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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
AIR, NOISE AND RADIATION

MEMORANDUM

SUBJECT: Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions

FROM: Kathleen M. Bennett, Assistant Administrator for Air, Noise and Radiation

TO: Regional Administrators, Regions I-X

I have been asked to clarify my memorandum of September 28, 1982, concerning policy on excess emissions during startup and shutdown.

Specifically, I stated that "startup and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the design and implementation of the operating procedure for the process and control equipment. Accordingly, it is reasonable to expect that careful planning will eliminate violations of emission limitations during such periods." I further stated that "[i]f excess emissions occur during routine startup and shutdown of such equipment, they will be considered as having resulted from a malfunction only if the source can demonstrate that such emissions were actually caused by a sudden and unforeseeable breakdown in the equipment."

A question has been posed as to whether there can be situations in which it is unreasonable to expect that careful planning can eliminate violations of emission limitations during startup and shutdown. I believe that there can be such situations. One such situation, which was already mentioned in the policy, is a malfunction occurring during these periods. A malfunction during startup or shutdown is to be handled as any other malfunction in accordance with the policy as presently written.

Another situation is one in which careful and prudent planning and design will not totally eliminate infrequent short periods of excesses during startup and shutdown. An example of this situation would be a source that starts up or shuts down once or twice a year and during that period there are a few hours when the temperature of the effluent gas is too low to prevent harmful

formation of chemicals which would cause severe damage to control equipment if the effluent were allowed to pass through the control equipment.

Therefore, during this latter situation, if effluent gases are bypassed which cause an emission limitation to be exceeded, this excess need not be treated as a violation if the source can show that the excesses could not have been prevented through careful and prudent planning and design and that bypassing was unavoidable to prevent loss of life, personal injury, or severe property damage.

I have clarified the policy concerning this issue. A copy is attached.

Attachment

Attachment

# POLICY ON EXCESS EMISSIONS DURING STARTUP, SHUTDOWN, MAINTENANCE, AND MALFUNCTIONS

## Introduction

Several of the existing State implementation plans (SIPs) provide for an automatic emission limitation exemption during periods of excess emission due to startup, shutdown, maintenance, or malfunction.* Generally, EPA agrees that the imposition of a penalty for sudden and unavoidable malfunctions caused by circumstances entirely beyond the control of the owner and/or operator is not appropriate. However, any activity which can be foreseen and avoided, or planned is not within the definition of a sudden and unavoidable breakdown. Since the SIPs must provide for attainment and maintenance of the national ambient air quality standards, SIP provisions on malfunctions must be narrowly drawn. SIPs may, of course, omit any provisions on malfunctions. [For more specific guidance on malfunction provisions for RACT SIPs, see the April 1978 workshop manual for preparing nonattainment plans].

## I. EXCESS EMISSION FROM MALFUNCTIONS

### A. AUTOMATIC EXEMPTION APPROACH

If a SIP contains a malfunction provision, it cannot be the type that provides for automatic exemption where a malfunction is alleged by a source. Automatic exemptions might aggravate air quality so as not to provide for attainment of the ambient air quality standards. Additional grounds for disapproving a SIP that includes the automatic exemption approach are discussed in more detail at 42 FR 58171 (November 8, 1977) and 42 FR 21372 (April 27, 1977). As a result, EPA cannot approve any SIP revisions that provides automatic exemptions for malfunctions.

* The term "excess emission" means an air emission rate which exceeds any applicable emission limitation, and "malfunction" means a sudden and unavoidable breakdown of process or control equipment.

B. ENFORCEMENT DISCRETION APPROACH--SIP EMISSION LIMITATION ADEQUATE TO ATTAIN AMBIENT STANDARDS

EPA can approve SIP revisions which incorporate the "enforcement discretion approach". Such an approach can require the source to demonstrate to the appropriate State agency that the excess emissions, though constituting a violation, were due to an unavoidable malfunction. Any malfunction provision must provide for the commencement of a proceeding to notify the source of its violation and to determine whether enforcement action should be undertaken for any period of excess emissions. In determining whether an enforcement action is appropriate, satisfaction of the following criteria should be considered.

1. To the maximum extent practicable the air pollution control equipment, process equipment, or processes were maintained and operated in a manner consistent with good practice for minimizing emissions;

2. Repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as practicable;

3. The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

4. All possible steps were taken to minimize the impact of the excess emissions on ambient air quality; and

5. The excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

II. EXCESS EMISSIONS DURING STARTUP, SHUTDOWN, AND MAINTENANCE

Any activity or event which can be foreseen and avoided, or planned, falls outside of the definition of sudden and unavoidable breakdown of equipment. For example, a sudden breakdown which could have been avoided by better operation and maintenance practice is not a malfunction. In such cases, the control agency must enforce for violations of the emission limitation. Other such common events are startup and shutdown of equipment, and scheduled maintenance.

Startup and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the planning, design and implementation of operating procedures for the process and control equipment. Accordingly, it is reasonable to expect that careful and prudent planning and design will eliminate violations of emission limitations during such periods. However, for a few sources there may exist infrequent short periods of excess emissions during startup and shutdown which cannot be avoided. Excess emissions during these infrequent short periods need not be treated as violations providing that the source adequately shows that the excess could not have been prevented through careful planning and design and that bypassing of control equipment was unavoidable to prevent loss of life, personal injury, or severe property damage.

If excess emissions occur during routine startup and shutdown due to a malfunction, then those instances will be treated as other malfunctions which are subject to the malfunction provisions of this policy. (Reference Part I above).

Similarly, scheduled maintenance is a predictable event which can be scheduled at the discretion of the operator, and which can, therefore, be made to coincide with maintenance on production equipment, or other source shutdowns. Consequently, excess emissions during periods of scheduled maintenance should be treated as a violation unless a source can demonstrate that such emissions could have been avoided through better scheduling for maintenance or through better operation and maintenance practices.