Appendix A

WISCONSIN MODEL ACCREDITATION PLAN AND TRAINING COURSE APPROVAL PROCEDURES

(adapted from 40 CFR 763, Subpart E, Appendix C)

1. Wisconsin Model Accreditation Plan

The Wisconsin Model Accreditation Plan has six components:

- Initial training;
- (2) Examinations;
- (3) Refresher training course;
- (4) Qualifications;
- (5) Decertification requirements; and
- (6) Reciprocity

For purposes of certification requirements in Chapter HSS 159, the duration is specified in number of days. A day of training equals a maximum of 8 class hours.

In several instances, initial training courses for a specific job classification (e.g., workers, inspectors) require hands-on training. For asbestos supervisors and workers, hands-on training should include working with asbestos-substitute materials, fitting and using respirators, use of glovebags, donning protective clothing, constructing a decontamination unit as well as other abatement work activities. Hands-on training must permit supervisors and workers to have actual experience performing tasks associated with asbestos abatement. For inspectors, hands-on training should include conducting a simulated building walk-through inspection and respirator fit testing.

1. INITIAL TRAINING

The following are the initial training course requirements for persons required to have certification under s. 140.06, Stats.

A. Asbestos Inspectors. All persons seeking certification as inspectors shall complete a 3-day training course as outlined below. The 3-day program shall include lectures, demonstrations, 4-hours of hands-on training, individual respirator fit testing, course review and a written examination. The department recommends the use of audiovisual materials to complement lectures, where appropriate.

The inspector training course shall adequately address the following topics:

(a) Background information on asbestos. Identification of asbestos, and examples and

discussion of the uses and locations of asbestos in buildings; and physical appearance of asbestos

- (b) Potential health effects related to assestos exposure. The nature of asbestos-related diseases; routes of exposure; dose-response relationships and the lack of a safe exposure level; the synergistic effect between cigarette smoking and asbestos exposure; the latency period for asbestos-related diseases; a discussion of the relationship of asbestos exposure to asbestosls, lung cancer, mesothelioma, and cancer of other organs.
- (c) Functions/qualifications and role of inspectors. Discussions of prior experience and qualifications for inspectors and management planners; discussions of the functions of a certified inspector as compared to those of a certified management planner; discussion of inspection process including inventory of ACM and physical assessment.
- (d) Legal liabilities and defenses. Responsibilities of the inspector and management planner; a discussion of comprehensive general liability policies, claims-made and occurrence policies, environmental and pollution liability policy clauses; state liability insurance requirements; bonding and the relationship of insurance availability to bond availability.
- (e) Understanding building systems. The interrelationship between building systems, including: An overview of common building physical plan layout; heat, ventilation and air conditioning (HVAC) system types, physical organization, and where asbestos is found on HVAC components; building mechanical systems, their types and organization, and where to look for asbestos on such systems; inspecting electrical systems, including appropriate safety precautions; reading blueprints and as-built drawings.
- (f) Public/employee/building occupant relations. Notifying employee organizations about the inspection; signs to warn building occupants; tact in dealing with occupants and the press; scheduling of inspections to minimize disruption; and education of building occupants about actions being taken.
- (g) Pre-inspection planning and review of previous inspection records. Scheduling the inspection and obtaining access; building record review; identification of probable homogeneous areas from blueprints or as-built drawings; consultation with maintenance or building personnel; review of previous inspection, sampling and abatement records of

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a building; the role of the inspector in exclusions for previously performed inspections.

- (h) Inspecting for friable and non-friable asbestos-containing material (ACM) and assessing the condition of friable ACM. Procedures to follow in conducting visual inspections for friable and non-friable ACM; types of building materials that may contain asbestos; touching materials to determine friability; open return air plenums and their importance in HVAC systems; assessing damage, significant damage, potential damage, amount of suspected ACM, both in total quantity and as a percentage of the total area; type of damage; accessibility; material's potential for disturbance; known or suspected causes of damage or significant damage; and deterioration as assessment factors.
- (i) Bulk sampling/documentation of assestes in schools. Detailed discussion of the "simplified Sampling Scheme for Friable Surfacing Materials (EPA 560/6-85-030a October 1985)"; techniques to ensure sampling in a randomly distributed manner for other than friable surfacing materials; sampling of non-friable materials; techniques for bulk sampling; sampling equipment the inspector should use; patching or repair of damage done in sampling; an inspector's repair kit; discussion of polarized light microscopy; choosing an accredited laboratory to analyze bulk samples; quality control and quality assurance procedures.
- (j) Inspector respiratory protection and personal protective equipment. Classes and characteristics of respirator types; limitations of respirators; proper selection, inspection, donning, use, maintenance, and storage procedures for respirators; methods for field testing of the facepiece-to-mouth seal (positive and negative pressure fitting tests); qualitative and quantitative fit testing procedures; variability between field and laboratory protection factors; factors that alter respirator fit (e.g., facial hair); the components of a proper respiratory protection program; selection and use of personal protective clothing; use, storage, and handling of non-disposable clothing.
- (k) Recordkeeping and writing the inspection report. Labeling of samples and keying sample identification to sampling location; recommendations on sample labeling; detailing of ACM condition; photographs of selected sampling areas and examples of ACM inventory; information required for inclusion in the management plan by TSCA Title II section 203(i)(1).
 - (I) Regulatory review.
- (1) EPA Worker Protection Rule, 40 CFR Part 763, Subpart G;
 - (2) TSCA Title II;

- (3) OSHA Asbestos Construction Standard, 29 CFR 1926,58;
- (4) OSHA respirator requirements, 29 CFR 1910.134;
- (5) Friable ACM in Schools Rule, 40 CFR Part 763, Subpart F;
- (6) Applicable state and local regulations and differences in federal/state requirements where they apply and the effects, if any, on public and non-public schools.
- (m) Field trip. To include a field exercise including a walk-through inspection; on-site discussion on information gathering and determination of sampling locations; on-site practice in physical assessment; classroom discussion of field exercise.
- (n) Course review. Review of key aspects of the training course.
- B. Asbestos Management Planners. All persons seeking certification as management planners shall complete an inspection training course as outlined above and a 2-day management planning training course. The 2-day training program shall include lectures, demonstrations, course review, and a written examination. The department recommends the use of audiovisual materials to complement lectures, where appropriate.

The management planner training course shall adequately address the following topics:

- (a) Course oterview. The role of the management planner; operations and maintenance programs; setting work priorities; protection of building occupants.
- (b) Evaluation/interpretation of survey results. Review of TSCA Title II requirements for inspection and management plans as given in section 203(i)(1) of TSCA Title II; summarized field data and laboratory results; comparison between field inspector's data sheet with laboratory results and site survey.
- (c) Hazard assessment. Amplification of the difference between physical assessment and hazard assessment; the role of the management planner in hazard assessment; explanation of significant damage, damage, potential damage, and potential significant damage; use of a description (or decision tree) code for assessment of ACM; assessment of friable ACM; relationship of accessibility, vibration sources, use of adjoining space, and air plenums and other factors to hazard assessment.
- (d) Legal implications. Liability; insurance issues specific to planner; liabilities associated with interim control measures, inhouse maintenance, repair, and removal; use of results from previously performed inspections.

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- (e) Evaluation and selection of control options. Overview of encapsulation, enclosure, interim operations and maintenance, and removal; advantages and disadvantages of each method; response actions described via a decision tree or other appropriate method; work practices for each response action; staging and prioritizing of work in both vacant and occupied buildings; the need for containment barriers and decontamination in response actions.
- (f) Role of other professionals. Use of industrial hygienists, engineers, and architects in developing technical specifications for response actions; any requirements that may exist for architect sign-off plans; team approach to design of high-quality job specifications.
- (g) Developing an operations and maintenance (O&M) plan. Purpose of the plan; discussion of applicable EPA guidance documents; what actions should be taken by custodial staff; proper cleaning procedures; steam cleaning and high efficiency particulate aerosol (HEPA) vacuuming reducing disturbance of ACM; scheduling O&M for off-hours; rescheduling or canceling renovation in areas with ACM; boiler room maintenance; disposal of ACM; in-house procedures for ACM—bridging and penetrating encapsulants: pipe fittings, metal sleeves, polyvinyl chloride (PVC), canvas, wetwraps, muslin with straps, fiber mesh cloth, mineral wool, and insulating cement; discussion of employee protection programs and taff training; case study in developing an O&M plan (development, implementation process, and problems that have been experienced).
 - (h) Regulatory review.
- (1) OSHA Asbestos Construction Standard, 29 CFR 1926.58;
- (2) National Emission Standard for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos);
- (3) EPA Worker Protection Rule, 40 CFR 763, Subpart G;
 - (4) TSCA Title II;
 - (5) Applicable state regulations.
- (i) Recordkeeping for the management planner. Use of field inspector's data sheet along with laboratory results; on-going record-keeping as a means to track asbestos disturbance; procedures for recordkeeping.
- (j) Assembling and submitting the management plan. Plan requirements in TSCA Title II section 203(i)(1); the management plan as a planning tool.
- (k) Financing abatement actions, Economic analysis and cost estimates; development of cost estimates; present costs of

- abatement versus future operations and maintenance costs; Asbestos School Hazard Abatement Act grants and loans,
- (1) Course review. Review of key aspects of the training course.
- C. Asbestos Supervisors. Ali persons seeking certification as asbestos supervisors shall complete a 4-day training course as outlined below. The training course shall include lectures, demonstrations, at least 6 hours of hands-on training, individual respirator fit testing, course review, and a written examination. The department recommends the use of audiovisual materials to complement lectures, where appropriate.

For the purposes of s.140.06, Stats., asbestos supervisors include those persons who provide supervision and direction to workers engaged in asbestos removal, encapsulation, enclosure, and repair. Supervisors may include those individuals with the position title of foreman, working foreman, or leadperson pursuant to collective bargaining agreements. Under this Model Plan as adapted from 40 CFR 763, Subpart E, Appendix C, at least one supervisor is required to be at the worksite at all times while work is in progress. Asbestos workers must have access to certified supervisors throughout the duration of the project.

The supervisor's training course shall adequately address the following topics:

- (a) The physical characteristics of asbestos, and asbestos-containing materials. Identification of asbestos, aerodynamic characteristics, typical uses, physical appearance, a review of hazard assessment considerations, and a summary of abatement control options.
- (b) Potential health effects related to asbestos exposure. The nature of asbestos-related diseases; routes of exposure; dose-response relationships and the lack of a safe exposure level; synergism between cigarette smoking and asbestos exposure; latency period for disease.
- (c) Employee personal protective equipment. Classes and characteristics of respirator types; limitations of respirators and their proper selection, inspection, donning, use, maintenance, and storage procedures; methods for field testing of the facepiece-to-face seal (positive and negative pressure fitting tests); qualitative and quantitative fit testing procedures; variability between field and laboratory protection factors; factors that alter respirator fit (e.g., facial hair); the components of a proper respiratory protection program; selection and use of personal protective clothing; use, storage, and handling of non-disposable clothing; and regulations covering personal protective equipment.
- (d) State-of-the-art work practices. Proper work practices for asbestos abatement activities including descriptions of proper con-

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struction and maintenance of barriers and decontamination enclosure systems; positioning of warning signs, electrical and ventilation system lockout; proper working techniques for minimizing fiber release; use of wet methods; use of negative pressure ventilation equipment; use of high efficiency particulate air (EPA) vacuums; proper clean-up and disposal procedures; work practices for removal, encapsulation, enclosure, and repair; emergency procedures for sudden releases; potential exposure situations, transport and disposal procedures, and recommended and prohibited work practices; discussion of new abatement-related techniques and methodologies.

- (e) Personal hygiene. Entry and exit procedures for the work area; use of showers; avoidance of eating, drinking, smoking, and chewing (gum or tobacco) in the work area; potential exposures, such as family exposure.
- (1) Additional safety hazards. Hazards encountered during abatement activities and how to deal with them, including electrical hazards, heat stress, air contaminants other than asbestos, fire and explosion hazards, scaffold and ladder hazards, slips, trips and falls, and confined spaces.
- (g) Medical monitoring. OSHA requirements for a pulmonary function test, chest X-rays and a medical history for each employee.
- (h) Air monitoring. Procedures to determine airborne concentrations of asbestos fibers: a description of aggressive sampling, sampling equipment and methods, reasons for air monitoring, types of samples, and interpretation of results, specifically from analysis performed by polarized light, phasecontrast, and electron microscopy analyses.
- (i) Relevant federal, state and local regulatory requirements. Procedures and standards, including:
 - (1) TSCA Title II;
- (2) National Emission Standards for Hazardous Air Pollutants, 40 CFR 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos);
- (3) OSHA standards for permissible exposure to airborne concentrations of asbestos fibers and respiratory protection, 29 CFR 1910.134;
- (4) OSHA Asbestos Construction Standard, 29 CFR 1926.58;
- (5) EPA Worker Protection Rule, 40 CFR Part 763, Subpart G.
- (j) Respiratory protection programs and medical surreillance programs.
- (k) Insurance and liability issues. Contractor issues; worker's compensation coverage and exclusions; third-party liabilities

and defenses; insurance coverage and exclusions.

- Recordkeeping for asbesios abatement projects. Records required by federal, state, and local regulations; records recommended for legal and insurance purposes.
- (m) Supervisory techniques for asbestos abatement activities. Supervisory practices to enforce and reinforce the required work practices and discourage unsafe work practices.
- (n) Contract specifications. Discussion of key elements that are included in contract specifications.
- (o) Course review. Review of key aspects of the training course.
- D. Asbestos Workers. All persons seeking certification as asbestos workers shall complete a 3-day training course as outlined below. The worker training course shall include lectures, demonstrations, at least 6 hours of hands-on training, individual respirator fit testing, course review, and an examination. The Department recommends the use of audiovisual materials to complement lectures, where appropriate.

The training course shall adequately address the following topics:

- (a) Physical characteristics of asbestos. Identification of asbestos, aerodynamic characteristics, typical uses, physical appearance, and a summary of abatement control options.
- (b) Potential health effects related to asbestos exposure. The nature of asbestos-related diseases, routes of exposure, dose-response relationships and the lack of a safe exposure level, synergism between cigarette smoking and asbestos exposure, and a latency period for disease.
- (c) Employe personal protective equipment. Classes and characteristics of respirator types; limitations of respirators and their proper selection, inspection, donning, use, maintenance, and storage procedures; methods for field testing of the facepiece-to-face seal (positive and negative pressure fitting tests); qualitative and quantitative fit testing procedures; variability between field and laboratory protection factors; factors that alter respirator fit (e.g., facial hari); the components of a proper respiratory protection program; selection and use of personal protective clothing; use storage, and handling of non-disposable clothing; and regulation covering personal protective equipment.
- (d) State-of-the-art work practices. Proper asbestos abatement activities including descriptions of proper construction and maintenance of barriers and decontamination enclosure systems; positioning of warning signs, electrical and ventilation system lockout; proper working techniques for minimiz-

ing fiber release; use of wet methods; use of negative pressure ventilation equipment; use of high efficiency particulate air (HEPA) vacuums; proper clean-up and disposal procedures; work practices for removal, encapsulation, enclosure, and repair; emergency procedures for sudden releases; potential exposure situations; transport and disposal procedures; and recommended and prohibited work practices.

- (e) Personal hygiene. Entry and exit procedures for the work area; use of showers; avoidance of eating, drinking, smoking, and chewing (gum or tobacco) in the work area; and potential exposures, such as family exposure.
- (1) Additional safety hazards. Hazards encountered during abatement activities and how to deal with them, including electrical hazards, heat stress, air contaminants other than asbestos, fire and explosion hazards, scaffold and ladder hazards, slips, trips and falls, and confined spaces.
- (g) Medical monitoring. OSHA requirements for a pulmonary function test, chest X-rays and a medical history for each employe.
- (h) Air monitoring. Procedures to determine airborne concentrations of asbestos fibers, focusing on how personal air sampling is performed and the reasons for it.
- (i) Relevant federal, state and local regulalory requirements, procedures and standards. With particular attention directed at relevant EPA, OSHA, and state regulations concerning asbestos abatement workers.
- Establishment of respiratory protection programs.
- (k) Course review. Review of key aspects of the training course.
- E. Project Designers. All persons seeking certification as project designers shall complete a 3-day project designer training course as outlined below. The 3-day project designer training program shall include lectures, demonstrations, a field trip, course review, and a written examination. The department recommends the use of audiovisual materials to complement lectures, where appropriate.

The 3-day project designer training course shall adequately address the following topics:

- (a) Background information on asbestos. Identification of asbestos; examples and discussion of the uses and locations of asbestos in buildings; physical appearance of asbestos.
- (b) Potential health effects related to asbestos exposure. Nature of asbestos-related diseases; routes of exposure; dose-response relationships and the lack of a safe exposure level; the synergistic effect between cigarette

smoking and asbestos exposure; the latency period of asbestos-related diseases; a discussion of the relationship between asbestos exposure and asbestosis, lung cancer, mesothelioma, and cancer of other organs.

- (c) Overview of abatement construction projects. Abatement as a portion of a renovation project; OSHA requirements for notification of other contractors on a multi-employer site (29 CFR 1925.58).
- (d) Safety system design specifications. Construction and maintenance of containment barriers and decontamination enclosure systems; positioning of warning signs; electrical and ventilation system lock-out; proper working techniques for minimizing fiber release; entry and exit procedures for the work area; use of wet methods; use of negative pressure exhaust ventilation equipment; use of high efficiency particulate aerosol (EPA) vacuums; proper clean-up and disposal of asbestos; work practices as they apply to encapsulation, enclosure, and repair; use of glove bags and a demonstration of glove bag use.
- (e) Field Irip. Visit an abatement site or other suitable building site, including on-site discussions of abatement design, building walk-through inspection, and discussion following the walk-through.
- (f) Employee personal protective equipment. To include the classes and characteristics of respirator types; limitations of respirators; proper selection, inspection, donning, use, maintenance, and storage procedures; methods for field testing of the facepiece-to-face seal (positive and negative pressure fitting tests); qualitative and quantitative fit testing procedures; variability between field and laboratory protection factors; factors that after respirator fit (e.g., facial hair); components of a proper respiratory protection program; selection and use of personal protective clothing; use, storage, and handling of non-disposable clothing; and regulations covering personal protective equipment.
- (g) Additional safety hazards. Hazards encountered during abatement activities and how to deal with them, including electrical hazards, heat stress, air contaminants other than asbestos, fire and explosion hazards.
- (h) Fiber aerodynamics and control. Aerodynamic characteristics of asbestos fibers; importance of proper containment barriers; settling time for asbestos fibers; wet methods in abatement; aggressive air monitoring following abatement; aggressive air movement and negative pressure exhaust ventilation as a clean-up method.
- Designing abatement solutions. Discussions of removal, enclosure, and encapsulation methods; asbestos waste disposal.
- (j) Budgeting/cost estimation. Development of cost estimates; present costs of

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abatement versus future operations and maintenance costs; setting priorities for abatement jobs to reduce cost.

- (k) Writing abatement specifications. Means and methods specifications versus performance specifications; design of abatement in occupied buildings; modification of guide specifications to a particular building; worker and building occupant health/medical considerations; replacement of ACM with non-asbestos substitutes; clearance of work area after abatement; air monitoring for clearance.
- (1) Preparing abatement drawings. Use of as-built drawings; use of inspection photographs and on-site reports; particular problems in abatement drawings.
- (m) Contract preparation and administration.
- (n) Legal/liabilities/ defenses. Insurance considerations; bonding; hold harmless clauses; use of abatement contractor's liability insurance; claims-made versus occurrence policies.
- (o) Replacement. Replacement of asbestos with asbestos-free substitutes.
- (p) Role of other consultants. Development of technical specification sections by industrial hygienists or engineers; the multidisciplinary team approach to abatement design.
- (q) Occupied buildings. Special design procedures required in occupied buildings; education of occupants; extra monitoring recommendations; staging of work to minimize occupant exposure; scheduling of renovation to minimize exposure.
- (r) Relevant federal, state and local regulatory requirements.

(1) TSCA Title II;

- (2) National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos);
- (3) OSHA standards for permissible exposure to airborne concentrations of asbestos fibers and respiratory protection, 29 CFR 1910.134;
- (4) EPA Worker Protection Rule, 40 CFR Part 763, Subpart G;
- (5) OSHA Asbestos Construction Standard, 29 CFR 1926.58.
- (s) Course review. Review of key aspects of the training course.

2. EXAMINATIONS

The department shall administer a closed book examination or designate other entities

such as department-approved training courses to administer the closed book examination to persons seeking certification who have completed an initial training course. Demonstration testing may also be included as part of the examination. A person seeking certification in a specific job classification shall pass the examination for that classification to receive certification. For example, a person seeking certification as an inspector must pass the department-approved inspector certification examination.

Each examination shall adequately cover the topics included in the training course for that classification. Persons who pass the department-approved examination and fulfill whatever other requirements the department imposes shall receive an identification card indicating that they are certified in a specific classification.

The following are the requirements for examinations in each area:

- Asbestos Inspectors-50 multiple choice questions, 70% passing score.
- Asbestos Management Planners- 50 multiple choice questions, 70% passing score.
- Asbestos Supervisors- 100 multiple choice questions, 70% passing score.
- Asbestos Worker- 50 multiple choice questions, 70% passing score.
- Project Designer- 100 multiple choice questions, 70% passing score.

3. REFRESHER TRAINING COURSES

An annual refresher training course for recertification shall be one day in length except for the inspector classification. Refresher courses for inspectors shall be a half-day in length. Management planners shall attend the inspector refresher course, plus an additional half-day on management planning.

The refresher course shall be specific to each classification. For each classification, the refresher course shall review and discuss changes in federal and state regulations, developments in state-of-the-art procedures and a review of key aspects of the initial training course as determined by the department. After completing the annual refresher course, persons shall have their certification extended an additional year. The department may consider requiring persons to pass reaccreditation examinations at specific intervals.

4. QUALIFICATIONS

In addition to training and an examination, the department may require whatever

qualifications and experience that the department considers appropriate for some or all classifications.

5. DECERTIFICATION REQUIRE-MENTS

Conditions for decertification are found in HSS 159,11(6)(a) for the five job classifications.

6. RECIPROCITY

Requirements for reciprocal acceptance of training certificates issued by states other than Wisconsin are found in HSS 159.13.

II. Text deleted, not applicable

III. Department Approval of Training Courses

Individuals or groups wishing to sponsor training courses in Wisconsin for job classifications required to be certified under Chapter HSS 189 shall apply for department approval. For a course to receive approval, it must meet the requirements for the course as outlined in the Wisconsin Model Accreditation Plan

Applicants shall send the information requested below to the department's Asbestos Training and Certification Program. The information includes but is not limited to:

- A completed application form including the course sponsor's name, address and phone number;
 - (2) The accreditation fee.
- (3) A letter from the training course sponsor that clearly indicates how the course meets the Wisconsin Model Accreditation Plan requirements for:
 - (a) Length of training in days;
- (b) Amount and type of hands-on training;
 - (c) Topics covered in the course.
 - (4) A course curriculum;
- (5) Course materials (student manuals, instructor notebooks, handouts, etc.);
 - (6) A copy of the keyed exam;
- (7) A detailed statement about the development of the examination used in the course;

- (8) Student notification of exam scores;
- (9) Names and qualifications of course instructors. Instructors must have academic credentials and/or field experience in asbestos abatement:
 - (10) Course evaluation forms:
- (11) Description and an example of numbered certificates issued to students who attend the course and pass the examination.
 - (12) Advertising materials:
 - (13) Training schedule;
- (14) Copies of EPA and other state(s) approval letters.

Information and materials for refresher courses are similar to those above, except for exam development requirements.

As noted above, the training course administrator must issue numbered certificates to students who successfully pass the training course's examination. The numbered certificate is to indicate the name of the student and the course completed, the dates of the course and the examination, and a statement indicating that the student passed the examination. That certificate also would include an expiration date for certification that is 1 year after the date on which the student completed the course and examination. Training course administrators who offer refresher training courses must also provide certificates with all of the above information (except testing information unless testing is required).

The department may revoke or suspend approval if an on-site audit indicates that a training course is not conducting training that meets the requirements of the Wisconsin Model Accreditation Plan. Training course sponsors shall permit department representatives to attend, evaluate, and monitor any training course without charge to the department. Department representatives may not give advance notice of their pudits

The department will submit a list of those training courses that have been granted acreditation consistent with the Wisconsin Model Accreditation Plan to the U.S. EPA for publication in the Federal Register.