

**New Source Review  
Emissions Impact Analysis SOP**


January 11, 2012

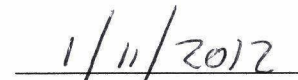
**New Source Review Sections  
Permitting Branch  
Division of Air Quality  
Utah Department of Environmental Quality**

APPROVED:

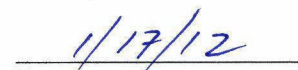
  
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Minor NSR Section Manager

  
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Date

  
\_\_\_\_\_  
Major NSR Section Manager

  
\_\_\_\_\_  
Date

  
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Permitting Branch Manager

  
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Date

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## **I. PURPOSE**

This standard operating procedure (SOP) is intended to give guidance and direction to the new source review (NSR) engineers and modelers in determining that a proposed source will be operated in accordance with the applicable requirements of our rules, the NSPSs, National Ambient Air Quality Standards (NAAQS), the NESHAPs and MACTs, new source review criteria, the provisions of the SIP and the Prevention of Significant Deterioration (PSD) program.

## **II. APPLICABILITY**

This SOP applies to NSR permit engineers and modelers. The NSR section managers and the permitting branch manager will be familiar with this SOP to educate and train any individuals involved in the permitting process.

## **III. OVERVIEW**

The Utah Administrative Code (UAC) R307-401-8 states that the Executive Secretary shall issue an AO if it is determined that the proposed source will be operated in accordance with the applicable emissions requirements, including R307-410 (Emissions Impact Analysis). Therefore, whenever the Division issues an AO, it is done with the understanding that during the process, staff has made a defensible determination that state and federal air quality standards, to include all of the items mentioned in R307-401-8, will be met. This responsibility is a shared one between the NSR engineer and the modeler, but the determination ultimately rests with the Executive Secretary.

## **IV. PROCEDURE**

1. The section manager will be notified of all new projects. When the section manager is notified of a new project, the section manager assigns a project engineer and peer engineer to the project. A modeler is assigned by the major source section manager if needed.
2. The project engineer is responsible to notify the assigned modeler of all pre-NOI meetings which should be attended. If a modeler is contacted by a source and requested to begin an Emissions Impact Analysis (EIA) prior to submittal of the NOI, the modeler will contact the section manager prior to conducting any work on the project. This project will be entered into TEMPO at this time so a billing code can be generated.
3. There are various levels of an EIA that fit various projects. The level of analysis required is based on the type of emissions, the size of the source and the change in emissions. The various levels of analysis are as follows:

- a. **No EIA required.**
    - i. If the source emitting the pollutant is located in an EPA-defined non-attainment area for a pollutant, then no analysis is required for that pollutant.
    - ii. Installations emitting HAPs which are or are scheduled to be subject to an emission standard promulgated under R307-214 at the time a notice of intent is submitted are exempt from analysis for the applicable HAPs.
    - iii. There is no increase in emissions.
    - iv. Intermittent operations (i.e. emergency generators).
  
  - b. **In-house EIA.**
    - i. A source is exempt from modeling (R307-410-4) a particular pollutant if it is increasing emissions of:
      - 1. PM<sub>10</sub> fugitives less than 5 TPY, or
      - 2. PM<sub>10</sub> non-fugitives less than 15 TPY, or
      - 3. SO<sub>2</sub> less than 40 TPY, or
      - 4. NO<sub>x</sub> less than 40 TPY, or
      - 5. CO less than 100 TPY, or
      - 6. Lead less than 0.6 TPY.
    - ii. For a minor source with emission increases less than the modeling thresholds, the EIA will include
      - 1. a review of previous modeling,
      - 2. an evaluation of site specific conditions, and
      - 3. the application of a conservative impact estimate.
    - iii. If an appropriate EIA conclusion cannot be made from this review, in-house site-specific modeling will be conducted (R307-410.3).
  
  - c. **Minor Source or minor modification EIA requiring site-specific modeling**
    - 1. NAAQS analysis for pollutants that increase
    - 2. HAP analysis
  
  - d. **Major Source PSD EIA**
    - i. New major sources and major modifications at a major PSD source (R307-405) must perform a PSD analysis that includes the following:
      - 1. Pre-construction monitoring analysis
      - 2. NAAQS analysis
      - 3. HAP analysis
      - 4. Class II increment analysis
      - 5. Class I increment analysis
      - 6. Soil and vegetation analysis near field
      - 7. Class I visibility and deposition (AQRV) analysis
4. If it is determined that the source must conduct an EIA, the project engineer and modeler will work together to establish the level of analysis needed. The source will submit a modeling protocol that will meet the level of analysis needed. The

modeler will review the protocol and work with the source to ensure the protocol meets DAQ guidelines and methods. Questions or concerns should be elevated to the section managers immediately.

5. A completed EIA should be submitted with the NOI unless, by rule, the source is not required to conduct an EIA. Any information submitted in the NOI pertaining to the EIA (including electronic files) should be forwarded by the project engineer to the modeler as soon as possible for review.
6. If a modeling protocol was not approved prior to receipt of the NOI, the project engineer will work closely with the modeler to determine the level of EIA required. If submitted, the adequacy of the EIA will be determined. The engineer will communicate this information and additional data needed, if any, to the source.
7. The modeler may contact sources and their consultants directly in order to exchange modeling related information. The modeler will copy the project engineer and section manager on any electronic or written communications (either letter or e-mail) and provide a summary of verbal communications.
8. If an in-house EIA is to be conducted, the modeler will work through the data as outlined in paragraph 3.b.ii. If it is determined by the modeler that a site-specific modeling analysis be conducted, a recommendation to that effect should be made to the section manager. The section manager will evaluate the recommendation before determining the course of action. If the section manager determines site-specific modeling is not required, the reason for this determination will be documented.
9. The project engineer is responsible for all emissions related information, stack parameters, calculations and materials, and for determining their accuracy and completeness. This information must be made available to the modeler during the review process. While questions may be asked, the project engineer has ultimate responsibility to assure that this information is correct. The project engineer will review the hourly HAP emission estimates in conjunction with the other information required under R307-410-5(1)(c)(i) and verify its accuracy and completeness. Under provisions of R307-214-2 for which there is a delay in the implementation of an emission standard that the installation will be subject to, the project engineer should consult with the modeler or toxicologist to determine if the exemption from R307-410-5(1)(c)(i) might result in an unacceptable risk to public health. The project engineer and modeler will present their conclusions to the section manager who will determine if the information required by R307-410-5(1)(c)(i) should be submitted.
10. For projects subject to a modeling analysis, the project engineer will notify the modeler when the review of the source's proposed emission levels is complete. Subsequently, if there are any changes in emission levels during the review

process they will be brought to the attention of the modeler, to assure that previous modeling results are still valid.

11. The modeler will complete the review of the EIA and generate an EIA memo in TEMPO. The modeler will notify the project engineer and section manager of any problem that may delay the EIA review.
12. Should in-house site-specific modeling be directed, the modeler will notify the project engineer and the appropriate section manager of the anticipated time line for completing the modeling review. At the completion of the in-house modeling/EIA, the modeler will generate an EIA memo. An EIA memo shall include the results of the EIA review and recommendations for AO conditions; the methodology and assumptions used for the analysis, the location of problem receptors, the frequency of the problems over the course of the modeling period, and the values returned by the model at these locations. A discussion of the sensitivities of the model should also be included in this memo. Input and output files from the modeling effort will be accessible to managers, if requested. The memo will be made part of the project file and TEMPO.
13. If the analysis predicts that the proposed permitting action will cause an exceedance of the NAAQS or PSD increment, the modeler will notify the project engineer and section manager before preparing the EIA memo. The project engineer will then notify the source of the adverse modeling results and ask the source to submit possible solutions. The project engineer, the modeler and the source will work together to reach an acceptable solution. The project engineer and modeler shall work together in this effort but will not direct or suggest specific solutions to the source without consulting the section manager.
14. If the EIA memo recommends conditions to be placed in a source's AO to ensure that the assumptions used in the modeling analysis remain valid, the modeler, the project engineer and the source will work together to draft the necessary language for these conditions. The project engineer will assure that this language is included as conditions in the AO.
15. The modeler should review the ITA before it is made available for public comment. The modeler should give top priority to these reviews and respond to the project engineer within five working days with any modeling concerns.
16. Regardless of personal concerns over a project, the ultimate decision to issue an AO rests with the Executive Secretary. Once a decision is made, that decision is the position of the division and should be supported by all staff.

## **V. TRAINING**

1. Initial training will be provided in a peer meeting to NSR engineers and modelers. Attendance will be taken at the meeting and any engineers or modelers not in attendance must read the SOP and report to their section manager. The section manager will ensure the SOP is understood.
2. NSR permitting staff will review this document on an annual basis or when an update or change occurs with this document. These reviews will be completed as part of a scheduled peer meeting.

## **VI. AUDITS**

1. The major NSR section manager is responsible to audit this procedure every three years.

## **VII. MAINTAINING SOP VIABILITY**

1. The major NSR section manager is responsible to keep this SOP up-to-date and the mandatory review period is every three years or after a regulatory change that affects this SOP. The audit and viability review can occur concurrently.

## **VIII. RECORDKEEPING**

1. The NSR secretary will receive the original copy. The SOP will be logged in an SOP index.
2. The NSR secretary will send a reminder notice to the major NSR section manager at least one month before an audit or mandatory review period is due.

## **IX. ATTACHMENTS**

1. N/A