LIQUID WASTE HANDLING FACILITY PERMIT APPLICATION REQUIREMENTS AND LOCATION, OPERATING AND DESIGN STANDARDS

8.0 Liquid Waste Handling Facility Permit Requirements.

A complete, detailed permit application, containing at a minimum the information required in Sections 8.1 through 8.7, shall be required for the following:

- developing and operating a new liquid waste handling facility;
- expanding an existing liquid waste handling facility;
- modifying an existing facility's permitted operations; and
- renewing an existing facility permit except when the Short Form application process may be used as outlined in Section 3.0 of these regulations.

The application shall contain narratives, drawings, diagrams, analyses, and calculations necessary to satisfy the requirements of these regulations and demonstrate that the liquid waste handling facility will be designed and operated to protect the public health, safety, and welfare at all times.

8.1. Owner's Authorization. [Section 11-4-1520(A)(1)] The application for a permit shall include a notarized letter, signed by the property owner that authorizes use of the property for a liquid waste handling facility. This letter is required even if the applicant is the owner of the property.

8.2. Property Taxes. [Section 11-4-1520(A)(2)] The application for permit shall include evidence of payment of real estate property taxes by providing copies of the most recent tax bill and check; or by providing a copy of the most recent tax bill that has been stamped paid by the Cook County Assessor's office. The PIN numbers for all areas of the facility shall also be provided.

8.3. Variance in the Nature of a Special Use. [Section 11-4-1520(A)(3)] For new or expanding facilities the application for a permit shall contain all reports and information necessary to obtain a Variance in the Nature of a Special Use (Special Use Variance) from the Zoning Board of Appeals (ZBA). If the liquid waste handling facility has an existing Special Use Variance, the application shall contain copies of the variance issued by the ZBA and a demonstration that the liquid waste handling facility is in compliance with the Special Use Variance and any conditions attached to the variance.

8.4. Design Report. The application for permit shall contain a design report for the liquid waste handling facility that shall include the following components, in this order:

8.4.1. Plot Plan. [Section 11-4-1520(A)(4)] The design report shall contain a plot plan drawing(s) of the liquid waste handling facility. This drawing(s) shall be

prepared at a legible scale, no smaller than one inch equals 100 feet. The plot plan drawing(s) shall include the following components, at a minimum:

8.4.1.1. The liquid waste handling facility site boundaries and the location of all facility buildings, access roads, parking areas, and any ancillary structures or features.

8.4.1.2. Topographic contours, at minimum two-foot contour intervals, of the liquid waste handling site.

8.4.1.3. The extent and composition of the buffer zone required by the Chicago Zoning Ordinance.

8.4.1.4. Any characteristic or feature that has a location standard established in Section 9.0 of these regulations or any other applicable standards. The plans shall identify the characteristic or feature and indicate the setback distance from the liquid waste handling facility boundary.

8.4.2. USGS Site Location Map. [Section 11-4-1520(A)(30)] The design report shall contain a USGS 7.5 Minute Quadrangle Map that provides sufficient coverage to include the following:

8.4.2.1. The delineated boundaries of the liquid waste handling site.

8.4.2.2. A clearly marked one-mile radius around the entire site to identify features including residential property, streams, rivers, ponds, lakes, wetlands, roads, highways, schools and parks within this one-mile perimeter.

8.4.3. Aerial Photograph Drawing(s). [Section 11-4-1520(A)(30)] For new and expanding facilities the design report shall contain an aerial photograph drawing(s) that provides sufficient coverage to include the following:

8.4.3.1. The delineated boundaries of the liquid waste handling facility and site property.

8.4.3.2. A clearly marked ½-mile radius around the entire site to identify features including residential property, streams, rivers, ponds, lakes, wetlands, roads, highways, schools and parks within this ½-mile perimeter.

8.4.3.3. Zoning districts clearly delineated with a ½-mile radius of the facility site. The district boundaries and their respective designations shall be clearly marked.

8.4.3.4. Any characteristic or feature that has a location standard established in Section 9.0 of these regulations or any other applicable standards. The plans shall identify the characteristic or feature and indicate the setback distance from the liquid waste handling facility boundary.

8.4.4. General Layout of the Facility. [Section 11-4-1520(A)(5)] The design report shall contain sufficient scale drawings to describe the general layout of the liquid waste handling facility. These drawings shall include, but not be limited to:

8.4.4.1. The main areas of the liquid waste handling facility, at a legible scale not less than one inch equals 100 feet. The scale shall be represented on each drawing in graphical format.

8.4.4.2. The internal and external layout of buildings and structures.

8.4.4.3. The layout and location of all fixed equipment including, but not limited to: tanks, mixers, filters, treatment equipment, pits, pumps, and piping.

8.4.4.4. The limits of waste treatment, processing, handling, and sorting areas.

8.4.4.5. All pertinent features of the stormwater management system.

8.4.4.6. All pertinent features of the wastewater management system.

8.4.4.7. The locations of the primary utilities within and adjacent to the liquid waste handling facility.

8.4.4.8. The locations of the primary water sources and water distribution system components for employee consumption, fire suppression, facility cleaning, and dust control.

8.4.4.9. The locations of all fire suppression equipment and flammable material storage areas.

8.4.4.10. The locations of all site control features and all screening devices such as fences, gates, and signage..

8.4.4.11. The locations and layout of all parking and queuing areas, including the number of parking spaces and the maximum number of trucks that can be queued at once in the allotted queuing area.

8.4.4.12. The locations and layout of all employee facilities.

8.4.4.13. The location of all first-aid equipment and other emergency supplies and equipment.

8.4.5. Survey. [Section 11-4-1520(A)(6)] The design report shall contain a Legal Plat of Survey, prepared by a Professional Surveyor, that depicts the liquid waste handling site boundaries.

8.4.6. Legal Description. [Section 11-4-1520(A)(7)] The design report shall contain legal descriptions, prepared by a Professional Surveyor, that describe the liquid waste handling site boundaries and are identical to those provided with the financial security required by Section 11-4-370 of the Chicago Municipal Code.

8.4.7. Utilities. [Section 11-4-1520(A)(8)] For new and expanding facilities, the design report shall demonstrate that adequate utility capacity is readily available for the operations of the liquid waste handling facility. Utilities may include, but are not limited to: electricity, potable water, process water, telephone, and natural gas. The information in the design report regarding utilities shall include:

8.4.7.1. A plan scaled drawing showing the location of all utilities within and adjacent to the liquid waste handling facility.

8.4.7.2. Calculations demonstrating what the peak utility demands are for proper operation of the liquid waste handling facility. This shall include but is not limited to peak water, sewage and gas and/or electrical demands.

8.4.7.3. A demonstration that sufficient utility capacity is available to the liquid waste handling facility to satisfy the demands calculated in 8.4.7.2. Such documentation may be in the form of an approval letter or permit from the utility provider.

8.4.8. Water Sources. [Section 11-4-1520(A)(11)] The design report shall demonstrate that sufficient quantities of water or other appropriate materials for employee consumption, fire protection, dust control, and cleaning are available. For this demonstration, the design report shall include:

8.4.8.1. The locations of each source of water and/or other material.

8.4.8.2. The total amount of water and/or other materials available from each source.

8.4.8.3. The rate at which water and/or other materials can be obtained from each source.

8.4.8.4. A listing of equipment and their specifications that are used to pump, distribute and/or convey water and/or other materials.

8.4.9. Site Security. [Section 11-4-1520(A)(13)] The design report shall demonstrate that the liquid waste handling facility is secure from unauthorized access at all times. This demonstration shall include, at a minimum:

8.4.9.1. Descriptions and specifications of the fences, gates, signs, and other barriers that prevent unauthorized access to the liquid waste handling facility.

8.4.9.2. A description of the security measures taken during both operating hours and closed hours.

8.4.10. Back-up Capacity. [Section 11-4-1520(A)(14)] The design report shall demonstrate that the liquid waste handling facility has sufficient back-up capacity for the removal, storage, treatment or containerization of all wastes in the event of an equipment failure or emergency situation. This demonstration shall include, but not be limited to:

8.4.10.1. Details and calculations demonstrating the back-up capacity of the liquid waste handling facility. Specifically list all redundancies or emergency back-up capacity built into the system equipment and staffing.

8.4.10.2. A plan for managing the flow of waste and other materials processed at the liquid waste handling facility during equipment failure or emergency situations.

8.4.11. Structures and Fixed Equipment. [Section 11-4-1520(A)(17)] The design report shall demonstrate that all structures and fixed equipment are designed so that the liquid waste handling facility can be operated as proposed and in a safe manner. This demonstration shall include, but not be limited to:

8.4.11.1. Detailed design drawings and manufacturers specification sheets for all structures and fixed equipment including tanks, mixers, filters, treatment equipment, pits, pumps, and piping.

8.4.11.2. Calculations of the waste handling capacity of all structures and fixed equipment.

8.4.11.3. An operating and maintenance plan for all structures and fixed equipment.

8.4.11.4. New facilities shall include a Construction Quality Assurance (CQA) Plan that provides testing and acceptance procedures for construction of all structures and fixed equipment.

8.4.12. Storage Capacity. [Section 11-4-1520(A)(10)] The design report shall demonstrate that sufficient storage capacity exists to accommodate the peak volumes of material inflow into the facility. This demonstration shall include, but not be limited to:

8.4.12.1. Drawings and calculations indicating the volume of storage available for waste in receiving pits or tanks.

8.4.12.2. Drawings and calculations indicating the volume of storage available for chemicals and other materials used at the facility.

8.4.12.3. Estimates of the volume of incoming waste materials during the peak inflow period of the day in gallons per hour and liters per hour.

8.4.12.4. Estimates of the amount of chemicals and materials used by the facility during an operating day.

8.4.13. Water Drainage. [Section 11-4-1520(A)(20)] The design report shall demonstrate that adequate systems exist to handle stormwater and wastewater flows from the liquid waste handling facility. This demonstration shall include:

8.4.13.1. Drawings, specifications, and design calculations to demonstrate effective control of run-on and run-off from the liquid waste handling facility.

8.4.13.2. Copies of the facility's NPDES and MWRD discharge permits or anticipated submittal date, if applicable and/or any other permit issued by the IEPA Bureau of Water.

8.4.13.3. Copies of the facilities MWRDGC discharge authorization request, discharge authorization, or anticipated submittal date, if applicable.

8.4.13.4. Documentation that any receiving sewer system has sufficient capacity to handle the quantity of stormwater and wastewater generated by the liquid waste handling facility. Such documentation may be in the form of an approval letter or permit from the utility provider.

8.4.13.5. Drawings, specifications, and design calculations to demonstrate effective handling, storage, treatment, and/or disposal of wastewater generated by the liquid waste handling facility.

8.4.14. Traffic. [Sections 11-4-1520(A)(21) The design report shall demonstrate that traffic generated for the liquid waste handling facility will not significantly affect existing traffic flows, and that the points of ingress and egress are designed according to Illinois Department of Transportation (IDOT) standards. For new, expanding, and existing facilities, this demonstration shall include, but not be limited to:

8.4.14.1. Calculations of the average and maximum number of vehicles generated by the liquid waste handling facility as well as hourly breakdown of vehicle traffic.

8.4.14.2. Diagrams of the points of ingress and egress depicting the layout of the ingress/egress points, sight distance, and improvements necessary to minimize accidents at the ingress/egress points.

8.4.14.3. A listing of roads and highways designated for use by traffic generated by the liquid waste handling facility.

8.4.14.4. A stacking plan showing the number of waste handling vehicles and the location of these vehicles during the maximum peak service hour.

8.4.14.5. A demonstration that traffic generated by the liquid waste handling facility will not interfere with the flow of traffic or exceed the intended level of service of any public street or right-of-way.

For new and expanding facilities, this demonstration shall include the components listed in Sections 8.4.14.1. through 8.4.14.5., in addition to:

8.4.14.6. Traffic counts taken in hourly intervals at all ingress/egress points during the anticipated operating hours of the liquid waste handling facility. The entire operating period shall be represented in this traffic count study and shall identify the peak hours of traffic volume occurring in the morning and afternoon. The traffic counts shall include classification of vehicles.

8.4.14.7. A description of the measures taken to reduce the impact of the liquid waste handling facility generated traffic on the existing traffic flows.

8.4.15. Parking. [Section 11-4-1520(A)(22)] The design report shall demonstrate that sufficient parking exists at the liquid waste handling facility. This demonstration shall include:

8.4.15.1. A listing of the number of employees at the liquid waste handling facility and the corresponding number of parking spaces.

8.4.15.2. A layout of all parking areas including short-term truck parking and truck queuing areas. This layout may be shown on the general layout required in Section 8.4.4.

8.4.16. Employee Facilities. [Section 11-4-1520(A)(23)] The design report shall contain a description of the employee facilities available at the liquid waste handling facility. At a minimum, these employee facilities shall include washrooms, toilets, and potable water.

8.4.17. Screening. [Section 11-4-1520(A)(25)] The design report shall demonstrate that the screening or fencing of the liquid waste handling facility will adequately control noise, dust, blowing litter, and will prevent unauthorized access. This demonstration shall include:

8.4.17.1. A description of the screening or fencing for the liquid waste handling facility site.

8.4.17.2. A detailed drawing of the construction of the screening or fencing and the placement around the liquid waste handling facility. This drawing may be included in the general layout required in Section 8.4.4.

8.4.17.3. A demonstration that the screening or fencing will control noise, dust, blowing litter, and unauthorized access.

8.4.18. Buffer Zone. [Section 11-4-1520(A)(28)] The design report shall describe the buffer zone surrounding the liquid waste handling facility and shall demonstrate that it meets the description of a buffer zone required for a liquid waste handling facility by the Chicago Zoning Ordinance.

8.4.19. Environmental Assessment. [Section 11-4-1520(A)(29)] For new or expanding facilities, the design report shall include a complete copy of the Environmental Assessment prepared pursuant to the Chicago Zoning Ordinance. The application shall also include responses and/or additional information related to any recommendations included in the Environmental Assessment.

8.4.20. Monitoring Wells. [Section 11-4-1520(B)(1)] The design report shall contain the locations of monitoring wells for the facility and specific details concerning the monitoring well construction and locations. This shall include, but not be limited to:

8.4.20.1. Drawings indicating the location of all monitoring wells and piezometers for the facility.

8.4.20.2. Construction details for all monitoring wells and piezometers.

8.4.20.3. A demonstration that the horizontal and vertical spacing of well screens is sufficient to detect a release from the liquid waste handling facility.

8.4.20.4. A description of monitoring well abandonment procedures which detail any backfilling or sealing including a demonstration that an abandoned well will not serve as a potential contaminant pathway.

8.4.21. Hydrogeological Investigation. [Section 11-4-1520(B)(3)] For new and expanding facilities, the design report shall contain the results of a comprehensive hydrogeologic investigation of the site and the surrounding area. This investigation shall include, but not be limited to:

8.4.21.1. A narrative describing the local and regional hydrogeology for the subject site.

8.4.21.2. Logs of all soil borings taken at the facility. Sufficient site-specific hydrogeological information shall be obtained to verify that hydrogeological conditions will protect the public health, safety and welfare. All borings shall be continuously sampled in accordance with appropriate testing standards and shall be retained for City inspection until such time as a permit has been issued. The boring logs shall provide an accurate depiction of the site geology extending down to the bottom of the uppermost aquifer or 20 feet below the surface or bedrock, whichever is shallower.

8.4.21.3. Sufficient regional geologic information to correlate the on-site data to the surrounding off-site area.

8.4.21.4. A minimum of two cross-sections through the site, extending 500 feet beyond the property boundary and to the bottom of the uppermost aquifer or 10 feet below the tip of bedrock, whichever is shallower. Existing, published information may be used. At least one cross-section shall be perpendicular to the other cross-sections. The cross-sections shall indicate the geologic units under the site; the watertable; the uppermost aquifer's potentiometric surface; pits, tanks, and treatment units; and the property boundary.

8.4.21.5. The results of all soil tests performed on samples taken from borings. All tests shall be conducted according to appropriate testing standards and results reported according to the same testing standards. Soil tests shall include, but not be limited to:

- Atterberg Limits - minimum one test for each auger boring, including a representative of each unconsolidated material type present on site.
- Moisture Content - minimum one test for each sample taken from every boring.
- Ion Exchange Capacity - minimum one test for each boring, including a representative of each unconsolidated material type present on site, conducted in accordance with the American Society of Agronomy Method, using a one normal solution of NH_4 aqueous at pH 7.0 +/- 0.1.
- Hydraulic Conductivity (permeability) - minimum one test for each boring to include each unconsolidated material found at the site. Vertical and lateral hydraulic conductivity testing shall be

performed for in-situ soils. For placed and compacted liners hydraulic conductivity testing shall be performed on the soil mix to be used for the liner. Samples taken for laboratory hydraulic conductivity testing shall be obtained by thin-walled (Shelby) tubes (minimum 3-inch diameter).

- Standard and Modified Proctor - minimum one test for each boring to include the materials to be used in the construction of the liner bottom and side slopes as well as each unconsolidated material found at the site.
- Shear-Strength - minimum one test for each boring to include the materials to be used in the construction of the liner bottom and side slopes as well as each unconsolidated material found at the site.
- Compressibility - minimum one consolidation test for each boring to include each unconsolidated material found at the site.
- Atterberg Limits - minimum one test for each auger boring, including a representative of each unconsolidated material type present on site.
- Grain size analysis - minimum one analysis for each boring and each soil type classified in the field.

Sufficient numbers of tests shall be performed to fully characterize each material identified beneath the site down to the bottom of the uppermost aquifer. If insufficient numbers of tests exist, DOE may request additional investigations be performed to characterize soil materials below the site.

8.4.21.6. Four potentiometric surface maps of the uppermost aquifer corresponding to four consecutive quarters of potentiometric surface measurements.

8.4.21.7. An analysis of the rate and direction of the flow of groundwater in the uppermost aquifer.

8.4.21.8. An analysis of the potential contaminant migration pathways that may exist in the geologic structures surrounding the facility.

8.4.22. Secondary Containment. [Section 11-4-1520(B)(5)] The design report shall contain sufficient documentation that secondary containment exists for all tanks, drum storage areas, tanker truck loading/unloading areas, liquid transfer points, pits, lagoons, impoundments, and similar liquid waste handling devices or storage systems or devices, and as necessary and appropriate, pumps and piping systems. This demonstration shall include, but not be limited to:

8.4.22.1. Drawings detailing the design of secondary containment features for the facility. The secondary containment features may be shown on the drawings specified in Section 8.4.4. of these regulations in lieu of separate drawings.

8.4.22.2. Detailed calculations verifying that the capacity of the secondary containment features meets the standards specified in Section 11.0 of these regulations

8.4.22.3. A description of any coating or similar sealant systems applied to the secondary containment. This description should include a demonstration that such coating or sealant systems are chemically compatible with any waste or other liquid material that may contact them.

8.4.23. Pit Liners. [Section 11-4-1520(B)(6)] The design report shall contain documentation to demonstrate that pit liners are designed and constructed to prevent contamination of the surrounding environment and meets the minimum standards set forth in Section 11.0 of these regulations. This demonstration shall include, but not be limited to:

8.4.23.1. Details and specifications of the pit liner system including design drawings, construction details, quality assurance testing results, and construction as-built drawings. For existing facilities, the design report shall contain all information regarding the construction of the pit liner system. If sufficient information is not available, DOE may place additional conditions on the facility or require the closure of the pit due to uncertainty of the pit liner integrity.

8.4.23.2. A demonstration that the pit liner system is chemically compatible with any waste or other liquid material that may contact it.

8.4.23.3. Calculations of the amounts of materials required for construction of the pit liners and a demonstration that sufficient quantities are available for construction.

8.4.23.4. A comprehensive construction quality assurance plan that provides for certification of materials and construction by a third party independent professional engineer.

8.4.23.5. Copies of all pit liner acceptance reports, permits, and/or correspondence received from the IEPA.

8.5. Operating Plan. The application for a permit shall contain an operating plan for the liqui waste handling facility that shall include, at a minimum, the following componer n order:

8.5.1. Types of Waste. [Section 11-4-1520(A)(9)] The operating plan shall include a detailed description of the types of waste and volumes of each waste type accepted at the facility. It shall also include the waste screening measures employed by the facility to ensure that unauthorized wastes are not accepted. This discussion shall include, but not be limited to:

8.5.1.1. A list of all the types of waste and the daily volumes of each waste type accepted or proposed to be accepted at the liquid waste handlin facility. The list shall be specific and shall not include terms such a "other", "general", "miscellaneous", or similar terms that are vague in nature. Each item included in the list of waste types shall be accompanied by a description of the material.

8.5.1.2. A description of the service area from which different types of waste will be accepted.

8.5.1.3. A waste screening plan that provides for monitoring and random inspection of waste entering the liquid waste handling facilit

8.5.1.4. An emergency response plan for the immediate segregation and removal of all unauthorized waste from the liquid waste handling facility.

8.5.1.5 A listing of the destinations for any waste that may be transferred off-site for storage, additional treatment, or disposal.

8.5.2. Quantity of Waste. [Section 11-4-1520(A)(10)] The operating plan shall include a discussion of the daily quantities of waste accepted at the facility and a demonstration of the facility's ability to handle the accepted quantity. This discussion shall include, but not be limited to:

8.5.2.1. A list of the quantities of each type of waste that will be accepted at the liquid waste handling facility during the operating day. The estimated waste quantities shall be provided on a gallons per day basis for each waste type and shall include an average daily quantity and a maximum daily quantity for each waste type.

8.5.2.2. A demonstration, through detailed calculations, waste flow diagrams, and operating guidelines, that the liquid waste handling facility is capable of processing the average and maximum quantities of waste anticipated for the facility. Waste flow diagrams shall indicate the quantity of waste material flow between each process or device on the diagram. The diagrams shall also indicate equipment processing rates, staffing requirements, storage capacity, mean storage time, and inflow/outflow rates. The demonstration shall incorporate operating hours, peak periods, peak quantity processing capacities, number of employees, and all other applicable factors.

8.5.2.3. A demonstration that the liquid waste handling facility has the ability to determine and record the amounts of waste entering and exiting the liquid waste handling facility.

8.5.3. Fire Prevention. [Section 11-4-1520(A)(12)] The liquid waste handling facility shall comply with the requirements of the Chicago Municipal Code and all applicable local, State, and Federal laws and regulations relating to fire prevention and control. The operating plan shall include a Fire Prevention and Response Plan. At a minimum, the Fire Prevention and Response Plan shall include:

8.5.3.1. A description of the safety measures employed to prevent fires.

8.5.3.2. The location of and handling procedures for flammable liquids and chemicals stored at the liquid waste handling facility.

8.5.3.3. Details and specifications of a fire detection system for the liquid waste handling facility.

8.5.3.4. Specifications and locations of all fire suppression equipment including, but not limited to, extinguishers, automatic sprinklers, hoses.

8.5.3.5. A description of the responsibilities of all employees in the event of a fire.

8.5.4. Emergency Communications. [Section 11-4-1520(A)(15)] The operating plan shall contain a description of the emergency communication system. This description shall include, but not be limited to:

8.5.4.1. A listing of all equipment available for routine communications and emergency communications.

8.5.4.2. A listing of authorities that may be contacted in the event of an emergency situation.

8.5.4.3. A description of the internal chain-of-command in the event of an emergency, including a description of responsibilities.

8.5.5. First Aid Equipment. [Section 11-4-1520(A)(16)] The operating plan shall contain a description of the first aid equipment available at the liquid waste handling facility. This description shall include, but not be limited to:

8.5.5.1. A listing of first aid supplies available at the liquid waste handling facility.

8.5.5.2. A description of the location of first aid equipment.

8.5.5.3. The designation of employees that receive Red Cross approved first aid training.

8.5.6. Devices, Apparatus, and Processes. [Section 11-4-1520(A)(18)] The operating plan shall contain detailed descriptions and procedures for the operation of the liquid waste handling facility. This shall include, but not be limited to:

8.5.6.1. Detailed descriptions of the procedures for the unloading of waste materials and other materials at the facility.

8.5.6.2. A listing of processes that will be used for the handling and treatment of wastes.

8.5.6.3. An inventory of chemicals or other materials used for the handling and treatment of wastes.

8.5.6.4. Detailed descriptions of the procedures for the loading of waste or other materials for the purpose of transport off-site.

8.5.6.5. Detailed descriptions of all mobile equipment (e.g. vactors and tank trucks) used for liquid waste management.

8.5.7. Rodent/Vector Control. [Section 11-4-1520(A)(24)] The operating plan shall contain a plan for the effective prevention and control of rodents and other vectors. At a minimum, this plan shall include:

8.5.7.1. A minimum of monthly inspections of the entire liquid waste handling facility for rodents and other vectors. A record of the most current inspection and eleven previous inspections shall be maintained at the liquid waste handling facility.

8.5.7.2. All measures taken to prevent infestation by rodents and vectors, including good housekeeping practices used to control rodents and vectors.

8.5.8. Odor Control. [Section 11-4-1520(A)(26)] The operating plan shall provide a plan for the prevention and treatment of malodors from the liquid waste handling facility. This plan shall include, but not be limited to:

8.5.8.1. A description of the methods, including good housekeeping measures, employed at the liquid waste handling facility to prevent malodors from migrating off-site. This description shall include an assessment of the effectiveness of such methods.

8.5.8.2. A description of the response measures taken once malodors are detected off-site including an assessment of the effectiveness of such measures.

8.5.8.3. A plan for the handling of extremely noxious waste materials.

8.5.9. Hours of Operation. [Section 11-4-1520(A)(30)] The operating plan shall specify the hours of operation of the liquid waste handling facility, including processing, waste receipt, and maintenance activities. Those facilities requesting authorization for 24-hour per day operations shall provide information justifying the need for such authorization.

8.5.10. Groundwater Monitoring Plan. [Section 11-4-1520(B)(2)] The operating plan shall contain a comprehensive groundwater monitoring plan demonstrating that the groundwater monitoring system is capable of detecting a release from the facility. This plan shall include, but not be limited to:

8.5.10.1. A listing of constituents monitored at each monitoring point.

8.5.10.2. All documentation used to determine the list of constituents and the maximum allowable predicted concentration (MAPC) of ea constituent at each monitoring point.

8.5.10.3. The schedule for sampling all monitoring wells including the constituents monitored during each routine sampling event.

8.5.10.4. Reporting requirements for quarterly groundwater samples. The quarterly monitoring results shall be provided to the Department of Environment. The quarterly submittal shall include a summary tabl that includes the results of the current monitoring results from the three previous monitoring events, the MAPC for the specific well, and the applicable groundwater quality standard (AGQS) for each constituent.

8.5.10.5. Procedures for verifying and reporting exceedances of MAPCs or AGQCs including procedures and schedule for the design and implementation of remedial actions in the event of a verified exceedance.

8.5.10.6. A requirement that copies of all documentation sent to the IEPA related to confirmation of monitored increase, assessment monitoring, assessment of potential groundwater impact, an remedial action be sent to the Department of Environment.

8.5.10.7. A description of the groundwater sampling procedures, including sampling equipment to be utilized.

8.5.11. Spill Prevention and Control. [Section 11-4-1520(B)(4)] The operating plan shall include a Spill Prevention and Control Plan. This plan shall include, but not be limited to:

8.5.11.1. Descriptions of the measures taken to prevent spills occurring at tanks, piping, pits, and treatment devices. This description shall include a schedule of routine inspections for leaks and spills.

8.5.11.2. Descriptions of the measures taken to control a spill should one occur.

8.5.11.3. A listing of the materials and equipment available on-site for use in controlling spills should one occur, including the location of the equipment within the facility.

8.5.11.4. Descriptions of the procedures used to document and report the spill to the Department of Environment and other agencies.

8.5.11.5. Descriptions of emergency procedures and evacuation plans for use in the event of an uncontrollable spill.

8.5.11.6. A listing of all safety equipment available at the facility, including the location of the equipment within the facility.

8.6 Closure Plan. [Section 11-4-1520(A)(27)] The application for a permit shall contain a closure plan to be implemented when waste activities cease at the liquid waste handling facility. Additional requirements for the closure plan may by included in additional sections. The closure plan shall include, at a minimum, the following components, in this order:

8.6.1. Closure Plan Activities. The closure plan shall include a listing of activities that will occur when waste related activities cease at the liquid waste handling facility including a listing of materials necessary for closure and a schedule for the completion of the closure activities.

8.6.2. Waste Removal. The closure plan shall include a plan for the removal of all waste material from the facility.

8.6.3. Equipment Decommissioning. The closure plan shall include a plan for the decommissioning and cleaning of all equipment and structures at the facility that contacted waste materials.

8.6.4. Cost Estimates. The closure plan shall include cost estimates for the completion of all closure activities. The cost estimates shall be based on the cost necessary for closure at anytime during the life of the facility and shall not be discounted to current values. The cost estimate shall reflect a worst case scenario.

8.6.5. Financing. The closure plan shall include a demonstration that sufficient financing is available to complete all closure activities.

8.7 Additional Requirements. [Section 11-4-1520(A)(30)]. The Commissioner may require additional information be submitted if it is determined that the information in the application is insufficient or if the nature of the liquid waste handling facility warrants additional information to ensure the facility can be operated as proposed.

9.0 Liquid Waste Handling Facility Location Standards.

All new and expanding liquid waste handling facilities seeking permits to operate within the Cit of Chicago shall be located in accordance with the following requirements. The requirements o this section do not exempt liquid waste handling facilities from securing additional approvals ar permits as required by local, State, and Federal regulations. In all cases, the proposed facility location shall be such that public health, safety and welfare are protected.

9.1. Illinois Environmental Protection Act. All liquid waste handling facilities shall demonstrate compliance with Section 22.14 of the Act.

9.2. Schools and Hospitals. A liquid waste handling facility shall not be located within 800 feet of any property used for a school, hospital, nursing home, or convalescent center, unless written permission from the owner is provided for a closer distance.

9.3. Lake Michigan. A liquid waste handling facility shall not be located within the Lake Michigan and Chicago Lakefront Protection District as specified in Lake Michigan and Chicago Lakefront Protection Ordinance (Chapter 16-4 of the Chicago Municipal Code)

9.4. 100-Year Flood Plain. A liquid waste handling facility and all ancillary structures, including storage areas, shall not be located within the 100-year flood plain, unless the liquid waste handling facility can demonstrate compliance with the Chicago Flood Control Ordinance (Chapter 16-6 of the Chicago Municipal Code) and all other applicable state and federal requirements.

9.5. Wetlands. A liquid waste handling facility shall not have a negative impact on wetlands occurring on the subject site or near the subject site in accordance with Section 404 of th Clean Water Act (33 U.S.C. 1344) unless application is made and a permit received fro the US Army Corps of Engineers and DOE approves such impact as part of the facility's permit.

9.6. Endangered Species. A liquid waste handling facility shall not pose a detrimental threat to any endangered species of plant, fish, or wildlife as defined by the Endangered Specie Act (16 U.S.C. 1531 et seq.) or the Illinois Endangered Species Protection Act. (520 ILCS 10/1 et seq.).

9.7. Historic and Natural Areas. A liquid waste handling facility shall not pose a detrimental threat to any historic site as listed pursuant to the National Historic Preservation Act (16 U.S.C. 470 et seq.) or the Illinois Historic Preservation Act (20 ILCS 3410/1 et seq.) and designated in the Chicago Zoning Ordinance, or any natural landmark, as designated by the National Park Service, the Illinois State Historic Preservation Officer, or as a

Dedicated Illinois Nature Preserve pursuant to the Illinois Natural Areas Preservation Act (525 ILCS 30/1 et seq.).

10.0 Liquid Waste Handling Facility Operating Standards.

All liquid waste handling facilities permitted by the Department of Environment shall comply with the following operational standards:

10.1. Permit. The liquid waste handling facility shall be operated in accordance with the current permit application on file with the Department of Environment; the current, written permit issued by the Department of Environment; the Standard Conditions contained in the current, written permit; and the Special Conditions contained in the current, written permit. A copy of the permit shall be maintained at the facility and shall be reviewed by the facility site manager. If the current permit application and the current, written permit conflict, the permit shall govern.

10.2. Hours of Operation. The liquid waste handling facility shall only operate during those hours specified in the permit issued by the Department of Environment. In addition to the hours specified in the permit for the acceptance of waste materials, the permit may also specify hourly restrictions on other ancillary operations that occur at the facility.

10.3. Waste Volumes. Waste volume limits specified by the Department of Environment in the facility's permit shall not be exceeded.

10.4. Facility Cleaning. Receiving and storage pits or tanks shall be cleared of all waste and cleaned according to the schedule outlined in the permit application. The date of each cleaning shall be recorded in a log which shall be available for inspection by the Department. Floors, equipment, and anything else that may contact the waste shall be spot cleaned on a daily basis and shall be completely cleaned on a weekly basis.

10.5. Vehicles and Equipment. The liquid waste handling facility shall have sufficient vehicles and equipment available at all times to process all incoming volumes of waste materials.

10.6. Air Quality. The liquid waste handling facility shall not significantly impact air quality off-site.

10.7. Utilities. All necessary utilities shall be available with sufficient capacity to serve the liquid waste handling facility and its operations. In the event of a disruption of any utility service, a contingency plan shall exist to provide back-up capacity or to provide procedures for safe operation during the disruption.

10.8. Equipment Maintenance. Equipment and vehicles used at the facility shall undergo routine maintenance. The liquid waste handling facility shall develop a maintenance plan for all equipment and vehicles used in facility operations. The owner and operator shall prevent the usage of any vehicle or equipment that is in need of repair.

10.9. Waste Screening. The liquid waste handling facility shall accept only those materials permitted by the Department of Environment and listed in the facility's current, written permit. All waste loads shall be screened in accordance with the load checking plan included in the application for a permit and approved by the Department. The operator shall monitor for unauthorized waste. Any unauthorized waste shall be immediately removed from the facility, in accordance with the conditions of the Department of Environment permit. The operator shall notify the Department of Environment by phone within 24 hours and in writing within two business days of any acceptance of unauthorized wastes, documenting the proper removal and disposal of the unauthorized waste.

10.10. Fire Prevention and Accident Safety Plan. The liquid waste handling facility shall have an approved fire prevention and accident safety plan; shall operate in compliance with the performance standards for fire and explosive hazards; and shall install and maintain fire suppression equipment as specified in the Chicago Zoning Ordinance, the building regulations and applicable fire prevention regulations of the Chicago Municipal Code.

10.11. Site Security. The liquid waste handling facility shall have all operations screened from view of all passersby. A fence or natural barrier shall be constructed and maintained to prevent unauthorized access to the site.

10.12. Traffic. The liquid waste handling facility shall not cause the back up of vehicles onto public roads or rights-of-way at any time. No vehicles used in the operations of the liquid waste handling facility shall be parked or wait along public streets or rights-of-way. The liquid waste handling facility shall have sufficient parking available for all personnel, visitors, and vehicles used for the operations of the liquid waste handling facility.

10.13. Noise. The liquid waste handling facility shall comply with the performance standards for noise specified in the Chicago Municipal Code.

10.14. Odor Control. The liquid waste handling facility shall operate in accordance with an approved odor control plan for the prevention and treatment of malodors from the liquid waste handling facility.

10.15. Rodent/Vector Control. The entire liquid waste handling facility shall be inspected by a vector control specialist for rodents and other vectors at least monthly. A record of the most current inspection and eleven previous inspections shall be maintained at the liquid waste handling facility.

10.16. Stormwater. Any precipitation which accumulates in the secondary containment system shall be removed within 24 hours of the time such accumulation is observed, or re t area overflows, whichever comes first. If necessary, the facility shall analyze and treat tl stormwater collected from the secondary containment system to ensure that no constituents violate the appropriate discharge requirements of the MWRDGC.

10.17. Daily Inspections. The facility operator shall conduct daily inspections for:

- leaks, spills and excess corrosion for all tanks, piping systems, and any other ancilla equipment at the facility.
- cracks, spilling, standing liquid and any evidence of stains or residuals for all secondary containment systems.
- the detection of leaks, spills and deterioration of containers and the containment system.

Records of all such inspections shall be made and maintained at the facility.

10.18. Inspections. The liquid waste handling facility, its records and permits, shall be availab to the Commissioner or authorized agent for inspections at all times during normal business hours and upon reasonable notice at other times to ensure compliance with the Municipal Code and these regulations.

10.19. Facility Operating Record. The facility shall maintain an on-site operating record whicl shall include, at a minimum, information regarding: facility cleaning; daily inspections; the date, time and description of emergencies; date and time of vector control ac ties and inspections; and date and time of receipt of unauthorized waste and action taken.

10.20. Record keeping. The operator of the liquid waste handling facility shall record the following information for each load of waste entering the facility: date/time received, type of waste, volume of waste, treatment method, volume of residuals, and date/locatio of residual disposal. Recordkeeping shall include the proper manifesting of any waste transported from the site. These records shall be kept at the facility and shall be availabl for inspection by the Department.

10.21. Reporting. The operator of the liquid waste handling facility shall submit quarterly reports to the Department containing the following information: results of groundwater sample analysis, monthly totals of waste volumes received, monthly totals of treated waste intended for disposal, monthly totals of treated waste intended for reuse, and monthly totals of wastewater discharged to the wastewater treatment facility. These reports shall be submitted within 45 days from the end of each quarter. This informatior may be submitted as part of a facility's monthly Environmental Control Fund payments.

10.22. Correspondence. The operator shall provide the Department with copies of all correspondence to or from the IEPA, the USEPA and the Army Corp of Engineers including, but not limited to: notices of violation, letters, permit applications, reports, groundwater monitoring reports, and annual reports.

11.0 Liquid Waste Handling Facility Design Standards.

Liquid waste handling facilities permitted by the Department of Environment shall comply with the following design standards. These standards shall comply to new facilities and the expansio of existing facilities.

11.1. Liquid Waste Handling Facility. The transfer, storage, treatment, and handling of waste materials shall be performed in a manner that prevents all precipitation from contacting the wastes.

11.2. Building Layout. The building layout shall allow for the free flow of material through the liquid waste handling facility.

11.3. Processing. The liquid waste handling area shall conform to Occupational Safety and Health Administration regulations including confined space regulations. All processing equipment shall have lockout devices and guarding. Equipment shall be explosion-proo and/or be equipped with explosion suppression controls if the potential for an explosive atmosphere is present. Emergency stopping devices shall be supplied for processing, mixing, and/or treatment equipment. Any elevated platform shall have at least two acces points. Processing equipment shall be sufficient to maintain the design throughout capacity specified in the permit.

11.4. Foundation Analysis. The proposed foundation shall be suitable for the building ign and function and shall meet all applicable regulations.

11.5. Piping Systems. The piping for the liquid waste handling facility shall be designed and constructed to resist the pressures and temperatures expected at the facility. The piping shall be constructed of a material that resists corrosion and is compatible with the waste or other materials handled by the facility.

11.6. Tank Design. Tanks at the facility shall be constructed of materials that are compatible with the waste or other materials stored in the tank. Tanks shall be leak-free and shall be capable of withstanding the pressures expected within the tanks. Tanks shall be equippe or located such that precipitation cannot enter the tank.

11.7. Pit Design. Pits at the facility shall be constructed of materials that are compatible with the waste or other materials stored in the pit. Pits shall be leak-free and shall be capable of withstanding the pressure expected within the pits. Pits shall be equipped or located such that precipitation cannot enter the pit. Pits constructed of concrete shall use epoxy coated rebar and shall be lined with a suitable material making the pit impervious to liquids.

11.8. Secondary Containment. Secondary Containment volume shall be equivalent to the volume of the largest tank plus precipitation from a 25 year, 24 hour rainfall event. The secondary containment installations shall allow for the complete removal of any spilled waste or other materials.

11.9. Monitoring Wells. Monitoring wells and piezometers shall be constructed in accordance with IEPA standards. All wells and piezometers shall be equipped with locking covers to prevent tampering. Monitoring wells shall be constructed and developed in accordance to IEPA regulations and applicable state laws. A minimum of one upgradient well and two downgradient wells shall be installed. The upgradient wells shall be located as close to the facility property boundary as practical. The downgradient wells shall be located as far away from the property line as practical so as to detect a release before contamination leaves the facility property.

11.10. Lighting. The light levels of each area, including the tipping floor, processing line, equipment maintenance areas, washrooms, office, storage areas, and other rooms shall conform to accepted standards. Exit lighting shall be provided at each exit.

11.11. Heating, Ventilation and Air Conditioning. Heating, ventilation and air conditioning systems shall be capable of maintaining comfort and minimum fresh air requirements. Fresh air quantities shall be provided taking into consideration exhaust emission and employee fresh air requirements. An air filtering system shall also be designed and installed to meet all applicable regulations for maximum dust and contaminant levels in occupied spaces.

11.12. Roadways. The liquid waste handling facility shall be designed and operated to allow traffic to flow smoothly into, through, and out of the site without interfering with other vehicles or the operations of the liquid waste handling facility. Interior roads shall be designed to withstand the loads expected at the facility. At a minimum, all roads and parking areas shall be paved or provided with other DOE approved dust control measures.

11.13. Parking. The liquid waste handling facility shall have sufficient parking for all vehicles involved in its operation.

11.14. Fueling Facilities. If equipment and vehicles will be fueled on site, a fueling station shall be constructed that provides secondary containment of flammable materials. The fueling station shall be designed and constructed in accordance with the Chicago Municipal Code and shall be approved by the State Fire Marshall's Office and the Chicago Fire Department.

11.15. Screening. The liquid waste handling facility shall have adequate screening or fencing to control noise, dust, and prevent unauthorized access.