Instructions for Attachment L
AMBIENT IMPACT ANALYSIS FORM
(Instructions for Completing DEEP-NSR-APP-218)

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 supplemental application form shall be completed to determine the applicability of an ambient impact analysis review and to provide the parameters and/or attachments to complete such reviews. Complete each item as appropriate. If a particular item does not apply to your situation indicate "N/A" (not applicable). If additional space is needed to answer a question stated in the application, attach separate sheet(s) as necessary, clearly identifying the applicant name, form name and Part number, and unit number.

Note: The data provided in these forms will be used to define the operating limits in your permit.

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

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

Part I: Applicability

This section will determine which level of ambient air quality review the source must complete: Stack Height Review, Screening or Refined Modeling.

Proposed Allowable Emissions - For each pollutant, enter the proposed allowable emissions from *Attachment E212: Unit Emissions Supplemental Application Form* (DEEP-NSR-APP-212).

Ambient Air Quality Review Level –For each pollutant, indicate which review is required based on the proposed allowable emissions.

For Modifications Only - For each pollutant, indicate if the proposed allowable emissions are greater than current allowable emissions. If the proposed allowable emissions are greater than the current allowable emissions for any pollutant, or any stack parameter has changed (stack height, flowrate, etc.), the associated Ambient Air Quality Reviews must be completed or revisited

Part II: Stack Height Review

Complete this Part if a Stack Height Review is required in Part I for any pollutant. This Part is not required for sources performing a screening analysis or a refined modeling analysis. Instead, complete Part III and/or IV of this form as appropriate.

A unit passes the stack height review if the height of the associated stack is greater than or equal to the greater of:

- 10 meters (32.8 feet); or
- the lesser of 1.3 times the building height or 1.3 times the building width.

The referenced building is the building the unit is located in; or if the unit is outdoors, the closest building or structure.

If a unit does not pass the Stack Height Review, a Screening Modeling or Refined Modeling Analysis may be performed to demonstrate compliance with the Ambient Air Quality Standards.

Stack Number – Use the same stack numbers as used in *Attachment E211: Stack Parameters Supplemental Application Form* (DEEP-NSR-APP-211).

Stack Height (SH) - Provide the stack height in feet above grade. If there is no stack for a particular unit, enter the minimum height of release.

Building or Structure No. - Assign a reference number to the building in which the unit is located, or if the unit is outdoors, the closest building or structure; ie. B1, B2, B3, etc. Use identification numbers consistent with facility plot plan, if possible.

Building Height (BH) – Provide the height of the building or structure, in feet.

Building Width (BW) – Provide the maximum projected width of the building, in feet. The maximum projected width of a building is the widest

distance across the building from a viewpoint directly above the building.

Multiply the lesser of BH and BW by 1.3 (BL)– Multiply the lesser of building height or building width times 1.3 and indicate the result, in feet.

Minimum Stack Height Required…Which is Greater, 32.8 ft or BL? (MSH) – Indicate which is greater, 32.8 ft or the result calculated as BL.

Is SH Greater than or equal to MSH? – Indicate if the stack height is greater than or equal to the minimum stack height required. If yes, the review is complete.

If a unit does not pass the Stack Height Review, a Screening Modeling or Refined Modeling Analysis may be performed to demonstrate compliance with the Ambient Air Quality Standards.

If more space is needed check the appropriate box and attach additional sheets providing the required information.

Part III: Screening

Complete this Part if screening is required for any pollutant in Part I.

Complete this Part to provide the stack parameter and all required building or structure information in order for a screening ambient air quality analysis to be completed. See instructions for an example and use the same stack and unit numbering from *Attachment E211: Stack Parameters Supplemental Application Form* (DEEP-NSR-APP-211).

The screening analysis will be performed by DEEP, however, the applicant may also perform this review and submit it for review and approval. If applicable, please submit a completed analysis as Attachment 218-B.

Such analysis shall be performed in accordance with the DEEP Ambient Impact Analysis Guideline (AIAG). Questions on performing a screening analysis can be sent to Mark.DeRosa@ct.gov.

All units and stacks that are included in this application package, as well as nearby buildings, should be listed in the table. *Nearby* is defined in Part III.B.

A. Equipment

Note: If the exhaust point discharges indoors, use the building exhaust nearest the unit in completing this form.

Stack Number - Assign a reference number to each stack that correlates with the unit number assigned to the unit which uses the stack. Base this reference number on the same numbering system that was used in completing *Attachment E211: Stack Parameters Supplemental Application Form* (DEEP-NSR-APP-211). For example, if the unit number assigned to a particular unit is U1, the stack number should be S1. If there is more than one stack for a particular unit then assign reference numbers such as S1a and S1b, etc. If more than one unit uses the same stack, then assign a number to the stack that correlates with each unit number. For example, if unit numbers assigned were U1, U2, U3, then assign a reference number to the stack such as S1-2-3. Please use a consistent reference number for each stack throughout the application package.

Note: List the units in each row in the same order as the associated stack numbers were listed in each column.

Unit Number - Identify the reference or unit number(s) assigned to the unit(s) which is vented to the stack. Use the same numbering system that was used in completing *Attachment E211: Stack Parameters Supplemental Application Form* (DEEP-NSR-APP-211). Please use a consistent reference number for each unit throughout the application package. Include other units previously constructed which are vented to the same stack. Assign reference numbers to the previously constructed units which begin with the letter "P". For example, if the unit number assigned to a particular unit is U1, the stack number assigned should be S1 and the previously constructed unit vented to this same stack should be assigned a reference number P1. If there is more than one previously constructed unit vented to this stack, then assign reference numbers such as P1a and P1b, etc. Use the same reference number assigned to a stack for the previously constructed units except replace the "S" with a "P" and add a, b, c. etc., if applicable.

Unit Description – Provide a brief description of each emissions unit.

Stack Height – For each unit, indicate the stack height (H) for the associated stack in feet above grade. If there is no stack for a particular unit, enter the minimum height of release.

Distance to Each Stack – For each unit, indicate the linear distance in feet from such unit's stack to each stack listed.

Distance to Nearest Property Line – For each unit, indicate the linear distance in feet from the unit's

stack base to the nearest property line.

If more space is needed to list additional stacks check the appropriate box and attach additional sheets providing the required information.

B. Building or Structure

To determine if a building is ***nearby*** and should be listed in this section:

- For each building, take the lesser of the building width (W) and building height (H) and multiply by 5.
- If a stack is within this distance, but no greater than 0.5 miles, of the building then the building is near the stack and must be included in Part III.B of this form.
- It may be necessary to assess buildings located off of the applicant's premises.

Building No. - Assign a reference number to each building which is determined to be ***nearby***; ie. B1, B2, B3, etc. Use identification numbers consistent with facility plot plan, if possible.

Building Description – Provide a brief description of each nearby building for identification purposes.

Building Height (H) – For each building, indicate the height of such building in feet.

Building Length (L) – For each building, indicate the length of such building in feet.

Building Width (W) – For each building, indicate the maximum projected width of such building in feet. The maximum projected width of a building is the widest distance across the building from a viewpoint directly above the building.

Distance to Stack – For each building, indicate the shortest linear distance in feet from such building to each stack listed in Part I.A.

If more space is needed to list additional buildings check the appropriate box and attach additional sheets providing the required information.

Part IV: Refined Modeling

If refined modeling is required for any pollutant as indicated in Part I, the applicant shall submit both a paper copy and an electronic copy of the refined modeling analysis as Attachment 218-C. Such analysis shall be performed in accordance with the DEEP Ambient Impact Analysis Guideline (AIAG).

It is recommended that applicants request a pre-application meeting to specifically discuss refined modeling issues prior to submitting their application. Requests for a modeling pre-application meeting can be sent to Mark.DeRosa@ct.gov.

Part V: Attachments

This section offers a checklist of all the attachments necessary to complete this application. Not all attachments may be applicable to the application. Where the checklist states "**IF APPLICABLE**", your particular situation will determine if the attachment is 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 218-A: *Plot Plan*, IF APPLICABLE

Submit a detailed plot plan of the facility with all structures, stack locations, and property lines clearly delineated with the unit, stack and building numbers used throughout this application. In addition you may submit sketches, aerial photos, or other site plans to aid in the identification of buildings or structures listed in Part III.B and their locations with respect to the stacks listed in Part III.A.

You may use the plot plan submitted as *Attachment C* of this application as long as all buildings or structures listed in Part III.B and their locations with respect to the stacks listed in Part III.A are properly identified.

Attachment 218-B: *Screening Analysis*, IF APPLICABLE

If the applicant opted to perform the screening analysis, submit both a paper and electronic copy of such completed screening analysis for DEEP review and approval.

Attachment 218-C: *Refined Modeling Analysis*, IF APPLICABLE

Submit both a paper copy and an electronic copy of the completed refined modeling analysis for DEEP review and approval.