July 17, 2001

Ms. Robin Schilling
MDK Corporation
415 New Street, P.O. Box 96
Goshen, IN 46527-0096

Dear Ms Schilling:

Re: Exempt Construction and Operation Status,
CP 141-12980-00015

The application from MDK Corporation, received on May 15, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following soil remediation operation, to be located at 12510 Adams Road, in Granger, Indiana 46530, is classified as exempt from air pollution permit requirements:

One (1) air sparge and soil vapor extraction system, with VOC and HAP emissions controlled by an air stripper.

This exemption is the first air approval issued to this source.

Any change or modification which may increase the potential to emit of VOC, single hazardous air pollutant (HAP), or combined HAPs emissions to greater than or equal to 10, 1, and 2.5 tons per year, respectively, from the equipment covered in this exemption, must be approved by the Office of Air Quality (OAQ) before such change may occur.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

SDF

cc: File - St. Joseph County
St. Joseph County Health Department
Air Compliance - Rick Reynolds
Northern Regional Office
Permit Tracking - Janet Mobley
Air Programs Section- Nancy Landau
St. Joseph County Local Agency

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	MDK Corporation
Source Location:	12510 Adams Road, Granger, Indiana 46530
County:	St. Joseph
Permit No.:	141-12980-00015
Permit Reviewer:	SDF

The Office of Air Quality (OAQ) has reviewed an application from MDK Corporation for an exemption to install and operate a soil remediation operation at 7-Eleven Store #32578. The operation is described as follows:

One (1) air sparge and soil vapor extraction system, with VOC and HAP emissions controlled by an air stripper.

Permitted Emission Units and Pollution Control Equipment

The proposed operation is a new operation. Thus, there are no existing permitted units.

Unpermitted Emission Units and Pollution Control Equipment

The source has proposed the construction and operation of the following:

One (1) air sparge and soil vapor extraction system, with VOC and HAP emissions controlled by an air stripper.

Existing Approvals

The existing source has no existing approvals.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the exemption be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete application for the purposes of this review was received on May 15, 2001.

Emission Calculations

The proposed soil remediation operation will generate VOC and HAP emissions. The following calculations determine the emissions from these units.

UNRESTRICTED POTENTIAL TO EMIT (UPTE):

The following calculations determine the unrestricted potential to emit based on maximum VOC of 2.01 lb VOC/hr*, the maximum hourly HAP rates, emissions before controls, and 8,760 hours of operation.

HAPs:

X lb poll/hr * 8760 hr/yr * 1/2000 ton poll/lb poll = ton

HAP	Max. lb/hr	Pollutant Emissions (ton/yr)
Benzene	0.013	0.06
Ethylbenzene	0.013	0.06
Methyl tert-butyl ether	0.099	**0.43**
Toluene	0.033	0.14
Xylene	0.066	0.29
	Total	**0.98**

VOC:

2.01 lb VOC/hr * 8760 hr/yr * 1/2000 ton VOC/lb VOC = **8.8 tons VOC/yr**

* The source estimates 8.8 tons VOC total to be removed over three years. The 2.01 lb/hr is based on the worst case scenario of all 8.8 tons of VOC being removed in one year.

8.8 tons VOC/yr * 1/8760 yr/hr * 2000 lb/ton = 2.01 lb VOC/hr

The following table summarizes the estimated unrestricted potential to emit.

UPTE	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr	Worst Single HAP tons/yr	Combined HAP tons/yr
Soil Remediation	-	-	-	-	8.80	-	0.43	098
Total	**-**	**-**	**-**	**-**	**8.80**	**-**	**0.43**	**0.98**

EMISSIONS AFTER CONTROLS

The following calculations determine the VOC and HAP emissions after controls based on control by air stripping, the respective estimated emission rates before controls, an overall control efficiency of 98%, and 8760 hours of operation.

Tons Poll./yr * (1 - 0.98) = tons Poll/yr After Controls

HAPs:

HAP	Emissions Before Controls (tons/yr)	Pollutant Emissions (ton/yr)
Benzene	0.06	0.001
Ethylbenzene	0.06	0.001
Methyl tert-butyl ether	0.43	0.009
Toluene	0.14	0.003
Xylene	0.29	0.006
	Total	**0.020**

VOC:

8.80 tons VOC/yr * 0.01 = **0.09 tons VOC/yr**

Potential To Emit for the Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	-
PM-10	-
SO_2	-
VOC	8.80
CO	-
NO_x	-

HAPs	Potential To Emit (tons/year)
Combined	0.98

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC (8.8 tons/yr), single HAP (0.43 tons/yr), and combined HAPs (0.98 ton/yr), are less than the exempt levels of 10, 1, and 2.5 tons per year. Therefore, the proposed soil remediation operation is determined to be an exemption pursuant to 326 IAC 2-1.1-3(d)(1)(D) and (H).

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM-10	attainment/unclassifiable
SO_2	attainment/unclassifiable
NO_2	attainment/unclassifiable
Ozone	maintenance attainment
CO	attainment/unclassifiable
Lead	attainment/unclassifiable

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as maintenance attainment for ozone Therefore, the criteria pollutant emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) St. Joseph County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

New Source PSD Definition (source emissions after controls after the proposed modification, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Potential To Emit (tons/year)
PM	-
PM10	-
SO_2	-
VOC	0.09
CO	-
NO_x	-

HAPs	Potential To Emit (tons/year)
Combined	0.02

(a) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

(b) This new source is not a PSD major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(c) This new source is not a Part 70 Major stationary source because The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all single HAPs is less than ten (10) tons per year, the combined HAP potential to emit (as defined in 326 IAC 2-7-1(29)) is less than twenty-five (25) tons per year, and the potential to emit of all applicable criteria pollutants are less than 100 tons per year.

Federal Rule Applicability

(a) New Source Performance Standards (NSPS):

There are no New Source Performance Standards that apply to the proposed operation.

(b) National Emission Standards for Hazardous Air Pollutants (NESHAP):

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the proposed operation.

State Rule Applicability

326 IAC 8-1-6: State BACT Requirements:

Although no other Article 8 rules apply, the proposed source is not subject to 326 IAC 8-1-6 because the unrestricted potential to emit of VOC (8.8 tons/yr) is less than the applicable level of 25 tons VOC/yr.

Testing Requirements

No stack testing is required for any units of this source because:

(a) there are no applicable NSPS or NESHAPs,
(b) 326 IAC 6-1 does not apply,
(c) there are no emission units with potential to emit (PTE) greater than 40 tons per year that are using the control device to achieve compliance with any limitations,
(d) there are no control devices being used to satisfy a synthetic minor limit,
(e) there are no unapproved alternate emission factors being used, and
(f) there are no emission units that are non-compliant.

The above determination is based on Office of Air Quality (OAQ) guidance for new source construction, January 1, 1999.

Conclusion

The operation of this soil remediation operation shall be subject to the conditions of the attached proposed exemption (141-12980-00015).