TECHNICAL SUPPORT DOCUMENT

MAY, 2014

I. GENERAL COMMENTS:

A. Company Information

Physical and mailing address:
1. Western Emulsions, Inc.
2. 3450 E. 36th Street, Tucson, AZ 85713

B. Background

Western Emulsions, Inc. (Western Emulsions) currently operates under a Class II air quality permit. This permit is a renewal to the 5-yr permit issued to the facility. There are no physical equipment changes or operational changes at the plant. The plants processing capacity will remain at 66,750 tons of asphalt per year.

C. Attainment Classification

Western Emulsions is located in an area that is in attainment for all pollutants.

II. SOURCE DESCRIPTION

A. Process Description

Western Emulsions operates an existing asphalt emulsion plant and terminal processing approximately 66,750 tons of asphalt per year. The facility operates natural gas fired boilers and hot oil heaters.

B. Air Pollution Control Equipment

No add-on air pollution control devices are used by Western Emulsions, Inc. or required by this permit.

III. REGULATORY HISTORY

Western Emulsions is currently in compliance with all Pima County Code requirements.

IV. EMISSION ESTIMATES

The source does not meet the permit threshold requirements based on potential to emit (PTE) levels for criteria pollutants. Western Emulsions requires a permit because it is subject to the NSPS for Steam Generating Units.

Based on standard EPA AP-42 emission factors for boilers, asphalt loading and tank emissions, the uncontrolled emissions from Western Emulsions are given in the table below. These numbers were not used in determining whether Western Emulsions requires a permit. They simply show the level of emissions when compared to the criteria pollutant permit requirement thresholds.

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Western Emulsions Tucson plant Emissions Summary
Potential To Emit

Pollutant	Emissions (tons/yr)
NO_X	18.8
CO	4.3
SO_X	0.1
VOC	5.4
PM_{10}	1.5

V. APPLICABLE REQUIREMENTS

A. Code of Federal regulations (CFR): – The following PCC rules apply:

40 CFR Subpart Dc Standards of Performance for Small Industrial Commercial-Institutional Steam Generating Units

EPA Determination Detail Control Number 0300118

B. Pima County Code (PCC) –The following PCC rules apply:

17.16.010 Local rules and standards - Applicability of more than one standard
17.16.020 Noncompliance with applicable standards
17.16.030 Odor limiting standards
17.16.040 Standards and applicability (Includes NESHAP)
17.16.050 Visibility limiting standard
17.16.165 Standards of performance for fossil-fuel fired industrial and commercial equipment
17.16.430 Standards of performance for unclassified sources

VI. PERMIT CONTENTS

Category A – Specific Conditions for NSPS (Subpart Dc) Boiler

The regulations identified within this category apply to the single Superior boiler identified in Table 1 of Attachment 2 of the permit.

Boilers with a maximum design heat input rating of 10 to 100 million Btu/hr that were constructed, modified, or reconstructed since June 9, 1989 are subject to federal New Source Performance Standards (NSPS). The subpart Dc performance standard applies to units that combust any of several fuel types, including coal, oil, natural gas, and wood. Limited performance standards apply to the Western Emulsions natural gas fired boiler.

Standard	Discussion	Authority
I.	Since there are no established emission limitations for the applicable natural gas fired Superior boiler, Western Emulsions is only subject to local compliance and when necessary performance test methods of subpart Dc.	40 CFR 60.40c

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Category A – Specific Conditions for NSPS (Subpart Dc) Boiler (continued)

Standard	Discussion	Authority
I.A	A standard for opacity is a local regulation applicable to permitted and unpermitted sources operating within Pima County. The opacity standard states that a boiler may not discharge gases with more than 20 percent opacity.	PCC 17.16.040.A
I.B	The fuel limitation standard is a local regulation to ensure the NSPS applicable boiler is restricted to combust natural gas only. A deviation from this condition would result in additional subpart Dc regulations.	PCC 17.12.185.A.2
II.	As the applicable NSPS boiler is restricted to combust natural gas, the potential emissions from the source may be focused on those pollutants associated with natural gas combustion; These include, nitrogen oxides (NO_X), carbon monoxide (CO), and carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), volatile organic compounds (VOCs), trace amounts of sulfur dioxide (SO_2), and particulate matter (PM). Subpart Dc was primarily written to regulate boilers that combust any of several fuel types, including coal, oil, natural gas, and wood. The applicable NSPS boiler at the Western Emulsions facility only combusts natural gas and thus it is not subject to the more stringent monitoring and recordkeeping requirements of subpart Dc.	PCC 17.12.185.A.3
II.A	The opacity of visible emissions from the boilers while combusting natural gas fuel is inherently low and are not significant enough to warrant a regular monitoring demonstration of compliance with the standard; as such Western Emulsions is required to operate and maintain the boilers at all times - including periods of startup, shutdown, and malfunction - in a manner consistent with good air pollution control practices and consistent with manufacturer's guidelines.	PCC 17.12.185.A.3
II.B.1	Applicable federal monitoring requirement identified in subpart Dc. NSPS subpart Dc allows Western Emulsions to maintain daily fuel records of the fuel consumption on a monthly basis for the applicable Dc boiler if fired on natural gas exclusively.	40 CFR 60.48c(g)
II.B.2	Compliance with the local fuel limitation requirement shall be demonstrated by documenting the fuel supplier certification. In addition, documentation must include a certified statement signed by the Permittee that the records of fuel supplier certifications held represent all of the fuel combusted during the fuel certification period.	PCC 17.12.185.A.3

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Category A – Specific Conditions for NSPS (Subpart Dc) Boiler (continued)

Standard	Discussion	Authority
III	Applicable federal recordkeeping requirement identified in subpart Dc. The fuel consumption to determine the amount of natural gas burned (delivered) in the applicable NSPS boiler and identification of the fuels combusted in the boiler (fuel supplier certifications).	40 CFR 60.48c(i), PCC 17.12.185.A.4.b
IV.A	Applicable federal reporting requirement identified in subpart Dc. NSPS subpart Dc allows Western Emulsions to maintain records of the fuel consumption on a monthly basis for the applicable natural gas fired Dc boiler. The Permittee shall annually report the annual amount of natural gas combusted.	40 CFR 60.48c(g)
IV.B	Reporting requirements for emissions in excess of the limits are identified in the Additional Permit Requirements of this permit.	PCC 17.12.185.A.5
V.	For purposes of demonstrating compliance, certain test methods are used for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit.	PCC 17.12.045 PCC 17.12.050 PCC 17.20.010
V.A	When required, opacity measurements are required to be performed according to EPA Reference Method 9.	PCC 17.20.010
V.B	Since the sulfur content of pipeline quality natural gas is regulated by the Federal Energy Regulatory Commission, identifying that pipeline quality natural gas was fired exclusively in the applicable NSPS boiler would suffice to demonstrate compliance with the fuel limitation standard.	PCC 17.12.185.A.3, PCC 17.20.010
V.C	Western Emulsions may seek approval for the use of alternative test methods to demonstrate compliance with applicable emission limitation standards.	PCC 17.12.045.D

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Category B: Fossil-Fuel Fired Industrial and Commercial Equipment

The provisions of this Category apply to Fossil-Fuel fired Industrial and Commercial Equipment specifically listed in Table 1 of Attachment 2 of the permit (Non-NSPS equipment).

Standard	Discussion	Authority
I.A	Opacity Standard - By law, the Permittee cannot allow any equipment under his control to emit effluents (such as exhaust from the boiler) that exceed specific values of opacity (the degree to which light cannot pass through the plume of effluent/exhaust.) The value of opacity that cannot be exceeded is stated in the permit for the boiler.	PCC 17.16.040.A
I.B	Fuel Limitation – The Permittee may demonstrate compliance with the fuel limitation requirement by documenting the specific fuel supplied to the boiler.	PCC 17.12.185.A.3
II.A	The opacity of visible emissions from the boilers while combusting natural gas fuel is inherently low and are not significant enough to warrant a regular monitoring demonstration of compliance with the standard; as such Western Emulsions is required to operate and maintain the boilers at all times - including periods of startup, shutdown, and malfunction - in a manner consistent with good air pollution control practices and consistent with manufacturer's guidelines.	PCC 17.12.185.A.3
II.B	Compliance with the local fuel limitation requirement shall be demonstrated by documenting the fuel supplier records.	PCC 17.12.185.A.3
III	Records retention to allow the Control Officer an opportunity to review historical monitoring data to determine compliance with the permit requirements	PCC 17.12.185.A.4
IV.	Reporting requirements for emissions in excess of the limits are identified in the Additional Permit Requirements of this permit.	PCC 17.12.185.A.5
V.A	When required, opacity measurements are required to be performed according to EPA Reference Method 9.	PCC 17.20.010
V.B	Since the sulfur content of pipeline quality natural gas is regulated by the Federal Energy Regulatory Commission, identifying that pipeline quality natural gas was fired exclusively in the applicable boiler would suffice to demonstrate compliance with the fuel limitation standard.	PCC 17.12.185.A.3, PCC 17.20.010
V.C	Western Emulsions may seek approval for the use of alternative test methods to demonstrate compliance with applicable emission limitation standards.	PCC 17.12.045.D

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Category C: Facility Wide Operations

The provisions of this Category apply to Facility Wide operations and other equipment listed in Attachment 2 and any other sources of air contaminants operating at the facility.

Standard	Discussion	Authority
I.A.1	This a general requirement applicable to all facilities to not permit the planning, construction, installation erection, modification, use or operation of an emission source which will cause or contribute to a violation of a performance standard in Title 17.	PCC 17.12.185.A.2 PCC 17.16.020.A
I.A.2.	General pollution control requirement for unclassified sources to install and use control methods, devices, and equipment where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge.	PCC 17.16.430.F
I.A.3	This a general requirement applicable to all facilities to install abatement equipment or alter the stack, vent or other outlet at the request of Control Officer where the outlet is at such a level that emissions constituting air pollution are discharged to adjoining property.	PCC17.12.185.A.2 PCC 17.16.020.B
I.B	This general odor limiting standard applies to all facilities and sources in Pima County.	PCC 17.12.185.A.2 PCC 17.16.030
I.C	This general opacity limit apply's to facility wide point and nonpoint sources in eastern Pima County for facilities located outside of the Tohono O'Odham, Pasqua Yaqui, and San Xavier Indian Reservations.	PCC 17.16.050.B PCC 17.16.130.B.1
I.D	This is the Pima County general visibility limiting standard and applies to all facilities and limits emissions to 20% opacity as measured by EPA Method 9 and the diffusion of emissions beyond the property boundary line.	PCC 17.16.050
I.E.	General conditions applicable to all facilities relating to concealment of emissions taken directly from PCC 17.20.040.	PCC 17.20.040
II.A	Demonstration of compliance with the odor limiting standard is not required unless asked by the Control Officer when the Control officer has reasonable casue.to believe a violation of the odor limiting standard has been committed.	PCC 17.12.185.A.3
II.B	Demonstration of the general opacity and visible emission requirements is demonstrated by the facility conducting monthly visible emission checks.	PCC 17.12.185.A.3
III.A	This provision defines the required elements in the facility wide opacity and visible emission checks.	PCC 17.12.185.A.3&4
III.B	This provision defines the required retention of records.	PCC 17.12.185A.4.b
III.C	This provision defines the permit posting, record locations, and recordkeeping requirements for compliance determinations.	PCC 17.12.080 PCC 17.24.20.A

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Standard	Discussion	Authority
IV.	Reporting requirements for emissions in excess of the limits are provided in I.B of the Additional Permit Requirements.	PCC 17.12.185.A.5 PCC 17.12.040
V.	Facility Changes - The Western Emulsions facility may make a physical change or change in method of operation if the conditions identified for a permit revision are met.	PCC 17.12.240 PCC 17.12.255 PCC 17.12.260
VI.	When required, opacity measurements are required to be performed according to EPA Reference Method 9.	PCC 17.12.050 PCC 17.20.010

Additional Permit Requirements

Standard	Discussion	Authority
I	Compliance with Permit Conditions: This section of the permit identifies generic conditions that are applicable to all Class II and Class III sources.	PCC 17.12.185 A.7.a &b, PCC 17.12.185.A.5 17.12.040, 17.12.185.A.9, and, PCC 17.12.510
II	Permit Revision, Reopening, Revocation and Reissuance, or Termination for Cause: The Permittee and Control Officer are provided means of revising, reopening, or terminating the permit for cause.	PCC 17.12.185.A.7.c
III	Duty to provide information: The Permittee is required to furnish records to the Control Officer when requested.	PCC 17.12.165.G & PCC 17.12.185.A.7.e
IV	Severability Clause: This generic condition provides an avenue for the permit to be enforceable even if a part of the permit is found to be invalid.	PCC 17.12.185.A.6

VII. Alternate Operating Scenarios

There are no alternate operating scenarios proposed by Western Emulsions

VIII. Miscellaneous Comments

A. Sulfur Dioxide:

Even though the sulfur content limit is 0.9% by weight in Pima County, natural gas delivered to Pima County consistently shows sulfur levels below this limit as shown in past records of fuel supplier specifications/ purchase records which verify sulfur content of the fuel fired. The limitation for use of natural gas will ensure high sulfur fuel is not fired allowing the omission of the rule in PCC 17.16.165.G. These rules are incorporated by reference in Attachment 1 of the permit.

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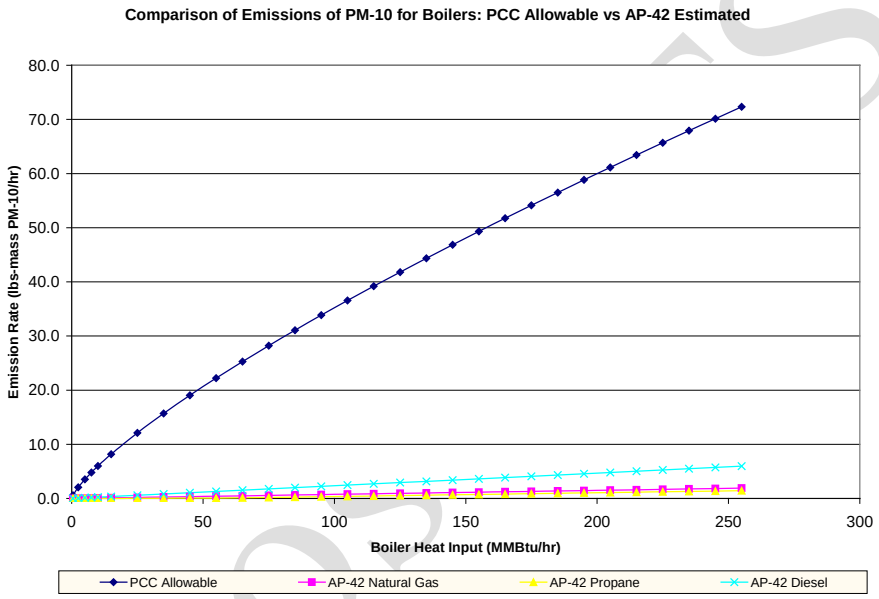
Compliance with the fuel limitation requirements of the Specific Conditions shall ensure compliance with the Sulfur Dioxide standard of PCC 17.16.165.E; which limit the emission of SO_2 to 1.0 pound per million BTU heat input, when burning low sulfur fuel. Since this source does not use diesel or fuel oil it is not necessary to include this standard in the permit even though there is fossil-fuel fired equipment at the facility. The rule specifically applies to sources that use diesel fuel.

B. Particulate Matter:

PCC 17.16.165.C limits the emissions of particulate matter from commercial and industrial fossil-fuel fired equipment (including but not limited to boilers.) This rule has not been included in the permit as allowable emissions are consistently over an entire order of magnitude higher than EPA AP-42 estimated potential emissions. The chart below, illustrates the point.



Comparative Chart of Allowable Particulate Emissions Under Pima County Code, Title 17, and Estimated Potential Emissions based on EPA AP-42 Estimates for External Combustion Sources. Allowable emissions are consistently over ten times estimated potential emissions. Therefore, it is not necessary to include the standard in the permit explicitly, but by reference in Attachment 1.

IX. IMPACTS TO AMBIENT AIR QUALITY

Only major sources are required to conduct impacts to ambient air quality, and Western Emulsions is not a major source.

X. CONTROL TECHNOLOGY DETERMINATION

Additional control technologies are not required for the source.

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