

Cambridge Township Stand-Alone Ordinance Provisions

Chapter 16 - ENVIRONMENT
ARTICLE 14. MINING CONTROL

ARTICLE III. MINING CONTROL

Sec. 16-26. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant means the person making application for a permit under this article.

Code means the Cambridge Township Code of Ordinances.

Hazardous waste means a solid waste, or a combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

- (1) Cause, or significantly contribute to an increase in mortality, or an increase in serious irreversible, or incapacitating reversible illness; or
- (2) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Industrial waste means any waste substance or combination thereof resulting from any process of industry, manufacturing, trade, or business, or from the development of any agricultural or natural resource, excluding common rubbish and garbage.

Mineral mining or mining means the excavation, stripping, removal or processing of gravel, sand, clay, stones, rock, aggregates, or other soils, including overburden, or the storage or transporting of such minerals and soils on a mining site, or the reclamation of the site after removal, excavation, stripping, and/or processing of the minerals or soil.

Legal holidays means New Year's Day, Memorial Day, Easter Sunday, Independence Day, Labor Day, Thanksgiving, and Christmas Day.

Operator means any person conducting mining operations on a site.

Owner means any person with an ownership interest in the site.

Permit holder or operator means the person receiving a permit under this article.

Person means an individual, partnership, corporation, limited liability company, limited liability partnership, trust, the state and any of its agencies or subdivisions, and any body of persons that together hold joint ownership of a site.

Sewage means water-carried human or animal wastes from septic tanks, water closets, residences, building, industrial and municipal establishments, or other places, together with such groundwater infiltration, subsurface water, mixtures of industrial wastes or other wastes as may be present.

Site means a parcel or unit of land on which mining operations have been, are, or are proposed to be conducted.

Sec. 16-27. Permits.

- (a) **Permit requirements.** From and after the effective date of the ordinance from which this article is derived, no person shall own or operate a mineral mining site in the township, except in accordance with a permit issued pursuant to this article and in accordance with the requirements of this article. A permit issued pursuant to this article shall be nontransferable.
- (b) **Compliance with other ordinances and regulations.** The grant of a permit under this article does not relieve the applicant from compliance with, as well as from applying for and receiving any approvals required by, the Cambridge Township Zoning Chapter, or any other applicable law, ordinance or regulation.
- (c) **No permits required.** No permit under this section shall be required for any of the following:
 - (1) Excavations for the construction of buildings and structures for which a building permit has been issued;
 - (2) For the moving, grading or leveling of earth or rock materials by a property owner solely upon his residential property as required for home construction or improvement, landscaping, lawn maintenance, or gardening. Whether or not a permit is required for any activity described in this subsection, any fill should be placed so it will not exceed a minimum slope ratio of four feet horizontal to one foot vertical from any adjacent property owner and not block any natural drainage course;
 - (3) For the filling of land for purposes of construction or land balancing where the land is low (but is not considered a wetland pursuant to applicable law) and in need of fill so long as the fill does not contain any refuse, is not a commercial operation and not more than 1,000 cubic yards of fill are deposited in any calendar year;

- (4) For the removal of soil when no more than 1,000 cubic yards are removed in any calendar year;
- (5) Excavations or land balancing, without removal of aggregate from premises, in connection with development of property pursuant to a site plan, condominium plan, or subdivision plan previously approved by the township;
- (6) Excavations or land balancing in connection with the installation or repair of a septic system for which any required permit has been secured from the county health division.

Sec. 16-28. Application procedure for mining permit.

The following application procedure shall be complied with. The application form shall be obtained from the township clerk.

- (a) All applicants shall use the form provided by the township clerk, accompanied by the documents listed on that form. All permits are annual in nature and all permits expire on May 15 of each permit year. To be considered for renewal, 15 copies of the proper application with required attachments must be submitted to the township on or before November 30 of the year preceding.
- (b) Upon receipt of any application, the township engineer and/or other qualified professional as selected by Cambridge Township shall review the application and attachments, physically inspect the premises to determine compliance with the standards of this article and any previously issued permit and reclamation plans, and report to the township board, which report shall also include feasibility of the reclamation plans, compliance with any previously issued permit and reclamation plan and engineering considerations, an estimate of the cost of reclamation upon abandonment for bond amount purposes, and general safety, drainage and other engineering considerations of the permit application. The report by the township engineer shall be rendered no later than the regular February meeting of the township board.
- (c) The township board shall make final determination on issuance, renewal or nonrenewal of the mining permit on or before May 15 of the respective year. Failure of the township board to act by the time frames mandated above shall not result in an automatic renewal for a one-year renewal period, but such failure merely results in an extension of the existing annual license for an additional period up to the time of final determination by the township board.

Sec. 16-29. Application contents.

- (a) **Application form.** The application shall contain the following information:
 - (1) Name and address of the owner, or owners, of land from which removal is to be made.

- (2) Name, address, email address and telephone number of the applicant including a list of other parties, partners, and stakeholders having an interest in the mining activity making a request for such permit.
 - (3) Name, address, email address and telephone number of the person who will be conducting the actual removal operation.
 - (4) Location, size, and legal description of the area from which the removal is to be made.
 - (5) Location of the processing plant and type of plant to be used.
 - (6) Detailed statement as to the exact type of materials or resources to be removed, and the estimated number of cubic yards.
 - (7) Proposed method of removal, general haul route, and whether blasting or other use of explosives will be required.
 - (8) General description of types of equipment to be used.
 - (9) Duration of proposed operation, and location, timing, and any other relevant details with respect to the phasing and progression of work on the site.
 - (10) Proposed method of filling excavation where mining results in extensive under-surface extension.
 - (11) The signature of the owner of the site, consenting to the application and agreeing to be bound by all the provisions of the permit and this article.
 - (12) The signature of the applicant
- (b) **Supporting Documentation.** The following documents must be submitted with the application:
- (1) **Aerial Photograph.** A vertical aerial photograph (submitted on an annual basis), enlarged to a scale to fit on a 24-inch by 36-inch plan sheet, from original photograph flown at a negative scale no smaller than one inch equals 200 feet. The date of the aerial photograph shall be certified and shall have been flown at such time as the foliage shall be off of onsite trees. If there are changes in the topography from the date of the photograph, an accompanying text shall be provided explaining each change. The photograph shall be provided from an aerial flight having occurred within six months prior to the application filing date. The vertical photograph shall cover:
 - a. All land anticipated to be mined in the application, together with adjoining land owned by the applicant;

- b. All contiguous land which is or has been used by the owner or leasehold applicant for mineral extraction and/or processing and/or storage, and all contiguous land in which the applicant or any affiliate has a current interest;
 - c. All lands within 200 feet of a proposed mining area;
 - d. All private and public roads from which access to the property may be immediately gained;
 - e. Boundary of the entire planned mining area by courses and distance;
 - f. Means of vehicular access to the proposed operation.
- (2) **Survey.** A full legal description and drawing of the site, prepared by a licensed surveyor registered in the State of Michigan, showing:
- a. The number of acres on each portion of the site to be mined, and the location of all parcel boundaries on and within the extraction site.
 - b. Existing site improvements including buildings and structures, drives, wells, and drain fields.
 - c. All servient and beneficial easements, and all easements appurtenant to the property, if any. Indicate the identity by Liber and Page, if any, the origin (e.g., Deed from A to B), if applicable, and nature (e.g., ten-foot sewer easement).
 - d. The location, dimensions, and nature of all encroachments upon the property.
 - e. Existing topography at contour intervals of five (5) feet, obtained from an actual on-site land survey, unless at the pre-application conference the Township engineer deems that a survey interval of less than five (5) feet is necessary for review.
 - f. The location and dimensions of drives to and from the property, including abutting streets.
- (3) **Environmental Impact Statement.** An environmental impact statement based upon the site inventory map and assessment, shall be prepared by a qualified professional, or professional engineer, addressing impacts the operation will have on natural features, and flora and fauna, both on the site and adjacent lands, as well as any mitigation measures needed to eliminate or minimize these impacts. The name, address, and professional qualifications of the proposed professional design team members, including the designation of the person responsible for the

preparation of the environmental impact study shall be provided for the approval of Cambridge Township. The statement should also address the following:

- a. Applicable setbacks for the site and from the extraction area.
- b. Tree fence rows, woodlands and wetlands and the extent of such lands, even if beyond the 100 foot margin above to the property line of the subject property.
- c. Watercourse stream banks, pond ordinary highwater marks, flood ways, and flood plains, where determinable from public and private records and/or when accessible to applicant as through aerial photographic interpretation.
- d. Areas of hydric soils, highly permeable soils, ground water recharge areas and topographic slopes.
- e. Landmark trees in the area(s) affected by mining should be located by numbered dots, with an accompanying database table of corresponding species and size listings. All trees 18 inches in diameter or larger will be considered landmark trees.
- f. An initial flora catalog, i.e. plants species, in the area(s) affected by mining
- g. The location of all archaeological, historical, or features of cultural significance.
- h. The site inventory should contain a written description of the quality, character, and health of the natural features, including but not limited to wetlands, surface waters, woodlands, historical features, and threatened and endangered species.
- i. Noise and dust.
- j. Drainage, erosion and sedimentation.
- k. Views of the mining site from adjacent roads and properties.
- l. Wetlands, flood ways, flood plains, and special habitats for fish and wildlife.
- m. Potential impacts on surface waters, on ground water, and on aquifers.
- n. Areas and features of historic, archeological and natural significance.

- o. Traffic study, including truck traffic and access to and from the site. The Traffic Impact Analysis is to be reviewed by the Township and other applicable agencies to determine impacts to the Township road system. All needed roadway improvements shall be shown on the required site plan.
 - p. Compatibility with adjacent land uses.
 - q. Any additional items that the Township's engineering or environmental consultant reasonably deem significant.
- (4) **Hydrogeological Analysis.** A hydrogeological analysis prepared by a professional engineer, registered in the State of Michigan, or professional geologist with experience in hydrogeological studies, containing such information as the Township's consultants shall require to insure that the extraction activities will not adversely impact the site or surrounding properties.
- (5) **Subsurface Information.**
- a. Physical Features Map, prepared by a professional engineer registered in the State of Michigan or professional geologist. The extent, location and nature of all subsurface materials on the proposed extraction site are to be shown on a topological map .
 - b. A report to include information about:
 - (i) Depth of excavation drill holes and the claimed deposit of materials to be extracted from the site.
 - (ii) Identification, location, and description of soil and mineral content, with soil boring logs representative of the site and an analysis of the subsurface materials. The Township engineer and applicant's engineer shall confer and jointly determine the number of borings required and boring depths at the pre-application conference. In the event of a dispute, the engineers shall agree upon a third engineer from a reputable engineering firm to resolve the dispute.
 - (iii) Ground water elevation, flow directions, and identification of aquifers.
 - (iv) Estimated quantity of reserves at the site, and projected years of operation.
 - (v) Depth and estimated quantity of topsoil to be stripped.
 - (vi) Depth and estimated quantity of overburden to be stripped and location of storage sites, if any.

- (6) **Haul Route Map.** An area map delineating the haul route to be used for the proposed operation, accompanied by a letter of preliminary comments from the Road Commission(s) impacted by the proposed haul routes. Any subsequent changes in haul routes be approved by the Township.
- (7) **Dust Control Plan.** A control plan to alleviate dust resulting from the mining operation, which may include sweeping, paving, spraying water or calcium chloride, or other best management practices. The plan shall include proposed management practices on both access roads and public roads, beyond normal maintenance of Road Commission(s), and will be part of the soil erosion plan. This plan is to be reviewed annually by the Township engineer or environmental consultant.
- (8) **Mud Control Plan.** A control plan to alleviate mud resulting from the mining operation, which may include sweeping, paving, spraying water or calcium chloride, or other best management practices. The plan shall include proposed management practices on both access roads and public roads, beyond normal maintenance of Road Commission(s), and will be part of the soil erosion plan.
- (9) **Noise Control Plan.** A study and report prepared by a qualified professional estimating the noise levels at the property boundaries containing the extraction operation and at successive stages of the operation. This plan must contain mitigation measures to be implemented when noise levels exceed acceptable standards.
- (10) **Soil Erosion Plan.** A site specific plan that will provide a complete description of all soil erosion measures, including but not limited to:
 - a. All erosion control strategies and control measures, including but not limited to silt fences, vegetation screens, sediment basins, and settling ponds.
 - b. Locations of control measures particularly on all bare surfaces including steep slopes.
 - c. Time schedule and installation description for each control measure.
 - d. All temporary and permanent measures and maintenance to each, to maintain adequate control.
 - e. The plan is to conform to any and all requirements of the soil erosion and sedimentation requirements of the Environmental Protection Act, MCL 394.9101 et seq., and/or Part 91 as defined. control measures showing adequacy of on-site secondary containment of hazardous

- f. Pollution Prevention Plan. A complete description of proposed pollution prevention plan. This plan must address all sediment, storm water and settling, basins as well as any probable impacts from processors activities or on-site fuel or chemical storage.
- (11) **Impact Mitigation Plan.** An impact mitigation plan to mitigate impacts resulting from mineral extraction, and the method by which complaints about any aspect of the facility operation or off-site transportation are to be received and resolved. This plan must set forth the procedures to address complaints regarding adverse impacts, including noise, fugitive dust, wetland loss.
- (12) **Permits.** A comprehensive list of all permits required for the proposed operation, copies of the application documents, and a schedule showing when they are to be renewed, including, but not limited to;
- a. A copy of permit from the Michigan Department of Environment, Great Lakes and Energy (EGLE), or written communication addressed to the Township from the EGLE indicating that a permit is not required for the proposed extraction or reclamation by any applicable statute granting the EGLE jurisdiction over such activity.
 - b. A Michigan State Fire Marshall permit for the on-site storage or transfer of fuels; or a written indication from the applicable agency that a permit is not required.
 - c. A copy of a storm water control permit from the United States Environmental Protection Agency (EPA) and any NPDES or wetland permit from the Michigan Department of Environmental Quality, PA 451 of 1994, Part 31.
- (13) **Well Complaint Resolution Program.** A well complaint resolution program shall be prepared and submitted to the Township, which specifies the procedures the applicant is committed to follow in resolving any domestic water well complaints, including:
- a. Multiple points of contact, response times and methods.
 - b. Complaint evaluation and mitigation procedures, including reports to both the domestic well owner and the Township.
 - c. The well complaint resolution program shall be applicable to properties that provide consent for the pre-extraction well survey.
 - d. If an analysis and evaluation of well complaints leads to the determination that an adverse impact is caused by the applicant's extraction operation, the applicant will replace the domestic water supply at the subject

residence by the following, but not limited to, methods, at no cost to the homeowner:

- (i) Repair or replace well components damaged by the extraction operation.
- (ii) Deepen the existing well or drill a replacement well.
- (iii) Provide another source of potable water for the residence.

(14) **Operations Plan.** A report prepared by a licensed geologist, architect or professional engineer, registered in the State of Michigan. The plans shall be of sufficient detail so they can be used to assess the performance of the mine operation during any site inspection, including the following:

- a. Earth handling equipment to be used on-site.
- b. Excavation equipment.
- c. Methods of excavating.
- d. Methods of transporting material from extraction site to processing plant and/or offsite.
- e. Processing plant height and area requirements.
- f. Types of processing activities, such as screening, washing, crushing, settling of fines and blending.
- g. Estimated quantity, use and disposal of fines.
- h. Estimated number and size of settling ponds and sediment basins.
- i. Estimated annual production of sand, gravel, and other minerals in cubic yards.
- j. Estimated type, size and number of trucks hauling material from the site daily, during peak season and annually.
- k. Fuel storage area requirements, if any.
- l. Maintenance and storage area requirements.
- m. Other structures and facilities to be constructed on-site.
- n. Procedures for recording and handling complaints.

- o. Proposed hours and days of operation.
 - p. Perimeter security plan, including fence locations.
 - q. Location and description of entrance area, processing plant and support areas, and structures, including any weigh stations
 - r. Lane widening on public roads at intersections with drives.
 - s. Division of the site into a series of cells that illustrate the sequence of the proposed extraction activities.
 - t. Sequence of clearing and grubbing, including a description of the disposal methods.
 - u. Sequence of construction and installation of facilities.
 - v. Sequence of stripping, placement and/or stockpiling of topsoil, including the area to be stripped.
 - w. Sequence of stripping, placement and/or stockpiling of overburden including the area to be stripped.
 - x. Location and type of materials for sound and visual screening of the site.
 - y. Location and operation of any check station or weigh stations.
- (15) **Reclamation Plan.** A detailed Reclamation Plan showing that the entire property will be left in a form for development with uses that are permitted in the district, relating such reuse to existing uses or probable uses for surrounding properties, and shall include the following elements:
- a. Proposed topography at contour intervals to provide adequate grading information, subject to the Township engineers recommendation at the pre-application meeting, with five (5) feet being the minimum.
 - b. Schedule of progressive rehabilitation.
 - (i) After mining is completed on one specified area, quadrant, or cell, reclamation shall follow progressively in reasonable stages set forth in the plan before mining continues on other areas of the site. Extraction areas which are inactive for over one year must be stabilized and slopes reduced to 1: 4, if feasible.
 - (ii) All rehabilitation activity shall be in compliance with soil erosion and sedimentation requirements of the Environmental Protection

Act, MCL 394.9101 et seq., Part 91 as defined.

- c. Proposed ground cover and other plantings to stabilize the soil surface and to beautify the restored area, as well as to protect from erosion and siltation.
 - d. Concept plan(s) for the proposed end use of the site when restored including a plan for residential use, drawn to scale, and prepared by a professional engineer, licensed architect, or licensed landscape architect, registered in the State of Michigan. The concept plan shall include:
 - (i) The proposed circulation system, including the location of internal roads and connection to the external road network.
 - (ii) Delineation of drainage patterns, identification of lakes, flood plains, wetlands, and conceptual layout of lots (if residential is proposed).
 - (iii) The use proposed in the concept plan must be acceptable based on a review of the zoning district, Township master plan, surrounding land uses, and site characteristics.
 - (iv) A description of the provisions for obtaining necessary permits and approvals for the future use(s).
 - (v) A landfill or other disposal or refuse site will not be considered a suitable or satisfactory use.
 - e. When the proposed future use includes residential units or other uses requiring the use of septic fields, the applicant shall provide a description of the construction and rehabilitation techniques that will be met, including:
 - (i) A description of methods and materials to be used in restoring the site.
 - (ii) The proposed date for completing all extraction operations and handling of all spoils and extraneous materials.
 - (iii) The date for completing the final restoration.
 - (iv) A list of all seeding and planting materials, which must be of native stock.
- (16) **Other Information.** Any other information deemed necessary by the township board in order to make its recommendation or decision.

- (17) **Correlation to Ordinance.** Drawings, aerial photographs and plans submitted with an application shall be correlated by transparent overlays, combined maps or other means that clearly set forth site features and proposed features and requirements of this ordinance including setbacks.
- (c) **Application Fees and Escrow.** An application fee and an initial escrow deposit to cover the cost of processing the application, as determined by resolution of the Township Board, shall accompany each application.
- (d) **Licensing Fees.** The first annual license fee, as determined by resolution of the Township Board, shall accompany each application. If a license is approved, a subsequent fee is due on the anniversary date of the issuance of the license. The fee shall be held in escrow pending decision on granting the application. The annual fee shall remain payable on all acreage not yet restored.
- (e) **Costs.** In addition to the basic application fee, applicants for a mineral extraction license shall pay the actual reasonable expenses incurred by the Township in reviewing and/or relating to the application, including but not necessarily limited to the cost of:
- (1) Township Board meetings;
 - (2) Special meetings;
 - (3) Attorney fees;
 - (4) Reports and review by the Township's experts and/or consultants; and
 - (5) Additional notices of public hearing.
- (f) **Renewal of annual permit.** The mining permit shall be annual in nature and shall expire on May 15 of each year. To renew the mining permit for the parcel or parcels being mined the township board shall receive a report from the township engineer as to compliance with the permit by the applicant. Upon finding the applicant has complied with the plan, another mining permit may be issued, subject to compliance with the provisions of this article.
- (g) **Standards for approval and requirements.**
- (1) The township board shall grant or renew a permit under this article only if it finds that the applicant has demonstrated all of the following:
 - a. The proposed or existing mining operation complies with the standards of this article.

- b. The proposed or existing mining operation complies with the Division 9 Performance Standards of the Cambridge Township Zoning Chapter, and any other applicable law, ordinance or regulation.
 - c. For renewals, that the mining operation is in compliance with the terms of the existing permit.
- (2) If, in the opinion of the township board, approval should be granted, it shall establish the following in the permit:
- a. Identify the person, contractor or subcontractor who will be doing the removal and indicate that no other individuals shall be allowed to work on the site.
 - b. Set a reasonable time limit for all mining and hauling operations and a reasonable time extension for the land to be completely restored.
 - c. Indicate hours of operation.
 - d. Set the amount of the bond to ensure final restoration of the property as provided by this article.
 - e. Establish the frequency of engineering reports to be prepared by a local engineering firm and to be reviewed by the township engineer.
 - f. Establish the frequency of on-site inspections to be made by the township engineer and establish the amount of cash deposit to be paid by the applicant necessary to cover such on-site inspections.
 - g. Establish any other reasonable conditions and requirements as deemed necessary to adequately protect the general health, safety, and welfare of the township.

Sec. 16-30. Standards, required improvements and reclamation.

- (a) **Setbacks.** All mining activities are to occur, all processing and stockpiling shall be conducted, all fixed equipment and machinery shall be located a minimum of three hundred (300) feet from the nearest property line (exclusive of a common property line with other permit holders or active mining operators),.
- (b) **Fencing.** A permit holder shall maintain and install/repair as necessary a four-foot-high farm type fence along the outside perimeter property line of all areas where mining activities have or are to occur. Fencing shall not be required along the common property lines for sites owned by the permit holder. The fencing must be continuous and in good repair so as to secure the subject property from trespassers.

- (1) During the mining and reclamation period, the permit holder shall maintain such fence. Any necessary repairs to the fencing shall be promptly made by the mining operators so as to maintain the integrity and continuity of the fence along the outside perimeter of the mining site properties.
 - (2) All fenced areas shall be conspicuously posted with "No Trespassing" signs, which shall be of sturdy and rigid material. A permit holder shall promptly replace any missing signs.
- (c) **Screening.** To reduce the effects of airborne dust, dirt, noise and vibration, a berm consisting of natural materials and planted with groundcover of not less than ten (10) feet in height shall be built around the immediate perimeter of all equipment and structures used for sorting, washing, crushing and other similar operations.
- (d) **Hours of operation.** A permit holder may carry on mineral mining and mining activities, during the hours of 8:00 a.m. or sunrise, whichever comes later; to 5:00 p.m. or sunset, whichever comes first; and no such activities shall take place after 12:00 p.m. on Saturday nor all day on Sunday and legal holidays as defined in this ordinance. The term "mining activities," as used in this section, means the operation of mining machinery and the processing plant. Mineral mining and/or trucking activities shall not occur on Saturday after 12:00 p.m. and all day Sunday without advance authorization from the township supervisor or his/her designee. The limitation of operations on legal holidays shall be the same as the limitation applicable to Sundays.

In addition to the above, no mining activities shall take place during weekend (Friday through Sunday) events at the Michigan International Speedway and the U.S. 12 Garage Sale so long as those events are publicly published and/or advertised.

- (e) **Road access.** The proposed mining operation shall have immediate and direct access to a paved road having necessary and appropriate load bearing and traffic volume capacity in relation to the proposed intensity of the use. For each ingress and egress, a paved driveway of not less than one hundred (100) feet in length, with a minimum width of twenty-two (22) feet in width shall be provided extending from the edge of the street. A crushed stone driveway at least two hundred (200) feet in length and twenty-two (22) feet in width shall be located from the terminus of the paved driveway into the site. Said driveways shall be constructed and maintained to support the maximum weight of vehicles. The proposed mining operation shall meet all MDOT commercial driveway requirements.
- (f) **Road maintenance.** Access roads, excluding roads under the jurisdiction of the Lenawee County Road Commission, to and within the subject properties shall be maintained by the permit holder so as to maintain the roads in adequate condition for access purposes and to minimize the dust arising from the use of such roads. Such maintenance shall be accomplished through the application of a brine consisting of sodium chloride or calcium chloride solution. . In the event notification is received from any other county and/or state

agency having jurisdiction over the affected public roadway regarding maintenance requirements, the notified mining operators shall promptly take whatever appropriate action is necessary to address the agency's requirements.

(g) **Operation of use.**

(1) All equipment and facilities used in the production, processing, or transportation of sand, gravel, or stone on the subject properties by the permit holder shall be constructed, maintained, and operated in such a manner as to eliminate, insofar as practicable, noises, vibrations, noxious odors, smoke, fumes, or dust which interfere with the reasonable use and enjoyment of surrounding property and be confined within the lines of said lot. Where feasible, the processing plants and accessory equipment shall be located below the average grade of the surrounding parcels so as to effectuate screening from sight, noise, dust, and vibration.

(2) Only materials mined from the property which is subject to this permit may be crushed on the premises.

(3) If mineral mining activities create a body of water, the owner, operator and/or permittee shall

- a. Place appropriate "KEEP OUT" "DANGER" signs around said premises not more than two hundred (200) feet apart.
- b. Apply for and obtain a Part 301 permit from the State of Michigan prior to commencement of any site activities.

(h) **Noise standards.** The permit holder shall not operate any equipment on the subject properties at any time or under any condition so as to cause a level of sound which exceeds that noted by Code section 36-548(1). The township supervisor/designee may grant a temporary waiver of this requirement for a period not in excess of 30 days after review and recommendation of the Township Board at a regularly scheduled Board meeting.

(i) **Lighting.** All lighting used on the site to illuminate the mining area, access roads, stockpile area, and similar use area shall comply with Code section 36-548(6) Glare.

(j) **Drainage.** Proper drainage shall be provided at all times on the subject properties by the permit holder to prevent the collection and stagnation of water, and surface water shall at all times be directed in such a manner so as not to create an adverse impact to the adjoining properties; provided, however, that the maintenance of the natural flow of surface water shall not be deemed an adverse impact. There shall be no creation of an adverse impact to the water table in the area.

(k) **Soil erosion.** Where substantial natural vegetation is not expected within one (1) year of where erosion is occurring, or where the Township finds erosion likely to occur, which

results or may result in injury or damage to fish and wildlife, the pollution of air or water, or which is causing or might cause injury to the person or property of others, surface overburden stockpiles shall be stabilized by planting with vegetative cover, or by other treatment to prevent erosion, pollution, or injury.

(l) **Termination and reclamation.**

- (1) The mining sites shall be reclaimed in a manner such that no final slopes shall have grades in excess of one foot vertical to three feet horizontal except with regard to submerged slopes which shall be graded from the water's edge at a grade not in excess of one foot vertical to seven feet horizontal for a distance of not less than ten feet, nor more than 50 feet.
- (2) In such cases as the reclamation plan provides for a permanent water area, excavations shall be made to a water depth of at least ten feet below the low water mark, for at least 80 percent of the entire water area.
- (3) All mining activities are to occur at least 100 feet from the nearest property line (exclusive of a common property line with other permit holders or active mining operators), provided all processing and stockpiling shall be conducted at least 200 feet from the nearest property line (exclusive of common property line with other permit holders or active mining operators).
- (4) Reclamation activities shall consist of the grading necessary to effectuate a smooth transition in site grades and stabilization of all disturbed areas with topsoil, seed, and mulch and may extend up to the 25-foot setback line. The submitted mining and reclamation plan shall include turf establishment specification acceptable to the township engineer.

(m) **Excavation filling.** In the event filling of the mined area is necessary in the course of reclamation, the fill material shall be inert materials only and shall not consist of and/or contain any organic waste, hazardous waste, radioactive waste, agricultural waste, industrial waste, or sludges and sewage residues, whether or not compounded, mixed, combined, bound, or contained within any other material through any chemical or physical process or a combination thereof, or in any other fashion; and moreover, such fill material shall not contain any other material which will, or is likely to, impair or harm the air, water, and natural resources, and public trust therein, and/or the public health and safety.

(n) **Cessation of mining.** Upon cessation of all mining operations, except stockpiles, the operator within a reasonable period of time not exceeding 12 months thereafter, shall remove all plant structures, buildings, stockpiles, and equipment unless such building or structures can be lawfully used in the district in which the structures, buildings, stockpiles and equipment are located. Storage and stockpiling of mined products after cessation of mining activities may be permitted by the township board by annual permit for that

purpose only. In no event shall any additional materials be allowed to be added to these stockpiles and such a permit shall not interfere with or excuse reclamation as provided by this article.

- (o) **Failure to implement reclamation plan.** In the event the permit holder fails to implement the reclamation plan in accordance with the approved reclamation schedule, then upon 15 days' notice to the owner and the permit holder, the township shall be entitled to enter onto the subject property and take all actions necessary to comply with the reclamation plan. The township may use any or all of the bond's proceeds to accomplish the reclamation. In the event the township is unable to utilize the bond proceeds for any reason, or if the bond proceeds are insufficient to complete the restoration, the township shall have a lien against the site to recover all of the township's expenses in reclamation, including any court costs, fees, attorney fees and engineering fees, which lien shall be enforceable in the same manner as provided by law for the collection of special assessments, or using the then applicable provisions of state law for foreclosure of mortgages by advertisement, or by suit against the permit holder and/or the owner. The election of any remedy shall be at the sole option of the township and election of one remedy shall not be deemed to be a waiver of any other remedy.

- (p) **Monitoring Controls.**
 - (1) **Monitoring Wells.** A minimum of three (3) monitoring wells shall be installed, constructed to requirements of the United States EPA, EGLE or Lenawee County Health Department, and retained for future monitoring. The Township engineer and applicant's engineer shall confer and jointly determine the required number and/or locations of such monitoring wells. These monitoring wells must be capable of detecting any significant ground water change. In the event of a dispute, the engineers shall agree upon a third engineer from a reputable engineering firm to resolve the dispute.

 - (2) **Domestic Wells.** Prior to the issuance of any extraction license, the applicant shall be required to conduct, at no cost to affected well owners, a pre-extraction survey of each domestic well located within two thousand (2,000) feet of the site property line.
 - a. The survey will consist of collecting baseline data from well logs, where available, measurement of water level and well depth and standard water quality testing measuring among other factors, including hardness, color, odor, pH, bacteria, nitrates, sulfates, petroleum, and total dissolved (tds).

 - b. The survey will be limited to those domestic well owners who provide consent to the survey within 30 days of receiving a certified letter request from the applicant.

- c. Said tests shall determine the following baseline data for comparison with similar data to be monitored during extraction operations.
- d. Copies of existing well logs for all wells located within two thousand (2,000) feet of the site.

(3) Groundwater.

- a. Static water level elevation, total dissolved solids (tds), water temperature, turbidity, specific conductance, pH, dissolved oxygen, redox potential, alkalinity, as well as the concentration level of the following: iron, manganese, magnesium, calcium, soluble phosphorus, nitrate nitrogen, ammonia, arsenic, lead, zinc, chloride, sodium, sulfate, phenols, and total petroleum hydrocarbons.
- b. For each aquifer within the extraction zone, the applicant is to provide a measure of hydraulic conductivity, aquifer flow direction, probable drawdown (based on a slug test or other measure), and probable recharge area.

(4) Testing.

- a. Testing of all monitoring wells shall take place prior to commencing extraction operations to establish background water quality levels. Testing shall include:
 - (i) Static water level elevation, total dissolved solids (tds), water temperature, turbidity, specific conductance, pH, dissolved oxygen, redox potential, alkalinity, as well as the concentration level of the following: iron, manganese, magnesium, calcium, soluble phosphorus, nitrate nitrogen, ammonia, arsenic, lead, zinc, chloride, sodium, sulfate, phenols, and total petroleum hydrocarbons.
 - (ii) For each aquifer within the extraction zone, the applicant is to provide a measure of hydraulic conductivity, aquifer flow direction, probable drawdown (based on a slug test or other measure), and probable recharge area.
- b. Annual testing shall be performed on domestic and monitoring wells in accordance with standards jointly established by the Township's expert taking into consideration the type and level of extractive activities which have taken place on the site during the preceding year.
- c. The results of such testing shall be filed with the Township supervisor within 60 days of date of testing. The parameters listed in 3a, above, must

be tested annually, and a comparison made with the baseline water quality data.

- d. Additional Testing may be required by the Township to better assess any potential risks if concerns regarding water quality or quantity are raised by or uncovered in the annual testing.
- (q) In the event of a conflict between subsections (b), (c), or (f) and sections of the Cambridge Township Zoning Chapter, the subsections above shall control, even if the zoning chapter has less restrictive provisions.

Sec. 16-31. Operational requirements during mining activities; authority to direct future action.

(a) **Monitoring and Inspections.**

- (1) The township engineer shall be responsible for inspections hereunder, and shall, at all times, with 24 hours notice to the permit holder sent by email to the email address on file, have the right to peaceably enter upon the subject property for the purpose of conducting inspections to ensure compliance. The details of the inspection shall be determined in a reasonable exercise of discretion by the township engineer. The permit holder and its representative may be present during such inspections. All efforts shall be made toward mutual cooperation during such inspections, toward the ends of allowing such inspection to be expeditiously and accurately undertaken and minimizing interference with the operation.
 - (2) In the event the township engineer shall determine that a violation of any of the provisions of this article exists, notice of such fact shall be sent to the permit holder with a copy of such notice to the township board. Such monitoring by the township engineer shall in no way limit access to the mining sites by authorized township personnel, subject to applicable laws and ordinances, in the exercise of their official township duties.
- (b) **Extraction of Samples.** At the time of any inspections, the Township agents, representatives, independent consultants, and engineers are authorized to enter upon the property and may extract from the property such small samples of water, soil and other materials as may be necessary to perform any evaluations recommended by the Township's consultants.
- (c) **Action by Township Board.** In the preparation of this article, it is recognized that it is impossible to foresee all of the activities in connection with the mining operation which could potentially result in hazards to the public health, safety and welfare. Therefore, the township board shall be authorized to direct that actions of the permit holder be taken or ceased in order to prevent immediate and identified harm to the public health, safety

and welfare in connection with the mining operation. The permit holder shall comply with such directive. However, in the event such a directive is given, the permit holder shall:

- (1) Be entitled to a written notice identifying the reason for the directive, and specifying the action which is to be taken or ceased; and
 - (2) Be entitled to a hearing before the township board upon request.
- (d) **Hearing Requirements.** Such hearing shall be conducted at the next regular township board meeting, or at a special meeting the supervisor/designee may call for this purpose. Without limitation, hazards which could trigger the application of this section would include the effect of the mining operation on the water table of the subject property and surrounding and adjacent properties, including effects on private wells in the area.

Sec. 16-32. Violations and penalties; revocation of permit; nuisance as municipal civil infraction.

- (a) **Revocation of permit.** The township supervisor/designee or the township engineer as authorized by the township board, may at their discretion notify the owner and/or operator of any violation of the permit and/or of this article and upon failure of the owner and/or operator to abate such violation within a reasonable time stated in the notice after mailing of such notice, such mineral mining site may be summarily closed, and the permit therefor, suspended or revoked, and resort had to the bond for restoration. Any owner and/or operator aggrieved by any notice sent pursuant to this article may file a written request for a hearing before the township board. The request should set forth why the operation site should not be summarily closed, the permit suspended or revoked, and/or resort had to the bond. If a request for a hearing is received by the township board, the board shall accord rudimentary due process to the owner and/or operator who requested the hearing by giving such owner and/or operator notice of the time and place of the hearing, an opportunity to be heard through counsel or otherwise, and shall make an impartial determination of whether a violation of this article has occurred and whether the health and safety of persons and/or property require the suspension or revocation of such permit. Upon receipt of a request for a hearing, the township board may, at the request of the township supervisor/designee or engineer properly authorized by the township, summarily close the site pending the hearing, if it is determined that the health and safety of person and/or property require such action.
- (b) **Nuisance; municipal civil infraction.** Any violation of this article is hereby determined to be a nuisance per se, and the township may institute suit to have such nuisance abated. A violation of this article is deemed to be a municipal civil infraction.

Sec. 16-33. Interpretation, conflicting regulations, restrictions.

The provisions of this article shall be liberally interpreted in order to promote and accomplish the purposes of this article as set forth in the preamble to the ordinance from which this article is

derived. Any limitations set forth in this article shall be construed as the minimum limitations. Whenever any provision of this article imposes more stringent requirements, regulations, restrictions or limitations than are imposed or required by the provisions of any other ordinance or law, then the provisions of this article shall govern. In the event of a conflict between the provisions of this article and the environmental performance standards of the zoning chapter, those provisions which are deemed more restrictive shall apply, except as provided in section 16-29(n).