

Lime Township Conditional Use Permit (CUP)

Narrative

Dem-Con Pilgrim Landfill, LLC (Dem-Con) is requesting to amend the CUP for the existing demolition landfill facility (Facility) located in Lime Township. The Facility is currently owned by OMG Midwest who has entered into agreements with Dem-Con to purchase the Facility. The CUP amendment to be described in more detail throughout this document includes an increase in capacity of the Facility to accommodate a modern landfill design consisting of a synthetic liner, leachate collection system, and synthetic cap which will enhance the protection of the groundwater and the environment at the Facility. In addition, the Facility will have an expanded list of materials accepted for recycling and disposal. The facility currently does not accept and Dem-Con is not proposing to accept Municipal Solid Waste (MSW). The CUP amendment does not propose any increase of the landfill area or landfill maximum height from historically approved plans. Finally, the proposed changes to acceptable materials will provide more disposal and recycling options for local residents and businesses.

Intro to Dem-Con:

Dem-Con is a third-generation Minnesota family-owned business that has been providing waste disposal, recycling, education, and processing solutions for Minnesota since 1965. Mark Pahl and Jason Haus are the third generation actively engaged owners of Dem-Con. Dem-Con's main operations started in the Shakopee area and has grown throughout Minnesota. The center of Dem-Con operations, also known as the Dem-Con Environmental Campus, consists of disposal, processing and recycling operations located in Shakopee, Minnesota. The Shakopee operations consist of a Construction and Demolition (C&D) recycling facility, a Municipal Solid Waste (MSW) transfer facility, shingle recycling facility, wood recycling facility, metals scrap and recycling yard, the Dem-Con Materials Recovery Facility (DCMRF) which processes curb side commercial and residential recyclables. In addition, Dem-Con recently started construction of an anaerobic digestion facility for the processing of food waste and other organics into renewable natural gas and biochar. Dem-Con also operates disposal and recycling facilities in northern and western Minnesota as well as transfer stations and metal recycling facilities in the Twin-Cities metro area. Dem-Con's leading core value of "Do the Right Thing" guides all decisions and business strategies. Dem-Con is proud of its 100% family-owned Minnesota history and is looking forward to the opportunity to utilize this operational experience to enhance the environmental protections at the existing Pilgrims Landfill site while expanding on waste processing and recycling for the local community.

Facility Background and Existing Conditions:

The Facility is an existing demolition debris landfill. The historic land use of the Facility consists of mining and solid waste activities. Blue Earth County approved a CUP for a rubber tire secondary materials reclamation facility to Mankato Aglime and Rock Company in 1981. In 1982, a CUP was issued for a demolition debris landfill on the property. In addition to the CUP, the Facility was permitted by the Minnesota Pollution Control Agency (MPCA), permit #SW-254, for use as a demolition landfill by the Brielmaier Corporation. The Brielmaier Corporation operated the Facility for 10 years and voluntarily discontinued filling operations in 1993.

In 2004, Lime Township reissued the CUP to Southern Minnesota Construction for the operation of the demolition landfill. In addition to the CUP, the MPCA reissued permit SW-254 for the landfill with a waste capacity of 5,561,700 cubic yards.

The Facility has continuously operated since 2004. The operations on the site consist of the demolition landfill, yard and tree waste composting, wood recycling, concrete and asphalt recycling and sales of landscape supplies. The customer base utilizing the Facility includes both residential and commercial customers. The Facility has a contract with the City of Mankato for composting yard and tree waste.

A site plan showing existing operations on Figure 1. The site is accessed off 3rd Avenue via a private drive to the site. Figure 1 shows existing traffic patterns to enter and exit the site. Other notable features at the site include the scale, employee parking, office and maintenance buildings serviced by well and septic system. Dem-Con is not proposing any changes to existing structures. Access to the site is controlled by a locked entrance gate.

General Operations Description:

The facility currently serves residents and businesses in Blue Earth and surrounding counties and Dem-Con plans to continue to service the same customer base with the facility being open to the general public. The population of the service area of the facility is approximately 350,000 residents.

The wastes proposed to be accepted at the Facility include general construction and demolition debris as well as industrial waste. Examples of industrial wastes include but are not limited to manufacturing scrap, recycling residue, off-spec products, contaminated soils, foundry sands, and others. Dem-Con has submitted an Industrial Waste Management Plan (ISWMP) as part of the MPCA permit application. The ISWMP lists and limits potential wastes to be accepted at the Facility as well as the criteria for acceptance. The ISWMP is attached to this application. The facility will not accept or generate toxic or hazardous wastes.

The waste needs to be covered as required by the MPCA permit. The cover soils consist of on-site materials as well as clean fill imported into the site. There are adequate cover soils currently on site. During winter months, frost will be ripped to access cover soils.

A variety of equipment will be utilized at the site. At a minimum, the equipment onsite will include a landfill compactor, dozer, water truck, skid and front end loader. Additional equipment will be brought onto the site during construction activities.

The primary contacts for initial operation and maintenance at the site will be Mark Pahl and Bill Keegan for at least the first year of Dem-Con's ownership of the site. A scalehouse attendant and operator(s) will also be available at the site. It is anticipated that a facility manager will be assigned to the site for daily questions or concerns. The MPCA requires that a certified operator be present when waste is accepted. Dem-Con employees at the site will receive the MPCA training for landfill operator certification. In addition Dem-Con has monthly safety training for each employee.

Operational Schedule and Facility Charges:

The Facility daily operations for waste acceptance will occur between 6am and 7pm Monday thru Friday and 7am-5pm on Saturday. Extended hours may be needed for special projects or emergency purposes. The Facility will charge fees by the cubic yard or by the ton. Tip fees will vary depending on waste type and volume and will range from \$6.00-\$50.00 per cubic yard and \$10-\$100 per ton.

Noise and Dust:

Noise sources from the Facility operations will be associated with vehicle traffic arriving and exiting the Facility, emptying loads, and heavy equipment associated with placing, compacting, and covering of waste. Nuisance noise from Facility operations is expected to be minimal and there are no new sources of noise associated with changes from this application.

Dust can be generated at the site from vehicle entering, unloading and exiting the Facility as well as from heavy equipment operation at the site. Dem-Con will use best management practices including watering roads and routine sweeping of paved surfaces to control fugitive dust emissions.

Odor:

The Facility only accepts C&D and Industrial Waste and odors from landfill activities are expected to be negligible. The composting operations at the site can cause odors if not managed properly. Dem-Con plans to continue implementing best management practices for odor control of the composting operations through timing pile rotation on calm days and managing moisture content of the composting activities. Dem-Con is not aware of any historic odor issues at the site related to composting or other Facility activities.

Litter Control:

Dem-Con will utilize best management practices such as berms, waste placement strategy, and litter fences to control litter blowing off of the landfill footprint. Since the

facility will not be accepting MSW, Dem-Con does not anticipate nuisance litter. In the unlikely event of litter blowing off of the site or out of vehicles entering and exiting the site, Dem-Con will inspect 231st street and County 5 at least weekly and cleanup any litter caused from operations at the site at least monthly.

Filling Progression:

The landfill will be developed in phases as shown in Figures 2. The general phasing of the site will progress from the east to west over time and is depicted on Figures 3-3G.

Ultimate Land Use Plan:

The final elevations of the site are shown on Figure 3. The ultimate land use for any areas where waste has been placed is open space due to the installation of the final cover system. The facility will be mowed and maintained on an annual basis and provide habitat for local wildlife.

Groundwater Monitoring and Protection: The site is currently unlined with upgradient and downgradient monitoring wells. The wells are tested routinely for groundwater quality. Dem-Con is proposing to install a liner with the collection of “leachate”—the precipitation that is collected from the liner under the waste, as well as a synthetic final cap of the landfill significantly enhancing protection of the groundwater and the environment. See Figure 2 shows the proposed liner grades that facilitate the leachate collection, and Figure 3 shows the proposed final grades. Details of the relocation and capping of existing waste as well as synthetic cap are described in more detail in this document. Routine groundwater monitoring will continue at the site. A Hydrogeologic investigation was completed in 2002 with the current CUP was issued. A copy of this report is attached to this application.

Proposed Modifications:

In addition to this CUP application, Dem-Con has applied to the MPCA for the renewal of the existing solid waste permit. At the time of this application, the MPCA is reviewing the permit application and drafting a renewed permit for public review and comment. There are two changes to the existing CUP and operations causing the request for this CUP amendment. The first is related to an increase in capacity resulting from enhanced environmental controls and the second is related to additional materials accepted for recycling and disposal. Each of these are explained in detail in the following text and related plans.

Facility Design and Environmental Protection:

Dem-Con is proposing to enhance the design of the landfill to include a liner and leachate collection system as well as a synthetic final cap over the entire waste disposal area. The base liner system (see Figure 2 for liner grades) includes a Geosynthetic Clay Liner (GCL) overlain by a 60-mil high density polyethylene (HDPE) geomembrane. Collection pipes and drainage sand are placed on top of the liner to collect the landfill leachate. Once construction is completed and before waste is accepted, leak location detection is performed to ensure the liner system was not damaged during construction.

In addition to the enhanced landfill design, Dem-Con is proposing to relocate the existing waste deposited from 1982-1993 and consolidate it with the existing waste placed at the site from 2004 to current and install a synthetic cap over the top of the relocated waste. The top cross-section in Figure 6A shows existing conditions with unlined and uncapped waste highlighted in red and green. The bottom cross section in Figure 6A shows the reclaimed condition where the existing waste is consolidated into the area in green and the bold line represented the geomembrane barrier preventing future rainwater from percolating thru the waste. The relocation of this waste will eliminate the migration of precipitation through this waste into the groundwater in this location and the synthetic cap over the relocated waste will prevent future infiltration of rainwater through this waste into the groundwater table. Rainwater will be directed down the slope of the landfill to diversion berms and perimeter ditches, where it will be routed to one of three proposed ponds as shown on Figure 4.

Capacity Increase:

The design of the liner and leachate collection system required different base liner grades compared to the previous design. In addition, Dem-Con revised the final grades to accommodate the relocated waste and synthetic cap. These two changes in the design of the Facility resulted in an increase of landfill capacity from 5,561,670 cubic yards to 6,397,436 cubic yards. It is important to note that the increased capacity of the landfill did not increase the maximum height or waste footprint from what was previously proposed. Figures 5 and 6 show cross sections of the proposed Facility design. In addition to the complete plans and specifications included in the MPCA permit application, the following table summarized the changes to landfill design.

Landfill Feature	Current (2004 MPCA permit)	Proposed Application
Area	75-acre waste footprint	75-acre waste footprint
Height	872' max height	872' max height
Capacity	5,561,670 cubic yard capacity	6,397,436 cubic yard capacity
Base layer	4-foot soil base layer	synthetic liner system
Leak Detection	no liner or leak detection	construction leak detection
Leachate Management	no leachate collection	leachate collection
Final Cover	2' soil cover	synthetic cap in addition to 2' soil cover

Dem-Con anticipates the relocation of the existing waste and associated enhanced cover installation to be completed within the first three years of final approval of the new Facility permits. This capping and covering of the unlined waste at the Facility will provide long-term protection of the local groundwater and serve as a screening berm for the ongoing landfill operations. Figure 2 highlights the currently unlined area that will be capped and covered with this enhanced system.

Acceptable materials:

The MPCA permit application requires the permittee to list all materials proposed to be accepted at the Facility for disposal or recycling. The enhanced design of the Facility allows additional wastes to be accepted at the Facility. The wastes proposed to be accepted at the Facility include general construction and demolition debris as well as industrial waste. Examples of industrial wastes include but are not limited to manufacturing scrap, recycling residue, off-spec products, contaminated soils, foundry sands, and others. Dem-Con has submitted an Industrial Waste Management Plan (ISWMP) as part of the MPCA permit application. The ISWMP lists and limits potential wastes to be accepted at the Facility as well as the criteria for acceptance. The ISWMP is attached to this application.

In addition to wastes accepted at the Facility, Dem-Con is proposing to store, process and transfer recyclable materials. Existing recycling activities at the site include wood recycling, concrete and asphalt recycling and yard waste composting. Dem-Con will continue the existing recycling activities and add additional recyclable materials that will be accepted such as appliances, tires, clean cardboard, electronics and batteries, which will be stored at the site for transport to a licensed recycler off-site. Dem-Con is not proposing to process any of these additional materials at the Facility. In addition, Dem-Con is proposing to accept shingles for recycling which would be stockpiled on-site and ground to size for reincorporation into hot mix asphalt or mixed with gravel for dust suppression on gravel roads. See Figures 7 and 8 for proposed recycling activity locations. The table below summarizes the changes to the materials accepted at the Facility:

Material Description	Current (2004 CUP)	Proposed
C&D Debris	Limited list in CUP	Additional list in ISWMP to include construction packaging, treated lumber, empty containers, etc.
Industrial Waste	Limited	Additional list in ISWMP to include packaging, treated lumber, empty containers, manufacturing scraps, contaminated soils, etc.
Composting activities	20,000 cubic yards	80,000 cubic yards annually, 5-acre capacity
Concrete Recycling	100,000 tons	100,000 tons annually, 10-acre capacity
Wood Recycling	20,000 cubic yards	20,000 cubic yards annually, 2000 tons storage capacity
Appliance Recycling	NA	1000 units annually, 100 units storage capacity
Ferrous Metal Recycling	NA	10,000 tons annually, 2,000 tons storage capacity
Asphalt shingle recycling	NA	100,000 tons annually, 50,000 storage capacity
Battery Recycling	NA	500 units annually, 50 units storage capacity
Electronic Recycling	NA	5000 units annually, 200 units storage capacity
Cardboard Recycling	NA	5000 tons annually, 5,000 ton storage capacity
Tire Recycling	NA	6000 tires annually, 500 tire storage capacity

Dem-Con is looking forward to working with Lime Township on this CUP amendment. The proposed changes to the Facility will enhance protection of the groundwater and offer increased disposal and recycling options for local businesses and residents. For any questions regarding the Facility or the the CUP amendment application, please feel free to contact Mark Pahl at 612-282-0864 or markpahl@dem-con.com

