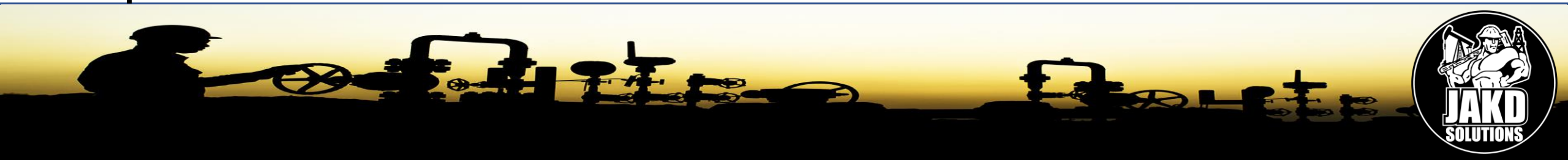


NMOCD Natural Gas Waste Rule and NMED Ozone Precursor Rule Overview



Presented by: James McDaniel, JAKD Solutions, LLC



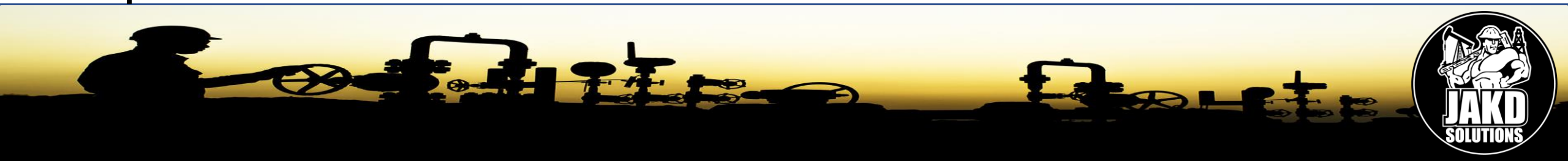


JAKD SOLUTIONS

Introduction

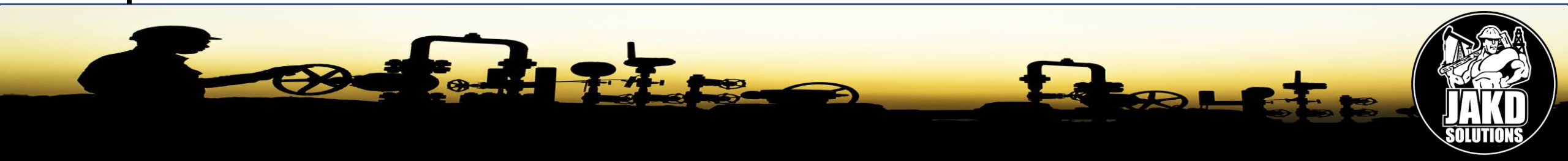
James McDaniel, Owner of JAKD Solutions, LLC

- Certified Safety Professional (CSP)
- Certified Hazardous Material Manager (CHMM)
- Certified Instructional Trainer (CIT)
- Worked in Oil and Gas HSE for over 13 years
 - Mostly in San Juan Basin
- Previously worked for XTO and Enduring Resources



Overview – Where Did This Come From

- Governors 'Methane Reduction' initiative
- Reduction in Ozone standard during Obama Administration

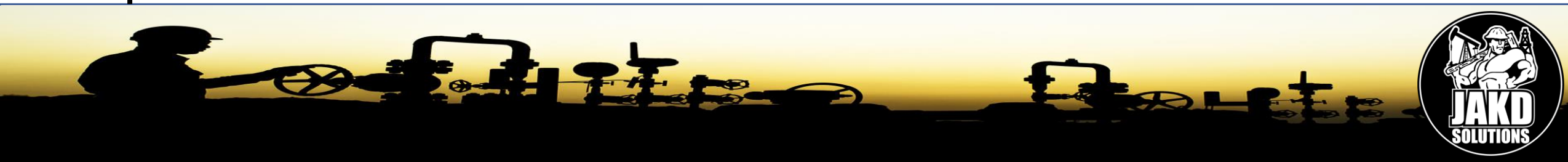




NMOCD Natural Gas Waste Rule

Rule 19.15.27 - Exploration and Production

- “applies to persons engaged in oil and natural exploration and production within New Mexico.”
- Objective is to “regulate the venting and flaring of natural gas from natural gas gathering systems to prevent waste and, public health and the environment

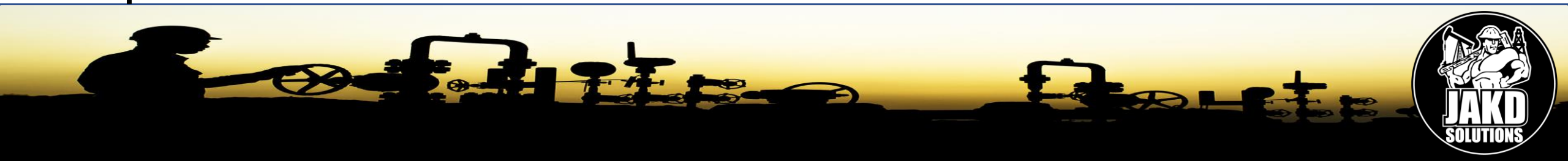




NMOCD Natural Gas Waste Rule

Definitions

- **ALARM** - means advanced leak and repair monitoring technology for detecting natural gas or oil leaks or releases that is not required by applicable state or federal law, rule, or regulation and which the division has approved as eligible to earn a credit against the reported volume of lost natural gas





NMOCD Natural Gas Waste Rule

Venting and Flaring

- Venting or flaring of natural gas during drilling, completion, or production operations that constitutes waste is prohibited
- In all circumstances, the operator shall flare rather than vent natural gas except when flaring is technically infeasible or would pose a risk to safe operations or personnel safety, and venting is a safer alternative than flaring

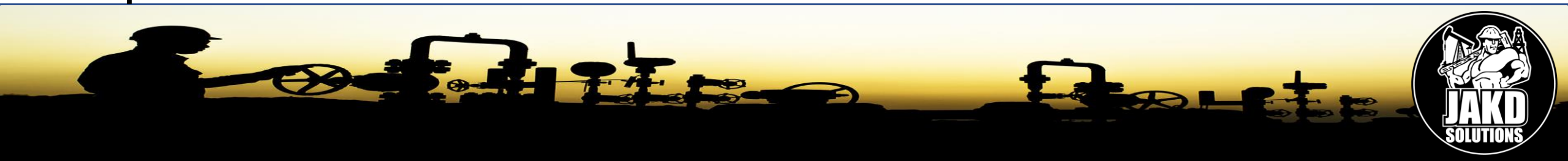




NMOCD Natural Gas Waste Rule

Venting and Flaring - Drilling

- The operator shall capture or combust natural gas if technically feasible using best industry practices and control technologies.
- A properly-sized flare stack shall be located at a minimum of 100 feet from the nearest surface hole location unless otherwise approved by the division.
- In an emergency or malfunction, the operator may vent natural gas to avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment.
- The operator shall report natural gas vented or flared during an emergency or malfunction to the division pursuant to this regulation

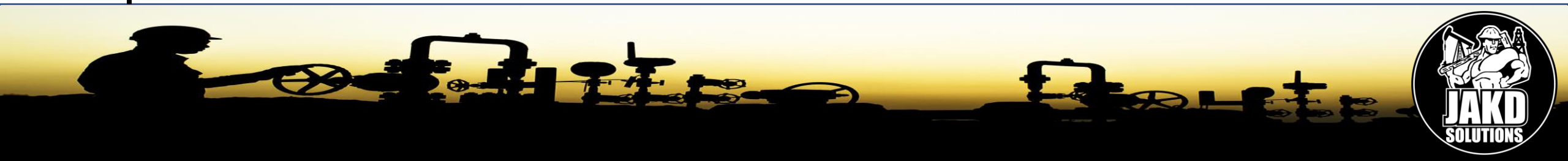




NMOCD Natural Gas Waste Rule

Venting and Flaring - Completions

- During initial flowback operators shall flare rather than vent, and commence operation of a separator as soon as it is technically feasible for a separator to function
- During separation flowback, the operator shall capture and route natural gas from the separation equipment:
 - to a gas flowline or collection system, reinject into the well, or use on-site as a fuel source or other purpose that a purchased fuel or raw material would serve;
OR
 - to a flare if routing the natural gas to a system would pose a risk to safe operation or personnel safety

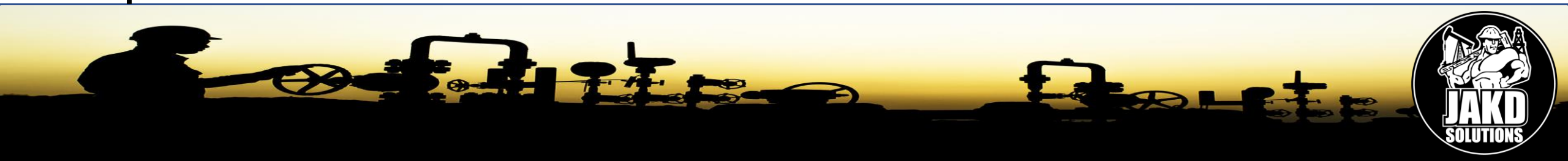




NMOCD Natural Gas Waste Rule

Venting and Flaring - Completions

- If natural gas does not meet gathering pipeline quality specifications, the operator may flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner, provided that:
 - a properly-sized flare stack is equipped with an automatic igniter or continuous pilot;
 - the operator analyzes natural gas samples twice per week;
 - the operator routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met; AND
 - the operator provides the pipeline specifications and natural gas analyses to the division upon request

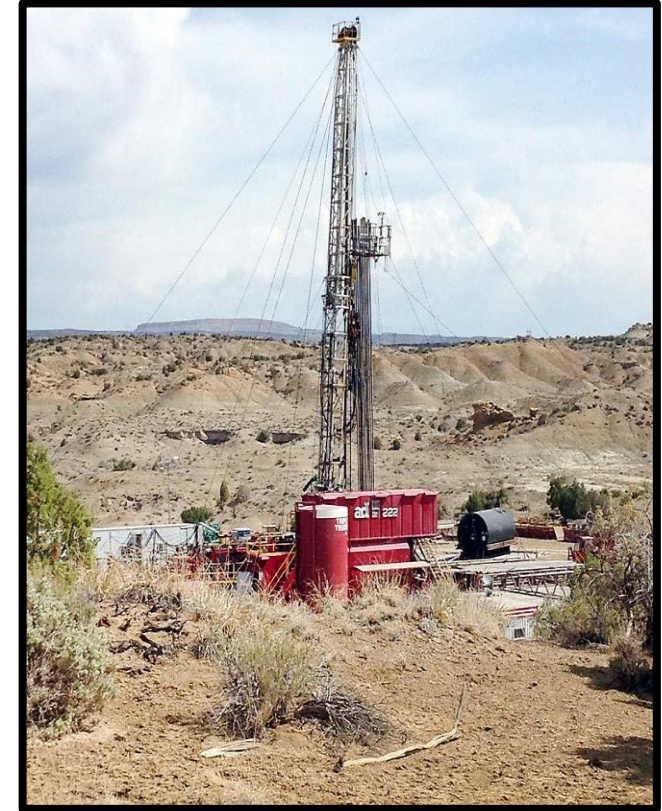




NMOCD Natural Gas Waste Rule

Venting and Flaring - Production

- The operator shall not vent or flare natural gas except:
 - during an emergency or malfunction
 - to unload or clean-up liquid holdup in a well to atmospheric pressure
 - As long as the operator remains on-site, or is within 30 minutes of the well
 - for a well equipped with a plunger lift system or an automated control system, the operator optimizes the system to minimize the venting of natural gas
 - during downhole well maintenance, only when the operator uses a workover rig, swabbing rig, coiled tubing unit or similar specialty equipment

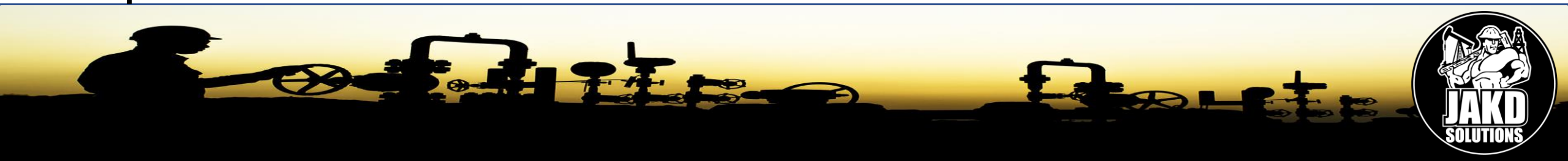




NMOCD Natural Gas Waste Rule

Venting and Flaring - Production

- Venting can also be completed during the following activities:
 - Gauging, sampling or loading out liquids from a storage tank or low pressure vessel
 - repair and maintenance, including blowing down and depressurizing production equipment to perform repair and maintenance;
 - normal operation of a gas-activated pneumatic controller or pump;
 - normal operation of a storage tank or other low-pressure production vessel, ***but not including venting from a thief hatch***
 - normal operation of dehydration units and amine treatment units;
 - normal operations of compressors, compressor engines, and turbines;
 - normal operations of valves, flanges and connectors that is not the result of inadequate equipment design or maintenance;
 - a bradenhead or packer test

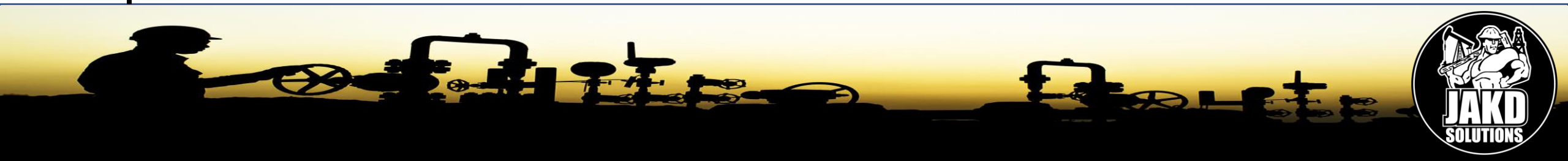




NMOCD Natural Gas Waste Rule

Venting and Flaring - Performance

- Separation equipment must be designed for maximum anticipated pressure and to minimize waste
- Storage tanks with control devices must have automatic gauging systems
- Flares stacks must be properly sized
 - Flares installed after the effective date must have an automatic igniter or a continuous pilot
 - Flares installed before the effective date must have an automatic igniter or continuous pilot installed within 18 months of the effective date
 - Flare stacks constructed after the effective date must be anchored and located at least 100 feet from the well and storage tanks, unless otherwise approved by the division





NMOCD Natural Gas Waste Rule

Venting and Flaring - Inspections

- Operators must perform **WEEKLY** audio, visual and olfactory (AVO) inspections on sites averaging than 60 MCF per day
- Operators must perform **WEEKLY** audio, visual and olfactory (AVO) inspections during the first year of production on new wells
- AVOs must be conducted on wells making less than 60 MCFPD, shut-in wells, inactive wells or temporarily abandoned wells **MONTHLY**, with at least 20 days between inspections



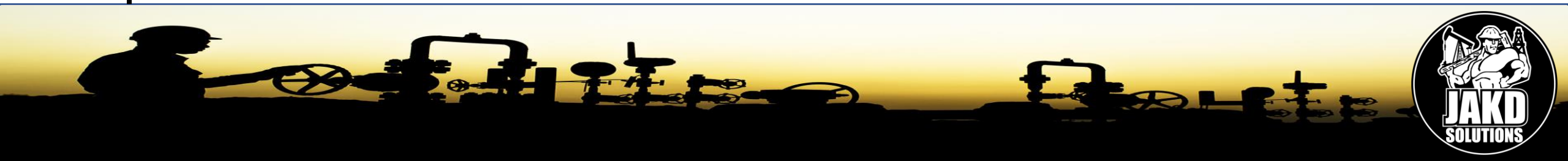


JAKD SOLUTIONS

NMOCD Natural Gas Waste Rule

Venting and Flaring - Inspections

- AVOs must include all components, including:
 - PRVs
 - Flares
 - Thief hatches
 - Closed vent systems
 - Pumps
 - Compressors
 - Lines, valves and flanges
 - Connectors
 - All associated piping

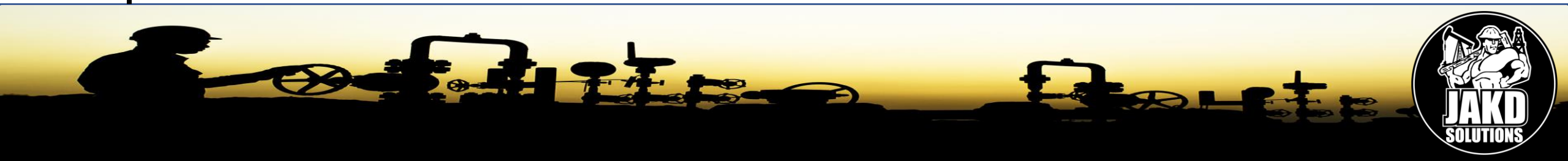




NMOCD Natural Gas Waste Rule

Venting and Flaring - Inspections

- AVO Inspection records must be kept for a minimum of 5 years
- These records must be kept available for the inspection by the division upon request
- Automated monitoring technology can be used instead of AVO inspections with the Division's prior approval

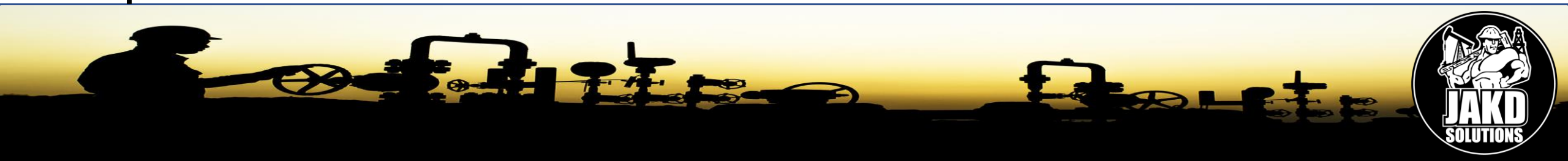




NMOCD Natural Gas Waste Rule

Venting and Flaring - Measurement

- Operators must measure or estimate the volume of natural gas that is vented, flared, or beneficially used
- Equipment must be installed to measure the volume of gas flared from existing process piping or flowlines associated with high pressure separators, heater treaters or VRUs on wells with APDs issued ***after*** the effective date with average daily production over 60 MCFPD





NMOCD Natural Gas Waste Rule

Reporting of Vented or Flared Natural Gas

- Operators shall notify the division on a Form C-129 of any venting event that exceeds 50 MCF, or that lasts more than 8 hours in a 24-hour period that is the result of an emergency or malfunction
- Notification shall be in writing, Form C-129, for volumes exceeding 50 MCF, but less than 500 MCF, and are due within 15 days to the Division
- Notifications for volumes over 500 MCF must be reported to the Division within 24 hours verbally or by email as well as a C-129 within 15 days
- Liquid releases associated with natural gas releases must have a C-141 submitted according to the release volumes

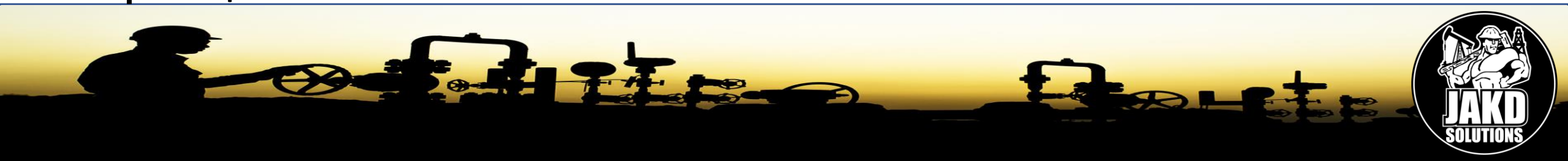




NMOCD Natural Gas Waste Rule

Reporting of Vented or Flared Natural Gas

- Operators must report vented and flared natural gas on a ***MONTHLY*** basis for all facilities where gas is vented or flared
- Beginning October 1, 2021, the operator shall gather data for quarterly reports in a format specified by the division and submit by February 15, 2022 for the fourth quarter and May 15, 2022 for the first quarter.
- Beginning April 2022, the operator shall submit a form C-115B monthly on or before the 15th day of the second month following the month in which it vented or flared natural gas.
- The operator shall specify whether it estimated or measured each reported volume.

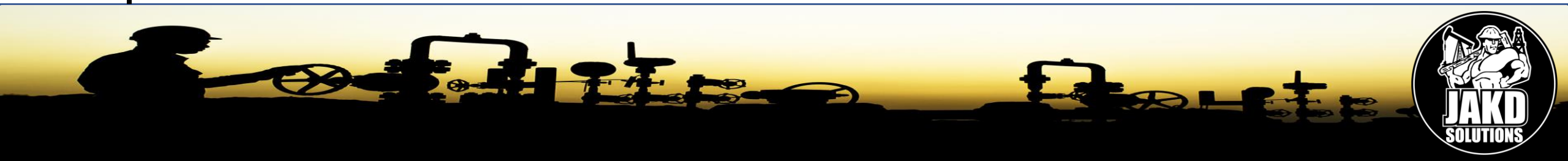
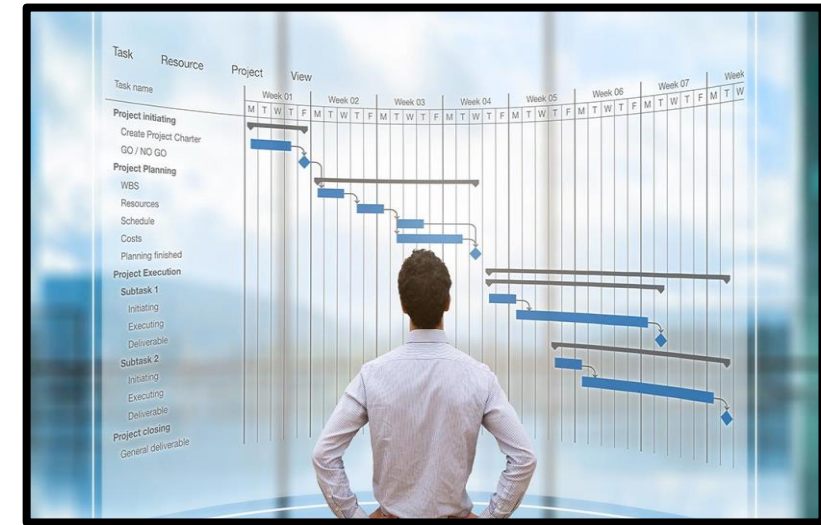




NMOCD Natural Gas Waste Rule

Natural Gas Management Plan

- All APDs submitted after the effective date must include a Natural Gas Management Plan
- The natural gas management plan shall describe the actions that the operator will take at each proposed well to meet its statewide natural gas capture requirements
- If the operator is not currently meeting the Statewide Gas Capture Requirements, the Natural Gas Management Plan will require specific information about the new well and the natural gas capture of the new well

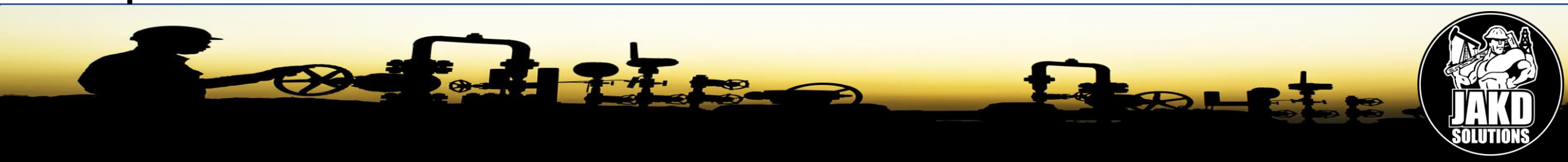




NMOCD Natural Gas Waste Rule

Rule 19.15.28 - Gathering

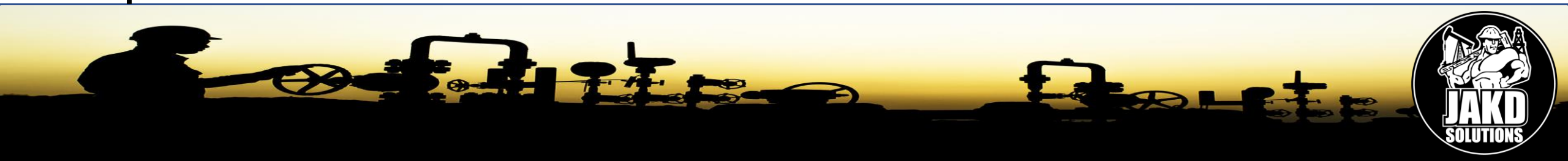
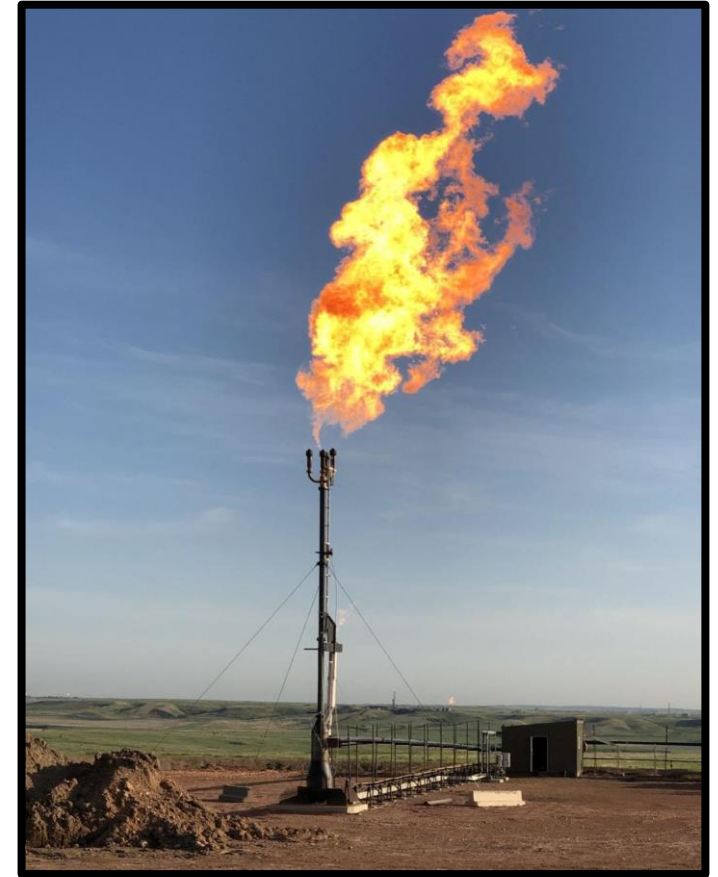
- “applies to persons engaged in oil and natural gas gathering and processing within New Mexico.”
- Objective is to “regulate the venting and flaring of natural gas from natural gas gathering systems to prevent waste and, public health and the environment





NMOCD Natural Gas Waste Rule

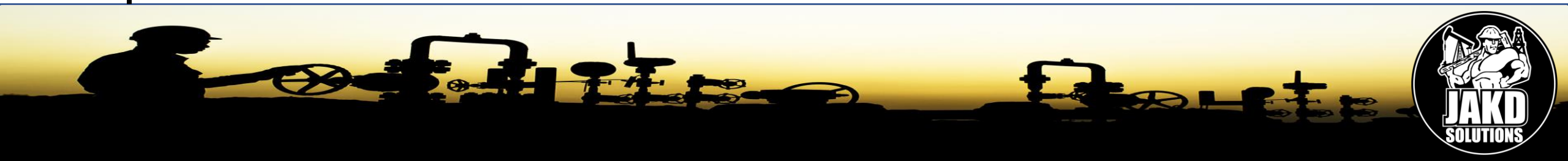
- According to the revised rule, venting and flaring of natural gas from a natural gas gathering system is waste and is 'prohibited' except as authorized by the division
- The operator shall flare rather than vent natural gas except when flaring is not technically feasible or would pose a risk to safe operations or personnel safety and venting is a safer alternative than flaring





NMOCD Natural Gas Waste Rule

- Exceptions where venting and flaring is 'allowed'
 - during an emergency or malfunction
 - during the following activities unless prohibited by applicable state and federal law, rule or regulation
 - repair and maintenance, including blowing down and depressurizing equipment to perform repair or maintenance;
 - normal operation of a gas-activated pneumatic controller or pump, dehydration units, compressors, compressor engines or turbines
 - normal operation of valves, flanges, and connectors that is not the result of inadequate equipment design or maintenance
 - normal operation of a storage tank or other low-pressure production vessel, but not including venting from a thief hatch that is not fully and timely closed or from a seal that is not maintained on an established schedule;
 - gauging or sampling a storage tank or other low-pressure vessel;
 - loading out liquids from a storage tank or other low-pressure vessel to a transport vehicle;
 - blowdown to repair, pigging or purging a gathering pipeline.

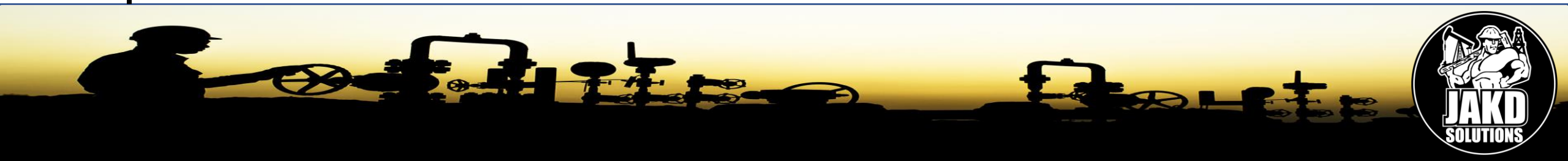




NMOCD Natural Gas Waste Rule

Performance Standards

- The operator must take all reasonable actions to prevent leaks and releases from a natural gas processing system
- Operators must implement an Operations Plan to prevent and minimize leaks and releases from gathering systems to 'minimize the waste of natural gas in each non-contiguous natural gas gathering system'
- The Operations Plan should include procedures to reduce leaks and releases, such as a routine maintenance program, cathodic protection, corrosion control, liquids management and integrity management.





NMOCD Natural Gas Waste Rule

Operations Plan

- An operations plan must be filed for each of the following scenarios
 - Gas gathering systems placed in service after the effective date of this rule, within 60 days of bringing the system online
 - Within 90 days of the effective date of this rule for all gathering systems in place at the time of the rule's effective date
 - By March 31st of the following year for any gathering system that had a pipeline added during the previous year, or if the operator made changes to the Operations Plan

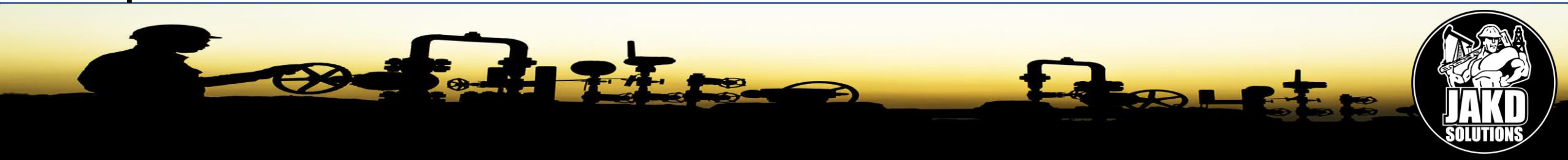




NMOCD Natural Gas Waste Rule

Performance Standards

- During scheduled repair of a gathering system, the operator shall not vent gas to the atmosphere, but must route gas to a portable flare which complies with NMOCD standards
- During unscheduled maintenance, replacement or repair of a new or existing natural gas gathering system, to the extent that it is technically feasible and would not pose a risk to safe operations or personnel safety, the operator shall not vent natural gas during blowdown and shall route natural gas to a portable flare stack

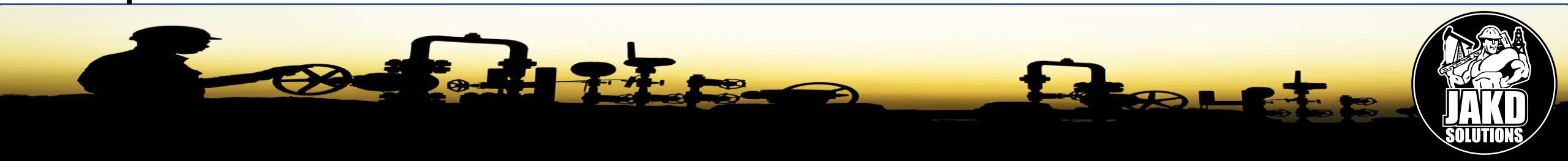




NMOCD Natural Gas Waste Rule

Performance Standards

- Operators must conduct **WEEKLY** AVO inspections on compressors, dehys and treatment facilities associated with natural gas gathering systems
- During AVO inspections, operator shall inspect all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated piping to identify defects, leaks, and releases by:
 - visually inspecting components for evidence of a leak (cracks, holes, damage and wear)
 - listening for pressure and liquid leaks; and
 - smelling for unusual and strong odors
- The operator shall make and keep a record of an AVO inspection for no less than five years and make such records available for inspection by the division upon request.
- With division prior written approval, operators may use a remote or automated monitoring technology to detect leaks and releases in lieu of an AVO inspection

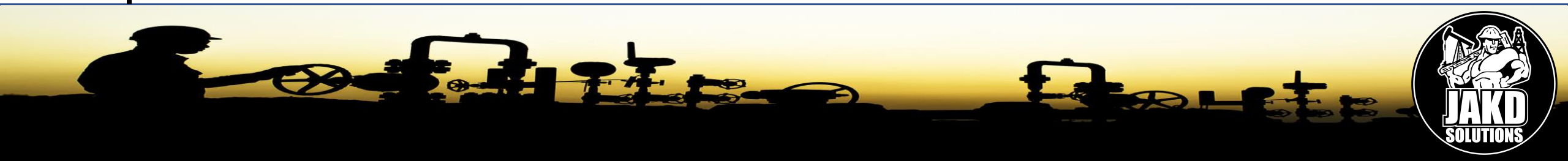




NMOCD Natural Gas Waste Rule

Performance Standards

- Operators shall perform an ***annual monitoring*** of the entire length of a gathering pipeline using an AVO technique, ALARM technology, aerial visual inspection, or other valid method to detect leaks and releases.
- The operator shall record and report to the division the date and time of the monitoring, the method and technology used and the name of the employee(s) who conducted the monitoring.
- Facilities constructed after the effective date shall be designed to minimize waste
- Operators have 'the obligation to minimize waste and shall resolve emergencies as quickly and safety as feasible'





NMOCD Natural Gas Waste Rule

Reporting to Affected Upstream Operators

- Operators must provide written notice to affected operators, in writing, 14 days prior to scheduled attendance of gathering systems
- Operators must provide written notice ASAP, but no more than 12 hours after discovery, of unscheduled maintenance or repair of a natural gas gathering system.
- Notification should provide the expected duration that the system will not be gathering natural gas
- Operators must maintain documentation of written reports for 5-years, and shall be available for inspection by the division upon request

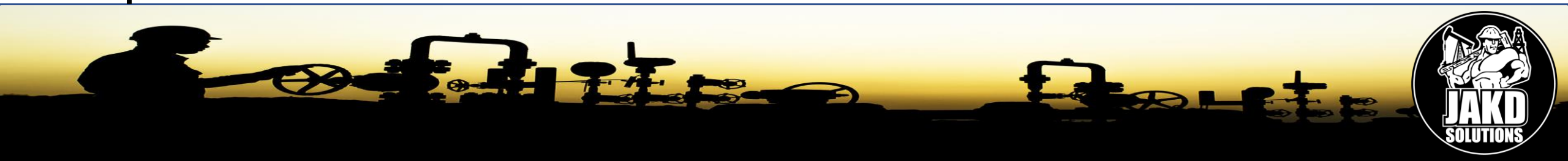




NMOCD Natural Gas Waste Rule

Measurement or Estimation of Vented and Flared Natural Gas

- The operator shall measure or estimate the volume of natural gas that it vents, flares or beneficially uses regardless of the reason or authorization for such venting or flaring
- The operator shall install equipment to measure the volume of natural gas flared from a natural gas gathering system
- Measuring equipment shall conform to an industry standard such as American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapter 14.10 Measurement of Flow to Flares
- Measuring equipment shall not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measuring equipment.
- If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, the operator shall estimate the volume of vented or flared natural gas using a methodology that can be independently verified





NMOCD Natural Gas Waste Rule

Reporting of Vented or Flared Natural Gas

- Operators shall notify the division on a Form C-129 of any venting event that exceeds 50 MCF, or that lasts more than 8 hours in a 24-hour period that is the result of an emergency or malfunction
- Notification shall be in writing, Form C-129, for volumes exceeding 50 MCF, but less than 500 MCF, and are due within 15 days to the Division
- Notifications for volumes over 500 MCF must be reported to the Division within 24 hours verbally or by email as well as a C-129 within 15 days
- Liquid releases associated with natural gas releases must have a C-141 submitted according to the release volumes





NMOCD Natural Gas Waste Rule

Monthly Reporting of Vented and Flared Natural Gas

- For each natural gas gathering system at which venting or flaring occurred, the operator shall separately report the volume of vented natural gas and the volume of flared natural gas for each month in each category listed below
 - Beginning October 1, 2021, the operator shall gather data for quarterly reports in a format specified by the division and submit by February 15, 2022 for the fourth quarter of 2021 and May 15, 2022 for the first quarter of 2022
 - Beginning April 2022, the operator shall submit a form C-115B monthly on or before the 15th day of the second month following the month in which it vented or flared natural gas. (June 15, 2022 for April 2022, etc)

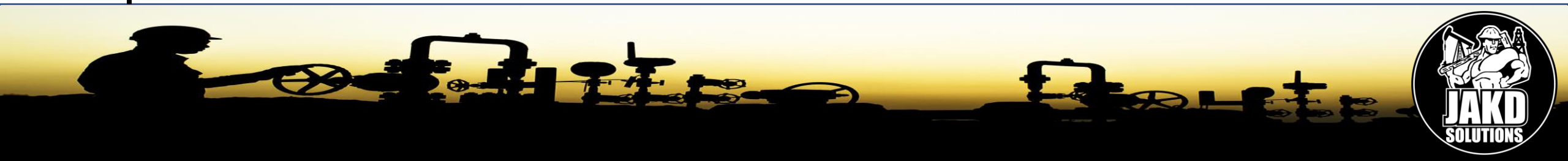




NMOCD Natural Gas Waste Rule

Monthly Reporting of Vented and Flared Natural Gas

- The operator shall specify whether it estimated or measured each reported volume.
- In filing the initial report, the operator shall provide the methodology (measured or estimated using calculations and industry standard factors) used to report the volumes on the form, and shall report changes in the methodology on future forms.
- The operator shall make and keep records of the measurements and estimates, including records showing how it calculated the estimates, for no less than five years and make such records available for inspection by the division upon request.



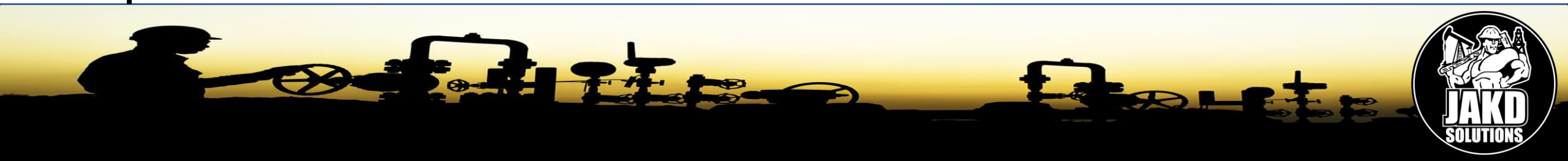


NMOCD Natural Gas Waste Rule

Monthly Reporting of Vented and Flared Natural Gas

Categories for reporting natural gas venting and flaring are:

- Emergency
- non-scheduled maintenance and malfunction
- routine repair and maintenance, including blowdown and depressurization
- beneficial use, including pilot and purge gas, fired equipment and engine
- gathering pipeline blowdown and purging
- gathering pipeline pigging
- storage tanks
- venting as a result of normal operation of pneumatic controllers and pumps
- improperly closed or maintained thief hatches
- other surface waste as defined in Subparagraph (b) of Paragraph (1) of Subsection W of 19.15.2.7





NMOCD Natural Gas Waste Rule

Reporting of Vented and Flared Natural Gas

- Upon submittal of the C-115B report, the division will compile and publish on the division's website an operator's vented and flared natural gas information for each month on a volumetric and gas capture percentage basis
- To calculate the lost natural gas on a **volumetric basis**, the operator shall deduct the volume of natural gas used for beneficial use and vented or flared during an emergency, or vented as a result of normal operation of pneumatic controllers and pumps from the volume of natural gas gathered reported on its form C-115B
- To calculate the natural gas captured on a **percentage basis**, the operator shall deduct the volume of lost gas calculated in Subparagraph (a) of Paragraph (3) of Subsection F of 19.15.28.8 NMAC from the total volume of natural gas gathered and divide by the total volume of natural gas gathered.

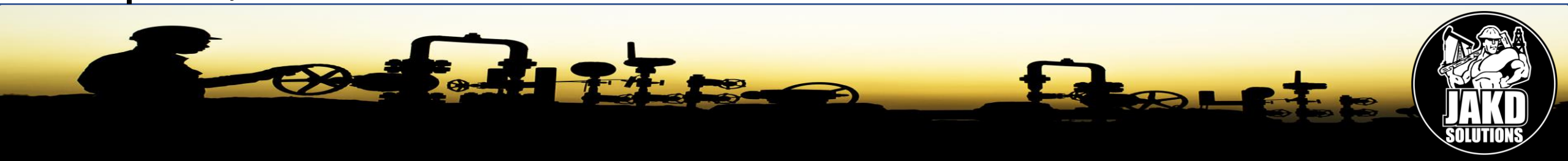




NMOCD Natural Gas Waste Rule

Measurement of Vented and Flared Natural Gas

- Upon request by the division, the operator, at its own expense, shall retain a third-party approved by the division to verify any data or information collected or reported to the division
- A report detailing the verification and recommendations by the third party must be submitted to the division by the specified date, and implement the recommendations in the manner approved by the division
- Upon the New Mexico environment department's request, the operator shall promptly provide a copy of any form filed with the NMOCD

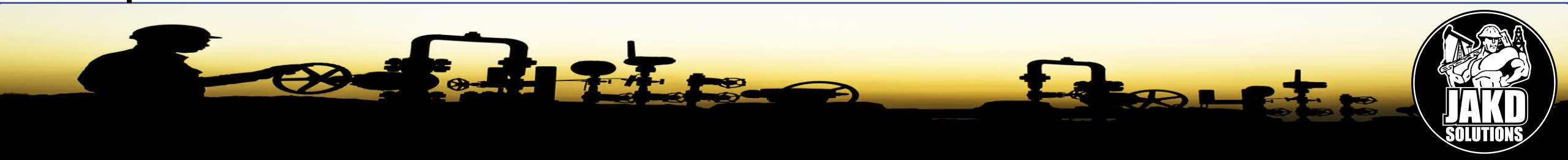




NMOCD Natural Gas Waste Rule

Location Requirements

- The operator shall file with the division a GIS digitally formatted as-built map for all new gathering pipelines, and for all additions to an existing gathering system, within 90 days of placing the gathering system into service.
- The operator shall file with the division a GIS digitally formatted as-built map for all existing gathering pipelines or natural gas gathering systems no later than 90 days from the rule's effective date
- To ensure proper field identification of a gathering pipeline in an emergency, the as-built map shall include a layer which identifies the pipeline size and construction material type.
- Operators shall file with the division an updated GIS digitally formatted as-built map of its gathering pipeline or natural gas gathering system, which shall include a GIS layer that identifies the date, location and volume of vented or flared natural gas of each emergency, malfunction and release reported to the division since 19.15.28 NMAC became applicable to the pipeline or system each year by July 31, of each year
- An operator may assert confidentiality for the GIS digitally formatted as-built map and GIS layer

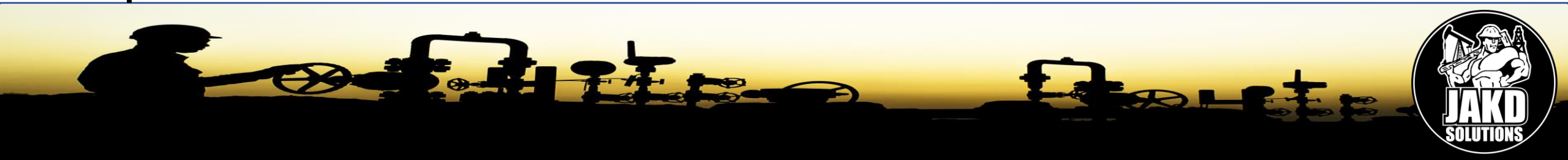




NMOCD Natural Gas Waste Rule

Statewide Natural Gas Capture Requirements

- Beginning April 1, 2022, operators of gathering systems and Wellsites must reduce the volume of vented and flared natural gas to 98% of all gas gathered in two reporting areas, North and South
- The two areas are separated by the North Township 10 Line (SJB in North)
- 98% capture rate must be achieved by December 31, 2026
- The division shall calculate and publish on the division's website each operator's baseline natural gas capture rate based on the operator's fourth quarter 2021 and first quarter 2022 quarterly reports



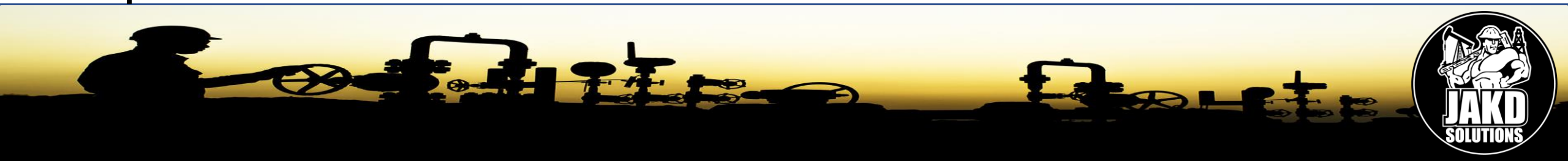


NMOCD Natural Gas Waste Rule

Statewide Natural Gas Capture Requirements

- In each calendar year between January 1, 2022 and December 31, 2026, the operator shall increase its annual percentage of natural gas captured in each reporting area in which it operates based on the following formula:
- (baseline loss rate minus two percent) divided by five,
- an operator's percentage of natural gas captured shall not be less than seventy-five percent of the annual gas capture percentage increase (2022 baseline loss rate minus two percent divided by five times 0.75), and the balance shall be captured in 2023.

Baseline Natural Gas Capture Rate	Minimum Required Annual Natural Gas Capture Percentage Increase
90-98%	0-1.6%
80-89%	>1.6-3.6%
70-79%	>3.6-5.6%
0-69%	>5.6-19.6%

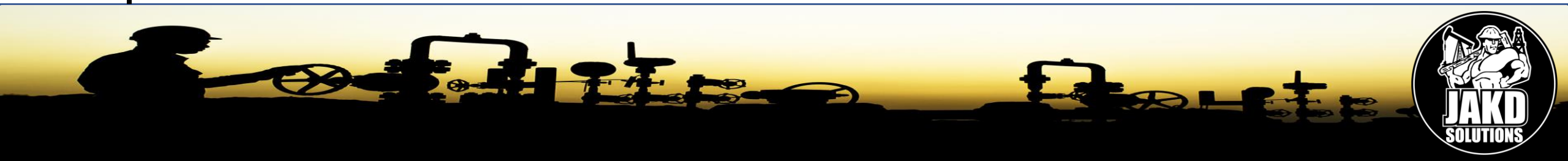




NMOCD Natural Gas Waste Rule

Statewide Natural Gas Capture Requirements

- If the operator has a capture rate less than 60%, they must submit a plan to the Division for approval to meet the 98% capture requirement
- If a gathering asset is purchased or acquired, it must meet the 98% capture rate by the December 31, 2026 deadline, unless the Division approved a later date

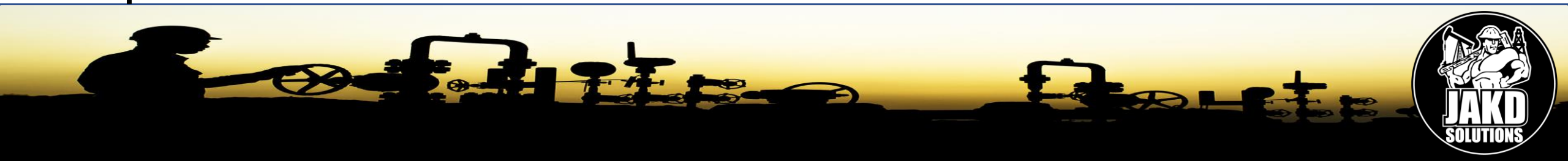
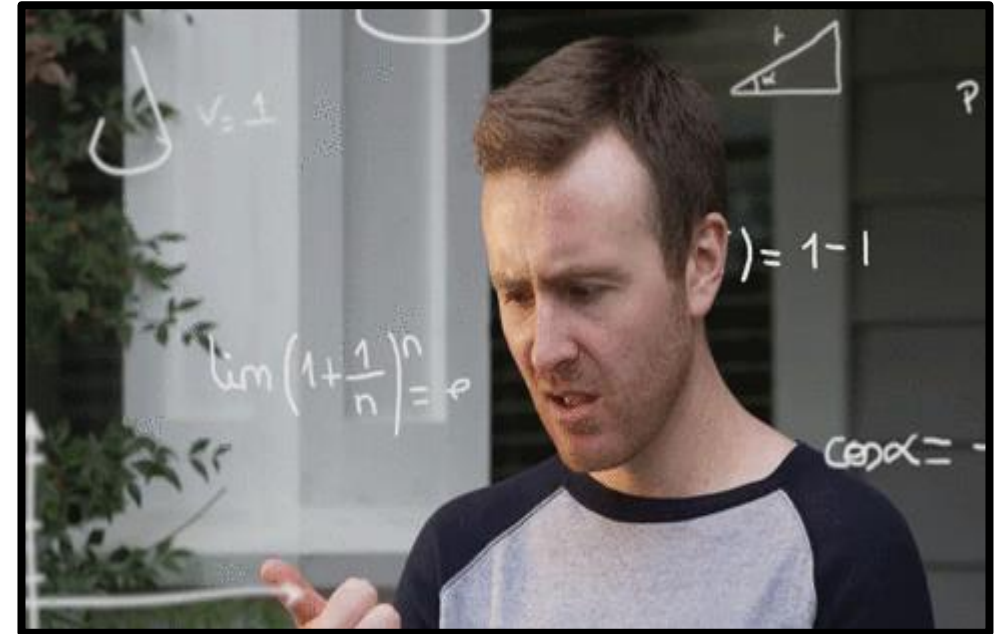




NMOCD Natural Gas Waste Rule

Accounting

- Operators must submit a report by February 15 each year demonstrating compliance with the Statewide Gas Capture Requirement
- Volumes of gas vented or flared must be counted as lost natural gas
- Volumes of gas reported on Form C-129 may be excluded from the total gathered natural gas
- Operators may also exclude gas used for beneficial use from the total volume of gathered gas

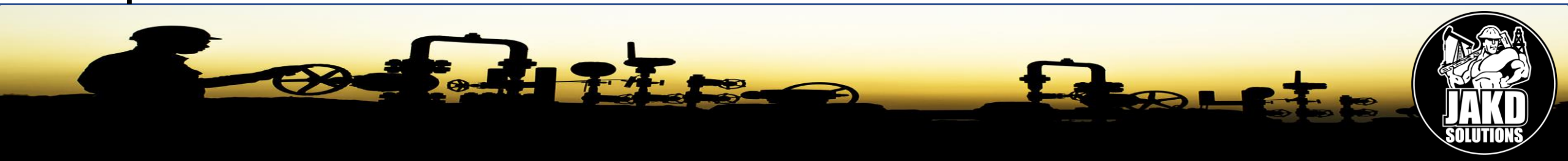




NMOCD Natural Gas Waste Rule

Accounting

- Operators using a division approved ALARM technique to monitor for leaks may receive credit against the total volume of gas lost if:
 - The leak or release was isolated within 48 hours following field verification
 - The leak or release was repaired within 15 days or another date approved by the division
 - The division was notified by filing a form C-129 or form C-141;
 - The operator timely reported the volume of natural gas leaked or released on form C-115 as an ALARM event; and
- Used ALARM monitoring technology as an on-going aspect of its waste-reduction practices.
 - For discrete waste-reduction practices such as aerial methane monitoring, the operator must use the technology at least twice per year; and
 - for waste-reduction practices such as automated emissions monitoring systems that operate routinely or continuously, the division will determine the required frequency of use

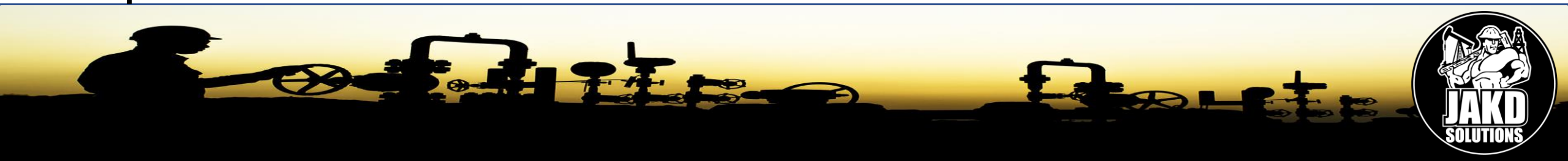




NMOCD Natural Gas Waste Rule

Obtaining ALARM Credits

- An operator may file for an ALARM credit against the volume of lost natural gas
- The credit application must contain:
 - The ALARM technology used to identify the leak or release
 - The dates in which the leak was identified, isolated and repaired
 - The method used to measure or estimate the volume of the leak
 - A description and date of the actions taken to isolate and repair the leak
 - visual documentation or other verification of discovery, isolation, and repair of the leak or release
 - A certification stating that the operator did not know of the leak or release prior to identifying it with the ALARM technology
 - A description of how the ALARM technology is used as part of an on-going waste reduction program

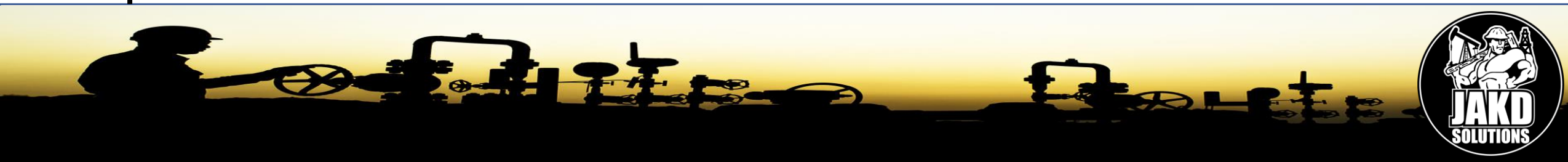




NMOCD Natural Gas Waste Rule

Obtaining ALARM Credits

- The Division may approve a 'credit' for each ALARM leak identified at *their sole discretion* based on the following:
 - Up to 40% for volumes of gas identified and isolated within 48 hours of discovery and timely repaired
 - An additional 20% credit can be approved if the operator uses ALARM technology no less than once per year as a routine part of their overall waste reduction program
 - ALARM credits may only be used once, and cannot be transferred to another operator
 - ALARM credits expire 24 months after being issued by the Division

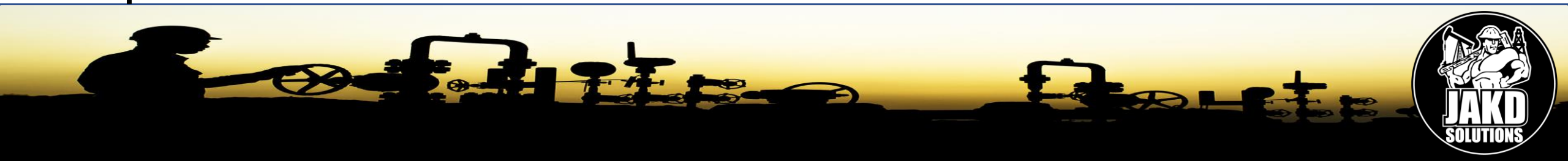




NMOCD Natural Gas Waste Rule

Rule Status

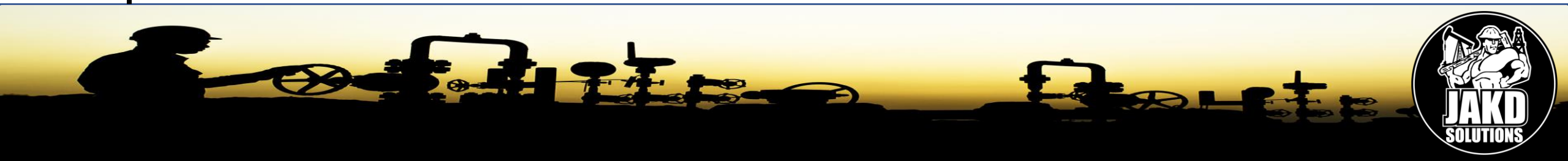
- The Final Rule was published on 3/25/2021 and is awaiting publication on the NM Register.
- Weekly AVO inspections should begin immediately once the rule is effective
- Annual inspections will need to be conducted this year





JAKD SOLUTIONS

NMOCD Natural Gas Waste Rule

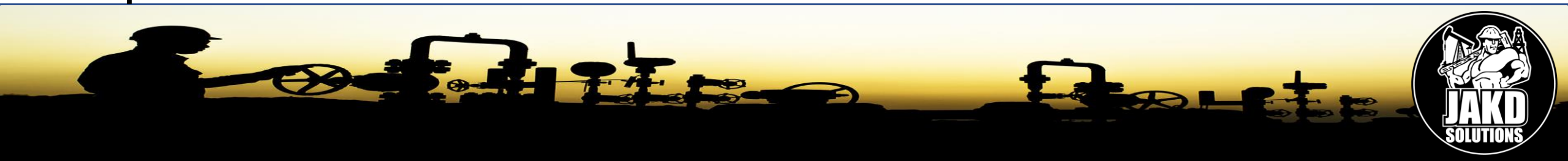




NMED Ozone Precursor Rule

Applicability

- Applies to 'sources' located within counties reaching ozone concentrations within 95% of the national standard
 - Chaves
 - Eddy
 - Lea
 - Rio Arriba
 - Sandoval
 - San Juan
- Sources located in Bernalillo County and on Tribal Lands are excluded

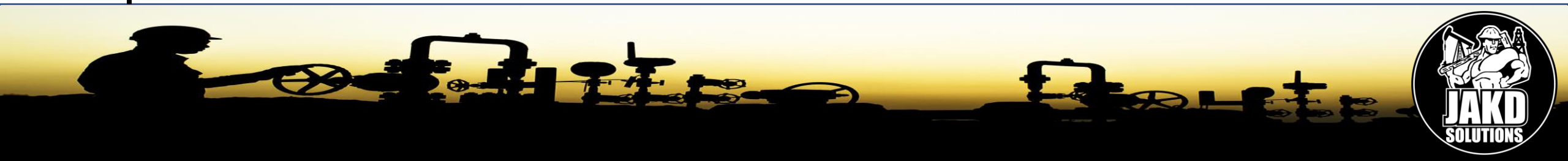




NMED Ozone Precursor Rule

Applicability

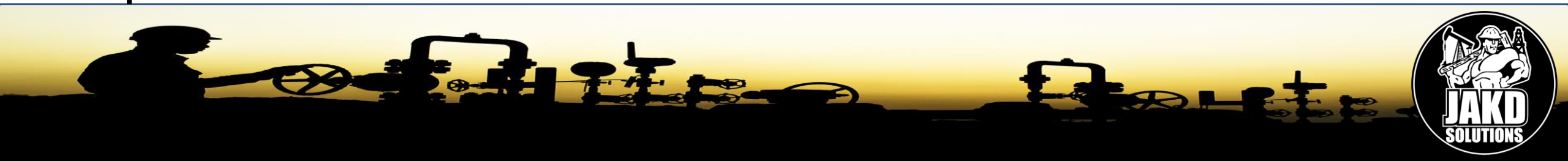
- This rule applies to ‘crude oil production and natural gas production equipment and operations that extract, collect, store, transport, or handle hydrocarbon liquids or produced.’
- ‘Crude oil production includes the well and extends to the point of custody transfer to the crude oil transmission pipeline or any other form of transportation.’
- ‘Natural gas production, processing, transmission, and storage includes the well and extends to, but does not include, the local distribution company custody transfer station.’



NMED Ozone Precursor Rule

Definitions

- **Approved Instrument Monitoring Method** - means an infra-red camera, U.S. EPA Method 21, or other instrument-based monitoring method or program approved by the Department in advance
- **Hydrocarbon liquids** - any naturally occurring, unrefined petroleum liquid and can include oil, condensate, produced water, and intermediate hydrocarbons
- **Liquid Transfers** - means the loading and unloading of hydrocarbon liquids or produced water between storage tanks and tanker trucks or tanker rail cars for transport

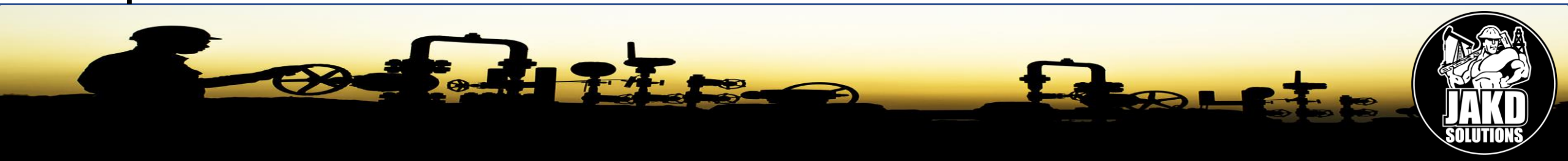




NMED Ozone Precursor Rule

Definitions

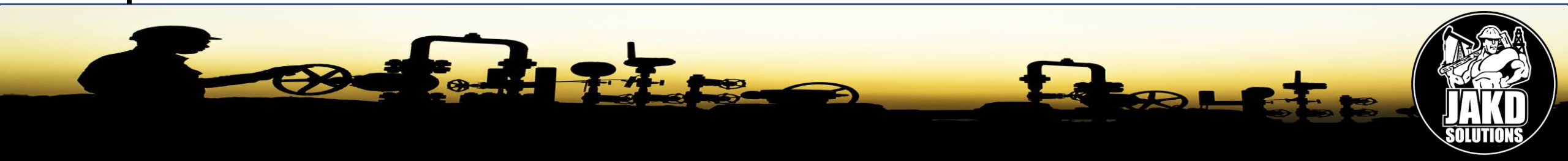
- **Stripper well** - means an oil well with a maximum daily average oil production not exceeding 10 barrels of oil per day, or a natural gas well with a maximum daily average natural gas production not exceeding 60,000 standard cubic feet per day, or a well with a maximum daily average combined oil and natural gas production not exceeding 10 barrels of oil equivalent per day during any 12-month consecutive time period.
- **Optical gas imaging** - means an imaging technology that utilizes high-sensitivity infrared cameras designed for and capable of detecting hydrocarbons



NMED Ozone Precursor Rule

General Requirements

- All equipment under this plan shall be maintained and operated per manufacturer's specifications, and operators must keep the manufacturer's specifications on record to provide to the Division upon request
- Owners and operators with equipment subject to this rule shall establish a plan for minimizing emissions during operations, startup and maintenance
- Within one year of the effective date of this rule, owners and operators of equipment requiring an Equipment Monitoring Information and Tracking Tag (EMITT) shall physically tag the unit with an EMITT that is scannable with a hand held scanner (RFID or QR) that uniquely identifies the unit to which it is assigned and the EMITT shall be maintained by the owner or operator.

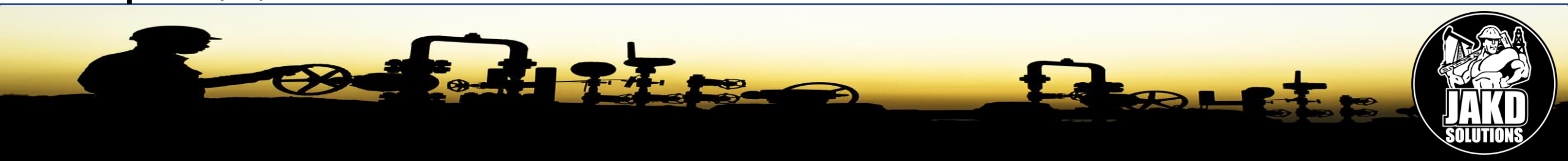




NMED Ozone Precursor Rule

EMITT

- Data in the EMITT shall be scannable by state inspectors to provide at a minimum, the following information:
 - Unique unit identification number
 - UTM coordinates of the facility
 - Type of unit (tank, VRU, dehydrator, pneumatic controller, etc.)
 - For equipment, the VOC (and NO_x, if applicable) potential to emit in pounds per hour and tons per year; and
 - For control equipment, the controlled VOC (and NO_x, if applicable) potential to emit in pounds per hour and tons per year and the design control efficiency in percent.
- The EMITT shall be linked to an EMITT Database accessible to state inspectors that at a minimum supplies the data required by Section 20.2.50.12 NMAC and any other data required for that equipment under this Part.





NMED Ozone Precursor Rule

General Monitoring Requirements

- Equipment subject to this rule is required to be inspected ***MONTHLY***, unless otherwise a different schedule is required for specific equipment
- Monitoring shall be conducted at 90% of the equipment's operating capacity
- If 90% is unachievable, the maximum achievable load is acceptable
- If alternative monitoring techniques are desired, they can be applied for from the Department

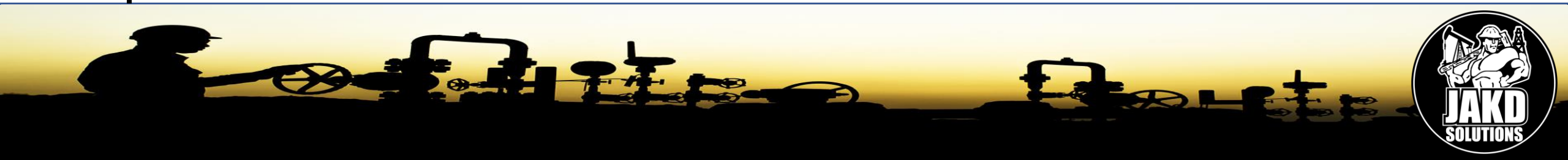




NMED Ozone Precursor Rule

General Recordkeeping Requirements

- Owners and operators must keep records for all inspections and maintenance required by this rule
- Records must be kept for 5 years, and must be maintained electronically
- Owners and operators shall keep records of emissions from equipment malfunctions and routine or predictable emissions during startup, shutdown, and scheduled maintenance.
- Owners and operators of equipment having an excess emission shall record the following information no later than ten (10) days after the end of the excess emission event





NMED Ozone Precursor Rule

General Recordkeeping Requirements

- Records of each EMITT monitoring event shall be electronically uploaded either in real time or subsequently) into the EMITT database.
- Prior to the transfer of ownership of any equipment subject to this Part, the current owner or operator shall conduct and document a full compliance evaluation of all equipment subject to the rule. The documentation shall indicate whether each piece of equipment subject to requirements under this Part is currently complying with those requirements.
- The compliance determination shall be conducted no earlier than ***one year prior*** to the transfer.

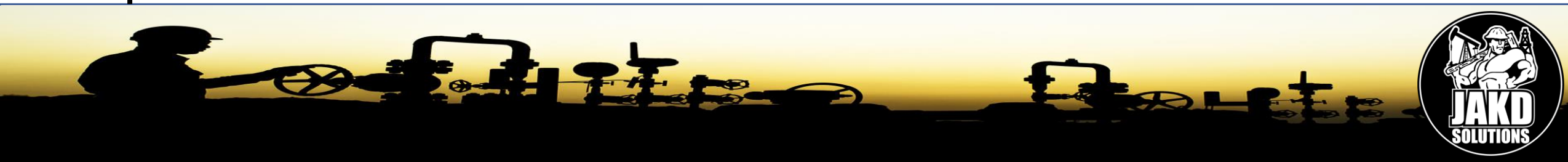




NMED Ozone Precursor Rule

General Reporting Requirements

- Owners and operators shall submit reports upon the request of the Department. Any reports requested by the Department shall be submitted electronically via the Department's Secure Extranet Portal (SEP) at <https://sep.net.env.nm.gov/sep/login-form>.
- Owner and operators of a source having an excess emission shall submit a Root Cause and Corrective Action Analysis upon the request of the department

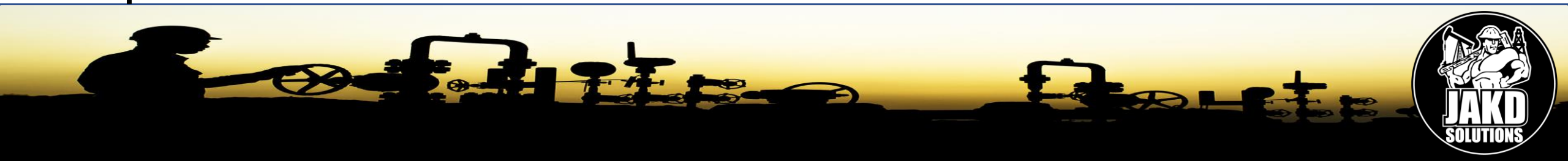




NMED Ozone Precursor Rule

Standards for Engines and Turbines

- New and existing portable and stationary natural gas-fired spark ignition engines, compression ignition engines, and natural gas-fired combustion turbines located at wellheads, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to the requirements of 20.2.50.13 NMAC
- Existing sources that were subject to federal standards of performance under 40 CFR Part 60 and Part 63 between March 25, 2004 and January 1, 2009 are exempt from the requirements of 20.2.50.13 NMAC.





NMED Ozone Precursor Rule

Standards for Engines and Turbines

- By ***January 1, 2022***, owners and operators must conduct an inventory of all existing engines, AND shall create a schedule to ensure all existing engines meet emissions standards in Table 1 by January 1, 2028
 - By January 1, 2024, owners and operators shall ensure 30% of the company's fleet of existing engines meet the requirements of Table 1.
 - By January 1, 2026, owners and operators shall ensure an additional 35% of the company's fleet of existing engines meet the requirements of Table 1.
 - By January 1, 2028, owners and operators shall ensure that the remaining 35% of the company's fleet of existing engines meet the requirements of Table 1.

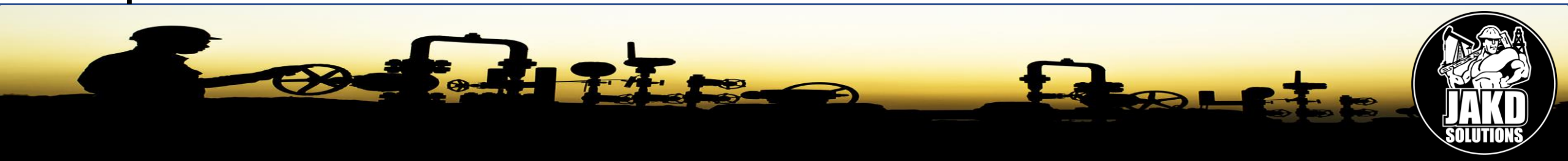




Table 1 - Emission Standards for Natural Gas-Fired Spark-Ignition Engines

For each natural gas-fired spark-ignition engine constructed or reconstructed and installed before the effective date of 20.2.50 NMAC, the owner or operator shall ensure the existing engine(s) does not exceed the following emission standards as determined by the compliance schedule required in 20.2.50.13.B(3) NMAC:

Engine Type	Rated bhp	NOx	CO	NMNEHC (as propane)
Lean-burn	≤100	2.0 g/bhp-h	2.0 g/bhp-h	-
Lean-burn	>100 - ≤500	1.0 g/bhp-h	2.0 g/bhp-h	0.70 g/bhp-h
Lean-burn	>500	0.50 g/bhp-h	47 ppmvd @ 15% O ₂ or 93% reduction	0.30 g/bhp-h
Rich-burn	≤100	2.0 g/bhp-h	2.0 g/bhp-h	-
Rich-burn	>100 - ≤500	0.25 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h
Rich-burn	>500	0.20 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h

For each natural gas-fired spark-ignition engine constructed or reconstructed and installed on or after the effective date of 20.2.50 NMAC, the owner or operator shall ensure the engine does not exceed the following emission standards upon startup:

Engine Type	Rated bhp	NOx	CO	NMNEHC (as propane)
Lean-burn	≤100	1.0 g/bhp-h	2.0 g/bhp-h	0.70 g/bhp-h
Lean-burn	>100 - ≤500	1.0 g/bhp-h	0.70 g/bhp-h	0.30 g/bhp-h
Lean-burn	>500 - <2,370	0.50 g/bhp-h	0.25 g/bhp-h	0.30 g/bhp-h
Lean-burn	≥2,370	0.30 g/bhp-h Uncontrolled or 0.05 g/bhp-h with Control	0.25 g/bhp-h	0.30 g/bhp-h
Rich-burn	≤100	1.0 g/bhp-h	2.0 g/bhp-h	0.70 g/bhp-h
Rich-burn	>100 - ≤500	0.25 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h
Rich-burn	>500	0.20 g/bhp-h	0.30 g/bhp-h	0.20 g/bhp-h



NMED Ozone Precursor Rule

Standards for Engines and Turbines

- Owners and operators of stationary natural gas-fired combustion turbines with a maximum design rating equal to or greater than 1,000 bhp (or a maximum heat input capacity equal to or greater than 2.54 MMBtu/hr) shall comply with the applicable emission standards for existing, new, or reconstructed turbines listed in Table 2

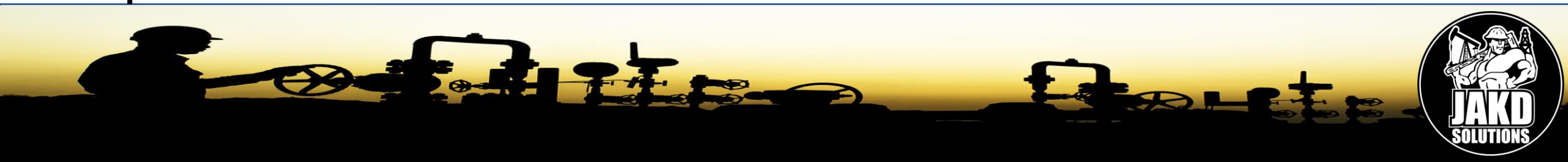
Table 2 - Emission Standards for Stationary Combustion Turbines

For each natural gas-fired combustion turbine constructed or reconstructed and installed before the effective date of 20.2.50 NMAC, the owner or operator shall ensure the turbine does not exceed the following emission standards no later than one year from the effective date:

Turbine Rating (bhp)	Turbine Rating (MMBtu/hr)	NOx (ppmvd @15% O ₂)	CO (ppmvd @ 15% O ₂)	NMNEHC (as propane, ppmvd @15% O ₂)
≥1,000 and <5,000	≥2.54 and <12.7	25	25	9
≥5,000 and <15,000	≥12.7 and <38.2	15	25	9
≥15,000	≥38.2	15	10 or 93% reduction	5 or 50% reduction

For each natural gas-fired combustion turbine constructed or reconstructed and installed on or after the effective date of 20.2.50 NMAC, the owner or operator shall ensure the turbine does not exceed the following emission standards upon startup:

Turbine Rating (bhp)	Turbine Rating (MMBtu/hr)	NOx (ppmvd @15% O ₂)	CO (ppmvd @ 15% O ₂)	NMNEHC (as propane, ppmvd @15% O ₂)
≥1,000 and <5,000	≥2.54 and <12.7	25	25	9
≥5,000 and <15,900	≥12.7 and <40.4	15	10	9
≥15,900	≥40.4	9.0 Uncontrolled or 2.0 with Control	10 Uncontrolled or 1.8 with Control	5

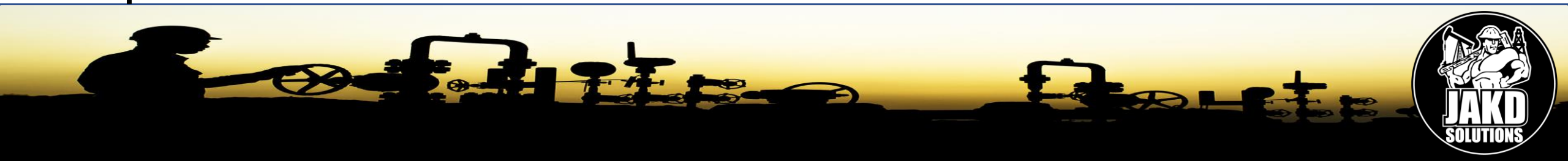




NMED Ozone Precursor Rule

Standards for Engines and Turbines

- Owners and operators of natural gas-fired spark ignition engines, stationary natural gas-fired combustion turbines, and portable or stationary compression ignition engines that control NO_x emissions with a control technology that uses ammonia or urea as a reagent shall ensure that the exhaust ammonia slip is limited to 10 ppmvd or less, corrected to 15 percent oxygen
- Owners and operators of new or existing engines or turbines shall install an Equipment Monitoring and Information Tracking Tag (EMITT) on each engine or turbine

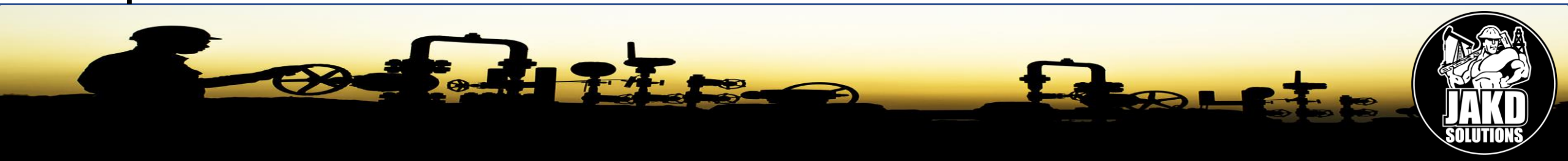




NMED Ozone Precursor Rule

Standards for Engines and Turbines – Monitoring

- Maintenance and repair for all spark ignition engines, compression ignition engines, and stationary combustion turbines shall meet the minimum engine or turbine manufacturer's recommended maintenance schedule.
- Activities that involve engine or turbine maintenance, adjustment, replacement, or repair of functional components with the potential to affect the operation of an emission unit shall be documented as they occur for the following events:
 - Routine maintenance that takes a unit out of service for more than two hours during any 24-hour period.
 - Unscheduled repairs that require a unit to be taken out of service for more than two hours in any 24-hour period

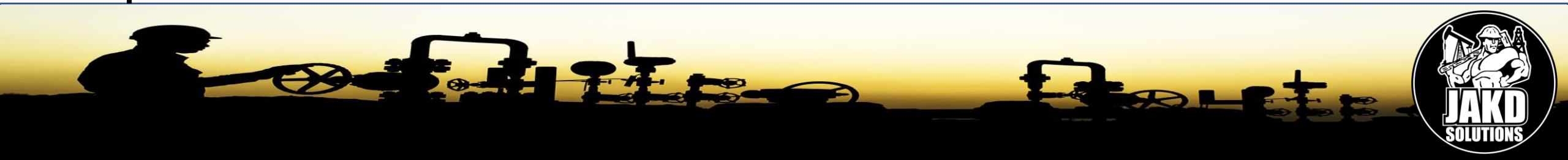




NMED Ozone Precursor Rule

Standards for Engines and Turbines – Monitoring

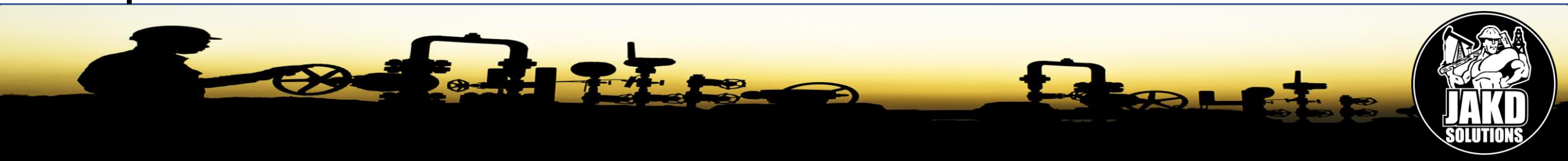
- Oxidation catalytic converters, selective and non-selective catalytic converters, and air-fuel ratio (AFR) controllers shall be maintained according to manufacturer's or supplier's recommended maintenance, including replacement of oxygen sensors as necessary for oxygen-based controllers.
- Compliance with the emission standards in 20.2.50.13.B NMAC shall be demonstrated by performing an ***initial and annual test*** for ***NO_x, CO, and nonmethane non-ethane hydrocarbons*** (NMNEHC) using a portable analyzer or EPA Reference Methods



NMED Ozone Precursor Rule

Standards for Engines and Turbines – Monitoring

- Testing shall be conducted once per calendar year. Performance testing required by 40 CFR 60, Subparts GG, IIII, JJJJ, or KKKK, or 40 CFR 63, Subpart ZZZZ may be used to satisfy these periodic testing requirements if they meet the requirements of this section and are completed once per calendar year.
- Each monitoring, testing, inspection, or tune-up of an engine or turbine shall include the initial scanning of the EMITT, and the monitoring data entry shall be made in accordance with the requirements

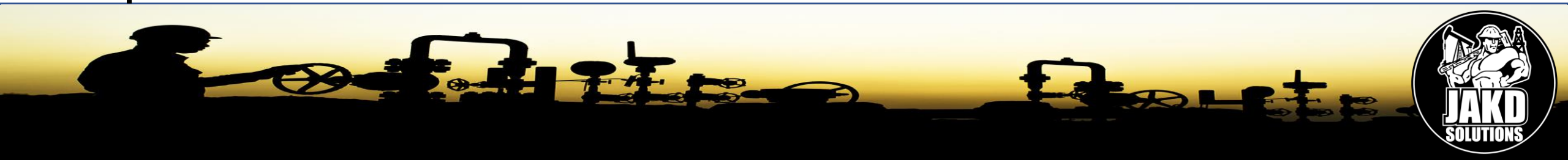
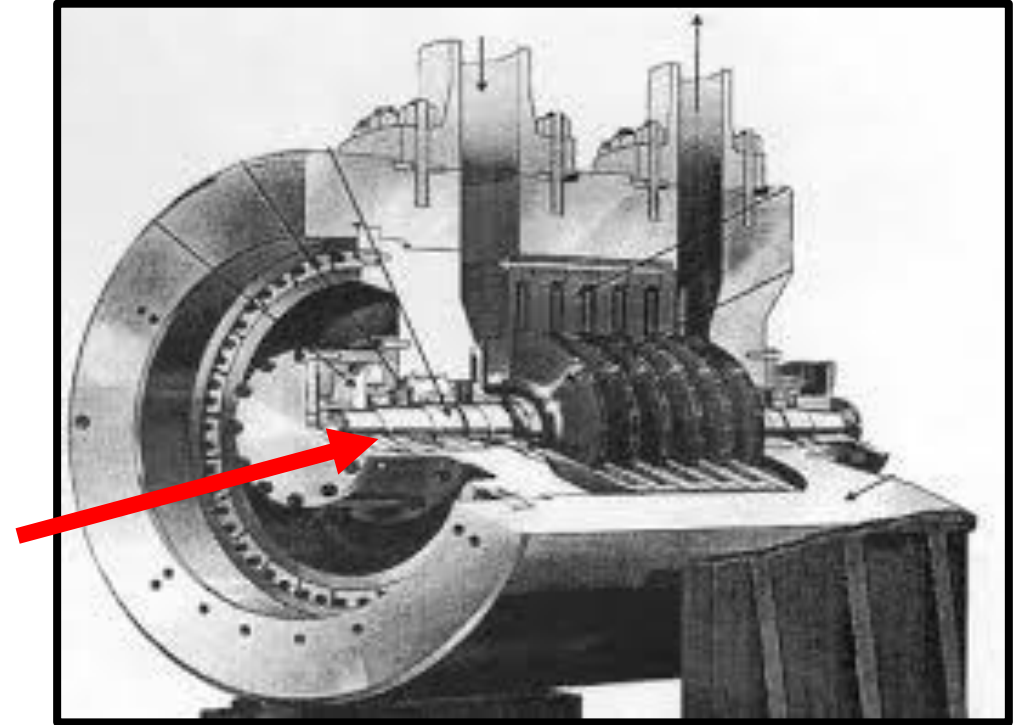




NMED Ozone Precursor Rule

Standards for Compressor Seals - Applicability

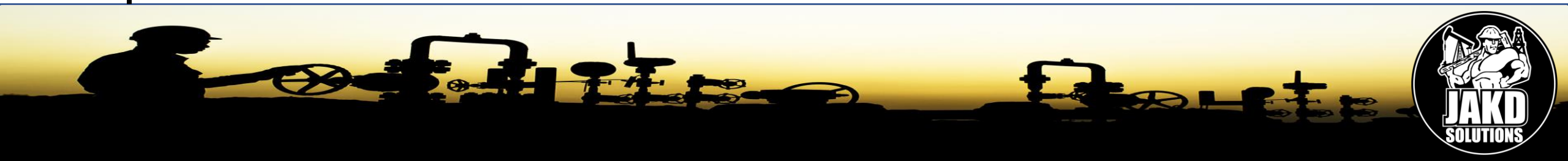
- All new and existing centrifugal compressors using wet seals, and all and reciprocating compressors, located at tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to these requirements
- Any new or existing centrifugal or reciprocating compressors located at a wellhead is not subject to these requirements



NMED Ozone Precursor Rule

Standards for Compressor Seals - Emissions

- Reciprocating Compressors
 - Owners and Operators of existing reciprocating compressors must control VOC emissions from wet seal fluid degassing systems by 95%, beginning on the effective date
 - Emissions shall be captured and routed via a closed vent system to a control system, recovery system, fuel cell or a process stream
 - Owners and operators shall either:
 - Replace the rod packing every 26,000 or every 36 months, whichever is later
 - Collect emissions from the rod packing under negative pressure and rout via a closed vent system to a control system, recovery system, fuel cell or a process stream

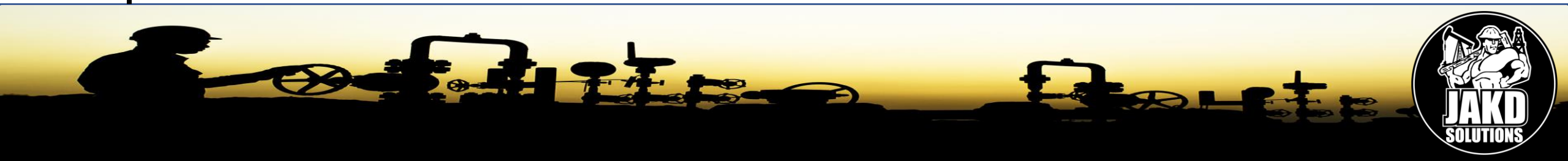




NMED Ozone Precursor Rule

Standards for Compressor Seals - Emissions

- Reciprocating Compressors
 - Owners and Operators of new reciprocating compressors shall, upon startup:
 - Replace the rod packing every 26,000 or every 36 months, whichever is later
 - Collect emissions from the rod packing under negative pressure and rout via a closed vent system to a control system, recovery system, fuel cell or a process stream





NMED Ozone Precursor Rule

Standards for Compressor Seals - Emissions

- Centrifugal Compressors
 - Owners and Operators of new centrifugal compressors shall control VOC emissions from wet seal degassing systems by 98% upon startup
 - Emissions shall be captured and routed via a closed vent system to a control system, recovery system, fuel cell or a process stream





NMED Ozone Precursor Rule

Standards for Compressor Seals - Emissions

- Owners and operators of new and existing centrifugal and reciprocating compressors shall install an EMITT tag on each compressor
- Owners and operators with an air permit shall incorporate these requirements in their permit during their next scheduled or requested permit or permit revision

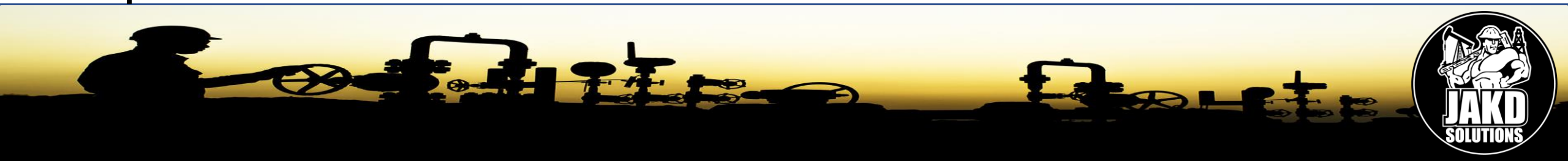




NMED Ozone Precursor Rule

Standards for Compressor Seals - Monitoring

- Operators of a centrifugal compressor must maintain a closed vent system encompassing the wet seal degassing system
- Operators of a reciprocating compressor shall monitor the engine hours with a non-resettable hour meter and track the months since startup, or the last rod packing replacement
- The owner or operator of a reciprocating compressor complying using a closed vent system shall monitor the rod packing emissions collection system semiannually to ensure that it operates under negative pressure and routes emissions through a closed vent system to a control device
- Owners and operators of new and existing centrifugal and reciprocating compressors, during each required monitoring activity, shall scan the compressor EMITT and perform monitoring data entry

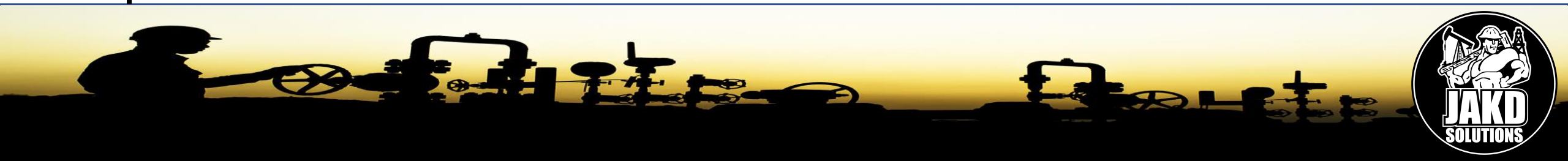
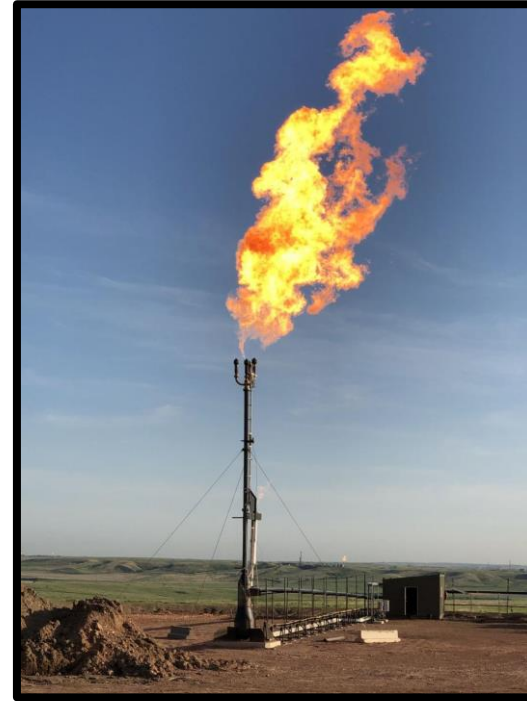




NMED Ozone Precursor Rule

Standards for control Devices - Applicability

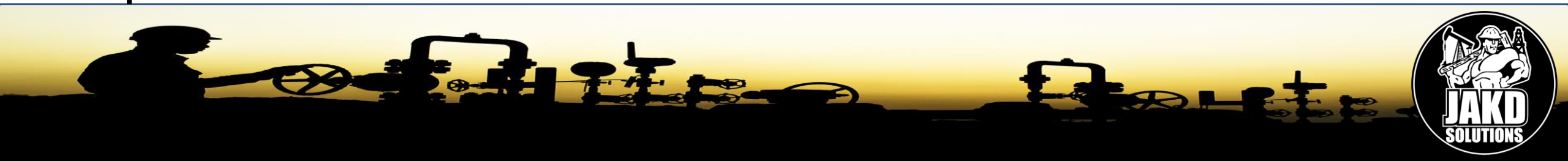
- This section applies to open flares, enclosed combustors, thermal oxidizers, vapor recovery units (VRUs), condensers, closed vent collection systems, other combustion devices, or emissions reduction equipment or technologies used to comply with the emission standards and emission reduction requirements



NMED Ozone Precursor Rule

Standards for Control Devices - General

- Control equipment used to demonstrate compliance must be operated and maintained according to manufacturer specs
- All control equipment shall be designed and sized to achieve the control efficiency rates required to handle fluctuations in emissions of VOCs and NO_x
- Control equipment must have an EMITT tag attached to ***each control device***
- Control equipment must be inspected ***MONTHLY*** and the EMITT tag scanned
- Flares, combustion devices, VRUs, or other emission control devices must be operated as a closed vent system that captures and routes VOC emissions to ensure they are not vented to the atmosphere

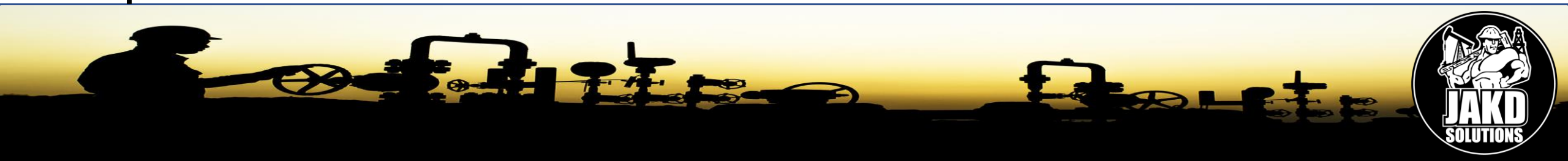




NMED Ozone Precursor Rule

Standards for Control Devices - Flares

- Flares shall combust all gas sent to the flare
- Flares shall be equipped with a continuous pilot flame, an auto-igniter, or shall require manual ignition
 - Flares with auto-igniters and pilots shall be equipped with a system to ensure a flame is always present when gas is sent to the flare
 - Flares with manual ignitors must be inspected prior to use
 - Any new flare constructed or re-constructed flare after the rule effective date must have an auto igniter installed
 - All existing flares constructed prior to the effective date must have an auto igniter installed no later than one year after the rule effective date
- Flares used for controlling VOCs must not have visible emissions, except for periods of 60 seconds or less during any 15-minute period





NMED Ozone Precursor Rule

Standards for Control Devices - Flares

- Flares with a continuous pilot or auto igniter must continuously monitor for the presence of a flame using a thermocouple with a continuous recorder alarm, or any device that serves the same purpose
- At least quarterly, and upon observing visible emissions, an EPA Method 22 observation test must be performed while the flare pilot flame is present. Observation period is 15 minutes.
- EMITT tags must be scanned initially and during monitoring and inspections
- Requirements for Enclosed Combustion Devices (ECDs) and Thermal Oxidizers (TO) are the same

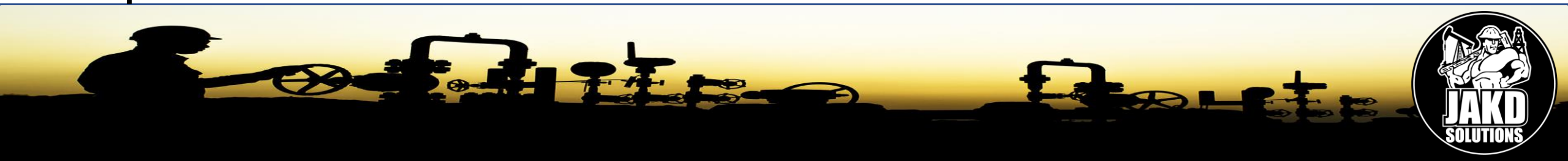




NMED Ozone Precursor Rule

Standards for Control Devices – Vapor Recovery Units (VRUs)

- VRUs must be operated as a closed vent system to prevent VOCs from venting to the atmosphere
- Emissions shall be controlled during startup, shutdown and maintenance or other VRU downtime with a backup control device (Flare/ECD/TO) or redundant VRU
- Standards for equipment leaks must be followed, or a program that meets the requirements of NSPS Subpart OOOOa
- VRUs must have an EMITT tag, and must be scanned initially, and during maintenance events with the required information electronically captured

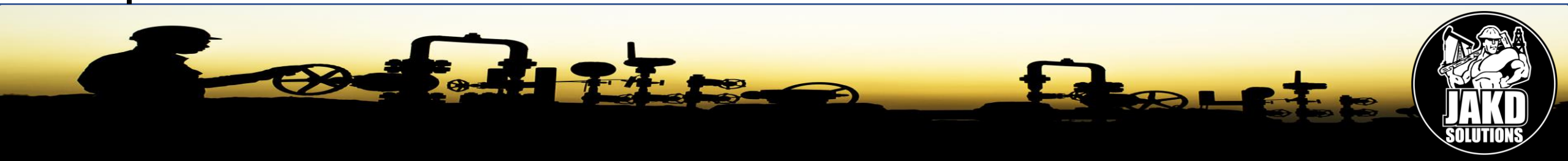
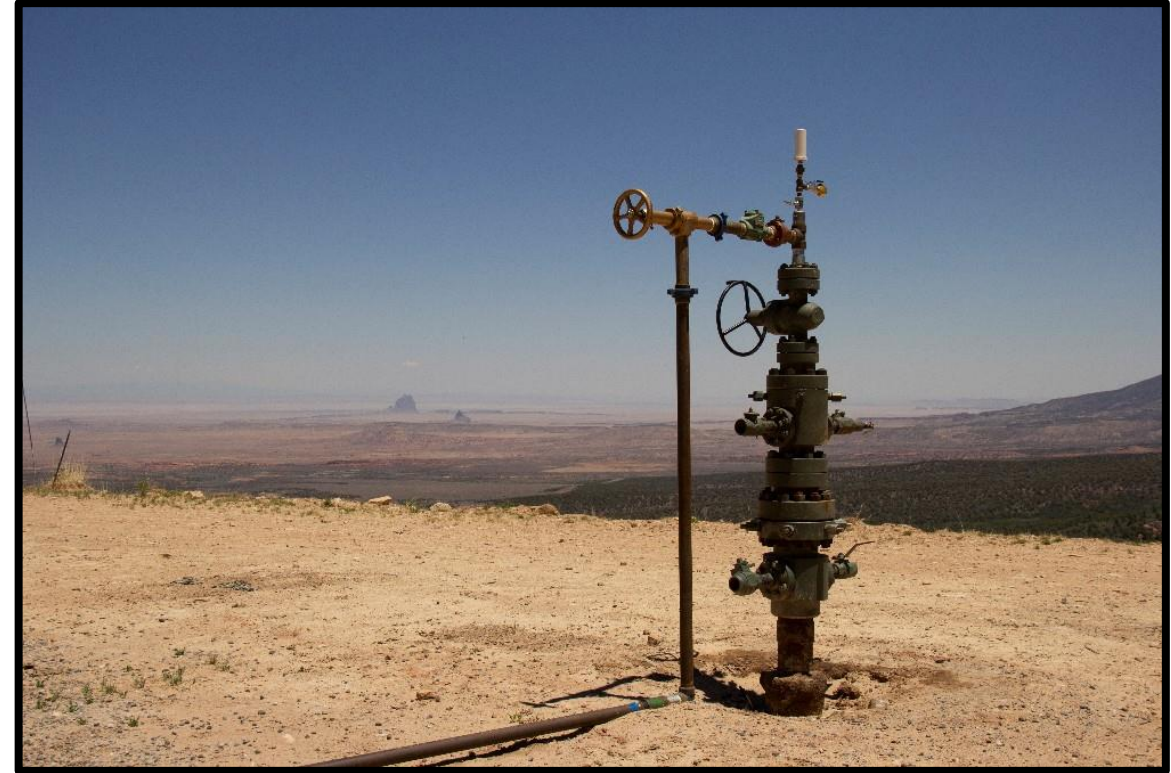




NMED Ozone Precursor Rule

Standards for Equipment Leaks – Applicability

- All new and existing wellheads, tank batteries, gathering and boosting sites, gas processing plants, transmission compressor stations and associated piping are subject to these requirements
- Owners and operators must demonstrate compliance with this section

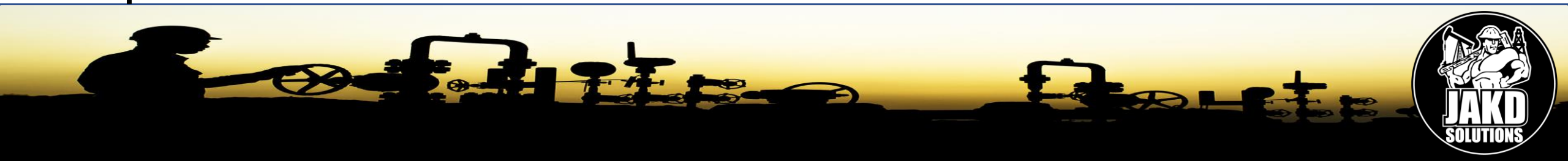




NMED Ozone Precursor Rule

Standards for Equipment Leaks – Monitoring

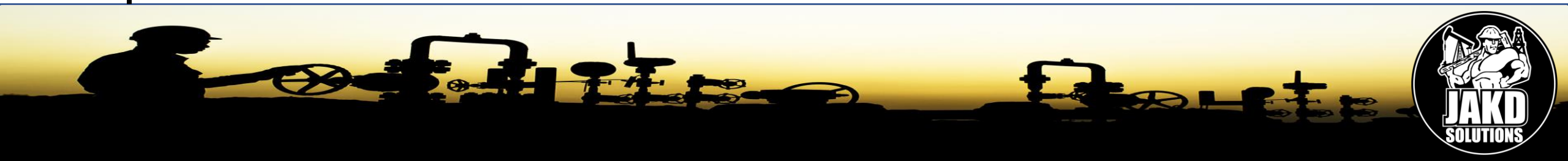
- Owners or operators shall conduct an audible, visual, and olfactory (AVO) inspection of each thief hatch, closed vent system, pump, compressor, pressure relief device, open-ended valve or line, valve, flange, connector, piping, and any associated equipment to identify defects and leaking components at least **WEEKLY**
- Detected leaks will be marked with a visible tag and reported to management or designee within 3 calendar days



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Standards for Equipment Leaks – Monitoring

- Inspections shall be conducted using EPA Method 21 or Optical Gas Imaging (OGI) for each thief hatch, closed vent system, pump, compressor, PRV, valve, flange, connector, piping and any associated equipment according to the following schedule for well production and tank battery facility (Over 60 MCFE/Day):
 - **ANNUALLY** at facilities with the potential to emit of less than 2 TPY of VOCs
 - **SEMI-ANNUALLY** at facilities with the potential to emit of equal to or greater than 2 TPY of VOCs, but less than 5 TPY of VOCs
 - **QUARTERLY** at facilities with the potential to emit of equal to or greater than 5 TPY of VOCs





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Standards for Equipment Leaks – Monitoring

- Inspections shall be conducted using EPA Method 21 or Optical Gas Imaging (OGI) for each thief hatch, closed vent system, pump, compressor, PRV, valve, flange, connector, piping and any associated equipment according to the following schedule for gathering, boosting, gas processing plants and transmission compressor stations:
 - **QUARTERLY** at facilities with the potential to emit of less than 25 TPY of VOCs
 - **MONTHLY** at facilities with the potential to emit of equal to or greater than 25 TPY of VOCs

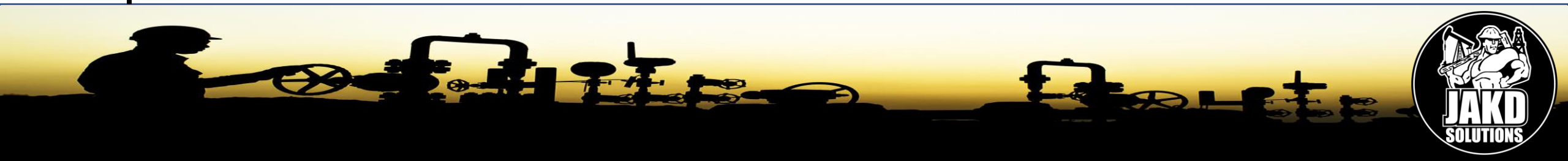




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Standards for Equipment Leaks – Monitoring

- Owners and Operators can apply for an alternative equipment leak monitoring plan with the Department
- Owners and operators may comply with equipment leak requirements through a pre-approved monitoring plan maintained by the Department
- Operators must notify the Department prior to implementation of an alternative monitoring plan or a pre-approved monitoring plan

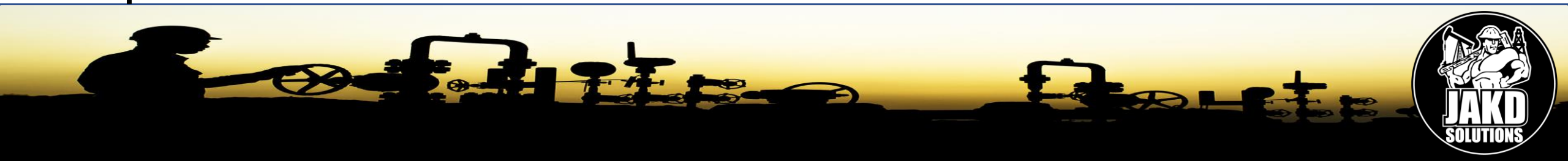




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Standards for Equipment Leaks – Repairs

- Detected leaks must have a visible tag on the leaking component until the leak is fixed
- All leaks discovered using OGI must be repaired within 7 days
- All other leaks must be repaired within 15 days
- The repaired leak must be re-monitored within 15 days ***after discovery of the leak*** to demonstrate that it has been repaired
- If the leak cannot be repaired within 7 days for leaks detected using OGI, and within 14 days for all other leaks, without a process unit shutdown, the leak can be designated as ‘repair delayed’ and must be repaired at the next shutdown

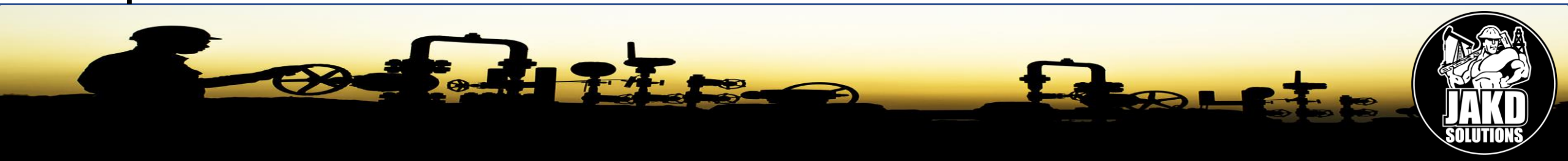




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Standards for Equipment Leaks – Records

- Records must be maintained for all AVO, OGI or Method 21 inspections to include:
 - Location and ID
 - Date of inspection
 - Monitoring Method
 - Name of person performing the inspection
 - List of leaks found for repair, OR a statement that no leaks were found
 - Whether a leak was tagged
 - The date the leak was detected
 - The date the leak was successfully repaired
 - The date the leak was re-monitored and the results of the monitoring
 - The reason a leak was delayed

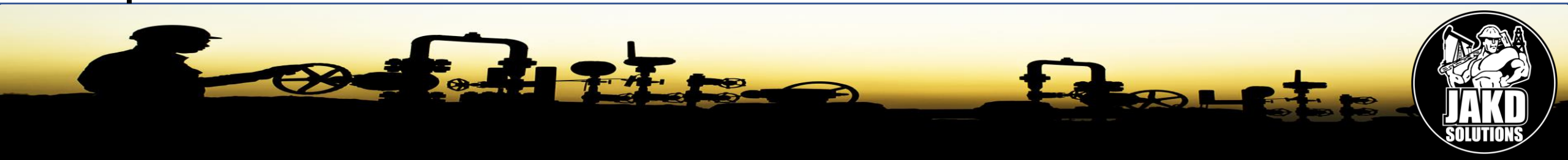




NMED Ozone Precursor Rule

Standards for Natural Gas Well Liquid Unloading

- All manual liquids unloading, including those associated with down-hole well maintenance events, performed at natural gas wells are subject to these requirements beginning on the effective date
 - Owners and operators of natural gas wells shall use best management practices during the life of the well to avoid the need for manual liquids unloading
 - Monitor manual liquids unloading in close proximity to the well or via remote telemetry
 - Close all well head vents to the atmosphere and return the well to normal production operation as soon as practicable

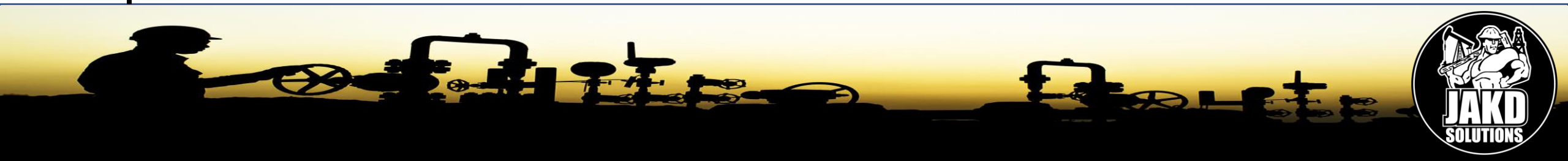




NMED Ozone Precursor Rule

Standards for Natural Gas Well Liquid Unloading - Monitoring

- During manual unloading, the following data must be monitored
 - Wellhead pressure
 - Flow rate of the vented gas
 - Duration of venting
- Volume and mass of VOCs vented shall be calculated during each unloading event
- EMITT tag must be scanned during each unloading event

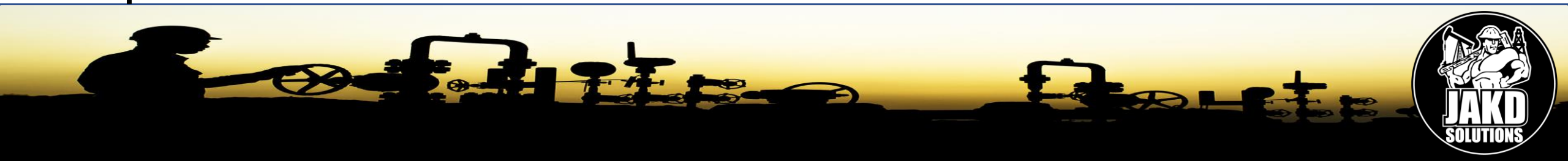




NMED Ozone Precursor Rule

Standards for Glycol Dehydrators

- All new and existing dehys with the potential to emit 2 TPY or greater of VOCs are subject to these requirements
- Glycol dehys constructed before the effective date of this regulation with the potential to emit of 2 TPY or greater of VOCs shall have a minimum combined capture and control efficiency of 95% VOC emissions from the still vent and flash tank within 1 year of the effective date of this rule
- If a combustion control device is used, it shall have a design efficiency of at least 98%
- All new glycol dehys must meet these requirements upon startup

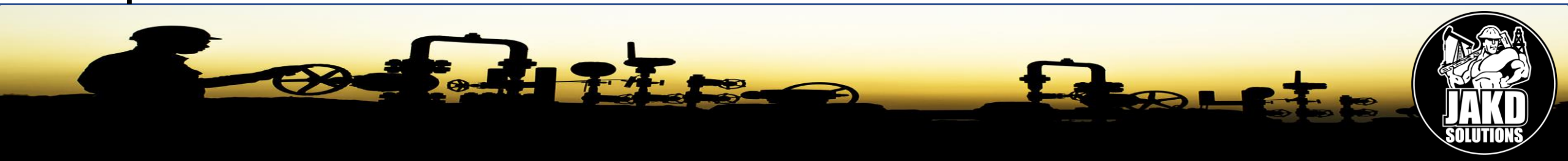




NMED Ozone Precursor Rule

Standards for Glycol Dehydrators

- Dehys that meet these requirements must meet the following control requirements:
 - Still vent and flash tank emissions must be routed to a reboiler firebox, condenser, or process point that recycles or recompresses the emissions as fuel, or to a VRU that reinjects the emissions back into the process stream
 - If a VRU is used, it must run 95% of the time, and meet the VRU requirements
 - Still vent and flash tank emissions shall not be vented to atmosphere
 - An EMITT tag must be installed on glycol dehy
- Dehys meeting these criteria must have an annual extended gas analysis performed, and calculate the uncontrolled VOC and controlled VOC emissions in TPY
- The Dehy must be inspected semi-annually to insure it is operating as designed





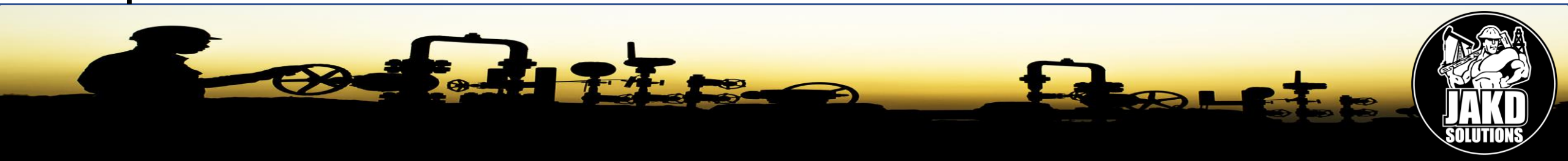
NMED Ozone Precursor Rule

Standards for Heaters

- All new and existing natural gas fired heaters with a RATED heat input equal to or greater than 10 MMBtu are subject to these requirements
- Emissions from these heaters must meet the emissions limits of Table 1 for CO and NO_x
- Heaters constructed or re-constructed prior to the effective date must meet Table 1 requirements within 1 year of the effective date
- Heaters constructed after the effective date must meet Table 1 requirements upon startup
- All heaters subject to this part must have an EMITT tag attached

Table 1 - Emission Standards for NO_x and CO

Date of Construction:	NO _x (ppmvd @ 3% O ₂)	CO (ppmvd @ 3% O ₂)
Constructed or reconstructed before the effective date of 20.2.50 NMAC	30	300
Constructed or reconstructed on or after the effective date of 20.2.50 NMAC	30	130

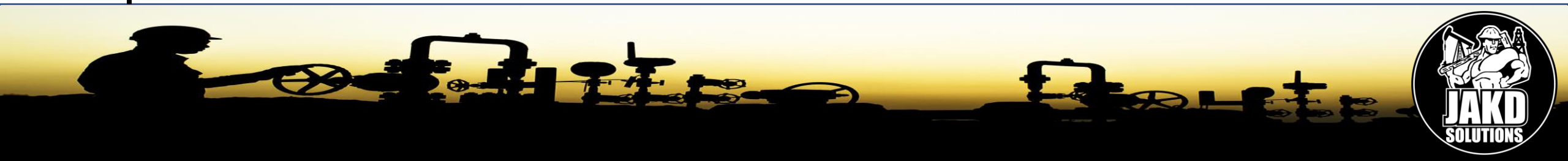




NMED Ozone Precursor Rule

Standards for Heaters - Monitoring

- Heaters subject to these requirements must have monitoring conducted for NO_x and CO within 180 days of the compliance date, and every 2 years thereafter
- Heaters subject to these requirements must be inspected, maintained and repaired at least once every 2 years consistent with the manufacturer's specifications
- The inspection, maintenance and repair shall include at least:
 - Inspection and cleaning of burner, replacing parts as needed
 - Inspecting flame pattern and adjusting as necessary
 - Inspecting system fuel to air ratio and insuring it is functioning properly
 - Measuring concentrations of CO in ppmvd and O₂ before and after adjustments are made

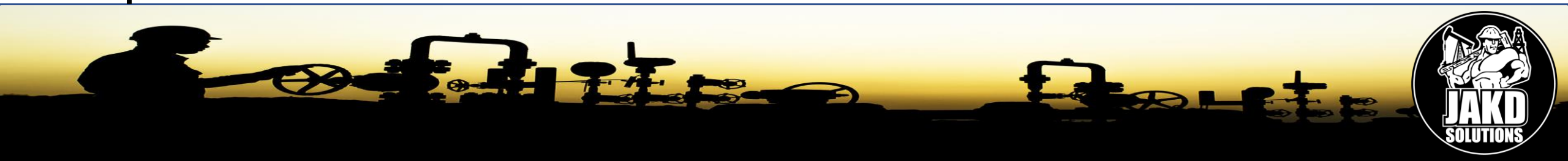




NMED Ozone Precursor Rule

Standards for Heaters - Monitoring

- Periodic Monitoring Requirements
 - Three tests of at least 20 minutes within 10% of 100% peak, or highest achievable load
 - Determine CO, NO_x and O₂ concentrations in the exhaust with an electrocell portable analyzer
 - If concentrations of NO_x or CO exceed Table 1 limits, adjustments must be made, and the monitoring must be re-done within 180 days
 - If the unit is excess of the highest achievable load plus 10%, monitoring shall be performed to ensure the emissions are within Table 1 limits within 180 days
 - Inspection and monitoring information must be entered electronically using the EMITT system

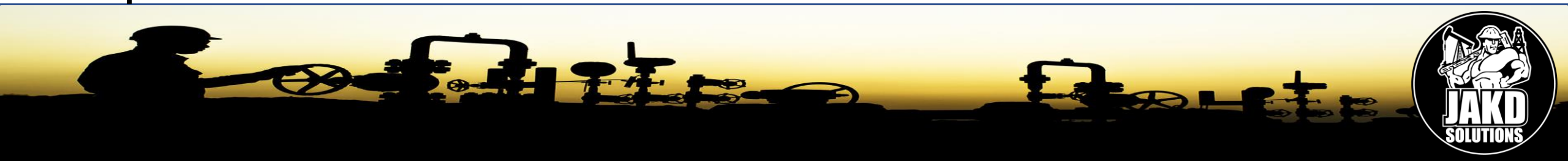




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Standards for Hydrocarbon Liquid Transfers

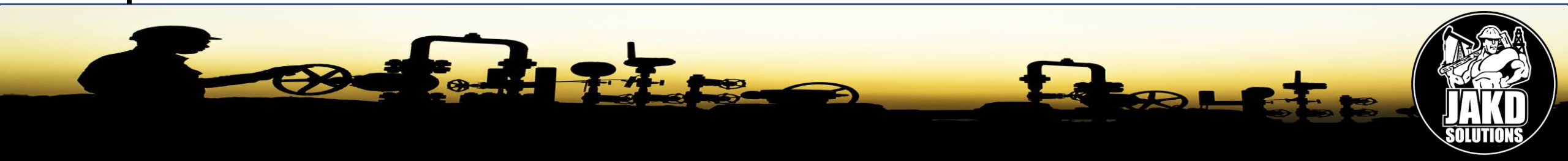
- All new and existing hydrocarbon liquid transfer operations located at wellheads, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to these requirements
- Owners and operators of all existing and new liquid transfer operations subject to these requirements shall use vapor balance, vapor recovery, or control VOC emissions by 98% or greater using vapor combustion when transferring liquids from storage tanks to transfer vessels, or when transferring liquids from transfer vessels to storage tanks



NMED Ozone Precursor Rule

Standards for Hydrocarbon Liquid Transfers

- Owners and operators using vapor balance during liquid transfer operations shall:
 - *Transfer the vapors displaced from the vessel being loaded back to the vessel being emptied via pipes and/or hoses connected prior to the start of transfer operations*
 - Ensure that the transfer does not begin until the vapor collection and return system is connected
 - Maintain connector pipes, hoses, couplers, valves, and pressure relief devices in a condition that prevents leaks
 - Check all liquid and vapor line connections for proper connection prior to commencing transfer operations
 - Operate all transfer equipment at a pressure that is less than the pressure relief valve setting of the receiving transport vehicle or storage tank





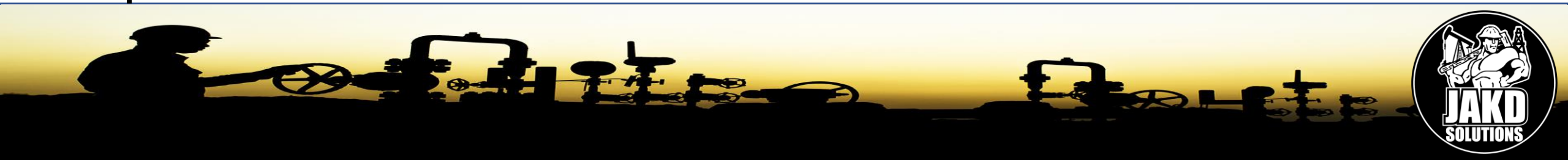
NMED Ozone Precursor Rule

Standards for Hydrocarbon Liquid Transfers - Monitoring

- All tanker trucks or tanker rail cars shall be tested **ANNUALLY** for vapor tightness in accordance with Method 27, Appendix A, 40 CFR Part 60
- Maximum Allowable pressure and vacuum changes are shown in Table 1
- Owners must create a company wide record summarizing the total liquid emissions for the company, and for each site

Table 1 - Allowable Cargo Tank Test Pressure or Vacuum Change

Cargo tank or compartment capacity, liters (gal)	Allowable vacuum change (Δv) in 5 minutes, mm H ₂ O (in. H ₂ O)	Allowable pressure change (Δp) in 5 minutes, mm H ₂ O (in. H ₂ O)
less than 3,785 (less than 1,000)	64 (2.5)	102 (4.0)
3,785 to less than 5,678 (1,000 to less than 1,500)	51 (2.0)	89 (3.5)
5,678 less than 9,464 (1,500 to less than 2,500)	38 (1.5)	76 (3.0)
9,464 or more (2,500 or more)	25 (1.0)	64 (2.5)

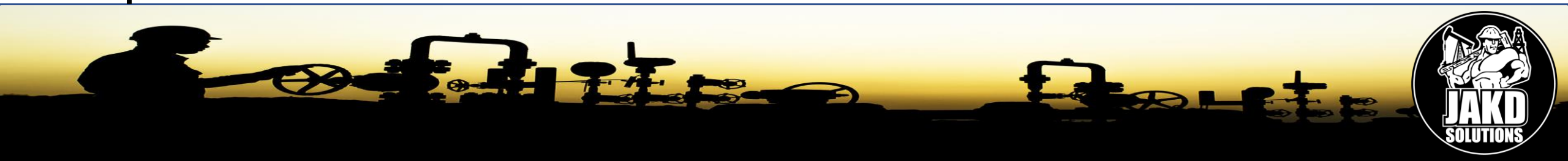




NMED Ozone Precursor Rule

Standards for Pig Launching and Receiving

- All new and existing pig launching and receiving operations within the property boundary at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to these requirements
- Existing and new pig launching and receiving operations with the potential to emit of 1.0 TPY of VOCs must capture and reduce VOC emissions by at least 98%
- An EMITT tag must be installed on each big launcher and receiver subject to this part
- Existing pipeline pig launching and receiving operations subject to controls may become exempt from these requirements when actual emissions of VOCs decrease to less than 0.5 TPY

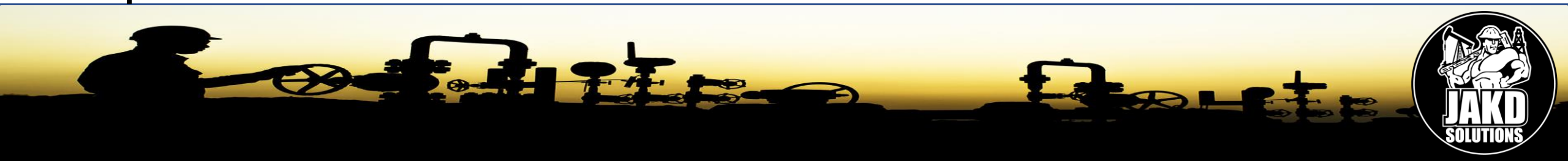




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Standards for Pig Launching and Receiving - Monitoring

- The type and volume of liquids cleared during launching shall be monitored
- The pig launcher and receiver shall be inspected for leaks using Method 21 or OGI prior to commencement and immediately after the conclusion of ***EACH*** pig launching and receiving operation
- Records of date, time and volume of liquids cleared must be maintained for each pigging event
- The data and methodology used to determine the actual emissions, and the potential to emit, must be maintained and reported

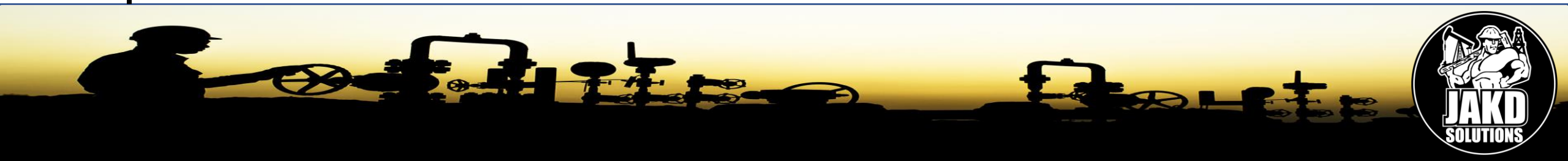




NMED Ozone Precursor Rule

Standards for Pneumatic Controllers and Pumps

- All new and existing natural gas driven pneumatic controllers located at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to these requirements
- Pneumatic controllers and pumps constructed prior to the effective date of this requirement shall comply with this part within one calendar year from the effective date
- Pneumatic controllers and pumps constructed after the effective date must be in compliance with this part upon startup
- Controllers and pumps subject to this section must have an EMITT tag attached





NMED Ozone Precursor Rule

Standards for Pneumatic Controllers and Pumps

- Gas Driven Controllers
 - Controllers at a Natural Gas Processing Plant shall have a VOC emissions rate of zero
 - Controllers at wellhead sites, tank batteries, gathering and boosting sites and transmission compressor stations with access to electrical power shall have a VOC emission rate of zero
 - Controllers at wellhead sites, tank batteries, gathering and boosting sites and transmission compressor stations without access to electrical power shall have a bleed rate of less than, or equal to, 6 SCF per hour
 - Controllers with a bleed rate greater than 6 SCF per hour are allowed where the operator has demonstrated a higher bleed rate is required based on functional need, including, but not limited to, response time, safety and actuations.

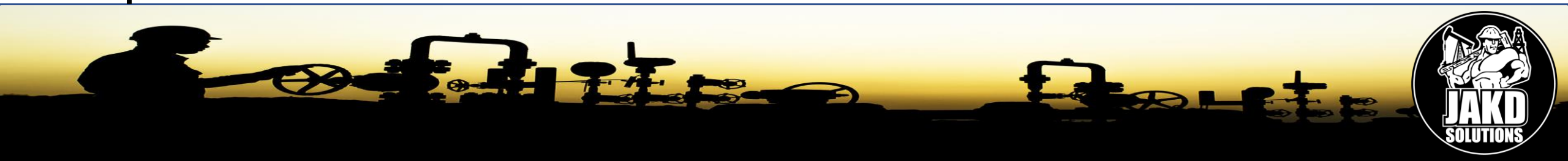




NMED Ozone Precursor Rule

Standards for Pneumatic Controllers and Pumps

- Gas Driven Pumps
 - Pumps at a Natural Gas Processing Plant shall have a VOC emissions rate of zero
 - Pumps at wellhead sites, tank batteries, gathering and boosting sites and transmission compressor stations with access to electrical power shall have a VOC emission rate of zero
 - Controllers at wellhead sites, tank batteries, gathering and boosting sites and transmission compressor stations without access to electrical power shall reduce VOC emissions from the pump by 95% if it is technically feasible to route emissions to a fuel cell, control device or process
 - If a control device is available on-site but is not able to reach a 95% emission reduction, the operator may route the pump emissions to this device if it is technically infeasible to route the emissions to a fuel cell or process on-site.

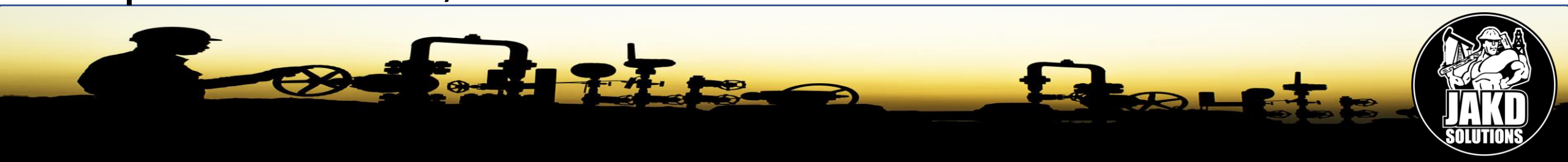




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Standards for Pneumatic Controllers and Pumps - Monitoring

- Controllers with a bleed rate greater than zero shall conduct a **monthly** AVO to determine if the controller is in working order without leaks.
- Monthly inspections shall be documented by scanning the EMITT tag and entering the information electronically
- Pumps must have monthly AVO inspections to determine if the pump is in working order without leaks
- Monthly inspections must be documented by scanning the EMITT tag and entering the information electronically

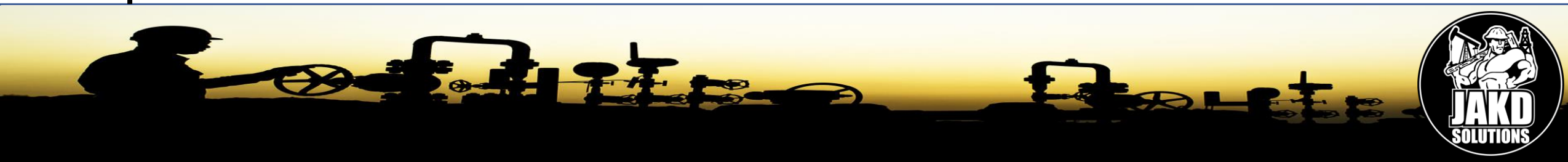




NMED Ozone Precursor Rule

Standards for Storage Tanks

- All new and existing hydrocarbon storage tanks with an uncontrolled potential to emit equal to or greater than 2 tpy of VOC and located at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations are subject to this part
- Tanks with a potential to emit greater than 2 TPY, but less than 10 TPY, shall have a combined capture and control of VOC emissions of at least 95% no later than one year after the effective date
- Tanks with a potential to emit greater than 10 TPY, shall have a combined capture and control of VOC emissions of at least 98% no later than one year after the effective date
- All new tanks must meet these requirements upon startup

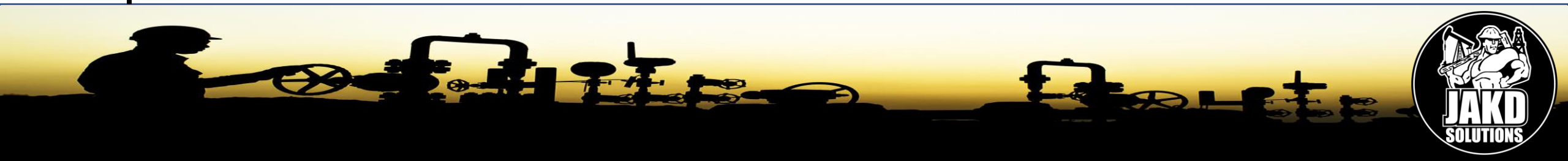




NMED Ozone Precursor Rule

Standards for Storage Tanks

- Any new or existing tank will become exempt from these requirements when uncontrolled annual VOC emissions are less than 2 TPY
- Owners and operators of an existing or new tank with a thief hatch shall install a control device on the thief hatch which allows the thief hatch to open sufficiently to relieve overpressure in the tank and to automatically close once the tank overpressure is relieved. The thief hatch shall be equipped with a manual lock open safety device to ensure positive hatch opening during times of human ingress. The lock-open safety device will only be engaged during the presence of owner or operator staff and during active ingress activities
- New and existing tanks subject to this part shall install an EMITT tag

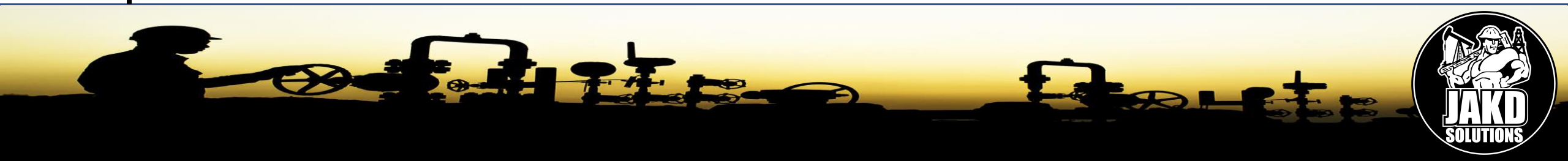




NMED Ozone Precursor Rule

Standards for Storage Tanks – Monitoring

- The owner or operator of any storage tank subject to these requirements shall monitor the total monthly liquid throughput (barrels) and the upstream separator pressure (psig) on a **monthly basis**. Any time the storage tank is unloaded less frequently than monthly, the throughput and separator pressure monitoring shall be conducted prior to the storage tank being unloaded.
- The owner or operator of any storage tank subject to control requirements shall conduct an auditory, visual, and olfactory (AVO) inspection on a **weekly basis**. Any time the storage tank is unloaded less frequently than weekly, the AVO inspections shall be conducted prior to the storage tank being unloaded.
- The owner or operator of any storage tank subject to control requirements shall inspect the tanks **monthly** to ensure compliance with these requirements. Inspections shall include a check to ensure the tanks have no leaks, that all hatches are closed, the pressure relief valves are properly seated, and all vent lines are closed
- Each monitoring or inspection shall include the scanning of the EMITT and the electronic entry of the required monitoring data

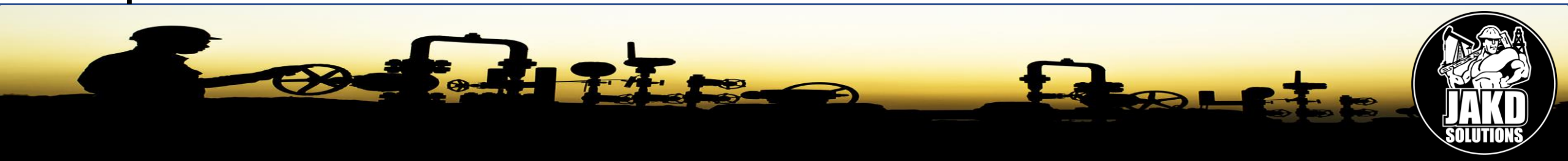




NMED Ozone Precursor Rule

Standards for Storage Tanks – Recordkeeping

- Records must be maintained monthly with the following information:
 - Tank location and unique inventory number
 - Monthly liquid throughput and most recent date of measurement
 - Average upstream separator pressure
 - Date and methodology used to calculate the potential to emit of VOCs
 - Controlled and uncontrolled emissions
 - Records of throughput shall be verified by dated delivery receipts from the purchaser of liquids, or the metered volume of liquids sent downstream

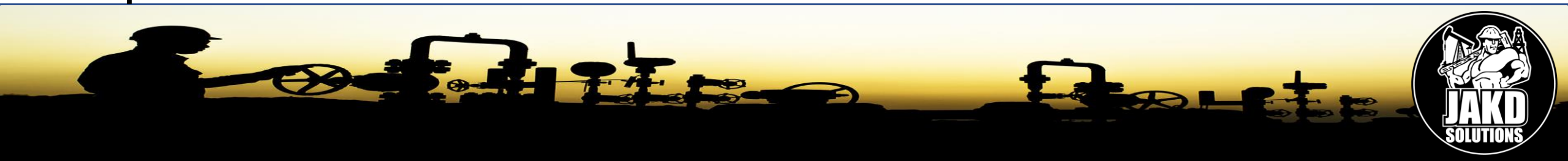




NMED Ozone Precursor Rule

Standards for Workovers

- All workovers performed at oil and natural gas wells are subject to these requirements
- Owners and operators of oil or natural gas wells shall use the following best management practices during workovers to minimize emissions, consistent with well site conditions and good engineering practices:
 - Reduce wellhead pressure prior to blowdown to minimize the volume of natural gas vented;
 - Monitor manual venting in close proximity to the well or via remote telemetry; and
 - Route natural gas flow to the sales line, if possible

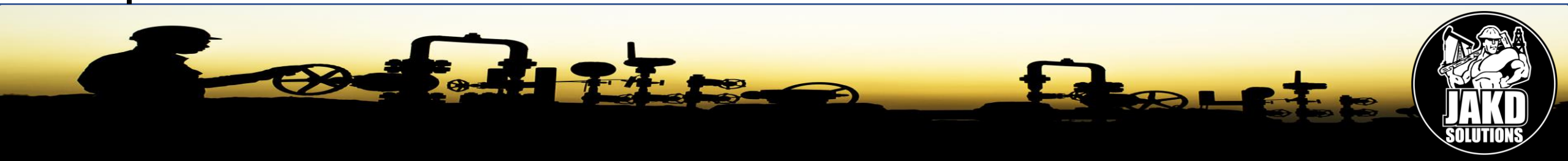




NMED Ozone Precursor Rule

Standards for Workovers - Monitoring

- Owners and operators shall monitor the following parameters during workovers:
 - Wellhead pressure;
 - Flow rate of the vented natural gas (to the extent feasible); and
 - Duration of venting to the atmosphere
- Owners and operators shall calculate the volume and mass of VOC vented during each workover.

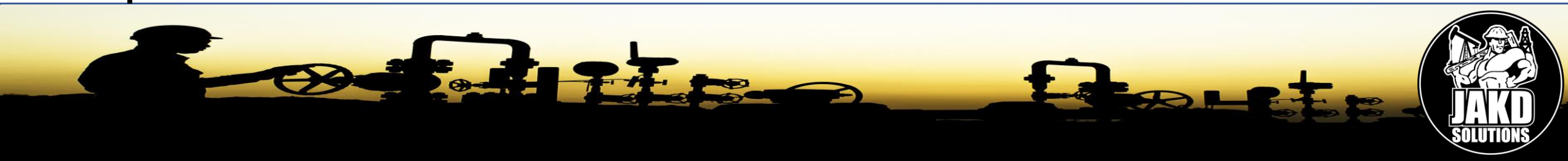
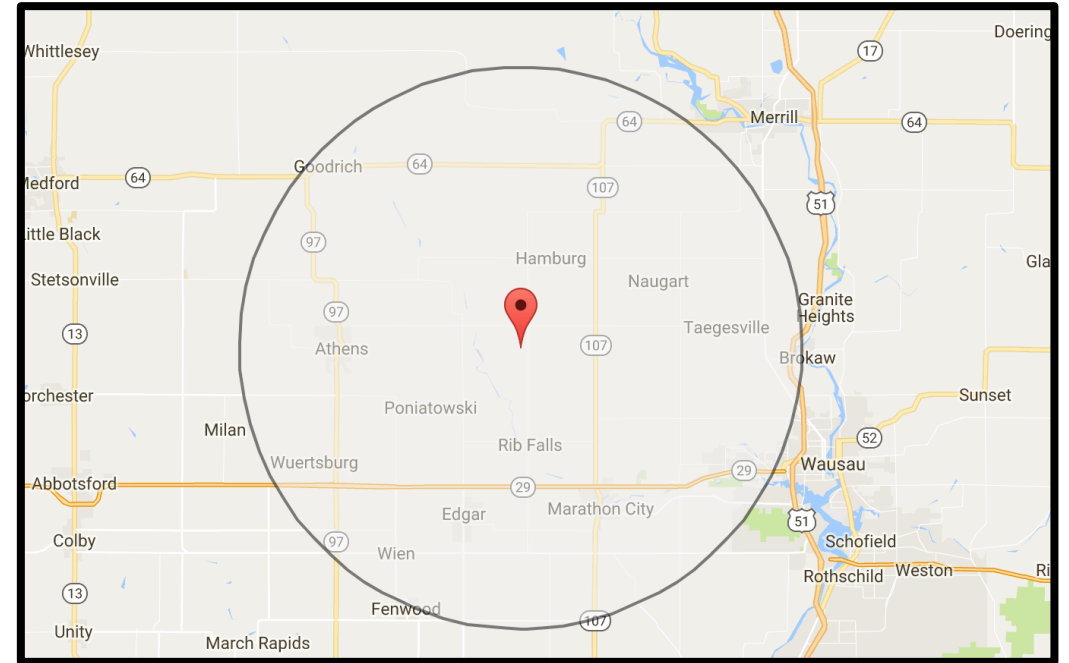




NMED Ozone Precursor Rule

Standards for Workovers

- If it is not feasible to prevent VOC emissions from being emitted to the atmosphere from any workover event, the owner or operator shall notify all residents by certified mail located within 0.25 miles of the well of the planned workover at least three (3) calendar days prior to the workover event***

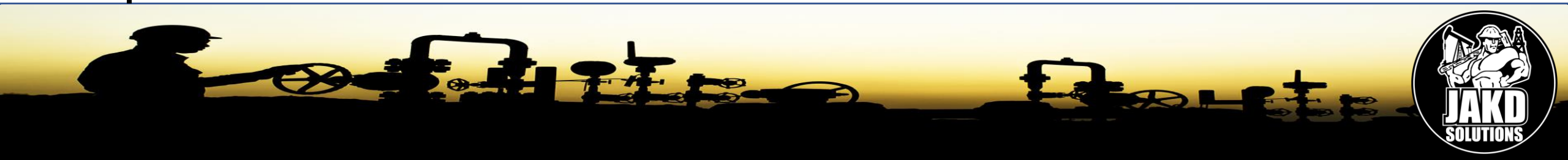




NMED Ozone Precursor Rule

Standards for Evaporation Ponds

- All new and existing oil and natural gas evaporation ponds with pond capacity equal to or greater than [**TBD barrels**] or a potential to emit greater than [**10 lbs/day VOC**] and located at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, transmission compressor stations, or not associated with a facility but located in San Juan, Lea, Eddy, Rio Arriba, Sandoval counties are subject to these requirements
- Owners or operators of oil and natural gas evaporation ponds shall comply with these requirements no later than 180 days after the effective date





NMED Ozone Precursor Rule

Standards for Evaporation Ponds

- Owners or operators of an oil or natural gas evaporation pond shall use best practices to minimize emissions of VOCs
- Prior to unloading into a pond(s), all liquids shall be first loaded into a compliant liquid storage tank designed to minimize VOC emissions from the pond





NMED Ozone Precursor Rule

Standards for Evaporation Ponds

- *Owners or operators shall install an impermeable continuous barrier or cover over the entire surface area of the liquid, which prevents VOC emissions from being emitted to the atmosphere.*
- *Owners and operators shall ensure that VOC emissions are collected and routed to a control device for destruction*

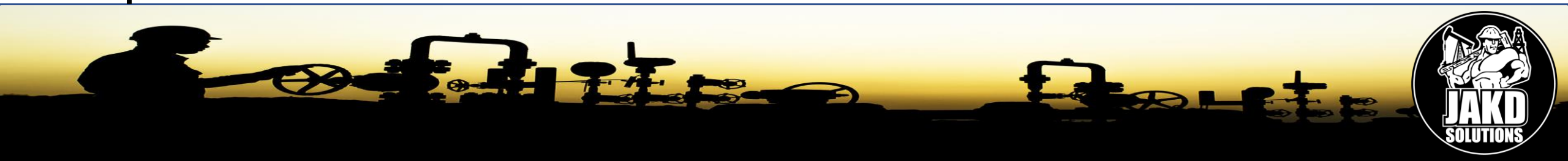




NMED Ozone Precursor Rule

Standards for Evaporation Ponds – Monitoring

- on a monthly basis, perform an inspection to ensure that the barrier is an impermeable continuous barrier or cover that covers the entire surface area of liquid
- on a monthly basis, ensure that all VOC emissions are being captured and routed to a control device
- monitor the monthly total and annual total oil and natural gas evaporation pond throughput in thousands of gallons of liquids
- Monitoring requirements of NMAC 20.2.50.12 must be followed





NMED Ozone Precursor Rule

Standards for Evaporation Ponds – Recordkeeping

- Owners or operators of an oil or natural gas evaporation pond shall, within the first calendar quarter of the year, record the calculated emission estimates of VOC from the evaporation pond in tons per year
- Owners or operators of an oil or natural gas evaporation pond shall record a description of the management practices used to minimize release of VOC at the evaporation pond, and the company-wide total VOC emissions from evaporation ponds in tons per year

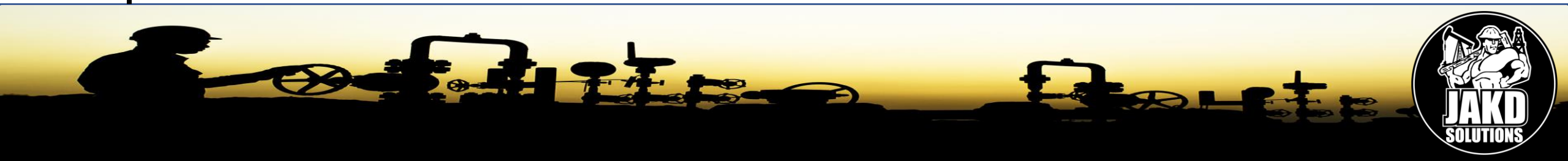




NMED Ozone Precursor Rule

Standards for Evaporation Ponds – Recordkeeping

- Owners or operators of an oil or natural gas evaporation pond shall, within the first calendar quarter of the year, use actual volumes of liquid loaded into each site's pond to calculate total site-wide VOC emissions
- Owners or operators of an oil or natural gas evaporation pond shall maintain a database of company-wide calculated annual total VOC emissions estimates in tons per year





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NMED Ozone Precursor Rule

Standards for Oil and Natural Gas Stripper Wells and Facilities with Site-Wide VOC Potential to Emit (PTE) less than 15 TPY

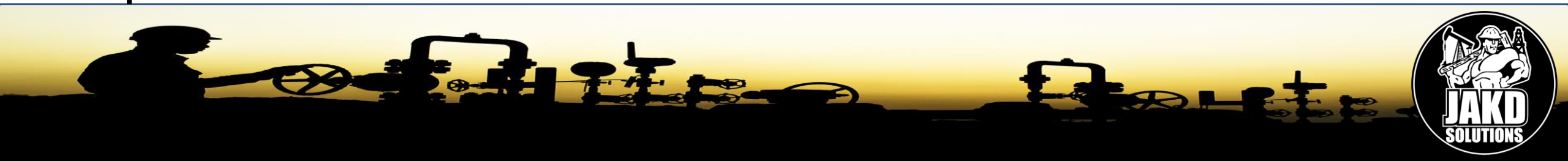
- Facilities with a site-wide annual PTE less than 15 TPY of VOCs are subject to this section
- Facilities with the PTE less than 15 TPY must comply with these requirements within 1 year of the effective date
- Anytime a facility subject to this part exceeds 15 TPY, semi-annual LDAR monitoring is required for a minimum of two years



NMED Ozone Precursor Rule

Standards for Oil and Natural Gas Stripper Wells and Facilities with Site-Wide VOC Potential to Emit (PTE) less than 15 TPY

- Equipment located at a subject facility must be operated in accordance with manufacturer specifications and good engineering practices
- Within one calendar quarter from the effective date, operators must use the actual site production volumes to calculate the VOC and NO_x emissions from the site
- The calculated VOC and NO_x emissions must be updated annually

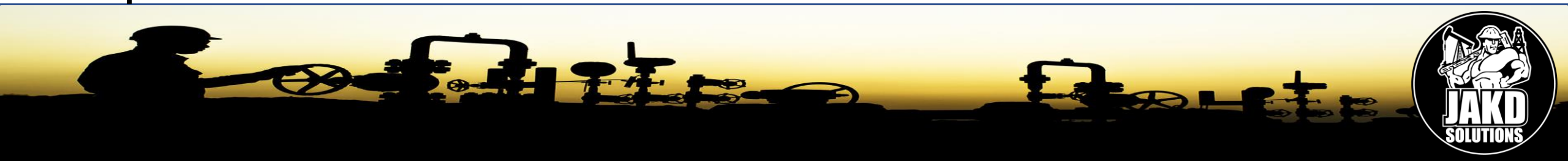




NMED Ozone Precursor Rule

Issues

- Manpower for recordkeeping and reporting
- EMITT System and Portable Scanners
- Liquids Unloading
- Logistics
- Low emission sites
- Monthly and Weekly Storage Tank Inspections?
- Definition of an Evaporation Pond?

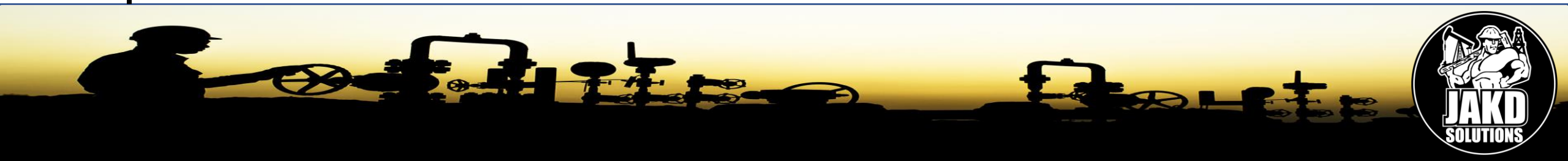




NMED Ozone Precursor Rule

Timeline

- This draft rule was released by the NMED in June of 2020
- The rule has undergone public comment and industry comment
- Revised rule is scheduled to be released in April/May for additional comment
- Rule is currently scheduled to be introduced to the EIB in June of 2021

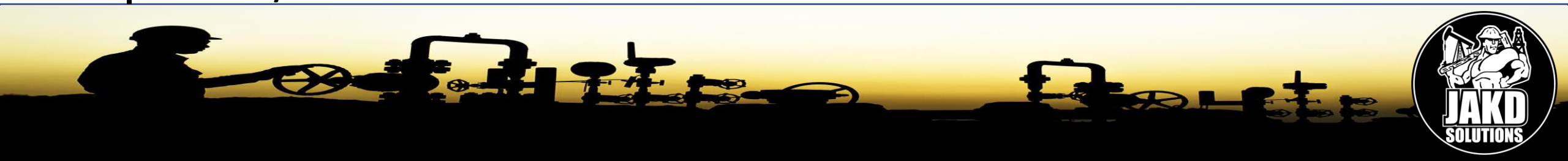




NMED Ozone Precursor Rule

Public Sentiment

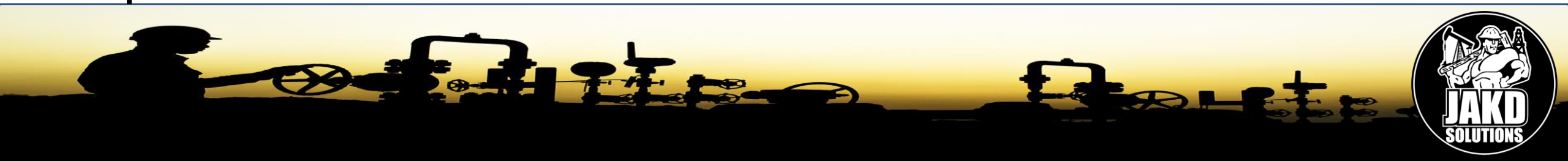
- NMOGA, IPANM and numerous operators have made comments regarding the harm this rule will cause
- Sierra Club, EDF, San Juan Citizens Alliance, Earthworks and other groups have submitted comments stating the rule is too lenient
- NMED performed a flyover in late 2020, and found numerous leaks in San Juan, and many more in the Permian





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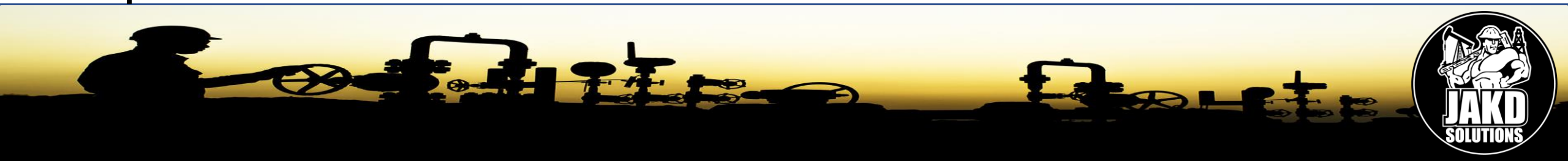


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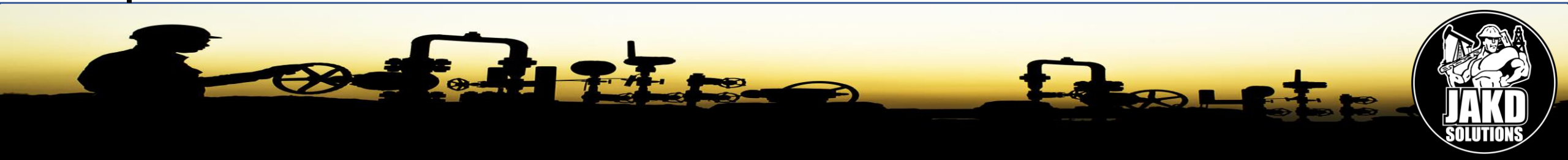


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