



Agenda Date: March 17, 2005
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Estimated Time: NA
Continued Item: No

Board Agenda Item

TO: Air Pollution Control District Board

FROM: Terry Dressler, Air Pollution Control Officer

CONTACT: Gary Hoffman, 961-8818

SUBJECT: Celite Corporation Diesel Tractor Repower Project-Off-Road Diesel Repower Program

RECOMMENDATION:

Execute a Grant Agreement with Celite Corporation for \$123,170 for repowering a surface mining Caterpillar D-10N tractor bulldozer with a new Caterpillar Tier 2 low-emission diesel engine.

DISCUSSION:

The District's Off-Road Diesel Repower Program was approved by your Board on June 19, 2003. The program targets both public agencies and private operators of off-road heavy-duty diesel equipment, to provide incentive funding for new or rebuilt low-emission engines, or to purchase new equipment with low-emission engines. To date, the District has funded \$128,462 to repower two front-end loaders and one bulldozer with low-emission diesel engines generating about 32 tons of reduction in smog pollutants (oxides of nitrogen or "NOx") over the project life, at a weighted-average cost effectiveness of about \$4,500 per ton NOx reduced. The balance of the program allocation approved by your Board is currently \$271,538.

Under this program, Celite Corporation of Lompoc repowered a front-end loader and bulldozer with low-emission diesel engines in 2003 with partial incentive funding from the District totaling \$98,462. Celite is proposing a second project using partial District funds to repower an existing

1996 Caterpillar D-10N bulldozer, used about 3,000 hours per year, with a new Caterpillar 3412 diesel engine (557 hp) meeting the CARB Tier 2 off-road emission standard. While repowering an engine of this size would now require a cleaner Tier 3 engine, starting in 2005, under CARB off-road standards, Caterpillar is not making Tier 3 engines available to repower older equipment, due to technical and safety considerations. In such cases, the Carl Moyer Program Guidelines allow the replacement engine to meet the previously applicable Tier 2 standard.

Celite's proposed D-10N repower project is estimated to cost a total of \$163,170. The District is proposing to pay a total of \$123,170 or about 75% of the hardware cost for the new Tier 2 engine. Celite is responsible for the balance of the project cost (\$40,000), including all labor, plus additional charges to replace transmission and related parts (estimated at \$18,664), and disposal of the old engine. Over a project life of seven years, this repower project should reduce NOx emissions alone by about 17 tons, and total emission reductions of NOx, reactive organic gases (ROG), and particulate matter (PM₁₀) of about 40 tons in our county. The estimated cost effectiveness of the project is about \$8,238/ton of NOx only, and about \$3,390/ton of total pollutants (NOx+ROG+10*PM₁₀) reduced. This repower project is consistent with the requirement of the current Carl Moyer Program Guidelines (including approved Advisory 05-001, pursuant to AB923), and has received ARB staff's oral approval.

Funding for the proposed Celite repower project for a not-to-exceed amount of \$123,170 will derive from the Carl Moyer Program funds, and is included the District budget for Fiscal Year 2004/05. The remaining balance in the program allocation will be \$148,368 if this grant is approved by the Board.

SPECIAL INSTRUCTIONS:

Please return one fully executed copy of the Grant Agreement for this item to the contact named above.

Attachment 1: Photograph of Celite D-10N

Attachment 2: Celite Corporation Grant Agreement