In its comments submitted to EPA, with support from its technical consultants, NLA identified numerous technical problems with EPA's prediction of the efficacy of DSI for control of HCl in lime kilns. For example, EPA assumed an unreasonably high control efficiency for this technology (98%), whereas NLA's consultants project control efficiency as likely less than 90%. Many lime kilns may require redesign of ducting and/or relocation of the existing PM control devices (at great expense) to attempt to reach reasonable control efficiencies. Injection of a sorbent may interfere with lime plants' ability to meet the existing PM standard, and thus may require replacement of existing PM control equipment resulting in increased costs and additional technical challenges above that estimated by EPA.

Accordingly, even though DSI can theoretically be installed at lime plants to control HCl, the parameters and efficacy of that application are unknown until actual testing is done. This will take a significant amount of time, and thus it is unknown if this technology can be consistently installed at lime plants and successfully achieve the HCl standards before the current compliance date. Thus, this technology should be deemed currently unavailable.

Mercury

As with D/F, the technology identified by EPA for treatment of mercury is ACI. As with all the technologies addressed here, ACI has not been used at lime plants in the United States to treat mercury. Once again, EPA's projections of the feasibility and costs of using this technology were not based on data from lime kilns, and thus are speculative. With mercury, an added challenge is that the same technology is to be used to treat both mercury and D/F, and testing will be required to make sure that parameters can be set so that both standards are met in the same device. Again, this will require extensive testing, to be carried out in equipment that currently does not exist.

NLA's comments cited additional technical issues with treatment of mercury in lime kilns with ACI. For example, the absorption mechanisms differ between the elemental or oxidized form of mercury. Each kiln would need to be studied for the form(s) of mercury in the exhaust to determine potential control alternatives. Activated carbon can be used for capture of the elemental form of mercury whereas brominated carbon is used for capture of ionic form. Brominated carbons are significantly more expensive. In addition, specific conditions in each kiln can significantly affect ACI's effectiveness, including the presence of water vapor or sulfur dioxide, requiring adjustment of injection rates.

Testing to determine how to treat mercury in each lime kiln will take a significant amount of time, and thus it is unknown if this technology can be consistently installed at lime plants and successfully achieve the mercury standards before the current compliance date. Thus, this technology should be deemed currently unavailable.

Overall, EPA's candidate control technologies identified as necessary for lime kilns to comply with the Lime Rule will require significant research and development, pilot plant

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question, because where no sources are controlling, it is nonsensical to refer to the "best performers." The speculative nature of EPA's technology predictions adds focus to this issue.