



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 122011-010 Project Number: 2011-10-007
Installation Number: 510-0096

Parent Company: Altana AG

Parent Company Address: Abelstr. 45, 46483 Wesel

Installation Name: Elantas PDG, Inc.

Installation Address: 5200 North Second Street, St. Louis, MO 63147

Location Information: St. Louis City

Application for Authority to Construct was made for:

Install a new 12.25 million British Thermal Units (MMBtu) per hour natural gas or fuel oil boiler boiler that will be used to heat water to produce steam for use in the plant. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

DEC 16 2011

EFFECTIVE DATE

Kyra L. Neider
DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2011-10-007
Installation ID Number: 510-0096
Permit Number:

Elantas PDG, Inc.
5200 North Second Street
St. Louis, MO 63147

Complete: January 15, 2012

Parent Company:
Altana AG
Abelstr. 45
46483 Wesel

County: St. Louis City

REVIEW SUMMARY

- Elantas PDG, Inc. has applied for authority to construct a new 12.25 million British Thermal Unit (MMBtu) per hour natural gas or fuel oil boiler that will be used to heat water to produce steam for use in the plant.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. Refer to the emission calculations for the details.
- 40 CFR 60, Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units of the New Source Performance Standards (NSPS) applies to the installation.
- 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Boiler MACT applies to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all pollutants are below the de minimis levels.
- This installation is located in North St. Louis City, a nonattainment area for the 8-hour ozone standard and the PM-2.5 standard and an attainment area for all other criteria pollutants.

- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing are not required for the equipment. Fuel certification is required instead.
- A Part 70 Installation State Operating Permit is required for this installation. This project will be incorporated into the next operating permit renewal.
- Approval of this permit is recommended without special conditions.

INSTALLATION DESCRIPTION

The Elantas PDG, Inc. facility located in north St. Louis, Missouri manufactures specialty polymers and coatings for the electrical and electronics industry, including wire varnish, wire enamel, and potting compounds.

The following permits have been issued to Elantas PDG, Inc. from the permitting authority.

Permit History

OP2002-035

Completed 5/24/2002, Status: Part 70 Operating Permit Issued Project#: EX199705026, Expires 5/23/2007

9801004SC

Completed 7/10/1998, Description: Nylon Process Tank, Status: Local Construction Permit Issued, Project#: EX199806047

9807-039SC

Completed 9/25/1998, Description: Thinning Tank, Status: Local Construction Permit Issued, Project#: EX199808115

00-04-018

Completed 5/24/2000, Description: Chemical usage in tanks, Status: Local Construction Permit Issued, Project#: EX200004095

00-04-018F

Completed 10/25/2000, Status: Local Construction Permit Issued, Project#: EX200009092

01-11-034

Completed 1/30/2002, Description: Mixers, Status: Local Construction Permit Issued Project#: AP200201017

03-09-017PM

Completed 11/6/2003, Description: Modify previous conditions, Status: Local Construction Permit Issued, Project#: AP200310023

04-04-007
Completed 6/3/2004, Status: Local Construction Permit Issued, Project#: AP200405152

04-02-006
Completed 7/9/2004, Status: Local Construction Permit Issued, Project#: AP200407013

04-04-007
Completed 12/20/2005, Status: Local Construction Permit Issued, Project#: AP200501056

04-12-024
Completed 12/20/2005, Status: Local Construction Permit Issued, Project#: AP200501057

04-12-025
Completed 3/23/2005, Description: AI Reactor, Status: Local Construction Permit Issued Project#: AP200502024

05-11-011
Completed 1/10/2006, Description: 20,000 gal tank, Status: Local Construction Permit Issued, Project#: AP200512034

06-01-001
Completed 2/23/2006, Description: 800 gal mixing vessel, Status: Local Construction Permit Issued, Project#: AP200602059

Completed 5/31/2006, Status: Local Construction Permit Issued, Project#: AP200605033

042007-012
Completed 4/16/2007, Description: Four Process Tanks, Status: Local Construction Section 5 Permit Issued, Project#: AP200702018

07-12-027
Completed 4/21/2008, Description: Process Tanks, Status: Local Construction Permit Issued, Project#: AP200803099

08-03-005
Completed 10/23/2008, Description: Tank, Status: Local Construction Permit Issued, Project#: AP200809046

09-05-012
Completed 9/17/2009, Status: Local Construction Permit Issued, Project#: AP200908035

PROJECT DESCRIPTION

The facility plans to install a new 12.25 million British Thermal Unit (MMBtu) per hour natural gas/fuel oil boiler that will be used to heat water to produce steam for use in the plant. The new boiler will be subject to 40 CFR 60, Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (NSPS Dc) and will be required to maintain records of monthly natural gas/fuel oil usage. The boiler will also be subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and

Institutional Boilers and Process Heaters Boiler MACT and will be subject to work practice standards. Since the boilers are subject to NSPS Dc, 10 CSR 10-5.030 - Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating and 10 CSR 10 6.260 - Restriction of Emission of Sulfur Compounds do not apply.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, AP-42 Section 1.3 Fuel Oil Combustion, AP-42 Section 1.4 Natural Gas Combustion. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year, tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application
PM _{2.5}	10.0	4.6	0.28	0.40
PM ₁₀	15.0	4.9	0.29	0.40
SO _x	40.0	28.2	0.25	2.72
NO _x	40.0	100.7	3.72	7.67
VOC	40.0	124.9	9.48	0.29
CO	100.0	37.9	3.09	4.42
HAPs	10.0/25.0	N/D	6.55 ¹	N/D

N/A = Not Applicable; N/D = Not Determined

Small Boilers (< 100 MMBtu/hr. Heat Input) - Criteria Pollutants, HAPs, and Metals from Fuel Oil #2			
Maximum Heat input: 12.25 MMBtu/hr.			
Criteria Pollutants	Emission Factor (lb./Mgal)	Emissions (lb./yr.)	Emissions for boiler (tpy)
NO _x	20	15,330	7.67
CO	5	3,833	1.92
Pb	0.0013	1	4.98E-04
PM ₁₀	1	767	0.38
PM _{2.5}	0.25	192	0.10
SO ₂	7.1	5,442	2.72
VOC	0.2	153	0.08

1 These were reported as PM₁₀/PM_{2.5} or VOCs.

Small Boilers (< 100 Btu/hr. Heat Input)'- Criteria Pollutants, HAPs, and Metals from Natural Gas			
Maximum Heat input: 12.25 MMBtu/hr.			
Criteria Pollutants	Emission Factor (lb./MMscf)	Emissions (lb./yr.)	Emissions for boiler (tpy)
NO _x	100	10,521	5.26
CO	84	8,837	4.42
Pb	0.0005	5.E-02	3.E-05
PM ₁₀	7.6	800	0.40
PM _{2.5}	7.6	800	0.40
SO ₂	0.6	63	0.03
VOC	5.5	579	0.29

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below the de minimis levels.

APPLICABLE REQUIREMENTS

Elantas PDG, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this permit was issued. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110. The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations, 10 CSR 10-6.070 – New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc.*
- *Maximum Achievable Control Technology (MACT) Regulations, 10 CSR 10-6.075, National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters 40 CFR 63, Subpart DDDDD.*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted without special conditions.

Randall E. Raymond
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 22, 2011, received September 26, 2011, designating Altana AG as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- St. Louis Regional Office Site Survey, dated October 5, 2011.

Mr. Todd Thomas
Manager of Regulatory Affairs
Elantas PDG, Inc.
P. O. Box 66756
St. Louis, MO 63166

RE: New Source Review Permit - Project Number: 2011-10-007

Dear Mr. Thomas:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Randy E. Raymond, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:rer

Enclosures

c: St. Louis Regional Office
PAMS File: 2011-10-007

Permit Number: