locate in either John Deere's permit application or IDNR's Fact Sheet an explanation why the VOC emissions from the core making would increase to nearly three times the current permitted limit despite the addition of only three new core machines to the existing eleven, especially since the three new core machines will be enclosed and will capture the catalyst VOC emissions. EPA requests an explanation as to why such a significant increase in VOC emissions is occurring as a result of this project.

Comment #5: IDNR established VOC emission limits in draft permit 12-A-501-P (EU P-073) and draft permit 12-A-502-P (EU P-074). Footnote #2 states that the VOC emission limit "... applies only to VOC emissions due to natural gas combustion in the core oven". It is not apparent what this means or how this would be implemented. John Deere stated on page 6 of the final permit application that "due to the water-based nature of the core coatings, only emissions from natural gas combustion are anticipated". IDNR may have been attempting to capture this concept in footnote #2. It is EPA's

understanding that there is one stack for each core oven. EPA therefore is unsure how John Deere would differentiate between VOC emissions from the natural gas combustion from the VOC emissions that may actually be emitted as part of the drying process. EPA recommends that IDNR clarify this situation. EPA also recommends that if VOC emissions exist as a result of the drying process (other than from the natural gas combustion) IDNR should determine whether further PSD evaluation is needed for these core ovens.

Comment #6: IDNR states on page 8 of the Fact Sheet that the state of Iowa has not adopted 40 CFR Part 63, Subpart EEEEE. However, page 9 of the Fact Sheet indicates that Iowa did adopt this NESHAP at 567 IAC 23.1(4)"de". EPA believes that IDNR has adopted this standard but is requesting clarification on this issue.

We appreciate the opportunity to provide what we hope you will find to be constructive comments. Please contact David Peter at (913) 551-7397 if you have any questions or comments regarding this letter.

Sincerely,

Mark A. Smith, Chief
Air Permitting and Compliance Branch
Air and Waste Management Division