submitted to the permitting authority prior to the public notice announcing the proposed construction permit. The determination of the amount of offset needed must take into account the prescribed offset ratio for the nonattainment area of concern. The permit must contain an enforceable condition requiring the source, each year, to have demonstrated to the permitting authority that, at that time, it held sufficient DER's to meet offset needs for at least the next year of operation. Failure to obtain any required offsets in a timely manner would be a violation of the source's permit.

Section 173(c)(2) of the Act prohibits emissions reductions otherwise required by the Act from being used as offsets. For example, reductions required to meet RACT, MACT, acid rain reductions, and the phase-out of chlorofluorocarbons pursuant to statutory requirements are not creditable as emissions offsets.

3. Special DER Use Restrictions. The proposed model OMTR would limit the use of DER's with respect to certain generation and use characteristics of the DER. Relevant characteristics include pollutant type, the modeling domain or nonattainment status of the area where the DER was generated, and the time of generation. The proposed OMTR would provide for these limiting provisions, in part, to assure that in nearly all cases the uses would be helpful toward reducing peak ozone concentrations. That is, the connection between generation and use must be correct, considering the distance between the generator and user sources and the patterns of pollutant transport in the relevant area (direction). States would be encouraged to assess their own unique situations, and devise an OMTR that contains special DER use limitations that are consistent with relevant modeling analyses that are in the SIP.

a. Geographic Restrictions. Ozone smog formation is a difficult problem that has resulted in various approaches aimed at resolving it. Prior to the 1990 amendments to the Act, ozone attainment plans largely focused on emission reductions in nonattainment areas. More recently, attention has been focused on the issue of long-range transport and its contribution to ozone formation and to violation of the ozone standard. Ozone precursor pollutants mix and react together as they travel long distances over several days, thus creating a serious problem. For example, high ozone concentrations in the northeast occur on scales of over 1,000 km and can persist for many days. Our current understanding of ozone formation suggests that the relative importance of VOC and NOx control varies with the location and scale of the ozone problem. In general, VOC control is most likely to be effective in urbanized nonattainment areas, and less effective in the surrounding countryside where local natural VOC emissions can overwhelm those from human activities. On the other hand, NOx control tends to be most beneficial over larger distances. Therefore, the model OMTR would restrict VOC DER use to the same area in which the DER was generated, and would permit NOx DER trades to occur within the larger modeling domain.

While considering the general relationships among VOC, NOx and ozone formation, it is also important to consider unique local effects that might be characterized in a specific SIP modeling analysis. DER uses should be consistent with relevant modeling analyses that are in the SIP to preserve the integrity of the SIP. In these modeling analyses, distance and direction effects are considered by analysis of various episodes, meteorological regimes, and boundary conditions. SIP's may define locations where emission reductions are most helpful, marginal, or even counterproductive.

Some SIP's may have a regional NOx strategy component. A regional strategy means that emission reductions are planned to occur across a large area that may include sources located both within the local urban airshed modeling domain and outside the modeling domain. A modeling domain is the geographic area covered by an air quality model used to support an attainment or maintenance demonstration. The domain can be thought of as a rectangular box which is superimposed over the area being modeled. For the current (1994) revisions to State implementation plans (SIP's) for ozone, 23 modeling domains have been defined for different locations in the United States. Typical domain size ranges from 100 km x 100 km to 350 km x 350 km. Specifications for each of the 23 modeling domains are available through the U.S. EPA's Technology Transfer Network (TTN). In addition, maps should be available from the State agency having lead responsibility for the modeling analysis. Lead State agencies are also identified in the TTN.

In the regional strategy knowing the precise location of each emissions reduction is not as critical as understanding the general distances and directions emission reductions travel from the nonattainment area. In such cases, the modeling analysis shows ozone reductions in the nonattainment area through both local emission reductions within the modeling domain and by reduced regional, boundary concentrations coming in to the area due to emission reductions outside the modeling domain.

The above considerations are reflected in SIP attainment demonstration or other modeling analyses conducted in support of the SIP. Thus, in some cases a SIP's control strategy may simply call for local reductions in a nonattainment area and, in other cases, the SIP may be supported by modeling analyses which indicate that both local and regional emission reductions are needed.

In general, EPA would view NO_X DER's used within the same urban airshed modeling domain as they were generated as acceptable as long as they: (1) Are consistent with the regional concept in the SIP strategy, and (2) address distance and direction concerns. The EPA acknowledges that in special cases, NO_X trades within a modeling domain could result in higher NO_X emissions in an urbanized area, and may increase already high ozone levels in that area; in this case, the use of NO_X DER's in that area might not be consistent with attainment demonstration and in such cases should be disallowed.

In addition, EPA believes that DER uses would be generally beneficial where NO_X or VOC DER's generated inside a nonattainment or maintenance area were used by sources not located in a nonattainment area, maintenance area or modeling domain. Trades which crossed or were entirely outside of modeling domain boundaries could be ineffective where the distances are great or the direction of pollutant transport showed little benefit in reducing peak ozone concentrations from such a trade.

Because of the complexity that would be required of EPA to list in the model rule all possible combinations of distance and direction for NO_X and VOC trades in all areas wanting to adopt open market trading programs, the model rule proposes to allow NO_X DER use only if the NO_X DER was generated within the same modeling domain, and VOC DER use only if the VOC DER was generated in the same area. States would be encouraged to assess their own unique situations, and propose an OMTR that allowed NO^{T2X} trades from outside the modeling domain at an appropriate discount, or allowed VOC trades with adjacent nonattainment areas, after taking into account and justifying the distance and direction considerations.

In addition, States could choose to adopt rules which allowed NO_X trades