

# Fact Sheet



## For Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the original Fact Sheet corresponding with the issuance of the initial Title V operating permit issued on December 16, 2003.

Permit Number: **R30-03900484-2003**

Application Received: **September 12, 2005**

Plant Identification Number: **03-54-03900484**

Permittee: **Praxair, Inc.**

Facility Name: **HyCO Plant**

Mailing Address: **P.O. Box 475, Institute, WV 25112**

Permit Action Number: *MM01*; Revised: *October 31, 2006*

---

Physical Location: Institute, Kanawha County, West Virginia  
UTM Coordinates: 432.4 km Easting • 4,248.5 km Northing • Zone 17  
Directions: From I-64 West, take Exit 50 toward Institute. At first traffic light, make a left. Facility is on the left.

---

### Facility Description

Praxair HYCO Plant operates a synthetic gas plant that produces hydrogen and carbon monoxide from a hydrocarbon feedstock.

This modification addresses the following issues:

1. The addition of source of CO emissions from equipment leaks;
2. Addition of the CO Tube Trailer Fill Station, which vents to the existing flare system;
3. Adjustment of the flare system design capacity from 602 lb/hr to 282 MMBtu/hr;

These changes are being incorporated into the Title V permit consistent with the issuance of R13-0222A, which consisted of a Class II Administrative Update.

## Emissions Summary

The 6.31 tons per year increase in emissions by the new classification of CO fugitive emissions from equipment leaks, is offset by reduction in CO emissions for the flare system from 165 tons per year to 158.69. Therefore, there is no overall increase in the facility-wide potential to emit for any regulated pollutant.

Emissions were calculated using SOCFI factors for valves, flanges, and compressor seals - Table 2-1, Protocol for Equipment Leak Emission Estimates EPA-453/R-95-017, November 1995. These factors are average SOCFI factors for gas service (considered 11 - 85% ethylene). Based on CO, air, and ethylene having similar densities with molecular weights between 28 and 29, the permittee considered the mass leakage rates for CO to be the same as mass leakage rates of ethylene estimated in the SOCFI method. Due to varying percentage of CO in the gas streams of the Reforming section, Prepurifier section, and the Cold Box, a correction factor was used for the estimated mass leakage rates.

## Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit over 100 tons per year of carbon monoxide. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, Praxair, Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

## Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR13	Construction, modification, relocation permit requirements
	45CSR30	Operating permit requirement.
State Only:	None.	

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

---

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-0222A	May 30, 2006	

---

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

### Determinations and Justifications

No additional determinations or justifications were made as part of this revision.

### Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following: N/A

### Request for Variances or Alternatives

None

### Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

### Comment Period

Beginning Date: Not required for minor modifications

Ending Date:

All written comments should be addressed to the following individual and office:

Toby Scholl  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, S.E.  
Charleston, WV 25304

### **Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

### **Point of Contact**

Toby Scholl  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, S.E.  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1213 • Fax: 304/926-0478

### **Response to Comments**

None