Form 1100-001
(R 2/11)

NATURAL RESOURCES BOARD AGENDA ITEM

Item No. 3.A.1

SUBJECT: Presentation of 2012 Registered Laboratory of the Year Awards

FOR: MARCH 2012 **BOARD MEETING**

TO BE PRESENTED BY / TITLE: Camille Turcotte/Chief, Environmental Science Services

SUMMARY:

The Department annually presents the Registered Laboratory of the Year awards to recognize two of the 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 17th consecutive year the Department has presented the awards.

The 2012 Large Registered Facility Award will be presented to the Whitewater Wastewater Treatment Plant.

The 2012 Small Registered Facility Award will be presented to the Saukville Wastewater Treatment Plant.

The nomination papers along with the nomination form are included in the attached memorandum.

RECOMMENDATION:

LIST OF ATTACHED MATERIALS:

No	☑	Fiscal Estimate Required	Yes ☐	Attached
No	☑	Environmental Assessment or Impact Statement Required	Yes ☐	Attached
No	☐	Background Memo	Yes ☑	Attached

APPROVED:

John R. Sullivan — Bureau Director, John R. Sullivan — Date 2/17/2012

Tim Lawhern — Administrator, Tim Lawhern — Date 2/19/2012

for Matt Moroney — Secretary, Cathy Stepp — Date 3/6/12

cc: NRB Liaison Laurie Ross /AD5
DNR Rules Coordinator
Camille Turcotte/557

2012 Wisconsin DNR Registered Laboratory of the Year Instruction and Nomination Forms

The Wisconsin Department of Natural Resources is asking for nominations for registered laboratories that are worthy of receiving the prestigious "Registered Laboratory of the Year (LOY)" award. This award is presented annually* in order to recognize registered laboratories for their outstanding commitment to producing high quality data.

Notes:

- Nominees for the award must be registered laboratories located in the State of Wisconsin.
- Certified laboratories are not eligible and therefore will not be considered.
- Laboratories may be nominated multiple times and can win the award more than once.
- A LOY awards committee will choose a winner in a small lab category and a winner in a large lab category (categories will be determined by the WDNR).
- Nominations can be made by anyone with the exception that laboratories may not nominate themselves.
- The laboratories last audit report will be used as part of the evaluation.

Nominating a registered laboratory for the 2012 Laboratory of the Year Award:

1. Complete the Nomination Form presented over the next two pages of this document.
2. Write a summary describing the reasons why you are nominating the laboratory. In the summary, please address the questions asked. Answers to these questions will be used in choosing the winner. Each question may not apply to all labs. If a question does not apply then it does not need to be answered. Please limit the summary to two pages or less.
3. Please submit the completed Nomination Form to Tom Trainor by January 13, 2012 to:

   By mail Wisconsin DNR
   Laboratory of the Year Award
   c/o Tom Trainor
   2984 Shawano Avenue
   Green Bay, WI 54313

   By email tom.trainor@wisconsin.gov

   By fax 920.662.5159

* The Laboratory Certification and Registration Program reserves the right to decide if awards will be issued or not.

2012 Wisconsin DNR Registered Laboratory of the Year Nomination Form – Lab Data Sheet

Due January 13, 2012

Name of Laboratory	Whitewater Wastewater Treatment Plant
Laboratory Manager	Melody Wunderlin-Lab Manager Tim Reel - Plant Superintendent
Key Laboratory Employees	Melody Wunderlin
Laboratory Address	P.O. Box 178 Whitewater, WI 53190=0178
Laboratory Phone Number	262-473-5920
Nominator (your name)	George Bowman
Your Affiliation with Laboratory	Contract Laboratory Audit Chemist, WI DNR
Your Address	SS/7 101 S. Webster, P.O. Box 7921 Madison, WI 53707-7921
Your Phone Number	608-219-6285
Your Email Address	George.bowman@wisconsin.gov
Is a 1-2 page summary attached that answe the questions asked on the next page?	Yes

Nomination Form – Question / Answer sheet
for the WDNR 2012 Laboratory of the Year Award:

Please provide an answer for each one of the questions listed below (unless it is not applicable)

Whitewater WWTP Nomination

1. Describe the quality control (QC) samples that the laboratory analyzes that are above the minimum requirements (if possible include the frequency that each one of them is analyzed).

The laboratory analyzes second source LCS in addition to the calibration standards each time ammonia analyses are performed, and a second source LCS with the CCV each time total phosphorus analyses are performed. The laboratory also participates in a quarterly blind standard program which is not required since second source standards are used. The laboratory also purchases additional blind standards which it uses extensively for training and IDC purposes. What is most impressive is the laboratory lists the QC limits and required corrective action directly on the benchsheets so there is clear direction if there is QC failure. This process reduces the risk that QC failures are overlooked.

2. Discuss how often the laboratory has QC failures and how they respond to them.

The laboratory occasionally has QC failures. However, when they do occur they are investigated, diagnosed and the affected data appropriately qualified. The laboratory has record of systematically investigating QC problems by eliminating one item at a time thereby allowing the laboratory to take focused corrective action.

3. Describe how well the laboratory documents maintenance activities and corrective actions.

Instrument and support equipment maintenance records are clear and concise. Corrective action is well documented on forms that guide the analyst in collecting the appropriate information. The laboratory's actions demonstrate they actually use these forms to correct problems rather than simply complete them solely to comply with NR149 requirements.

4. Explain if the laboratory performs any testing of registered parameters beyond what is required by their permit (i.e. extra samples or tests analyzed).

Not applicable

5. Describe any unique or advanced techniques the laboratory uses to improve their data quality.

The laboratory has detailed forms for many functions including chain-of-custody, sample logs, benchsheets, training, and IDCs. These forms help insure that all samples are processed, preserved and tested in a consistent and appropriate manner by all analysts. This is a unique approach for a registered laboratory. These processes where put into affect since the last audit. The net affect is an overall improvement in data quality.

6. Discuss any special ways the laboratory uses QC or compliance sample results to improve their operations.

All laboratories have problems from time to time. A good laboratory uses those problems as opportunities to improve through corrective action. This laboratory could be a poster-child for turning problems into opportunity for improvement. For example, the operators rotate lab and plant coverage on weekends. On occasion operators would forget to calibrate the pH meter or forget to record the temperature of the BOD incubator, refrigerator or TSS oven. The analyst in charge of the lab initiated corrective action. The first corrective action attempt appeared to be successful. However, follow-up revealed the problem had not been fully resolved. Additional corrective action was taken by preparing a weekend operator worksheet that listed all activities with QC tolerances, a place for results and corrective action. This resolved the problem. This is a perfect example of how this laboratory used the "Plan-Do-Check -Act" corrective action approach to deal with a problem.

7. Discuss any unique or exceptional ways in which the laboratory performs their testing that improves data quality.

Most registered laboratories only prepare a full total phosphorus calibration curve once each year, the program minimum requirement. This laboratory runs a full calibration curve quarterly-- or more often if the analyst observes trends in the CCV and LCS recoveries. This approach provides better control and improves the overall quality of the total phosphorus results.

8. Discuss the degree to which the laboratory has established their quality system and how well it is adhered to.

The laboratory documentation, corrective action process and general organization are the best I've seen in the 30 laboratories I audited during 2011. Frankly, their quality system rivals that of many commercial laboratories that have a fulltime QA Officer. Many laboratories play lip-service to quality systems because they are required to do so by code. However, this laboratory practices what they preach. They also use a positive approval sign-off process for documenting training. New analysts are required to read the Quality Manual, SOPs, discharge permit, chemical hygiene plan and understand them. Both the analyst and trainer are required to sign the training forms after successfully completing all requirements. Their training approach is outstanding. I have shared their forms and process with other laboratories.

9. Discuss any other reasons why you believe this laboratory is worthy of nomination for the Laboratory of the Year award.

This laboratory is one of the cleanest, best organized laboratories I've seen in my 39 years in the environmental laboratory field. Their quality system is also one the best I have seen as well. It is also the only registered laboratory I have seen that has a chemical hygiene plan and takes lab safety training as serious as data quality. Furthermore, the laboratory's corrective action approach, documentation and traceability records are outstanding. They are highly deserving of the Laboratory of the Year award.

2012 Wisconsin DNR Registered Laboratory of the Year Nomination Form – Lab Data Sheet

DUE JANUARY 13, 2012

Name of Laboratory	Village of Saukville WWTP
Laboratory Manager	Ray Hartman
Key Laboratory Employees	Ray Hartman, Kyle Miller, Dale Kropidlowski and Eri Paulus
Laboratory Address	1600 Cottontail Lane Saukville, WI 53080
Laboratory Phone Number	262-284-3185
Nominator (your name)	George Bowman
Your Affiliation with Laboratory	Contractor, Wisconsin DNR Lab Certification Program
Your Address	SS/7 101 S. Webster, P.O. Box 7921 Madison, WI 53707-7921
Your Phone Number	608-219-6285
Your Email Address	george.bowman@wisconsin.gov
Is a 1-2 page summary attached that answe the questions asked on the next page?	Yes

Nomination Form – Question / Answer sheet
for the WDNR 2012 Laboratory of the Year Award:

Please provide an answer for each one of the questions listed below (unless it is not applicable)

Saukville WWTP Nomination

1. Describe the quality control (QC) samples that the laboratory analyzes that are above the minimum requirements (if possible include the frequency that each one of them is analyzed).

The laboratory analyzes second source standards each time they perform total phosphorus and ammonia analysis. They also participate in a blind standard program. This is clearly above and beyond what is required by the program.

2. Discuss how often the laboratory has QC failures and how they respond to them.

Like all laboratories, they occasionally have QC failures such as low GGA results during BOD testing. The laboratory makes an entry in their corrective action log, clearly identifying the problem, what was attempted to correct the problem and whether the problem was resolved. When chronic problems are encountered, they systematically attempt to try different approaches to correct the problem. They use their records to assist them in the corrective action process.

3. Describe how well the laboratory documents maintenance activities and corrective actions.

Maintenance activities are document in logbooks. Corrective actions are documented on forms created from templates developed by DNR Lab Certification Program staff. Records are clear, descriptive and understandable.

4. Explain if the laboratory performs any testing of registered parameters beyond what is required by their permit (i.e. extra samples or tests analyzed).

N/A

5. Describe any unique or advanced techniques the laboratory uses to improve their data quality.

The laboratory does not use any advanced techniques. However, what they do, they do very well.

6. Discuss any special ways the laboratory uses QC or compliance sample results to improve their operations.

The laboratory has a very good database system. They enter their test results, lab QC data and all facility information in this database daily. They prepare monthly QC reports to assess their performance and to look for trends during corrective actions. They also use this report to prepare their e-DMR. The report helps assure they do not miss qualifying test results if there are QC failures that particular month. It is a very nice system and they use if effectively.

Saukville WWTP Nomination Continued

7. Discuss any unique or exceptional ways in which the laboratory performs their testing that improves data quality.

The laboratory generates the calibration curve directly on their spectrophotometer. They recall the calibration each time samples are tested and calculate the final results directly on the instrument. The instrument has a printer connected to it which allows them to print the raw and final results each time analyses are performed. This reduces the risk of transcription error and improves overall data quality.

8. Discuss the degree to which the laboratory has established their quality system and how well it is adhered to.

The laboratory developed their quality system based on information they obtained at a training session given by DNR staff in 2008 and from taking corrective action after an on-site evaluation conducted by the DNR in 11/6/08. The lab has four analysts that work in the laboratory at one time or another. They take great care to make sure all analysts follow the QA plan. A key part of the success is the diligence of the Lab Director and consistent training.

9. Discuss any other reasons why you believe this laboratory is worthy of nomination for the Laboratory of the Year award.

This laboratory had numerous deficiencies during their 11/6/08 on-site evaluation, in part because of the extensive change in NR149 implemented only a few months prior to their evaluation. The laboratory responded to the evaluation by not only correcting all deficiencies but by kicking it up a notch by taking the initiative to do more than was necessary. They implemented a very good training plan and prepared an outstanding monthly QC report. They also were not hesitant to seek the assistance of their auditor, Dave Ekern to make these quality improvements. One thing that impressed me most during the on-site evaluation I conducted in December, 2011 was how neat and clean the laboratory appeared. I was very surprise to find out their laboratory was over ten years old. It appeared to be a new facility. The laboratory staff takes great pride in their facility and this clearly carries over in the quality of data they generate. I believe they are highly deserving of the Laboratory of the Year Award for small systems.