

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

April 20, 2000

Re: 167-11855-00036
First Minor Permit Modification to
Part 70 No.: T 167-5971-00036

Dear Mr. Steward:

Western Tar Products Corporation was issued a Title V on December 31, 1998 for a wood manufacturing plant. A letter requesting changes to this permit was received on December 14, 1999. Pursuant to the provisions of 326 IAC 2-7-12 a minor permit modification to this permit is hereby approved.

The modification consists of the addition of two (2) new 500,000 gallon storage tanks, #19 and #20, and 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.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

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 contact Mr. Darren Woodward, VCAPC, 103 South Third Street, Terre Haute, Indiana, 47808, or call 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

PART 70 OPERATING PERMIT

OFFICE OF AIR MANAGEMENT
and
VIGO COUNTY AIR POLLUTION CONTROL

Western Tar Products Corporation
2525 Prairieton Road
Terre Haute, Indiana 47808-0270

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T167-5971-00036	
Issued by: Felicia R. George, Assistant Commissioner Office of Air Management	Issuance Date: December 31, 1998
First Administrative Amendment T167-11366	Issuance Date: December 14, 1999
First Minor Permit Modification 167-11855	Page(s) Affected: 6 and 36
Issued by: George M. Needham, Director Vigo County Air Pollution Control	Issuance Date: April 20, 2000

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Vigo County Air Pollution Control, and presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a treated wood manufacturing plant.

Responsible Official: Gregory J. Steward
Source Address: 2525 Prairieton Road, Terre Haute, Indiana 47808-0270
Mailing Address: P.O. Box 270, Terre Haute, Indiana 47808-0270
SIC Code: 2491,2865
County Location: Vigo County
County Status: Attainment area for TSP, but located within a Nonattainment county; Maintenance for Sulfur dioxide; Attainment for all other criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (1) One (1) boiler, identified as Boiler A, Wood Division, with a maximum capacity of 10.75 MMBtu per hour, using natural gas, propane, or No. 2 fuel oil for fuel, with no control equipment, and exhausting to stack Blr-A-WD.
- (2) One (1) boiler, identified as Boiler B, Wood Division, with a maximum capacity of 10.75 MMBtu per hour, using natural gas, propane, or No. 2 fuel oil for fuel, with no control equipment, and exhausting to stack Blr-B-WD.
- (3) One (1) process still, identified as Still, with a maximum capacity of 10,000 gallons, and a 16.0 MMBtu per hour burner, using natural gas or No. 2 fuel oil for fuel, with a scrubber for control, and exhausting to stack STILL.
- (4) Three (3) wood pressure-treat cylinders, identified as Cylinder 1, 2, and 3, with maximum capacities of 4,327 cubic feet, 4,224 cubic feet, and 2,137 cubic feet, respectively, with no control equipment, and exhausting to stacks Cyl-1, Cyl-2 and Cyl-3, respectively.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour. (Tar Division, Boilers A and B);
- (2) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (3) Wood Division, Tanks W-1a through W-4a;
- (4) Above ground cooling tower, identified as CT #1.

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

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

Source Background and Description

Source Name:	Western Tar Products Corporation
Source Location:	2525 Prairieton Road, Terre Haute, Indiana 47808-0270
County:	Vigo
SIC Code:	2491, 2865
Operation Permit No.:	T 167-5971-00036
Operation Permit Issuance Date:	12/31/1998
Minor Permit Modification No.:	T 167-11855-00036
Permit Reviewer:	Darren Woodward

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 Permit 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 ₂	NA
VOC	1.22
CO	NA
NO _x	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 ₂	Maintenance
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) 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. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x 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 ₂	less than 100
VOC	greater than 250
CO	less than 100
NO _x	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 permit modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	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
Total	2.77	0.0	0.0	1.22	0.0	0.0	0.0

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 Permit Modification No. 167-11855-00036.

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.

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.