

State of California
AIR RESOURCES BOARD

ERRATA

TITLE 17. CALIFORNIA AIR RESOURCES BOARD

On February 3, 2017, the Air Resources Board released a "Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information" for the proposed Regulation for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities. The deadline for public comment on the modified text and additional documents is February 21, 2017.

PLEASE BE ADVISED that Attachment 2, the additional documents to the Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information, has a few minor errors, as described below. The errors are located on page 4 of the "Revised Emission and Cost Estimates for the Leak Detection and Repair Provision" document, which is posted at the following website:

<https://www.arb.ca.gov/regact/2016/oilandgas2016/oilandgas2016.htm>

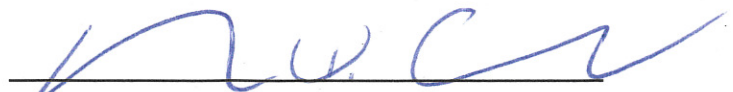
1. In Table 2, the costs in the Set Up Cost column should have been multiplied by a cost recovery factor of 0.23, reflecting that these costs are amortized over five years, because stakeholders commented that it is anticipated that LDAR vendors will change every five years, thereby requiring a new set up cost. The remaining values in Table 2 are correct.
2. The Set Up Cost calculation equation now correctly shows the cost recovery factor of 0.23, along with an explanation of why this cost is amortized.

This errata, including the attachment which illustrates the corrections and the complete notice of public availability of modified text and availability of additional documents and/or information are available on ARB's website at the following address:

<https://www.arb.ca.gov/regact/2016/oilandgas2016/oilandgas2016.htm>

Any questions regarding these corrections should be directed to Jim Nyarady, Manager, Oil & Gas Section, at (916) 322-8273.

CALIFORNIA AIR RESOURCES BOARD



Richard W. Corey
Executive Officer

Date: *February 17, 2017*

ATTACHMENT

Page 4 of the "Revised Emission and Cost Estimates for the Leak Detection and Repair Provision" document appeared as follows:

Table 2

Cost and Emissions for LDAR

	Number of Components	Emissions (MT CO2e)	Reductions (MT CO2e)	Quarterly Inspection Cost	Set Up Cost	Recordkeeping and Reporting	Total Cost
Dry Gas, Gas Storage and Gas Processing	1,339,185	774,468	464,681	\$9,453,071	\$1,198,500	\$1,136,186	\$10,864,912
Idle Dry Gas and Gas Storage Wells	41,219	23,122	13,873	\$290,958	\$36,889	\$34,971	\$334,413
Idle Light Oil Wells	205,249	23,724	14,234	\$1,448,816	\$183,687	\$174,137	\$1,665,201
Total	1,585,653	821,314	492,789	\$11,192,845	\$1,419,076	\$1,345,294	\$12,864,526

The Quarterly Inspection cost is calculated as:

Inspection Cost

$$= \frac{\text{Number of Components} \times \$60 \text{ per hour} \times 2080 \text{ hours per year} \times 4 \text{ inspections per year}}{70,720 \text{ Components per PY}}$$

The Set Up cost is calculated as:

$$\text{Set Up Cost} = \frac{\$1,500 \text{ per facility} \times \text{Number of Components} \times 799 \text{ Facilities}}{1,339,185 \text{ Components from Survey}}$$

The Recordkeeping and Reporting cost is calculated as:

$$\text{Recordkeeping and Reporting Cost} = \frac{\$15,000 \times 4 \times \text{Number of Components}}{70,720 \text{ Components per PY}}$$

Page 4 of the "Revised Emission and Cost Estimates for the Leak Detection and Repair Provision" document has been corrected as follows:

Table 2

Cost and Emissions for LDAR

	Number of Components	Emissions (MT CO2e)	Reductions (MT CO2e)	Quarterly Inspection Cost	Set Up Cost	Recordkeeping and Reporting	Total Cost
Dry Gas, Gas Storage and Gas Processing	1,339,185	774,468	464,681	\$9,453,071	\$275,655	\$1,136,186	\$10,864,912
Idle Dry Gas and Gas Storage Wells	41,219	23,122	13,873	\$290,958	\$8,484	\$34,971	\$334,413
Idle Light Oil Wells	205,249	23,724	14,234	\$1,448,816	\$42,248	\$174,137	\$1,665,201
Total	1,585,653	821,314	492,789	\$11,192,845	\$326,387	\$1,345,294	\$12,864,526

The Quarterly Inspection cost is calculated as:

Inspection Cost

$$= \frac{\text{Number of Components} \times \$60 \text{ per hour} \times 2080 \text{ hours per year} \times 4 \text{ inspections per year}}{70,720 \text{ Components per PY}}$$

The Set Up cost is calculated as:

Set Up Cost

$$= \frac{\$1,500 \text{ per facility} \times \text{Number of Components} \times 799 \text{ Facilities}}{1,339,185 \text{ Components from Survey}} \times 0.23$$

This cost is amortized over five years with a cost recovery factor of 0.23 since stakeholders commented that it is anticipated that LDAR vendors will change every five years requiring a new set up cost.

The Recordkeeping and Reporting cost is calculated as:

$$\text{Recordkeeping and Reporting Cost} = \frac{\$15,000 \times 4 \times \text{Number of Components}}{70,720 \text{ Components per PY}}$$