

**TECHNICAL REVIEW DOCUMENT**  
**for**  
**OPERATING PERMIT 99OPWE213**

to be issued to:

**Platte River Steel Company, Inc.**

Weld County  
Source ID 1230488

Michael E. Jensen  
July 30, 1999

**I. PURPOSE:**

This document establishes the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA and during Public Comment. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Conclusions in this document are based on information provided in the original application submittal of July 20, 1999, and a supplemental Title V technical information submittal of August 2, 1999, previous inspection reports, the technical documents submitted for the construction permits, as well as telephone contacts with the applicant.

On April 16, 1998, the Colorado Air Quality Control Commission directed the Division to implement new procedures regarding the use of short term emission and production/throughput limits on Construction Permits. These procedures are being directly implemented in all Operating Permits that had not started their Public Comment period as of April 16, 1998. All short term emission and production/throughput limits that appeared in the Construction Permits associated with this facility that are not required by a specific State or Federal standard or by the above referenced Division procedures have been deleted and all annual emission and production/throughput limits converted to a rolling twelve (12) month total. Note that, if applicable, appropriate modeling to demonstrate compliance with the National Ambient Air Quality Standards was conducted as part of the Construction Permit processing procedures. If required by this permit, portable monitoring results and/or EPA reference test method results will be multiplied by 8760 hours for comparison to annual emission limits unless there is a specific condition in the permit restricting the hours of operation.

This Operating Permit incorporated the existing Construction Permit 95WE890. Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this Operating Permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This Operating Permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this Operating

Permit without applying for a revision to this permit or for an additional or revised Construction Permit.

**II. SOURCE DESCRIPTION:**

Platte River Steel purchases rolled steel plate and shapes and fabricates them into components for bridges, buildings and similar structures. The production operations involve sawing, shearing, flame cutting, hole punching and drilling, fitting the various components together, and joining them into a finished product by bolting or welding. A coat of metal primer or other protective coating may be applied based on customer requirements. The metal may be prepared for coating by cleaning with a steel shot blast or application of a solvent, or both. The shot blast cleaning operation is equipped with a particulate emissions control device.

Coating is accomplished primarily indoors in large open bays. The large size of the components prohibits the use of a conventional type spray booth. Coating overspray accumulates on the floor area of the coating area. Large fans are provided to provide ventilation during the cleaning and coating operations. Various solvents, primarily methyl ethyl ketone, may be used in preparing the steel for protective coating applications, and for cleaning the coating equipment.

The facility is located in Weld County in the Greeley carbon monoxide non-attainment area. Wyoming is an affected state within 50 miles of the plant. Rocky Mountain National Park is a Federal Class I designated area within 100 kilometers of the plant.

Facility-wide emissions are as follows:

POTENTIAL TO EMIT, TONS PER YEAR				
	PM	PM <sub>10</sub>	VOC	HAPs
Protective coating and associated cleaning activities			72.4	
Shot blast steel cleaning	1.3	1.3		
<b>Totals</b>	<b>1.3</b>	<b>1.3</b>	<b>72.4</b>	
1995 Actual Emissions, Tons per Year				
	12.6	5.04	39.9	15.4

Construction Permit 95WE890 was issued on January 19, 1996. The provisions of the permit limited the usage of Methyl Ethyl Ketone (MEK) to 4,600 gallons per year, which is equivalent to 15.7 tons per year of MEK emissions. The MEK emissions established the facility as a source subject to the provisions of the Title V program. Condition 15 of the Construction Permit required the facility to submit an application for a Title V permit within one year of commencing operation. A subsequent facility inspection noted that the Title V application had not been submitted. Platte River then

submitted an application to modify the existing Construction Permit to limit the hazardous air pollutant emissions to below the Title V applicability threshold. During the preparation of the permit modification Platte River indicated it expected to expand the fabrication portion of the facility. The expansion would result in the potential to increase the coating activities and result in hazardous air pollutant emissions sufficient to once again make Platte River subject to the Title V provisions.

The non-compliance with the provision to submit a Title V application by January, 1997, was reviewed by the Division. A review of limited Platte River records available indicated the quantities of MEK purchased were less than 10 tons per year for the years of concern. The Division made the determination that the documented purchases limited the Potential-To-Emit for the hazardous air pollutants to less than the Title V major source thresholds. Therefore, the source was not subject to the Title V provisions and was not required to submit the application. The hazardous air pollutant emissions associated with the volatile organic compound emission limit of the Construction Permit modification being requested would classify the facility as a Title V source. The Division required a prompt submittal of a Title V application.

The applicability of the 40 CFR Part 63 Section 112(g) Maximum Achievable Control Technology (MACT) standards were reviewed. Platte River became a major source of hazardous air pollutants because of increased emissions resulting from increased cleaning/coating activities. The rule applicability date is June 29, 1998, and the rule applies to either a major source constructed on a greenfield site, or a new or reconstructed process or production unit at an existing plant, provided that the process or production unit emits hazardous air pollutants in amounts that exceed the major source threshold. Since this is a change at an existing plant, the greenfield provision does not apply. While the steel processing activity is being modified, it is not a major source for hazardous air pollutants. The coating/cleaning process is the major source of hazardous air pollutant emissions. However, no change is being made in this process. Since no changes are being made, the source does not qualify under either the construct or re-construct definitions of 112(g). On the basis of the MACT definitions for construct or reconstruct, the coating/cleaning process is exempt from the 112(g) provisions.

The shot blast operation has an uncontrolled potential to emit estimated at 1,344 tons per year for total particulate matter and 1,156 tons per year for particulate matter smaller than ten (10) microns. These emission levels would categorized Platte River as a major source for Prevention of Significant Deterioration (PSD) considerations. The increase in the volatile organic compound emissions requested in the construction permit modification would trigger the requirement for a PSD review. Platte River elected to accept federally-enforceable limits on the shot blast emissions to establish the facility as a synthetic minor for PSD classification. By accepting the particulate limits Platte River was not subject to the need to conduct a PSD review for the permit modification.

The modified Construction Permit was issued after the Title V application was submitted. Since the equipment covered by Construction Permit 95WE890 will have been operating for more than 180 days by the due date for the first semi-annual monitoring required by this permit, the Division considers that the Responsible Official certification submitted with the first semi-annual report will serve as the self-certification for the Construction Permit.

### III. EMISSION SOURCES

The following sources are specifically regulated under terms and conditions of the Operating Permit for this site:

#### **Protective Coating and Associated Cleaning Activities**

**1. Applicable Requirements** - The source is subject to the conditions of the modification of Initial Approval Construction 95WE890. The Division has reviewed the MACT 112(g) provisions and determined they do not apply to this source.

**2. Emission Factors** - The volatile organic compound and hazardous materials content of the various coating and cleaning materials is taken from the Material Safety Data Sheets (MSDS) for the material. The emissions are calculated from the composition data and the quantity of the material used.

**3. Monitoring Plan** - The monitoring plan is to use a computer spreadsheet to track the quantity of coating and cleaning materials used. The emissions are estimated by mass balance based on the quantity and composition of the materials consumed. The Division does not believe this type of source is associated with visible emissions and this is reflected in the opacity monitoring plan.

**4. Compliance Status** - As discussed earlier, the hazardous air pollutant emissions associated with the previous version of Construction Permit 95WE890 required a Title V application to be submitted within one year of the issuance of the Construction Permit. This was not done. However, the Division reviewed the hazardous emissions and determined that the coating/cleaning activity was not a major Title V source. The current version of the Construction Permit established a volatile organic compound emission limit at a level that allows Platte River to be a major source of hazardous air pollutant emissions and subject to Title V. The Division has determined that the source is currently in compliance with the applicable requirements.

### **Shot Blast Cleaning (Wheelabrator)**

**1. Applicable Requirements** - This source is subject to the current provisions of the modified Construction Permit 95WE890. The permit limits categorize the source as a synthetic minor for the the Prevention of Significant Deterioration provisions.

**2. Emission Factors** - The emission factor is determined from the hours of operation and the emission limit of the Construction Permit. The efficiency of the air pollution control device is incorporated into the emission factor. The emissions were estimated from the operating rate of the shot blast unit, the manufacture's information on the performance of the air pollution control device and an evaluation of the amount of material captured by the air pollution control device during a timed period.

**3. Monitoring Plan** - For the Construction Permit the Division determined monitoring the operating hours provided the most reasonable means for monitoring the emissions. Records of the operating hours for each day are to be maintained.

**4. Compliance Status** - Historically, this source had not been permitted as required. The current version of the Construction Permit provides the necessary permit conditions. On this basis the Division accepts this source is currently in compliance.

### **Alternate Operating Scenarios**

No alternate operating scenarios were identified

### **Permit Shield**

The intent of the permit shield is to provide limited protection in the event of an error in the evaluation of whether a regulation, or portion of a regulation applies. The permittee identifies the issue and presents its position. The Division reviews the position. If the Division and the permittee mutually agree on the position, the issue is recorded in the operating permit. If there is a disagreement on the position, the Division has reserved the right to make the final decision. If, at a later date, it is discovered that an error was made in the mutual decision, the source is protected from the non-compliance due to the error. However, the permittee must move rapidly to obtain compliance.

In the Title V application the applicable sections of the Federal and State regulations are identified for the sources. The shield request was granted and noted in the Operating Permit where a specific request for the shield was identified, justified and accepted by the Division. The shield was not granted where a blanket request lacked specific detail, the request was not justified, or the Division did not agree that shield protection could be applied.

### **Hazardous Air Pollutants**

The hazardous air pollutants originate as a component of the fuels used and the sludge processed. The types of these material and related emission factors were obtained from information provided by the California Air Resources Board and other references.

### **Miscellaneous**

From time to time published emission factors are changed based on new or improved data. A logical concern is what happens if the use of the new emission factor in a calculation results in a source being out of compliance with a permit limit. For this operating permit, the emission factors or emission factor equations included in the permit are considered to be fixed until changed by the permit. Obviously, factors dependent on the fuel sulfur content or heat content can not be fixed and will vary with the test results. The formula for determining the emission factors is, however, fixed. It is the responsibility of the permittee to be aware of changes in the factors which may affect the compliance status. Upon notification, the Division will work with the permittee to address the situation.

### **Short Term Limits**

As noted at the start of this review document, new procedures resulted in the removal of short term emission and production/throughput limits from Construction Permits. No short term limits had to be removed from the existing Construction Permit.