

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

Quality Metal Finishing Company
Attn: Mr. Chad Worman, Environmental Manager
4th and Walnut Street
Byron, Illinois 61010

Illinois EPA ID Number: 141010AAB

Application Number: 95110069

Application Type: Renewal Permit

Start of Public Comment Period: June 7, 2007

Close of Public Comment Period: July 7, 2007

Permit Engineer/Technical Contact: Jack Yates, 217/782-2113

Community Relations/Comments Contact: Brad Frost, 217/782-7027

(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 renewal 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

Quality Metal Finishing Company is located in Byron, Ogle County, Illinois. The facility manufactures and chrome plates zinc die cast plumbing fixtures. The primary source of pollutants at this facility is re-melt pots, zinc holding pots, buffing lines (Control Collectors), degreaser, plating lines (Control Surface Tension), Sludge Dryer, (Control Scrubber), and boilers. Ancillary emission units at the source have been determined to be insignificant emission sources.

b. Ambient Air Quality Status for the Area

The source is located in an area that is currently designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, PM_{2.5}, PM₁₀, sulfur dioxide).

c. Major Source Status

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1. The source requires a CAAPP permit as a major source of HAP emissions.

d. Source Emissions

The following table lists annual emissions of criteria pollutants from this source, as reported in the Annual Emission Reports sent to the Illinois EPA.

	Annual Emissions (tons)
Pollutant	2005
CO	3.10
NO _x	3.99
PM	1.82
SO ₂	0.02
VOM	51.94
Trichloroethylene (top HAP)	51.58

III. NEW SOURCE REVIEW/TITLE I CONDITIONS

This draft permit contains terms and 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. Any such terms and conditions are identified within the draft permit by T1, T1R, or T1N. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this draft permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them. Where the source has requested that the Illinois EPA establish new conditions or revise such conditions in a Title I permit, those conditions are consistent with the information provided in the CAAPP application and will remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

This draft permit would establish newly revised Title I requirements.

IV. COMPLIANCE INFORMATION

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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.

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 Source-Wide Requirements

The following table indicates the source-wide emissions control programs and planning requirements that are applicable to this source. These programs are addressed in Sections 5 and 6 of the draft permit.

Program/Plan	Applicable
Emissions Reduction Market System (ERMS)	NO
Nitrogen Oxides (NO _x) Trading Program	NO
Acid Rain Program	NO
Compliance Assurance Monitoring (CAM) Plan	NO
Fugitive Particulate Matter (PM) Operating Program	NO
Risk Management Plan (RMP)	NO
PM ₁₀ Contingency Measure Plan	NO

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ATTACHMENT 2: Summary of Requirements for Specific Emission Units

The following tables include information on the requirements that apply to significant emission units at this source. The requirements are found in Section 7 of the draft permit, which is further divided into subsection, i.e., Section 7.1, 7.2, etc., for the different categories of units at the source. A separate table is provided for each subsection in Section 7 of the draft permit. An explanation of acronyms and abbreviations is contained in Section 2 of the draft permit.

Table 1 (Section 7.1 of the draft permit)

Emission Unit – Unit 01: Chrome Plating Lines #1, #2 and #3		
Description	<p>The plating lines apply a decorative chrome finish to the parts utilizing a chromic acid solution. First the parts are washed in an alkaline solution and acid bath. They are then adequately rinsed prior to being introduced into the copper strike tank. A copper finish is then applied, followed by an electro-clean and an acid bath and then a nickel finish. Finally a chrome finish is applied to the part. The part is rinsed and then sent to the packaging department for inspection. If a part fails inspection it is sent to the re-plate line and re plated. This line strips the chrome plating and then applies a new chrome finish.</p> <p>The plating racks are periodically sent through the rack strip tanks to remove unwanted metal finishes.</p>	
Date Constructed	PL-1, Decorative Chrome Plating Line #1	1996
	DUR-NI Nickel Plating Bath Tanks #163 and #164 for Plating Line #1	2006
	PL-2, Decorative Chrome Plating Line #2	1972, Modified in 1994
	PL-3, Decorative Chrome Re-Plating Line #3	1972, Modified in 1994
Emission Control Equipment	PL-1, Decorative Chrome Plating Line #1	Surface Tension and Mist Eliminator
	DUR-NI Nickel Plating Bath Tanks #163 and #164 for Plating Line #1	Combination wetting agent and foam blanket
	PL-2, Decorative Chrome Plating Line #2	Surface Tension and Mist Eliminator

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Emission Unit – Unit 01: Chrome Plating Lines #1, #2 and #3		
	PL-3, Decorative Chrome Re-plating Line #3	Surface Tension and Mist Eliminator
Applicable Rules and Requirements		
Emission Standards	<ul style="list-style-type: none"> • 40 CFR Part 63 • 35 IAC 212.321 	
Non-applicability	<ul style="list-style-type: none"> • 40 CFR Part 64, because the affected Decorative Chrome Plating Lines do not use an add-on control device to achieve compliance with an emission limitation or standard. 	
Reporting		
Prompt Reporting	Requirements per 40 CFR 63.10(b)(1).	

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Table 2 (Section 7.2 of the draft permit)

Emission Unit – Unit 02: Vapor Degreaser	
Description	DG, Detrex Vapor Degreaser
Date Constructed	1972
Emission Control Equipment	Freeboard Refrigeration Device Idling and Downtime Mode Covers
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> • 40 CFR 63 Subparts A and T • 35 IAC 215.184
Non-applicability	<ul style="list-style-type: none"> • 40 CFR Part 64; because the affected vapor degreaser does not use an add-on control device to achieve compliance with an emission limitation or standard. • 35 IAC 215.301; because the affected vapor degreaser uses trichloroethylene as the cleaning solvent. Trichloroethylene is not considered a photochemically reactive material.
Reporting	
Prompt Reporting	Requirements per 40 CFR 63.463

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Table 3 (Section 7.3 of the draft permit)

Emission Unit - Unit 03: Buffing Units	
Description	Buffing and polishing of die-cast parts is performed with automated chain buffing units, automated straight buffing units and hand buffing units.
Date Constructed	<ul style="list-style-type: none"> • B-1 Units 1958 • B-2 and B-3 Units 1966
Emission Control Equipment	<ul style="list-style-type: none"> • PM Collectors #1, #2, and #3
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> • 35 IAC 212.301 • 35 IAC 212.123(a)
Non-applicability	<ul style="list-style-type: none"> • 35 IAC 212.322, because the requirements of 35 IAC 212.322 cannot reasonably be applied to the affected buffing units. • 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected buffing units do not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.
Reporting	
Prompt Reporting	Within 30 days. See Table 3.

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Table 4 (Section 7.4 of the draft permit)

Emission Unit - Unit 04: Zinc Re-Melt Furnaces and Zinc Holding Pots	
Description	Natural gas fired small furnaces used for re-melting zinc, and (liquid) zinc holding pots.
Date Constructed	RM1 1969 RM3 1979 RM4 1979 ZH1-ZH5 Prior to April 14, 1972 ZH7-ZH20 Prior to April 14, 1972, except ZH9,ZH14, and ZH15 were constructed in 1995
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> • 35 IAC 212.321(a) • 35 IAC 212.123(b) • 35 IAC 212.124
Title I Conditions	The draft permit contains limits on operation and emissions in Conditions 7.4.5 and 7.4.6. The limits on ZH-9 were established in this permit. The limits on ZH-14 and ZH-15 were incorporated from Permit 95080130.
Non-applicability	<ul style="list-style-type: none"> • 35 IAC 217.321, emissions of nitrogen oxides from new fuel combustion emission sources, because the affected re-melt furnace or holding pot is not by definition a fuel combustion emission unit. • 40 CFR 60 Subpart Q, Standards of Performance for Primary Zinc Smelters, because the affected re-melt furnace or holding pot is not by definition a primary zinc smelter. • 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected re-melt furnace or holding pot does not use an add-on control device to achieve compliance with an emission limitation or standard
Reporting	
Prompt Reporting	30 days See Attachment 3

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Table 5 (Section 7.5 of the draft permit)

Emission Unit – Unit 05: Sludge Dryer	
Description	Water is removed via evaporation from sludge generated by wastewater pretreatment. Natural gas is used in combustion.
Date Constructed	1994
Emission Control Equipment	Scrubber
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> • 40 CFR 61 Subpart E • 35 IAC 212.321(a)
Title I Conditions	<ul style="list-style-type: none"> • The draft permit contains limits on operation and emissions in Conditions 7.5.6. These limits were incorporated from Permit 94070061.
Non-applicability	<ul style="list-style-type: none"> • 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected sludge dryer is not by definition a fuel combustion emission unit. • 35 IAC 217.321, emissions of nitrogen oxides from new fuel combustion emission sources, because the affected sludge dryer is not by definition a fuel combustion emission unit. • 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected sludge dryer does not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.
Reporting	
Prompt Reporting	15 days for mercury emissions limit exceedances explained in Section 3 30 days for PM emissions limit exceedances explained in Section 3

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Table 6 (Section 7.6 of the draft permit)

Emission Unit – Unit 06: Gas-Fired Boilers	
Description	The boilers combust natural gas to produce steam for heating at the source.
Date Constructed	BLR-1 1972 BLR-2 1997
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> • 40 CFR 60 Subpart Dc • 35 IAC 212.123(a) • 35 IAC 216.121
Title I Conditions	<ul style="list-style-type: none"> • The draft permit contains limits on operation and emissions in Conditions 7.6.5 and 7.6.6. These limits were incorporated from Permit 96120009. The limits in 7.2.6 were also updated in this permit based on updated AP 42 emission factors.
Non-applicability	<ul style="list-style-type: none"> • 35 IAC 215.301, because the affected boilers are exempt pursuant to 35 IAC 215.303. • 35 IAC 217.121, NO_x emission limitation, because the affected boilers have a rated heat input of less than 250 mmBtu/hour. • 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected boilers do not use an add-on control device to achieve compliance with an emission limitation or standard
Reporting	
Prompt Reporting	30 days explained in Attachment 3

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Table 7 (Section 7.7 of the draft permit)

Emission Unit – Unit 07: Nitric Acid Strip Line	
Description	This is a strip line consisting of two nitric acid strip tanks and one rinse tank. The line is used to clean metal plating racks.
Date Constructed	2002
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> • 35 IAC 212.321(a) • 35 IAC 212.123(a)
Title I Conditions	<ul style="list-style-type: none"> • The draft permit contains limits on operation and emissions in Conditions 7.7.6. These limits were incorporated from Permit 02040034.
Non-applicability	<ul style="list-style-type: none"> • 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected Nitric Acid Strip Line does not use an add-on control device to achieve compliance with an emission limitation or standard
Reporting	
Prompt Reporting	30 days as explained in Attachment 3

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ATTACHMENT 3: 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

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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

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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.

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