

November 1, 2000

## LCMR Work Program Report

### I. PROJECT TITLE: Pollution Prevention Training Program for Industrial Employees

**Program Manager:** Ian A. Greaves  
**Agency Affiliation:** University of Minnesota  
**Mail Address:** Box 807 Mayo  
420 Delaware Street S.E.  
Minneapolis. MN 55455.  
**Phone:** (612) 624-6669  
**Fax:** (612) 626-6931  
**e-mail:** igreaves@cccs.umn.edu

#### Total Biennial Budget

<b>\$LCMR Amount Appropriated :</b>	<b>\$200,000</b>
<b>- \$LCMR Amount Spent Prior to UofM Award :</b>	<b>\$35,647</b>
	<hr/>
	<b>\$164,353</b>
<b>- \$LCMR Amount Spent Subsequently :</b>	<b>\$140,223.02</b>
	<hr/>
<b>= \$LCMR Balance* :</b>	<b>\$24,129.98</b>

\* Amount returned to LCMR

**A. Legal Citation:** ML <sup>1997</sup>~~1995~~, Chp. 216, Sec. 15, Subd. 8(B)  
**Pollution Prevention Training Program for Industrial Employees**  
**[as amended ML 1998, Chp. 401, Sec. 49]**

**Appropriation Language:** This appropriation is from the future resources fund to the University of Minnesota to provide the training and technical assistance needed for pollution prevention by industrial employees.

### II. PROJECT SUMMARY AND RESULTS

This project developed educational materials for training industrial employees to play a positive role fostering pollution prevention in Minnesota. The University of Minnesota School of Public Health and Regions Hospital worked cooperatively to produce the following results.

A. Developed a curriculum for workers on environmental issues, with a special emphasis on pollution prevention. Using the Delphi process, project staff and cooperating groups worked with stakeholder representatives to develop curricula

for 8-hour workshops and more intensive three-day training, as outlined in Results B and C below.

B. Trained 68 employees around Minnesota in one-day workshops based on the 8-hour curriculum developed in Result A.

C. Trained 15 employees as pollution prevention advocates by providing intensive study based on the three-day curriculum developed in Result A. After completing the course, advocates returned to their work with the goal of completing a pollution prevention project. Training grants were set aside for employees that needed funding for release time from their jobs.

D. Despite the offer of further technical assistance, no trainee in the three-day course has reported working on a pollution prevention project, despite follow-up contact. A final questionnaire and interview of each trainee attending the three-day program will be conducted in November-December, 2000.

E. Program evaluations consistently indicated a high level of satisfaction with the one-day and three-day courses. Final evaluation of the effectiveness of the three-day training, and subsequent pollution prevention initiatives in the work place, is in progress.

### III. OUTLINE OF PROJECT RESULTS

**Result A. Curriculum Development.** Beginning June 1, 1998, University of Minnesota and Regions Hospital personnel consolidated the curricula materials developed to that date and from these produced 8-hour and 27-hour training sessions. A Delphi group was convened in July, 1998 to examine the drafts. After incorporating the committee's recommendations, revised drafts were sent to a set of stakeholders for review of these materials. Based on reviewers' comments, the final curricula and training materials were developed in September, 1998 (see appended materials for details).

<b>Result A.</b>	Budget: \$40,896	Balance: 0
Completed:	September, 1998	

**Result B. One-Day Workshops.** The 8-hour training was implemented in a series of four one-day workshops conducted in St Paul, Mankato and Duluth. These one-day programs aimed (i) to develop awareness of the opportunities for pollution prevention within the work place and (ii) to provide strategies that might prove useful in implementing such changes in the work place. The initial program was offered in October, 1998 but a staffing problem delayed the implementation of further training sessions until 1999. Details of the course materials and the course evaluations are provided in the appended materials.

The following one-day workshops were given:



October 27, 1998	St Paul	18 attendees
March 17, 1999	St Paul	19 attendees
April 14, 1999	Duluth	17 attendees
April 21, 1999	Mankato	14 attendees

Total attendance at the four workshops was 68.

By holding courses in Mankato and Duluth we captured some trainees who would not otherwise have been able to attend training in the Twin Cities. This was stressed as an important feature by those who attended the sessions in Mankato and Duluth. Another important feature of these workshops was the financial compensation of workers for time taken away from work. Many indicated that this was very important. Some said that they were coming on their own time and did not wish their employer to know where they were.

The exit evaluations of the one-day courses were positive: all sessions and content areas were rated average to good, and 96% of respondents said they would recommend the program to others.

<b>Result B.</b>	Budget: \$37,589	Balance: 0
Completed:	April, 1999	

**Result C. Three-Day Training Session.** Development of the three-day training session commenced in December, 1997 with consideration of certain industries that might participate. Possible training sites and participants were considered further in summer and fall, 1998. The departure of a key staff member in December, 1998 slowed subsequent progress. It was not until March, 1999 that a selection process for trainees and a method for administering the \$15,000 in training grants were developed. Basically, these trainees were drawn from the participants in the one-day training sessions. This also allowed some economy of time, because the individuals selected for further training had already received a basic level of training in some of the key areas, and thus could move more quickly through the course. Consequently, the training was reduced from a five-day (35 hour) program, to a three-day (27 hour) program. The fewer number of days was also more acceptable to the trainees who lost less work time.

The intensive three-day training session was conducted May 19-21, 1999 for 15 trainees drawn from the seven county Metropolitan Area and north-central Minnesota. No trainee attended from southern Minnesota. An exit evaluation showed that participants rated the three-day program as 4.4 out of a possible 5.0. They identified that the most valuable aspects of the program were the general awareness of pollution, health-related concerns, team work, and the tools provided to assist them in implementing pollution prevention activities.

<b>Result C.</b>	Budget: \$57,441	Balance: 0
Completed:	May, 1999	

**Result D. Technical Support.** Each of the 15 trainees participating in the three-day course returned to their plant where they were expected to work with management and other employees on projects aimed toward pollution prevention. Project staff were available to work with the trainees. Written notification was sent to each trainee six weeks after the three-day course informing them of the expertise and resources available to them for working on pollution prevention within their work places. No trainee has utilized these resources or expertise. In particular, no contact was made with the project's technical consultant hired for this purpose (Mr. John Jaimez), nor was contact made with staff of the Minnesota Technical Assistance Program.

It is possible that projects have been initiated without the knowledge of the staff associated with the training. To identify such activities and to provide a final evaluation of the project, trainees in the three-day course will be surveyed with a mailed questionnaire and follow-up interviews in November-December, 2000 to determine what, if any, pollution prevention actions they attempted following their training, and to identify reasons why projects may not have been initiated.

A fund of \$10,000 was set aside for support of trainees, on a needs basis, in conducting their projects. Since no project or request for funds was forthcoming, these funds were returned to LCMR, together with funds for staff time for field work associated with such projects.

<b>Result D.</b>	Budget: \$48,314	Balance: \$24,129.98
Training completed:	May, 1999	
Follow-up completion:	December, 2000	

**Result E. Evaluation of Program.** One-day and three-day courses were evaluated with exit questionnaires that included questions regarding the content, format, and usefulness of the materials presented. Results of these evaluations can be found in the appended materials.

For trainees receiving the three-day training, the effectiveness of their pollution prevention efforts will be evaluated by a questionnaire and interviews of the trainees and their employers in December, 2000. An employer will only be contacted if the respective trainee permits us to do so.

<b>Result E.</b>	Budget: \$10,456	Balance: 0
Completion date:	December, 2000	

**V. DISSEMINATION:** After final evaluations are complete, information will be made available to the public from this project: curriculum and outreach materials will be published in paper form and posted on web sites.

# UNIVERSITY OF MINNESOTA

*Twin Cities Campus*

*Office of the Dean  
School of Public Health*

*A302 Mayo Memorial Building  
Box 197  
420 Delaware Street S.E.  
Minneapolis, MN 55455-0381  
Phone: 612-624-6669  
Fax: 612-626-6931*

November 1, 2000

John Velin  
Director, Legislative Commission  
on Minnesota Resources  
Room 65, SOB  
100 Constitution Avenue  
St. Paul. MN 55155.

NOV - 6 2000

Dear Mr. Velin:

Enclosed please find an updated report on the project, Pollution Prevention Training Program for Industrial Employees. I thank you for your patience and understanding with this project.

You will notice that a final evaluation of the three-day training program is in progress and data collection will continue into December, 2000. Given the very poor response we received to our offer of technical assistance and other resources for worker-initiated projects in the work place, I am sure you, like we, will want to know what happened. Questionnaires and interviews with workers and their employers may help shed some light on the problems, and allow better interventions to be planned in future.

Appended to the progress report are the educational materials that were developed and the evaluations of the one-day and three-day courses.

Sincerely,



Ian A. Greaves, MD  
Associate Professor

cc: Amy Levine, ORTTA  
Sarah Waldemar, EOH

