

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

BUREAU OF AIR

DIVISION of AIR POLLUTION CONTROL

PERMIT SECTION

PROJECT SUMMARY for the  
DRAFT CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

Afton Chemical Corporation  
501 Monsanto Avenue, Sauget, St.Clair County, 62201

Illinois EPA ID Number: 163121AAB

Application Number: 95120012

Application Type: Significant Modification

Start of Public Comment Period: September 1, 2011

Close of Public Comment Period: October 1, 2011

Permit Engineer/Technical Contact: Anatoly Belogorsky, 217/782-2113

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(This Project Summary generally describes the source and explains the draft permit. This document has been prepared pursuant to Section 39.5(8)(b) of the Illinois Environmental Protection Act, which requires "a statement that sets forth the legal and factual basis for the draft CAAPP permit conditions.")

## I. INTRODUCTION

This source has applied for a significant modification of the Clean Air Act Permit Program (CAAPP) operating permit. The CAAPP is the program established in Illinois for operating permits for significant stationary sources as required by Title V of the federal Clean Air Act and Section 39.5 of Illinois' Environmental Protection Act. The conditions in a CAAPP permit are enforceable by the Illinois Environmental Protection Agency (Illinois EPA), the USEPA, and the public. This document is for informational purposes only and does not shield the Permittee from enforcement actions or its responsibility to comply with applicable regulations. This document shall not constitute a defense to a violation of the Act or any rule or regulation.

A CAAPP permit contains conditions identifying the applicable state and federal air pollution control requirements that apply to a source. The permit also establishes emission limits, appropriate compliance procedures, and specific operational flexibility. The appropriate compliance procedures may include monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the source is operating in accordance with the requirements of the permit. Further explanations of the specific provisions of the draft CAAPP permit are contained in the attachments to this document, which also identify the various emission units at the source.

## II. GENERAL SOURCE DESCRIPTION

### a. Nature of source

Afton Chemical Corporation is located at 501 Monsanto Avenue in Sauget, Illinois. The source manufactures various miscellaneous organic chemicals, including lubricant additives, for the petroleum industry. In addition, the source packages these materials for transportation off-site for further processing.

### b. Ambient air quality status for the area

This source is located in an area that, as of the date of permit issuance, is designated nonattainment for the National Ambient Air Quality Standards for ozone (moderate nonattainment),  $PM_{2.5}$ , and attainment or unclassifiable for all other criteria pollutants (CO, lead,  $NO_x$ ,  $SO_2$ ).

### c. Major source status

This permit is issued based on the source requiring a CAAPP permit as a major source of VOM and  $SO_2$  emissions.

### d. Nature of Significant Modification Request

1. The Permittee has applied for revision of this permit for the following reasons: 1) Condition 7.16.6(b): increase of the

allowable VOM emission limit (to 500 lb/batch) without any changes to the VOM annual emission limit; 2) Condition 7.24.6(a): increase of the allowable VOM emissions from both cooling towers to less than 5.0 ton/yr total; 3) Condition 7.3.3(d): clarification of the "cold" startup when a propane heater is used and the burner cannot be vented to the catalytic converter; 4) Condition 7.3.5(a): modification of the language of this condition by allowing emissions from burner during startup to bypass SO<sub>2</sub> scrubber; 5) Condition 7.3.8(a): continuous monitoring system for pH is not required when the scrubber is not in service during cold startup; 6) Conditions 7.3.9(a) and 7.3.9(c): remove reference to the temperature records and scrubbant pH records during a cold startup. See also Attachment 1 for more information about these changes.

2. All proposed changes do not increase monthly/annual production limits or actual monthly/annual emissions of regulated air pollutants during normal operations. Most of the proposed changes related to a "cold startup", when a propane heater is used to re-heat the burner, which is sometimes required for the purpose of curing the masonry following repair. During these events, the burner cannot be vented to the catalytic converter or SO<sub>2</sub> scrubber due to the presence of combustion byproducts from the propane, which would destroy the catalyst and damage the control equipment. Current CAAPP gives authorization to "cold startup" but certain requirements (duration and temperature) should be adjusted to reflect propane heater employment as described above.

### III. NEW SOURCE REVIEW / TITLE I CONDITIONS

This draft permit does contain conditions that address the applicability of permit programs for new and modified sources under Title I of the Clean Air Act (CAA) and regulations promulgated thereunder, including 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203, Major Stationary Sources Construction and Modification. Conditions 7.16.6(b) and 7.24.6(a) reference to revised Title I conditions as T1R. New emission limit for addressing rule non-applicability in Condition 7.26.6 references as T1N.

### IV. COMPLIANCE INFORMATION

The source has certified compliance with all applicable rules and regulations; therefore, a compliance schedule is not required for this source. In addition, the draft permit requires the source to certify its compliance status on an annual basis. Also, the Annual Emission Reports and latest inspection report have been reviewed which indicate compliance.

### V. PROPOSED ILLINOIS EPA ACTION / REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The

Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested by the Illinois EPA for the draft or proposed permit, pursuant to 35 IAC Part 252 and Sections 39.5(8) and (9) of the Illinois Environmental Protection Act. A final decision on the draft or proposed permit will not be made until the public, affected states, and USEPA have had an opportunity to comment. The Illinois EPA is not required to accept recommendations that are not based on applicable requirements. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.

ATTACHMENT 1: Summary of the Changes Done for Specific Emission Units

Table 1: Summary of Significant Modifications to CAAPP

Reference to Existing CAAPP Condition	Reference to New/Modified CAAPP Condition	Description of Condition Modification	Brief Explanation of Proposed Changes
7.3.3(d)	7.3.3(d)	Reference to extension of startup up to 12 hours was removed; Reference to the level of hourly increased temperature during startup was removed.	Propane heater used for cold startup is needed more than 12 hours for reaching desirable temperature and the temperature levels are obsolete
7.3.5(a)	7.3.5(a)	Cold startup was added to original condition.	Reflects bypassing the scrubber during cold startup
7.3.8(a)	7.3.8(a)	Monitoring for scrubbant pH is required when the scrubber is in service.	Reflects operating scenario when the scrubber is in service
7.3.9(a)	7.3.9(a)	Reference to the records of duration exceeding 12 hours during startup was removed; reference to 300 <sup>0</sup> F was removed	These records are not part of the cold startup operating scenario
7.3.9(c)	7.3.9(c)	Records for emission control devices were clarified by adding "when the scrubber is in service"	These records required only when the scrubber is in service
7.16.6(b)	7.16.6(b)	VOM emission limit for each batch has been changed and shall not exceed 500 lb/batch	No increase of the annual emissions. Old emission factors are incorrect
7.24.6(a)	7.24.6	VOM emissions from each cooling tower (CT) are limited to 2.4 tons/yr. Combined emissions from CT and loading operations (LO) (7.26.6) are limited to 4.9 tons/yr	Combined 4.9 tons/yr limit was established to avoid applicability of 35 IAC Part 219, Subpart TT
7.26.4(a)	7.26.4(a)	Clarification of non-applicability of 35 IAC 219, Subpart TT	Includes a reference to a newly established limit in Condition 7.26.6
7.26.6	7.26.6	New VOM limit of 4.9 tons/yr for CT and LO	The same

## ATTACHMENT 2: Prompt Reporting of Deviations

Prompt reporting of deviations is critical in order to have timely notice of deviations and the opportunity to respond, if necessary. The effectiveness of the permit depends upon, among other important elements, timely and accurate reporting. The Illinois EPA, USEPA and the public rely on timely and accurate reports submitted by the permittee to measure compliance and to direct investigation and follow-up activities. Prompt reporting is evidence of a permittee's good faith in disclosing deviations and describing the steps taken to return to compliance and prevent similar incidents.

Any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in this CAAPP permit is a deviation subject to prompt reporting. Additionally, any failure to comply with any permit term or condition is a deviation of that permit term or condition and must be reported to the Illinois EPA as a permit deviation. The deviation may or may not be a violation of an emission limitation or standard. A permit deviation can exist even though other indicators of compliance suggest that no emissions violation or exceedance has occurred. Reporting permit deviations does not necessarily result in enforcement action. The Illinois EPA has the discretion to take enforcement action for permit deviations that may or may not constitute an emission limitation or standard or the like, as necessary and appropriate.

Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act, which mirrors 40 CFR 70.6(a)(3)(iii)(B), requires prompt reporting of deviations from the permit requirements. The permitting authority (in this case, Illinois EPA) has the discretion to define "prompt" in relation to the degree and type of deviation likely to occur. Furthermore, Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act, which mirrors 40 CFR 70.6(a)(3)(iii)(A) requires that monitoring reports must be submitted at least every 6 months. Therefore, USEPA generally considers anything less than 6 months to be "prompt" as long as the selected time frame is justified appropriately (60 Fed. Reg. 36083, 36086 (July 13, 1995)).

The USEPA has stated that, for purposes of administrative efficiency and clarity, it is acceptable to define prompt in each individual permit. *Id.* The Illinois EPA has elected to follow this approach and defines prompt reporting on a permit by permit basis. In instances where the underlying applicable requirement contains "prompt" reporting, this frequency or a shorter frequency of reporting is the required timeframe used in this permit. Where the underlying applicable requirement fails to explicitly set forth the timeframe for reporting deviations, the Illinois EPA has developed a structured manner to determine the reporting approach used in this permit.

The Illinois EPA generally uses a time frame of 30 days to define prompt reporting of most deviations. Also, for certain permit conditions in individual permits, the Illinois EPA may require an alternate timeframe that is less than 30 days if the permit requirement justifies a shorter reporting time period. Under certain circumstances, EPA may establish a deviation reporting period longer than 30 days, but, in no event exceeding 6 months. Where it has established a deviation reporting period other than 30 days in an individual permit (specifically Section 7.x.10), the Illinois EPA has explained the reason for the alternative timeframe. (See Attachment 2 of this Project Summary.)

The timing for certain deviation reporting may be different when a source or emission unit at a source warrants reporting to address operation, independent of the occurrence of any deviations. This is the case for a source that is required to perform continuous monitoring for the emission unit, for which quarterly or semi-annual "monitoring" reports are appropriate. Where appropriate, reporting of deviations has generally been combined in, or coordinated with these quarterly or semi-annual reports, so that the overall performance of the plant can be reviewed in a comprehensive fashion. This will allow a more effective and efficient review

of the overall performance of the source by the Illinois EPA and other interested parties, as well as by the source itself.

At the same time, there are certain deviations for which quicker reporting is appropriate. These are deviations for which individual attention or concern may be warranted by the Illinois EPA, USEPA, and other interested parties. Under this scenario, emphasis has been placed primarily on deviations that could represent substantial violations of applicable emission standards or lapses in control measures at the source. For these purposes, depending on the deviation, immediate notification may be required and preceded by a follow-up report submitted within 15 days, during which time the source may further assess the deviation and prepare its detailed plan of corrective action.

In determining the timeframe for prompt reporting, the Illinois EPA assesses a variety of criteria such as:

- historical ability to remain in continued compliance,
- level of public interest in a specific pollutant and/or source,
- seriousness of the deviation and potential to cause harm,
- importance of applicable requirement to achieving environmental goals,
- designation of the area (i.e., non-attainment or attainment),
- consistency among industry type and category,
- frequency of required continuous monitoring reports (i.e., quarterly),
- type of monitoring (inspection, emissions, operational, etc.), and
- air pollution control device type and operation

These prompt reporting decisions reflect the Illinois EPA's consideration of the possible nature of deviations by different emission units and the responses that might be required or taken for those different types of deviations. As a consequence, the conditions for different emission units may identify types of deviations which include but are not limited to: 1) Immediate (or very quick) notification; 2) Notification within 30 days as the standard; or 3) Notification with regular quarterly or semi-annual monitoring reports.

The Illinois EPA's decision to use the above stated prompt reporting approach for deviations as it pertains to establishing a shorter timeframe in certain circumstances reflects the criteria discussed as well as USEPA guidance on the topic.

- 40 CFR 71.6(a)(3)(iii)(B) specifies that certain potentially serious deviations must be reported within 24 or 48 hours, but provides for semi-annual reporting of other deviations. (Serious or severe consequences)
- FR Vol. 60, No. 134, July 13, 1995, pg. 36086 states that prompt should generally be defined as requiring reporting within two to ten days of the deviation, but longer time periods may be acceptable for a source with a low level of excess emissions. (intermediate consequences)
- Policy Statement typically referred to as the "Audit Policy" published by the USEPA defines prompt disclosure to be within 21 days of discovery. (Standard for most "pollutant limiting" related conditions)
- Responses to various States by USEPA regarding other States' definition of prompt.

As a result, the Illinois EPA's approach to prompt reporting for deviations as discussed herein is consistent with the requirements of 39.5(7)(f)(ii) of the Act as well as 40 CFR part 70 and the CAA. This reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention. The timing for these event-specific notifications is necessary and appropriate as it gives the source enough time to conduct a thorough investigation into the causes of an event, collecting any necessary data, and to develop preventative measures, to reduce the likelihood of similar events, all of which must be addressed in the notification for the deviation.