

From: [Holladay, Cleveland](#)
To: [Rupesh Patel](#)
Cc: [Chen, Eugene](#); [TSAL, YA-TING](#); [Rios, Gerardo](#); [Brode, Roger](#); john_notar@nps.gov; don_shephard@nps.gov; kirsten_king@nps.gov
Subject: Tucson Electric Power's IGS RICE Project: Urban vs Rural Determination Land Use Classification; Approval of Merge Plumes
Date: Thursday, October 19, 2017 3:03:38 PM

Hi Rupesh,

Here are my comments and approvals of the following modeling procedures. Tucson Electric Power may proceed to the use the "urban" land use option based on the procedure in Section 5 of the AERMOD Implementation Guide (Last Revised December, 2016). The use of this option is also based on population density data indicating urban (867/km² vs 750 km²) and the Tucson International Airport wind rose showing predominant winds blowing from the southeast over the proposed project to the urban area to the northwest.

Tucson Electric may also proceed to use plume merging provided that the stack arrangement is the following as described in the applicant's "Technical and Policy Justification for Plume Merging: Tucson Electric Power's IGS RICE Project". For each group of the IGS RICE project's five stacks shown in Figure 2, two sets of stacks indicated by red boxes are proposed to be modeled as separate merged stacks (see orange stars in the figure) due to their separation in each group by slightly less than one stack diameter from every other stack in that group. One group of 3 stacks would be modeled as a single merged stack and the remaining 2 stacks would be modeled as a second (smaller) merged stack (a "3 + 2" configuration). This merging approach follows the policy decisions from past EPA Model Clearinghouse memos that the merged stacks should be within one diameter of each other in the merging approach.

-Cleve Holladay
US EPA Air Division, Air 07
75 Hawthorne Street, San Francisco, CA 94105
415-947-4140