



ENERGY/AIR QUALITY ADVISORY COMMITTEE

March 16, 2009

Isiah Leggett
County Executive
Office of the County Executive
Rockville, MD 20850

Dear Mr. Leggett:

The Montgomery County Energy and Air Quality Advisory Board (EAQAC) is charged with providing advice to the County Executive and Council on issues related to air quality. EAQAC is comprised of Montgomery County citizens representing a variety of skills and sectors in areas such as environmental science, law and policy. We would like to bring to your attention an issue concerning air pollution from non-road construction vehicles and equipment that we believe you and the Council should act upon to ensure greater air quality and health benefits for all Montgomery County residents.

EAQAC recommends that the County enact legislation that requires, for County construction projects, the use of best available emissions control technology for non-road construction vehicles and equipment.

Background

The Washington Metropolitan region continues to strive to meet increasingly strict National Ambient Air Quality Standards, particularly those for fine particulate matter (PM_{2.5}) and ozone. The region will be developing State Implementation Plans (SIP's) to demonstrate how the area will meet the federal standards. Local government initiatives, such as the one proposed here, reduce PM_{2.5} and ozone forming precursors. Consequently, the legislative action proposed here can be included in the SIP, and is an important contribution to the region's efforts to improve air quality.

Health Effects from Diesel Emissions

Diesel emissions, due in large part to their high concentrations of particulate matter, are associated with severe and multiple health risks to the citizens of Montgomery County.

Public health organizations, including the National Institute of Occupational Safety and Health, the World Health Organization, the United States Environmental Protection Agency (EPA), the California Environmental Protection Agency and the United States Department of Health and Human Services' National Toxicology Program, have associated diesel exhaust or diesel particulates with an increased risk of cancer. Additionally, the health effects associated with particulate matter include decreased lung function, aggravated asthma, respiratory symptoms and premature death.¹ Nonroad diesel equipment is the single largest mobile source-based source of diesel particulate matter.

Diesel exhaust also contains nitrogen oxides, which combine with volatile organic compounds in the air, such as hydrocarbons -- also emitted by nonroad vehicles -- to form ground-level ozone, or smog, in the presence of heat and sunlight.² Ozone may cause a variety of respiratory problems, including aggravated asthma, decreases in lung capacity and increased susceptibility to respiratory illnesses.³ It is damaging to lung tissue in high concentrations and during long-term exposure.⁴ As mentioned above, increased particulate matter concentrations and nitrogen oxides have been positively linked to increases in the aggravation of asthma, which can lead to increased rates of preventable hospitalization and premature death.

Addressing Non-Road Vehicles

Nonroad vehicles, such as backhoes, bulldozers, excavation machines, generators and cranes, have been and will be used to perform necessary and important functions in Montgomery County. The EAQAC finds, however, that the County has a responsibility toward the people who live, work and attend school in the County, to minimize, wherever practical, the pollution such equipment and machinery emit into the air. The EAQAC finds that using nonroad vehicles that utilize the best available technology for reducing the emission of harmful pollutants, such as particulate matter and nitrogen oxides, would have a dramatic impact on the level of pollutants being released in Montgomery County. The Inter-County Connector project includes emission control requirements for the construction vehicles involved. The EAQAC believes that we should extend similar vehicle emissions control to all Montgomery County construction projects.

Recommendation

¹ United States Environmental Protection Agency, "Health and Environmental Effects of Particulate Matter, Fact Sheet", July 17, 1997, <http://www.epa.gov/ttn/oarpg/naaqsfm/pmhealth.html>.

² <http://www.epa.gov/otaq/inventory/overview/pollutants/nox.htm>.

³ <http://www.epa.gov/otaq/consumer/04-ozone.pdf>

⁴ American Lung Association of New York State, Inc., "Unhealthful to Breathe: Summer Ozone Levels in New York State", October 2002, p. 6.

EAQAC recommends legislation requiring that any diesel-powered nonroad vehicle, fifty horsepower and greater, that is owned by, operated by or on behalf of, or leased by a County agency utilize the best available technology for reducing the emission of pollutants. Additionally, this legislation should require that any solicitation for a public works contract and any contract entered into as a result of such solicitation include specifications that all contractors in the performance of such contract use the best available technology for reducing the emission of pollutants for diesel-powered nonroad vehicles. All contractors in the performance of such contract must comply with such specifications.

To facilitate the County's promulgation of this recommendation, we have included, in Appendix A, legislation enacted by New York City that establishes a "clean" non-road vehicle program. In Appendix B, we provide model contracting language developed in partnership between the US EPA and the Northeast Diesel Council to support a preference for clean non-road vehicles. We believe both approaches are valid and can assist you and the Council in determining the best approach for achieving a cleaner Montgomery County.

The County should also explore whether some of the new federal funds available through the American Resource and Recovery Act (ARRA), and other competitive federal grants awarded annually, such as grant funding authorized by the Diesel Emission Reduction Act (DERA), might be used to purchase new, cleaner, more fuel efficient non-road diesels, and retrofit, replace or repower existing diesel engines.

If you have any questions concerning this matter please do not hesitate to contact me.

Sincerely,

David Faerberg, Chair
Energy and Air Quality Committee

Appendix A: New York City Law

New York City Local Law 77 [Note, the NYC law includes language requiring that vehicles use ultra low sulfur diesel fuel. At the time of this legislation, in 2003, low sulfur diesel fuel was not nationally available. In the 2006-2007 timeframe, the U.S. EPA required that low sulfur diesel fuel be used by all on-road and nonroad diesel vehicles.] The law can also be found at http://www.nycouncil.info/pdf_files/bills/law03077.pdf

§ 2. Title 24 of the administrative code of the city of New York is hereby amended by adding a new section 24- 163.3 to read as follows:

§ 24-163.3 Use of ultra low sulfur diesel fuel and best available technology in nonroad vehicles.

a. For purposes of this section only, the following terms shall have the following meanings:

(1) "City agency" means a city, county, borough, administration, department, division, bureau, board or

commission, or a corporation, institution or agency of government, the expenses of which are paid in whole or in part from the city treasury.

(2) "Contractor" means any person or entity that enters into a public works contract with a city agency, or

any person or entity that enters into an agreement with such person or entity, to perform work or provide labor or services related to such public works contract.

(3) "Lower Manhattan" means the area of New York county consisting of the area to the south of and within Fourteenth street.

(4) "Motor vehicle" means any self-propelled vehicle designed for transporting persons or property on a street or highway.

(5) "Nonroad engine" means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 or section 7521 of title 42 of the United States code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

(6) "Nonroad vehicle" means a vehicle that is powered by a nonroad engine, fifty horsepower and greater, and that is not a motor vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers and similar equipment, except that this term shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a nonroad engine of sixty-five horsepower or less and that are not used in any construction program or project.

(7) "Person" means any natural person, co-partnership, firm, company, association, joint stock association, corporation or other like organization.

(8) "Public works contract" means a contract with a city agency for a construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; a contract with a city agency for the preparation for any construction program or project involving the

construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; or a contract with a city agency for any final work involved in the completion of any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge.

(9) "Ultra low sulfur diesel fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million.

b. (1) Any diesel-powered nonroad vehicle that is owned by, operated by or on behalf of, or leased by a city agency shall be powered by ultra low sulfur diesel fuel.

(2) Any diesel-powered nonroad vehicle that is owned by, operated by or on behalf of, or leased by a city agency shall utilize the best available technology for reducing the emission of pollutants.

c. (1) Any solicitation for a public works contract and any contract entered into as a result of such

solicitation shall include a specification that all contractors in the performance of such contract shall use ultra low sulfur diesel fuel in diesel-powered nonroad vehicles and all contractors in the performance of such contract shall comply with such specification.

(2) Any solicitation for a public works contract and any contract entered into as a result of such solicitation

shall include a specification that all contractors in the performance of such contract shall utilize the best

available technology for reducing the emission of pollutants for diesel-powered nonroad vehicles and all

contractors in the performance of such contract shall comply with such specification.

d. (1) The commissioner shall make determinations, and shall publish a list containing such determinations, as to the best available technology for reducing the emission of pollutants to be used for each type of diesel-powered nonroad vehicle to which this section applies for the purposes of paragraph two of subdivision b and paragraph two of subdivision c of this section. Each such determination, which shall be updated on a regular basis, but in no event less than once every six months, shall be primarily based upon the reduction in emissions of particulate matter and secondarily based upon the reduction in emissions of nitrogen oxides associated with use of such technology and shall in no event result in an increase in the emissions of either such pollutant. In determining the best available technology for reducing the emission of pollutants, the commissioner shall select technology from that which has been verified by the United States environmental protection agency or the California air resources board for use in nonroad vehicles or onroad vehicles where such technology may also be used in nonroad vehicles, but the commissioner may select technology that is not verified as such as is deemed appropriate.

(2) No city agency or contractor shall be required to replace best available technology for reducing the

emission of pollutants or other authorized technology utilized for a diesel-powered nonroad vehicle in accordance with the provisions of this section within three years of having first utilized such technology for such vehicle.

e. A city agency shall not enter into a public works contract subject to the provisions of this section unless

such contract permits independent monitoring of the contractor's compliance with the requirements of this section and requires that the contractor comply with section 24-163 of this code. If it is determined that the contractor has failed to comply with any provision of this section, any costs associated with any independent monitoring incurred by the city shall be reimbursed by the contractor.

f. (1) The provisions of subdivision b of this section shall apply to any diesel-powered nonroad vehicle in use in Lower Manhattan that is owned by, operated by or on behalf of, or leased by a city agency and the provisions of subdivision c of this section shall apply to any public works contract for Lower Manhattan upon the effective date of this section.

(2) The provisions of paragraph one of subdivision b of this section shall apply to all diesel-powered nonroad vehicles that are owned by, operated by or on behalf of, or leased by a city agency and the provisions of paragraph one of subdivision c of this section shall apply to all public works contracts six months after the effective date of this section.

(3) The provisions of paragraph two of subdivision b of this section shall apply to all diesel-powered nonroad vehicles that are owned by, operated by or on behalf of, or leased by a city agency and the provisions of paragraph two of subdivision c of this section shall apply to any public works contract that is valued at two million dollars or more one year after the effective date of this section.

(4) The provisions of paragraph two of subdivision c of this section shall apply to all public works contracts eighteen months after the effective date of this section.

g. (1) On or before January 1, 2005, and every succeeding January 1, the commissioner shall report to the comptroller and the speaker of the council on the use of ultra low sulfur diesel fuel in diesel-powered nonroad vehicles and the use of the best available technology for reducing the emission of pollutants and such other authorized technology in accordance with this section for such vehicles by city agencies during the immediately preceding fiscal year. This report shall include, but not be limited to (i) the total number of diesel-powered nonroad vehicles owned by, operated by or on behalf of, or leased by each city agency or used to fulfill the requirements of a public works contract for each city agency; (ii) the number of such nonroad vehicles that were powered by ultra low sulfur diesel fuel; (iii) the number of such nonroad vehicles that utilized the best available technology for reducing the emission of pollutants, including a breakdown by vehicle model and the type of technology used for each vehicle; (iv) the number of such nonroad vehicles that utilized such other authorized technology in accordance with this section, including a breakdown by vehicle model and the type of technology used for each vehicle; (v) the locations where such nonroad vehicles that were powered by ultra low sulfur diesel fuel and/or utilized the best available technology for reducing the emission of pollutants or such other authorized technology in accordance with this section were used; (vi) all findings, and renewals of such findings, issued pursuant to subdivision j of this section, which shall include, but not be limited to, for each finding and renewal, the quantity of diesel fuel needed by the city agency or

contractor to power diesel-powered nonroad vehicles owned by, operated by or on behalf of, or leased by the city agency or used to fulfill the requirements of a public works contract for such agency; specific information concerning the availability of ultra low sulfur diesel fuel or diesel fuel that has a sulfur content of no more than thirty parts per million where a determination is in effect pursuant to subdivision i of this section; and detailed information concerning the city agency's or contractor's efforts to obtain ultra low sulfur diesel fuel or diesel fuel that has a sulfur content of no more than thirty parts per million where a determination is in effect pursuant to subdivision i of this section; and (vii) all findings and waivers, and renewals of such findings and waivers, issued pursuant to paragraph one or paragraph three of subdivision k or subdivision m of this section, which shall include, but not be limited to, all specific information submitted by a city agency or contractor upon which such findings, waivers and renewals are based and the type of such other authorized technology, if any, utilized in accordance with this section in relation to each finding, waiver and renewal, instead of the best available technology for reducing the emission of pollutants.

(2) Where a determination is in effect pursuant to subdivision i of this section, information regarding diesel fuel that has a sulfur content of no more than thirty parts per million shall be reported wherever information is requested for ultra low sulfur diesel fuel pursuant to paragraph one of this subdivision.

h. This section shall not apply:

(1) where federal or state funding precludes the city from imposing the requirements of this section; or

(2) to purchases that are emergency procurements pursuant to section three hundred fifteen of the charter.

i. The commissioner shall issue a written determination that permits the use of diesel fuel that has a sulfur

content of no more than thirty parts per million to fulfill the requirements of paragraph one of subdivision b and paragraph one of subdivision c of this section if ultra low sulfur diesel fuel is not available to meet the needs of city agencies and contractors to fulfill the requirements of this section. Such determination shall expire after six months and shall be renewed in writing every six months if ultra low sulfur diesel fuel is not available to meet the needs of city agencies and contractors to fulfill the requirements of this section, but in no event shall be in effect after September 1, 2006.

j. Paragraph one of subdivision b and paragraph one of subdivision c, as that paragraph applies to all

contractors' duty to comply with the specification, of this section shall not apply to a city agency or contractor in its fulfillment of the requirements of a public works contract for such agency where such agency makes a written finding, which is approved, in writing, by the commissioner, that a sufficient quantity of ultra low sulfur diesel fuel, or diesel fuel that has a sulfur content of no more than thirty parts per million where a determination is in effect pursuant to subdivision i of this section, is not available to meet the requirements of paragraph one of subdivision b or paragraph one of subdivision c of this section, provided that such agency or contractor in its fulfillment of the requirements of a public works contract for such agency, to the extent practicable, shall use whatever quantity of ultra low sulfur diesel fuel or diesel fuel that has a sulfur

content of no more than thirty parts per million is available. Any finding made pursuant to this subdivision shall expire after sixty days, at which time the requirements of paragraph one of subdivision b and paragraph one of subdivision c of this section shall be in full

force and effect unless the city agency renews the finding in writing and such renewal is approved by the commissioner.

k. Paragraph two of subdivision b and paragraph two of subdivision c, as that paragraph applies to all

contractors' duty to comply with the specification, of this section shall not apply:

(1) to a diesel-powered nonroad vehicle where a city agency makes a written finding, which is approved, in writing, by the commissioner, that the best available technology for reducing the emission of pollutants as required by those paragraphs is unavailable for such vehicle, in which case such agency or contractor shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle; or

(2) to a diesel-powered nonroad vehicle that is used to satisfy the requirements of a specific public works

contract for fewer than twenty calendar days; or

(3) to a diesel-powered nonroad vehicle where the commissioner has issued a written waiver based upon a city agency or contractor having demonstrated to the commissioner that the use of the best available technology for reducing the emission of pollutants might endanger the operator of such vehicle or those working near such vehicle, due to engine malfunction, in which case such city agency or contractor shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle, which would not endanger the operator of such vehicle or those working near such vehicle.

l. In determining which technology to use for the purposes of paragraph one or paragraph three of subdivision k of this section, a city agency or contractor shall primarily consider the reduction in emissions of particulate matter and secondarily consider the reduction in emissions of nitrogen oxides associated with the use of such technology, which shall in no event result in an increase in the emissions of either such pollutant.

m. Any finding or waiver made or issued pursuant to paragraph one or paragraph three of subdivision k of

this section shall expire after one hundred eighty days, at which time the requirements of paragraph two of subdivision b and paragraph two of subdivision c of this section shall be in full force and effect unless the city agency renews the finding, in writing, and the commissioner approves such finding, in writing, or the commissioner renews the waiver, in writing.

n. Any contractor who violates any provision of this section, except as provided in subdivision o of this

section, shall be liable for a civil penalty between the amounts of one thousand and ten thousand dollars, in addition to twice the amount of money saved by such contractor for failure to comply with this section.

o. No contractor shall make a false claim with respect to the provisions of this section to a city agency. Where a contractor has been found to have done so, such contractor shall be liable for a civil penalty of twenty thousand dollars, in addition to twice the amount of money saved by such contractor in association with having made such false claim.

p. This section shall not apply to any public works contract entered into or renewed prior to the effective date of this section.

q. Nothing in this section shall be construed to limit the city's authority to cancel or terminate a contract,

deny or withdraw approval to perform a subcontract or provide supplies, issue a non-responsibility finding, issue a non-responsiveness finding, deny a person or entity pre-qualification as a vendor, or otherwise deny a person or entity city business.

§ 3. Subparagraph (i) of paragraph 5 of subdivision b of section 24-178 of the administrative code of the city of New York is amended by inserting the following lines in the Table of Civil Penalties, immediately following the line regarding civil penalties for a violation of section 24-163.2 of this chapter:

24-163.3; plus twice the amount of money saved by the contractor for failure to comply with such section; provided that such \$1,000 - \$10,000 penalty and additional penalty shall

not apply to violations of 24-163.3(o)..... 10,000 1,000

24-163.3(o); plus twice the amount of money saved by the contractor in association with having made such false claim 20,000 20,000

§ 4. If any section, subsection, sentence, clause, phrase or other portion of this local law is, for any reason, declared unconstitutional or invalid, in whole or in part, by any court of competent jurisdiction such portion shall be deemed severable, and such unconstitutionality or invalidity shall not effect the validity of the remaining portions of this law, which remaining portions shall continue in full force and effect.

§ 5. This local law shall take effect one hundred eighty days after its enactment, except that the commissioner of environmental protection shall take all actions necessary, including the promulgation of rules, to implement this local law on or before the date upon which it shall take effect.

APPENDIX B: EPA Model Language

DIESEL EMISSION CONTROLS IN CONSTRUCTION PROJECTS

MODEL CONTRACT SPECIFICATION

April 2008

The contract specification below provides a comprehensive model that is technically sound and grounded in field experience. It addresses not only the level of emission control, but also key considerations such as

idling, exemptions, and compliance. It incorporates improvements in retrofit technology already underway to meet both market demand and tighter federal standards for new engines.

This model specification recommends that institutions and agencies (“developer” in the text below)

undertaking large construction projects:

Require the highest level of emission control available. The model sets reduction thresholds that reflect the current state of retrofit technology for different types of engines while acknowledging that the technology continues to improve. It therefore links an increased level of control—from technology that achieves at least a 20% reduction in diesel particulate matter (PM) to technology that achieves at least an 85% reduction—to the dates when new engines must comply with the higher standards and are available as an option. The document also signals to contractors that a higher level of control is likely to be required in later contracts and thus encourages early adoption of the more advanced technology where feasible.

Include the widest range of diesel onroad vehicles, nonroad equipment, and generators. Although high-horsepower engines emit more pollutants, there are far more low-horsepower engines in the fleets.

Implement and/or enforce idle-reduction policies.

Require the use of ultra-low sulfur diesel fuel, which is widely available.

Fully pay for the retrofits, which will reduce the air-quality impacts of the projects. EPA acknowledges that existing contract requirements, policy adoption processes, procurement rules, and financial resources differ considerably among the institutions, municipalities, and state agencies in the region and therefore affect options for developing or amending a retrofit program. For example, those with successful clean construction initiatives may revise or expand them only through a stakeholder process. In creating a new program, some may need to adopt a narrower scope (e.g., picking a higher project dollar threshold or initially targeting particular horsepower ranges) while others opt for broader or more aggressive coverage (e.g., requiring retrofits in all projects regardless of their budget). The model provides a robust standard and an implementation framework that can be adapted for consistency with established institutional protocols. The EPA Steering Committee wishes to thank the representatives from the emission control manufacturers, environmental organizations, private companies, construction industry, and state agencies who contributed to the development of this document, either by fully participating in the work of the task force or by offering valuable perspective on key elements.

Northeast Diesel Collaborative Model Contract Specification 4/08 2

MODEL CONTRACT SPECIFICATION

NEDC recommends that contracts for projects with budgets of \$2 million or more and of more than nine months’ duration require the diesel control measures outlined below. As the public health risks from exposure to diesel exhaust are of paramount concern, institutions, municipalities, and agencies that want a phased adoption of contract requirements could focus initially on projects located either (1) in urban areas or (2) within 500 feet of a school, hospital, daycare facility, elderly housing, convalescent facility, or similar facility.

1. Diesel Emission Control Technology

a. **Diesel Onroad Vehicles**

All diesel onroad vehicles used on the project for more than 10 total days must have either (1) engines that meet U.S. Environmental Protection Agency (EPA) 2007 onroad emissions standards or (2) emission control technology verified by EPA or the California Air Resources Board (CARB) to reduce PM emissions by a minimum of 85%.¹

b. **Diesel Generators**

i. Until December 31, 2009, all diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 20%.

ii. Beginning January 1, 2010, all diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.

c. **Diesel Nonroad Construction Equipment**

i. Until December 31, 2012, all diesel nonroad construction equipment with engines 75hp and greater on site more than 10 total days must have either (1) engines that meet EPA Tier 4 nonroad emissions standards, or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 20%.³

1

In all instances “verified” means verified for use with the specific onroad, nonroad, or generator engine. For

EPA’s list of verified technology: <http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm>. For CARB’s list of

verified technology: <http://www.arb.ca.gov/diesel/verdev/verifiedtechnologies/vt.htm>.

Vehicles with diesel oxidation catalysts or similar emission control technology installed as original equipment

meet the 20% reduction threshold and are deemed compliant through December 31, 2009, after which they must

meet the minimum reduction of 85%.

3

Nonroad equipment with diesel oxidation catalysts or similar emission control technology installed as original

equipment meets the 20% reduction threshold and is deemed compliant through December 31, 2012.

ii. Beginning January 1, 2013, all diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines 75hp and greater and by a minimum of 20% for engines between 25 and 75hp.

iii. Tier 0 engines are not allowed on site and must be upgraded to Tier 1 and then retrofit with an emission control device achieving the required reduction.

d. Upon confirming that the diesel vehicle, construction equipment, or generator has either a Tier 4 engine or pollution control technology installed and functioning, the developer will issue a compliance sticker indicating the level of emission control. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in the designated location.

e. Pollution control technology shall be operated, maintained, and serviced as recommended by the manufacturer.

f. All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a ULSD blend with sulfur content of 15 ppm or less.

2. Additional Diesel Requirements

a. Construction shall not proceed until the contractor submits a certified list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:

i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.

ii. Equipment type, manufacturer, engine model year, engine certification (Tier rating), horsepower, plate, serial number, and expected fuel usage and/or hours of operation.

iii. For the pollution control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date.

b. If the contractor subsequently needs to bring on site equipment not on the list, the contractor shall submit written notification within 24 hours that attests the equipment complies with all contract conditions.

c. All diesel equipment shall comply with all pertinent local, state, and federal regulations relative to exhaust emission controls and safety.

d. The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.

e. During periods of inactivity, idling of diesel onroad vehicles and nonroad equipment shall be minimized and shall not exceed the time allowed under state and local laws. In the absence of state or local idling regulations, idling shall not exceed three minutes in any sixty-minute period.

3. Exemptions

a. Onroad diesel vehicles, nonroad construction equipment, and generators on site for 10 working days or less over the life of the project need not install pollution control technology. This equipment must be included on the equipment list submitted by the contractor and approved by the developer.

b. If the contractor can prove to the developer's satisfaction that for a particular class of onroad diesel vehicle, nonroad construction equipment, or generator, (1) no alternative equipment with a Tier 4 engine is available, or (2) it is not technically feasible to meet the control level specified above, or (3) installing the control device would create a safety hazard or impaired visibility for the operator, then the contractor may, with the developer's written approval, drop down to a lower level of control.

c. The developer's representative may create an exemption when there is a compelling emergency need to use diesel vehicles or engines that do not meet the contract conditions for emission controls. An example would be the need for rescue vehicles or other equipment to prevent or remedy harm to human beings or nearby property. Meeting contract deadlines is not considered a compelling emergency.

d. Exemptions, if any, from state or local idling laws are specified by those laws, which shall be enforced on site. In locations without prevailing state or local idling regulations, idling for more than three minutes over a sixty-minute period is permitted only under the following circumstances:

- i. When an onroad diesel vehicle or nonroad construction equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control;
- ii. To bring the onroad diesel vehicle, nonroad construction equipment, or generator to the manufacturer's recommended operating temperature;
- iii. When there are regulations requiring temperature control for driver or passenger comfort and there are no auxiliary power sources available to provide temperature control;
- iv. When it is necessary to operate auxiliary equipment that is located in or on the diesel vehicle or construction equipment, to accomplish the intended use of the vehicle or equipment (for example, cranes and cement mixers);
- v. When the onroad diesel vehicle, nonroad construction equipment, or generator is being repaired, if idling is necessary for such repair; and/or
- vi. When the onroad diesel vehicle, nonroad construction equipment, or generator is queued for inspection, if idling is necessary for such inspection.

4. Reporting

- a. The contractor shall submit to the developer's representative a monthly report that, for each onroad diesel vehicle, nonroad construction equipment, or generator, includes:
 - i. Number of hours of engine operation
 - ii. Any problems with the equipment or emission controls.
- b. In addition, the monthly report shall contain certified copies of fuel deliveries for the time period that identify:
 - i. Source of supply
 - ii. Quantity of fuel
 - iii. Quality of fuel, including sulfur content (percent by weight).

5. Compliance

All onroad diesel vehicles, nonroad construction equipment, and generators must be compliant with these provisions whenever they are present on the project site. The contractor's compliance with this notice shall not be grounds for claims as outlined in Section _____. *[developer inserts reference to appropriate section in its standard contract]*

6. Non-Compliance

- a. If any onroad diesel vehicle, nonroad construction equipment, or generator is found to be in non-compliance with the contract terms, then... *[developer inserts penalties consistent with others specified in contract]*.
- b. Once the contractor has brought previously non-compliant machinery into compliance, the developer's representative shall promptly issue the contractor a written acknowledgment of compliance.

7. Costs

- a. All costs associated with the installation of emission control technology **specifically for this project** shall be fully funded, provided that (i) the technology is installed before March 31, 2010, for onroad vehicles and generators and March 31, 2014, for nonroad construction equipment;
- ii. the contractor submits documentation, as outlined in Section 2(a)(iii) above, proving by date that the technology was installed for this project and certifying that the expenditure for installation was not previously reimbursed by any public agency or public contract.

b. Retrofits installed with funds from this project shall remain on the onroad vehicle, nonroad construction equipment, or generator for the useful life of the emission control device or the machine.