

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SUPERVISOR OF WELLS INSTRUCTION 1-97

DISPOSAL OF PRODUCED GAS FROM
OIL AND GAS FIELD OPERATIONS

PURPOSE

The purpose of Supervisor of Wells Instruction 1-97 is to prevent the release of hydrogen sulfide (H₂S) gas associated with oil and gas production operations in quantities which result in, or may result in, pollution or a threat to human health and safety.

Administrative rules promulgated pursuant to Part 615, Supervisor of Wells, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), impose certain restraints on the release of gas associated with the operation or testing of wells. R 324.1010 states:

"A permittee of a well shall ensure that all gas produced in the operation or testing of wells that is not utilized is burned, processed, or disposed of in a manner consistent with these rules and all applicable state and federal laws and regulations. The gas shall not be burned closer than 100 feet from a well or storage tank or 300 feet from structures used for public or private occupancy or from any other flammable and combustible material."

This Supervisor's Instruction 1-97 clarifies the meaning of "*disposed of in a manner consistent with these rules*" in R 324.1010.

BACKGROUND

The administrative rules promulgated pursuant to Part 615 of the NREPA address the disposal of produced gas under several circumstances. The general statutory requirement to prevent waste is articulated in R 324.504, which states:

"A person shall use every reasonable precaution to stop and prevent waste. . . . An operation shall not be commenced or continued at a location where it is likely that a substance may escape in a quantity sufficient to pollute the air, soil, surface waters, or groundwaters, until the permittee has complied with the methods and measures to prevent pollution as specified by the supervisor."

For gas from wells other than H₂S wells, a method of disposal may be acceptable if it meets the general requirement to prevent waste in accordance with R 324.504, and if it is not specifically prohibited by the rules or by an Order of the Supervisor of Wells. However, disposal of gas from H₂S wells poses special hazards due to the toxic and noxious nature of H₂S, and must be subject to more stringent and specific conditions.

R 324.1101(g) defines H₂S wells:

“H₂S well” means a well that contains a hydrogen sulfide content in the gas of not less than 300 ppm.”

There are several provisions in the rules which relate to disposal of gas from H₂S wells. Gas that is not utilized is an oil or gas field fluid waste which may be injected into a disposal well under R 324.703, which states in part:

“A permittee of a well shall inject oil or gas field fluid wastes, or both, into an approved underground formation in a manner that prevents waste”

Release of gas from storage vessels associated with an H₂S well is subject to R 324.1122, which states in part:

“(2) If a storage vessel releases a total 24-hour volume of 5 mcf or more of vapors, then a permittee of a well shall ensure that the vessel is equipped with a vent line for conveying the released gasses and vapors to an incinerator, flare, or vapor recovery system”

“(4) If a storage vessel releases a total daily volume of 5 mcf or less of vapor, then it may be vented to the atmosphere if the vent is located not less than 10 feet above the tank top and if the opening of the vent is within the diked area or not less than 20 feet above the ground if the opening of the vent is outside the diked area. The supervisor may prohibit venting of vapor to the atmosphere if a verified chronic nuisance odor results from the sulfur-bearing compounds being vented. . . .”

Release of gas from process equipment associated with an H₂S well is subject R 324.1124, which states:

“A permittee of a well shall ensure that an emergency relief valve on process equipment is equipped with a line for conveying the released gasses or vapors to an incinerator or flare. The supervisor or authorized representative of the supervisor may grant an exception if the total daily volume of gas produced is less than 5 mcf.”

INSTRUCTION

This Instruction is issued in addition to and in conjunction with the provisions of R 324.1010. After the effective date of this Instruction, all gas that is produced in conjunction with the operation or testing (including reworking, producing, and plugging) of an H₂S well and is not processed for sale shall be utilized or disposed of by one of the following methods:

1. Burning as fuel in a heated vessel in compliance with R 324.1121 of Part 615 of the NREPA; Part 55, Air Pollution Control, of the NREPA and promulgated rules; and all other applicable state and federal laws and regulations

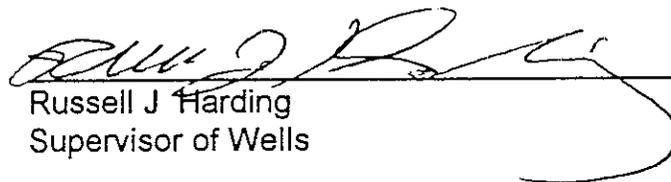
2. Burning in a flare or incinerator that complies with R 324.1010 of Part 615 of the NREPA, Part 55 of the NREPA and promulgated rules, and all other applicable state and federal laws and regulations.
3. Injection into an approved underground formation pursuant to R 324.612 or R 324.703 of Part 615 of the NREPA, as applicable, utilizing an injection well that meets the requirements of "Part 8 Injection Wells," of the administrative rules promulgated pursuant to Part 615 of the NREPA.
4. Venting to the atmosphere only as specified in R 324.1122(4) or R 324.1124 of Part 615 of the NREPA, provided such venting is in compliance with Part 55 of the NREPA and promulgated rules and all other applicable state and federal laws and regulations.
5. Disposal by other means as may be approved by the Supervisor pursuant to a specific request by the permittee and wherein the permittee demonstrates to the Supervisor that the manner of disposal shall prevent waste and shall not pose a threat to public health and safety. If required under the provisions of the applicable rules, approval by the Supervisor shall be subject to a hearing.

Any release to the environment of gas produced from an H₂S well other than the circumstances identified in Items 1 - 5 above shall be considered to be a violation R 324.1010 and is prohibited.

SUPERVISOR'S INSTRUCTION 1-97 IS EFFECTIVE ON JULY 15, 1997

Date:

6/16/97


Russell J Harding
Supervisor of Wells