

Mr. Gregory J. Steward  
Western Tar Products Corporation  
P.O. Box 270  
Terre Haute, IN 47808-0270

February 24, 2000

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Re: 167-11754-00036  
Minor Source Modification to:  
Part 70 permit No.: T167-5971-00036

Dear Mr. Steward:

Western Tar Products Corporation was issued Part 70 operating permit T167-5971-00036 on December 31, 1998 for a wood manufacturing plant. An application to modify the source was received on December 14, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

1. Two (2) 500,000 gallon vertical, above ground storage tanks, identified as #19 and #20, respectively. The two (2) tanks have a height of 32 feet and a diameter of 52 feet each.
2. The installation of an indoor cyclone dust collector system for a 1200 RPM Gang drill with a 9/16 DML Tool, located in the Preplate Building. The system will be totally enclosed with only explosion relief vents being vented to the building exterior. Therefore, the emissions are considered insignificant.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

7. Pursuant to the New Source Performance Standards (NSPS), Part 60.110b(a), Subpart Kb, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
- (a) Commencement of construction date (no later than 30 days after such date);
  - (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
  - (c) Actual start-up date (within 15 days after such date); and
  - (d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

and

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

The application and enforcement of these standards have been delegated to the IDEM OAM and VCAPC. The requirements of 40 CFR Part 60 are also federally enforceable.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as a minor source modification in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please call Mr. Darren Woodward at (812) 462-3433 extension 15.

Sincerely,

George M. Needham  
Director  
Vigo County Air Pollution Control

Attachments

DKW

cc: Mindy Hahn - IDEM  
Winter Bottum - IDEM

**Indiana Department of Environmental Management  
Office of Air Management  
and  
Vigo County Air Pollution Control**

Technical Support Document (TSD) for a Part 70 Minor Source Modification.

**Source Background and Description**

<b>Source Name:</b>	<b>Western Tar Products Corporation</b>
<b>Source Location:</b>	<b>2525 Prairieton Road, Terre Haute, Indiana 47808-0270</b>
<b>County:</b>	<b>Vigo</b>
<b>SIC Code:</b>	<b>2491, 2865</b>
<b>Operation Permit No.:</b>	<b>T 167-5971-00036</b>
<b>Operation Permit Issuance Date:</b>	<b>12/31/1998</b>
<b>Minor Source Modification No.:</b>	<b>T 167-11754-00036</b>
<b>Permit Reviewer:</b>	<b>Darren Woodward</b>

The Office of Air Management (OAM) and Vigo County Air Pollution Control (VCAPC) has reviewed a modification application from Western Tar Products Corporation relating to the construction and operation of two (2) storage tanks, and an indoor cyclone dust collection system for a 1200 revolution per minute (RPM) Gang drill. Western Tar Products Corporation requested that preconstruction approval be combined with operation approval, therefore, a Permit Modification Letter was issued to incorporate the source modification into the Part 70 permit.

- (a) Two (2) 500,000 gallon vertical, above ground storage tanks. The two (2) tanks are identified as Tank #19 and Tank #20, both having cone shaped roofs. Both tanks have a height of 32 feet and a diameter of 52 feet. Coal Tar will be stored in both tanks.
- (b) A 1200 RPM Gang Drill with a 9/16 inch DML Tool.
- (c) A 1,000 acfm indoor cyclone dust collection system.

**History**

On December 14, 1999, Western Tar Products Corporation submitted an application to the VCAPC requesting to add two (2) 500,000 gallon storage tanks and the installation of an indoor cyclone dust collector system for a 1200 RPM Gang Drill to their existing plant. Western Tar Products Corporation was issued a Part 70 permit on December 31, 1998. Western Tar Products Corporation received an Administrative Amendment December 14, 1999 for the following: one (1) above ground cooling tower, one (1) above ground separator, and one (1) resistance temperature detector.

**Enforcement Issue**

There are no enforcement actions pending.

## Stack Summary

The new emission units will contain no stack(s). The 1000 acfm velocity requirements and duct system for the cyclone dust collection unit is designed to meet proper industrial ventilation engineering practices and OSHA compliance standards. Only the explosion relief vents will be vented to the building exterior to meet compliance with NFPA code and property loss control requirements.

## Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification 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 application for the purposes of this review was received on December 14, 1999, additional information was received on January 20, 2000.

## Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document, page 6 of 6.

## Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source 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.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	NA
PM-10	NA
SO <sub>2</sub>	NA
VOC	1.22
CO	NA
NO <sub>x</sub>	NA

HAP's	Potential To Emit (tons/year)
Benzene	less than 10
o-Cresol	less than 10
m-Cresol	less than 10
p-Cresol	less than 10
Phenol	less than 10
Quinoline	less than 10
Styrene	less than 10
Toluene	less than 10
o-Xylene	less than 10
m-Xylene	less than 10
p-Xylene	less than 10
Napthalene	greater than 10
TOTAL	greater than 25

**Justification for Modification**

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification and a Part 70 Minor Permit Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(c)(2). This modification is considered a minor modification because the potential to emit is below 25 tons per year for all criteria pollutants.

**County Attainment Status**

The source is located in Vigo County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Maintenance
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Vigo County has been classified as attainment or unclassifiable for all the 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**

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	less than 100
PM-10	less than 100
SO <sub>2</sub>	less than 100
VOC	greater than 250
CO	less than 100
NO <sub>x</sub>	less than 100

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

These emissions are based upon Western Tar Products Corporation's Title V permit (T167-5971-00036), issued December 31, 1998.

**Potential to Emit of Modification After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
(2) storage tanks	0.0	0.0	0.0	1.22	0.0	0.0	0.0
Cyclone	2.77	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>2.77</b>	<b>0.0</b>	<b>0.0</b>	<b>1.22</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

**Federal Rule Applicability**

- (a) The two (2) 500,000 gallon storage tanks, identified as #19 and #20, are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b(a), and 40 CFR 60.116b(b), Subpart Kb).

All records of each storage vessel, as specified in 60.110b(a), shall be kept and made readily accessible for the life of the source. The records shall include the dimension and an analysis showing the capacity of the storage vessel.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

**State Rule Applicability - Individual Facilities**

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions from the indoor cyclone dust collection system shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

The indoor cyclone dust collection system shall be in operation at all times the Gang Drill is in operation.

326 IAC 6-3-2 (Particulate Matter Limitation (PM))

The particulate matter (PM) from the Gang drill operation shall be limited by the following equation:

$$E = 4.10 P^{0.67}$$

Where E = rate of emission in pounds per hour and  
 P = process weight rate in tons per hour

The cyclone for PM control from the Gang drill shall be in operation at all times when the Gang drill is in operation.

326 IAC 8-4-3 (Petroleum liquid storage facilities) does not apply to this source because they are below the minimum vapor pressure requirement of 1.52 psi.

## **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM and VCAPC, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 167-11754-00036.

## Working Losses:

Lw = fixed roof working loss (lb/year)

Mv = molecular weight of vapor in storage tank (lb/lb mole), 172 g/gmol

P = true vapor pressure at bulk liquid temperature (psia), 0.006 psia

V = tank capacity (gal), 500000 gal

N = number of turnovers per year (dimensionless), 2

KN = Turnover factor (dimensionless), 1.0

KC = product factor (dimensionless), 1.0

$$Lw = 2.40E-5(Mv)(P)(V)(N)(KN)(KC)$$

$$Lw = 24.77 \text{ lb/yr}$$

## Breathing Loss:

Lb = fixed roof breathing loss (lb/year)

Mv = molecular weight of vapor in storage tank (lb/lb mole), 172 g/gmol

Pa = average atmospheric pressure at tank location (psia) at Indianapolis, 14.7 psia

P = true vapor pressure at bulk liquid temperature (psia), 0.006 psia

D = Tank diameter (ft), 52 ft

H = average vapor space height, including roof volume correction (ft),

Change T = average ambient diurnal temperature change (deg. F), 20 F

Fp = paint factor, see Table 4.3-1

C = adjustment factor for small diameter tanks, see figure 4.3-4

KC = product factor (dimensionless), 1.0

$$Lb = 2.26E-2(Mv)(P)/(Pa-P)^{0.68}(D)^{1.73}(H)^{0.51}(\text{Change T})^{0.50}(Fp)(C)(KC)$$

$$Lb = 461.91 \text{ lb/yr}$$

## Total Loss, LT:

$$LT = (24.77 + 461.91) \times 5$$

$$LT = 2433.4 \text{ lb/yr each}$$

$$LT = 4866.8 \text{ lb/yr}$$

$$LT = 2.43 \text{ ton/yr}$$

NOTE: The storage tank calculations were done three different ways, with all yielding similar values. The calculations yielding the highest emissions were used for this modification.