

NATURAL RESOURCES BOARD AGENDA ITEM

SUBJECT: Presentation of the 2008 Laboratory of the Year Awards

FOR: MARCH 2008 BOARD MEETING

TO BE PRESENTED BY: David Webb, Bureau of Science Services

SUMMARY:

The Department presents annually the Registered Laboratory of the Year Awards to recognize Wisconsin's best registered laboratories for their outstanding commitment to producing high quality data. Awards are offered in two categories: Large Registered Facility and Small Registered Facility. This will be the 13th consecutive year the Department has presented these awards.

The 2008 Large Registered Facility Award will be presented to the Neenah Paper - Whiting Wastewater Treatment Plant. The 2008 Small Registered Facility Award will be presented to McCain Foods USA, Inc.

The nomination papers for each laboratory, along with an overview of the award selection criteria, are included in the attached memorandum.

RECOMMENDATION:

LIST OF ATTACHED MATERIALS:

- | | | | | | |
|----|-------------------------------------|---|-----|-------------------------------------|----------|
| No | <input checked="" type="checkbox"/> | Fiscal Estimate Required | Yes | <input type="checkbox"/> | Attached |
| No | <input checked="" type="checkbox"/> | Environmental Assessment or Impact Statement Required | Yes | <input type="checkbox"/> | Attached |
| No | <input type="checkbox"/> | Background Memo | Yes | <input checked="" type="checkbox"/> | Attached |

APPROVED:

/s/
Bureau Director,

/s/
Administrator,

/s/
Secretary, Matt Frank

2/15/08
Date

2/18/08
Date

3/7/08
Date

- | | |
|----------------------------|-------------------------|
| cc: Laurie J. Ross - AD/5 | Joseph W. Renville LS/5 |
| David Webb - SS/7 | Alfredo Sotomayor SS/7 |
| Susan Crawford - AD/5 | |
| John R. Sullivan - SS/7 | |
| Camille Johnson SS/Wautoma | |

DATE: February 14, 2008

TO: Natural Resources Board Members

FROM: Matthew J. Frank, Secretary

SUBJECT: 2008 Registered Laboratory of the Year Awards

The Department has presented the “Registered Laboratory of the Year Awards” since 1996. The awards recognize registered laboratories that have developed superior systems for producing high quality environmental data. Registered laboratories perform testing solely on behalf of their own facility, municipality, subsidiary or corporation under common ownership or control. The Laboratory Certification and Registration Program coordinates nomination and selection activities, but a laboratory can be nominated by anyone familiar with it and its operations.

Yearly recipients are selected based on the following criteria:

1. The laboratory’s commitment to exceeding the minimum requirements for compliance with Department rules and guidance.
2. The laboratory’s commitment to correcting instances of non-compliance.
3. The measures taken by the laboratory to ensure the production of high quality data.
4. The manner in which the laboratory uses its quality assurance program to evaluate and improve laboratory procedures.
5. The laboratory’s engagement in other noteworthy practices or achievements deserving recognition.

Two awards are presented, one for a small and another for a large facility. Only registered laboratories are eligible to be nominated. Laboratories that meet any of the following criteria may be nominated to receive the “Small Facility” award:

- Registered to perform limited testing, such as that covered by Chapter NR 149 test categories 1 through 4: oxygen demand, nitrogen, phosphorus, and solids.
- Associated with a facility with an average annual flow of less than 1 MGD.
- Unaffiliated with a large corporation or large public entity.

Laboratories that meet any of the following criteria may be nominated to receive the “Large Facility” award:

- Registered to perform tests of greater complexity in any of the Ch. NR 149 test categories.
- Associated with a facility with an average annual flow greater than 1 MGD.
- Affiliated with a large corporation or large public entity.

2008 Laboratory of the Year Award Selections**Large Registered Facility Award: Neenah Paper – Whiting Wastewater Treatment Plant**

The laboratory is registered to perform testing for biochemical oxygen demand (BOD) and total suspended solids (TSS). The plant has an average annual flow of 2 MGD. The laboratory has been evaluated on-site six times by the Laboratory Certification and Registration Program. The laboratory was especially commended for performing additional quality control analyses and for achieving consistent high quality results among the four operators in charge of testing.

Small Registered Facility Award: McCain Foods USA, Inc.

The laboratory is registered to perform testing for biochemical oxygen demand (BOD) and total suspended solids (TSS). The laboratory has been evaluated on-site five times by the Laboratory Certification and Registration Program. McCain Foods USA was commended for the maintenance and organization of its records, the consistency of the results produced by the two analysts, and the effective communication among personnel.

Copies of each laboratory's nomination papers are attached.



2008 Wisconsin DNR Registered Lab of the Year Nomination Form

The Wisconsin Department of Natural Resources Registered Lab of the Year Awards annually recognize registered laboratories for their outstanding commitment to producing high quality data. One award is presented in each of two categories: Small Facility and Large Facility. Small facilities include municipal wastewater treatment laboratories with a flow of less than 1 mgd, or labs that perform limited types of testing (e.g., BOD, nitrogen, phosphorus, and solids). Large facilities may include major municipal wastewater treatment laboratories with flows greater than 1 mgd, labs that perform tests of greater complexity (e.g., metals, PCBs, VOCs) or labs that process a large volume of samples annually.

Nominees for the award must be registered facilities located in the State of Wisconsin. Certified laboratories will not be considered. Anyone, including DNR staff, can nominate a laboratory for one of the awards, but laboratories may not nominate themselves. There is no limit on the number of times that a laboratory may be nominated, and a laboratory may be nominated for (or receive) an award in consecutive years. In the event that insufficient nominations are received for either category, the Department reserves the right to not issue either award.

To nominate a registered laboratory for the 2008 Lab of the Year Award, complete the following form and include a summary of no more than three pages describing the reasons why you are nominating the laboratory for the award. Be sure to address the following considerations in your summary (please note - all considerations do not necessarily have to be addressed for a laboratory to be chosen to receive the award):

Nomination Considerations:

- Does the laboratory demonstrate a commitment to exceeding the minimum requirements for compliance with Department rules and guidance?
- Has the laboratory demonstrated a high level of commitment to correcting instances of non-compliance?
- What measures does the laboratory take to ensure the production of high-quality data?
- Does the laboratory's quality assurance program ensure that quality control data is used to evaluate and improve laboratory procedures?
- For which other practices or achievements should the laboratory be recognized?

Completed nomination forms must be received by January 18, 2008 in order for the candidate to be considered. A nomination committee will decide the award winners. Please send the completed nomination form and summary to: Lab of the Year Award, c/o Camille Johnson, WI DNR, 427 East Tower Drive, Suite 100, Wautoma, 54982. Or fax 920-787-2477 or email: camille.johnson@wisconsin.gov.

Category: Small Registered Large Registered

Name of Laboratory Nominated: McCain Foods Inc.

Laboratory Director: Mr. Dale Johnson – Barbara Lodl and Kathy Asuquo analysts

Laboratory Address: PO Box 10, Plover, WI 54467

Laboratory Phone #: 715-344-0112

Nominator (your name): Camille Johnson

Your Affiliation with Nominee: Auditor

Your Address: 427 E Tower drive, Wautoma

Your Phone #: 920-787-4686 x3019

McCain Foods Inc. Laboratory
2008 LOY Nomination
Small Registered Lab

The McCain Foods Inc. Laboratory is managed by Dale Johnson. The primary analysts are Kathy Asuquo and Barbara Lodl. Effluent, influent, primary, secondary and clarifier samples are analyzed daily for BOD and TSS. Only effluent samples are required under their WPDES permit.

➤ **Does the laboratory demonstrate a commitment to exceeding the minimum requirements for compliance with Department rules and guidance?**

Yes, the lab demonstrates an unyielding commitment to exceeding the minimum requirements for compliance. Quality control (QC) samples are analyzed a great deal more often than required. Replicates, blanks and GGA standards are analyzed every day. Control charts are created for all QC measures (including non-required QC) and control limits are calculated monthly (rather than yearly as most labs do). Influent, primary, secondary and clarifier samples are analyzed even though they are not required by the DNR. The analysts also run non-required QC samples for many of those matrices in order to monitor their own performance.

➤ **Has the laboratory demonstrated a high level of commitment to correcting instances of non-compliance?**

Yes, the lab has demonstrated a very strong commitment to correcting any non-compliance instances. All deficiencies identified in the past have been corrected and maintained. The only deficiency found during their recent audit was an insufficient lab cooling system. This lab not only has an amazing history of being in compliance but they go well beyond what is required. Past evaluations have only resulted in a few deficiencies and those were rapidly corrected. Any QC exceedances result in quick and thorough corrective action.

➤ **What measures does the laboratory take to ensure the production of high-quality data?**

The analysts perform many extra tasks (in addition to the method required tasks) in order to improve their data quality and ensure analytical success. Some examples of this include:

- a few BOD bottles from each batch are checked for cleanliness with bromothymol blue indicator each analysis day (if the indicator identifies an unclean bottle then the whole batch is re-washed)
- the balance-weight verification and conductivity check on their reagent water are performed daily
- balance weights and thermometers are sent out annually for re-certification
- thermometers are calibrated in the lab at least twice a year against a NIST thermometer
- detailed reagent tracking logs are maintained
- each reagent has a detailed custom label

➤ **Does the laboratory's quality assurance program ensure that quality control data is used to evaluate and improve laboratory procedures?**

The lab performs constant monitoring of their quality control. They have a remarkable practice of data validation which entails daily validation of each others data sheets. They check all the calculations and entries and initial. The analysts calculate new control limits very frequently and run non-required QC samples each day. They run a BOD blank, GGA, and replicate on every analysis day. For TSS, they run a blank and a replicate on every analysis day. They plot all their QC results on charts displayed in the lab to track their trends. The control limits are very tight – most of the average standard deviations are 3% or less - which is very precise. Amazingly, even with so much extra QC, they have very few QC samples that result in exceedances.

➤ **For which other practices or achievements should the laboratory be recognized?**

Their program includes excellent standard operating procedures (SOPs) for all their lab practices. Many of the SOPs are posted throughout the lab. A detailed reagent tracking system is in place. Blind and PT samples are very close to the true value. Records are organized and maintained better than almost any registered lab I have seen. A detailed lab schedule and preventative maintenance list are generated every month. The preventative maintenance list includes items such as changing membranes or tubing, regeneration of desiccant, changing of DI cartridges or filters, checking DO meter batteries, acid washing glassware, barometer and thermometer tests. At the end of each month the analysts generate an "Environmental Lab Report" which is given to the Lab Manager for his use in filling out the DMR. It contains any QC exceedances and particulars of corrective actions. Excellent details are always reported on the DMR if there are any QC issues. The two analysts have both dedicated 25 years to working at this lab. The experience they have gained and the efforts they put forth are apparent in all they do. The documentation and attention to detail at this facility are surely among the best I have ever observed. The consistency between the two analysts, good communication, and superb documentation have all resulted in generation of very high quality data. For these reasons I am nominating the McCain Foods Inc. Laboratory for the 2008 Small Registered Lab of the Year award.

Sincerely,

Camille G. Johnson
DNR Audit Chemist



2008 Wisconsin DNR Registered Lab of the Year Nomination Form

The Wisconsin Department of Natural Resources Registered Lab of the Year Awards annually recognize registered laboratories for their outstanding commitment to producing high quality data. One award is presented in each of two categories: Small Facility and Large Facility. Small facilities include municipal wastewater treatment laboratories with a flow of less than 1 mgd, or labs that perform limited types of testing (e.g., BOD, nitrogen, phosphorus, and solids). Large facilities may include major municipal wastewater treatment laboratories with flows greater than 1 mgd, labs that perform tests of greater complexity (e.g., metals, PCBs, VOCs) or labs that process a large volume of samples annually.

Nominees for the award must be registered facilities located in the State of Wisconsin. Certified laboratories will not be considered. Anyone, including DNR staff, can nominate a laboratory for one of the awards, but laboratories may not nominate themselves. There is no limit on the number of times that a laboratory may be nominated, and a laboratory may be nominated for (or receive) an award in consecutive years. In the event that insufficient nominations are received for either category, the Department reserves the right to not issue either award.

To nominate a registered laboratory for the 2008 Lab of the Year Award, complete the following form and include a summary of no more than three pages describing the reasons why you are nominating the laboratory for the award. Be sure to address the following considerations in your summary (please note - all considerations do not necessarily have to be addressed for a laboratory to be chosen to receive the award):

Nomination Considerations:

- Does the laboratory demonstrate a commitment to exceeding the minimum requirements for compliance with Department rules and guidance?
- Has the laboratory demonstrated a high level of commitment to correcting instances of non-compliance?
- What measures does the laboratory take to ensure the production of high-quality data?
- Does the laboratory's quality assurance program ensure that quality control data is used to evaluate and improve laboratory procedures?
- For which other practices or achievements should the laboratory be recognized?

Completed nomination forms must be received by January 18, 2008 in order for the candidate to be considered. A nomination committee will decide the award winners. Please send the completed nomination form and summary to: Lab of the Year Award, c/o Camille Johnson, WI DNR, 427 East Tower Drive, Suite 100, Wautoma, 54982. Or fax 920-787-2477 or email: camille.johnson@wisconsin.gov.

Category: Small Registered Large Registered

Name of Laboratory Nominated: Neenah Paper Inc. – Whiting Mill

Laboratory Director: Mr. John Kohler

Laboratory Address: 3243 Whiting Road, Stevens Point, WI 54481

Laboratory Phone #: 715-345-5095

Nominator (your name): Camille Johnson

Your Affiliation with Nominee: Auditor

Your Address: 427 E Tower drive, Wautoma

Your Phone #: 920-787-4686 x3019

Neenah Paper 2008 LOY Nomination Information Large Registered Lab

John Kohler is the Environmental/Utilities Engineer who oversees the lab at the Neenah Paper – Whiting Mill. There are three primary operators and a relief operator that complete the analysis. They are Russ Garski, Jerry Kowski, Greg Stroik and Pat O’Neil. Effluent samples are analyzed six days a week for BOD and TSS. The average flow is about 2 MGD – thus this lab is in the Large Registered Category.

➤ **Does the laboratory demonstrate a commitment to exceeding the minimum requirements for compliance with Department rules and guidance?**

The lab is definitely committed to meeting and exceeding rules and regulations. Replicates are analyzed weekly (only required every 3 weeks for this facility). Control limits are generated twice a year (usually done yearly in most labs). The analytical balance is checked with one weight daily, four weights monthly and is certified twice a year. The DO meter’s internal barometer is checked daily. Thermometers are checked monthly against a certified thermometer. All other requirements are met or exceeded.

➤ **Has the laboratory demonstrated a high level of commitment to correcting instances of non-compliance?**

All deficiencies found in 2004 were properly corrected and very well maintained. There were only three very minor deficiencies found during this audit and the lab expressed eagerness to correct anything that needed changing. Exceedances of everyday QC samples are documented and corrected.

➤ **What measures does the laboratory take to ensure the production of high-quality data?**

The lab ensures that they produce the highest quality data possible by doing extra QC and being proactive about maintenance. Records are well kept on paper and well-managed in the lab’s computer program. There are good QC summaries and flags for any exceedances in the database. A good corrective action log and biological log are maintained. The biological log helps with the tracking of WWTP bacteria/algae. The records were all clear and well-organized.

➤ **Does the laboratory’s quality assurance program ensure that quality control data is used to evaluate and improve laboratory procedures?**

Yes – they frequently recalculate control limits and assess all QC measures on a regular basis. The DMR is well qualified when there are QC exceedances. A corrective action log is used. John ensures that quality checks (such as PT samples) are rotated among the operators to check performance. He also sends operators to lab training whenever possible.

➤ **For which other practices or achievements should the laboratory be recognized?**

The lab takes extra steps to transfer the data they generate to the mill they serve. A daily status report of TSS and other data is given to the mill to aid in process control. The lab has demonstrated superb results on QC samples. In records for 2007 I could not identify a single BOD blank or GGA exceedance. In 2006, I only identified 6 blank exceedances out of over 300 blanks and no GGA exceedances at all. Many of the BOD replicates had a range of zero – meaning the replicates were exactly the same as each other. Control limits have been overly tight for several years due to exceptional precision on replicates. For example, the current

BOD effluent control limit is a range of 0.09. A tough limit to achieve. With four operators working in the lab it is a major accomplishment to achieve such high precision and accuracy. Other extra steps are taken to transfer the data they generate to the mill they serve. A daily status report of TSS and other data is given to the mill to aid in process control.

Overall, the most significant achievement at this lab is the consistency of the results achieved with four operators. It is clear that the operators take their lab work very seriously and do the best they can. They have developed their procedures to a point where their consistency is excellent. The lab manager is doing a great job promoting this consistency and maintaining all the quality control records. This is one of the best registered labs I have evaluated this year and I therefore submit this nomination for Large Registered Lab of the Year.

Sincerely,

Camille G. Johnson
DNR Audit Chemist