Instructions for Attachment J:
NON-ATTAINMENT REVIEW FORM

(Instructions for completing DEEP-NSR-APP-215)

All applications for a permit to construct and operate a stationary source shall include the information listed in Regulations of Connecticut State Agencies (RCSA) Section 22a-174-3a(c). This attachment shall be completed to fulfill the requirements of a non-attainment analysis.

Complete one form for the application package. If a particular item does not apply enter "N/A" (not applicable). If additional space is needed to answer a question in the application, attach separate sheet(s) as necessary, clearly identifying the applicant name, form name and Part number.

Questions? Visit the Air Permitting web page or contact the Air Permitting Engineer of the Day at 860-424-4152 (between 8:30 AM and 4:30 PM, Monday through Friday).

Background

Pursuant to sections 22a-174-3a(d)(3)(I) and –3a(*l*) of the Regulations of Connecticut State Agencies (RCSA) a permit cannot be granted for a new major stationary source or major modification located in a non-attainment area unless the Lowest Achievable Emission Rate (LAER) is incorporated into the subject source permit for each nonattainment air pollutant for which the subject source is major.

Currently Connecticut is considered non-attainment ozone with the ozone precursor pollutants nitrogen oxides (NOx) and volatile organic compounds (VOC) being subject to non-attainment review.

Instructions for Completing *Attachment J: Non-Attainment Review Form* (DEEP-NSR-APP-215)

Note: This form is not required if Current Premises Potential Emissions and Proposed Allowable Emissions, from Part VII.B of *Attachment F: Premises Information Form (DEEP-NSR-APP-217),* from this project are each less than major source thresholds for each pollutant. (i.e. an existing minor premises adds a minor source which results in the premises becoming a new major source.)

Applicant Name: Provide the applicant name as previously indicated on the *Permit Application for Stationary Sources of Air Pollution* form (DEEP-NSR-APP-200).

If the proposed project will be a major modification for NOx or VOC after completing *Attachment H: Major Modification Determination Form* (DEEP-NSR-APP-215), skip Part I of this form and complete Parts II and III of this form.

Part I: Applicability

The provisions of RCSA section 22a-174-3a(*l*) apply to the owner or operator of a major stationary source or major modification for any non-attainment air pollutant if such source is major for such pollutant and located in a non-attainment area for such air pollutant; or is located in an attainment area or unclassifiable area, but the allowable emissions of any air pollutant would cause or exacerbate a violation of a National Ambient Air Quality Standard (NAAQS) in an adjacent non-attainment area. Allowable emissions of any such air pollutant will be deemed not to cause or contribute to a violation of a National Ambient Air Quality Standard provided that such emissions result in impacts that are less than levels set forth in RCSA section 22a-174-3a, Table 3a(i)-1.

A. If the proposed project is a new major stationary source, indicate the air quality status of the area in which the premises is or will be located and list the allowable emissions from the proposed project for each pollutant. Indicate if such emissions are greater than the major source thresholds listed. Check all that apply.

If "Yes" was answered for any pollutants, the project is subject to Non-Attainment review for such pollutant(s) and must complete Parts II and III of this form.

If "No" was answered for any pollutants, the pollutant is not to Non-Attainment review for such pollutant(s).

B. If the proposed project is being located at an existing major stationary source and the project did not trigger a major modification for NOx or VOC:

Calculate the net emissions increase of NOx and VOC during the 5-year contemporaneous period (as defined below), including the current project. ("De minimis Rule").

Provide the following information to determine the 5-year contemporaneous period for the De minimis Rule review:

Proposed Calendar Year when Project will Commence Construction – Enter the calendar year in which the project is projected to commence construction.

Four Calendar Years Prior to Project Proposed Commence Construction Year – Enter the calendar year which is 4 years prior to the *Proposed Calendar Year when Project will Commence Construction.* Example: If the *Proposed Calendar Year when Project will Commence Construction* is 2014 then four calendar years prior to that would be 2010. This range represents 5 calendar years.

1. Contemporaneous Creditable Emissions Increases and Decreases

NOTE: Emissions increases and decreases must be *creditable* and *enforceable* and are subject to review and approval by the DEEP.

To determine which emission changes are creditable, the following basic rules apply:

- A decrease is creditable only to the extent that it is "federally-enforceable" from the moment that the actual construction begins on the proposed modification to the source. The decrease must occur before the proposed emissions increase occurs. An increase occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period not to exceed 180 days.

- A decrease is creditable only to the extent that it has the same health and welfare significance as the proposed increase from the source.

- A source cannot take credit for a decrease that it has had to make, or will have to make, in order to bring an emissions unit into compliance.

- A source cannot take credit for an emissions reduction from potential emissions from an emissions unit which was permitted but never built or operated.

Provide the following information for **all** contemporaneous creditable NOx and VOC emissions increases and decreases during the 5-year contemporaneous period defined above. Be aware that this contemporaneous period differs from the contemporaneous period used on *Attachment H – Major Modification Determination Form* and *Attachment I – PSD Form*. Calculate the Total Contemporaneous Increases/Decreases for the

subject pollutant and enter the results in Part I.B.2. Duplicate the page if necessary.

Change Type – Enter the type of change that caused or will cause an increase or decrease during the 5-year contemporaneous period. The change types are explained below:

NEW	New unit added. Includes new units that obtained an individual permit, new units that were added and are operating under a permit by rule regulation in RCSA §§22a-174-3b, -3c, or -3d or a new unit that was added that did not meet permit applicability under RCSA 22a-174-3a.
MOD	Modification of an existing unit This includes any unit which triggered a modification.
REM	Removal of a Unit. This includes any unit that was removed from the premises and where the removal will be federally enforceable on and after the date that construction begins on the proposed project. The actual reduction must take place before the date that the emissions increase from any of the new or modified emissions units occurs. (i.e. license revocation)
PBR	Permit by Rule Conversion. This includes any unit which was previously covered by an individual permit or registration and such license was revoked to allow the source to operate under a permit by rule in RCSA §§22a-174-3b, -3c, or -3d.
DB	De-Bottlenecked Units. This includes any existing unit which, as a result of the installation of the proposed project will increase its actual emissions.

Equipment Description - Provide the description for each unit that has been added or modified at the premises during the 5-year contemporaneous period and resulted in an emissions increase or decrease of the pollutant being evaluated. Do not include the proposed project for which this permit application is being submitted. List the equipment description from the permit. For other equipment, include the unit type, manufacturer and model number.

License or Regulation No. - If the unit holds, or once held a license (permit or registration) indicate the license number here. If the unit is permitted, indicate "P" and provide the permit number. If the unit is a registered source, indicate "R" and provide the registration number. If the unit is operating under a regulation, list the regulation. If the unit does not meet applicability under RCSA §22a-174-3a, then indicate "N/A". Examples: P 100-0043; RCSA §22a-174-3b(e).

Date of Change - Provide the date of the specified change during the 5-year contemporaneous period as follows:

NEW	Date license issued or date unit began operation for unpermitted sources.
MOD	Date of modification to an existing unit.
REM	Date license was revoked.
PBR	Date license was revoked in order for the source to operate under a permit by rule.
DB	Date de-bottlenecked units will increase actual emissions due to operation of proposed project.

New Actual Emissions (New ACT) - Provide the new actual emissions immediately after the *Date of Change* for each change during the 5-year contemporaneous period as follows:

NEW	New ACT emissions immediately after the *Date of Change* are the unit's potential to emit or allowable emissions, if operating under a permit or regulation.
MOD, PBR	New ACT emissions immediately after the *Date of Change* are the unit's new potential to emit or allowable emissions, if operating under a permit or regulation, due to the change.
REM	New ACT emissions immediately after the *Date of Change* are "0" since the unit's license was revoked.
DB	New ACT emissions immediately after the *Date of Change* are the unit's expected actual emissions due to the installation of the proposed project.

2-yr Actual Emissions (2-yr ACT) - Provide the baseline 2-year actual average emissions prior to the *Date of Change* for each change during the 5-year contemporaneous period as follows:

NEW	2-yr ACT emissions prior to the *Date of Change* are "0" since the unit did not exist prior to the date of change.
MOD, REM, PBR, DB	2-yr ACT emissions prior to the *Date of Change* are the average emissions for the specified pollutant over the most recent 24 month period. If the unit being changed is a new unit with less than 24 months of actual emissions, the 2-yr ACT emissions shall be the unit's potential emissions or permit allowable, if permitted.

Note: For a unit which was added and then removed within the same contemporaneous period, the 2-yr ACT emissions prior to the date of removal shall be the unit's potential to emit or permit allowable, if permitted. This results in a net increase of "0"for the unit being added then removed during the same contemporaneous period.

Totals – Total both the New ACT and 2-yr ACT columns for each pollutant.

Total Contemporaneous Increases/Decreases - Provide the difference between the New ACT and 2-yr ACT emissions in tons per year (tpy) for each pollutant.

Attachment 215-A - The 2-yr ACT emissions for each unit listed in Part IV must be based on the average actual emissions for the two years immediately preceding the change. New units would enter a "0" since they did not previously exist. If the most recent two year period was not selected as the representative two year period for actual emissions for any changed unit, check here and submit written justification for using a period other than two years of actual emissions immediately preceding the date of change as Attachment 215-A.

2. Emissions Summation

Total Project Emissions Increase – Provide the total project emissions increase from Part III of *Attachment H: Major Modification Determination Form.*

Total Contemporaneous Increases/Decreases – Provide the total contemporaneous increases/decreases from Part I.B.1 of this form.

Net Emissions Increase – Calculate the net emissions increase by adding the Total Project Emission Increase value to the Total Contemporaneous Increases/Decreases value.

Is Net Emissions Increase equal to or greater than 25 tpy? – Indicate if the net emissions increase value is equal to or greater than 25 tpy.

If "No", this pollutant is not subject to Non-Attainment Review and the Non-Attainment Review determination is complete.

If "Yes" for any pollutant, this pollutant is subject to Non-Attainment Review. Continue to Parts II and III of this form for the subject pollutant.

Part II: Application Requirements for Non-Attainment Areas

This part offers a checklist of attachments which are necessary to complete this application. All attachments listed in this Part are **REQUIRED.**

Check the appropriate box by each attachment being submitted as verification that all applicable attachments have been submitted. Please label all attachments as referenced in the permit application form and these instructions and be sure to include the name of the applicant as indicated on the application form.

Attachment 215-B: *Analysis of Alternatives*

Submit an analysis of alternative sites for the proposed activity, alternative sizes for the subject source or modification, alternative production processes, and all environmental control techniques and technologies which are available for such major stationary source or major modification.

Such analysis shall demonstrate whether the benefits of the subject source or modification would significantly outweigh its adverse environmental impacts, including secondary impacts and cumulative impacts, and social costs imposed as a result of the location, construction or modification.

The owner or operator of the subject source or modification shall submit such analysis prior to the issuance of any tentative determination on the permit application.

Attachment 215-C: *Secondary or Cumulative Impact Analysis*

Submit, for approval in writing, an evaluation of secondary impacts or cumulative impacts for each non-attainment pollutant with potential emissions in excess of the amount listed in Table 3a(k)-1 of RCSA section 22a-174-3a(k).

Attachment 215-D: *Offsetting Emission Reductions or Emission Reduction Credits Determination*

Submit documentation demonstrating that the planned use of any internal offsets comply with the requirements of RCSA section 22a-174-3a(*l*)(4)(B) and that certified emission reduction credits comply with the requirements of RCSA section 22a-174-3a(*l*)(5).

Any use of internal offsets must be approved by the Department prior to the issuing of the Tentative Determination. The application should include a detailed description of the planned reduction in actual emission from other stationary sources on the premises.

The use of certified emission reduction credits (CERC) must be submitted and approved by the Department before the issuing of the final permit.

To avoid unnecessary delays in issuing of the final permit it is recommended that the applicant use the Department's Emission Reduction Credit Registry contact for assistance in the CERC approval process.

Note: The current Connecticut State Implementation Plan (SIP) approved regulations are based on the federal regulations published in the July 2001 Federal Register. It is important to take this into account for any potential permitting activity concerning new major sources or major modifications involving PSD or non-attainment review because the definitions and/or methods used during the review are

slightly different than the most current version of the Code of Federal Regulations (CFR).

Attachment 215-E: *Required Number of CERCs Determination*

Indicate the total number of CERCs required for each pollutant subject to non-attainment review and submit documentation of secured CERCs which comply with the requirements of RCSA section 22a-174-3a(*l*)(5).

CERCs shall be calculated by the following equation =

[(Total non-attainment pollutant increase)[a] x (Appropriate offset ratio)[b]] – (Internal offsets)[c]

Notes:

[a] Total project increase for the non-attainment pollutant

[b] 1.3:1 for severe non-attainment; 1.2:1 for serious non-attainment; 1.15 for moderate non-attainment

[c] Based on actual preceding 2-year average emissions for that pollutant

Total non-attainment pollutant increase means all emission increases for that pollutant in the contemporaneous period.

Appropriate offset ratio of at least 1.3:1 in any severe non-attainment area for ozone, and 1.2:1 in any serious non-attainment area for ozone.

Internal offsets means the actual preceding 2-year average emissions for that pollutant.

It is recommended that the applicant discuss the planned offsetting reduction method with the Department prior to submittal of any application to avoid unnecessary delays in processing the application.

Part III: Lowest Achievable Emission Rate (LAER) Review

This part must be completed for each non-attainment pollutant.

Pollutant - Indicate the pollutant being reviewed in this Part.

LAER is the most stringent emission rate achievable for a source. The emission rate may result from a combination of emission-limiting measures, such as a change in raw material usage, process modification and add-on controls. The analysis must first identify all available control systems for the pollutant that have practical potential for application to this unit. The review needs to be broad enough to include controls applied to similar sources and new control technologies. The following sources of information should be investigated:

- EPA's RACT/BACT/LAER Clearinghouse
- Emissions limitation found in any State Implementation Plan
- EPA/State Air Quality Permits
- Federal/State Air Emission Inventories
- Control Equipment Vendors
- Manufacturers and Trade Associations
- International and Foreign Environmental Agencies
- Inspection/Performance Test Reports
- Technical Papers and Journals

Based on the analysis done on the possible control technologies, only technically achievable control technologies are to be considered.

The control system with the most stringent emission rate possible for the emission unit is LAER.

A. Achievability

List all LAER found for a unit which is the same or similar to the subject unit and determine if the emissions limitation has been demonstrated in practice.

LAER must be either of the following:

- The most stringent emissions limitation which is contained in the implementation

plan of any State for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or

- The most stringent emissions limitation which is achieved in practice by such class or category of stationary sources.

LAER does not consider economic, energy or environmental factors when determining achievability. LAER can be considered unachievable only if the cost of the control is such that the project could not be constructed or operated.

LAER – Enter each LAER determination found for the source.

Achievable (Yes/No) – Indicate if the LAER was demonstrated in practice.

If No, Explain – Enter an explanation on why the LAER was not achievable.

B. LAER Information

Complete this table for each LAER listed in Part III.A of this form.

LAER Option – Indicate the LAER option being reviewed from Part III.A of this form.

Unit Description – Enter the description of the equipment to be controlled, e.g., gas turbine, coating line, etc.

Facility/Location - Provide the name of the company or plant and the city and state where it is located.

Permitting Authority with Contact Information – Indicate the permitting authority that issued the LAER analysis. Examples include EPA, State of Connecticut, etc. Also include contact information such as: name, affiliation, address, phone, email of contact, etc.

Permit No.- Provide the identification number of the permit for the affected emission unit or process.

Capacity – Provide the appropriate capacity (e.g., raw material input, maximum production, or fuel usage rates, etc.), and specify the appropriate units for capacity.

LAER Determination – Provide the control requirements and/or limitations determined to be LAER for the affected emissions unit. Include relevant details such as control/destruction efficiencies, capture efficiencies, and units. Include separate attachments as necessary.

Compliance Achieved – Indicate whether or not the affected emissions unit has achieved compliance with the BACT determination requirements in practice/operation.

Method of Compliance Determination – If compliance was achieved, provide the method of compliance demonstration, such as a stack test, continuous emission monitoring system (CEMS) data, etc.

Post-LAER Emissions Rate – Provide the projected PTE for the pollutant of concern from the affected emissions unit after implementation of the LAER option (specify units).

Reference - Provide the sources of information used to obtain the BACT analysis information.

C. Proposed LAER Determination

In determining whether to approve LAER, the commissioner may take into account any emission limitation, including a visible emission limit. The commissioner may disregard any emissions test on a pilot plant or prototype equipment which does not have reasonable operating experience or which may not be generally available for industry use;

The commissioner may also take into account an output based emission limitation as LAER provided such application of LAER improves the overall thermal efficiency of the subject source or modification.

In no event shall the application of LAER result in an emission limit or rate of emissions that is less stringent or environmentally protective than an emission limitation approved by the commissioner as BACT, an emission limitation demonstrated or established in any State Implementation Plan or any applicable limitation or standard pursuant to 40 CFR Parts 60, 61, 62 or 63.

LAER Option Proposed – Indicate the LAER option proposed for this project.

Justification - Indicate why the LAER option(s) was chosen. Provide additional pages of explanation as necessary.