TRC Environmental Corporation
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615

Main 864.281.0030
Fax 864.281.0288

Transmittal

To: NCDEQ – Division of Air Quality
Permits Branch
1641 Mail Service Center
Raleigh, NC 27609-1641

Date: February 11, 2019
Project No.: 325749.0000.0000
Project: Madison Asphalt, LLC
Application for Permit to
Construct and Operate
Marshall, North Carolina

We have enclosed one original and 5 copies of:

☒ Report, Copy of Letter to Board of Commissioners, and FedEx Delivery Confirmation of Letter to Board of Commissioners

DESCRIPTION	REV #	DATE
Application for Permit to Construct and Operate Madison Asphalt, LLC 3807 US 25//70 Marshall, North Carolina February 2019		February 2019
Copy of Letter to Mandy Bradley Clerk to the Board of Commissioners		
FedEx Confirmation Delivery to Mandy Bradley		

Sent Via:

☒ FedEx Overnight Express

Copy to: Tommy Reed, Client – 1 copy each
Mona Brandon, TRC
Mike Riley, TRC

Very truly yours,
TRC Environmental Corporation

Cheryl Traynham
Project Coordinator

TRC

February 5, 2019

VIA: Federal Express

Ms. Mandy Bradley
Clerk to the Board of Commissioners
Madison County, North Carolina
5707 U.S. Highway 25/70
Marshall, NC 28753

Dear Ms. Bradley,

On behalf of Madison Asphalt, LLC, I am writing to inform you that we intend to construct and operate a Hot Mix Asphalt Plant at 3807 US-25/70 in Marshall, Madison County. I hereby certify that to the best of my knowledge, the County of Madison is one of the local governments having jurisdiction over any part of the land on which the facility and its appurtenances are to be located.

In accordance with § 143-215.108(f) of the North Carolina General Statutes, we hereby request that you issue a determination as to whether your town has in effect a zoning or subdivision ordinance that is applicable to the proposed facility. Additionally, please issue a determination as to whether the proposed use would be consistent with applicable zoning or subdivision ordinances. For your convenience, I have included a form with which you may remit your determination and a copy of the draft air permit application. As a means of demonstrating proof of transmittal, please sign, title, stamp, and date the enclosed form and mail to both the facility mailing address and the checked air quality office at your earliest convenience.

Thank you for your prompt attention to this matter. If you have any questions regarding this request, please contact me at 828-237-2239, or mbrandon@trcsolutions.com.

Sincerely,

Mona Brandon, CHMM
Project Manager
TRC Environmental on behalf of Madison Asphalt, LLC

Received
FEB 13 2019
Air Permits Section

Enclosures:
Zoning Consistency Determination Form
Draft Air Permit Application

RECEIVED
FEB 18 2019
Division of Air Quality
Asheville Regional Office

Zoning Consistency Determination

Facility Name: Madison Asphalt, LLC

Facility Street Address: 3807 US-25/70

Facility City: Marshall, NC 28753

Description of Process: Hot Mix Asphalt Plant

SIC/NAICS Code: 2951/324121

Facility Contact: Tommy Reed– Vice President

Phone Number: 828.777.3259

Mailing Address: 725 Bee Tree Rd.

Mailing City, State Zip: Marshall, NC 28753

Based on the information given above:

☐ I have received a copy of the air permit application (draft or final) AND...

☐ There are no applicable zoning ordinances for this facility at this time

☐ The proposed operation IS consistent with applicable zoning ordinances

☐ The proposed operation IS NOT consistent with applicable zoning ordinances
(please include a copy of the rules in the package sent to the air quality office)

☐ The determination is pending further information and can not be made at this time

☐ Other: _____

Agency _____

Name of Designated Official _____

Title of Designated Official _____

Signature _____

Date _____

Please forward to the facility mailing address listed above and the air quality office at the appropriate address as checked on the back of this form.

Traynham, Cheryl

From: TrackingUpdates@fedex.com
Sent: Friday, February 8, 2019 2:22 PM
To: Traynham, Cheryl
Subject: FedEx Shipment 774413210627 Delivered

Your package has been delivered

Tracking # 774413210627

Ship date:
Thu, 2/7/2019

Mona Brandon
TRC Companies
Greenville, SC 29615
US

Delivered

Delivery date:
Fri, 2/8/2019 2:18 pm

MS. MANDY BRADLEY
CLERK ON THE BOARD OF COMMISSIONERS
107 ELIZABETH LN
MARSHALL, NC 28753
US

Personalized Message

Application for Permit Construct & Operate - Madison Asphalt, Marshall NC - 325749

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	774413210627
Status:	Delivered: 02/08/2019 2:18 PM Signed for By: M.BRADLEY
Reference:	OHGENL.0000.0000 310583
Signed for by:	M.BRADLEY
Delivery location:	MARSHALL, NC
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Priority Overnight®
Packaging type:	FedEx® Pak
Number of pieces:	1
Weight:	1.00 lb.
Special handling/Services:	Deliver Weekday
Standard transit:	2/8/2019 by 4:30 pm

Application for Permit to Construct and Operate

Madison Asphalt, LLC

3807 US 25/70
Marshall, North Carolina

February 2019

Michael Riley
Air Quality Specialist

Mona Brandon, CHMM
Project Manager

3 WALDEN RIDGE DRIVE, SUITE 250, ASHEVILLE, NC 28803, • 828.681.0310 PHONE • 828.681.0460 FAX • WWW.TRCSOLUTIONS.COM

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Section 1
Introduction

Madison Asphalt, LLC, located at 3807 US 25/70, Madison County, Marshall, North Carolina is planning to construct and operate a hot mix asphalt facility. Madison County is currently in attainment for all criteria pollutants. Madison Asphalt, LLC has contracted with TRC Environmental Corporation (TRC) to assist with preparing this application for a Permit to Construct and Operate for the proposed facility.

1.1 Purpose

The Madison Asphalt, LLC facility will produce hot mix asphalt for use in local road repair. Based on potential-to-emit emissions estimates, the facility will qualify for a synthetic minor facility air permit. This application was prepared to apply for a permit to construct and operate, using the procedures detailed in 15A NCAC 02Q .0300. The required North Carolina Department of Environmental Quality (NC DEQ) forms are included in Appendix A. Detailed emission calculations are included in Appendix B and the North Carolina Modeling Protocol Checklist is included in Appendix C.

1.2 Contact Information

The Madison Asphalt LLC contact for questions concerning this permit application is as follows:

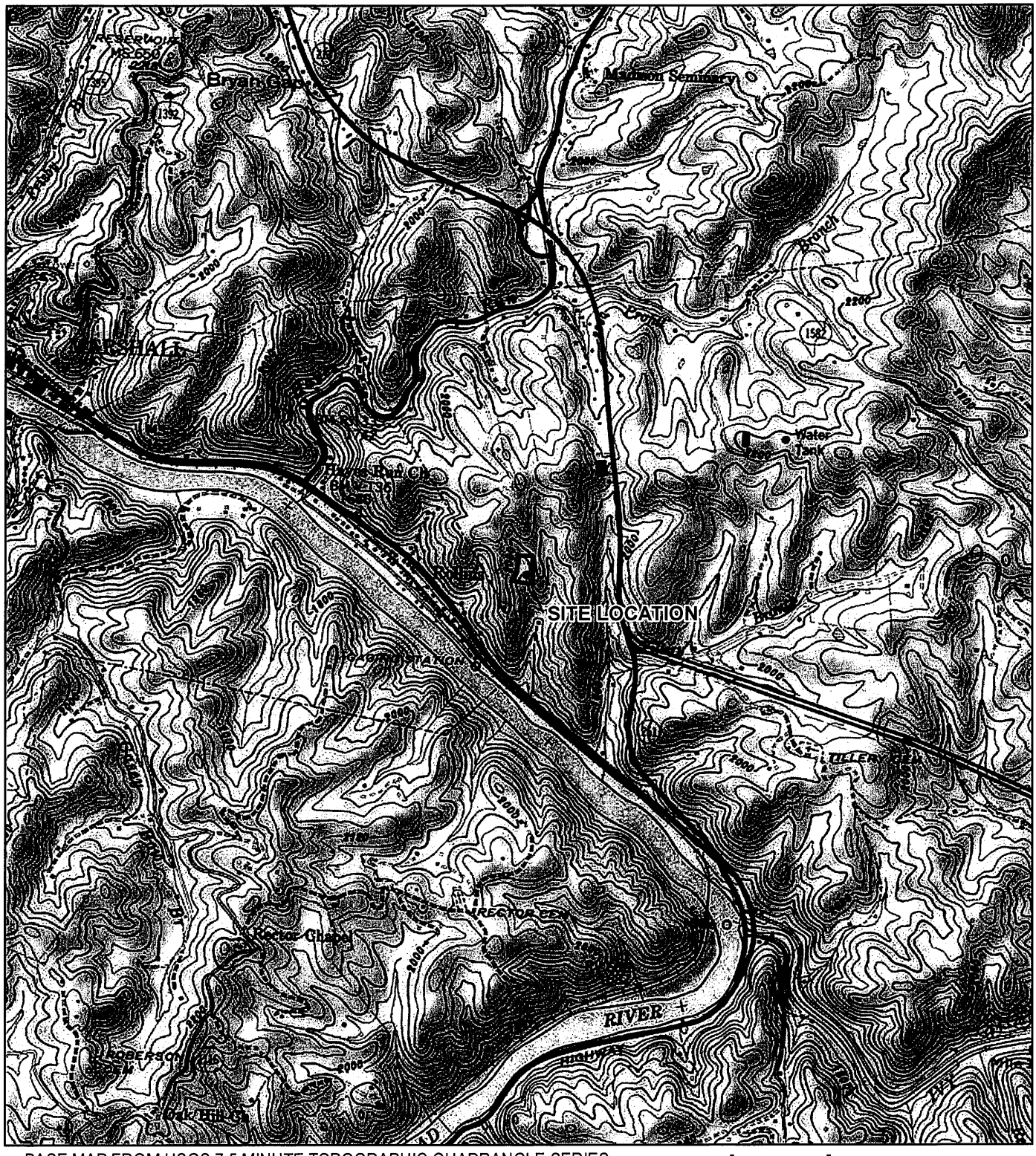
Mr. Tommy Reed (tommyfbpaving@yahoo.com)
Vice President
Madison Asphalt LLC
725 Bee Tree Road
Marshall, NC 28753
Telephone: 828.777.3259

The TRC contact information is as follows:

Ms. Mona Brandon, CHMM (mbrandon@trcsolutions.com)
Project Manager
TRC Environmental Corporation
3 Walden Ridge Drive, Suite 250
Asheville, NC 28803
Telephone: 828.237.2239

1.3 Location

The Madison Asphalt, LLC facility will be located at 3807 US 25/70, Madison County, Marshall, North Carolina. Madison Asphalt, LLC will be situated on a 2-acre, leased portion of the existing McCrary Stone Co. quarry. The site and surrounding area are zoned for industrial use. A site location map is included in Figure 1. Facility Layouts are included as Figures 2 and 3 respectively.



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

N

1 " = 2,000 '
1:24,000

0 2,000 4,000
FEET

Legend

PROPERTY BOUNDARY

TRC

TRC - GIS

PROJECT:

MADISON ASPHALT, LLC
3807 US25/70
MARSHALL, NC 28753

TITLE:

SITE LOCATION MAP

DRAWN BY:	SRAY
CHECKED BY:	MBRANDON
APPROVED BY:	MBRANDON
DATE:	FEBRUARY 2019
PROJ. NO.:	325749
FILE:	325749_1.mxd

FIGURE 1

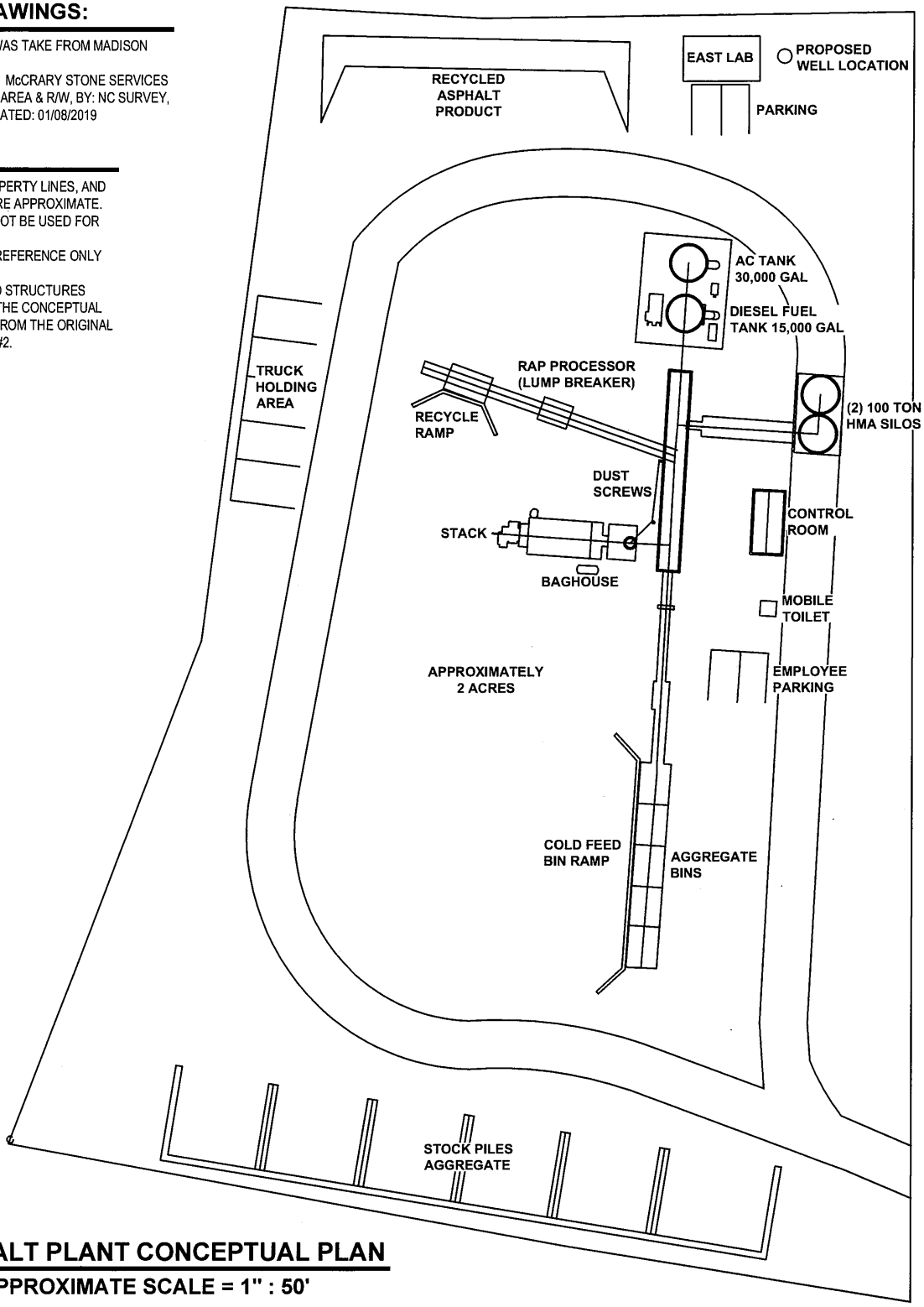
S:\1-PROJECTS\FrenchBroadPaving\325749_MadisonAsphalt\325749_1.mxd -- Saved By: SRAY on 2/1/2019, 17:32:36 PM

REFERENCE DRAWINGS:

1. BACKGROUND IMAGE WAS TAKE FROM MADISON COUNTY, NC GIS.
2. REFERENCE DRAWING: McCRARY STONE SERVICES INC. PROPOSED LEASE AREA & R/W, BY: NC SURVEY, P.C., JOHN B. YOUNG, DATED: 01/08/2019

NOTES:

1. ALL STRUCTURES, PROPERTY LINES, AND DIMENSIONS SHOWN ARE APPROXIMATE.
2. THIS FIGURE SHOULD NOT BE USED FOR CONSTRUCTION.
3. SCALE SHOWN IS FOR REFERENCE ONLY AND IS APPROXIMATE.
4. ADDITIONAL PROPOSED STRUCTURES HAVE BEEN ADDED TO THE CONCEPTUAL LAYOUT AND DEVIATE FROM THE ORIGINAL REFERENCE DRAWING #2.



ASPHALT PLANT CONCEPTUAL PLAN

APPROXIMATE SCALE = 1" : 50'

0 50 100 150 200

APPROXIMATE SCALE IN FEET

TRC

PROJECT:

PROPOSED ASPHALT PLANT LAYOUT
MADISON ASPHALT LLC
MARSHALL, NC

TITLE:

ASPHALT PLANT CONCEPTUAL LAYOUT

DRAWN BY:	K. KJOS
CHECKED BY:	M. BRANDON
APPROVED BY:	M. BRANDON
DATE:	JANUARY 2019
PROJ. NO.:	325749.0000
FILE:	BASE.dwg

FIGURE 2

8.5x11 -- USER: KKjos -- ATTACHED XREFS: -- ATTACHED IMAGES: ARCGIS; GIS No Topo; googleearth; GIS;
DRAWING NAME: J:\CAD\French Broad Paving\326235 - French Broad Paving\0000\ BASE.dwg -- PLOT DATE: January 24, 2019 - 3:18PM -- LAYOUT: FIG-2

Version: 2017-10-21

ASPHALT PLANT CONCEPTUAL PLAN

APPROXIMATE SCALE = 1" : 200'

0 100 200 300 400

APPROXIMATE SCALE IN FEET

REFERENCE DRAWINGS:

1. BACKGROUND IMAGE WAS TAKE FROM MADISON COUNTY, NC GIS.
2. REFERENCE DRAWING: McCRARY STONE SERVICES INC. PROPOSED LEASE AREA & R/W, BY: NC SURVEY, P.C., JOHN B. YOUNG, DATED: 01/08/2019

NOTES:

1. ALL STRUCTURES, PROPERTY LINES, AND DIMENSIONS SHOWN ARE APPROXIMATE.
2. THIS FIGURE SHOULD NOT BE USED FOR CONSTRUCTION.
3. SCALE SHOWN IS FOR REFERENCE ONLY AND IS APPROXIMATE.
4. ADDITIONAL PROPOSED STRUCTURES HAVE BEEN ADDED TO THE CONCEPTUAL LAYOUT AND DEVIATE FROM THE ORIGINAL REFERENCE DRAWING #2.

TRC

Section 2
Emissions Summary

2.1 Potential Emissions Summary

Emissions sources for the proposed facility include:

- One Recycled Asphalt Pavement feeder system equipped with one screen and two conveyors
- 50 MMBtu/hr oil-fired rotary drum aggregate dryer/mixer with baghouse
- One, 30,000-gallon asphalt cement (AC) storage tank
- One, 15,000-gallon No. 2 diesel fuel storage tank
- Two, 100-ton hot mix asphalt (HMA) storage silos
- Truck loadout operation
- Aggregate storage piles

A summary of PTE emissions is presented in Table 1. Detailed emission calculations and assumptions are included in Appendix B.

Table 1
Facility Emissions Summary

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION						
AIR POLLUTANT EMITTED	**ACTUAL EMISSIONS** (AFTER CONTROLS / LIMITS)		**POTENTIAL EMISSIONS** (BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
PARTICULATE MATTER (PM)	7.21	2.31		48.07		2.31
PARTICULATE MATTER<10 MICRONS (PM_{10})	4.52	1.52		23.82		1.52
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)						
SULFUR DIOXIDE (SO2)	13.39	6.86		58.66		6.86
NITROGEN OXIDES (NOx)	9.55	3.63		41.84		3.63
CARBON MONOXIDE (CO)	22.58	6.85		98.90		6.85
VOLATILE ORGANIC COMPOUNDS (VOC)	8.18	2.42		35.83		2.42
TOTAL HAP	1.53	0.45		6.68		0.45
LARGEST HAP (formaldehyde)	0.54	0.16		2.37		0.16

2.2 General Assumptions

The following assumptions apply to PTE emissions for the new hot mix asphalt facility:

- Emissions were estimated using the NC DEQ Division of Air Quality (DAQ) "Asphalt Emissions Calculator Revision F 07/18/2012" spreadsheet.
- Vendor information was used to estimate fabric filter control effectiveness.

2.3 Air Dispersion Modeling

Emissions from the proposed facility were calculated using the NC DEQ DAQ "Asphalt Emissions Calculator Revision F 07/18/2012" (Appendix B). The worksheet calculated projected emissions for air toxic substances and identified that an air quality modeling assessment for arsenic, benzene and formaldehyde is required. TRC performed the air quality modeling assessment and the predicted impacts for arsenic, benzene and formaldehyde are acceptable with respect to the defined acceptable ambient levels (AALs). A detailed discussion of the air quality modeling assessment is provided in Section 4.0 and a Modeling Protocol Checklist is included in Appendix C. Air quality modeling files will be e-mailed to the NC DEQ upon request.

Section 3
Regulatory Applicability

This section presents a review of federal and state air quality regulations that are applicable or potentially applicable to the proposed new hot mix asphalt plant.

3.1 Federal Regulations

3.1.1 New Source Performance Standards: 40 CFR Part 60

Subpart A – General Provisions

Subpart A, General Provisions, contains general requirements for notification, testing and reporting for the New Source Performance Standard (NSPS) regulations. The subpart applies to each facility that has an affected source as defined under another subpart. The proposed facility has units subject to one or more standards under Part 60; therefore, the applicable Subpart A requirements set forth in this regulation apply to the facility.

The facility will be required to conduct the initial performance test required in §60.8, using the reference test methods found in Appendix A of Part 60, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility. The facility must conduct performance test(s) and furnish the Administrator a written report of the results of the performance test(s).

Subpart I – Standards of Performance for Hot Mix Asphalt Facilities

For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

The proposed facility contains these emissions units, and is subject to Subpart I. On and after the date on which the performance test required to be conducted by

Subpart A is completed, the facility will not discharge into the atmosphere any gases which:

1. Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).
2. Exhibit 20 percent opacity, or greater.

3.1.2 National Emission Standards for Hazardous Air Pollutants: 40 CFR Part 61

The National Emission Standards for Hazardous Air Pollutants are regulated under 40 CFR 61. The proposed facility will not emit any HAPs listed under 40 CFR 61 and therefore, the proposed facility is not subject to these regulations.

3.1.3 National Emission Standards for Hazardous Air Pollutants for Source Categories: 40 CFR Part 63

The National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAPs) are regulated under 40 CFR 63. The proposed facility is not in a source category listed under 40 CFR 63 and therefore, the proposed facility is not subject to these regulations.

3.1.4 Prevention of Significant Deterioration: 40 CFR Part 52

The requirements of 40 CFR 52.21 apply to the construction of any new major stationary source or major modifications at existing major sources for pollutants where the source is located in an area that is designated as in attainment or unclassifiable with the National Ambient Air Quality Standards (NAAQS).

A new Hot Mix Asphalt Plant would be considered a major stationary source if it has the potential to emit 250 tons per year or more of a regulated NSR pollutant. Since the proposed plant does not have the potential to emit regulated NSR pollutants at this rate, the provisions of 40 CFR 52.21 do not apply to the facility.

3.2 State Regulations

3.2.1 Particulates from Hot Mix Asphalt Plants: 15A NCAC 2D .0506

This rule requires that particulate matter emissions resulting from the operation of a hot mix asphalt plant not exceed allowable emission rates. The allowable emission rates are, as defined in 15A NCAC 2D .0506, a function of the process weight rate and are determined by the following equation (calculated to three

significant figures), where P is the process throughput rate in tons per hour (tons/hr) and E is the allowable emission rate in pounds per hour (lbs/hr).

$E = 4.9445 * (P)^{0.4376}$ for P < 300 tons/hr, or

E = 60 lbs/hr for P >=300 tons/hr

Visible emissions from stacks or vents at a hot mix asphalt plant must be less than 20 percent opacity when averaged over a six-minute period.

Fugitive dust emissions must be controlled as required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources."

Fugitive emissions for sources at a hot mix asphalt plant not covered elsewhere under this rule must not exceed 20 percent opacity averaged over six minutes.

All hot mix asphalt batch plants must be equipped with a scavenger process dust control system for the drying, conveying, classifying, and mixing equipment. The scavenger process dust control system must exhaust through a stack or vent and shall be operated and maintained in such a manner as to comply with the allowable particulate emission rate and opacity limit of this rule.

3.2.2 Sulfur Dioxide Emissions from Combustion Sources: 15A NCAC 2D .0516

This rule requires sulfur dioxide emissions from the combustion sources shall not exceed 2.3 pounds per million Btu heat input.

3.2.3 Control of Visible Emissions: 15A NCAC 2D .0521

This rule requires that visible emissions from emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with 15A NCAC 2D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants" must comply with applicable visible emissions requirements contained therein.

3.2.4 Particulates from Fugitive Dust Emission Sources: 15A NCAC 2D .0540

This rule requires that the facility must not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible

emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f).

"Fugitive dust emissions" means particulate matter that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

3.2.5 Notification Requirement: 15A NCAC 2D .0535

This rule requires the facility which is a of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions to:

a. Notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and describe:
   i. the name and location of the facility,
   ii. the nature and cause of the malfunction or breakdown,
   iii. the time when the malfunction or breakdown is first observed,
   iv. the expected duration, and
   v. an estimated rate of emissions.

b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

3.2.6 Control of Toxic Air Pollutants: 15A NCAC 2D .1100

This Section sets forth the rules for the control of toxic air pollutants to protect human health. According to this rule a facility must not emit any of the listed toxic air pollutants in such quantities that may cause or contribute beyond the facility's premises to any significant ambient air concentration that may adversely affect human health, except as allowed pursuant to 15A NCAC 02Q .0700. The proposed facility will emit listed toxic air pollutants and is subject to this rule.

3.2.7 Control and Prohibition of Odorous Emissions: 15A NCAC 2D .1806

This rule requires that the facility must not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

3.2.8 Construction and Operation Permits: 15A NCAC 2Q .0300

This rule presents the procedures required to obtain a permit to construct and operate a new facility or source, which is not a Title V or PSD major source. It states that a facility may not begin construction or operation without first obtaining a construction and operation permit pursuant to 15A NCAC 02Q .0300. A facility required to have a permit pursuant to this Section shall also be subject to applicable air toxic permit procedures pursuant to 15A NCAC 02Q .0700.

The proposed facility does not have the potential to emit regulated pollutants at a rate that requires Title V or PSD permitting. Therefore, the procedures of 15A NCAC 02Q .0300 will be followed. It will emit toxic air pollutants and is subject to the requirements of 15A NCAC 02Q .0700.

3.2.9 Emission Rates Requiring a Permit: 15A NCAC 2Q .0711

This regulation requires that a facility, for each of the listed toxic air pollutants (TAPs), make a demonstration that facility-wide actual emissions, do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711(a). The facility must be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 2Q .0711(a).

A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.

PRIOR to exceeding any of these listed TPERs, the facility must be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 "Control of Toxic Air Pollutants".

The facility must maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs.

The facility emits listed TAPs and must comply with the requirements of this rule. An assessment of emissions has identified that only emissions of arsenic, benzene and formaldehyde exceed their corresponding TPERs. An air quality analysis is presented in Section 4 that evaluates emissions of these substances. The analysis has identified that the proposed facility will be in compliance with air quality impact limitations for these substances.

Section 4
Air Quality Modeling Assessment

This section summarizes the air quality modeling assessment performed for the proposed asphalt plant located in Marshall, NC.

4.1 Background

Madison Asphalt LLC (Madison) is proposing to install and operate a new asphalt plant on a roughly 2-acre leased parcel located at 3807 US 25/70, Marshall, North Carolina. Potential emissions were calculated using the NC DEQ DAQ's "Asphalt Emissions Calculator Revision F 07/18/2012". The emissions worksheet calculates projected emissions of air toxic substances and compares estimated emissions to NC DEQ emission thresholds that would trigger the need for an air quality modeling evaluation of specific substance emissions. Completion of the worksheet has identified that an air quality modeling assessment is needed for arsenic, benzene and formaldehyde. This section describes the air quality analysis conducted and the results. A North Carolina Modeling Protocol Checklist has also been prepared for this analysis and is included in Appendix C.

4.2 Facility Location and Description

The Madison Asphalt, LLC facility will be located at 3807 US 25/70, Madison County, Marshall, North Carolina. Madison Asphalt, LLC will be situated on a 2-acre, leased portion of the existing McCrary Stone Co. quarry. The site and surrounding area are zoned for industrial use. A site location map is included in Figure 1. Facility Layouts are included as Figures 2 and 3 respectively. Receptors were placed around only the leased property that constitutes the asphalt plant operations.

4.3 Emission Rates and Stack Parameters

The NC DEQ DAQ's Asphalt Emissions Calculator identified that emissions of arsenic, benzene and formaldehyde must be modeled. Emissions of these substance come from the dryer/baghouse, silo filing and loadout. The dryer/baghouse and silo filling are point sources, the silo loadout would be a nonpoint fugitive source. The calculated emission rates for the three emission sources are summarized below.

Table 2
Emission Rates

EMISSION SOURCE	FORMALDEHYDE (lb/hr)	BENZENE (lb/hr)	ARSENIC (lb/hr
Dryer/baghouse	0.53	0.0663	0.0000952
Silo Filling	0.0143	0.000663	0
Loadout	0.00062	0.000368	0

The dryer/baghouse and the Silo Filling have the assumed stack parameters.

Table 3
Stack Parameters

STACK	X(m)*	Y(m)*	HGT(m)	TEMP(K)	m/s	DIAMETER(m)
Dryer/BH	350121.7	3961926	8.1	436	19.4	1.03
Silo Vent	350139.4	3961930	10.81	339	1.5**	0.1

*UTM 83
**Assumed to be horizontal

The loadout operation was modeled as a volume source with dimensions corresponding to a typical asphalt transfer vehicle and using the conversion guideline in the United States Environmental Protection Agency's (USEPA's) AERMOD Guidance document as follows.

- The sigma-y parameter (lateral dimension) was assumed equal to 3m/4.3m or 0.7.
- The sigma-z (vertical dimension) parameters was assumed equal to 3.5m/2.15m or 1.6m

4.4 Air Quality Model Considerations

- The AERMOD dispersion model (Version 18081) was used for the analysis.
- The NC DEQ was contacted to determine an appropriate set of meteorological data to use for the analysis. The site is located in Madison County. For this county, NC DEQ provides meteorological data for modeling purposes corresponding to the specific location. NC DEQ was supplied a centroid UTM coordinate for the facility. The NC DEQ in turn supplied meteorological data files for the years 2013-2015 with the names:
  - MMIF_AERMET_2013_35.764N_82.585W.SFC (plus two more files for 2014 and 2015)
  - MMIF_AERMET_2013_35.764N_82.585W.PFL (plus two more files for 2014 and 2015)

- Receptors in NAD83 coordinates were located on the boundary of the asphalt plant and at 25-meter intervals out to a distance to ensure that the worst case predicted impacts were well within the interior of the grid. All worst-case impacts were found at or near the boundary of the facility and well within the outer edges of the receptor network. Receptor elevations were determined using the USEPA's AERMAP terrain processor and an applicable portion of a NED data set.
- The proposed asphalt plant has limited structures that are solid from ground to their top. Some structures were evaluated in the model using the BPIP-Prime algorithm. Structures included a number of storage vessels, baghouse and a maintenance building. Parameters for these structures are identified in the BPIP input file.

4.5 Modeling Results

Modeling results in comparison to the corresponding acceptable ambient concentrations (AACs) are summarized below.

Predicted Impacts and AALs in Micrograms per Cubic Meter

MODEL YEAR	FORMALDEHYDE (1-hr)	BENZENE (annual)	ARSENIC (annual)
2013	18	0.088*	0.00008
2014	31	0.092*	0.00008
2015	26	0.084*	0.00007
AAL	150	0.12	9.52E-05

*Result based maximum hourly rate for 8760 hours/year.
An actual annual impact based on projected operation would yield a predicted impact less than 1/10th of the listed impact for benzene.

The predicted impacts above are all acceptable with respect to the defined AALs. The North Carolina Modeling Protocol Checklist is included in Appendix C.

Appendix A
NC DEQ Forms

FORM A

GENERAL FACILITY INFORMATION

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — **A**

NOTE- APPLICATION WILL NOT BE PROCESSED WITHOUT THE FOLLOWING:

- [x] Local Zoning Consistency Determination (new or modification only)
- [x] Appropriate Number of Copies of Application
- [x] Application Fee (if required)
- [x] Responsible Official/Authorized Contact Signature
- [x] P.E. Seal (if required)

GENERAL INFORMATION

Legal Corporate/Owner Name: Madison Asphalt LLC

Site Name: Madison Asphalt LLC

Site Address (911 Address) Line 1: 3807 US 25/70

Site Address Line 2:

City: Marshall | State: North Carolina

Zip Code: 28753 | County: Madison

CONTACT INFORMATION

Responsible Official/Authorized Contact:			***Invoice Contact:***		
Name/Title: Tommy Reed / Vice President			Name/Title: Regina Reed		
Mailing Address Line 1: 725 Bee Tree Rd.			Mailing Address Line 1: 25 Bee Tree Rd.		
Mailing Address Line 2:			Mailing Address Line 2:		
City: Marshall State: NC		Zip Code: 28753	City: Marshall State: NC		Zip Code: 28753
Primary Phone No.: 828.777.3259	Fax No.: 828.649.0077		Primary Phone No.: 828.777.3259	Fax No.: 828.649.0077	
Secondary Phone No.: 828.689.4866			Secondary Phone No.:		
Email Address: tommyfbpaving@yahoo.com			Email Address: reginafbpaving@yahoo.com		

Facility/Inspection Contact:			***Permit/Technical Contact:***		
Name/Title: Tommy Reed / Vice President			Name/Title: Tommy Reed / Vice President		
Mailing Address Line 1: 725 Bee Tree Rd.			Mailing Address Line 1: 725 Bee Tree Rd.		
Mailing Address Line 2:			Mailing Address Line 2:		
City: Marshall State: NC		Zip Code: 28753	City: Marshall State: NC		Zip Code: 28753
Primary Phone No.: 828.777.3259	Fax No.: 828.649.0077		Primary Phone No.: 828.777.3259	Fax No.: 828.649.0077	
Secondary Phone No.: 828.689.4866			Secondary Phone No.: 828.689.4866		
Email Address: tommyfbpaving@yahoo.com			Email Address: tommyfbpaving@yahoo.com		

APPLICATION IS BEING MADE FOR

- [x] New Non-permitted Facility/Greenfield
- [ ] Modification of Facility (permitted)
- [ ] Renewal Title V
- [ ] Renewal Non-Title V
- [ ] Name Change
- [ ] Ownership Change
- [ ] Administrative Amendment
- [ ] Renewal with Modification

FACILITY CLASSIFICATION AFTER APPLICATION (Check Only One)

- [ ] General
- [ ] Small
- [ ] Prohibitory Small
- [x] Synthetic Minor
- [ ] Title V

FACILITY (Plant Site) INFORMATION

Describe nature of (plant site) operation(s):

170 ton per hour rotary drum asphalt plant. Raw and final material storage, RAP processing, asphalt manufacturing in a 6'x4" rotary drum for drying and mixing and material conveyance.

Facility ID No. NA

Primary SIC/NAICS Code: 2951/324121 | Current/Previous Air Permit No. NA | Expiration Date: NA

Facility Coordinates: Latitude: 35.789891 | Longitude: -82.658390

Does this application contain confidential data? [ ] YES [x] NO ***If yes, please contact the DAQ Regional Office prior to submitting this application.*** **(See Instructions)**

PERSON OR FIRM THAT PREPARED APPLICATION

Person Name: Mona Brandon		Firm Name: TRC	
Mailing Address Line 1: 3 Walden Ridge Drive		Mailing Address Line 2: Suite 250	
City: Asheville	State: NC	Zip Code: 28803	County: Buncombe
Phone No.: 828.237.2239	Fax No.: NA	Email Address: mbrandon@trcsolutions.com	

SIGNATURE OF RESPONSIBLE OFFICIAL/AUTHORIZED CONTACT

Name (typed): Tommy Reed | Title: Vice President

X Signature(Blue Ink): | Date:

RECEIVED
FEB 18 2019
Division of Air Quality
Asheville Regional Office

Received
FEB 13 2019
Air Permits Section

Attach Additional Sheets As Necessary

FORM A (continued, page 2 of 2)

GENERAL FACILITY INFORMATION

REVISED 09/22/16 — NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate — A

SECTION AA1 - APPLICATION FOR NON-TITLE V PERMIT RENEWAL

_____ (Company Name) hereby formally requests renewal of Air Permit No. _____

There have been no modifications to the originally permitted facility or the operations therein that would require an air permit since the last permit was issued.

Is your facility subject to 40 CFR Part 68 "Prevnetion of Accidental Releases" - Section 112(r) of the Clean Air Act? ☐ YES ☐ NO

If yes, have you already submitted a Risk Manage Plan (RMP) to EPA? ☐ YES ☐ NO Date Submitted: _____

Did you attach a current emissions inventory? ☐ YES ☐ NO

If no, did you submit the inventory via AERO or by mail? ☐ Via AERO ☐ Mailed Date Mailed: _____

SECTION AA2- APPLICATION FOR TITLE V PERMIT RENEWAL

In accordance with the provisions of Title 15A 2Q .0513, the responsible official of _____ (Company Name) hereby formally requests renewal of Air Permit No. _____ (Air Permit No.) and further certifies that:

(1) The current air quality permit identifies and describes all emissions units at the above subject facility, except where such units are exempted under the North Carolina Title V regulations at 15A NCAC 2Q .0500;

(2) The current air quality permit cits all applicable requirements and provides the method or methods for determing compliance with the applicable requirements;

(3) The facility is currently in compliance, and shall continue to comply, with all applicable requiremetns. (Note: As provided under 15A NCAC 2Q .0512 compliance with the conditions of the permit shall be deemed compliance with the applicable requirements specifically identified in the permit);

(4) For applicable requirements that become effective during the term of the renewed permit that the facility shall comply on a timely basis;

(5) The facility shall fulfill applicable enhanced monitoring requirements and submit a compliance certification as required by 40 CFR Part 64.

The responsible official (signature on page 1) certifies under the penalty of law that all information and statements provided above, based on information and belief formed after reasonable inquiry, are true, accurate, and complete.

SECTION AA3- APPLICATION FOR NAME CHANGE

New Facility Name: _____

Former Facility Name: _____

An official facility name change is requested as described above for the air permit mentioned on page 1 of this form. Complete the other sections if there have been modifications to the originally premitted facility that would requie an air quality permit since the last permit was issued and if ther has been an ownership change associated with this name change.

SECTION AA4- APPLICATION FOR AN OWNERSHIP CHANGE

By this application we hereby request transfer of Air Quality Permit No. _____ from the former owner to the new owner as described below.

The transfer of permit responsibility, coverage and liability shall be effective _____ (immediately or insert date.) The legal ownership of the facility described on page 1 of this form has been or will be transferred on _____ (date). There have been no modifications to the originally permitted facility that would require an air quality permit since the last permit was issued.

Signature of New (Buyer) Responsible Official/Authorized Contact (as typed on page 1):

X Signature (Blue Ink): _____

Date:

New Facility Name:

Former Facility Name:

Signature of Former (Seller) Responsible Official/Authorized Contact:

Name (typed or print):

Title:

X Signature (Blue Ink): _____

Date:

Former Legal Corporate/Owner Name:

In lieu of the seller's signature on this form, a letter may be submitted with the seller's signature indicating the ownership change

SECTION AA5- APPLICATION FOR ADMINISTRATIVE AMENDMENT

Describe the requested administrative amendment here (attach additional documents as necessary):

FORMs A2, A3

EMISSION SOURCE LISTING FOR THIS APPLICATION - A2

112r APPLICABILITY INFORMATION - A3

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **A2**

EMISSION SOURCE LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted

EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE ID NO.	CONTROL DEVICE DESCRIPTION
Equipment To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)			
ES-1	Hot Mix Asphalt Rotary Drum Mixer / Dryer	CD-1	Baghouse
ES-2.1, ES-2.2	Hot Mix Asphalt Storage Silos	NONE	NA
ES-3	RAP Recycle System	NONE	NA
Existing Permitted Equipment To Be MODIFIED By This Application			
NONE			
Equipment To Be DELETED By This Application			
NONE			

112(r) APPLICABILITY INFORMATION — A 3

Is your facility subject to 40 CFR Part 68 "Prevention of Accidental Releases" - Section 112(r) of the Federal Clean Air Act? ☐ Yes ☑ No

If No, please specify in detail how your facility avoided applicability: Facility does not use and/or store any of the regulated substances in quantities exceeding the applicable threshold limits.

If your facility is Subject to 112(r), please complete the following:

A. Have you already submitted a Risk Management Plan (RMP) to EPA Pursuant to 40 CFR Part 68.10 or Part 68.150?

☐ Yes ☐ No Specify required RMP submittal date: _____ If submitted, RMP submittal date: _____

B. Are you using administrative controls to subject your facility to a lesser 112(r) program standard?

☐ Yes ☐ No If yes, please specify: _____

C. List the processes subject to 112(r) at your facility:

PROCESS DESCRIPTION	PROCESS LEVEL (1, 2, or 3)	HAZARDOUS CHEMICAL	MAXIMUM INTENDED INVENTORY (LBS)

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B**

EMISSION SOURCE DESCRIPTION: Hot Mix Asphalt Rotary Drum Mixer / Dryer	EMISSION SOURCE ID NO: ES-1
	CONTROL DEVICE ID NO(S): CD-1
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): ES-1

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
Rotary Drum Asphalt Mixer / Dryer. 170 ton per hour production rate. No.2 Fuel Oil fired.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☑ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☐ Other (Form B9)

START CONSTRUCTION DATE: June 2019 DATE MANUFACTURED: TBD

MANUFACTURER / MODEL NO.: ADM / EX7636 EXPECTED OP. SCHEDULE: 8 HR/DAY 5 DAY/WK 14 WK/YR

IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): I ☐ NESHAP (SUBPARTS?):

PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 0 MAR-MAY 25 JUN-AUG 50 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42	5.61	1.7	4,760	40.2	5.61	1.7
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42	3.91	1.2	1,105	20.3	3.91	1.2
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)	AP-42						
SULFUR DIOXIDE (SO2)	AP-42	12.68	3.7	12.68	55.5	12.68	3.7
NITROGEN OXIDES (NOx)	AP-42	9.35	2.8	9.35	41	9.35	2.8
CARBON MONOXIDE (CO)	AP-42	22.1	6.5	22.1	96.8	22.1	6.5
VOLATILE ORGANIC COMPOUNDS (VOC)	AP-42	5.44	1.6	5.44	23.8	5.44	1.6
LEAD	AP-42	0.003	0.0008	0.003	0.01	0.003	0.0008
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
Formaldehyde (TH)	50000	AP-42	5.27E-01	1.55E-01	5.27E-01	2.31E+00	5.27E-01	1.55E-01
Toluene (TH)	108883	AP-42	4.93E-01	1.45E-01	4.93E-01	2.16E+00	4.93E-01	1.45E-01
Hexane, n- (TH)	110543	AP-42	1.60E-01	4.69E-02	1.60E-01	6.99E-01	1.60E-01	4.69E-02
Polycyclic Organic Matter (H)	POM	AP-42	1.50E-01	4.40E-02	1.50E-01	6.55E-01	1.50E-01	4.40E-02
Napthalene (H)	91203	AP-42	1.11E-01	3.25E-02	1.11E-01	4.84E-01	1.11E-01	3.25E-02
Benzene (TH)	71432	AP-42	6.63E-02	1.95E-02	6.63E-02	2.90E-01	6.63E-02	1.95E-02
Ethyl benzene (H)	100414	AP-42	4.08E-02	1.20E-02	4.08E-02	1.79E-01	4.08E-02	1.20E-02
Xylene (TH)	1330207	AP-42	3.40E-02	1.00E-02	3.40E-02	1.49E-01	3.40E-02	1.00E-02

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr
Formaldehyde (TH)	50000	AP-42	5.27E-01	1.26E+01	3.10E+02
Toluene (TH)	108883	AP-42	4.93E-01	1.18E+01	2.90E+02
Hexane, n- (TH)	110543	AP-42	1.60E-01	3.83E+00	9.38E+01
Benzene (TH)	71432	AP-42	6.63E-02	1.59E+00	3.90E+01
Xylene (TH)	1330207	AP-42	3.40E-02	8.16E-01	2.00E+01
Nickel metal (TH)	7440020	AP-42	1.07E-02	2.57E-01	6.30E+00
Hydrogen Sulfide (T)	7783064	AP-42	8.81E-03	2.11E-01	5.18E+00

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B**

EMISSION SOURCE DESCRIPTION: RAP Recycle System	EMISSION SOURCE ID NO: ES-3
	CONTROL DEVICE ID NO(S): NONE
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): ES-3 Fugitive

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
Recycled Asphalt Pavement recycling system, 43 tons per hour capacity.
Consists of: one recycle bin and feeder system, one screen, and two conveyors.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☐ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☑ Other (Form B9)

START CONSTRUCTION DATE: June 2019 DATE MANUFACTURED: TBD

MANUFACTURER / MODEL NO.: ADM / RAP15 EXPECTED OP. SCHEDULE: 8 HR/DAY 5 DAY/WK 14 WK/YR

IS THIS SOURCE SUBJECT TO? ☐ NSPS (SUBPARTS?): ☐ NESHAP (SUBPARTS?):

PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 0 MAR-MAY 25 JUN-AUG 50 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42	1.57	0.46	1.57	6.86	1.57	0.46
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42	0.57	0.17	0.57	2.50	0.57	0.17
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)	AP-42						
SULFUR DIOXIDE (SO2)	AP-42						
NITROGEN OXIDES (NOx)	AP-42						
CARBON MONOXIDE (CO)	AP-42						
VOLATILE ORGANIC COMPOUNDS (VOC)	AP-42						
LEAD	AP-42						
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
NONE								

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr
NONE					

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B

SPECIFIC EMISSION SOURCE INFORMATION (REQUIRED FOR ALL SOURCES)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B**

EMISSION SOURCE DESCRIPTION: Hot Mix Asphalt Storage Silos	EMISSION SOURCE ID NO: ES-2.1, ES2.2
	CONTROL DEVICE ID NO(S): NONE
OPERATING SCENARIO 1 OF 1	EMISSION POINT (STACK) ID NO(S): ES-2.1, ES2.2

DESCRIBE IN DETAILTHE EMISSION SOURCE PROCESS (ATTACH FLOW DIAGRAM):
Two Hot Mix Asphalt Storage Silos - 100 ton capacity each.

TYPE OF EMISSION SOURCE (CHECK AND COMPLETE APPROPRIATE FORM B1-B9 ON THE FOLLOWING PAGES):

- ☐ Coal,wood,oil, gas, other burner (Form B1)
- ☐ Int.combustion engine/generator (Form B2)
- ☐ Liquid storage tanks (Form B3)
- ☐ Woodworking (Form B4)
- ☐ Coating/finishing/printing (Form B5)
- ☑ Storage silos/bins (Form B6)
- ☐ Manuf. of chemicals/coatings/inks (Form B7)
- ☐ Incineration (Form B8)
- ☐ Other (Form B9)

START CONSTRUCTION DATE: June 2019	DATE MANUFACTURED: TBD
MANUFACTURER / MODEL NO.: ADM / SS100	EXPECTED OP. SCHEDULE: 8 HR/DAY 5 DAY/WK 14 WK/YR
IS THIS SOURCE SUBJECT TO? ☑ NSPS (SUBPARTS?): I	☐ NESHAP (SUBPARTS?):

PERCENTAGE ANNUAL THROUGHPUT (%): DEC-FEB 0 MAR-MAY 25 JUN-AUG 50 SEP-NOV 25

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

AIR POLLUTANT EMITTED	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
PARTICULATE MATTER (PM)	AP-42	0.10	0.03	0.10	0.44	0.10	0.03
PARTICULATE MATTER<10 MICRONS (PM_{10})	AP-42						
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)	AP-42						
SULFUR DIOXIDE (SO2)	AP-42						
NITROGEN OXIDES (NOx)	AP-42						
CARBON MONOXIDE (CO)	AP-42	0.20	0.06	0.20	0.88	0.20	0.06
VOLATILE ORGANIC COMPOUNDS (VOC)	AP-42	2.07	0.61	2.07	9.07	2.07	0.61
LEAD	AP-42						
OTHER							

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

HAZARDOUS AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) lb/hr	EXPECTED ACTUAL (AFTER CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS) tons/yr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) lb/hr	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS) tons/yr
Formaldehyde (TH)	50000	AP-42	1.43E-02	4.20E-03	1.43E-02	6.26E-02	1.43E-02	4.20E-03
Xylene (TH)	1330207	AP-42	4.14E-03	1.22E-03	4.14E-03	1.81E-02	4.14E-03	1.22E-03
Hexane, n- (TH)	110543	AP-42	2.07E-03	6.09E-04	2.07E-03	9.07E-03	2.07E-03	6.09E-04
Toluene (TH)	108883	AP-42	1.28E-03	3.78E-04	1.28E-03	5.63E-03	1.28E-03	3.78E-04
Xylene, o- (H)	95476	AP-42	1.18E-03	3.47E-04	1.18E-03	5.17E-03	1.18E-03	3.47E-04
Methyl ethyl ketone (TH)	78933	AP-42	8.08E-04	2.38E-04	8.08E-04	3.54E-03	8.08E-04	2.38E-04
Ethyl benzene (H)	100414	AP-42	7.87E-04	2.31E-04	7.87E-04	3.45E-03	7.87E-04	2.31E-04
Napthalene (H)	91203	AP-42	7.86E-04	2.31E-04	7.86E-04	3.44E-03	7.86E-04	2.31E-04

TOXIC AIR POLLUTANT EMISSIONS INFORMATION FOR THIS SOURCE

TOXIC AIR POLLUTANT	CAS NO.	SOURCE OF EMISSION FACTOR	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS lb/hr	lb/day	lb/yr
Formaldehyde (TH)	50000	AP-42	1.43E-02	3.43E-01	8.41E+00
Xylene (TH)	1330207	AP-42	4.14E-03	9.94E-02	2.44E+00
Hexane, n- (TH)	110543	AP-42	2.07E-03	4.97E-02	1.22E+00
Toluene (TH)	108883	AP-42	1.28E-03	3.08E-02	7.55E-01
Methyl ethyl ketone (TH)	78933	AP-42	8.08E-04	1.94E-02	4.75E-01
Benzene (TH)	71432	AP-42	6.63E-04	1.59E-02	3.90E-01
Carbon disulfide (TH)	75150	AP-42	3.31E-04	7.96E-03	1.95E-01

Attachments: (1) emissions calculations and supporting documentation; (2) indicate all requested state and federal enforceable permit limits (e.g. hours of operation, emission rates) and describe how these are monitored and with what frequency; and (3) describe any monitoring devices, gauges, or test ports for this source.

COMPLETE THIS FORM AND COMPLETE AND ATTACH APPROPRIATE B1 THROUGH B9 FORM FOR EACH SOURCE

Attach Additional Sheets As Necessary

FORM B1

EMISSION SOURCE (WOOD, COAL, OIL, GAS, OTHER FUEL-FIRED BURNER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B1**

EMISSION SOURCE DESCRIPTION: Hot Mix Asphalt Rotary Drum Mixer / Dryer

EMISSION SOURCE ID NO: ES-1

CONTROL DEVICE ID NO(S): CD-1

OPERATING SCENARIO: 1 OF 1

EMISSION POINT (STACK) ID NO(S): ES-1

DESCRIBE USE: ☐ PROCESS HEAT ☐ SPACE HEAT ☐ ELECTRICAL GENERATION ☐ CONTINUOUS USE ☐ STAND BY/EMERGENCY ☑ OTHER (DESCRIBE): Asphalt Dryer

HEATING MECHANISM: ☑ INDIRECT ☐ DIRECT

MAX. FIRING RATE (MMBTU/HOUR): 50

WOOD-FIRED BURNER

WOOD TYPE: ☐ BARK ☐ WOOD/BARK ☐ WET WOOD ☐ DRY WOOD ☐ OTHER (DESCRIBE): _____

PERCENT MOISTURE OF FUEL: _____

☐ UNCONTROLLED ☐ CONTROLLED WITH FLYASH REINJECTION ☐ CONTROLLED W/O REINJECTION

FUEL FEED METHOD: HEAT TRANSFER MEDIA: ☐ STEAM ☐ AIR ☐ OTHER (DESCRIBE) _____

COAL-FIRED BURNER

TYPE OF BOILER IF OTHER DESCRIBE:

PULVERIZED	OVERFEED STOKER	UNDERFEED STOKER	SPREADER STOKER	FLUIDIZED BED
☐ WET BED	☐ UNCONTROLLED	☐ UNCONTROLLED	☐ UNCONTROLLED	☐ CIRCULATING
☐ DRY BED	☐ CONTROLLED	☐ CONTROLLED	☐ FLYASH REINJECTION	☐ RECIRCULATING
			☐ NO FLYASH REINJECTION	

OIL/GAS-FIRED BURNER

TYPE OF BOILER: ☐ UTILITY ☐ INDUSTRIAL ☐ COMMERCIAL ☐ INSTITUTIONAL

TYPE OF FIRING: ☐ NORMAL ☐ TANGENTIAL ☐ LOW NOX BURNERS ☐ NO LOW NOX BURNER

OTHER FUEL-FIRED BURNER

TYPE(S) OF FUEL: No.2 Fuel Oil PERCENT MOISTURE: UNK

TYPE OF BOILER: ☐ UTILITY ☑ INDUSTRIAL ☐ COMMERCIAL ☐ INSTITUTIONAL

TYPE OF FIRING: _____ TYPE(S) OF CONTROL(S) (IF ANY): Baghouse Fabric Filter

FUEL USAGE (INCLUDE STARTUP/BACKUP FUELS)

FUEL TYPE	UNITS	MAXIMUM DESIGN CAPACITY (UNIT/HR)	REQUESTED CAPACITY LIMITATION (UNIT/HR)
No. 2 Fuel Oil	MMBtu	50	None

FUEL CHARACTERISTICS (COMPLETE ALL THAT ARE APPLICABLE)

FUEL TYPE	SPECIFIC BTU CONTENT	SULFUR CONTENT (% BY WEIGHT)	ASH CONTENT (% BY WEIGHT)
No. 2 Fuel Oil	140,000 Btu/gal	0.5	NA

COMMENTS:

Attach Additional Sheets As Necessary

FORM B6

EMISSION SOURCE (STORAGE SILO/BINS)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B6**

EMISSION SOURCE DESCRIPTION: Hot Mix Asphalt Storage Silos	EMISSION SOURCE ID NO: ES-2.1, ES2.2
	CONTROL DEVICE ID NO(S): NONE
OPERATING SCENARIO: 1 OF 1	EMISSION POINT(STACK) ID NO(S): ES-2.1, ES2.2

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM):
Two Hot Mix Asphalt Storage Silos - 100 ton capacity each.

MATERIAL STORED: Hot Mix Asphalt				DENSITY OF MATERIAL (LB/FT3): 120	
CAPACITY	CUBIC FEET: 1,670			TONS: 100	
DIMENSIONS (FEET)	HEIGHT: 16'	DIAMETER: 11.5'	***(OR)***	LENGTH:	WIDTH: HEIGHT:
ANNUAL PRODUCT THROUGHPUT (TONS)		ACTUAL: 100,000		MAXIMUM DESIGN CAPACITY: 1,500,000	

PNEUMATICALLY FILLED	MECHANICALLY FILLED	FILLED FROM
☐ BLOWER	☐ SCREW CONVEYOR	☐ RAILCAR
☐ COMPRESSOR	☑ BELT CONVEYOR	☐ TRUCK
☐ OTHER:	☐ BUCKET ELEVATOR	☐ STORAGE PILE
	☐ OTHER:	☑ OTHER: Asphalt dryer / mixer

NO. FILL TUBES:

MAXIMUM ACFM:

MATERIAL IS UNLOADED TO: Trucks

BY WHAT METHOD IS MATERIAL UNLOADED FROM SILO?: Gates at bottom of Silo.

MAXIMUM DESIGN FILLING RATE OF MATERIAL (TONS/HR): 220

MAXIMUM DESIGN UNLOADING RATE OF MATERIAL (TONS/HR): 100

COMMENTS:

Attach Additional Sheets As Necessary

FORM B9

EMISSION SOURCE (OTHER)

REVISED 09/22/16 **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** **B9**

EMISSION SOURCE DESCRIPTION: RAP Recycle System	EMISSION SOURCE ID NO: ES-3
	CONTROL DEVICE ID NO(S): NONE
OPERATING SCENARIO: 1 OF 1	EMISSION POINT (STACK) ID NO(S): ES-3 Fugitive

DESCRIBE IN DETAIL THE PROCESS (ATTACH FLOW DIAGRAM): Recycled Asphalt Pavement recycling system, 43 tons per hour capacity. Consists of: one recycle bin and feeder system, one screen, and two conveyors.

MATERIALS ENTERING PROCESS - CONTINUOUS PROCESS		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/HR)	LIMITATION(UNIT/HR)
Asphalt Pavement	Tons	43	43

MATERIALS ENTERING PROCESS - BATCH OPERATION		MAX. DESIGN	REQUESTED CAPACITY
TYPE	UNITS	CAPACITY (UNIT/BATCH)	LIMITATION (UNIT/BATCH)

MAXIMUM DESIGN (BATCHES / HOUR):	
REQUESTED LIMITATION (BATCHES / HOUR):	(BATCHES/YR):
FUEL USED: NONE	TOTAL MAXIMUM FIRING RATE (MILLION BTU/HR): NA
MAX. CAPACITY HOURLY FUEL USE: NA	REQUESTED CAPACITY ANNUAL FUEL USE: NA

COMMENTS:

Attach Additional Sheets as Necessary

FORM C1

CONTROL DEVICE (FABRIC FILTER)

REVISED 09/22/16 — **NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate** — **C1**

CONTROL DEVICE ID NO: CD-1	CONTROLS EMISSIONS FROM WHICH EMISSION SOURCE ID NO(S): ES-1
EMISSION POINT (STACK) ID NO(S): ES-1	POSITION IN SERIES OF CONTROLS NO. 1 OF 1 UNITS
OPERATING SCENARIO:	
1 OF 1	P.E. SEAL REQUIRED (PER 2q .0112)? ☑ YES ☐ NO

DESCRIBE CONTROL SYSTEM: BHS 420-10 Stationary Baghouse

POLLUTANTS COLLECTED:	PM			
BEFORE CONTROL EMISSION RATE (LB/HR):	4,760			
CAPTURE EFFICIENCY:	100 %	%	%	%
CONTROL DEVICE EFFICIENCY:	99.9 %	%	%	%
CORRESPONDING OVERALL EFFICIENCY:	99.9 %	%	%	%
EFFICIENCY DETERMINATION CODE:	As Required by NSPS Subpart I			
TOTAL AFTER CONTROL EMISSION RATE (LB/HR):	2.38			

PRESSURE DROP (IN H_2O): MIN: 15 MAX: 20 GAUGE? ☑ YES ☐ NO	
BULK PARTICLE DENSITY (LB/FT^3): 147	INLET TEMPERATURE (°F): MIN 250 MAX 350
POLLUTANT LOADING RATE: 90 ☐ LB/HR ☑ GR/FT^3	OUTLET TEMPERATURE (°F) MIN 250 MAX 350
INLET AIR FLOW RATE (ACFM): 34,000	FILTER OPERATING TEMP (°F): 250-350

NO. OF COMPARTMENTS: UNK	NO. OF BAGS PER COMPARTMENT: 420 total	LENGTH OF BAG (IN.): 10
NO. OF CARTRIDGES:	FILTER SURFACE AREA PER CARTRIDGE (FT^2):	DIAMETER OF BAG (IN.): 6
TOTAL FILTER SURFACE AREA (FT^2): 6,590	AIR TO CLOTH RATIO: 5.15:1	

DRAFT TYPE: ☑ INDUCED/NEGATIVE ☐ FORCED/POSITIVE — FILTER MATERIAL: ☑ WOVEN ☐ FELTED

DESCRIBE CLEANING PROCEDURES:

- ☑ AIR PULSE
- ☐ REVERSE FLOW
- ☐ MECHANICAL/SHAKER
- ☐ OTHER:
- ☐ SONIC
- ☐ SIMPLE BAG COLLAPSE
- ☐ RING BAG COLLAPSE

DESCRIBE INCOMING AIR STREAM: Off gases from hot mix asphalt dryer / mixer.

PARTICLE SIZE DISTRIBUTION

SIZE (MICRONS)	WEIGHT % OF TOTAL	CUMULATIVE %
0-1	15	15
1-10	30	45
10-25		
25-50		
50-100		
>100		
	TOTAL = 100	

Data from AP-42: Table 11.1-4

ON A SEPARATE PAGE, ATTACH A DIAGRAM SHOWING THE RELATIONSHIP OF THE CONTROL DEVICE TO ITS EMISSION SOURCE(S):

COMMENTS:

Attach Additional Sheets As Necessary

FORM D1

FACILITY-WIDE EMISSIONS SUMMARY

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | D1

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

	EXPECTED ACTUAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)
AIR POLLUTANT EMITTED	tons/yr	tons/yr	tons/yr
PARTICULATE MATTER (PM)	2.31	48.07	2.31
PARTICULATE MATTER < 10 MICRONS (PM_{10})	1.52	23.82	1.52
PARTICULATE MATTER < 2.5 MICRONS ($PM_{2.5}$)			
SULFUR DIOXIDE (SO_2)	6.86	58.66	6.86
NITROGEN OXIDES (NOx)	3.63	41.84	3.63
CARBON MONOXIDE (CO)	6.85	98.9	6.85
VOLATILE ORGANIC COMPOUNDS (VOC)	2.42	35.83	2.42
LEAD	0.00075	0.01117	0.00075
GREENHOUSE GASES (GHG) (SHORT TONS)	2,341	34,883	2,341
OTHER			

HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

		EXPECTED ACTUAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITATIONS)	POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITATIONS)
HAZARDOUS AIR POLLUTANT EMITTED	CAS NO.	tons/yr	tons/yr	tons/yr
Formaldehyde (TH)	50000	1.59E-01	2.37E+00	1.59E-01
Toluene (TH)	108883	1.46E-01	2.17E+00	1.46E-01
Hexane, n- (TH)	110543	4.78E-02	7.12E-01	4.78E-02
Polycyclic Organic Matter (H)	POM	4.40E-02	6.55E-01	4.40E-02
Napthalene (H)	91203	3.29E-02	4.91E-01	3.29E-02
Benzene (TH)	71432	1.98E-02	2.95E-01	1.98E-02
Ethyl benzene (H)	100414	1.28E-02	1.91E-01	1.28E-02
Xylene (TH)	1330207	1.21E-02	1.80E-01	1.21E-02
Nickel metal (TH)	7440020	3.15E-03	4.69E-02	3.15E-03
Methyl chloroform (TH)	71556	2.40E-03	3.57E-02	2.40E-03
Trimethylpentane, 2,2,4- (H)	540841	2.01E-03	2.99E-02	2.01E-03
Phosphorus Metal, Yellow or White (H)	7723140	1.40E-03	2.08E-02	1.40E-03
Lead unlisted compounds (H)	PBC-other	7.50E-04	1.12E-02	7.50E-04

TOXIC AIR POLLUTANT EMISSIONS INFORMATION - FACILITY-WIDE

INDICATE REQUESTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS. EMISSIONS ABOVE THE TOXIC PERMIT EMISSION RATE (TPER) IN 15A NCAC 2Q .0711 MAY REQUIRE AIR DISPERSION MODELING. USE NETTING FORM D2 IF NECESSARY.

					Modeling Required ?	
TOXIC AIR POLLUTANT EMITTED	CAS NO.	lb/hr	lb/day	lb/year	Yes	No
Formaldehyde (TH)	50000	5.42E-01	1.30E+01	3.19E+02	X	
Toluene (TH)	108883	4.96E-01	1.19E+01	2.92E+02		X
Hexane, n- (TH)	110543	1.63E-01	3.90E+00	9.57E+01		X
Benzene (TH)	71432	6.73E-02	1.62E+00	3.96E+01	X	
Xylene (TH)	1330207	4.10E-02	9.85E-01	2.41E+01		X
Nickel metal (TH)	7440020	1.07E-02	2.57E-01	6.30E+00		X
Hydrogen Sulfide (T)	7783064	9.30E-03	2.23E-01	5.47E+00		X
Methyl chloroform (TH)	71556	8.16E-03	1.96E-01	4.80E+00		X
Manganese unlisted compounds (T)	MNC-other	1.31E-03	3.14E-02	7.70E-01		X
Methyl ethyl ketone (TH)	78933	1.15E-03	2.77E-02	6.79E-01		X
Arsenic unlisted cmpds (comp. of ASC) (TH)	ASC-other	9.52E-05	2.28E-03	5.60E-02	X	
Nickel metal (TH)	7440020	1.07E-02	2.57E-01	6.30E+00	X	

COMMENTS:

Attach Additional Sheets As Necessary

FORM D4

EXEMPT AND INSIGNIFICANT ACTIVITIES SUMMARY

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | D4

ACTIVITIES EXEMPTED PER 2Q .0102 OR INSIGNIFICANT ACTIVITIES PER 2Q .0503 FOR TITLE V SOURCES

DESCRIPTION OF EMISSION SOURCE	SIZE OR PRODUCTION RATE	BASIS FOR EXEMPTION OR INSIGNIFICANT ACTIVITY
Truck Loadout	170 ton per hour	2Q.102(h)(5)
Asphalt Tank Heater	1.41 MMBtu/hr., No.2 Fuel Oil Fired	2Q.102(h)(5)
Asphalt Storage Tank	30,000 gallon	2Q.102(g)(4)
No.2 Fuel Oil Storage Tank	15,000 gallon	2Q.102(g)(4)
5.		
6.		
7.		
8.		
9.		
10.		

Attach Additional Sheets As Necessary

FORM D5

TECHNICAL ANALYSIS TO SUPPORT PERMIT APPLICATION

REVISED 09/22/16 | NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate | D5

PROVIDE DETAILED TECHNICAL CALCULATIONS TO SUPPORT ALL EMISSION, CONTROL, AND REGULATORY DEMONSTRATIONS MADE IN THIS APPLICATION. INCLUDE A COMPREHENSIVE PROCESS FLOW DIAGRAM AS NECESSARY TO SUPPORT AND CLARIFY CALCULATIONS AND ASSUMPTIONS. ADDRESS THE FOLLOWING SPECIFIC ISSUES ON SEPARATE PAGES:

A **SPECIFIC EMISSIONS SOURCE (EMISSION INFORMATION) (FORM B and B1 through B9) -** SHOW CALCULATIONS USED, INCLUDING EMISSION FACTORS, MATERIAL BALANCES, AND/OR OTHER METHODS FROM WHICH THE POLLUTANT EMISSION RATES IN THIS APPLICATION WERE DERIVED. INCLUDE CALCULATION OF POTENTIAL BEFORE AND, WHERE APPLICABLE, AFTER CONTROLS. CLEARLY STATE ANY ASSUMPTIONS MADE AND PROVIDE ANY REFERENCES AS NEEDED TO SUPPORT MATERIAL BALANCE CALCULATIONS.

B **SPECIFIC EMISSION SOURCE (REGULATORY INFORMATION)(FORM E2 - TITLE V ONLY) -** PROVIDE AN ANALYSIS OF ANY REGULATIONS APPLICABLE TO INDIVIDUAL SOURCES AND THE FACILITY AS A WHOLE. INCLUDE A DISCUSSION OUTING METHODS (e.g. FOR TESTING AND/OR MONITORING REQUIREMENTS) FOR COMPLYING WITH APPLICABLE REGULATIONS, PARTICULARLY THOSE REGULATIONS LIMITING EMISSIONS BASED ON PROCESS RATES OR OTHER OPERATIONAL PARAMETERS. PROVIDE JUSTIFICATION FOR AVOIDANCE OF ANY FEDERAL REGULATIONS (PREVENTION OF SIGNIFICANT DETERIORATION (PSD), NEW SOURCE PERFORMANCE STANDARDS (NSPS), NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), TITLE V), INCLUDING EXEMPTIONS FROM THE FEDERAL REGULATIONS WHICH WOULD OTHERWISE BE APPLICABLE TO THIS FACILITY. SUBMIT ANY REQUIRED INFORMATION TO DOCUMENT COMPLIANCE WITH ANY REGULATIONS. INCLUDE EMISSION RATES CALCULATED IN ITEM "A" ABOVE, DATES OF MANUFACTURE, CONTROL EQUIPMENT, ETC. TO SUPPORT THESE CALCULATIONS.

C **CONTROL DEVICE ANALYSIS (FORM C and C1 through C9) -** PROVIDE A TECHNICAL EVALUATION WITH SUPPORTING REFERENCES FOR ANY CONTROL EFFICIENCIES LISTED ON SECTION C FORMS, OR USED TO REDUCE EMISSION RATES IN CALCULATIONS UNDER ITEM "A" ABOVE. INCLUDE PERTINENT OPERATING PARAMETERS (e.g. OPERATING CONDITIONS, MANUFACTURING RECOMMENDATIONS, AND PARAMETERS AS APPLIED FOR IN THIS APPLICATION) CRITICAL TO ENSURING PROPER PERFORMANCE OF THE CONTROL DEVICES). INCLUDE AND LIMITATIONS OR MALFUNCTION POTENTIAL FOR THE PARTICULAR CONTROL DEVICES AS EMPLOYED AT THIS FACILITY. DETAIL PROCEDURES FOR ASSURING PROPER OPERATION OF THE CONTROL DEVICE INCLUDING MONITORING SYSTEMS AND MAINTENANCE TO BE PERFORMED.

D **PROCESS AND OPERATIONAL COMPLIANCE ANALYSIS - (FORM E3 - TITLE V ONLY) -** SHOWING HOW COMPLIANCE WILL BE ACHIEVED WHEN USING PROCESS, OPERATIONAL, OR OTHER DATA TO DEMONSTRATE COMPLIANCE. REFER TO COMPLIANCE REQUIREMENTS IN THE REGULATORY ANALYSIS IN ITEM "B" WHERE APPROPRIATE. LIST ANY CONDITIONS OR PARAMETERS THAT CAN BE MONITORED AND REPORTED TO DEMONSTRATE COMPLIANCE WITH THE APPLICABLE REGULATIONS.

E **PROFESSIONAL ENGINEERING SEAL -** PURSUANT TO 15A NCAC 2Q .0112 "APPLICATION REQUIRING A PROFESSIONAL ENGINEERING SEAL," A PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA SHALL BE REQUIRED TO SEAL TECHNICAL PORTIONS OF THIS APPLICATION FOR NEW SOURCES AND MODIFICATIONS OF EXISTING SOURCES. (SEE INSTRUCTIONS FOR FURTHER APPLICABILITY).

I, Daryl J Whitt, P.E. *attest that this application for* Madison Asphalt, LLC - Marshall, NC *has been reviewed by me and is accurate, complete and consistent with the information supplied in the engineering plans, calculations, and all other supporting documentation to the best of my knowledge. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with the applicable regulations. Although certain portions of this submittal package may have been developed by other professionals, inclusion of these materials under my seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design. Note: In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application shall be guilty of a Class 2 misdemeanor which may include a fine not to exceed $10,000 as well as civil penalties up to $25,000 per violation.*

Received
FEB 13 2019
Air Permits Section

(PLEASE USE BLUE INK TO COMPLETE THE FOLLOWING)

NAME: Daryl J. Whitt, P.E.
DATE: February 7, 2019
COMPANY: TRC Engineers, Inc.
ADDRESS: 1030 10th Ave. N., Surfside Beach, SC 29575
TELEPHONE: (864) 607-7690
SIGNATURE:
PAGES CERTIFIED: Forms A, A2 A3, B, B1, B6, B9, C1, D1, D4, Asphalt Emissions Calculations (App. B)

(IDENTIFY ABOVE EACH PERMIT FORM AND ATTACHMENT THAT IS BEING CERTIFIED BY THIS SEAL)

PLACE NORTH CAROLINA SEAL HERE

2/7/2019

Attach Additional Sheets As Necessary

Appendix B
Emission Calculations

ASPHALT EMISSIONS CALCULATOR REVISION F 07/18/2012 INPUT SCREEN

NCDENR

NOTICE: This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Instructions: 1. Fill in all BLUE cells.
2.Ensure all pull down boxes and BLUE cells reflect correct conditions.
3. Read the README sheet.
4. Use the mouse pointer to read the tips in the "red cornered" input cells. (See Tools->Options->Comments if these are not displayed.

Company Name:	Madison Asphalt LLC
Facility ID No.:	
Permit No.:	
Facility City:	Marshall
Facility County:	Madison
Spreadsheet Prepared by:	MP Riley - TRC

Is this spreadsheet being used for emissions inventory purposes?	2. NO
Plant type:	Drum mix
Fuel type:	No.2 fuel oil-fired
Fuel Sulfur Content:	0.50 % (default value is 0.5 %)
Controls:	Fabric filter controls

Dryer heat input:	50	million Btu per hour
Plant maximum production capacity:	170	tons per hour

Asphalt Properties			
Asphalt temperature:	325	degrees F	(default value of 325 degrees F)
Volatility loss (V):	-0.5	%	(default value of -0.5 %)

Silo Filling?	YES

RAP crushing on site?	YES				
Crushing Capacity?	43	tons per hour	No. of crushers:	1	
Hours of operation:	8760	hours per year	No. of screens:	1	
			No. of conveyors:	2	

Asphalt Cement Heater			
AC heater heat input:	1.41	million Btu per hour	(No.2 or diesel fuel oil -fired assumed)
Fuel Sulfur Content:	0.50	%	(default value is 0.5 %)
Hours of operation:	8760	hours per year	(default is 8760 hours per year unless specified otherwise)

Calculated Annual Production Limit:	1,490,682	tons per year	
Requested Annual Production Limit:	100,000	tons per year	(if none desired leave default value =8760*tph)
Requested Daily Production Limit:		tons per day	**Are you SURE you want a restriction? If you do not want a daily restriction, make sure the cell has the value 24 hours/day *170 tons per hour = 4080 tons per day.**

Is this plant NSPS Subpart I affected?	YES	
Stack gas flow rate :	34,000	ACFM
Stack gas temperature :	240	oF
Stack % moisture:	33	%
Allowable emission rate under NSPS Subpart I:	5.89	lb/hr
Control efficiency required:	99.876	%
Does Method 5 data already exist?:	NO	
Method 5 determined emission rate:	40.00	lb/hr
Control efficiency based on test data:	99.160	%

Allowable emission rate under 2 D .0506:	46.79	lb/hr
Does this plant emit less than this limit ?:	Yes	*(based on emission factors)*
Control efficiency required:	99.017	%

Dryer Emissions
Criteria Pollutants

Pollutant	Uncontrolled Emission Factor (lb/ton)	Controlled Emission Factor (lb/ton)	uncontrolled emission rate (lb/hr)	controlled emission rate (lb/hr)	Title V, Potential Emissions (tpy) (no controls, 8760 hours per year operation)	PSD, Potential Emissions, (tpy) (with controls, 8760 hours per year operation)	Synthetic Minor, Potential Emissions (tpy) (with all operation restrictions)
Condensible PM (or PM_{10})	0.0654	0.0194	11.118	3.298			
Filterable PM	28	0.014	4760	2.38			
Filterable PM10	6.4	0.0039	1088	0.663			
Total PM	28	0.033	4760	5.61	40.2	24.6	1.7
Total PM10	6.5	0.023	1105	3.91	20.3	17.1	1.2
SO2	0.0746	0.0746	12.68	12.68	55.53	55.53	3.73
CO	0.1300	0.130	22.1	22.1	96.8	96.8	6.5
NOx	0.0550	0.055	9.35	9.35	41.0	41.0	2.8
VOC	0.0320	0.032	5.44	5.44	23.8	23.8	1.6
HAPs, TOTAL		0.009		1.479	6.5	6.5	0.4

Silo Filling plus Load Out Emissions, Criteria Pollutants

Pollutant	Emission Factor, combined (lb/ton)	emission rate (lb/hr)	Title V, Potential Emissions (tpy) (no controls, 8760 hours per year operation)	PSD, Potential Emissions, (tpy) (8760 hours per year operation)	Synthetic Minor, Potential Emissions (tpy) (with all operation restrictions)
Total PM	1.11E-03	1.88E-01	0.8	0.8	0.1
CO	2.53E-03	4.30E-01	1.9	1.9	0.1
VOC	1.61E-02	2.74E+00	12.0	12.0	0.8
HAPs, TOTAL	2.74E-04	4.66E-02	0.2	0.2	0.0

Rap Crusher Emissions

Pollutant	Emission Factor, all sources combined (lb/ton)	emission rate (lb/hr)	Title V, Potential Emissions (tpy) (no controls, 8760 hours per year operation)	PSD, Potential Emissions, (tpy) (8760 hours per year operation)	Synthetic Minor, Potential Emissions (tpy) (with all operation restrictions)
Total PM	0.0364	1.57E+00	6.9	6.9	0.5
Total PM10	0.0133	5.72E-01	2.5	2.5	0.2

Asphalt Cement Heater Emissions

Pollutant	Uncontrolled Emission Factor (lb/MMBtu)	emission rate (lb/hr)	Title V, Potential Emissions (tpy) (no controls, 8760 hours per year operation)	PSD, Potential Emissions, (tpy) (8760 hours per year operation)	Synthetic Minor, Potential Emissions (tpy) (with all operation restrictions)
Total PM	0.0235714	3.32E-02	0.1	0.1	0.1
Total PM10	0.0235714	3.32E-02	0.1	0.1	0.1
SO2	0.5071429	7.15E-01	3.1	3.1	3.1
CO	0.0357143	5.04E-02	0.2	0.2	0.2
NOx	0.1428571	2.01E-01	0.9	0.9	0.9
VOC	0.0024286	3.42E-03	0.0	0.0	0.0

Facility-wide Criteria Pollutant Emissions Summary

Pollutant	Controlled Emission Rate, lb/hr	Title V, Potential Emissions (tpy) (no controls, 8760 hours per year operation)	PSD, Potential Emissions, (tpy) (8760 hours per year operation)	Synthetic Minor, Potential Emissions (tpy) (with all operation restrictions)
Total PM	7.21E+00	48.1	32.4	2.3
Total PM10	4.52E+00	23.8	20.6	1.5
SO2	1.34E+01	58.7	58.7	6.9
CO	2.26E+01	98.9	98.9	6.8
NOx	9.55E+00	41.8	41.8	3.6
VOC	8.18E+00	35.8	35.8	2.4
HAPs, TOTAL	1.53E+00	6.7	6.7	0.4

Facility-wide Toxic Air Pollutants Summary

TAP	CAS No.	Action
Acetaldehyde (TH)	75070	NOTE 1
Acrolein (TH)	107028	NOTE 1
Arsenic unlisted cmpds (comp. of ASC) (TH)	ASC-other	NOTE 3
Benzene (TH)	71432	NOTE 3
Benzo(a)pyrene (T)	50328	NOTE 1
Beryllium metal (unreacted) (TH)	7440417	NOTE 1
Cadmium metal (elemental unreacted) (TH)	7440439	NOTE 2
Carbon disulfide (TH)	75150	NOTE 1
Formaldehyde (TH)	50000	NOTE 3
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8 (T)	57653857	NOTE 1
Hexane, n- (TH)	110543	NOTE 1
Hydrogen Sulfide (T)	7783064	NOTE 1
Manganese unlisted compounds (T)	MNC-other	NOTE 1
Methyl chloroform (TH)	71556	NOTE 1

TAP	CAS No.	Action
Mercury, vapor (TH)	7439976	NOTE 1
Methyl ethyl ketone (TH)	78933	NOTE 1
Methylene chloride (TH)	75092	NOTE 1
Nickel metal (TH)	7440020	NOTE 2
Perchloroethylene (tetrachloroethylene) (TH)	127184	NOTE 1
Phenol (TH)	108952	NOTE 1
Soluble Chromate Compounds as Chrome VI (TH)	7738945	NOTE 1
Styrene (TH)	100425	NOTE 1
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (TH)	1746016	NOTE 1
Toluene (TH)	108883	NOTE 1
Trichloroethylene (TH)	79016	NOTE 1
Trichlorofluoromethane (CFC 111) (T)	75694	NOTE 1
Xylene (TH)	1330207	NOTE 1

NOTE 1: Include TAP in TPER stipulation.

NOTE 2: Include TAP in TPER stipulation with operation restrictions.

NOTE 3: Modeling Required. See "Toxic calculations" worksheet.

ASPHALT EMISSIONS CALCULATOR REVISION F 07/18/2012 - OUTPUT SCREEN

Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

COMPANY:	**Madison Asphalt LLC**	FACILITY ID NO.:	0
		PERMIT NUMBER:	0
EMISSION SOURCE DESCRIPTION:	NSPS affected 170 tph No.2 fuel oil-fired, Drum mix asphalt plant (50 mmBtu/hr heat input, w/silofill, with RAP, sulfur=0.5%)	FACILITY CITY:	Marshall
		FACILITY COUNTY:	Madison

Annual Production Limit:	**100,000** ton/year	**Daily Production Limit:**	**0** ton/day
SPREADSHEET PREPARED BY:	MP Riley - TRC		

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

AIR POLLUTANT EMITTED	ACTUAL EMISSIONS (AFTER CONTROLS / LIMITS)		POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS)		POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS)	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
PARTICULATE MATTER (PM)	7.21	2.31		48.07		2.31
PARTICULATE MATTER<10 MICRONS (PM_{10})	4.52	1.52		23.82		1.52
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)						
SULFUR DIOXIDE (SO2)	13.39	6.86		58.66		6.86
NITROGEN OXIDES (NOx)	9.55	3.63		41.84		3.63
CARBON MONOXIDE (CO)	22.58	6.85		98.90		6.85
VOLATILE ORGANIC COMPOUNDS (VOC)	8.18	2.42		35.83		2.42
TOTAL HAP	1.53	0.45		6.68		0.45
LARGEST HAP (formaldehyde)	0.54	0.16		2.37		0.16

Attach INPUT worksheet

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

TOXIC / HAZARDOUS AIR POLLUTANT	CAS Number	ACTUAL EMISSIONS (AFTER CONTROLS / LIMITS)		POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS)		POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS)		EMISSION FACTOR (lb/ton asphalt produced, with Fabric filter controls)
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	
Acetaldehyde (TH)	75070	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Acrolein (TH)	107028	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Antimony unlisted compounds (H)	SBC-other	3.06E-05	1.80E-02	3.06E-05	0.27	3.06E-05	1.80E-02	1.8E-07
Arsenic unlisted cmpds (comp. of ASC) (TH)	ASC-other	9.52E-05	5.60E-02	9.52E-05	0.83	9.52E-05	5.60E-02	5.6E-07
Benzene (TH)	71432	6.73E-02	3.96E+01	6.73E-02	589.82	6.73E-02	3.96E+01	4.0E-04
Benzo(a)pyrene (T)	50328	3.00E-06	1.76E-03	3.00E-06	0.03	3.00E-06	1.76E-03	1.8E-08
Beryllium metal (unreacted) (TH)	7440417	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Cadmium metal (elemental unreacted) (TH)	7440439	6.97E-05	4.10E-02	6.97E-05	0.61	6.97E-05	4.10E-02	4.1E-07
Carbon disulfide (TH)	75150	4.23E-04	2.49E-01	4.23E-04	3.71	4.23E-04	2.49E-01	2.5E-06
Chromium unlisted cmpds (add w/chrom acid to get CRC) (H)	CRC-other	8.59E-04	5.05E-01	8.59E-04	7.52	8.59E-04	5.05E-01	5.1E-06
Chromic acid (VI) (component of solCR6 and CRC) (TH)	7738945	7.65E-05	4.50E-02	7.65E-05	0.67	7.65E-05	4.50E-02	4.5E-07
Cobalt unlisted compounds (H)	COC-other	4.42E-06	2.60E-03	4.42E-06	0.04	4.42E-06	2.60E-03	2.6E-08
Cumene (H)	98828	7.78E-04	4.57E-01	7.78E-04	6.81	7.78E-04	4.57E-01	4.6E-06
Ethyl benzene (H)	100414	4.36E-02	2.56E+01	4.36E-02	381.65	4.36E-02	2.56E+01	2.6E-04
Ethyl chloride (chloroethane) (H)	75003	1.48E-06	8.73E-04	1.48E-06	0.01	1.48E-06	8.73E-04	8.7E-09
Formaldehyde (TH)	50000	5.42E-01	3.19E+02	5.42E-01	4747.19	5.42E-01	3.19E+02	3.2E-03
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8 (T)	57653857	2.21E-10	1.30E-07	2.21E-10	0.00	2.21E-10	1.30E-07	1.3E-12
Hexane, n- (TH)	110543	1.63E-01	9.57E+01	1.63E-01	1424.94	1.63E-01	9.57E+01	9.6E-04
Hydrogen Chloride (hydrochloric acid) (TH)	7647010	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Hydrogen Sulfide (T)	7783064	9.30E-03	5.47E+00	9.30E-03	81.49	9.30E-03	5.47E+00	5.5E-05
Lead unlisted compounds (H)	PBC-other	2.55E-03	1.50E+00	2.55E-03	22.34	2.55E-03	1.50E+00	1.5E-05
Manganese unlisted compounds (T)	MNC-other	1.31E-03	7.70E-01	1.31E-03	11.47	1.31E-03	7.70E-01	7.7E-06
Mercury, vapor (TH)	7439976	4.42E-04	2.60E-01	4.42E-04	3.87	4.42E-04	2.60E-01	2.6E-06
Methyl bromide (H)	74839	1.69E-04	9.96E-02	1.69E-04	1.48	1.69E-04	9.96E-02	1.0E-06
Methyl chloride (H)	74873	1.06E-04	6.24E-02	1.06E-04	0.93	1.06E-04	6.24E-02	6.2E-07
Methyl chloroform (TH)	71556	8.16E-03	4.80E+00	8.16E-03	71.48	8.16E-03	4.80E+00	4.8E-05
Methyl ethyl ketone (TH)	78933	1.15E-03	6.79E-01	1.15E-03	10.11	1.15E-03	6.79E-01	6.8E-06
Methylene chloride (TH)	75092	5.59E-06	3.29E-03	5.59E-06	0.05	5.59E-06	3.29E-03	3.3E-08
Napthalene (H)	91203	1.12E-01	6.59E+01	1.12E-01	981.21	1.12E-01	6.59E+01	6.6E-04
Nickel metal (TH)	7440020	1.07E-02	6.30E+00	1.07E-02	93.82	1.07E-02	6.30E+00	6.3E-05
Perchloroethylene (tetrachloroethylene) (TH)	127184	5.44E-05	3.20E-02	5.44E-05	0.48	5.44E-05	3.20E-02	3.2E-07
Phenol (TH)	108952	6.84E-04	4.02E-01	6.84E-04	5.99	6.84E-04	4.02E-01	4.0E-06
Phosphorus Metal, Yellow or White (H)	7723140	4.76E-03	2.80E+00	4.76E-03	41.70	4.76E-03	2.80E+00	2.8E-05
Polycyclic Organic Matter (H)	POM	1.50E-01	8.80E+01	1.50E-01	1310.50	1.50E-01	8.80E+01	8.8E-04
Propionaldehyde (H)	123386	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Quinone (H)	106514	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Selenium compounds (H)	SEC	5.95E-05	3.50E-02	5.95E-05	0.52	5.95E-05	3.50E-02	3.5E-07
Styrene (TH)	100425	1.63E-04	9.62E-02	1.63E-04	1.43	1.63E-04	9.62E-02	9.6E-07
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (TH)	1746016	3.57E-11	2.10E-08	3.57E-11	0.00	3.57E-11	2.10E-08	2.1E-13

Toluene (TH)	108883	4.96E-01	2.92E+02	4.96E-01	4342.94	4.96E-01	2.92E+02	2.9E-03
Trichloroethylene (TH)	79016	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0E+00
Trichlorofluoromethane (CFC 111) (T)	75694	9.19E-06	5.41E-03	9.19E-06	0.08	9.19E-06	5.41E-03	5.4E-08
Trimethylpentane, 2,2,4- (H)	540841	6.82E-03	4.01E+00	6.82E-03	59.74	6.82E-03	4.01E+00	4.0E-05
Xylene (TH)	1330207	4.10E-02	2.41E+01	4.10E-02	359.53	4.10E-02	2.41E+01	2.4E-04
Xylene, o- (H)	95476	1.75E-03	1.03E+00	1.75E-03	15.30	1.75E-03	1.03E+00	1.0E-05

TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

Expected actual emissions after controls and limitations consisting of an annual production limit of 100000 tons and a daily production limit of 0 tons.

TOXIC AIR POLLUTANT	CAS Num.	lb/hr	lb/day	lb/yr	Modeling Required?	EMISSION FACTOR (lb/ton asphalt produced, with Fabric filter controls)
Acetaldehyde (TH)	75070	0.00E+00	0.00E+00	0.00E+00	NO. Based on facility-wide potential.	0.00E+00
Acrolein (TH)	107028	0.00E+00	0.00E+00	0.00E+00	NO. Based on facility-wide potential.	0.00E+00
Arsenic unlisted cmpds (comp. of ASC) (TH)	ASC-other	9.52E-05	0.00E+00	5.60E-02	YES. Modeling required	5.60E-07
Benzene (TH)	71432	6.73E-02	0.00E+00	3.96E+01	YES. Modeling required	3.96E-04
Benzo(a)pyrene (T)	50328	3.00E-06	0.00E+00	1.76E-03	NO. Based on facility-wide potential.	1.76E-08
Beryllium metal (unreacted) (TH)	7440417	0.00E+00	0.00E+00	0.00E+00	NO. Based on facility-wide potential.	0.00E+00
Cadmium metal (elemental unreacted) (TH)	7440439	6.97E-05	0.00E+00	4.10E-02	NO. Because of operating restriction	4.10E-07
Carbon disulfide (TH)	75150	4.23E-04	0.00E+00	2.49E-01	NO. Based on facility-wide potential.	2.49E-06
Soluble Chromate compounds as Chrome (VI) (TH)	SOLCR6	7.65E-05	0.00E+00	4.50E-02	NO. Based on facility-wide potential.	4.50E-07
Formaldehyde (TH)	50000	5.42E-01	0.00E+00	3.19E+02	YES. Modeling required	3.19E-03
Hexane, n- (TH)	110543	1.63E-01	0.00E+00	9.57E+01	NO. Based on facility-wide potential.	9.57E-04
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8 (T)	57653857	2.21E-10	0.00E+00	1.30E-07	NO. Based on facility-wide potential.	1.30E-12
Hydrogen Sulfide (T)	7783064	9.30E-03	0.00E+00	5.47E+00	NO. Based on facility-wide potential.	5.47E-05
Manganese unlisted compounds (T)	MNC-other	1.31E-03	0.00E+00	7.70E-01	NO. Based on facility-wide potential.	7.70E-06
Mercury, vapor (TH)	7439976	4.42E-04	0.00E+00	2.60E-01	NO. Based on facility-wide potential.	2.60E-06
Methylene chloride (TH)	75092	5.59E-06	0.00E+00	3.29E-03	NO. Based on facility-wide potential.	3.29E-08
Methyl chloroform (TH)	71556	8.16E-03	0.00E+00	4.80E+00	NO. Based on facility-wide potential.	4.80E-05
Methyl ethyl ketone (TH)	78933	1.15E-03	0.00E+00	6.79E-01	NO. Based on facility-wide potential.	6.79E-06
Nickel metal (TH)	7440020	1.07E-02	0.00E+00	6.30E+00	NO. Because of operating restriction	6.30E-05
Perchloroethylene (tetrachloroethylene) (TH)	127184	5.44E-05	0.00E+00	3.20E-02	NO. Based on facility-wide potential.	3.20E-07
Phenol (TH)	108952	6.84E-04	0.00E+00	4.02E-01	NO. Based on facility-wide potential.	4.02E-06
Styrene (TH)	100425	1.63E-04	0.00E+00	9.62E-02	NO. Based on facility-wide potential.	9.62E-07
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (TH)	1746016	3.57E-11	0.00E+00	2.10E-08	NO. Based on facility-wide potential.	2.10E-13
Toluene (TH)	108883	4.96E-01	0.00E+00	2.92E+02	NO. Based on facility-wide potential.	2.92E-03
Trichloroethylene (TH)	79016	0.00E+00	0.00E+00	0.00E+00	NO. Based on facility-wide potential.	0.00E+00
Trichlorofluoromethane (CFC 111) (T)	75694	9.19E-06	0.00E+00	5.41E-03	NO. Based on facility-wide potential.	5.41E-08
Xylene (TH)	1330207	4.10E-02	0.00E+00	2.41E+01	NO. Based on facility-wide potential.	2.41E-04

Toxic Air Pollutant (TAP) emission rate calculations page

This sheet presents the emission rate calculations that are necessary for modeling determinations.

Pollutant	CAS No.	emissions from dryer	emissions from handling	TPER	Units	TPER	Units	dryer: Controlled Emission Factor (lb/ton)	dryer: Controlled Emission Rate (lb/hour)	Silo Filling: Emission factor (lb/ton)	Silo Filling: Emission Rate (lb/hr)	Loadout: Emission factor (lb/ton)	Loadout: Emission Rate (lb/hr)	total handling: Emission Factor (lb/ton)	total handling: Emission Rate (lb/hour)	total: Controlled Emission Factor (lb/ton)	total: Controlled Emission Rate (lb/hour)	Controlled Emission Rate (lb/day)	Controlled Emission Rate (lb/year)	Controlled w/Limitations Emission Rate (lb/day)	Controlled w/Limitations Emission Rate (lb/year)	Controlled ER greater than TPER ?	Controlled w/Limitations ER greater than TPER ?	Comments
Acetaldehyde (TH)	75070	yes	no	6.8	lb/hr			0.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No		NOTE 1
Acrolein (TH)	107028	yes	no	0.02	lb/hr			0.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No		NOTE 1
Formaldehyde (TH)	**50000**	**yes**	**yes**	**0.04**	**lb/hr**			**3.10E-03**	**5.27E-01**	**8.41E-05**	**1.43E-02**	**3.66E-06**	**6.22E-04**	**8.775E-05**	**1.49E-02**	**3.19E-03**	**5.42E-01**	**1.30E+01**	**4.75E+03**	**0.00E+00**	**3.19E+02**	**Yes**		**NOTE 3**
Phenol (TH)	108952	no	yes	0.24	lb/hr					0.00E+00	0.00E+00	4.02E-06	6.84E-04	4.02E-06	6.84E-04	4.02E-06	6.84E-04	1.64E-02	5.99E+00	0.00E+00	4.02E-01	No		NOTE 1
Styrene (TH)	100425	no	yes	2.7	lb/hr					6.58E-07	1.12E-04	3.04E-07	5.16E-05	9.62E-07	1.63E-04	9.62E-07	1.63E-04	3.92E-03	1.43E+00	0.00E+00	9.62E-02	No		NOTE 1
Trichlorofluoromethane (CFC 111) (T)	75694	no	yes	140	lb/hr					0.00E+00	0.00E+00	5.41E-08	9.19E-06	5.41E-08	9.19E-06	5.41E-08	9.19E-06	2.21E-04	8.05E-02	0.00E+00	5.41E-03	No		NOTE 1
Methyl chloroform (TH)	71556	yes	yes	64	lb/hr	250	lb/day	4.80E-05	8.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-05	8.16E-03	1.96E-01	7.15E+01	0.00E+00	4.80E+00	No	No	NOTE 1
Methyl ethyl ketone (TH)	78933	yes	yes	22.4	lb/hr	78	lb/day	0.00E+00	0.00E+00	4.75E-06	8.08E-04	2.04E-06	3.46E-04	6.79E-06	1.15E-03	6.79E-06	1.15E-03	2.77E-02	1.01E+01	0.00E+00	6.79E-01	No	No	NOTE 1
Toluene (TH)	108883	yes	yes	14.4	lb/hr	98	lb/day	2.90E-03	4.93E-01	7.56E-06	1.28E-03	8.73E-06	1.48E-03	1.63E-05	2.77E-03	2.92E-03	4.96E-01	1.19E+01	4.34E+03	0.00E+00	2.92E+02	No	No	NOTE 1
Xylene (TH)	1330207	yes	yes	16.4	lb/hr	57	lb/day	2.00E-04	3.40E-02	2.44E-05	4.14E-03	1.71E-05	2.90E-03	4.14E-05	7.04E-03	2.41E-04	4.10E-02	9.85E-01	3.60E+02	0.00E+00	2.41E+01	No	No	NOTE 1
Methylene chloride (TH)	75092	no	yes	0.39	lb/hr	1600	lb/year			3.29E-08	5.59E-06	0.00E+00	0.00E+00	3.29E-08	5.59E-06	3.29E-08	5.59E-06	1.34E-04	4.90E-02	0.00E+00	3.29E-03	No	No	NOTE 1
Soluble Chromate compounds as Chrome (VI) (TH)	SOLCR6	yes	no	0.013	lb/day			4.50E-07	7.65E-05							4.50E-07	7.65E-05	1.84E-03	6.70E-01	0.00E+00	4.50E-02	No	No	NOTE 1
Hexane, n- (TH)	110543	yes	yes	23	lb/day			9.38E-04	1.60E-01	1.22E-05	2.07E-03	6.24E-06	1.06E-03	1.84E-05	3.13E-03	9.57E-04	1.63E-01	3.90E+00	1.42E+03	0.00E+00	9.57E+01	No	No	NOTE 1
Manganese unlisted compounds (T)	MNC-other	yes	no	0.63	lb/day			7.70E-06	1.31E-03							7.70E-06	1.31E-03	3.14E-02	1.15E+01	0.00E+00	7.70E-01	No	No	NOTE 1
Mercury, vapor (TH)	7439976	yes	no	0.013	lb/day			2.60E-06	4.42E-04							2.60E-06	4.42E-04	1.06E-02	3.87E+00	0.00E+00	2.60E-01	No	No	NOTE 1
Nickel metal (TH)	**7440020**	**yes**	**no**	**0.13**	**lb/day**			**6.30E-05**	**1.07E-02**							**6.30E-05**	**1.07E-02**	**2.57E-01**	**9.38E+01**	**0.00E+00**	**6.30E+00**	**Yes**	**No**	**NOTE 2**
Carbon disulfide (TH)	75150	no	yes	3.9	lb/day					1.95E-06	3.31E-04	5.41E-07	9.19E-05	2.49E-06	4.23E-04	2.49E-06	4.23E-04	1.02E-02	3.71E+00	0.00E+00	2.49E-01	No	No	NOTE 1
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (TH)	1746016	yes	no	0.0002	lb/yr			2.10E-13	3.57E-11							2.10E-13	3.57E-11	8.57E-10	3.13E-07	0.00E+00	2.10E-08	No	No	NOTE 1
Arsenic unlisted cmpds (comp. of ASC) (TH)	**ASC-other**	**yes**	**no**	**0.016**	**lb/yr**			**5.60E-07**	**9.52E-05**							**5.60E-07**	**9.52E-05**	**2.28E-03**	**8.34E-01**	**0.00E+00**	**5.60E-02**	**Yes**	**Yes**	**NOTE 3**
Benzene (TH)	**71432**	**yes**	**yes**	**8.1**	**lb/yr**			**3.90E-04**	**6.63E-02**	**3.90E-06**	**6.63E-04**	**2.16E-06**	**3.68E-04**	**6.06E-06**	**1.03E-03**	**3.96E-04**	**6.73E-02**	**1.62E+00**	**5.90E+02**	**0.00E+00**	**3.96E+01**	**Yes**	**Yes**	**NOTE 3**
Benzo(a)pyrene (T)	50328	yes	yes	2.2	lb/yr			9.80E-09	1.67E-06	0.00E+00	0.00E+00	7.84E-09	1.33E-06	7.84E-09	1.33E-06	1.76E-08	3.00E-06	7.20E-05	2.63E-02	0.00E+00	1.76E-03	No	No	NOTE 1
Hydrogen Sulfide (T)	7783064	yes	yes	1.7	lb/day			5.18E-05	8.81E-03	1.46E-06	2.48E-04	1.46E-06	2.48E-04	2.92E-06	4.96E-04	5.47E-05	9.30E-03	2.23E-01	8.15E+01	0.00E+00	5.47E+00	No	No	NOTE 1
Beryllium metal (unreacted) (TH)	7440417	yes	no	0.28	lb/yr			0.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No	No	NOTE 1
Cadmium metal (elemental unreacted) (TH)	**7440439**	**yes**	**no**	**0.37**	**lb/yr**			**4.10E-07**	**6.97E-05**							**4.10E-07**	**6.97E-05**	**1.67E-03**	**6.11E-01**	**0.00E+00**	**4.10E-02**	**Yes**	**No**	**NOTE 2**
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8 (T)	57653857	yes	no	0.0051	lb/yr			1.30E-12	2.21E-10							1.30E-12	2.21E-10	5.30E-09	1.94E-06	0.00E+00	1.30E-07	No	No	NOTE 1
Hydrogen Chloride (hydrochloric acid) (TH)	7647010	yes	no	0.18	lb/hr			0.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No		NOTE 1
Perchloroethylene (tetrachloroethylene) (TH)	127184	no	yes	13000	lb/yr					0.00E+00	0.00E+00	3.20E-07	5.44E-05	3.20E-07	5.44E-05	3.20E-07	5.44E-05	1.31E-03	4.77E-01	0.00E+00	3.20E-02	No	No	NOTE 1
Trichloroethylene (TH)	79016	no	yes	4000	lb/yr					0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No	No	NOTE 1
Napthalene (H)	91203	yes	yes					6.50E-04	1.11E-01	4.62E-06	7.86E-04	4.26E-06	7.24E-04	8.88E-06	1.51E-03	6.59E-04	1.12E-01	2.69E+00	9.81E+02	0.00E+00	6.59E+01			
Phosphorus Metal, Yellow or White (H)	7723140	yes	no					2.80E-05	4.76E-03							2.80E-05	4.76E-03	1.14E-01	4.17E+01	0.00E+00	2.80E+00			
Polycyclic Organic Matter (H)	POM	yes	no					8.80E-04	1.50E-01							8.80E-04	1.50E-01	3.59E+00	1.31E+03	0.00E+00	8.80E+01			
Propionaldehyde (H)	123386	yes	no					0.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Quinone (H)	106514	yes	no					0.00E+00	0.00E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Selenium compounds (H)	SEC	yes	no					3.50E-07	5.95E-05							3.50E-07	5.95E-05	1.43E-03	5.21E-01	0.00E+00	3.50E-02			
Trimethylpentane, 2,2,4- (H)	540841	yes	yes					4.00E-05	6.80E-03	3.78E-08	6.42E-06	7.49E-08	1.27E-05	1.13E-07	1.91E-05	4.01E-05	6.82E-03	1.64E-01	5.97E+01	0.00E+00	4.01E+00			
Antimony unlisted compounds (H)	SBC-other	yes	no					1.80E-07	3.06E-05							1.80E-07	3.06E-05	7.34E-04	2.68E-01	0.00E+00	1.80E-02			
Chromium unlisted cmpds (add w/chrom acid to get CRC) (H)	CRC-other	yes	no					5.05E-06	8.59E-04							5.05E-06	8.59E-04	2.06E-02	7.52E+00	0.00E+00	5.05E-01			
Cobalt unlisted compounds (H)	COC-other	yes	no					2.60E-08	4.42E-06							2.60E-08	4.42E-06	1.06E-04	3.87E-02	0.00E+00	2.60E-03			
Ethyl benzene (H)	100414	yes	yes					2.40E-04	4.08E-02	4.63E-06	7.87E-04	1.16E-05	1.98E-03	1.63E-05	2.77E-03	2.56E-04	4.36E-02	1.05E+00	3.82E+02	0.00E+00	2.56E+01			
Lead unlisted compounds (H)	PBC-other	yes	no					1.50E-05	2.55E-03							1.50E-05	2.55E-03	6.12E-02	2.23E+01	0.00E+00	1.50E+00			
Methyl bromide (H)	74839	no	yes							5.97E-07	1.02E-04	3.99E-07	6.79E-05	9.96E-07	1.69E-04	9.96E-07	1.69E-04	4.07E-03	1.48E+00	0.00E+00	9.96E-02			
Cumene (H)	98828	no	yes							0.00E+00	0.00E+00	4.57E-06	7.78E-04	4.57E-06	7.78E-04	4.57E-06	7.78E-04	1.87E-02	6.81E+00	0.00E+00	4.57E-01			
Ethyl chloride (chloroethane) (H)	75003	no	yes							0.00E+00	0.00E+00	8.73E-09	1.48E-06	8.73E-09	1.48E-06	8.73E-09	1.48E-06	3.56E-05	1.30E-02	0.00E+00	8.73E-04			
Methyl chloride (H)	74873	no	yes							0.00E+00	0.00E+00	6.24E-07	1.06E-04	6.24E-07	1.06E-04	6.24E-07	1.06E-04	2.55E-03	9.29E-01	0.00E+00	6.24E-02			
Xylene, o- (H)	95476	no	yes							6.95E-06	1.18E-03	3.33E-06	5.66E-04	1.03E-05	1.75E-03	1.03E-05	1.75E-03	4.19E-02	1.53E+01	0.00E+00	1.03E+00			
HAPs, TOTAL								8.70E-03	1.48E+00	1.87E-04	3.19E-02	8.66E-05	1.47E-02	2.74E-04	4.66E-02	8.97E-03	1.53E+00	3.66E+01	1.34E+04	0.00E+00	8.97E+02			

Appendix C
Dispersion Modeling Protocol Checklist

North Carolina Modeling Protocol Checklist

The North Carolina Modeling Protocol Checklist may be used in lieu of developing the traditional written modeling plan for North Carolina toxics and criteria pollutant modeling. The protocol checklist is designed to provide the same level of information as requested in a modeling protocol as discussed in Chapter 2 of the *Guideline for Evaluating the Air Quality Impacts of Toxic Pollutants in North Carolina*. The modeling protocol checklist is submitted with the modeling analysis.

Although most of the information requested in the modeling protocol checklist is self-explanatory, additional comments are provided, where applicable, and are discussed in greater detail in the toxics modeling guidelines referenced above. References to sections, tables, figures, appendices, etc., in the protocol checklist are found in the toxics modeling guidelines.

INSTRUCTIONS: The modeling report supporting the compliance demonstration should include most of the information listed below. As appropriate, answer the following questions or indicate by check mark the information provided or action taken is reflected in your report.

FACILITY INFORMATION	
Name: **Madison Asphalt LLC** **Facility ID:** **Address:** **3807 US 25/70** **Marshall, NC 28753**	**Consultant (if applicable):** **TRC Environmental Corporation** **3 Walden Ridge Drive, Suite 250** **Asheville NC 28803**
Contact Name: Tommy Reed **Vice President**	**Contact Name: Mona Brandon, CHMM** **Project Manager**
Phone Number: **828-777-3259** **Email:** tommyfbpaving@yahoo.com	**Phone Number: 828-237-2239** **Email:** mbrandon@trcsolutions.com

GENERAL

Description of New Source or Source / Process Modification: provide a short description of the new or modified source(s) and a brief discussion of how this change affects facility production or process operation.	**See Application**
Source / Pollutant Identification: provide a table of the affected pollutants, by source, which identifies the source type (point, area, or volume), maximum pollutant emission rates over the applicable averaging period(s), and, for point sources, indicate if the stack is capped or non-vertical (C/N).	**See Application**
Pollutant Emission Rate Calculations: indicate how the pollutant emission rates were derived (e.g., AP-42, mass balance, etc.) and where applicable, provide the calculations.	**See Application**
Site / Facility Diagram: provide a diagram or drawing showing the location of all existing and proposed emission sources, buildings or structures, public right-of-ways, and the facility property (toxics) / fence line (criteria pollutants) boundaries. The diagram should also include a scale, true north indicator, and the UTM or latitude/longitude of at least one point.	**See Application**
Certified Plat or Signed Survey: a certified plat (map) from the County Register of Deeds or a signed survey must be submitted to validate property boundaries modeled.	**See Application**
Topographic Map: A topographic map covering approximately 5km around the facility must be submitted. The facility boundaries should be annotated on the map as accurately as possible.	**See Application**
Cavity Impact Analysis: No cavity analysis is required if using AERMOD. *See Section 4.2*	**NA**

Background Concentrations (criteria pollutant analyses only): Background concentrations must be determined for each pollutant for each averaging period evaluated. The averaged background value used (e.g., high, high-second-high, high-third-high, etc.) is based on the pollutant and averaging period evaluated. The background concentrations are added to the modeled concentrations, which are then compared to the applicable air quality standard to determine compliance.	**NA**
Offsite Source Inventories (criteria pollutant analyses only): Offsite source inventories must be developed and modeled for all pollutants for which onsite sources emissions are modeled in excess of the specific pollutant significant impact levels (SILs) as defined in the PSD New Source Review Workshop Manual. The DAQ AQAB must approve the inventories. An initial working inventory can be requested from the AQAB.	**NA**

SCREEN LEVEL MODELING

Model: The latest version of the AERSCREEN model must be used. The use of other screening models should be approved by NCDAQ prior to submitting the modeling report.	**NA**
Source / Source emission parameters: Provide a table listing the sources modeled and the applicable source emission parameters. See NC Form 3 – Appendix A.	**NA**
Merged Sources: Identify merged sources and show all appropriate calculations. See Section 3.3	**NA**
GEP Analysis: See Section 3.2 and NC Form 1 – Appendix A	**NA**
Terrain: Indicate the terrain modeled: simple (Section 4.4), and complex (Section 4.5 and NC Form 4 – Appendix A). If complex terrain is within 5 kilometers of the facility, complex terrain must be evaluated. Simple terrain must include terrain elevations if any terrain is greater than the stack base of any source modeled. Simple:_____ Complex:_____	**NA**
Meteorology: Refer to Section 4.1 for AERSCREEN inputs.	**NA**
Receptors: AERSCREEN – use shortest distance to property boundary for each source modeled and use sufficient range to find maximum (See Section 4.1 (i) and (j)). Terrain above stack base must be evaluated.	**NA**
Modeling Results: For each affected pollutant, modeling results should be summarized, converted to the applicable averaging period (See Table 3), and presented in tabular format indicating compliance status with the applicable AAL, SIL, or NAAQS. See NC Form S5 – Appendix A.	**NA**
Modeling Files: Either electronic or hard copies of AERSCREEN output must be submitted.	**NA**

REFINED LEVEL MODELING

Model: The latest version of AERMOD should be used, and may be found at http://www.epa.gov/scram001/dispersion_prefrec.htm. The use of other refined models must be approved by NCDAQ prior to submitting the modeling report.	**AERMOD (18081)**
Source / Source emission parameters: Provide a table listing the sources modeled and the applicable source emission parameters. See NC Form 3 - Appendix A.	**See Modeling Analysis**
GEP Analysis: Use BPIP-Prime with AERMOD.	**See Modeling Analysis**
Cavity Impact Analysis: No separate cavity analysis is required when using AERMOD as long as receptors are placed in cavity susceptible areas. See Section 4.2 and 5.2.	**See Modeling Analysis**
Terrain: Use digital elevation data from the USGS NED database (http://seamless.usgs.gov/index.php). Use of other sources of terrain elevations or the non-regulatory Flat Terrain option will require prior approval from DAQ AQAB.	**See Modeling Analysis**
Coordinate System: Specify the coordinate system used (e.g., NAD27, NAD83, etc.) to identify the source, building, and receptor locations. Note: Be sure to specify in the AERMAP input file the correct base datum (NADA) to be used for identifying source input data locations. Clearly note in both the protocol checklist and the modeling report which datum was used.	**NAD83**
Receptors: The receptor grid should be of sufficient size and resolution to identify the maximum pollutant impact. See Section 5.3.	**See Modeling Analysis**

Meteorology: Indicate the AQAB, pre-processed, 5-year data set used in the modeling demonstration: (See Section 5.5 and Appendix B) AERMOD If processing your own raw meteorology, then pre-approval from AQAB is required. Additional documentation files (e.g. AERMET stage processing files) will also be necessary. For NC toxics, the modeling demonstration requires only the last year of the standard 5-year data set (*e.g.*, 2005) provided the maximum impacts are less than 50% of the applicable AAL(s).	**See Modeling Analysis**
Modeling Results: For each affected pollutant and averaging period, modeling results should be summarized and presented in tabular format indicating compliance status with the applicable AAL, SIL or NAAQS. See NC Form R5 - Appendix A.	**See Modeling Analysis**
Modeling Files: Submit input and output files for AERMOD. Also include BPIP-Prime files, AERMAP files, DEM files, and any AERMET input and output files, including raw meteorological	**See Attached**