

STATE OF MISSOURI



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: 102012-002

Project Number: 2012-08-014
Installation Number: 099-0052

Parent Company: DRS Technologies

Parent Company Address: 2345 Crystal Drive, Arlington, VA 22202

Installation Name: Engineered Coil Company D.B.A. DRS Marlo Coil

Installation Address: 6060 Highway PP, High Ridge, MO 63049

Location Information: Jefferson County, 22, 43N, 4E

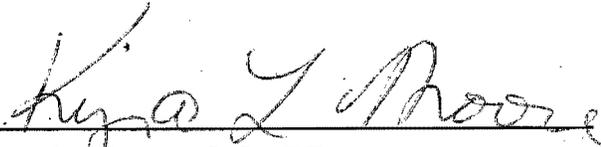
Application for Authority to Construct was made for:
Installation of a new fin press. This review was conducted in accordance with Section (5),
Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

OCT - 5 2012

EFFECTIVE DATE


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 Department's 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.

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Project No.	2012-08-014

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Engineered Coil Company D.B.A. DRS Marlo Coil
Jefferson County, 22, 43N, 4E

1. VOC Emission Limitations
 - A. Engineered Coil Company D.B.A. DRS Marlo Coil shall emit less than 100.0 tons of VOCs in any consecutive 12-month period from the entire installation (see table 1).

Table 1: Installation Emission Units

Emission Unit	Description	Pollutant
EU-002	Fin fabrication	VOC
EU-009	Adhesive application	VOC
EU-010	Paint Booth Cleaning	VOC
EU-014	Paint Booth	VOC
EU-015	Paint Booth	VOC
EU-018	Degreasing	VOC

- B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions.
2. Operational Requirement – Lubrication
 - A. Engineered Coil Company D.B.A. DRS Marlo Coil shall keep the lubrication involved in emission unit 002 in sealed containers whenever the materials are not in use. Engineered Coil Company D.B.A. DRS Marlo Coil shall provide and maintain suitable, easily read, permanent markings on all lubrication containers used with this equipment.
3. Record Keeping and Reporting Requirements
 - A. Engineered Coil Company D.B.A. DRS Marlo Coil shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include MSDS for all materials used.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- B. Engineered Coil Company D.B.A. DRS Marlo Coil shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

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

Project Number: 2012-08-014
Installation ID Number: 099-0052
Permit Number:

Engineered Coil Company D.B.A. DRS Marlo Coil Complete: August 8, 2012
6060 Highway PP
High Ridge, MO 63049

Parent Company:
DRS Technologies
2345 Crystal Drive
Arlington, VA 22202

Jefferson County, S22, 43N, 4E

REVIEW SUMMARY

- Engineered Coil Company D.B.A. DRS Marlo Coil (Marlo Coil) has applied for authority to install a new fin press. This will make a total of five fin presses for the installation.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation. 40 CFR Part 60, Subpart TT, *Standards of Performance for Metal Coil Surface Coating* does not apply because the coils manufactured will not be surface coated.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment. 40 CFR Part 63 Subpart MMMM, *National Emission Standards of Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products* and subpart HHHHHH, *National Emission Standards of Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources* do not apply because Marlo Coil is not a major source.
- 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 VOC for the project are below de minimis levels.

- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and the PM_{2.5} standard and an attainment area for all other criteria pollutants. Jefferson County is a nonattainment area for lead.
- 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 100 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed because there are no modeling standards for VOC.
- Emission testing is not required for the equipment.
- An Intermediate Operating Permit modification is required for this installation within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Marlo Coil manufactures cooling coils, steam coils and air handling equipment in High Ridge, Missouri. The installation is a minor source under Construction Permits. Marlo Coil operates under an Intermediate Operating Permit. Marlo Coil submitted an Intermediate Operating Permit renewal in May 2011. The lubrication, FinWorks 4041 HF, for the fin presses contains VOC's. VOC's will be emitted during the drying process of fins, but there will not be any HAPs associated with the lubrication drying process.

The following New Source Review permits have been issued to Engineered Coil Company D.B.A. DRS Marlo Coil from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0489-001A	New Paint Line
1194-016	Paint Line Modification

PROJECT DESCRIPTION

Marlo Coil proposed to install an additional fin press to Emission Unit 002. The fin press will simply have a different pattern than existing presses. Each press includes a separate tool and die design. By having multiple tool and die designs, the facility has the ability to manufacture many different coil and steam coil designs. Therefore, the additional press will not debottleneck any processes. VOC emissions will not be controlled but will be tracked. The additional fin press has an annual PTE of 25.3 tons per year which is under the de minimis level for the project. Since the project's emissions are above insignificant levels of 10 CSR 10-6.061(3)(A)3.A, a permit is required.

EMISSIONS EVALUATION

The emission factors used in this analysis were obtained from the MSDS for the given lubricant. A mass balance was used from the VOC content by weight. A conservative estimate of one gallon of lubrication per hour was used for PTE calculations of VOC's from this additional press. PTE calculations were based on a mass balance of the %VOC by weight of the lubrication used in the fin making process. Emissions will not be controlled, and the additional fin press has an annual PTE of 25.3 tons per year.

Lubricant: 90%VOC by weight * 6.42 lb/gallon (density) * 8760 hr/year * 1gal/hr
 *1ton/2000lb = 25.3 tons per year

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2011 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	Minor	N/A	N/A	N/A
PM ₁₀	15.0	Minor	N/A	N/A	N/A
PM _{2.5}	10.0	Minor	N/A	N/A	N/A
SOx	40.0	Minor	N/A	N/A	N/A
NOx	40.0	Minor	N/A	N/A	N/A
VOC	40.0	<100	5.73	25.3	<100
CO	100.0	Minor	N/A	N/A	N/A
HAPs	10.0/25.0	Minor	<1	N/A	N/A

N/A = not applicable, N/D = not determined, Minor = Less than Major source levels

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 VOC are below de minimis levels.

APPLICABLE REQUIREMENTS

Engineered Coil Company D.B.A. DRS Marlo Coil 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 application was approved. 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
- *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

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.

J Luebbert
New Source Review Section

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 7, 2012, received August 8, 2012, designating DRS Technologies as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheets
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	
CFR	Code of Federal Regulations	National Emissions Standards for Hazardous Air Pollutants
CO	carbon monoxide	NO_x	nitrogen oxides
CO₂	carbon dioxide	NSPS	New Source Performance Standards
CO_{2e}	carbon dioxide equivalent	NSR	New Source Review
COMS	Continuous Opacity Monitoring System	PM	particulate matter
CSR	Code of State Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
dscf	dry standard cubic feet	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
EQ	Emission Inventory Questionnaire	ppm	parts per million
EP	Emission Point	PSD	Prevention of Significant Deterioration
EPA	Environmental Protection Agency	PTE	potential to emit
EU	Emission Unit	RACT	Reasonable Available Control Technology
fps	feet per second	RAL	Risk Assessment Level
ft	feet	SCC	Source Classification Code
GACT	Generally Available Control Technology	scfm	standard cubic feet per minute
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tpy	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Charles Ault
Plant Engineer
Engineered Coil Company D.B.A. DRS Marlo Coil
6060 Highway PP
High Ridge, MO 63049

RE: New Source Review Permit - Project Number: 2012-08-014

Dear Mr. Ault:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. 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 J Luebbert, at the Department of Natural Resources' 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

Susan Heckenkamp
New Source Review Unit Chief

SH:jl

Enclosures

c: St. Louis Regional Office
PAMS File: 2012-08-014

Permit Number: