TECHNICAL REVIEW DOCUMENT
FOR
RENEWAL OF OPERATING PERMIT 98OPJE205

to be issued to:

CoorsTek, Inc.
Jefferson County
Facility ID 0590066

Cathy Rhodes
August, 2003

I. Purpose

This document will establish the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered by the renewal Operating Permit proposed for this site. The original operating permit was issued August 1, 1999 and expires on August 1, 2004. This document is designed for reference during review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted July 28, 2003. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at http://www.cdphe.state.co.us/ap/Titlev.html. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

II. Source Description

This source is an industrial ceramic manufacturing facility. The facility consists of twenty three natural gas-fired kilns, four natural gas fired spray dryers, a rubber mold press area and numerous insignificant activities.

The facility is located at 600 Ninth Street, Golden, in Jefferson County. The area in which the plant operates is currently designated as attainment/maintenance for carbon monoxide, particulate matter less than 10 μm and ozone. There are no affected states within 50 miles of the plant. Rocky Mountain National Park is a Federal Class I designated area within 100 kilometers of the plant.

Facility emissions are as follows:

Pollutant	Potential* (tpy)	Actual** (tpy)
NO_x	67	67
CO	146	146
VOC	101	101
SO_2	28	28
PM	12	12
PM_{10}	12	12

*Based on permitted emissions.
**Actual emissions are based on the latest APENs on file

II. Discussion of Modifications Made

Source Requested Modifications

The permittee requested the following revisions to the Operating Permit in their renewal application.

Page Following Cover Page
Changes to Responsible Official and Permit Contact Person

Section II
Two kilns, L-30 and L-112 have been removed from the site and are removed throughout the permit.

Appendix A
Update Insignificant Activity List

Other Modifications

In addition to the changes requested by the permittee, the Division has included changes to make the permit consistent with recently issued permits, to include comments made by the EPA on other Operating Permits, to reflect updated and current Regulatory language, as well as to correct errors or omissions identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the CoorsTek Operating Permit:

Page following Cover Page
A Note regarding when reports will be considered to have met the date due deadline is added.

Section I
Condition 1.1 is revised to indicate the exact location of the facility and to reflect the new attainment status for the area.

Condition 1.4 is revised to reflect new Condition numbers for Section IV conditions.

Condition 1.5 is revised to reflect the renumbering of the cited condition to Section IV, Condition 22.

New Condition 3 is added to reflect the PSD status of the source. Subsequent conditions in Section I are renumbered accordingly.

Condition 4 is revised based on comments by the EPA on other operating permits, the phrase “Based on information provided by the applicant” is added to the beginning of Condition 4.

Condition 6 is added for compliance assurance monitoring (CAM) provisions.

Section II
Previous Condition 1.5.1.3 is removed. The initial NSPS compliance test had been completed, and results indicated the emission limit was met.

Condition 1.6 – Revised to reflect current Regulation No. 1 opacity language.

Condition 2.2 – Revised to reflect current Regulation No. 1 opacity language.
The monitoring method is also revised to reflect current Division policy.

Section V – Permit Shield
The Title for Condition 1 is changed from “Specific Conditions” to “Specific Non-Applicable Requirements.”

Language is revised to reflect current Division policy, as requested in previous EPA comments regarding operating permits.

The shield for nonattainment review of CO emissions is removed. The area has been redesignated as attainment/maintenance for CO, therefore the source is no longer a major source for nonattainment NSR purposes.

Section VI – General Conditions
Add Common Provisions requirements as Condition 3. (All subsequent conditions are renumbered)

Insert “and” between the Regulation No. 3 and the C.R.S. citations in Condition 4.

Update the Open Burning Regulation cite for Condition 17.

Condition 21 citation of the next general condition is revised to reflect new general condition numbers. (changed from “21.d” to “22.d”)

Appendices
The EPA addresses in Appendix D are updated.

III. Compliance Assurance Monitoring (CAM)
CAM requirements apply to emission units which use add on control devices to meet an emission limit. The CAM rule defines “Control device” as “equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere.” “Inherent process equipment” means “equipment that is necessary for the proper safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment.” The preamble to the final CAM rule lists three criteria to be used to distinguish inherent process equipment from control devices:

(1) Is the primary purpose of the equipment to control air pollution?
(2) Where the equipment is recovering product, how do the costs savings from the product recovery compare to the cost of the equipment?
(3) Would the equipment be installed if no air quality regulations are in place?

Spray dryers are equipped with dust collectors. The Technical Review Document for the initial Operating Permit indicates that “All spray dryers are equipped with a combination of control equipment used for product recovery and are therefore considered inherent to the process.” (second to last paragraph on page 5)

All of the equipment at the facility is subject to a facility-wide annual PM emission limit.

Spray Dryer #5 is subject to NSPS Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries. The NSPS defines “control device” as “air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities.” The NSPS sets a PM emission limit of 0.025 gr/dscf.

For Spray Dryers #1, 2, and 4, the Division believes that, using the three criteria listed in the preamble, the dust collectors would be considered inherent to the process. The primary purpose of the collectors is to recover product, not to control air pollution, and would be installed even if no air quality regulations were in place. The collectors also meet the definition of “inherent process equipment” because the collectors do not need to be operated at a higher efficiency from normal operations in order to comply with the annual emission limit.

For Spray Dryer #5, the Division believes the dust collector would pass the three preamble criteria to be considered inherent. For the higher efficiency requirement, the operating permit requires operation and maintenance of the bagfilter in accordance with manufacturer's specifications in order to monitor compliance with the NSPS. Therefore, the bagfilter does not need to be operated at a higher efficiency than originally designed for normal operation in order to meet the NSPS limit. Furthermore, the emission factor for all dryers is the same, based on stack test data, thus the Dryer #5 bagfilter is not presumed to be operated any differently than the other dryer bagfilters. Based on this information, the Division considers the collector for Dryer #5 to be "inherent."

The dust collectors for the Spray Dryers are therefore not subject to CAM requirements of 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, because they meet the definition of "inherent process equipment."