What is it?

Completeness Review

What is it?
Completeness Review Starts

- Elements of a completeness review
  - Checking for missing forms
  - Checking for missing information
  - Checking for the appropriateness of the forms submitted

Construction Permitting
Review Process
The cover letter – how important is it?

- Very important!
  - Tell us your story and what you want to accomplish with your application
  - Try to anticipate our questions and give us the answers in your letter
A complete application should include:

- A Facility Information form
- One or more forms describing the emission unit(s)
- One or more forms describing the control equipment
- One or more forms describing the emission point(s)
- Emission calculations
- An Emission Inventory form
- A Non–PSD Modeling Determination
- A Facility Plot Plan
- A Summary of emission sources
- A Federal Regulations Applicability form
- A Greenhouse Gas Information form
So far….
- Most applications have not included one or more of these forms. Sometimes, all forms are missing.
  - Most common missing forms are:
    1) Form FI
    2) Form MD
MISSING FORMS – Part 3

- Most common missing forms...
  3) Form MI–1
  4) Form MI–2
Most common missing forms...

5) Form FRA
A complete application should have:

- All applicable cells in each form filled in. Some examples of missing information are:
  1) Responsible official signature.
  2) If it is a new source, or an unpermitted existing unit, or a modification to a unit.
  3) The previous permit number if the application is for the modification of a permitted unit.
  4) Construction date (past or proposed).
  5) The description and a flow diagram of the process.
  6) The number of guns used simultaneously in a spray paint booth.
  7) Emission calculations.
Form EI – Facility Emission Inventory

- Most of the time, this form is not completed appropriately because the only information provided is the emissions from the emission unit(s) included in the application.
  - Things to keep in mind:
    1) We are asking for potential emissions.
    2) For a minor or unknown PSD source, potential emissions from ALL emission points at the facility must be included...even those that are exempt, grandfathered, and fugitive.
    3) For a major PSD source, potential emissions from emission points that are new or were modified during the 5 years prior to the proposed construction date requested in the application must be included.
Form GHG – Facility and Project Greenhouse Gas Emission Inventory

- As with Form EI, the Form GHG is not completed appropriately because the only information provided is the GHG emissions from the emission unit(s) included in the application.

- Things to keep in mind:
  1) We are asking for potential GHG emissions.
  2) For a minor or unknown PSD source, potential GHG emissions from ALL emission points at the facility must be included...even those that are exempt, grandfathered, and fugitive.
  3) For a major PSD source, potential emissions from emission points that are new or were modified during the 5 years prior to the proposed construction date requested in the application must be included.
Form MI–2 – Emission Source Characteristics
- As with Forms EI and GHG, the Form MI–2 is not completed appropriately because the only information provided is the emission source characteristics for the emission point(s) included in the application.
- Things to keep in mind:
  1) We are asking for the emission source characteristics of existing stack/vents.
  2) ALL emission points at the facility must be included, even those that are grandfathered, EXCEPT:
     - Exempt units. In the case of units using the small unit exemption subrule, they do not need to be included unless the total combined emissions from all substantial small units using the exemption reaches the “cumulative notice threshold.”
     - Emission units that only emit VOCs/HAPs.
     - Fugitive sources.
A complete application should include:

- The appropriate EU form, instead of the generic Form EU:
  - For an industrial engine, include an EU1 form.
  - For a nonmetallic mineral processing plant (fugitive only), include an EU2 form.
  - For a spray paint booth, include an EU3 form.
  - For a cooling tower, include an EU4 form.
  - For a boiler, include an EU5 form.
A complete application should include:

- The appropriate CE form, instead of the generic Form CE:
  - For a fabric filter, include a CE1 form.
  - For a cyclone, include a CE2 form.
  - For a wet scrubber, include a CE3 form.
  - For a thermal oxidizer, include a CE4 form.
  - For a catalytic oxidizer, include a CE5 form.
Once all three elements of the completeness review are satisfied, the application is assigned a project number.
Construction Permit Forms

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Construction Permits
Form FL – Facility Information

- Form must be signed or application is incomplete
- Submit one FL form for every project: new or modification

Common Issues:

- #4 – Email address missing – often primary way to communicate
- #9 – Equipment location: give street address (not Hwy 18 West)
Form FI – Facility Information, continued

- **#11** – Portable equipment identification. Equipment that will not move for several years should not be permitted as portable.

- **#13** – SIC (Standard Industrial Classification) and NAICS (North American Industrial Classification System) codes are not provided
  - Be consistent w/past applications unless reason to change
  - Some federal rules – applicability based on facility’s SIC
    - 6X, for example
Form EU - Emissions Unit Information

- Form EU1 – Internal Combustion Engine
- Form EU2 – Nonmetallic Mineral Processing Plant
- Form EU3 – Spray Paint Booth
- Form EU4 – Cooling Tower
- Form EU5 – Boilers

Form EU is used for all other types of equipment
Form EU - Emissions Unit Information

- Submit one EU form for each emissions unit in the project
  - Exception for identical units
- Do not use EU form if using an EU1 thru EU5 form

Common Issues:
- #1 - The name of control device or general process is given, not the specific name of the operation to be permitted.
Form EU – Emissions Unit Information, continued

- #2 – EU ID, EP ID – not consistent with what was used previously, or other forms, or SPARS

- #3 EU Type:
  - New Source – no permit, construction not started
  - Unpermitted Existing Source – no permit, construction has started and/or is completed
  - Modification to Permitted Source – unit already has a construction permit
    - Previous permit No. is construction permit number (not Title V permit number)
      - 80–A–167–S2, for example
#6 Maximum capacity is left out or is based on annual capacity or plant’s capacity
- Maximum capacity should be based on rated nameplate or manufacturer’s rating
- Normally, units should be “per hour”

#8 – Date of construction not given or too vague
- Past dates may determine applicability of a rule
- Future dates should be as accurate as possible
#12 – Permit limits are not requested even though they are used in calculations or are necessary.
  ◦ Types of limits:
    ▪ Operating hours, production limits
    ▪ Hourly limits to limit PTE, for dispersion modeling
    ▪ Give reason for request

#13 – No written description or drawing of process
  ◦ Very important for new facility, new process, unusual process, multiple emission units
The sheller removes corn from the cob. The sheller aspiration air stream will be directed into the bag filter, with aspiration pickup points across the screen cleaner, at the cob discharge from the sheller, and along the cob conveyor. Material collected in the bag filter will be continuously discharged into a vehicle parked beneath the filter. Material from the scalp and sift screens beneath the sheller will be mechanically conveyed into the vehicle parked beneath the bag filter. Cobs will be injected into the cob-discharge pipe, downstream from the cob blower, and will be blown onto an open air cob pile.
Use one for each industrial engine

New engines less than 400 HP must be registered if using exemption “r”– separate registration forms

- Can permit small engines to limit PTE

Common Issues

#1 – Stated use of the engine is not correct:
- Emergency: only for emergency situations, testing and maintenance (as defined in NSPS and NESHAP)
- Fire Pump: used as emergency engine to pump water or fire suppressants
Non-emergency: all other uses
  • Primary power, peaking power, curtailment arrangements, etc.

Specific information about engine
  ◦ #10 Displacement per cylinder – often listed as total displacement
  ◦ #12 Engine burn type – can be omitted for CI engines
  ◦ Certificate of conformity should be submitted as proof that the engine has been certified
  ◦ Manufacturer’s information
#25 – Manufacturer’s rated flow rate is usually in ACFM not SCFM

Use Form EU1, don’t use EU and EP forms

All stationary engines are now regulated by the RICE, requirements depend on:

- Model year of engine
- Use of engine (emergency vs. non-emergency)
- Facility status (major or area for HAPs)
- Size of engine, type of fuel burned
Form EU2 – Nonmetallic Mineral Processing Plant

- Used for plants subject to NSPS, Subpart OOO
  - List equipment (for example, crushers, screeners, conveyor belts, etc.)

Possible Issues

- If emissions vent through a stack, don’t use EU2
- Many aggregate processing plants have been using permit template
  - Template has been pulled. Full application is required for new aggregate processing plants. New aggregate plants will have to use EU2 for processing equipment. Engines will need individual permits.
Form EU3 – Spray Paint Booth

- #1–5 Spray Gun Description
  - Number of spray guns that can operate simultaneously not given – this affects PM emissions

- #6 – Not all materials used in booth included
  - Sprayed material
  - Clean up solvents

- #7 Type of material being coated is not listed.
  - Important for NESHAP

- #11 – MSDS not submitted
  - How to deal with many coatings
#12 – Does the coating contain a HAP targeted by an area source NESHAP?

#17 – No information given on the dry filters

Emissions from paint booth heaters need to be estimated

Cure ovens (permit or not?)
  ◦ If exhausted thru paint booth’s stack, provide information on cure oven on a Form EU. Cure oven on permit.
  ◦ If exhausted thru separate stack, may meet exemption
  ◦ In either case, combustion emissions need to be determined
No issues with form
We issue permits by tower, not by cell
Some cooling towers can also emit VOC and HAPs, these emissions should be quantified
Permit not required:
- Natural gas or LPG fired and less than 10 MMBTU/hr heat input
- Burns coal, oil, untreated wood, untreated seeds or pellets, or other vegetative matter and is less than 1 MMBTU/hr heat input
  - This exemption proposed to be changed as of January 1, 2013

Permit required for natural gas boilers w/ oil back up greater than 1 MMBTU/hr heat input

#2 Rated capacity not provided in heat input (i.e. MMBtu/hr)
Provide additional information on alternative fuels (e.g. grease, biomass)
  ◦ Ultimate and proximate analysis
Form may be changed when boiler MACT is adopted
Subpart DDDDD applies to boilers and process heaters at major sources of HAPs
Subpart JJJJJJJ applies to boilers at area sources of HAPs
  ◦ Under this rule, NG boilers are exempt
Comments or questions about Form FI or Forms EU, EU1 to EU5?

Assistance for completion of applications:
  ◦ 1–877–AIR–IOWA (Construction Permit Help Line)
Construction Permit Forms

Chris Roling
Construction Permits
Form CE – Control Equipment Information

- Form CE1 – Fabric Filters
- Form CE2 – Cyclones
- Form CE3 – Wet Scrubbers
- Form CE4 – Thermal Oxidation
- Form CE5 – Catalytic Oxidation

Form CE is used for all other types of control equipment
Submit one CE form for each piece of control equipment
Do not use CE form if using a CE1 thru CE5 form

Common Issues:
#1 – The generic Form CE is submitted instead of a specific Form CE (i.e. Form CE1 for a fabric filter)
Common problems:
- Not completely filled out
  - Examples:
    - Lines 7 & 8 on Form CE1 are often missing
- A range is not given for pressure drop

If unclear about information submit manufacturer’s data
Will be adding PM$_{2.5}$ in the future
Need to be consistent in EP ID
- Title V, SPARS, etc.

Use actual distance from property line & nearest property line

Stack characteristic information is placed in permit so important to be accurate

Air emission pathway frequently not provided (Box 11
Calculations needed for:

- Emission point
- Project
- All pollutants
Purpose

- Demonstrate emission unit/emission point has capability to meet emission standard
  - Can use:
    - Emission factors
      - Need to document source of emission factors
    - Stack test data
      - Provide summary page or test date if observed by Dept.
    - Manufacturer’s test data
      - May need to provide test data for review
      - Make sure methodology is same as EPA methods
  - Not appropriate to back calculate from standard
  - Real small emission rates/poor emission factor rating can be reason for stack test
Need calculations showing project totals
- Includes:
  - Emission units/emission points obtaining permits
  - Exempt units that are part of project
  - Fugitive sources if 1 of 28 listed source categories
  - Other increases (i.e. increased utilization) if a major source
Minor sources for PSD
  ◦ Need to list **all** emission units & emission points including fugitive emissions

Major sources for PSD
  ◦ Need to list only emission units & emission points from last five (5) years including fugitive emissions

Need to list **all** pollutants

Need to use potential emissions (PTE)
  ◦ Can use standard (0.1 gr/dscf) or permit limit
    • Some exceptions (Ex: 500 ppm for SO$_2$ on NG source)

Can use spreadsheet as long as info is there
Need to be included even if not subject to federal reporting

Certain industries/processes often don’t include GHG
  ◦ Coolant
  ◦ Lagoons
  ◦ Food processors

Biogenic deferral
  ◦ Still need to include emissions in Form GHG
Form FRA

- Required to be submitted
- Most of the time marked “Don’t know”
Need to be included
  ◦ Decision from previous Kaizen event
  ◦ Speeds up processing time

Form MI–1:
  ◦ Follow plot plan requirements

Form MI–2:
  ◦ Need to list all emission units/emission points not part of the project
  ◦ Need to include attachment with explanation/calculations for actual emissions
Final Question or Comments?

- Open Discussion?/Questions?/Comments?