



COLORADO
Oil & Gas Conservation
Commission
Department of Natural Resources

FOR IMMEDIATE RELEASE

April 13, 2020

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Colorado Oil & Gas Conservation Commission Approves \$18.25 Million Penalty for Firestone Tragedy

The funds will be used for projects that will increase public protections

DENVER - The Colorado Oil and Gas Conservation Commission (COGCC) today announced it has approved the \$18.25 million penalty against Kerr-McGee, a subsidiary of Occidental Petroleum, at an Online Special Hearing. The Commission considered COGCC staff's Administrative Order by Consent (AOC), as a part of the enforcement process, and heard from Kerr-McGee and Mrs. Erin Martinez, who lost her husband and brother when her home was destroyed on April 17, 2017.

"I want to acknowledge Mrs. Martinez, for her commitment to improve the safety and the lives of all Coloradans. You are making a difference. While none of this will ever make up for your loss, your courage through this tragedy has been an inspiration to me, and everyone," said Dan Gibbs Executive Director, Department of Natural Resources and Chair of the COGCC Commissioners. "What our Commission can do is to continue to hold oil and gas operators accountable and be forever vigilant to ensure this type of tragedy never happens again."

On March 12, the Commission issued a Notice of Alleged Violation (NOAV) of four of COGCC's rules and sought an \$18.25 million penalty. This amount is the maximum dollar amount possible and included, for the first time, the 'aggravating factor of death.' This aggravating factor increased one of the penalties from \$3.6 million to \$5.4 million. Because of the loss of lives, this is the largest penalty ever by COGCC, by more than 11 times.

"We thank Mrs. Martinez, the Commissioners and COGCC staff for their work that will ensure the state of Colorado's oil and gas operations are conducted in a manner that is protective of the public's health, safety, welfare, wildlife and the environment as directed by SB 19-181," said COGCC Director Jeff Robbins. "Over the next few months, the COGCC will be focused on

developing new rules that reflect this commitment to protect Coloradans in oil and gas operations.

“Also, I’m pleased to announce that COGCC will honor Mrs. Martinez’ family by naming the public projects funded by this penalty to ‘The Mark Martinez and Joey Irwin Memorial Public Projects Fund,’” said Robbins.

In November 2019, the COGCC increased the protections to the public through stronger and more transparent flowline rules. To learn more about the COGCC, visit our website: www.colorado.gov/cogcc.

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Notice of Alleged Violation (NOAV) and Administrative Order of Consent (AOC) for the Firestone Tragedy Fact Sheet

Who:

- Operator: Kerr McGee is the operator, a subsidiary of Anadarko, most recently sold to Occidental Petroleum
- Local Governments: Town of Firestone, Frederick-Firestone Fire Protection District
- Erin Martinez
- Colorado Oil & Gas Conservation Commission (COGCC)

What is COGCC's role: The COGCC is charged with regulation of oil and gas development in a manner that is protective of the public health, safety, welfare, wildlife and the environment and in doing so, ensuring operators comply with COGCC rules and to use the available enforcement tools and measures when operators do not comply with COGCC rules.

The COGCC must protect the public's safety in and around oil and gas operations, and we have taken the following steps in response to the Firestone tragedy:

- The November Flowline rulemaking has strengthened current rules and added new regulatory requirements that seek to prevent such a future tragedy.
- This Notice of Alleged Violation (NOAV) holds the operator accountable for its failures.
- COGCC enforcement promotes operator compliance and achieves protections.

What is a Notice of Alleged Violation (NOAV)?

A NOAV is a "Notice of Alleged Violation" as described in Commission Rule 522. If an operator has received one, the Commission has reasonable cause to believe the operator has violated a Commission Rule, Order, permit, or the Oil and Gas Conservation Act, § 34-60-101 et. seq., C.R.S. ("Act"). Click here for the NOAV FAQ:

https://cogcc.state.co.us/documents/reg/Enforcement/NOAV_FAQ_20200310.pdf

The Notice of Alleged Violation (NOAV) alleges violations of the following Rules:

1. 324A.a. - "The operator shall take precautions to prevent significant adverse environmental impacts to air, water, soil, or biological resources to the extent necessary to protect public health, safety and welfare ..."
2. 605.d. - "All valves, pipes and fittings shall be securely fastened, inspected at regular intervals, and maintained in good mechanical condition."
3. 1102.a. - "(1) Each operator shall take reasonable precautions to prevent failures, leakage and corrosion of pipelines.

4. 1103. - “Each pipeline abandoned in place shall be disconnected from all sources and supplies of natural gas and petroleum, purged of liquid hydrocarbons, depleted to atmospheric pressure, and cut off three (3) feet below ground surface ...”

What are the next steps?

- The next steps in this process are that Kerr McGee (Occidental) will answer to the Commission for these violations.
- The Commission will consider the COGCC’s Administrative Order of Consent at a Special Online Commission Hearing held 1 p.m, April 13, 2020.

About the penalty:

- This NOAV results in a \$18.25 Million penalty
- The number of days of violation alleged for each violation is 365 days.
- The maximum daily penalty is assessed for each violation
 - \$15,000 per day for Rule 324A.a.
 - \$10,000 per day for Rules 605.d., 1102.a. and 1103
 - No discount is applied to any of the violations
- Staff has applied an aggravating factor of death; which is the first time it has been used by the COGCC. The aggravating factor increases one of the penalties from \$3.6 million to \$5.4 million.
- A majority of these penalties will fund special projects relevant to flowline monitoring and air emissions.

Staff is applying an aggravating factor of death:

- As a result of the Firestone tragedy, this became a rule in December 2018. It serves as a multiplier in the calculation of the penalty. Kerr McGee/ Occidental has agreed to the application of the aggravating factor of death.
- It is appropriate that it is applied to this NOAV.
- It is the first time it has been used by COGCC for a NOAV.

What is the next highest penalty ever issued by COGCC?:

- \$18.25M penalty is higher than the next highest, which was for a \$1.6M violation in 2018, with Noble Energy.
 - Noble was penalized for the Mechanical Integrity Test (MIT), which looks at the health of the well and whether it has integrity, (i.e. it is not leaking).
 - An MIT is the test that allows operators to know whether the well can withstand the pressure that it is put under.

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The Mark Martinez and Joey Irwin Memorial Public Projects Fund

Public Projects Overview

The Colorado Oil and Gas Conservation Commission (COGCC) proposed the following public projects be funded from monies received from settlement of the Kerr-McGee/Occidental enforcement matter. The projects would be administered by either the COGCC or the Colorado Department of Public Health and Environment (CDPHE). All costs are estimates.

1. Aerial Survey Project

Perform aerial surveys at least once per year for two years in the D-J Basin, which is part of the North Front Range ozone non-attainment area. Aerial surveys have the potential to identify and significantly reduce leaks from pipelines/flowlines, production pads, tanks, central gathering facilities, compressor stations. Identifying and resolving these leaks not only results in reduced exposure to organic compounds that can affect public health and emissions of ozone precursors, it prevents the economic waste of the product. Aerial surveys may also be expanded to other oil and gas basins in Colorado.

Cost \$2,000,000.

2. Mobile Air Monitoring Van

Acquire a mobile air monitoring van to measure pollutants, and help determine and locate leaks. The van would be a supplement not only to CDPHE's CAMML, but also to APCD inspectors. This mobile air monitoring van would be driven past oil and gas facilities and operations, as well as near flowlines/pipelines. As the van detects leaks, measures are taken to specifically locate the leak and promptly notify the responsible operator.

Cost \$1,595,000 plus \$250,000 per year for 2 years operational expenses

3. Intrinsically Safe Optical Gas Imaging Cameras

Currently CDPHE and COGCC use this specialized type of camera to visualize natural gas that is emitted at oil and gas facilities. These cameras can help in identifying leaks and equipment malfunctions that result in uncontrolled emissions. The cameras are nearing the end of their useful life and must be replaced. In addition there is new technology that allows the cameras to quantify (measure) the amount of gas emitted.

Cost for 9 cameras and necessary equipment \$ 1,100,000

4. Satellite and Remote Sensing Technology

Over the past two years, an E&E Lab Research Fellow (embedded at CDPHE) and the team of faculty and researchers at University of Chicago have been working closely with CDPHE to identify opportunities to leverage new technology and advanced analytics to improve air quality. The E&E Lab is developing machine learning models to help CDPHE improve effectiveness and efficiency of monitoring and inspections through better resource targeting. The E&E Lab is also supporting CDPHE in assessing opportunities emerging from advances in remote sensing (e.g., satellite, drone and aircraft-mounted sensors), which are poised to drastically lower the cost of emissions monitoring while improving measurement precision. The E&E Lab is working with CDPHE to create proofs-of-concept and develop policies to leverage state-of-the-art technology to help achieve emissions reductions; and to measure the impact and effectiveness of the technology-informed approach to enforcement.

Cost \$1,000,000 per year for two years

5. Methane Emissions Technology Evaluation Center (METEC)

With additional funding, METEC will help to develop and characterize leak detection technologies for flowlines (gas migration experiments in different soil types).

Cost \$1,100,000

6. Gas Detection and Metering Equipment

COGCC currently needs to update gas detection and metering equipment. This equipment will allow for more accurate detection and measurement of stray gas both in the soil and atmosphere.

Cost \$300,000

7. Remote Methane Leak Detectors

These machines are highly portable and capable of detecting small leaks in open areas, such as flowlines and pipelines. These can be used in conjunction with Optical Gas Imaging cameras to find and quantify emissions. These cameras would be deployed by COGCC flowline integrity inspectors on a regular basis.

Cost \$42,000

8. Legal Expense Reimbursement

The Frederick & Firestone Fire Protection District incurred legal expenses related to the Firestone investigation and the National Transportation Safety Board process. This money would help defer those costs.

Cost \$50,000

9. Public Health, Safety, Welfare and Environment Projects

Monies will be reserved to fund between 2021 and 2024 additional high priority public projects that protect public health, safety, welfare and the environment. The COGCC

will work with Kerr-McGee and CDPHE to identify these projects. \$8.5 million will be escrowed by Kerr-McGee for these projects.

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The Mark Martinez and Joey Irwin Memorial Public Projects Fund

Public Projects	Amount
Aerial Survey Project	\$2,000,000
Mobile Air Monitoring Van	\$1,595,000 + \$250,000 Annually
Intrinsically Safe Optical Gas Imaging Cameras	\$1,100,000
Satellite and Remote Sensing Technology	\$2,000,000 (for two years)
Methane Emissions Technology Evaluation Center (METEC)	\$1,100,000
Gas Detection and Metering Equipment	\$300,000
Remote Methane Leak Detectors	\$42,000
Legal Fees	\$50,000
High Priority Public Health, Safety, Welfare and Environment Projects	\$ 8,563,000
TOTAL	\$17,250,000

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF ALLEGED VIOLATIONS) CAUSE NO. 1V
OF THE RULES AND REGULATIONS OF THE) DOCKET NO. 200300060
COLORADO OIL AND GAS CONSERVATION) TYPE: ENFORCEMENT
COMMISSION BY **KERR-MCGEE OIL & GAS**) ORDER NO. 1V-709
ONSHORE LP, WELD COUNTY, COLORADO)
)

**HEARING OFFICER'S RECOMMENDED ORDER APPROVING AN
ADMINISTRATIVE ORDER BY CONSENT**

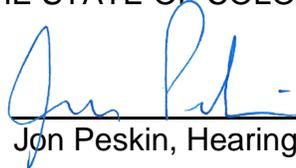
Upon review of the Administrative Order by Consent ("AOC") submitted in the instant matter, the Hearing Officer recommends approval of same by the Colorado Oil and Gas Conservation Commission.

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ENTERED this 9th day of April, 2020.

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

By



Jon Peskin, Hearing Officer

CERTIFICATE OF SERVICE

On April 9, 2020, a true and correct copy of the foregoing *Hearing Officer's Recommended Order Approving an Administrative Order By Consent*, was transmitted to the Parties at the following addresses:

Parties:

Kerr McGee Oil & Gas Onshore LP
Attn: Danielle Piernot
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Jeremy Ferrin
Enforcement Supervisor
Colorado Oil & Gas Conservation Commission Staff
jeremy.ferrin@state.co.us

ENTERED this ____ day of _____, 2020 as of the 13th day of April, 2020.

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

By _____
Mimi Larsen, Secretary

CERTIFICATE OF SERVICE

On April __, 2020, a true and correct copy of the foregoing Order of the Commission was transmitted to the Parties at the following addresses:

Parties:

Kerr McGee Oil & Gas Onshore LP
Attn: Danielle Piernot
P.O. Box 173779
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BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF ALLEGED VIOLATIONS) CAUSE NO. 1V
OF THE RULES AND REGULATIONS OF THE)
COLORADO OIL AND GAS CONSERVATION) DOCKET NO. 200300060
COMMISSION BY **KERR-MCGEE OIL & GAS**) TYPE: ENFORCEMENT
ONSHORE LP, WELD COUNTY, COLORADO) ORDER NO. 1V-709
)

ADMINISTRATIVE ORDER BY CONSENT

(Pursuant to Rule 522.e.(1) of the Rules and Regulations of the
Colorado Oil and Gas Conservation Commission, 2 CCR 404-1)

FINDINGS

1. Kerr-McGee Oil & Gas Onshore LP (Operator No. 47120) (“Kerr-McGee”) is the operator of record of the now plugged and abandoned Coors V 6-14Ji Well (API No. 05-123-17324) located in Weld County (the “Well”).

2. The Well was originally drilled by Gerrity Oil and Gas (“Gerrity”) in 1993. A few years later, Gerrity merged with another company to form Patina Oil and Gas Corporation (“Patina”), which officially became the operator of the Well in 1997. Noble Energy, Inc. (“Noble”) then assumed ownership of the Well in 2007 when it acquired Patina in a merger. Then, in 2013, the Well was transferred to Kerr-McGee as part of an asset exchange in which thousands of wells were traded between Anadarko Petroleum Corporation and Noble.¹

3. Kerr-McGee became the operator of the Well effective January 31, 2014 (Doc. No. 400551514).

4. In December of 2015 the Well was shut-in (Form 7 reporting on COGCC’s website).

5. In January of 2017 the Well began producing again (Form 7 reporting on COGCC’s website).

6. Sometime after the Well began producing again in 2017,, a valve was opened at the Well permitting unrefined, non-odorized natural gas to flow through a cut, abandoned gas flowline that was connected to the Well.

7. On April 17, 2017, Frederick-Firestone F.P.D. (“FFFPD”) crews responded to a home explosion and subsequent fire at 6312 Twilight Avenue in Firestone, Colorado (the “Incident”). The origin and cause of the explosion, as determined by FFFPD, was unrefined, non-odorized gas that entered the basement of the home from a

¹ This AOC does not address the responsibility of any other operators for conduct relating to the explosion, due to the limitations period applicable to COGCC enforcement actions.

cut, abandoned gas flowline that was connected to the Well. The Well was shut-in the same day. (Doc. No. 1309672).

8. The National Transportation Safety Board (NTSB) conducted a multi-year investigation of the Incident. It concluded that Patina had not properly abandoned the cut flowline and specifically, “the probable cause of the explosion ... was the ignition of fugitive natural gas that had migrated from the Coors V 6-14Ji well through a pipeline that was not abandoned by Patina Oil and Gas Corporation and that was most likely severed in 2015 during the construction of the house.” NTSB Report at 6.

9. On August 22, 2018, the Well was properly plugged and abandoned (Doc. No. 401768270). On August 24, 2018, all flowlines associated with the Well, including the flowline that had previously been improperly abandoned, were properly abandoned (Doc. No. 401762962). Kerr-McGee also removed the abandoned flowlines, though it was not required to do so by COGCC Rule. (Doc. No. 690100762).

10. Kerr-McGee devoted substantial resources toward numerous actions to ensure the safety of the community following the Incident, many of which were voluntary. Among other things, Kerr-McGee:

- i. Immediately dispatched personnel to assist local authorities in their investigation;
- ii. Supplied machinery and other equipment to assist the local fire and police departments in their excavation and investigation of the accident site;
- iii. Shut down all similar “vertical” wells in Colorado within three weeks of the incident—totaling over 4,200 wells;
- iv. Implemented a 25-point inspection protocol before returning any vertical well to production;
- v. Disconnected and permanently abandoned all one-inch gas lines from every vertical well in the region;
- vi. Worked with the COGCC and other experts to test the entire neighborhood for increased gas levels;
- vii. Installed and monitored venting wells and other remediation equipment to remove any excess gas from the soil;
- viii. Distributed natural-gas monitors to neighborhood residents (and reimbursed individuals who purchased their own);
- ix. Conducted groundwater sampling to confirm the incident did not have any negative impacts on groundwater;
- x. Permanently abandoned the two other wells in the neighborhood near the Well and associated equipment and gas lines near the neighborhood;
- xi. Pressure-tested all existing flowlines, and abandoned lines no longer in use, consistent with updated COGCC guidance in May 2017;

- xii. Held multiple meetings with neighborhood homeowners' associations and individual residents to understand their concerns and describe the steps Kerr-McGee had taken to ensure residents were safe;
- xiii. Established a website, telephone hotline, and email address for the public to raise concerns or ask questions about Kerr-McGee's remediation efforts;
- xiv. Revised its policies to test flowlines near occupied structures more frequently than required by then-applicable COGCC regulations; and
- xv. Enhanced the company's safety and operations practices, including its employee-training program.

11. On March 12, 2020, COGCC Staff issued Notice of Alleged Violation No. 402009800 ("NOAV") to Kerr-McGee for four violations of the COGCC Rules of Practice and Procedure, 2 C.C.R. 404-1 ("Rule" or "Rules")², including:

- a. Rule 324A.a. (Pollution) for failing to take precautions to prevent significant adverse environmental impacts and the unauthorized discharge of natural gas,
- b. Rule 605.d. (Oil and Gas Facilities) for failing to ensure that the flowline was inspected at regular intervals and maintained in good mechanical condition,
- c. Rule 1102.a. (Operations, Maintenance, and Repair) for failing to take reasonable precautions to prevent the leakage of natural gas from the flowline, and
- d. Rule 1103 (Abandonment) for failing to ensure that the flowline was disconnected from all sources and supplies of natural gas.

12. Kerr-McGee is a wholly-owned subsidiary of Anadarko Petroleum Corporation. On August 8, 2019, Anadarko Petroleum Corporation was purchased by Occidental Petroleum Corporation. At this time, Kerr-McGee remains a wholly-owned subsidiary of Anadarko Petroleum Corporation, who remains a wholly-owned subsidiary of Occidental Petroleum Corporation.

13. Following a factual investigation and legal review of the violations alleged in the NOAV, the Enforcement Staff asserts Kerr-McGee has committed the following violations:

² The Rules cited in the NOAV refer to the COGCC Rules in effect as of the date of the incident, April 17, 2017.

Rule No.	Class	Impact	Daily Base Penalty	Start Date	End Date	Days of Violation	Penalty
324A.a.	3	Major	\$15,000	4/17/2016	4/17/2017	365	\$5,475,000
605.d.	2	Major	\$10,000	4/17/2016	4/17/2017	365	\$3,650,000
1102.a.	2	Major	\$10,000	4/17/2016	4/17/2017	365	\$3,650,000
1103 ³	2	Major	\$15,000	4/17/2016	4/17/2017	365	\$5,475,000
Grand Total							\$18,250,000

14. Pursuant to Rule 523 and the Commission's Enforcement and Penalty Policy, Enforcement Staff calculated a penalty of \$18,250,000 for these violations. The penalty calculation is based on the following:

- e. Rule 324A.a.:
 - i. Class 3 Violation;
 - ii. Major impact;
 - iii. Start Date: April 17, 2016; and
 - iv. End Date: the date of the Incident as Kerr-McGee took corrective actions on the same day.
- f. Rule 605.d.:
 - i. Class 2 Violation;
 - ii. Major impact;
 - iii. Start Date: April 17, 2016; and
 - iv. End Date: the date of the Incident as Kerr-McGee took corrective actions on the same day.
- g. Rule 1102.a.:
 - i. Class 2 Violation;
 - ii. Major impact;
 - iii. Start Date: April 17 2016; and
 - iv. End Date: the date of the Incident, as Kerr-McGee took corrective actions on the same day.
- h. Rule 1103:
 - i. Class 2 Violation;
 - ii. Major impact;
 - iii. Start Date: April 17 2016; and
 - iv. End Date: the date of the Incident, as Kerr-McGee took corrective actions on the same day.
 - v. Application of aggravating factor eight (523.c.(3)A.(viii)) because the Incident resulted in the death of two individuals and two individuals were seriously injured.
- i. All Violations:

³ Aggravating Factor applied to the Rule 1103 violation, which results in application of an additional \$5,000 per day penalty.

- i. Pursuant to 523.c.(4), the Director elected not to apply the Duration Matrix from the COGCC Enforcement Guidance and Penalty Policy, January 2015 (corrected 4/18/2015);
- ii. No mitigating factors;
- iii. No pattern of violation; and
- iv. No gross negligence or knowing and willful misconduct.

AGREEMENT

NOW, THEREFORE, based on the Findings and pursuant to Rule 522.e.(1) and the Commission's Enforcement and Penalty Policy, the Director and Kerr-McGee request that the Commission approve the Order set forth below.

Pursuant to Rule 523.f, in its discretion, the Commission may allow an operator to satisfy a penalty in whole or in part by a Public Project that the operator is not otherwise legally required to undertake. In order to satisfy the penalty amount in part, Kerr-McGee and the Director have agreed to the funding of multiple Public Projects, described below.

Kerr-McGee agrees to this AOC only for the purpose of expeditiously resolving this matter without a contested hearing. Kerr-McGee reserves the right to contest the findings of this AOC in any proceeding before any agency, court, or other tribunal, except for a proceeding to enforce the terms of this AOC. The findings and any action undertaken by Kerr-McGee or its affiliates or its parent companies pursuant to this AOC shall not constitute evidence of fault or liability by Kerr-McGee or its affiliates and parent companies with respect to any third-party claim against or brought by Kerr-McGee, its affiliates, or parent companies.

RECOMMENDED this 8th day of April, 2020.

OIL AND GAS CONSERVATION COMMISSION OF
THE STATE OF COLORADO

By  _____
Jeff Robbins, Director

AGREED TO AND ACCEPTED this 8th day of April, 2020.

KERR-MCGEE OIL & GAS ONSHORE LP

By /s/ Thomas A. Janiszewski
Thomas A. Janiszewski
Vice President
Kerr-McGee Onshore LP

ORDER

HAVING CONSIDERED the Agreement between the Director and Kerr-McGee to resolve the NOAV, the COMMISSION ORDERS:

1. Kerr-McGee is found in violation of Rules 324A.a., 605.d., 1102.a. and 1103, as described above.

2. Kerr-McGee is assessed a penalty of \$18,250,000. Kerr-McGee will deposit \$18,250,000 in an escrow account no later than 30-days from entry of this order. The escrow account will be established, maintained and held in the name of Kerr-McGee. The monies in that escrow account will be disbursed as follows:

- a. Kerr-McGee will pay to the Commission \$1,000,000 on July 1, 2020.
- b. Kerr-McGee will satisfy the remaining penalty of \$17,250,000, which may be used to fund multiple Public Projects, as discussed in Paragraph 3 of this Order.

3. Public Projects. The Public Projects described below constitute qualifying "Public Projects" as defined by Rule 523.f. because they will benefit public health, safety, and welfare and, except for those responsibilities set forth below in this Order, Kerr-McGee has no pre-existing legal obligations with respect to the Public Projects. The Public Projects described below are in settlement of the violations found herein, are to be directly funded by Kerr-McGee, and do not constitute publicly-funded contracts. The Public Projects would be administered by either the COGCC or the Colorado Department of Public Health and Environment (CDPHE). Certain costs below are estimates. Kerr-McGee will only be responsible for Public Project costs in the amount of \$17,250,000. Should actual costs exceed that amount, Kerr-McGee will not be responsible for the excess amount and will not be required to deposit additional monies into the escrow account.

- a. Aerial Survey Project. Perform aerial surveys at least once per year for two years in the D-J Basin, which is part of the North Front Range ozone non-attainment area. Aerial surveys have the potential to identify and significantly reduce leaks from pipelines/flowlines, production pads, tanks, central gathering facilities, compressor stations. Identifying and resolving these leaks not only results in reduced exposure to organic compounds that can affect public health and emissions of ozone precursors, it prevents the economic waste of the product. Kerr-McGee will contract for the aerial surveys with a third party of the COGCC's choosing, and pay for the surveys. The COGCC will also select the date of the survey and the area to be surveyed. Aerial surveys may also be expanded to other oil and gas basins in Colorado.

Estimated cost: \$2,000,000

- b. Mobile Air Monitoring Van. Acquire a mobile air monitoring van to measure pollutants, and help determine and locate leaks. The van would be a supplement not only to CDPHE's CAMML, but also to APCD inspectors. This mobile air monitoring van would be driven past oil and gas facilities and operations, as well as near flowlines/pipelines. As the van detects leaks, measures are taken to specifically locate the leak and promptly notify the responsible operator. Kerr-McGee will purchase the van selected by the COGCC from a vendor selected by the COGCC and transfer ownership to the COGCC.

Estimated costs:\$1,595,000 for the van, plus \$250,000 per year for 2 years of operational expenses

- c. Intrinsically Safe Optical Gas Imaging Cameras. Currently CDPHE and COGCC use this specialized type of camera to visualize natural gas that is emitted at oil and gas facilities. These cameras can help in identifying leaks and equipment malfunctions that result in uncontrolled emissions. The cameras are nearing the end of their useful life and must be replaced. In addition there is new technology that allows the cameras to quantify (measure) the amount of gas emitted. Kerr-McGee will purchase 9 cameras from a vendor selected by the COGCC and transfer ownership of all 9 cameras to the COGCC.

Estimated costs: \$1,100,000.for 9 cameras and related, necessary equipment

- d. Satellite and Remote Sensing Technology. Over the past two years, an E&E Lab Research Fellow (embedded at CDPHE) and the team of faculty and researchers at University of Chicago have been working closely with CDPHE to identify opportunities to leverage new technology and advanced analytics to improve air quality. The E&E Lab is developing machine learning models to help CDPHE improve effectiveness and efficiency of monitoring and inspections through better resource targeting. The E&E Lab is also supporting CDPHE in assessing opportunities emerging from advances in remote sensing (e.g., satellite, drone and aircraft-mounted sensors), which are poised to drastically lower the cost of emissions monitoring while improving measurement precision. The E&E Lab is working with CDPHE to create proofs-of-concept and develop policies to leverage state-of-the-art technology to help achieve emissions reductions; and to measure the impact and effectiveness of the technology-informed approach to enforcement. Kerr-McGee will fund two years of E&E Lab work, and make payment directly to E&E Lab.

Cost: \$1,000,000 per year for two years of E&E Lab work

- e. Methane Emissions Technology Evaluation Center (METEC). With additional funding, METEC will help to develop and characterize leak

detection technologies for flowlines (gas migration experiments in different soil types).

Cost: Kerr-McGee will donate \$1,100,000 to METEC to help develop and characterize leak detection technologies for flowlines

- f. Gas Detection and Metering Equipment. COGCC currently needs to update gas detection and metering equipment. This equipment will allow for more accurate detection and measurement of stray gas both in the soil and atmosphere. Kerr-McGee will purchase the equipment selected by the COGCC from a vendor selected by the COGCC and transfer ownership of the equipment to the COGCC.

Estimated cost: \$300,000 for gas detection and metering equipment

- g. Remote Methane Leak Detectors. These machines are highly portable and capable of detecting small leaks in open areas, such as flowlines and pipelines. These can be used in conjunction with Optical Gas Imaging cameras to find and quantify emissions. These cameras would be deployed by COGCC flowline integrity inspectors on a regular basis. Kerr-McGee will purchase two remote methane leak detectors from a vendor selected by the COGCC and transfer ownership to the COGCC.

Estimated cost: \$42,000 for leak detectors

- h. Legal Expense Reimbursement. Fredrick Firestone Fire Protection District incurred legal expenses related to the Firestone investigation and the National Transportation Safety Board process. This money would help defer those costs.

Cost: Kerr-McGee will transfer \$50,000 directly to the Fredrick Firestone Fire Protection District for its legal expenses associated with the Incident

- i. Public Health, Safety, Welfare and Environment Projects. The monies remaining in the escrow account after payment of the penalty set forth in section 2.a. and funding of the Public Projects identified in section 3.a.-h. above may be used to fund additional Public Projects that would protect or otherwise aid the COGCC in fulfilling its mission to protect public health, safety, welfare, the environment, and wildlife resources. Upon the earlier of funding the Public Projects identified in section 3.a.-h. or February 25, 2021, the Director will present to the Commission a report on the status of the Public Projects and recommendations for use of the remaining monies in the escrow account. If the Director recommends to the Commission that additional Public Projects be identified for funding, the COGCC will work with Kerr-McGee and CDPHE to identify these Public Projects, and no Public Project will be funded from the escrow account unless the COGCC and Kerr-McGee both agree to fund the Public Project out of the escrow account. Every six months after February 25, 2021, the Director will report

to the Commission on the status of the funds expended on Public Projects and the monies remaining in the escrow account. The Director's report will contain a recommendation to the Commission on the use of the monies remaining in the escrow account. Kerr-McGee will take all necessary precautions to ensure that the monies in the escrow account may only be used for the purposes contemplated in this Order, including all necessary steps to ensure that no person has any interest in the monies other than Kerr-McGee and the COGCC. All fees associated with the account shall be paid out of the escrow account. The process for the COGCC and Kerr-McGee to agree to expend funds from the escrow account will be as follows:

- a. The COGCC and Kerr-McGee will work together to find appropriate Public Projects advancing the goals of leak detection and repair. COGCC and Kerr-McGee will present mutually agreed upon projects to the Commission for its consideration at a public hearing.
- b. If either party believes the other has unreasonably withheld agreement to a proposed Project, the party who wishes to expend funds may submit its position to a committee that will make the final binding decision on whether to expend funds from the escrow account. The party who rejected the proposal may submit a response in writing. The committee will be comprised of an employee of the COGCC or a Commissioner, an employee of Kerr-McGee, and a third person, which the two other committee members will select. The committee will make its decision based solely on the writings submitted by the parties.
- c. If both Kerr-McGee and the COGCC agree in writing to expend funds from the escrow account for the proposed Project, funds equal to the estimated cost of the project will be deemed committed to that proposed Project on the date that both parties agree. Kerr-McGee and the COGCC will memorialize their agreement to expend funds in a writing that states a description of the Project and the estimated cost of the Project, as well as any additional terms the parties deem necessary.
- d. Kerr-McGee will not transfer funds from the escrow account until the COGCC has determined all necessary terms with the third party, if any. If the Project involves purchasing equipment, Kerr-McGee will purchase the equipment and then transfer ownership of the equipment to the COGCC, or other state agency as agreed. If the Project involves services or research, COGCC will enter into the agreement for services or research with the third party, if applicable, and Kerr-McGee will transfer funds from the escrow account directly to the third party.

4. Any monies in the escrow account that are not expended or committed to a Public Project by July 1, 2025, will be transferred to the COGCC by Kerr-McGee. Notwithstanding the foregoing, the Commission may direct that escrowed monies remaining after the Public Projects identified in section 3.a.-h. are funded, be transferred to the COGCC.

5. Every six months, and upon the funding of each Public Project, Kerr-McGee will submit to the Director a report detailing the actual expenditures for each Project to be verified by appropriate records. The Director may also request an accounting of all expenditures for any or all Projects upon 30 days written notice.

6. Kerr-McGee will submit a final accounting of all monies transferred out of the escrow account to the COGCC on July 1, 2025, along with a total amount remaining in the escrow account.

7. After Kerr-McGee's completion of the Public Project as provided in the Order, and at the Commission or Director's discretion, Kerr-McGee shall present to the Commission a follow up report.

8. Failure to comply with this Order is an independent violation that may be subject to additional penalties.

9. Compliance dates specified in this Order may be extended only for good cause, as determined at the Director's discretion. A request for extension must be made, in writing, at least 28 days prior to the pertinent compliance deadline or as soon as possible if 28 days prior notice is not feasible. Failure to receive an approved extension prior to the compliance deadline or the failure to meet a compliance deadline may constitute a new violation subject to additional penalties.

10. This Order is effective as of the date it is mailed by the Commission. It constitutes final agency action for purposes of judicial review.

11. The Commission expressly reserves its right, after notice and hearing, to alter, amend, or repeal any and/or all of the above orders.

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ENTERED this ____ day of _____, 2020, as of this ____ day of _____, 2020.

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

By _____
Mimi Larsen, Secretary

CERTIFICATE OF MAILING

On _____, 2020, a true and accurate copy of Commission Order 1V-709 was mailed by first-class mail return receipt requested to the following:

Kerr-McGee Oil & Gas Onshore LP
Attn: Thomas Janiszewski and Danielle Piernot
PO Box 173779
Denver, CO 80217-3779

Margaret Humecki