Top 10 Tips for Submitting a Complete Air Quality Permit Application

Air Quality Division

Facilities Emissions Control
July 21, 2022

ADEQ
Arizona Department of Environmental Quality

Introduction

Air Permits Unit

- Angela Athey, *Permit Engineer*
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Housekeeping

- You are on mute.
  - If you have a question…
    - You may submit it via the questions panel; or
    - You may raise your hand using the hand icon in the control panel.
  - Questions will be addressed at the end.
- Slides will be posted online at azdeq.gov.
- A survey will pop up once you exit the webinar.
  - Please take a moment to tell us how we did and if you would to like to hear about other topics.

Request to Consult

This presentation covers common application errors seen by ADEQ, which extend permitting timelines, increase costs to the applicant, and require additional effort by both the applicant and ADEQ to process.

If you are unsure about application requirements, we request that you contact us at airpermits@azdeq.gov for a pre-application meeting before submitting an application.

Agenda

	Top 10 Tips for Submitting a Complete Permit Application
1	Applicability
2	Responsible Official Signature
3	Process Description/Flow Diagram
4	Equipment List
5	Certifications
6	Specification Sheets
7	Emission Calculations
8	Minor New Source Review
9	Changes
10	Before Your Submittal

Tip No. 1 - Applicability

Determine applicability to ensure you are completing the appropriate application.

Pollutant	Maximum Capacity to Emit (tons per year)
$PM_{2.5}$	5
PM_{10}	7.5
SO_2	20
NO_x	20
VOCs	20
CO	50

Pollutant	Potential to Emit (tons per year)
$PM_{2.5}$	10
PM_{10}	15
SO_2	40
NO_x	40
VOCs	40
CO	100

Permitting Exemption Thresholds

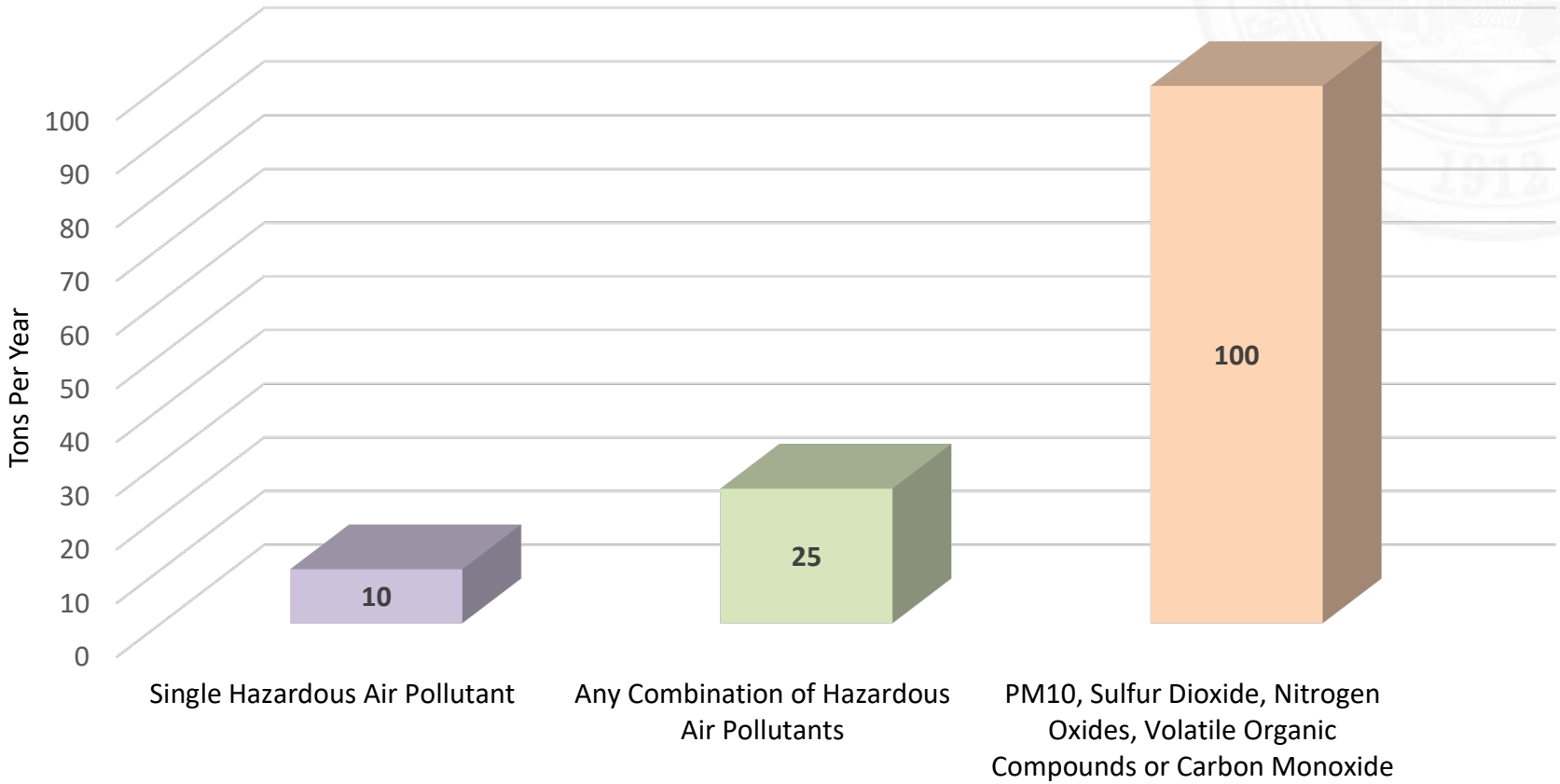
- Registration

Significant Thresholds

- Individual Permit
  - Class II (True Minor)
  - Class II (Synthetic Minor)
  - Class I (Title V)

Tip No. 1 – Applicability (Continued)

Major Source Thresholds



ADEQ may help you determine applicability during a pre-application meeting.

Tip No. 2 – Responsible Official Signature

Include RO signature.

- To be administratively complete:
  - An application must be signed by a Responsible Official (RO) or Alternate RO.
- Why?
  - "Any application form…shall contain certification by a responsible official of truth, accuracy, and completeness."

    -Arizona Administrative Code (A.A.C) R18-2-304.I
- Before submitting an application:
  - Check who is listed as your RCO/DRO in myDEQ, or
  - Contact the Air Permits Unit at airpermits@azdeq.gov.

Tip No. 2 - RO Signature (Continued)

Link to Steps/Form for RCO Change Request in myDEQ (Preferred if you have a myDEQ account)

- https://azdeq.gov/emergencyRCOrequest

Link to Change in RO Form (Default if you do not have a myDEQ account)

- https://static.azdeq.gov/forms/aq_change_ro.pdf

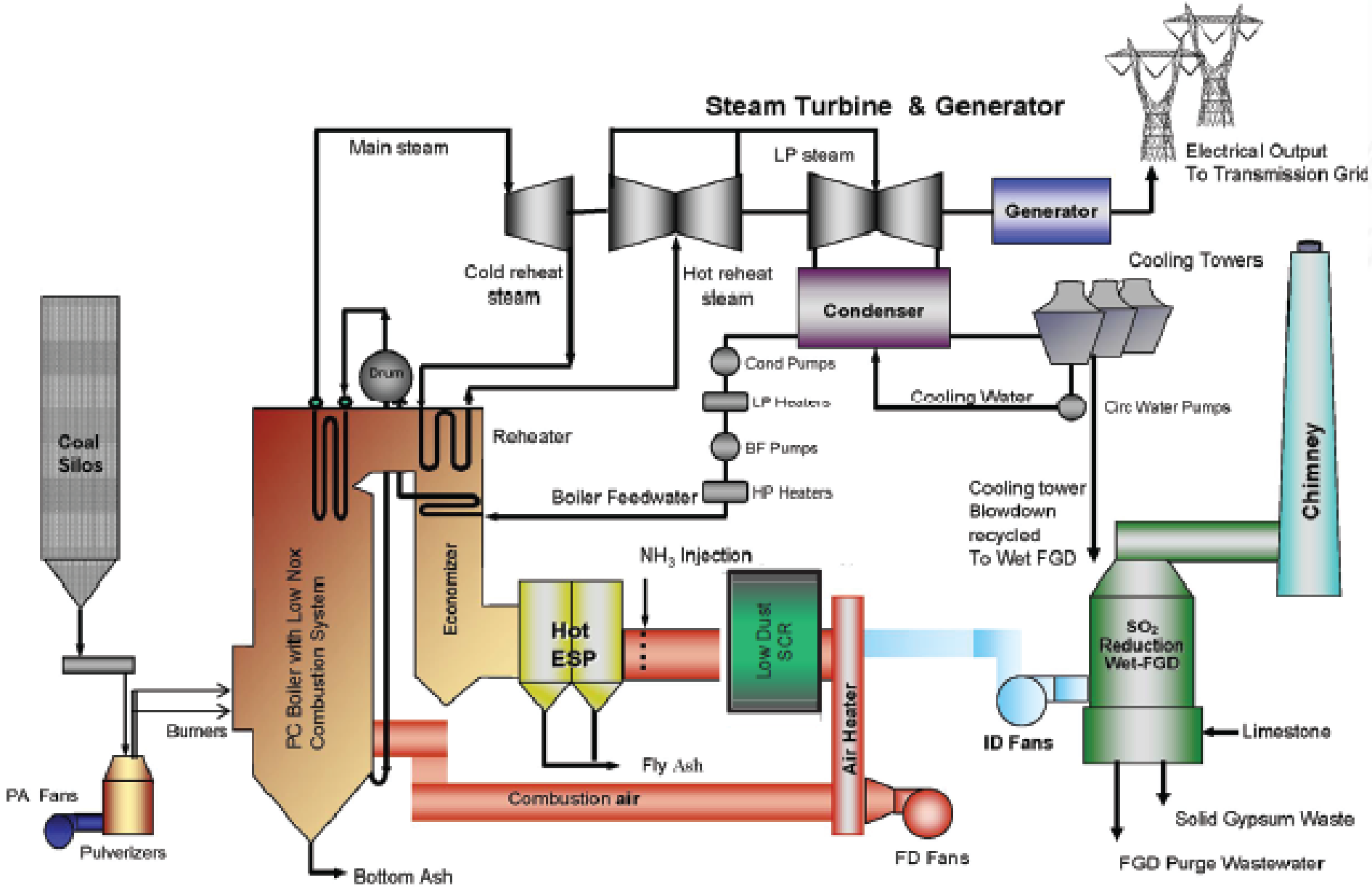
Tip No. 3 – Process Description/Flow Diagram

Add detailed process description including a process flow diagram that captures every process, product and/or control device.

The facility operates a variety of pumps and tanks that mix raw materials. During the first phase, the facility receives three (3) bulk chemicals: bleach, caustic and potassium hydroxide. The chemicals are delivered by truck and placed into the exterior bulk tank farm tanks. They are pumped to the mix tanks inside the compounding room in different proportions. Additional ingredients are added by hand into the mix tanks. The mixtures are blended using an agitator mounted on each mix tank. The blended product is pumped out

During the second phase, the facility receives two (2) bulk chemicals: glacial acetic acid and hydrogen peroxide. The chemicals are delivered by rail and placed into the exterior bulk tank farm tanks. In addition, nitric acid is delivered by truck and placed into the exterior bulk tank farm tanks. They are pumped to the mix tanks inside the compounding room and the same process takes place as described above. Water is supplied to each mix tank after it is deionized. On occasion, products come back to the facility for recycling. These products are delivered by truck and pumped to the appropriate tanks. The facility packages and ships caustic, bleach, nitric acid, peracetic acid and water-based solutions to other locations or customers.

Tip No. 3 – Process Description/Flow Diagram

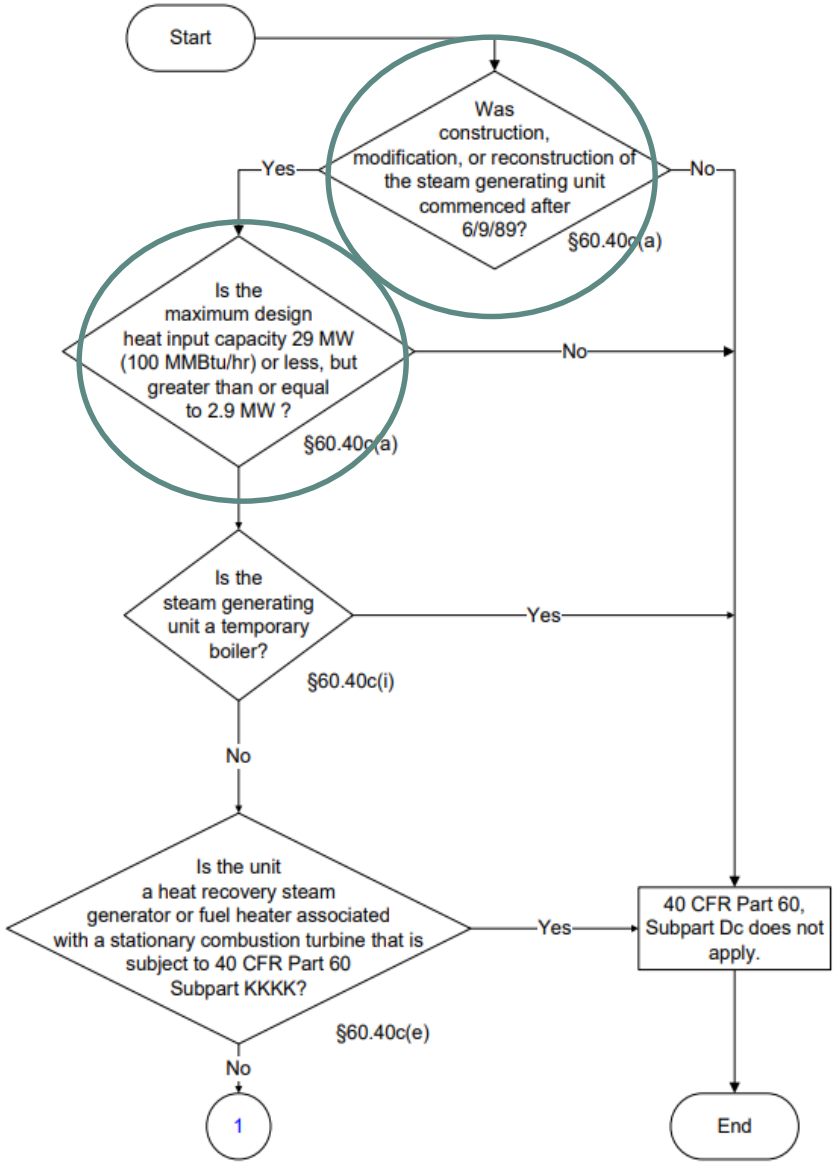


Tip No. 4 - Equipment List

Make sure the equipment list is complete, correct and up-to-date.

- Maximum Capacities
  - These can be found on specification sheets or operation & maintenance plans.
- Dates of Manufacture
  - These should be supported by the make/model.
- Types of Fuel
  - If applicable.
- Control Devices

Tip No. 4 - Equipment List (Continued)



§ 63.11200 What are the subcategories of boilers?

The subcategories of boilers, as defined in § 63.11237 are:

(a) Coal.

(b) Biomass.

(c) Oil.

(d) Seasonal boilers.

(e) Oil-fired boilers with heat input capacity of equal to or less than 5 million British thermal units (Btu) per hour.

(f) Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up.

(g) Limited-use boilers.

Tip No. 5 - Certifications

Include copies of certifications.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2013 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Power Solutions, Inc.
(U.S. Manufacturer or Importer)

Certificate Number: DPSIB8.80EMT-001

Effective Date: 11/20/2012

Expiration Date: 12/31/2013

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/20/2012

Revision Date: N/A

Manufacturer: Power Solutions, Inc.
Engine Family: DPSIB8.80EMT
Certificate Number: DPSIB8.80EMT-001
Certification Type: Stationary (Part 60)
Fuel : Natural Gas (CNG/LNG)
LPG/Propane
Emission Standards : CO (g/kW-hr) : 4.4
NMHC + NOx (g/kW-hr) : 2.7
HC + NOx (g/kW-hr) : 2.7NOx (g/Hp-hr) : 2
VOC (g/Hp-hr) : 1
CO (g/Hp-hr) : 4
Emergency Use Only : Y

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 60, 1065, 1068, and 60 (stationary only and combined stationary and mobile) and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new nonroad spark-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover large nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

Tip No. 6 - Specification Sheets

Include specification sheets.

It is critical that you include material safety data sheets (or MSDSs) if applicable.

NPower

EPA Exhaust Emission Compliance Statement
GFPA
Natural gas standby
60 Hz Spark Ignited Generator Set

Compliance Information:
The engine used in this generator set complies with U.S. EPA emission regulations under the provisions of 40 CFR Part 60, Stationary Emergency Spark-Ignited emissions limits when tested per ISO 8178 D2.

Engine Manufacturer:	PSI
EPA Certificate Number:	DPSIB8.80EMT-001
Effective Date:	11/20/2012
Date Issued:	11/20/2012
EPA Engine Family:	DPSIB8.80EMT

Engine Information:

Model:	PSI8.8	Bore:	4.0in. (101.6 mm)
Engine Nameplate HP:	243		
Type:	4 Cycle, VEE-8 Cylinder Spark-Ignited	Stroke:	3.48 in. (88.4 mm)
Aspiration:	Turbo Charged	Displacement:	537 cu. in. (8.8 liters)
Compression Ratio:	10:1		
Emission Control Device:	Standard		

U.S. Environmental Protection Agency Stationary Emergency SI Emission Limits

(All values are Grams per HP-Hour)

COMPONENT	
HC + NOx (Total Unburned Hydrocarbons and Oxides of Nitrogen)	2.7
CO (Carbon Monoxide)	4.0

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

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Use of Paints

FinishKare

"The Choice of Professionals Since 1164"

SAFETY DATA SHEET

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union Reach Regulation, Directives 67/548/EC & 1999/45/EC and CLP Regulation 1272/2008/EC

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	***1000P Hi-Low Paste Wax***
PRODUCT CODE:	FK-1000P
PRODUCT USE:	Wax
U.N. NUMBER:	UN1325
U.N. DANGEROUS GOODS CLASS:	Flammable solid, organic, n.o.s., (Contains Solvent Naphtha) Class 4.1, PGII
MANUFACTURER'S NAME: ADDRESS:	**FINISH KARE PRODUCTS, INC** 1726 Floradale Ave. So. El Monte, CA 91733 USA
BUSINESS PHONE:	1-626-443-8983
FAX#:	1-626-443-0288
EMERGENCY PHONE:	1-800-535-5053 INFOTRAC (U.S.A. 24 Hours/Day) 1-352-323-3500 INFOTRAC (International Calls)
DATE OF PREPARATION:	September 1, 2015
DATE OF LAST REVISION:	September 8, 2015

Tip No. 6 - Specification Sheets

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It is critical that you include material safety data sheets (or MSDSs) if applicable.

3. COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	AMOUNT	HAZARD SYMBOLS	HAZARD CLASSIFICATION
Solvent Naphtha - medium & Heavy aliphatic	64742-88-7/ 64742-96-7	265-191-7/ 265-200-4	5 - 65%		ASP. TOX. CAT 1, STOT RE 1
Solvent Naphtha - light	64742-95-6	265-199-0	<3.55%		ASP TOX 1, Note P applies (contains <0.005% benzene)
1,2,4-trimethylbenzene	95-63-6	202-436-9	<2.84%		FLAM LIQ 3, SKIN IRRIT 2, EYE IRRIT 2, ACUTE TOX 4 (INHALATION), STOT SE3 (RESP), AQUATIC CHRONIC 2
Mesitylene	108-67-8	203-604-4	<0.71%		FLAM LIQ 3, STOT SE3 (RESP), AQUATIC CHRONIC 2
Cumene	98-82-8	202-704-5	<0.36%		FLAM LIQ 3, ASP TOX 1, STOT SE 3, AQUATIC CHRONIC 2
Xylene	1330-20-7	215-535-7	<0.36%		FLAM LIQ 3, ACUTE TOX 4 (DERMAL,INHALATION), SKIN IRRIT 2
Each of the other components is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens)					

Tip No. 6 - Specification Sheets

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9. PHYSICAL and CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE, ODOR and COLOR: This product is a yellow paste wax.
ODOR: Hydrocarbon odor.
BOILING POINT: 318°F- 390°F (159°C - 198°C)
FLASH POINT: 98°F (36.66°C)
EVAPORATION RATE (n-BuAc=1): 0.13
VAPOR PRESSURE: 0.71 kPa
VAPOR DENSITY: 4.1
SPECIFIC GRAVITY: 0.749
SOLUBILITY IN WATER: Insoluble
WEIGHT PER GALLON: 6.25 lbs
CALCULATED VOC: 3.98 lbs/gal (477.5 g/l)
KINEMATIC VISCOSITY: >20.5mm2/s at 40°C

Tip No. 7 - Emission Calculations

Include Excel spreadsheet(s) or Google Sheet(s) of emission calculations (controlled and uncontrolled).

- Provide basis and/or references for all variables, equations and assumptions used including:
  - Voluntary Limits
  - Emission Factors
  - Other Variables (e.g., wind speed, moisture content, control efficiency, etc.)
- This may mean:
  - Providing a written discussion in the application
  - Adding notes or comments to the Excel spreadsheet(s) or Google Sheet(s)
  - Attaching document(s) containing emission factors or calculation methodologies, especially if document is not readily available (e.g. AP-42 is readily available. A study done by a consultant may not be readily available.)
- It is important to highlight any changes that have been made to emission calculations since the previous renewal and/or revision (if applicable).

Tip No. 7 - Emission Calculations (Example)

- Show basis of emission factors
- Include equations for emission calculations

	Unit 1	Unit 2	Basis
Unit Design and Coal Information			
Coal Emission Factors			
NOx (lb/mmBtu) annual average	0.320	0.080	Limit from RH FIP Reconsideration 3/29/2016
SO2 (lb/mmBtu) Annual average	0.08	0.08	Voluntary Emission Limit
Filterable PM (lb/mmBtu)	0.030	0.030	MATS Limit
Total PM10 (lb/mmBtu)	0.03	0.03	MATS Limit
Total PM2.5 (lb/mmBtu)	0.01	0.01	Tested in 2015
HCl (lb/mmBtu)	0.0025	0.0025	Engineering assumption based on EPRI studies
HF (lb/mmBtu)	0.002	0.002	Engineering assumption based on EPRI studies
H2SO4 (lb/mmBtu)	0.005	0.006	Proposed BACT limit/Voluntary Limit
CO (lb/mmBtu)	0.50	0.50	BACT limit
VOC (lb/ton)	0.06	0.06	EPA AP-42 Emission Factor, Table 1.1-19 (9/98)
(CO2)e (kg/mmBtu)	114.42	114.42	(CO2)e emissions are based on 40 CFR Part 98 Subpart A Table A-1. Emission Factors per Subpart C, Table C-1 and C-2.
Lead (lb/mmBtu)	0.0005	0.0005	EPA AP-42 Emission Factor, Table 1.1-17
Mercury (lb/GWh)	0.013	0.013	MATS Limit
Mercury (lb/MWh)	0.000013	0.000013	MATS Limit coverted to lb/MWh
EGUs Potential Emissions (lb/hr)			
NOx (lb/hr)	1,510	378	NOx (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
SO2 (lb/hr)	378	378	SO2 (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
Filterable PM (lb/hr)	142	142	Filterable PM (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
Total PM10 (lb/hr)	142	142	Filterable PM10 (lb/hr) + Condensable PM10 (lb/hr)
Total PM2.5 (lb/hr)	48.13	50.49	PM2.5 (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
HCl (lb/hr)	11.8	11.8	HCl (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
HF (lb/hr)	9.4	9.4	HF (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
H2SO4 (lb/hr)	22.3	28	H2SO4 (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
CO (lb/hr)	2,360	2,360	CO (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
VOC (lb/hr)	16.0	16.0	VOC (lb/ton) x [Coal Burned (lb/hr) / 2,000 lb/ton]
(CO2)e (lb/hr)	1,190,400.3	1,190,400.3	(CO2)e (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
Lead (lb/hr)	2.4	2.4	Lead (lb/mmBtu) x Maximum Boiler Heat Input (mmBtu/hr)
Mercury (lb/hr)	0.006	0.006	Mercury (lb/MWh) x Design Gross Output (MW)

Tip No. 7 - Emission Calculations (Example)

- Include units
- Indicate source of emission factors
- Note assumptions (For example, VOC = TOC)
- Show voluntary limits
- Highlight new equipment

EQUIPMENT RATING		Operational Limits	EMISSION FACTORS							SOURCE OF EF	EMISSIONS (Tons Per Year)							
			PM	PM_{10}	SO_2	NO_x	CO	Pb	VOC		PM	PM_{10}	SO_2	NO_x	CO	Pb	VOC	HAPs
DIESEL ENGINES < or = 600HP																		
Equipment ID	Rating	Hours	*lbs/hp-hr*															
EG-2	333	200									07	0.07	1.03	0.22	0.00	0.08	8.84E-04
EG-3	350	200									08	0.07	1.09	0.23	0.00	0.09	9.29E-04
EG-4	191	200									0.04	0.04	0.04	0.59	0.13	0.00	0.05	5.07E-04
EG-7	150	200									0.03	0.03	0.03	0.47	0.10	0.00	0.04	3.98E-04
EG-9	62	200									0.01	0.01	0.01	0.19	0.04	0.00	0.02	1.65E-04
EG-13	252	200	0.0022	0.0022	0.00205	0.031	0.0067		0.0025	AP-42 Table 3.3-1	0.06	0.06	0.05	0.78	0.17	0.00	0.06	6.69E-04
EG-16	47	200									0.01	0.01	0.01	0.15	0.03	0.00	0.01	1.25E-04
EG-19	200	200									0.04	0.04	0.04	0.62	0.13	0.00	0.05	5.31E-04
EG-23	380	200									0.08	0.08	0.08	1.18	0.25	0.00	0.10	1.01E-03
EG-24	133	200									0.03	0.03	0.03	0.41	0.09	0.00	0.03	3.53E-04
EG-31	102	200									0.02	0.02	0.02	0.32	0.07	0.00	0.03	2.71E-04
Total for ICEs below or at 600 HP											**0.48**	**0.48**	**0.45**	**6.82**	**1.47**	**0.00**	**0.55**	**0.01**

Angela L. Athey:
Assumed VOC = TOC

Voluntary limit:

The Permittee shall not operate emergency diesel-fired internal combustion engines for more than 200 hours each in any rolling 12-month period.

Tip No. 7 - Emission Calculations (Example)

- Include equation and its source
- List and explain assumptions
- Provide wind speed data

Maximum Average Acres/Day	24
Emission Factor (lb/day/acre)	2.58
PTE (tpy)	11.31
Reference	WRAP Fugitive Dust Handbook Chapter 9

$$EF = 0.85 \times \left(\frac{s}{1.5}\right) \times \frac{365 - p}{235} \times \left(\frac{f}{15}\right)$$

where, s = silt content of material (weight %), 2.2% according to AP-42 Table 13.2.4-1

p = number of days per year with at least 0.01 inch of precipitation, 0 as worst-case scenario

f = percentage of time the unobstructed wind speed is greater than 12 mph at the mean pile height, 20%

The actual number for 2020 is about 11% however we reported 20% in the previous applications and decided to keep it to be more conservative.

Tip No. 7 - Emission Calculations (Example)

- Include equation and its source
- List and explain assumptions
- Provide wind speed data

Jan	Avg Wind Speed	Feb	Avg Wind Speed	Mar	Avg Wind Speed	Apr	Avg Wind Speed	May	Avg Wind Speed	Jun	Avg Wind Speed	Jul	Avg Wind Speed	Aug	Avg Wind Speed	Sep	Avg Wind Speed	Oct	Avg Wind Speed	Nov	Avg Wind Speed	Dec	Avg Wind Speed
1	6	1	6.8	1	12.6	1	13.1	1	8.7	1	6.8	1	9.6	1	9.3	1	8.7	1	2.1	1	3	1	6
2	6.4	2	13.8	2	5.2	2	18.4	2	11.5	2	3.5	2	8.1	2	8.7	2	5.9	2	4.9	2	3.8	2	17.5
3	3.6	3	20	3	12.2	3	6.9	3	10.6	3	5.3	3	4.1	3	7.6	3	3.2	3	3.9	3	2.7	3	12.7
4	3.5	4	12.5	4	5.2	4	10.9	4	3.7	4	6.6	4	4.2	4	7.8	4	2.4	4	3.9	4	4.8	4	5.8
5	5	5	6.8	5	3.2	5	12.1	5	4.4	5	0	5	6.8	5	8.2	5	3.7	5	5	5	5.6	5	2.3
6	7.5	6	6.9	6	3.6	6	13.6	6	7.8	6	17.3	6	9	6	10.8	6	3.6	6	2.5	6	10.4	6	1.7
7	2.4	7	6	7	12.5	7	5.7	7	3.8	7	18.8	7	10.3	7	8.4	7	6.6	7	3.7	7	18	7	8
8	9	8	10.6	8	13.8	8	9.8	8	6.1	8	11.4	8	9.2	8	6.5	8	14.8	8	5	8	18.9	8	7.3
9	5.3	9	9.3	9	4.5	9	9.3	9	6	9	10.8	9	9.5	9	5.4	9	11.8	9	4.9	9	9.7	9	3.1
10	1.8	10	5.5	10	5.5	10	3.9	10	6.6	10	5.5	10	4.5	10	9	10	4.4	10	8	10	2.3	10	4.7
11	7.6	11	15.7	11	5.7	11	6.6	11	11.9	11	6.3	11	3.1	11	7.9	11	2.5	11	7	11	3.8	11	8.2
12	6.5	12	3.7	12	3.9	12	14.1	12	13.6	12	10.3	12	3.4	12	5.1	12	4.9	12	2.6	12	1.4	12	12.2
13	8.6	13	2.9	13	14	13	5	13	12.8	13	14.3	13	11.5	13	3.6	13	3.3	13	3.8	13	6.9	13	10.6
14	9.1	14	5	14	7.2	14	5.8	14	8.1	14	9.5	14	9.9	14	3.7	14	2.4	14	5.8	14	5.8	14	7.6
15	4	15	6.7	15	4	15	7	15	6.8	15	9.3	15	7	15	4.2	15	3.4	15	7	15	1.6	15	5
16	8.2	16	7.7	16	6.3	16	10.7	16	5.2	16	15.8	16	4.2	16	6.1	16	2.3	16	5.9	16	3.8	16	2.5
17	16.5	17	3	17	16.9	17	7.3	17	9.3	17	13.3	17	6.3	17	3.5	17	3.6	17	3.8	17	4.3	17	6.6
18	4.3	18	4	18	11.1	18	8	18	12.7	18	7.5	18	4.5	18	5	18	5.5	18	7	18	12.1	18	5.7
19	8.7	19	5.3	19	11.8	19	5.8	19	18.3	19	4.8	19	3.8	19	4.3	19	7.8	19	4.2	19	10.2	19	1.2
20	5.3	20	6.3	20	1.2	20	7.3	20	5.7	20	6.1	20	6.3	20	7	20	3.8	20	4.3	20	5.8	20	2.7
21	8.8	21	2.7	21	7	21	5.6	21	4.6	21	6.3	21	5.6	21	6.9	21	2.9	21	4.7	21	3.2	21	4.4
22	2.2	22	8.1	22	3.4	22	4.8	22	12.1	22	6	22	3.6	22	6.7	22	4.9	22	8.2	22	5.4	22	8
23	7.6	23	8.3	23	9.2	23	6.5	23	11.3	23	6.6	23	5.9	23	6.2	23	3.1	23	6.6	23	14	23	12.4
24	2.5	24	6.5	24	7.2	24	4.5	24	5.4	24	8.5	24	4.1	24	3.8	24	3.6	24	11	24	3.8	24	5.3
25	1.2	25	16.9	25	13.5	25	5.6	25	7	25	9.7	25	2.4	25	4	25	7.7	25	18.4	25	3.7	25	2.7
26	5.1	26	7.8	26	19.1	26	7.8	26	4.2	26	8.9	26	4	26	4.1	26	8.6	26	14.5	26	7.9	26	7
27	6	27	4.2	27	12	27	7.3	27	4.1	27	9.2	27	5.6	27	4.8	27	0	27	13.1	27	13.4	27	3.5
28	3.8	28	3.2	28	5.2	28	3.5	28	3.9	28	18	28	6	28	2.7	28	0	28	6.1	28	2.8	28	9.9
29	10.2	29	7.4	29	8.6	29	4.9	29	5.2	29	22.5	29	5.1	29	5	29	0	29	4	29	4.3	29	4.5
30	12			30	5.4	30	6.8	30	8.5	30	6.3	30	3.3	30	7.5	30	0	30	3.2	30	1.8	30	12
31	10.8			31	4.3			31	9.6			31	2.3	31	10.1			31	2.5			31	4.1
	2		4		7		5		5		6		0		0		1		3		3		5

Total days average wind speed over 12 mph	41
Percent wind speed is over 12 mph	11%

*https://www.wunderground.com/history/daily/US/AZ/86025

Tip No. 8 – Minor New Source Review

Minor NSR is required for any of the following activities if the emissions from the project exceed the permitting exemption threshold:

- Construction of any new Class I or Class II source; or
- Any minor NSR modification to a Class I or Class II source.
  - Minor NSR modification is defined in A.A.C. R18-2-101.14.

Note: Minor NSR is not required if the project triggers PSD/NNSR review for that pollutant.

Pollutant	Maximum Capacity to Emit (tons per year)
$PM_{2.5}$	5
PM_{10}	7.5
SO_2	20
NO_x	20
VOCs	20
CO	50

Permitting Exemption Thresholds

Tip No. 8 – Minor NSR (Continued)

- Two pathways to satisfy the requirements for minor NSR:
  1. Reasonably Available Control Technology (RACT)
     - Examples of what constitutes RACT can be found in A.A.C. R18-2-334.D.2.
  2. Ambient Air Quality Assessment (Screening Model)

Tip No. 8 – Minor NSR (RACT)

- For new units:
  - You must evaluate RACT for each emissions unit that has the potential to emit a regulated minor NSR pollutant in an amount equal to or greater than 20% of the permitting exemption threshold.
- For minor NSR modifications:
  - You must implement RACT for each emissions unit that will experience an increase in the potential to emit a regulated minor NSR pollutant equal to or greater than 20% of the permitting exemption threshold.

Tip No. 8 – Minor NSR (Modeling)

- You may elect to have ADEQ conduct a screening model of the emissions from the source or minor NSR modification.
  - **Note:** Refined modeling can be conducted if the screening model indicates interference with the attainment of National Ambient Air Quality Standards (NAAQS).
- If you would like to conduct your own modeling to satisfy minor NSR, please contact us at airpermits@azdeq.gov to verify that your parameters are correct prior to submitting an application.

Tip No. 8 – Minor NSR (Continued)

If you elect to implement RACT, ADEQ **may require** modeling if there is reason to believe that a source or minor NSR modification could interfere with attainment or maintenance of NAAQS.

Tip No. 9 – Changes

Note any changes that may have been made since the last renewal and/or revision, and why they were made.

- These may include:
  - Changes in processes
  - Changes in equipment, including control devices
  - Changes in rule applicability
  - Changes to emission calculations, such as:
    - A different emission factor or calculation methodology.
    - An updated assumption.
- This may mean:
  - A written list or paragraph discussing the changes that were made and why.
  - Notes within the emission calculations spreadsheet discussing any changes relevant to the emission calculations.

Tip No. 9 – Changes (Examples)

From a renewal application:

Note that the potential emissions have been updated to represent the change in the calculation methodology for the cooling towers and the emergency engines. No increase in potential emissions due to physical changes or changes in the method of operation are being proposed. The updates to the cooling towers include a fraction of PM_{10} and $PM_{2.5}$ in total PM. The updated fire pump calculations include correcting the equation used to represent emissions as well as including HAP emissions from all the engines. Filterable PM, total PM_{10}, total $PM_{2.5}$, and GHG (measured as carbon dioxide equivalent [CO_2]e) emissions were also included as part of this renewal action.

From a minor permit revision (MPR) application:

Blasting Emission Calculations

During preparation of the 2020 annual emission inventory, it was identified that the average annual blast area of 60,000 square feet (ft^2), traditionally used to calculate potential fugitive particulate matter emissions from the [redacted] facility, has inadvertently been underestimated. The average annual blast area is actually approximately 93,000 ft^2. This correction is made pursuant to A.A.C. R18-2-304.H and affects annual emission calculations from the following emission unit:

- Process #026-2: Blasting.

[redacted] requests to update the calculated potential annual emissions from the above emission unit as part of this MPR application. Potential hourly emissions are not affected since they have been based on a maximum blast area of 200,000 ft^2, which remains correct. Additionally, [redacted] total maximum annual mining rate of 220,314,000 tons per year (tpy) and the maximum quantity of blasts per year (i.e., 600 blasts) will not be affected.

Tip No. 10 - Before Your Submittal…

Finalize major components of a project **prior to** submitting an application.

- Avoid submitting an application if any significant changes may still be made to a project, such as:
  - Changes in applicability
  - Changes in equipment or process(es)
  - Changes to emission calculations

- Timeline Dates to Remember
  - To maintain your right to operate:
    - A complete renewal application must be submitted at least 6 months and no more than 18 months prior to the expiration of the current permit.

      -A.A.C. R18-2-322.B
  - "No person shall begin actual construction of, operate, or make a modification…without obtaining a registration, permit or permit revision…"

    -A.A.C. R18-2-302.A
    - Some exceptions: minor permit revisions, registration revisions.
    - See the definition for "begin actual construction of".

- Reach out to ADEQ ahead of time to ensure the submission of a complete application and that your permit is processed as quickly as possible.

Summary

1. Determine applicability to ensure you are completing the appropriate application.
2. Include RO signature.
3. Add detailed process description including a process flow diagram that captures every process, product and/or control device.
4. Make sure the equipment list is complete, correct and up-to-date.
5. Include copies of certifications.
6. Include specification sheets. It is critical that you include material safety data sheets (or MSDSs) if applicable.
7. Include Excel spreadsheet(s) or Google Sheet(s) of emission calculations.
8. Check minor NSR. RACT and/or modeling may be necessary.
9. Note any changes that may have been made since the last renewal and/or revision, and why they were made.
10. Finalize major components of a project **prior to** submitting an application.

Questions?

- Additional questions can be sent to airpermits@azdeq.gov; or

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Thank You!

ADEQ
Arizona Department
of Environmental Quality