TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

ArrMaz Custom Chemicals, Inc.
4800 State Road 60 East
Mulberry, FL 33860

ArrMaz Custom Chemicals – Mulberry Facility

Facility ID No. 1050097

PROJECT

Project No. 1050097-024-AC
Application for Minor Air Construction Permit
Project Name: Modification of Construction Permits 1050097-021-AC and 1050097-023-AC

COUNTY

Polk County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-7600

September 20, 2011

Prepared by Nedin Bahtic

GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

I. Project Description:

A. Applicant:

Ms. Jacalyn McCarthy, EHS Director
ArrMaz Custom Chemicals, Inc.
4800 State Road 60 East
Mulberry, FL 33860

B. Professional Engineer:

Lawrence J. Maron
S&ME, Inc.
1211 Tech Boulevard
Tampa, FL 33619

C. Project Location:

4800 State Road 60 East
Mulberry, FL 33860

D. Project Summary:

For modification of construction permits 1050097-021-AC and 1050097-023-AC. Specifically, the applicant proposes to: increase the size of the existing reaction kettle Nos. 4 and 5 (EU 006); increase the maximum permitted sulfur input rate to the sulfonation unit (EU 001) to 350 lb/hr; extend the expiration date of construction permit 1050097-021-AC to allow construction of a new reaction kettle (No. 1); and eliminate the requirement to record scrubber pressure drop for reaction kettle Nos. 1, 2, 4, and 5 (condenser outlet temperature will be recorded instead). Annual visible emissions testing requirement for EU 001 is also being eliminated as a part of this project since this unit is only subject to the general visible emissions standard (20%) and as such no routine testing is required.

E. Application Information:

Application Received on: 08/01/11
Additional Information Requested on: 08/09/11
Additional Information Received on: 09/08/11
Application Complete: 09/19/11

II. Rule Applicability

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes and Chapters 62-204 through 62-297, Florida Administrative Code (F.A.C.), as indicated below.

Subject to:	Y/N	Comments
Rule 62-210.300, F.A.C. - Project Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C.	Y	not exempt from general permitting requirements
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	facility is not a PSD major source
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	Y	EU 001 is a source of particulate matter emissions
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	EU 006 is a source of VOCs, and EUs 001 and 006 could be a source of odors
Rule 62-296.400, F.A.C. - Stationary Source Emission Standards	N	there is no applicable source category
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Polk County is not an air quality maintenance area for ozone

Subject to:	Y/N	Comments
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	there is no applicable source category
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	N	there is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants (NESHAPS – 40 CFR 61)	N	there is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants for Source Categories a.k.a. MACT (NESHAPS –40 CFR 63)	N	there is no applicable source category
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	N	facility is a synthetic non-Title V source
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	N	compliance testing is not required for EUs 001 and 006

III. Summary of Emissions

Pollutant	Regulated EU No. and Brief Description	Potential Emissions (tons/year)	Allowable Emissions
PM/PM_{10}	001 – Sulfonation Unit	1.50[1]	N/A
	003 – 500 HP Steam Boiler	0.70[2]	
	Facility Total	2.20	
VOC	003 – 500 HP Steam Boiler	0.50[2]	N/A
	006 – Reaction Kettles	8.52[3]	
	Facility Total	9.02	
NO_x	001 – Sulfonation Unit	1.60[1]	N/A
	003 – 500 HP Steam Boiler	9.18[2]	
	Facility Total	10.78	
SO_2	001 – Sulfonation Unit	3.07[4]	N/A
	003 – 500 HP Steam Boiler	5.33[5]	
	Facility Total	8.40	
CO	001 – Sulfonation Unit	0.31[1]	N/A
	003 – 500 HP Steam Boiler	7.71[2]	
	Total	8.02	
VE	All EUs		20%

[1] These potential emission values are from previous technical evaluations.
[2] Calculated using AP-42 factors (7.6 lb. PM/PM_{10}, 5.5 lb. VOC, 100 lb. NO_x, and 84 lb. CO; all per million ft^3 of natural gas) and 20,932 ft^3 of natural gas per hour, at 8,760 hours per year.
[3] Calculated based on the March 1995 stack test data (0.26 lb/hr VOC) conducted on Kettle No. 2 (6,500 gallon capacity).
[4] Calculated using the material balance model submitted in the 09/08/11 RAI response (0.7 lb/hr SO_2, at 8,760 hours per year).

[5] Calculated using AP-42 factor (142 x 0.5%S = 71 lb. SO_2 per 1,000 gallons) and 150 gallons of fuel oil per hour, at 1,000 hours per year.

IV. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204 through 297, F.A.C.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 297, F.A.C.

V. Preliminary Determination

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection Air Resource Management, Southwest District 13051 North Telecom Parkway, Temple Terrace, Florida 33637-7600.

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).