Illinois
Environmental
Protection Agency

Bureau of Land
2520 West Iles Avenue
Box 19276
Springfield, IL 62794-9276

DLPC – INSTRUCTIONS FOR THE APPLICATION FOR A POTENTIALLY INFECTIOUS MEDICAL WASTE ("PIMW") MANAGEMENT PERMIT TO DEVELOP TREATMENT AND/OR STORAGE-TRANSFER FACILITIES
LPC-PA17

General Information

Read the enclosed instructions carefully to acquire an understanding of permit application requirements. The application form is to be supplemented by plans, specifications, and reports which are required to describe the development and/or operation of the site. The information submitted by the applicant must provide the Illinois Environmental Protection Agency ("Agency") with assurance that operation of the facility will not cause a violation of the Environmental Protection Act (Ill. Rev. Stat., ch. 111-1/2, pars. 1001 et seq.) and regulations promulgated thereunder. This form has been developed for Potentially Infectious Medical Waste ("PIMW") facilities. This application is not intended for use with any other solid waste management facilities. Applicants should use the application form designated for those facilities.

All data and information should be typed or legibly printed in ink.

For any information requested but not provided, justification demonstrating the reason(s) for not doing so must be stated.

Who Should Use this Form

Persons requesting a permit to develop a new PIMW facility, or requesting a permit for the first time for a PIMW facility should use this application form and follow these instructions. In addition, PIMW facilities that are expanding, or adding new units (i.e., new storage area, new treatment units, etc.) should utilize this application. When application is made for these types of activities the applicant should address each area with respect to the original application to see whether changes are necessary. If no changes are necessary, that fact should be so indicated. For example, if a new storage area is proposed, it may not be necessary to change the waste screening plan, but the contingency and closure plans would have to be changed. Applicants should not use the form if they are not expanding, but rather only making modification to existing facilities. In this case the standard application for supplemental permit should be used (LPA-PA1).

Submit an original and three copies of all information requested in the application to:

Illinois Environmental Protection Agency
Division of Land Pollution Control (#33)
Permit Section
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

It is recommended that the applicant retain a copy of the application and all correspondence sent to the Agency. Engineering features of plans, specifications, and reports must be certified by an Illinois Registered Professional Engineer and must bear his seal and signature along with the signature and/or seal of any Registered Land Surveyor who has supplied data contained in the submittal. When such data is obtained from published sources, references are to be included.

The applicant must notify the Agency in writing and certify that the development of the site has been completed in accordance with the application and Development Permit.

In accordance with the Environmental Protection Act ("Act"), all information submitted as part of the application is available to the public except when specifically designated by the applicant to be treated confidentially as regarding a trade secret or secret process in accordance with Section 7(a) of the Act.

I. Site Name:

Provide the name by which the site is to be known for commercial or business purposes. Provide a site number if one has been previously issued for this site.

II. Applicant Information:

1. The full legal name of the owner and operator must be indicated. If the owner is the operator, that fact should be so indicated. Please be advised that since the operator is the entity that conducts was management activities, any permits will be issued to the operator. Signatures are to be place on the cover application (LPC-PA1).
2. The proper legal status of the owner and operator should be noted.
3. Please indicate the relationship between the owner and operator by checking the appropriate boxes.

III. Location Information:

The Agency will correlate information contained in the application with data from other sources as well as evaluate the local conditions adjacent to the site.

The applicant should provide a topographic map (or maps) of the area which surrounds the site or facility, drawn to a scale of one inch equal to no more than 200 feet, containing 5-foot contour intervals where the relief exceeds 20 feet, and 2-foot contour intervals where the relief is 20 feet or less, and referenced to a United States Geological Survey datum; include the boundaries and a legal description of the proposed or developed waste management area.

IV. Facility Background:

Check the box(es) that most accurately describe the facility. Provide the permit number(s) of all existing environmental facility permits.

V. Facility Information:

1. Provide a separate map or plan sheet, drawn to a scale of one-inch equal to no more than 200 feet, showing the outline of the facility (include all essential dimensions and legal boundaries), the location of all storage units, process buildings, transfer facilities, loading and unloading area, access roads, storm, sanitary, and process sewage systems, monitoring and injection wells and any other special construction as may be required to

comply with the provisions of the Act and regulations promulgated thereunder. Indicate the location of closed or inactive units.

2. Provide process flow diagrams or schematic drawings showing the flow of waste through the facility. Show residuals, recycle streams, sample points, equipment, process monitoring devices, etc.

3. Describe the intended operation of the facility:

   A. Type of operation – A description of the overall process to be used for treating and/or storing PIMW and anticipated performance.

   B. Facility operation – A description of the facility operation shall include, at a minimum.

      i. A detailed description of the major activities used at the facility, including transfer, storage, screening, weighing, processing and treatment (including the number of units) of PIMW;

      ii. A description of operations for initial facility startup, daily startup, and scheduled and unscheduled shutdowns;

      iii. A description of the facility operating parameters (e.g., residence time, temperature, pressure, irradiation levels, disinfectant or chlorine concentrations, contact times) for the process, and safety and monitoring equipment.

      iv. A description of the methods to disinfect emptied reusable PIMW containers, transport vehicles, and facility equipment contaminated with PIMW.

      v. A description of the days and hours of operation;

      vi. A description of methods to control the emissions of odors and aerosols generated by the facility operations (e.g., negative building air pressure, fans and vents, internal air recirculation, air pollution control equipment and filtration), as necessary to comply with the Act and regulations promulgated thereunder, including all supporting design and engineering data;

      vii. A description of the measures to control dust, noise, litter and vectors at the facility; and

      viii. A description of the PIMW handling and storage methods required by the Act and regulations promulgated thereunder (e.g., maintaining the integrity of the packaging; providing protection from water, rain, and wind; maintaining PIMW in a nonputrescent state).

   C. Numbers and duties of employees – Include person(s) directly responsible for operation of the site or facility. A description of each job task and how training will be designed to meet each job task (i.e., an outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the facility in a safe manner during normal and emergency situations).

   D. Logistics – Describe how wastes are loaded, unloaded and moved within the site; provide the estimated traffic volume, number and types of transporting vehicles and

other equipment (i.e., fork lifts, loaders, etc.) and identify any safety procedures used to prevent accidents during waste transfer operations.

E. Equipment utilized – Identify each item's function, physical description, capacity, and model number; the number of units used in the operation of each storage and/or treatment process.

F. Daily cleanup procedures.

G. Location and type of security devices to prevent unauthorized access. Signs identifying the storage operation must be prominently displayed at the points of access to the secured storage area. Signs must be marked in lettering that is readable at a minimum distance of five (5) feet. At a minimum, the signs must display the International Biohazard Symbol as shown in 35 Ill. Adm. Code 1421. Illustration A and the word "biohazard".

H. Provide proof that adequate utilities are available to operate the facility, and to respond to emergency situations.

I. Provide proof that all authorizations, permits, and approvals required for this facility have been applied for or obtained, including those from the other divisions of the Agency, other state agencies, federal agencies, local governments, and sewer districts.

4. Waste Types

For PIMW and/or special waste to be stored, treated or recycled at the facility, describe the waste by identifying:

- A generic waste name (i.e., cultures and stocks, human pathological wastes, human blood and blood products, sharps, animal waste, isolation waste, treated recognizable sharps, etc.)
- The process from which the waste was generated (i.e., laboratory, hospital)
- Key components by percent weight (e.g., sharps, plastics, noncombustibles, cellulosic solids)
- Approximate amount of waste (in pounds) to be accepted per day

5. Waste Screening Plan

Facilities must develop a waste screening plan that describes the procedures which the facility will use to identify and prevent unauthorized wastes from being accepted. The waste screening plan must contain provisions to:

- Safeguard the plant equipment
- Assure compliance with local, state and federal regulations governing the waste materials
- Assure the health and safety of all company employees, haulers, and other persons at the facility
- Assure the effectiveness of the treatment technology

The plan should be specific to the type of facility and must include at a minimum:

i. General Procedure – A description of the methods used to identify and prevent unauthorized wastes from being accepted, stored and/or treated at the facility;

ii. Preacceptance Screening – A description of screening methods to determine whether the waste is acceptable prior to shipment to the facility and a brief explanation for the procedures chosen;

iii. Gate Control Screening – A description of criteria to be used for rejecting (e.g., packaging, labeling and marking requirements of the Act and 35 Ill. Adm. Code 1421; delivery by a transporter without a PIMW hauling permit as required by Section 56.1(f) of the Act and issued in accordance with Section 56.5 of the Act; shipment not accompanied by a PIMW manifest as required by Section 56.1(h) of the Act and implemented in accordance with 56.4 of the Act). Gate control shall include visual random inspections of outer packages and the use of appropriate screening equipment (e.g., geiger counters, scales, metal detectors) to prevent unauthorized waste from being accepted. Records of these inspections shall be kept at the facility; and

iv. Quantification Procedure – A description of procedures used to weigh in pounds the amount of PIMW received, unless previously weighed by the transporter. PIMW shall be weighed with a device for which certification has been obtained under the Weights and Measures Act (Ill. Rev. State. 1989, ch. 147, pars. 101 et seq.).

6. Initial Efficacy Testing and Periodic Verification Test(s)

Treatment: Facilities must develop a validation program which demonstrates the effectiveness of the treatment method by performing an Initial Efficacy Test and a Periodic Verification Test(s) to insure the effectiveness of the on-going process.

A. Initial Efficacy Test. The test shall demonstrate that the treatment method eliminates the infectious potential of PIMW in accordance with 35 Ill. Adm. Code 1422.124 by providing:

i. Test data and supporting documentation from either similar existing equipment operations, or pilot projects; and

ii. Sufficient information to determine the efficacy of the proposed treatment technology, including its ability to completely and consistently kill the appropriate biological indicator for the technology chosen. The applicant will be required to justify the test microorganism(s) chosen for the efficacy studies. The results of the initial efficacy testing must be adequate to establish facility operating parameters.

B. Periodic Verification Test(s). A description of the methods of verifying the effectiveness of the on-going operation in accordance with 35 Ill. Adm. Code 1422.125. The description shall include the applicable methods of testing, sampling, handling, and the biological indicator sample culturing procedures. A discussion of the appropriateness of the biological indicator selected for the periodic verification test relative to those used in the initial efficiency test must be included. Each biological indicator sample shall be placed in a load that is representative of a

worst-case of the treatment process. If another verification method is to be used, justification for using an alternative verification method must be provided as part of this application.

7. Classification of Residuals – Describe the management of residual waste generated at the facility. Identify the site(s) or type of site(s) which can receive these wastes. Identify permits required or issued to the receiving site for these wastes. Provide a detailed discussion of the following:

   - Loading and unloading procedures used to handle residuals
   - The estimated quantity and types of residual waste expected to be generated
   - The expected classification of the residuals (i.e. special waste, PIMW, general refuse)
   - The safety features used to prevent the releases or hazards during storage and/or treatment of the residuals (i.e., containment of liquid, cover for dust control, etc.)

8. Contingency Plan

   A written contingency plan must be developed such that it can be used separately from this application as an aid to state and local emergency response teams and plant personnel in dealing with an emergency situation. The plan shall be maintained at the facility and implemented in the event of a discharge, equipment failure, or person injury. The plan should include the following information:

   A. The facility name, location, and brief description of the facilities operations.

   B. The names and addresses, office and home phone numbers of the emergency coordinators.

   C. Names and telephone numbers of police, fire, hospitals, and other emergency organizations and back-up facilities that can be contacted in the case of an emergency, and a brief description of the circumstances under which they will be contacted.

   D. A list of materials that may be found at this facility that may be considered dangerous or hazardous if involved in a flood, fire or release to the environment, and the reason these materials are dangerous (i.e., biohazardous, ignitable, etc.).

   E. The specific procedures to be used by the plant personnel in the event of an emergency (e.g., discharges of PIMW, personal injury, equipment failure, or fire). Include a discussion of the following:

      i. Assessment of the emergency and determination of the action to be taken.

      ii. Emergency response procedures performed by in-plant personnel; and

      iii. The circumstances under which outside emergency teams and the Agency will be notified.

   F. A description (including capabilities) of emergency and cleanup equipment kept at the site and a scale drawing showing their location. This should include, but not be limited to:

      i. Internal Communication Systems

ii. External Communication Systems
iii. Fire Fighting Equipment
iv. Spill Cleanup Equipment

a. Brooms, shovels
b. Absorbents
c. Recovery Drums
d. Disinfectants

v. Personal Protection Equipment
vi. Alarm Systems

G. An evacuation plan that shows the primary and secondary evacuation routes on a floor plan and site plan of the facility.

H. Specific procedures used by facility personnel after the emergency (i.e., cleanup, replacement of emergency equipment, containment, storage procedures, equipment disinfection and inspection, disposal of spill residue, repackaging of PIMW, alternative arrangements for PIMW treatment, etc.).

I. Precautions the facility will take to prevent injury to unauthorized persons by physical contact with wastes, equipment, or structures within the active portion of the facility. This should include, but is not limited to:

i. Barriers
ii. Surveillance systems
iii. Warning signs.

9. Design of Waste Management Area

The waste management area must be designed so that PIMW can be properly stored, treated, transferred and inspected within the facility. The design must incorporate the following:

A. PIMW shall be stored in designated areas so as not to contaminate other waste or materials.

B. All cardboard packages shall be stored in an enclosed area at an elevation above that of the floor.

C. PIMW shall be stored on a surface that allows for drainage and collection of liquids and that minimizes exposure of PIMW to workers and the public.

D. Adequate aisle space shall be maintained between packages to allow inspection of at least one side of each package. PIMW packages shall be stacked so that labels are readable. Justification for the aisle space selected must be provided.

A vehicle containing PIMW is exempt from the above aisle space requirement:

i. when loading or unloading a vehicle; or
ii. when a fully-loaded vehicle is on a site

Either exemption or both exemptions, must not exceed five (5) calendar days.

J. Material handling equipment shall be designed so as to maintain the integrity of the PIMW package.

K. PIMW shall not be stored for more than:

i. 72 hours at the facility unless the surface temperature of the package is maintained at or below 45° F, and

ii. 30 days at the facility regardless of temperature.

G. PIMW packages shall not be compacted or subjected to stress that compromises the integrity of the container.

H. The outdoor storage areas containing PIMW shall be secured against unauthorized access.

I. Adequate structural design shall be provided to insure the integrity of each unit.

J. PIMW Packages shall be stored in a manner and location which maintains the integrity of the packaging and provides protection from water, rain and wind.

K. A description and plan view (including dimensions) must be provided. The design shall include provisions for controlling run-on and run-off.

10. Inspection Plan

Describe in detail the facility's inspection procedures and provide an inspection schedule. The following information must be provided in the inspection plan.

A. A schedule of all units or pieces of equipment which will be inspected, including:

i. Waste management units, ancillary equipment, and surrounding areas;

ii. Monitoring equipment (level alarms, fire alarms, etc.);

iii. Safety and emergency equipment; and

iv. Security devices.

B. Types of problems to look for during inspections.

C. Frequency of inspections.

D. Name of inspector.

E. Record of observations which include date and time of each inspection, the nature of any repairs or other remedial action, and the signature of the inspector.

11. Recordkeeping – Provide a description of the daily operating record and training records which are to be maintained at the facility. A sample page (or pages) from the operating record and training record must be provided as part of the application. The records shall include at a minimum:

A. Operating Record

- Quantities and disposition of PIMW stored, transferred, and/or treated
- Date and time the PIMW arrived at the permitted PIMW site
- Date and time the PIMW left the facility
- Date and time the PIMW was treated, if applicable

- Waste stream permit number (authorization number, if applicable) issued by the Agency
- Generator name(s), location(s), and if applicable, the identification number(s) issued by the Agency for each PIMW load received at the facility
- Temperature(s) of the PIMW load during each day it remains at the storage facility
- The operating treatment parameters (e.g., temperature, pressure, residence time, disinfectant concentration, irradiation dose), if applicable
- Periodic Verification Test(s), if applicable
- Contingency plan
- Manifests
- Corresponding certificates of treatment, if applicable
- Destinations of PIMW packages, which shall include at a minimum; the name of the receiving facility, the location of the receiving facility, the identification number of the receiving facility issued by the Agency (if applicable), and the disposition (i.e., storage, transfer, treatment or disposal)
- In a separate log, the date, time, nature and extent of all discharges and personal injuries and the date, time, nature and result of any response(s) taken

B. Training Record

- Records verifying initial and ongoing training of personnel. Personnel training must be provided to all staff prior to the handling of PIMW. Annual personnel training must include, at a minimum, a thorough explanation of the operating procedures to be taken during normal and emergency situations. The owner or operator shall keep records verifying training of personnel.

12. Closure Plan

An operator of a waste management site shall close the site in a manner which minimizes the need for further maintenance and controls to the extent necessary to prevent threats to human health or the environment. At least sixty (60) days prior to closing a storage operation, the owner or operator shall notify the Agency of the planned closure. Within ninety (90) days after the date the final load of PIMW is received at the storage operation, the owner or operator shall certify to the Agency that final closure has been completed in accordance with the permit, the Act and all applicable regulations promulgated thereunder. The closure plan shall include at a minimum:

- A description of the steps to be taken to clean the area, equipment and structures
- A Material Safety Data Sheet ("MSDS") and manufactures recommendations for use of the chemicals used for decontamination
- Steps necessary to verify that the facility is clean and decontaminated

13. Provide the following information on site suitability which is sufficient to show:

    A. That the facility is located so as to avoid any hazards to public health and safety to persons residing, working, traveling, or in any way spending periods of time in the immediate vicinity. Immediate vicinity is here defined to mean a one-mile radius zone adjacent to the boundary of the site.

    B. That the site or facility is located so as to avoid an adverse effect on existing air and water quality.

    C. That access roads and bridges are not limited to preclude necessary vehicular traffic (i.e., size and weight limits).

VI. Storage:

Check number 1 if storage of PIMW is conducted at this facility. Storage is the containment of waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal. Transfer stations (which is a site or facility that accepts waste for temporary storage or consolidation and further transfer to a waste disposal, treatment or storage facility) is a storage site.

1. Type of Storage Check the box(es) that most accurately describes the type(s) of storage at your facility.

2. General Information

    A. Location Drawings – Cross reference type of storage with the location on a map of the developed site. Indicate the aisle spacings and provide justification that it is adequate to allow inspection of individual containers, and access for emergency and spill control equipment.

    B. Material of Construction – Identify the materials for construction for the various containers (i.e., steel, plastic, fiber, cardboard, etc.). Include design specifications of the containers.

    C. Storage Capacity – Maximum number of containers stored in each area.

    D. Duration of Storage – Turnover rate and frequency of removal for stored wastes from the facility.

    E. Type of Waste(s) – Identify the type of waste stored in each storage area and the type of container(s) used for each waste type.

    F. Container Design – Indicate capacity of each container type used at the facility and demonstrate compliance with 49 Code of Federal Regulations, Parts 173-178: Performance – Oriented Packaging Standards.

VII. Treatment:

Check number 1 if treatment of PIMW is conducted at this facility. Treatment includes incineration, autoclaving, chemical, irradiation, mechanical or any other method, technique or process, including neutralization, designed to change the physical, chemical, or biological character or composition of the PIMW.

1. Type of Treatment Check the box(es) that most accurately describes the type(s) of treatment methods at your facility.

2. General Information

A. Location Drawing – Cross reference type of treatment with the location on a map of the developed site. Indicate the aisle spacings and provide justification that it is adequate to allow inspection of individual units, and access for emergency and spill control equipment.

B. Materials of Construction – Identify the material of construction for the various treatment units.

C. Number of Units and Capacity – Maximum number of treatment units and the maximum amount of PIMW to be treated.

D. Age of Units – Provide age of units and rate of deterioration.

E. Type of Waste(s) – Identify the types of PIMW (e.g., sharps, animal waste, pathological waste, isolation waste, cultures/stocks, and human blood/blood products) treated in each unit.

F. Unit Design – Include information on the type of treatment/equipment and model. This shall include:

- Plan view, elevation view, isometric view of treatment equipment and pollution control equipment
- Schematic diagram of the unit and pollution control equipment
- The locations of all monitors must be indicated on the above drawings
- Minimum, maximum, and nominal operating conditions
- Detailed description of how the system interlocks and emergency waste feed cut-off system works. How will any material in the unit be managed during a system upset? How are fugitive emissions controlled during an emergency shutdown?

G. Treatment Processes – Describe the techniques or methods used in each treatment process. Provide plans and specifications for the treatment units including a process flow diagram and a description of the feed systems, safety cutoff, bypass systems and operational controls (i.e. ORP probe, pH probe, sludge age, MLSS, etc.) for the tank/treatment process and pressure controls. Provide a mass balance throughout the treatment process.

State the objective/goal for each treatment process and performance criteria. Also identify contaminants in the waste stream which will not be treated or which may hinder the treatment process. Express the design capacity of the system, including maximum, minimum, and expected flow rates in gallons/hour. For batch treatment processes, indicate the frequency with which batches will be treated.