

HYDROGEN SULFIDE

LAST UPDATE MAY, 2008

This Section Pertains to Areas Classified as H₂S Present and H₂S Unknown.

Definitions:

H₂S *present* means that drilling, logging, coring, testing, or producing operations have confirmed the presence of H₂S in concentrations and volumes that could potentially result in atmospheric concentrations of 20 ppm or more of H₂S.

H₂S *unknown* means the designation of a zone or geological formation where neither the presence nor absence of H₂S has been confirmed.

H-100 IS A COPY OF THE APPROVED H₂S CONTINGENCY PLAN AVAILABLE IN THE FIELD AREA, AND IS THAT PLAN BEING FOLLOWED?

Authority: 490(f)

Enforcement Action: W/S

INSPECTION PROCEDURE:

Verify that an approved plan is available and being followed at the facility at the commencement of and throughout all operations during which the H₂S Contingency Plan is in effect.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if an H₂S Contingency Plan is not available.

Issue a facility shut-in (S) INC if there is not an approved plan or the plan is not being followed.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-101 ARE AT LEAST TWO SAFE BRIEFING AREAS ESTABLISHED?

Authority: 490(f)(6)

Enforcement Action: S

INSPECTION PROCEDURE:

1. Verify that designated safe briefing areas at the facility are as designated in the approved H₂S Contingency Plan.

2. Verify that designated safe briefing area during the inspection period is upwind of operations.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if safe briefing areas:

1. Are not as approved,
2. Have not been established, or
3. During inspection, is not upwind of operations.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-102 ARE ALL PERSONNEL INFORMED OF THE HAZARDS OF H₂S AND OF SO₂ RESULTING FROM BURNING H₂S, AND INSTRUCTED IN THE PROVISIONS FOR PERSONNEL SAFETY CONTAINED IN THE H₂S CONTINGENCY PLAN?

**Authority: 490(g)(4)(i)
490(j)(11)(iii)**

Enforcement Action: C

INSPECTION PROCEDURE:

Inspect training session records to verify that personnel were instructed and informed as required.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC to remove any person from the facility that has not received the required instructions.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-103 ARE ALL PERSONNEL INSTRUCTED IN THE USE OF SAFETY EQUIPMENT WHICH THEY MAY BE REQUIRED TO USE?

Authority: 490(g)(4)(ii)

Enforcement Action: C

INSPECTION PROCEDURE:

Inspect training session records to verify that all personnel were instructed and informed as required.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC to remove any personnel from the facility that have not received the required instructions.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-108

DO ALL OPERATOR AND CONTRACT PERSONNEL RECEIVE A TRAINING SESSION BEFORE BEGINNING WORK AT THE FACILITY AND AGAIN WITHIN 1 YEAR AFTER COMPLETION OF THE PREVIOUS CLASS?

Authority: 490(g)(1)(i)
490(g)(1)(ii)

Enforcement Action: C

INSPECTION PROCEDURE:

1. Verify that all operator and contract personnel arriving at the facility have received a training session before beginning work.
2. Verify that the operator and contract personnel have again received that training within 1 year after completion of the previous class.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC if, during the inspection, the inspector observes any operator or contract personnel arriving at the facility who does not receive a training session before beginning work or has not received that training within 1 year after completion of the previous class.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-109

DOES EACH PERSON PARTICIPATE IN A DRILL DURING NORMAL DUTY HOURS AT LEAST ONCE EVERY 7-DAY PERIOD?

Authority: 490(h)(1)(i)

Enforcement Action: W/C

INSPECTION PROCEDURE:

Verify that all personnel have participated in a drill during normal duty hours at least once in every 7-day period after duty begins.

Note: Duty begins upon arrival at the facility.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records do not indicate that any person(s) did not participate in a drill at least once in every 7-day period after duty began.

Issue a component shut-in (C) INC if individual personnel has not participated in a drill during normal duty hours at least once every 7-day period.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-111

ARE RECORDS OF ATTENDANCE FOR TRAINING MAINTAINED AT THE FACILITY OR DOES THE EMPLOYEE CARRY A TRAINING COMPLETION CARD?

Authority: 490(g)(2)(i)
490(g)(2)(ii)

Enforcement Action: W

INSPECTION PROCEDURE:

Request to see the records of attendance at the weekly drills and training sessions.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if:

1. The records are not available.
2. The records are incomplete.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-113

IS A FIRST-AID KIT, OF APPROPRIATE SIZE AND CONTENT, READILY AVAILABLE FOR THE NUMBER OF PERSONNEL ON THE FACILITY?

Authority: 490(k)(3)(i)

Enforcement Action: W

INSPECTION PROCEDURE:

Visually inspect the facility to verify that a first-aid kit of appropriate size and content is readily available.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if:

1. There is no first-aid kit.
2. The first-aid kit is of insufficient size or content.
3. The first aid kit is not readily available.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each first aid kit inspected.

H-114

ARE THERE AT LEAST THREE RESUSCITATORS ON MANNED FACILITIES, AND A NUMBER EQUAL TO THE PERSONNEL ON BOARD, NOT TO EXCEED THREE, ON NORMALLY UNMANNED FACILITIES (COMPLETE WITH FACE MASKS, OXYGEN BOTTLES, SPARE OXYGEN BOTTLES) AND ARE THESE ITEMS READILY AVAILABLE?

Authority: 490(k)(1)(v)

Enforcement Action: C

INSPECTION PROCEDURE:

1. Visually inspect the facility to verify that at least three resuscitators complete with a face mask and oxygen bottle are available.
2. Visually inspect the facility to verify that spare oxygen bottles are readily available.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (C) INC if:

1. The facility is not equipped with at least three resuscitators complete with face masks and oxygen bottles.
2. The facility does not have spare oxygen bottles.
3. The resuscitators and oxygen bottles are not readily available.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-115

IS THERE AT LEAST ONE LITTER OR AN EQUIVALENT DEVICE ON THE FACILITY AND READILY AVAILABLE FOR USE?

Authority: 490(k)(3)(ii)

Enforcement Action: W/C

INSPECTION PROCEDURE:

Visually inspect the facility to verify that there is at least one litter or an equivalent device readily available on the facility.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if there is not at least one litter or an equivalent device readily available.

Issue a component shut in INC (C) if a litter or other suitable safety litter is not readily accessible on a manned facility.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-117

IS WIND-DIRECTION EQUIPMENT INSTALLED IN LOCATIONS VISIBLE AT ALL TIMES TO INDIVIDUALS ON OR IN THE IMMEDIATE VICINITY OF THE FACILITY?

Authority: 490(i)(1)

Enforcement Action: S

INSPECTION PROCEDURE:

Visually verify that visible wind-direction equipment has been installed at prominent locations. Wind direction equipment includes windsocks, flags, and streamers.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if wind-direction equipment is not visible or has not been installed in prominent locations.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-118

ARE OPERATIONAL DANGER SIGNS DISPLAYED AT ALL TIMES ON FACILITIES WITH WELLS CAPABLE OF PRODUCING H₂S GAS IN CONCENTRATIONS OF 20 PPM OR MORE?

Authority: 490(i)(2)(i)

Enforcement Action: W/S

INSPECTION PROCEDURE:

Inspect the signs and flags to verify that installation is as required.

Signs shall:

1. Be installed on each side of the facility.
2. Be a minimum width of 8 feet and a minimum height of 4 feet.
3. Be a high visibility yellow color with black lettering a minimum of 12 inches in height.
4. Read "DANGER - HYDROGEN SULFIDE - H₂S".
5. Be illuminated at night and under conditions of poor visibility.
6. Be displayed when concentrations of H₂S reach 20 ppm.

Red Flags shall:

1. Be visible to aircraft and watercraft when hoisted.
2. Be a minimum width of 3 feet and a minimum height of 2 feet.
3. Be illuminated at night and under conditions of poor visibility, and
4. Be displayed when concentrations of H₂S reach 50 ppm.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if Signs or flags are not displayed as required.

Issue a facility shut in INC (S) if Signs or flags are not available for use.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-120

DOES THE FACILITY HAVE AN H₂S-DETECTION AND H₂S-MONITORING SYSTEM WHICH IS CAPABLE OF SENSING A MINIMUM OF 10 PPM H₂S AND WHICH ACTIVATES AUDIBLE AND VISUAL ALARMS WHEN THE ATMOSPHERIC CONCENTRATION REACHES 20 PPM AND ARE THESE SENSING DEVICES LOCATED AT THE BELL NIPPLE, MUD RETURN LINE RECEIVER TANK (POSSUM BELLY), PIPE TRIP TANK, SHALE SHAKER, WELL-CONTROL FLUID PIT AREA, DRILLER'S STATION, LIVING QUARTERS, AND OTHER AREAS WHERE H₂S MIGHT ACCUMULATE?

Authority: 490(j)(1)(i)

Enforcement Action: S

490(j)(2)(i)

490(j)(2)(ii)

490(j)(2)(iii)

490(j)(2)(iv)

490(j)(2)(v)

490(j)(2)(vi)

490(j)(2)(vii)

490(j)(2)(viii)

INSPECTION PROCEDURE:

1. Visually verify that detection and monitoring equipment (sensors) is installed at:
 - A. Bell nipple.
 - B. Mud return line receiver tank (possum belly).
 - C. Pipe trip tank.
 - D. Shale shaker.
 - E. Well-control fluid pit area.
 - F. Driller's station.
 - G. Living quarters (drilling personnel).
 - H. Other areas where H₂S may accumulate.
2. Have operator test equipment for operation.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if H₂S detection and monitoring equipment is not:

1. Installed at the required locations.
2. Operable.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-121

ARE SENSORS LOCATED IN ROOMS, BUILDINGS, DECK AREAS, OR LOW-LAYING DECK AREAS NOT OTHERWISE COVERED BY 30 CFR 250.490(j)?

Authority: 490(j)(5)(i)

Enforcement Action: S

INSPECTION PROCEDURE:

Verify that sensors are located in rooms, buildings, deck areas, or low-laying deck areas not otherwise covered by 30 CFR 250.490(j).

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if sensors are not located in rooms, buildings, deck areas, or low-laying deck areas not otherwise covered by 30 CFR 250.490(j).

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each location inspected.

H-122

IS AT LEAST ONE SENSOR INSTALLED PER 400 SQUARE FEET OF DECK AREA OR FRACTIONAL PART THEREOF (OR AS OTHERWISE APPROVED BY THE DISTRICT MANAGER)?

Authority: 490(j)(5)(i)

Enforcement Action: S

INSPECTION PROCEDURE:

Verify that there is at least one sensor installed per 400 square feet of deck area or fractional part thereof (or as otherwise approved by the District Manager).

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if there is not at least one sensor installed per 400 square feet of deck area or a fractional part thereof (or as otherwise approved by the District Manager).

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each area inspected.

H-128

ARE PRESSURE-DEMAND TYPE RESPIRATORS WITH HOSELINE CAPABILITY AND BREATHING TIME OF AT LEAST 15 MINUTES IMMEDIATELY AVAILABLE AND EASILY ACCESSIBLE TO ALL PERSONNEL ON THE FACILITY INCONFORMANCE WITH ANSI Z88.2?

Authority: 490(j)(13)(i)

Enforcement Action: S

490(j)(13)(ii)

490(j)(13)(v)

INSPECTION PROCEDURE:

1. Inspect the facility to verify that all pressure-demand type respirators with hose-line capability and breathing time of at least 15 minutes are available and easily accessible to all personnel on the facility and in conformance with ANSI Z88.2.
2. Visually inspect gauges to verify that the air tanks are full.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if all pressure-demand type respirators with hose-line capability of at least 15 minutes of breathing time are not accessible to all personnel on the facility and in conformance with ANSI Z88.2.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-129

ARE AT LEAST TWO VOICE TRANSMISSION DEVICES, WHICH CAN BE USED WHILE WEARING A RESPIRATOR, AVAILABLE FOR USE BY DESIGNATED PERSONNEL?

Authority: 490(j)(13)(iii)

Enforcement Action: W

INSPECTION PROCEDURE:

Verify that at least two voice transmission devices, which can be used while wearing a respirator, are available for use by designated personnel.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if there are not at least two voice transmission devices on the facility.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-131

IS EACH BREATHING-AIR BOTTLE LABELED AS CONTAINING BREATHING-QUALITY AIR FOR HUMAN USE?

Authority: 490(j)(13)(vi)

Enforcement Action: C/S

INSPECTION PROCEDURE:

Visually inspect the breathing-air bottles to verify that they are labeled as containing breathing-quality air for human use.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC if a few of the breathing-air bottles are not labeled as containing breathing-quality air for human use but have ample supply of bottles that are labeled.

Issue a facility shut-in (S) INC if none of the breathing-air bottles are labeled as containing breathing-quality air for human use.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-132

DO VESSELS ATTENDANT TO FACILITIES CARRY APPROPRIATE PROTECTIVE-BREATHING EQUIPMENT FOR EACH CREW MEMBER?

Authority: 490(j)(13)(vii)

Enforcement Action: C

INSPECTION PROCEDURE:

1. If conditions permit, inspect each attendant vessel to verify that it carries sufficient protective-breathing equipment for each crew member.
2. If the District Manager has required additional protective-breathing equipment for vessels, verify that the additional equipment is on board.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC to remove the vessel if:

1. The vessel does not carry sufficient protective-breathing equipment for each crew member.
2. The vessel does not carry the additional equipment required by the District Manager.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each vessel inspected.

H-133 FOR AUTHORIZED FLIGHTS DURING H₂S ALERTS, ARE HELICOPTER FLIGHTS TO AND FROM THE FACILITY LIMITED TO THE CONDITIONS SPECIFIED IN THE H₂S CONTINGENCY PLAN?

Authority: 490(j)(13)(viii)

Enforcement Action: C

INSPECTION PROCEDURE:

Review contingency plans to determine when a flight is considered an authorized flight.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC if unauthorized flights are witnessed during an H₂S alert.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each unauthorized flight inspected.

H-134 DURING AUTHORIZED H₂S ALERT FLIGHTS, DO THE FLIGHT CREW AND PASSENGERS USE PRESSURE-DEMAND TYPE RESPIRATORS?

Authority: 490(j)(13)(viii)

Enforcement Action: C

INSPECTION PROCEDURE:

During an authorized H₂S alert flight, observe if the flight crew and passengers use pressure-demand type respirators.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC if the crew and passengers are not using pressure-demand type respirators during H₂S alert flights.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each H₂S alert flight crew facility inspected.

H-135 ARE ALL MEMBERS OF THE FLIGHT CREW TRAINED IN THE USE OF THE PARTICULAR TYPE(S) OF RESPIRATOR EQUIPMENT MADE AVAILABLE DURING H₂S ALERT FLIGHTS?

Authority: 490(j)(13)(viii)

Enforcement Action: C

INSPECTION PROCEDURE:

Verify that all members of the flight crew have been trained in the use of the particular type(s) of respirator equipment aboard the aircraft or stored at the heliport for H₂S alert flights.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC to remove the helicopter if all members of the flight crew have not been trained in the use of the respirator equipment during H₂S alert flights.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each H₂S alert flight crew facility inspected.

H-136 AS APPROPRIATE TO THE PARTICULAR OPERATION(S), (PRODUCTION, DRILLING, WELL-COMPLETION/WORKOVER, OR ANY COMBINATION THEREOF), IS A SYSTEM OF BREATHING-AIR MANIFOLDS, HOSES, AND MASKS PROVIDED ON THE FACILITY AND IN THE BRIEFING AREAS?

Authority: 490(j)(13)(ix)

Enforcement Action: S

INSPECTION PROCEDURE:

Visually inspect the facility, including the briefing areas, to verify that a system of breathing-air manifolds, hoses, and masks has been installed as approved in the H₂S Contingency Plan.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if a system of breathing-air manifolds, hoses, and masks has not been installed as approved in the H₂S Contingency Plan.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-137 IS A CASCADE AIR-BOTTLE SYSTEM PROVIDED FOR THE BREATHING-AIR MANIFOLDS AND TO REFILL INDIVIDUAL PROTECTIVE-BREATHING APPARATUS BOTTLES?

Authority: 490(j)(13)(ix)

Enforcement Action: S

INSPECTION PROCEDURE:

Visually inspect the facility to verify that the cascade air-bottle system has been installed as approved in the H₂S Contingency Plan.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if a cascade air-bottle system has not been installed as approved in the H₂S Contingency Plan.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-138

IF THE CASCADE AIR-BOTTLE SYSTEM IS RECHARGED BY A HIGH-PRESSURE COMPRESSOR SUITABLE FOR PROVIDING BREATHING-QUALITY AIR, IS THE COMPRESSOR SUCTION LOCATED IN AN UNCONTAMINATED ATMOSPHERE?

Authority: 490(j)(13)(ix)

Enforcement Action: S

INSPECTION PROCEDURE:

Visually inspect the compressor to verify that:

1. It is suitable for providing breathing-quality air.
2. The compressor suction is located in an uncontaminated atmosphere.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if:

1. The high-pressure compressor is not suitable for providing breathing-quality air, or
2. The compressor suction is located in a contaminated atmosphere.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-140

ARE RETRIEVAL ROPES WITH SAFETY HARNESES AVAILABLE TO RETRIEVE INCAPACITATED PERSONNEL FROM CONTAMINATED AREAS?

Authority: 490(k)(1)(ii)

Enforcement Action: W

INSPECTION PROCEDURE:

Visually inspect the facility to verify that retrieval ropes with safety harnesses are available as approved in the H₂S Contingency Plan.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if retrieval ropes with safety harnesses are not available.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-141

ARE CHALKBOARDS AND/OR NOTE PADS AVAILABLE FOR COMMUNICATION PURPOSES LOCATED ON THE RIG FLOOR, SHALE-SHAKER AREA, THE CEMENT-PUMP ROOMS, WELL-BAY AREAS, PRODUCTION PROCESSING EQUIPMENT AREA, GAS COMPRESSOR AREA, AND PIPELINE-PUMP AREA?

Authority: 490(k)(1)(iii)

Enforcement Action: W

INSPECTION PROCEDURE:

Visually inspect to verify that chalkboards and/or note pads are available at the following locations as approved in the H₂S Contingency Plan:

1. Rig floor.
2. Shale-shaker area.
3. Cement-pump rooms.
4. Well-bay areas.
5. Production processing equipment area.
6. Gas compressor area.
7. Pipeline-pump area.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if chalkboards and/or note pads are not available at the required locations.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each location inspected.

H-142

ARE BULL HORNS AND FLASHING LIGHTS AVAILABLE?

Authority: 490(k)(1)(iv)

Enforcement Action: S

INSPECTION PROCEDURE:

Visually inspect the facility to verify that the following equipment is available and operable as approved in the H₂S Contingency Plan:

- Bull horns.
- Flashing lights.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if operable bull horns and flashing lights are not available.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-143

ARE AUDIBLE ALARMS AND DISPLAY FLAGS OR FLASHING RED LIGHTS AVAILABLE FOR USE ON FACILITIES WHEN ATMOSPHERIC CONCENTRATIONS OF H₂S REACH 20 PPM AND ARE SIGNS AND FLAGS CAPABLE OF BEING ILLUMINATED AT NIGHT AND UNDER CONDITIONS OF POOR VISIBILITY?

Authority: 490(i)(2)(ii)
490(i)(5)
490(i)(7)(i)

Enforcement Action: S

INSPECTION PROCEDURE:

Test and visually inspect:

1. Audible alarms
2. Display flags or flashing red lights
3. Signs and flags capable of being illuminated at night and under conditions of poor visibility.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if the above items are not available for use on the facility.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-144

ARE ALL VENTILATION DEVICES EXPLOSION-PROOF AND SITUATED IN AREAS WHERE H₂S OR SO₂ MAY ACCUMULATE?

Authority: 490(k)(2)(i)
490(k)(2)(ii)

Enforcement Action: C/S

INSPECTION PROCEDURE:

1. Visually inspect all ventilation devices to verify that they are explosion-proof.
2. Visually inspect the facility to verify that ventilation devices are situated in areas where H₂S and SO₂ may accumulate as approved in the H₂S Contingency Plan.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC for the ventilation device if it is not explosion-proof.

Issue a facility shut-in (S) INC if ventilation devices are not situated as approved in the H₂S Contingency Plan in areas where H₂S and SO₂ may accumulate.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each device inspected.

H-145

ARE MOVABLE, MULTIDIRECTIONAL VENTILATION DEVICES CAPABLE OF DISPERSING H₂S OR SO₂ VAPORS AWAY FROM WORKING PERSONNEL PROVIDED IN WORK AREAS?

Authority: 490(k)(2)(iii)

Enforcement Action: C

INSPECTION PROCEDURE:

Visually inspect work areas to verify that movable, multidirectional ventilation devices capable of dispersing H₂S and SO₂ vapors are provided.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC for the work area if movable, multidirectional ventilation devices capable of dispersing H₂S and SO₂ vapors are not provided.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-146

IF WATER-BASED, WELL-CONTROL FLUIDS ARE USED, AND IF H₂S IS DETECTED BY AIR SENSORS, HAS THE GARRETT-GAS-TRAIN TEST OR COMPARABLE TEST TECHNIQUES FOR SOLUBLE SULFIDES BEEN CONDUCTED?

Authority: 490(m)(2)

Enforcement Action: W

INSPECTION PROCEDURE:

1. Check operator's records to verify that the Garrett-Gas-Train test or comparable test for soluble sulfides has been conducted if H₂S was detected when using water-base well-control fluids.
2. If the concentration detected by air sensors is in excess of 20 ppm, personnel conducting the tests shall don protective-breathing equipment.

Note: The Garrett-Gas-Train test is described in API RP 13B, Appendix A.16.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if the Garrett-Gas-Train test or comparable test for soluble sulfides has not been conducted when H₂S was detected.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-147 ARE SUFFICIENT QUANTITIES OF ADDITIVES (SCAVENGERS, pH, AND CORROSION CONTROL) MAINTAINED ON THE FACILITY?

Authority: 490(m)(4)(i)

Enforcement Action: S

490(m)(4)(ii)

490(m)(4)(iii)

INSPECTION PROCEDURE:

Visually inspect the facility to verify that sufficient quantities of additives as approved in the H₂S Contingency Plan are available for the:

1. Control of H₂S (scavengers).
2. Control of well-control fluid pH.
3. Control for corrosion of equipment.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if sufficient quantities of additives are not available to control:

1. H₂S.
2. Well-control fluid pH.
3. Corrosion of equipment.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-148 WHEN H₂S IS DETECTED, IS DRILLING SUSPENDED UNTIL SCAVENGER IS CIRCULATED THROUGHOUT THE SYSTEM?

Authority: 490(m)(4)(i)

Enforcement Action: S

INSPECTION PROCEDURE:

If present on the facility during the detection of H₂S, observe to see if drilling is suspended until scavenger is circulated throughout system.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if drilling is not suspended and scavenger is not circulated throughout the system.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-149 IS THE pH OF WATER-BASED WELL-CONTROL FLUIDS MAINTAINED AT A MINIMUM OF 10.0?

Authority: 490(m)(4)(ii)

Enforcement Action: S

INSPECTION PROCEDURE:

Check the operator's records to verify that the pH of water-based well-control fluids is maintained at a minimum of 10.0.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if the pH of well-control fluids is not maintained at a minimum of 10.0.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-150 ARE WELL-CONTROL FLUIDS CONTAINING H₂S DEGASSED AT THE OPTIMUM LOCATION FOR THE PARTICULAR FACILITY AND ARE THE GASSES REMOVED BURNED IN A CLOSED FLARE SYSTEM?

Authority: 490(m)(5)

Enforcement Action: S

INSPECTION PROCEDURE:

1. Review H₂S Contingency Plan to ascertain optimum location for degasser.
2. Visually inspect the facility to confirm the presence of the degasser and that it is operative.
3. Visually inspect the flare system to verify that it is a closed system.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if the degasser is not operative or if flare system is not a closed system.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each flare system inspected.

H-156

ARE ALL VENTS USED FOR H₂S PRODUCTION PROCESS EQUIPMENT, TANKS, RELIEF VALVES, BURST PLATES, AND SIMILAR DEVICES PIPED TO THE FLARE SYSTEM?

Authority: 490(q)(6)

Enforcement Action: C/S

INSPECTION PROCEDURE:

Visually inspect the facility to verify that all vents are piped to the flare system used for H₂S for:

1. Production process equipment.
2. Tanks.
3. Relief valves.
4. Burst plates.
5. Similar devices.

IF NONCOMPLIANCE EXISTS:

Issue a component shut-in (C) INC if certain components are not vented properly.

Issue a facility shut-in (S) INC if all components on the facility are not vented properly.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-157

IS GAS CONTAINING H₂S NOT USED FOR INSTRUMENT GAS, AND IF H₂S IS BEING USED AS FUEL GAS, DOES THE OPERATOR HAVE APPROVAL FROM THE DISTRICT MANAGER?

Authority: 490(q)(9)

Enforcement Action: S

INSPECTION PROCEDURE:

1. Check operator's records and inspect all instruments for any indication that gas containing H₂S may be being used for instruments.
2. Check operator's records and all combustion devices for indications that gas containing H₂S may be used for fuel. The District Manager may approve the use of gas containing H₂S for fuel. If no approval has been given and indications are present, operator must prove that gas used for fuel does not contain H₂S.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if gas containing H₂S is used for instruments or if gas containing H₂S is used for fuel without the prior approval of the District Manager.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-158

HAS THE DISTRICT MANAGER BEEN NOTIFIED IF PRODUCED WATER IS DISPOSED OF BY MEANS OTHER THAN SUBSURFACE INJECTION?

Authority: 490(q)(12)

Enforcement Action: S

INSPECTION PROCEDURE:

Inspect the production process system to verify that produced water to be disposed of by means other than subsurface injection is treated for removal of H₂S.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if the produced water to be disposed of by means other than subsurface injection is not treated for removal of H₂S and does not have approval by the District Manager.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-159

ARE H₂S LEVELS CONTINUOUSLY MONITORED IN THE WORK AREAS DURING DRILLING, WELL-COMPLETION, AND WELL-WORKOVER OPERATIONS?

Authority: 490(j)(4)(i)

Enforcement Action: W/S

490(j)(4)(ii)

490(j)(4)(iii)

490(j)(4)(iv)

490(j)(4)(v)

INSPECTION PROCEDURE:

1. Check operator's records to verify that H₂S levels were monitored in the work area when:
 - A. Pulling a wet string of drill pipe;
 - B. Pulling a workover string;
 - C. Circulating bottoms-up after a drilling break;
 - D. Cementing;
 - E. Logging; and
 - F. Circulating to condition mud or other well-control fluids.
2. If present during such operations, verify that the required monitoring is being conducted.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that monitoring was not conducted during such operations. Issue a facility shut-in (S) INC if such monitoring is not being conducted when present during such operations.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-160

WHEN CONDUCTING CORING OPERATIONS, IS PROTECTIVE BREATHING EQUIPMENT WORN BY ALL PERSONNEL IN THE WORK AREA AT LEAST 10 STANDS IN ADVANCE OF RETRIEVING THE CORE BARREL?

Authority: 490(q)(1)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that protective breathing equipment was worn by personnel in the work area at least 10 stands in advance of retrieving the core barrel during conventional coring operations.
2. If present during such operations, verify that protective breathing equipment is worn by personnel in the work area at least 10 stands in advance of retrieving the core barrel during conventional coring operations.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that protective breathing equipment was not worn by personnel in the work area at least 10 stands in advance of retrieving the core barrel during conventional coring operations.

Issue a facility shut-in (S) INC if protective breathing equipment is not worn by personnel in the work area at least 10 stands in advance of retrieving the core barrel during conventional coring operations, if present during such operations.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-161

ARE ALL CORES TO BE TRANSPORTED SEALED AND MARKED FOR THE PRESENCE OF H₂S?

Authority: 490(q)(1)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that all cores to be transported were sealed and marked for the presence of H₂S.
2. If present on the facility, inspect all cores to verify that they have been sealed and marked for the presence of H₂S.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that cores were not sealed and marked for the presence of H₂S.

Issue a facility shut-in (S) INC if cores are not sealed and marked for the presence of H₂S if present on the facility during inspection.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-162

IS WELL-CONTROL FLUID IN USE FOR LOGGING OPERATIONS CONDITIONED AND TREATED TO MINIMIZE THE EFFECT OF H₂S ON THE LOGGING EQUIPMENT?

Authority: 490(q)(2)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Inspect operator's records to verify that well-control fluids in use during logging operations were conditioned and treated to minimize the effect of H₂S on the logging equipment.
2. If present during logging operations, observe well-control fluid handling operations and check records to verify that the well-control fluids have been conditioned and treated to minimize the effect of H₂S on the logging equipment.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that the well-control fluids in use during logging operations were not conditioned and treated to minimize the effect of H₂S on the logging equipment.

Issue a facility shut-in (S) INC if present during logging operations and the well-control fluids have not been conditioned and treated to minimize the effect of H₂S on the logging equipment.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-163

DURING STRIPPING OPERATIONS, ARE DISPLACED WELL-CONTROL FLUID RETURNS MONITORED BY PERSONNEL?

Authority: 490(q)(3)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that well-control fluid returns were monitored by personnel during stripping operations.
2. If present during stripping operations, observe well-control fluid returns for the presence of monitoring personnel.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that well-control fluid returns were not monitored by personnel during stripping operations.

Issue a facility shut-in (S) INC if present during stripping operations and well-control fluid returns are not monitored by personnel.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-164

DURING STRIPPING OPERATIONS, IS PROTECTIVE BREATHING EQUIPMENT WORN BY PERSONNEL IN THE WORK AREA WHEN THE ATMOSPHERIC CONCENTRATION OF H₂S REACHES OR EXCEEDS 20 PPM OR IF THE WELL IS UNDER PRESSURE?

Authority: 490(q)(3)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that protective breathing equipment was worn by personnel in the work area during stripping operations when the concentration of H₂S reached or exceeded 20 ppm, or if the well was under pressure.
2. If present during stripping operations and the concentration of H₂S equals or exceeds 20 ppm, or if the well is under pressure, observe the work area to verify that personnel are wearing protective breathing equipment.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that personnel did not wear protective breathing equipment during stripping operations when the concentration of H₂S reached or exceeded 20 ppm, or if the well was under pressure.

Issue a facility shut-in (S) INC if present during stripping operations and protective breathing equipment is not worn by personnel in the work area if the concentration of H₂S reaches or exceeds 20 ppm, or if the well is under pressure.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-165

IS PROTECTIVE BREATHING EQUIPMENT WORN BY PERSONNEL IN THE WORK AREA DURING BOTTOMS-UP WHEN CIRCULATING OUT A KICK AND DURING EXTENDED KILL OPERATIONS?

Authority: 490(q)(4)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that protective breathing equipment was worn by personnel in the work area during bottoms-up when circulating out a kick and during extended kill operations.
2. If present during bottoms-up when circulating out a kick and during extended kill operations, observe the work area to verify that personnel are wearing protective breathing equipment.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that personnel did not wear protective breathing equipment during bottoms-up when circulating out a kick and during extended kill operations.

Issue a facility shut-in (S) INC for the facility if present during bottoms-up when circulating out a kick and during extended kill operations if personnel in the work area are not wearing protective breathing equipment.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-166

IS AN EFFECTIVE MEANS OF MONITORING AND CONTROLLING CORROSION CAUSED BY ACID GASES USED IN BOTH THE DOWNHOLE AND SURFACE PORTIONS OF A PRODUCTION SYSTEM?

Authority: 490(q)(7)

Enforcement Action: S

INSPECTION PROCEDURE:

Check operator's records and observe production system for indications of corrosion monitoring and control equipment. The operator must prove that such means for monitoring and controlling corrosion exist.

IF NONCOMPLIANCE EXISTS:

Issue a facility shut-in (S) INC if records and observations indicate that an effective means of monitoring and controlling corrosion in both the downhole and surface portions of the production system does not exist.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-167

ARE LUBRICATORS WHICH MAY BE EXPOSED TO FLUIDS CONTAINING H₂S MADE OF H₂S-RESISTANT MATERIALS?

Authority: 490(q)(8)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that lubricators exposed to fluids containing H₂S were made of H₂S resistant materials.
2. If present when lubricators are installed, visually inspect the lubricator for make and model and verify with records that they are made of H₂S resistant material.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if operator's records indicate that lubricators exposed to fluids containing H₂S were not made of H₂S resistant material.

Issue a facility shut-in (S) INC if the lubricators which may be exposed to fluids containing H₂S and in use during the inspection are not made of H₂S resistant materials.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC for each lubricator inspected.

H-168

ARE METALS USED FOR SENSING LINES AND SAFETY-CONTROL DEVICES WHICH ARE EXPOSED TO H₂S BEARING FLUIDS CONSTRUCTED OF H₂S CORROSION RESISTANT MATERIALS OR COATED WITH APPROPRIATE MATERIALS SO AS TO RESIST CORROSION?

Authority: 490(q)(10)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Check operator's records to verify that metals used in sensing lines and safety-control devices which were exposed to H₂S bearing fluids were constructed with H₂S corrosion resistant materials or coated with appropriate materials so as to resist corrosion.
2. If present on the facility during operations in a known H₂S zone, verify that the metals and safety-control devices are properly constructed or coated.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if the metals were not properly constructed or coated so as to resist H₂S corrosion. Issue a facility shut-in (S) INC if present on the facility during operations in a known H₂S bearing zone and the metals and safety-control devices are not properly constructed or coated.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-169

ARE ALL SEALS WHICH MAY BE EXPOSED TO FLUIDS CONTAINING H₂S MADE OF H₂S-RESISTANT MATERIAL?

Authority: 490(q)(11)

Enforcement Action: W/S

INSPECTION PROCEDURE:

1. Inspect records to verify that all seals, which were in service while operating in a known H₂S zone and which may have been exposed to fluids containing H₂S, were made of H₂S-resistant material.
2. If present while operations are conducted in a known H₂S zone, verify that all seals, which may be exposed to fluids containing H₂S, are made of H₂S-resistant material by visual observation and records checks.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if records indicate that seals, which may have been exposed to fluids containing H₂S, were not made of H₂S-resistant material.

Issue a facility shut-in (S) INC if seals which may be exposed to fluids containing H₂S are not constructed of H₂S resistant material, if witnessed during operations in a known H₂S zone.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-170

DO TRAINED EMPLOYEES OR CONTRACTORS TRANSFERRED FROM ANOTHER FACILITY RECEIVE A SUPPLEMENTAL BRIEFING ON H₂S EQUIPMENT AND PROCEDURES BEFORE BEGINNING DUTY?

Authority: 490(g)(3)(i)

Enforcement Action: W

INSPECTION PROCEDURE:

Verify that all operator and contract personnel from other facilities have received a supplemental briefing on H₂S equipment and procedures for this facility.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if any operator or contract personnel have not received a supplemental briefing for this facility.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

H-171

DO VISITORS WHO REMAIN AT THE FACILITY FOR MORE THAN 24 HOURS RECEIVE THE TRAINING REQUIRED FOR EMPLOYEES AND CONTRACTORS?

Authority: 490(g)(3)(ii)

Enforcement Action: W

INSPECTION PROCEDURE:

Verify that all visitors that will be on the facility for more than 24 hours have received the same training as required for the operators and contractors.

IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC if any visitors are on the facility more than 24 hours without receiving the same required training as the operators and contractors.

INSPECTION COUNT/ INC

Enter one item checked/ issue one INC per facility inspected.

<p>H-172</p>	<p>DO VISITORS WHO WILL DEPART THE FACILITY WITHIN 24 HOURS RECEIVE A BRIEFING ON H₂S PROCEDURES? Authority: 490(g)(3)(iii) Enforcement Action: W INSPECTION PROCEDURES: Verify that all visitors departing the facility within 24 hours have received a briefing on H₂S procedures. IF NONCOMPLIANCE EXISTS: Issue a warning (W) INC if records show any visitors departing the facility within 24 hours have not received the required briefing. INSPECTION COUNT/ INC Enter one item checked/ issue one INC per facility inspected.</p>
<p>H-173</p>	<p>ARE RECORDS OF ATTENDANCE IN DRILLS FOR DRILLING, WELL-COMPLETION, AND WELL-WORKOVER OPERATIONS MAINTAINED AT THE FACILITY UNTIL OPERATIONS ARE COMPLETED? Authority: 490(h)(2)(i) Enforcement Action: W INSPECTION PROCEDURE: Verify that drill attendance records for drilling, well-completion, and well-workover operations are maintained on the facility until operations are completed. IF NONCOMPLIANCE EXISTS: Issue a warning (W) INC if records for drills for drilling, well-completion, and well-workover operations are not being maintained at the facility. INSPECTION COUNT/ INC Enter one item checked/ issue one INC per facility inspected.</p>
<p>H-174</p>	<p>ARE RECORDS OF ATTENDANCE IN DRILLS FOR PRODUCTION OPERATIONS MAINTAINED AT THE FACILITY OR THE NEAREST FIELD OFFICE FOR 1 YEAR? Authority: 490(h)(2)(ii) Enforcement Action: W INSPECTION PROCEDURE: Verify that records of attendance in drills for production operations are maintained on the facility or the nearest field office for 1 year. IF NONCOMPLIANCE EXISTS: Issue a warning (W) INC if records of attendance in drills for production operations are not maintained at the facility or nearest field office for 1 year. INSPECTION COUNT/ INC Enter one item checked/ issue one INC per facility inspected.</p>
<p>H-175</p>	<p>ARE PORTABLE OR STRATEGICALLY PLACED FIXED SO₂ DEVICES CAPABLE OF DETECTING A MINIMUM OF 2 PPM OF SO₂ AVAILABLE OR IN USE AT THE FACILITY? Authority: 490(j)(11)(i) Enforcement Action: W/S INSPECTION PROCEDURE: 1. Verify that portable SO₂ devices are available on the facility. 2. Verify that strategically placed fixed SO₂ devices in use on the facility are capable of detecting a minimum of 2 ppm of SO₂. IF NONCOMPLIANCE EXISTS: 1. Issue a warning (W) INC if portable SO₂ devices capable of detecting a minimum of 2 ppm of SO₂ are not available and flaring is not ongoing. 2. Issue a facility shut-in (S) INC if strategically placed fixed SO₂ devices are not available on the facility or not capable of detecting 2 ppm of SO₂ during flaring. INSPECTION COUNT/ INC Enter one item checked/ issue one INC per facility inspected.</p>
<p>H-176</p>	<p>ARE PORTABLE OR FIXED SO₂ ELECTRONIC SENSING DEVICES CALIBRATED EVERY 3 MONTHS? Authority: 490(j)(11)(iv) Enforcement Action: W/S INSPECTION PROCEDURE: Verify that portable or fixed SO₂ electronic sensing devices have been calibrated every 3 months. IF NONCOMPLIANCE EXISTS: Issue a warning (W) INC if records indicate a period was greater than 3 months between calibrations but subsequent calibrations were conducted within the required time period. Issue a facility shut-in (S) INC if inspection shows the last calibration occurred more than 3 months ago. INSPECTION COUNT/ INC Enter one item checked/ issue one INC per facility inspected.</p>

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- H-177** **ARE SPECTACLE KITS AVAILABLE FOR RESPIRATORS AS NEEDED?**
Authority: 490(j)(13)(iv) **Enforcement Action:** W
INSPECTION PROCEDURE:
Inspect all respirators that require spectacle kits for specified personnel with vision problems.
IF NONCOMPLIANCE EXISTS:
Issue a warning (W) INC when spectacle kits in respirators are not issued to specified personnel.
INSPECTION COUNT/ INC
Enter one item checked/ issue one INC per facility inspected.
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- H-178** **ARE COMPRESSORS EXCEEDING 50 HP COVERED BY AT LEAST TWO H₂S SENSORS LOCATED WITHIN 10 FEET OF THE COMPRESSOR?**
Authority: 490(j)(5)(iv) **Enforcement Action:** C
INSPECTION PROCEDURE:
Verify that at least two H₂S sensors are located within 10 feet of each compressor that exceeds 50 hp.
IF NONCOMPLIANCE EXISTS:
Issue a component shut-in (C) INC if there are not at least two sensors located within 10 feet of any compressor that exceeds 50 hp.
INSPECTION COUNT/ INC
Enter one item checked/ issue one INC for each area inspected.
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- H-179** **WHEN DRILLING, ARE FUNCTIONAL TESTS OF H₂S DETECTORS INITIATED BEFORE THE BIT IS 1,500 FEET (VERTICALLY) ABOVE THE POTENTIAL H₂S ZONE?**
Authority: 490(j)(7)(i) **Enforcement Action:** W
INSPECTION PROCEDURE:
Inspect the driller's log to verify that functional tests are initiated before the bit is 1,500 feet (vertically) above the potential H₂S zone.
IF NONCOMPLIANCE EXISTS:
Issue a warning (W) INC if functional tests are not initiated before the bit is 1,500 feet (vertically) above any potential H₂S zone.
INSPECTION COUNT/ INC
Enter one item checked/ issue one INC for each area inspected.
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- H-180** **WHEN CONDUCTING PRODUCTION OPERATIONS, ARE ALL H₂S DETECTORS TESTED AT LEAST EVERY 14 DAYS?**
Authority: 490(j)(7)(ii) **Enforcement Action:** C
INSPECTION PROCEDURE:
Verify that all H₂S detectors are being tested at least every 14 days.
IF NONCOMPLIANCE EXISTS:
Issue a component shut-in (C) INC if records indicate that any H₂S detector is not being tested at least every 14 days.
INSPECTION COUNT/ INC
Enter one item checked/ issue one INC per facility inspected.
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- H-181** **IN AREAS CLASSIFIED AS H₂S PRESENT, ARE ALL H₂S DETECTORS TESTED ONCE EVERY 24 HOURS WHEN CONDUCTING DRILLING OPERATIONS, DRILL STEM TESTING, WELL TESTING, WELL COMPLETION OPERATIONS, OR WORKOVER OPERATIONS?**
Authority: 490(j)(7)(i) **Enforcement Action:** W/S
INSPECTION PROCEDURE:
Verify that all H₂S detectors are being tested once every 24 hours.
IF NONCOMPLIANCE EXISTS:
Issue a warning (W) INC if each H₂S detector is not tested within the 24-hour time period, but subsequent tests were conducted as required.
Issue a facility shut-in (S) INC if each H₂S detector is not tested within the 24-hour time period and subsequent tests were not conducted.
INSPECTION COUNT/ INC
Enter one item checked/ issue one INC per facility inspected.
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