

◊ Turning to the specific sections of the proposed rule

◊ Three persons commented on proposed 19.15.2.52.A. Greg Nibert commented that the subsection should be redrafted as follows: "The intent of this Rule is to provide for the public safety in areas where hydrogen sulfide gas, H₂S, in concentrations greater than those listed below are present." Marbob Energy Corporation commented that the phrases "sulfurated hydrogen" and "hydrosulfuric acid" should be stricken because they are not in common use in industry, and the Independent Petroleum Association of New Mexico (hereinafter referred to as "IANM") commented that the last sentence should be stricken and replaced with the sentence suggested by Mr. Nibert, above.

◊ Mr. Nibert's suggested language (also urged upon this body by IPANM) seems designed to reiterate that many provisions of the proposed rule will apply only when a given concentration of hydrogen is present. However, certain sections of the proposed rule, including 19.15.2.52.C.10 ("potentially hazardous volume"), 19.15.2.52.D (determination of hydrogen sulfide risk) and 19.15.2.52.D.2 ("tested concentrations below 100 ppm") clearly define the concentration of hydrogen sulfide for which action is required (19.15.2.52.D.2) and the actions to be taken based on the radius of exposure calculations () and the potentially hazardous volume resulting from the required testing and calculation (19.15.2.52.C.10) and no further clarification is necessary.

◊ Marbob's suggestion that the phrases "sulfurated hydrogen" and "hydrosulfuric acid" should be stricken because they are not in common use in industry is well-taken and will be adopted. The chemical formula should also be deleted because of the difficulty in codifying the subscript.

◊ Therefore, proposed 19.15.2.52.A as set forth on Exhibit ◊ shall be adopted with the following changes:

A. In General. Hydrogen sulfide gas (known by its chemical abbreviation "H₂S" ~~or as "sulfurated hydrogen" or "hydrosulfuric acid"~~) is a flammable, poisonous gas that may occur naturally as a component of crude petroleum and natural gas. The gas has a distinct and characteristic odor of rotten eggs but due to olfactory fatigue may not be sensed by the human sense of smell.

◊ Several comments were made on proposed 19.15.2.52.B. During the hearing, ◊ queried the Division witness concerning the applicability of the proposed rule to surface waste facilities permitted under Rule 711 (◊ NMAC ◊). In response to these inquiries, the Division noted on <August > that an original draft of the rule covered all regulated facilities, and after further thought the Division concluded that surface waste management facilities should continue to be regulated separately under the current Rule 711 because these facilities are fundamentally different in their operating characteristics than the remainder of the industry in that they have the potential to generate hydrogen sulfide as a result of their operations, and that the proposed rule was intended to protect public safety and the short term and acute consequences of exposure to hydrogen sulfide. The Division noted that it cannot ascertain whether exposure to less acute quantities of hydrogen sulfide would affect public health or cause long term or chronic consequences and the safe radius of exposure to long term exposure is unknown. The Division noted that Rule 711 imposes fence line monitoring for the protection of public health. In addition, the Division proposed to clarify that the proposed Section is to apply to situations where a potentially hazardous volume is present or where hydrogen sulfide may exist in concentrations greater than 100 ppm.

◊ As a result, the Division proposed the following revisions to Exhibit ◊ on August 16, 2002:

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◊ This proposal generated many comments. Controlled Recovery Inc. commented that facilities subject to Rule 711 (◊ NMAC ◊) should not be exempt from the requirements of this rule. The permits of some 711 facilities contain more stringent requirements than those set forth for other facilities in the proposed rule, and no evidence in the record justifies these more stringent requirements. The New Mexico Oil and Gas Association commented that facilities subject to Rule 711 should not be exempt from the requirements of this rule; they should be subject to the same standards as the rest of the industry and had inadequate public notice and were not involved in the rulemaking process. Loco Hills Water Disposal Co. commented that facilities subject to Rule 711 should not be exempt from the requirements of this rule because requirements imposed upon 711 facilities are more stringent than applied to the rest of the industry through the proposed new Section; disposal facilities should be subject to the same standards as the rest of the industry. Greg Nibert and IPANM also commented that the word "may" in the first sentence of the amended draft should be changed to "does" so that rule applies only where H₂S is present, not where it "may" be present.

◊ It is apparent that there are fundamental differences between the regulation of surface waste management facilities that generate hydrogen sulfide gas and the remainder of the industry that instead manages naturally occurring hydrogen sulfide in connection with its exploration and production activities. Moreover, surface waste management facilities are already covered under a regulatory scheme in Rule 711 that is more rigorous with respect to handling hydrogen sulfide than is proposed here, and that regulatory scheme should not be altered without directly considering the special requirements of surface waste management facilities, which has not been done here. The proposed rule applies to all operations regulated by the Oil Conservation Division under the Oil and Gas Act, and every version of the draft circulated to date the draft to the extent some requirements herein may not be contained within 711 permits, they should also apply, and Exhibit A, as modified by the Division on August 16, should be further modified to reflect this reality. Staff is directed to examine the requirements of Rule 711 and determine whether changes to the hydrogen sulfide regime need to be reconsidered in light of this rulemaking.

◊ Mr. Nibert and IPANM's comments concerning the wording of subsection B are also well-taken. Moreover, although titles of subsections are generally not of legal significance, "scope" does not seem to apply very well to the content of the paragraph, and "applicability" seems more appropriate. The second sentence purports to describe the "intent" of the rule, which is inappropriate for the text of the rule and should also be stricken.

◊ Therefore, proposed 19.15.2.52.B as set forth on Exhibit ◊ shall be adopted with the following changes:

B. Applicability Scope. This Section provides for public safety in areas where hydrogen sulfide gas (H₂S) ~~may~~ exists in concentrations greater than 100 ppm or in a potentially hazardous volume. This Section applies to any person, operator or facility subject to the jurisdiction of the Division, including, but not limited to, any person, operator or facility engaged in drilling, stimulating, injecting into, completing, working over or producing any oil, natural gas or carbon dioxide well or any person, operator or facility engaged in gathering, transporting, storing, processing or refining of crude oil, natural gas or carbon dioxide. This Section shall not act to exempt or otherwise excuse ~~Exempt from this rule are~~ surface waste management facilities permitted pursuant to 19 NMAC 15.I.711 ~~from more stringent conditions on the handling of hydrogen sulfide in 19 NMAC 15.I.711 or permits issued thereunder, nor shall such facilities be exempt from the requirements set forth in this Section by virtue of permitting under 19 NMAC 15.I.711.~~

◊ Several comments were made concerning the definitions of certain acronyms in Exhibit ◊ to other standards. See Exhibit A, 19.15.2.52.C.1, C.2, C.3, C.6, C.7, C.8. For example, Mr. Nibert and IPANM objected to the use in the proposed rule of the acronyms "ANSI", "API", "ASTM", "GPA", "LEPC" and "NACE" on the grounds that the Internet web page of the American Petroleum Institute indicates that its standards to be used only as guideline, not as regulations, that the publications must be purchased along with technical supplements and independent operators do not own these documents and instead rely on practices common to a given area.

◊ If an acronym is used in a regulation, it should be defined to prevent uncertainty and confusion. These comments do not take issue with this principle, and it seems evident that the commenters really object to use of third-party standards to set regulatory standards here, particularly where those standards were initially prepared as advisories. References to standards which establish prevalent industry practices or practices commonly taken by prudent operators are not improper. But, to the extent that such standards change over time, they may raise due process concerns. However, as will be seen in the discussion below, in most cases, the proposed rule makes reference to industry standards as recommended practices, not requirements. As the discussion below will show, to the extent that the regulations impose requirements by reference to a third-party standard, the objections of Mr. Nibert and IPANM are well-taken. However, none of the definitions should be stricken, and the individual standards will be discussed in connection with the applicable regulatory language. Finally, the suggestion that the parallel reference material should be attached will also be denied as inappropriate, but staff is directed to seek permission from the various publishers and entities mentioned to place the referenced materials on the Division's Internet web site and to otherwise make the materials available to the public in hard copy form at the offices of the Division.

On August ◊, the Division apparently responded to these questions by amending that paragraph to provide as follows:

◊ This amended language in turn was the subject of one comment. Marbob Energy Corp. commented that the escape rate should not be calculated using the daily absolute open flow rate against atmospheric pressure. The only time the absolute open flow rate can be calculated is when a deliverability test is performed. Later, the reservoir pressure and performance coefficient decrease and the original deliverability equation do not represent current well deliverability. Moreover, deliverability tests are difficult to achieve in wells with low permeability, and most gas wells in New Mexico have low permeability. Marbob concluded that the third sentence should therefore be stricken.

◊ Marbob's concerns are already largely addressed by the proposed rule, as amended by the Division's August 16 submission, although as will be seen further clarification of the language is necessary to completely address Marbob's concerns. The paragraph already provides that the escape rate is to "calculated." Therefore if the operator can calculate the rate without direct testing, the language as proposed by the Division permits it. Furthermore, the paragraph as proposed by the Division provides that the calculated can use actual maximum daily rate of the gaseous mixture produced "or the best estimate thereof." In the absence of present information as to the absolute open flow rate against atmospheric pressure, the operator may use engineering judgment to calculate the rate maximum escape or use engineering judgment to estimate the flow. The proposed rule refers to the "current" daily absolute open flow rate, and operators may use engineering judgment to extrapolate current rates; they need not use the rate (and indeed should not) use deliverability tests when the well was first completed to develop these figures. Finally, the parallel reference provided by the Division to account for wildcat wells should be revised.

◊ Therefore, proposed 19.15.2.52.C.5 as set forth on Exhibit ◊ and as amended by the Division in its submission of August 16, 2002, should be adopted with the following changes:

5. Escape Rate. The "escape rate" is the maximum volume (Q) that is used to designate the possible rate of escape of a gaseous mixture containing H₂S. The escape rate is calculated using the maximum daily rate of the gaseous mixture produced or the best estimate thereof. For a natural gas well, the escape rate shall be calculated by using the current daily absolute open flow rate against atmospheric pressure or best estimate thereof. For an oil well, the escape rate shall be calculated by multiplying the producing gas/oil ratio by the maximum daily production rate or best estimate thereof. For an oil or natural gas well drilled in a developed area, the escape rate may be determined by using offset wells completed in the interval in question, or using some other reasonable means to calculate the escape rate. For a well drilled in an area where insufficient data exists to calculate a radius of exposure but where hydrogen sulfide could reasonably be expected to be present in concentrations in excess of 100 ppm in the gaseous mixture, a 100 ppm radius of exposure equal to 3,000 feet shall be assumed. ~~wildcat wells, subparagraph C.13.d shall apply.~~ For facilities or operations not mentioned, the escape rate shall be calculated using the actual flow of gaseous mixture through the facility or operation.

◊ The definition of the phrase "potentially hazardous volume" in Exhibit ◊ was the subject of several comments. That paragraph was unchanged from its first submission in Exhibit ◊. Greg Nibert and IPANM both indicated that the 100 ppm and 500 ppm radius of exposure should be extended by fifty feet, as follows: "the 100 ppm radius of exposure in excess of 50 feet includes any public area as defined herein except a public road" and "the 500 ppm radius of exposure is greater than 50 feet includes any public road as defined herein ...". No explanation for these proposed changes was provided or why fifty feet should be added to the radius of exposure as calculated and the purpose of the proposal is unclear. No change should be made.

◊ Several comments were received on the definition of "public area" in Exhibit ◊. The definition of that phrase was unchanged from its first submission in Exhibit ◊. Greg Nibert and IPANM commented that the word "occupied" should be inserted before "dwelling," "place of business" and "government building." The references to "city, town, village" should be deleted and facilities "directly involved in oil and gas production" should be excluded. Harvard Petroleum Corp. commented that the definition is too broad, and it would prefer the narrower language developed by IPANM.

◊ The problem with defining public area is ensuring the protection of the public in populated areas without creating absurd results. Evidently, the commenters are concerned that unoccupied buildings not create a "public area" and trigger more stringent requirements set forth in the proposed rule on operations in those areas. Any ambiguity about this matter can be resolved by slightly redrafting the proposed rule, as follows. The references to city, town and village should not be deleted, nor do the commenters explain why they desire these places to be excluded from the definition of "public area." Indeed, it is more likely that members of the public may be found in those places, and these words should not therefore be deleted.

◊ Therefore, proposed 19.15.2.52.C.10 as set forth on Exhibit ◊ should be adopted with the following changes:

11. Public Area. A "public area" is any area where members of the public may reasonably be expected to be present such as a dwelling, office, place of business, church, school, hospital, school bus stop, government building, any portion of a park, city, town, village or other similar area, ~~or any portion of a park, city, town, village or other similar area where members of the public may reasonably be expected to be present.~~

◊ Several comments were received concerning the definition of "public road" in Exhibit ◊. Mr. Nibert, IPANM and Harvard ask that a definition of "public road" be included that is restricted to roads under jurisdiction of a government "for maintenance or public use" and specifies that a public road is not a "private road, two track, ranch or oil and gas lease road."

◊ These comments apparently seek to broaden the proposed definition to include roads "maintained for public use" but also seek to limit its application to roads commonly used by the industry but not widely used by others. What constitutes a public road in the State of New Mexico is largely a question of common law and based on such factors as designation as a public road, maintenance by a governmental authority and actual use by the public. It would be impossible to set forth all the factors relevant to this determination in the proposed rule. Governments have a duty to maintain roads under their jurisdiction, and the proposed definition's use of the a governmental designation as public vs. private is a pragmatic method of addressing the issue.

◊ Several comments were received concerning the definition of "radius of exposure" and it was the subject of discussion during the hearing of July ◊ as well. Both Greg Nibert and IPANM commented that subsubpargarphs c should b deleted the only source of hydrogen sulfide is a well; while it may appear in flow lines, treating equipment or water tanks, it came originally from the well, and apparently therefore propose that the radius of exposure should relate to the well only.

◊ This section of the rule is somewhat confusing and it should be deleted, however, for different reasons than suggested by Mr. Nibert and IPANM. The fact of the matter is that leaks can occur in many places remote from the well where hydrogen sulfide originated. Leaks that threaten public safety can occur in gathering lines, compressor facilities, central tank batteries, refineries gas plants and other facilities more remote from the well. The public deserves protection from such releases as well. Paragraph 13.c just confuses the issue by discussing the "larger area" that may result from calculating the radius of exposure from the components from which a release may occur. It should be clear that the radius of exposure is constructed around a "point of escape" (paragraph 13) and that point of escape can be one of many sources away from the well, and a radius of exposure (if applicable) should be calculated for each "point of release."

◊ Mr. Nibert commented that paragraph 13.d should be amended to permit a lesser radius of exposure upon application and justification, or deleted. IPANM commented that this paragraph should be deleted as the phrase "reasonably be expected" is subject to interpretation; hydrogen sulfide may "reasonably expected" to be found anywhere and the paragraph would therefore permit decisions to be made without objectivity or science. IPANM further commented that "regulatory employees" now have to ask where hydrogen sulfide is located but fail to ask the operators in the field who know where the gas exists. If not deleted, the paragraph should be revised to permit a lesser radius of exposure upon application and justification.

◊ Some provision has to be made for drilling of wells in areas where insufficient data exists to assess the hydrogen sulfide risk. The proposal of the Division assumes a 3,000 foot radius of exposure in these situations, and this does not seem an unreasonable assumption and provides an adequate margin of error. This will be discussed in greater depth later. Imposing a "reasonably expected" standard on operators to anticipate hydrogen sulfide based on their training and experience seems a rational way to approach this problem. Another way to approach it would be to impose a strict 3,000 foot limit on all wildcat wells, but this seems unnecessarily strict approach. Finally, the proposal that a lesser radius of exposure be permitted upon application and justification seems duplicative of the provisions of subsection J of the proposed rule; subsection J broadly permits application for an exemption to any requirement of the rule. It would be duplicative and potentially confusing to include special exemption language in selected places in the proposed rule with such a broad exemption available.

◇ Marbob Energy Corp commented that the 3,000 foot radius of exposure is not realistic and far too conservative. Marbob claims a radius of exposure of 3,000 feet is extremely unlikely in New Mexico since most serious well control events in southeastern New Mexico occur in the Wolfcamp, Atoka and Morrow formations, but those zones contain low concentrations of hydrogen sulfide gas and the chances that a radius of exposure of 100 ppm 3,000 feet from such a well during a well control event are slim to none. The Upper Penn formation in the Indian Basin area has relatively high hydrogen sulfide concentrations, but reservoir depletion and water production in that area will restrict flows to 23 to 45 mmcf/d, and make a 3,000 foot radius of exposure of 100 ppm unlikely. Marbob proposes that a more reasonable assumption would be 1,500 feet.

◇ While it is a true that an event that would result in a 3,000 foot radius of exposure of 100 ppm hydrogen sulfide is unlikely, it is not impossible. A 1,500 foot radius of exposure would provide an ample safety margin for many events, but would not provide a margin of error against all events. The modest additional requirements that are protective of the public health safety outweigh the modest additional cost of the protections outlined in the proposed rule.

◇ The proposed rule as set forth in Exhibit ◇ as drafted is confusing, which can be eliminated with minor reorganization.

◇ Proposed 19.15.2.52.C.13 as set forth on Exhibit ◇ should adopted with the following changes:

13. Radius of Exposure. The radius of exposure (hereinafter referred to as "radius of exposure" or "ROE") is an imaginary circle constructed around a point of escape the radius of which is calculated using the following Pasquill-Gifford derived equation, or by such other method as may be approved by the division:

a. For determining the 100-ppm radius of exposure: $X = [(1.589)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where X is the radius of exposure in feet, where the hydrogen sulfide concentration equals the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture and where Q equals the maximum volume of gas determined to be available for escape in cubic feet per day (corrected for standard conditions of 14.73 psia and 60°F).

or

b. For determining the 500-ppm radius of exposure: $X = [(0.4546)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where X is the radius of exposure in feet, where the hydrogen sulfide concentration equals the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture and where Q equals the maximum volume of gas determined to be available for escape in cubic feet per day (corrected for standard conditions of 14.73 psia and 60°F).

~~c. Where multiple sources of hydrogen sulfide are present (e.g. wells, treatment equipment, flow lines, etc.), the radius of exposure may encompass a larger area than would otherwise be calculated using a radius of exposure computation for each component part.~~

c. ~~d.~~ For a well being drilled in an area where insufficient data exists to calculate a radius of exposure, but where hydrogen sulfide could reasonably be expected to be present in concentrations in excess of 100 ppm in the gaseous mixture, a 100 ppm radius of exposure equal to 3,000 feet shall be assumed.

◇ Several comments were received concerning the provisions for determining the hydrogen sulfide risk in subsection D of Exhibit ◇, and it was the subject of discussion during the hearing of July ◇ as well. The Division responded to the discussions at the hearing by amending its proposal by significantly amending subsection D of Exhibit ◇ on August ◇. The Division commented that it was not its intent that each well be tested if operating and process knowledge exists on the existence and concentration of hydrogen sulfide on a formation or pool basis. The Division proposed the following amended language to address this issue:

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◇ Since promulgating this language, several comments were received. Greg Nibert and IPANM commented that the words "facility" and "system" should be deleted because they are not defined. IPANM commented, apparently unaware of the Division's proposed changes, that the rule should be broadened to permit a determination at the pool or field level because the words "system" and "facility" could be interpreted to mean an entire field or township "at the discretion of the local OCD employee" and notes that the first persons to be exposed to hydrogen sulfide are the operator and its employees so they have an incentive to insure that the gas is not present. Harvard Petroleum Corp. commented, also apparently unaware of the Division's proposed amended language, that the subsection would be acceptable if it were amended to permit an operator to test a field or pool rather than an individual operation or system. Many production pools exist which do not contain hydrogen sulfide and therefore individual testing of wells producing from those pools is unnecessary. Finally, Greg Nibert and IPANM comment that subparagraph D.1.d should be deleted because it permits disapproval "without objective parameters" and IPANM additionally complains that an operator could be required to test multiple times at the discretion of "an OCD employee" and does permit the use of "new technology."

◇ The word "facility" is defined in the global definitions at ◇ NMAC. The word "system" is not defined, but therefore would be interpreted according to its ordinary meaning. No additional definitions are necessary.

◇ The need for additional definitions may be obviated by the Division's proposed amendments. The Division's intent to permit radius of exposure calculations based on a test that can validly be applied to multiple wells or other sources of hydrogen sulfide releases is certainly reasonable. While the language suggested is a bit cumbersome, minor amendments can be made to accomplish the desired goal.

◇ The provision permitting the Division to disapprove test methodology (paragraph D.3.d) should be deleted, but not for the reasons advanced by Mr. Nibert and IPANM. The proposed rule already describes the testing parameters in ◇ and ◇. Therefore, the complaint of Mr. Nibert and IPANM that this is standardless inquiry, subject to the whims of "OCD employees" and fail to acknowledge new technology, are incorrect. Moreover, it should go without saying that if an operator's testing fails to meet the standards set forth in the proposed rule, that the operator will be subject to enforcement action.

◇ Proposed 19.15.2.52.D as set forth on Exhibit ◇ and as amended by the Division's submission of August ◇ should be adopted with the following changes.

D. Determination of Hydrogen Sulfide Risk.

1. Determination of Hydrogen Sulfide Concentration.

a. Each person, operator or facility to which this Section applies shall determine the hydrogen sulfide concentration within each of its operations or systems. A representative sample or previous process knowledge for each system or operation may be used for testing provided that the person, operator or facility can demonstrate that the concentration derived from a test or process knowledge of the representative sample is reasonably representative of the hydrogen sulfide concentration within the operation, pool or system.

b. The tests referred to in the previous Subparagraph shall be conducted in accordance with applicable ASTM or GPA standards or by other methods approved by the division.

c. If a representative sample from a system or operation was tested within one (1) year of the effective date of this Section, new testing shall not be required; provided, however, new testing shall not be required for a producing well that

was tested at any time prior to the effective date of this Section. [Division recommended change <>]

d. ~~The Division may disapprove the test methodology and require additional testing if the testing methodology did not conform to the requirements of this Section.~~

<> The provisions concerning actions to be taken if the testing referred to in previous paragraphs yields a concentration greater than 100 ppm was also the subject of comments. Greg Nibert and IPANM reiterated the contention that word "system" should be deleted because it is not defined. As this contention has been previously discussed, the previous discussion is adopted here.

<> However, the Division on August <> amended proposed subsection D.3.b after a discussion at the hearing revealed some concern that the submission schedules in subsections D, F and G conflict. The Division responded that its intent that drilling and workover operations should be required to have a plan in place before commencement of operations, and production production were to have 180 days to develop contingency plans and one year to place the required equipment, signs, fencing etc. The Division also responded that new facilities should comply with the requirements of the new rule before commencement of operations. As a result, the Division proposed amendments to Exhibit <>, as follows:

<> The concept that the Division envisions seems sensible. Upon enactment of the proposed Rule, existing facilities and operations should be provided with a reasonable time to comply with the new requirements, and new operations and facilities placed after the effective date of the proposed rule should comply before beginning operations. The phraseology adopted by the Division to accomplish these goals is cumbersome, but minor amendments will eliminate any confusion. Moreover, the reference to exemptions is duplicative of subsection J or the proposed Rule and should also be deleted for the reasons stated previously.

<> IPANM commented that the revised draft requires plans and reports to be submitted electronically, but that some independent operators are not computer literate and complying with this provision would be a significant burden. Mr. Nibert made similar comments.

<> The requirement of electronic submission is critical to proper and efficient functioning of the Division. If an operator is not familiar with electronic submission, the operator may petition the Division for an exemption pursuant to subsection J of the proposed rule.

<> Proposed 19.15.2.52.D.3 as set forth on Exhibit <> and as amended by the Division's submission of August <> should adopted with the following changes.

3. Tested Concentrations Above 100 ppm; Calculation of the Radius of Exposure.

a. If the testing described in Paragraph 1 of this Subsection determines that the concentration of hydrogen sulfide in a gaseous mixture is 100 ppm or greater, then the person, operator or facility must calculate the radius of exposure pursuant to this Section.

b. If calculation of the radius of exposure reveals that a potentially hazardous volume may be present, the person, operator or facility shall provide the results of the testing and the resulting radius of exposure determinations to the division electronically in a generally accepted electronic format that is compatible with the division's systems. For facilities existing on the effective date of this Section, the calculation and submission required herein shall be accomplished before commencing operations or, for existing facilities, within 180 days of the effective date of this Section;

facilities and operations beginning operations after the effective date of this Section shall calculate the radius of exposure and submit the results prior to beginning operations. Operators may petition the Division for an extension of the submission date, or for an exception to the electronic submission requirement pursuant to subsection J of this Section.

<> Several questions were posed during the hearing of this matter concerning the requirement that the radius of exposure be recalculated under certain circumstances in subsection D.4 of Exhibit <>. The Division responded to these inquiries by amending Exhibit <>, as follows:

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<> Several comments were received on the revised draft. Greg Nibert and IPANM reiterated their previous comments that operators should not be required to make submissions electronically. Marbob Energy Corp commented that operators should not be required to recalculate the 100 ppm radius of exposure if the potentially hazardous volume threshold of 100 ppm is not reached. Marbob commented that the subsection appears to require such a recalculation if only a 25% increase results even if the potentially hazardous volume remains below 100 ppm.

<> Marbob's point that the amended rule appears to require recalculation even if a process results in a change to the hydrogen sulfide concentration, but the resulting concentration still does not exceed the action level established in Exhibit <> of 100 ppm. In addition, the acronyms adopted by the Division should not be used without being defined.

<> Proposed 19.15.2.52.D.3 as set forth on Exhibit <> and as amended by the Division's submission of August <> should be adopted with the following changes:

4. Recalculation. If operational changes or production alterations are made that cause the hydrogen sulfide concentration to increase 100 ppm or, in the case of facilities whose hydrogen sulfide application of generally accepted engineering principles and generally accepted operating practices, indicate ~~then recalculations may be made~~ If recalculations indicate that a H₂S concentration has become greater than 100 ppm or has a 25% or greater increase in the actual volume fraction of hydrogen sulfide has occurred in a given operation or facility, the person, operator or facility shall recalculate the radius of exposure or, and, if the radius of exposure ROE reveals that a potentially hazardous volume PHV may be present, submit the results to the division electronically in a generally accepted electronic format that is compatible with the division's systems.

<> Several commenters objected to subsection E, requiring development of a hydrogen sulfide contingency plan. Greg Nibert and IPANM proposed deleting the entire subsection because it places an unnecessary burden on operators without any corresponding gain in public safety. Mr. Nibert and IPANM also comment that the proposed plan would be duplicative of plans already required by the Bureau of Land Management on federal land, but that the requirements of the federal plans are less stringent. Both recommend that Rule 118 should be used instead of this language. IPANM also commented that even if plans are appropriate within municipalities, they should not be required in the extraterritorial zones or outside municipalities. IPANM also comments that operators have had 80 years experience dealing with hydrogen sulfide, and writing an emergency response plan "will not improve response" and "will not ensure public safety." IPANM also comments that the requirements in the proposed contingency plan duplicate requirements in existing plans that are already written by the department of Public Safety. IPANM also notes that the subsection requires "operators" to decide what

actions to take and which roads to close, but that the operator lacks this authority. The IPANM also complains that telephone numbers will require constant updating, and that the requirement that emergency response authorities have input on the plan will delay implementation of the plan by years. Harvard Petroleum Corp. comments that the proposed contingency plans would be unnecessary in most cases and extremely onerous to prepare and submit, and should be pared down to that required by present Rule 118(E)(2).

◇ Preparation of a contingency plan serves ◇ objectives. First, it ensures that the operator focuses on emergency preparedness and thinks about what actions must be taken in the event of a release. If a release occurs, the exercise of writing a plan and thinking through the steps that must be taken improve response and may save lives. Second, preparation of a plan provides the Incident Commander, the Oil Conservation Division, the Department of Public Safety, and the emergency response authorities, with basic information needed to address the release. For example, having access to the telephone numbers of company personnel means that personnel can be contacted to address the leak before it becomes a threat to public safety. Having the names and telephone numbers available of persons potentially at risk simplifies evacuation, should that become necessary. Knowing which roads might need to be closed can impact public safety.

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◇ Several commenters addressed ◇.3 wherein input of emergency response authorities is required. Pierce Production Co. commented that operators should not have to seek input from emergency response authorities outside of a municipality and that municipal authorities should have only advisory input. Pierce also commented that the nature of the input required should be clearly spelled out and the operator should only have to present a letter documenting the efforts made to obtain input. Marathon Oil Company also commented that the level of input required from emergency response authorities should be clearly specified, particularly if activities occur within a municipality. Harvard Petroleum Corp. commented that the paragraph is unnecessary and would place a tremendous burden on operators. Marbob Energy Corp. commented that emergency response authorities will be overwhelmed by requests for input by operators if this requirement is imposed, that the requirements are redundant of paragraph 4 and are unnecessary. Marbob commented that the requirement will impose a terrible burden on operators if each agency must be consulted on every plan.

◇ The Oil Conservation Division responded to these concerns and noted that compliance with the New Mexico Hazardous Materials Emergency Response (HMER) Plan is mandatory and the Division is required to coordinate emergency response. The Division proposed changes to clarify that coordination of emergency response is the objective, not obtaining input where input is impossible, as follows:

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◇ This paragraph should be amended as follows:

COMMENT: Oil Conservation Division: Another concern voiced to the Division during a conference call was in the contingency plan area. A trade association commented felt that the contingency plans could be interpreted to be very comprehensive with no flexibility for remote operations or in areas where there would be little impact on public safety in the event of a release. The Division agreed it makes sense to treat remote sites differently where appropriate and proposes the foregoing amended language.

viii. additional support information, if applicable, such as the location of emergency evacuation routes, the location of safety and life support equipment, the location of hydrogen sulfide containing facilities, the location of nearby telephones or other means of communication and special instructions for conditions at a particular installation such as local terrain and the effect of various weather conditions.

d. Additional Requirements. The division may impose additional requirements or modify requirements based on site-specific conditions, population density or special circumstances.

5. Submission. For existing subsection G facilities. the H₂S contingency plan shall be submitted to the division electronically in a form that is compatible with the division's systems and to the local emergency planning committee no later than 180 days following submission of the radius of exposure required in Subsection D of this Section For subsection F operations the H₂S contingency plan may be submitted separately or along with the application for permit to drill (APD) and shall be submitted to the division electronically in a generally accepted electronic format that is compatible with the division's systems before commencement of operations.

COMMENT: Greg Nibert: Operators should not be required to make submissions electronically; it should only be an option --- some independent operators may not be able to submit reports electronically.

COMMENT: Marbob Energy Corp.: Some areas do not have a defined local emergency planning committee, making compliance with this subparagraph difficult if not impossible.

COMMENT, IPANM: Plans and reports must be submitted electronically, but some independent operators are not computer literate and this would be a significant burden.

6. Failure to Submit Plan. Failure to submit an H₂S contingency plan when required may result in denial of an application for permit to drill that well, cancellation of an allowable or other appropriate enforcement action.

7. Annual Review, Amendment. The person, operator or facility shall review the H₂S contingency plan on an annual basis, if activation of a plan reveals a deficiency or, if changes to processes, concentrations of hydrogen sulfide or other circumstances occur. The person, operator or facility shall submit any amendments to the division electronically in a form that is compatible with the division's systems and to the local emergency planning committee. Reasonable efforts shall be taken to update on an annual basis the names and telephone numbers of persons designated in E.4.c.v. within the 100 ppm radius of exposure.

COMMENT: Greg Nibert: Operators should not be required to make submissions electronically; it should only be an option --- some independent operators may not be able to submit reports electronically.

COMMENT, IPANM: Plans and reports must be submitted electronically, but some independent operators are not computer literate and this would be a significant burden.

8. Retention and Inspection. An H₂S contingency plan shall be reasonably accessible in the event of a release and maintained on file at all times and shall be available for inspection by the Division.

RESPONSE: Oil Conservation Division: The Division responds to concerns voiced during the hearing that the proposed Section would require placement of contingency plans at flow lines, wells and other unsuitable places by proposing to strike the phrase "on site."

9. Activation Levels. The H₂S contingency plan shall be activated in the event of a release of a potentially hazardous volume of H₂S above the respective thresholds (i.e. 500 ppm radius at any public road, 100 ppm radius at any public area, etc.) or if a sustained concentration of H₂S exceeds 50 ppm at the facility boundary of any facility, well or operation.

COMMENT: Pierce Production Company, Marathon Oil Company: Should not have an activation level at the property line.

COMMENT: Marbob Energy Corp.: The clause requiring activation of the contingency if the sustained concentration of hydrogen sulfide at the property line reaches 50 ppm should be deleted. The words "sustained" and "property line" are not adequately defined. The contingency plan should only be activated if a potentially hazardous volume is present, not on these more subjective criteria.

RESPONSE: Oil Conservation Division: Two operators requested that the language referring to the "property line" be stricken. OCD agrees and proposes that the phrase "facility boundary" be inserted. The term "facility boundary" allows the operator some flexibility in determining the threshold for activation and at the same time provides them with a definite activation number to implement the contingency plan. OCD feels this provides the best protection for the public while allowing operators the flexibility needed to prevent nuisance activation of contingency plans.

F. Protection from Hydrogen Sulfide During Drilling, Workover and Servicing Operations.

COMMENT: Greg Nibert: This subsection should be deleted because it seeks to protect worker safety rather than public safety and is duplicative of OSHA and requirements of the Bureau of Land Management. The provisions of current Rule 118 are more than adequate.

COMMENT, IPANM: This subsection should be deleted because it seeks to protect worker safety rather than public safety and is duplicative of OSHA and requirements of the Bureau of Land Management. The provisions of current Rule 118 are more than adequate. The Division lacks authority to regulate on behalf of employee safety. It is also unclear whether the plan required for drilling is the same plan required earlier in the Section. The requirements for additional requirements under special circumstances are too broad and Division employees are not required to show objective scientific need for the additional equipment. The extra equipment described in the Section cannot be physically placed under most of the rigs used in New Mexico. The requirements to keep track of individuals living within a radius of exposure are too difficult to comply with because people move in and out of these areas. [Stream of consciousness; not connected to any particular section]

COMMENT: Harvard Petroleum Corp.: This subsection appears to apply to all drilling, completion, workover and servicing operations regardless of whether H₂S is present or not. However, workers, not the public, inhabit these sites. The requirements set forth in this subsection are unnecessary for the majority of operations that take place where H₂S is not present. Some of the requirements are physically impossible for many rigs that operate in New Mexico, and can be extremely costly. Precautions are already taken by operators and their contractors to avoid exposure of the public to H₂S. Current Rule 118(C) is sufficient to address any concerns.

1. API Standards. All drilling, completion, workover and well servicing operations shall be conducted with due consideration to the guidelines published by the API entitled "Recommended Practice for Oil and Gas Well Servicing and Workover Operations Involving Hydrogen Sulfide," RP-68, and "Recommended Practices for Safe Drilling of Wells Containing Hydrogen Sulfide," RP-49, most recent edition.

COMMENT: Harvard Petroleum Corp.: This paragraph appears to apply to all drilling, completion, workover and servicing operations regardless of whether H₂S is present or not.

COMMENT: Marbob Energy Corp.: The API standards referred to are in fact "recommended practices" of API, not a requirement or statute. RP-68 and RP-49 should not be changed into regulations in this manner.

2. Minimum Standards. At a minimum, and possibly in addition to the foregoing API standards, each drilling, completion, workover and well servicing operation shall also be conducted in accordance with the following:

COMMENT: Harvard Petroleum Corp.: This paragraph appears to apply to all drilling, completion, workover and servicing operations regardless of whether H₂S is present or not.

COMMENT: Marbob Energy Corp.: The recommended practices referred to in this paragraph should not be made regulatory requirements.

RESPONSE: Oil Conservation Division:

a. Before Commencing Operations. The person, operator or facility shall complete an H₂S contingency plan, where required, before commencement of operations. In addition, hydrogen sulfide training shall be completed and all related safety equipment and warning systems shall be operational before commencement of operations. Detection and monitoring equipment is not required for drilling from the surface to within 500 feet of the zone anticipated to contain hydrogen sulfide.

COMMENT: Pierce Production Company, Marathon Oil Company: No contingency plan should be required for any operation outside of a municipality. The contingency plan, training and necessary equipment should be operational prior to commencement of completions and workovers only; the plan, training and equipment for drilling operations should be in place 500 feet above the zone anticipated to contain hydrogen sulfide.

RESPONSE: Oil Conservation Division: Comments claimed the term "operations" was vague. The Division disagrees and believes the term "operations" is satisfactory when the "scope" of the Section is considered, and recommends that the term remain.

b. Egress Routes. The person, operator or facility shall maintain passable egress routes at all times during operations.

c. Safety, Detection and Monitoring Equipment. The person, operator or facility shall provide hydrogen sulfide detection and monitoring equipment as follows:

i. Each drilling and completion site shall have a hydrogen sulfide detection and monitoring system that automatically activates visible and audible alarms when the ambient air concentration of hydrogen sulfide reaches 20 ppm. There shall be a sensing point located at the shale shaker, rig floor and bell nipple for a drilling site and the cellar, rig floor and circulating tanks or shale shaker for a completion site.

COMMENT: Pierce Production Company, Marathon Oil Company; the time weighted average for the permissible exposure limit of 10 ppm is eight hours. Alarms that activate at 20 ppm should provide adequate public protection (this comment is not altogether clear).

RESPONSE: Oil Conservation Division: These comments seem to express concern that the current safety rules were being relaxed. However, the workgroup intended that the proposed rule have flexibility to address the issue of nuisance tripping of alarms. The 20 ppm activation level

is a minimum standard and operators may choose to set more stringent levels. The Division thus recommends no change in the wording of the paragraph.

ii. The detection system shall be calibrated, tested and the results recorded monthly. Each test of the hydrogen sulfide monitoring system shall be recorded on the driller's log or its equivalent.

iii. For workover and well servicing operations, one operational sensing point shall be located as close to the well bore as practical. Additional sensing points may be necessary for large or long-term operations.

COMMENT: Harvard Petroleum Corp.: This requirement is extremely costly and burdensome.

iv. Hydrogen sulfide detection, safety and monitoring equipment must be provided and the prescribed safety equipment must be made operational during drilling when drilling is within 500 feet of the zone anticipated to contain hydrogen sulfide and continuously thereafter through all subsequent drilling.

d. Wind Indicators and Signs.

i. Equipment to indicate wind direction shall be present and visible at all times. At least two devices to indicate wind direction shall be installed at separate elevations and visible from all principal working areas at all times.

ii. Danger or caution signs shall be displayed along all accesses to the site. The signs shall read "DANGER - POISON GAS, HYDROGEN SULFIDE PRESENT" or, as appropriate, "CAUTION - POISON GAS - HYDROGEN SULFIDE MAY BE PRESENT" or equivalent language approved by the division, and in smaller lettering: "Do Not Approach If Red Flag is Flying" or equivalent language approved by the division. Each sign shall be painted in colors that satisfy Table 1 of ANSI standard Z53.1-1967 or regulations of the federal occupational safety and health administration. The signs shall be legible and large enough to be read by all persons entering the well site and shall be placed a minimum of 200 feet but no more than 500 feet from the well site and at a location which allows vehicles to turn around at a safe distance prior to reaching the site.

COMMENT: Marbob Energy Corp.: ANSI Z53.1-1967 and the pertinent OSHA regulations should be attached to the rule.

iii. When a sustained concentration of hydrogen sulfide is detected in excess of 20 ppm at any detection point, red flags shall be displayed.

e. If Hydrogen Sulfide Encountered During Operations. If hydrogen sulfide was not anticipated at the time the division approved the APD but is encountered during drilling in excess of 100 ppm in the gaseous mixture, the operator shall immediately ensure control of the well, suspend drilling operations unless detrimental to well control, and obtain materials and safety equipment to bring the operations into compliance with this Section. The operator shall notify the division of the event and the mitigating steps that have or are being taken as soon as possible, but no later than 24 hours following discovery.

3. Operating Practices In Hydrogen Sulfide Concentrations of 100 ppm or Greater.

Operating practices in areas known to contain a concentration of hydrogen sulfide gas of 100 ppm or greater in the gaseous mixture shall be subject to the following requirements:

a. If Hydrogen Sulfide Is Encountered During Use of Air, Gas, Mist or Other Non-Mud Circulating Media. If hydrogen sulfide gas in excess of 100 ppm is encountered while drilling with air, gas, mist or other non-mud circulating mediums for aerated mud, the well shall be killed with a water- or oil-based mud, and mud shall be used thereafter as the circulating medium for continued drilling. An alternate drilling method may be used after the Division specifically approves encountering hydrogen sulfide in excess of 100 ppm, but only if the alternative method.

b. Flare System. For drilling and completion operations, the person, operator or facility shall install a flare system to safely gather and burn hydrogen sulfide-bearing gas, unless

exempted pursuant to Subsection J. Flare outlets shall be located as far from the well bore as feasible but not less than 150 feet from the well. Flare lines shall be as straight as practical. The flare system shall be equipped with a suitable and safe means of ignition. Where noncombustible gas is to be flared, the system shall be provided supplemental fuel to maintain ignition.

COMMENT: Marbob Energy Corp.: Smaller drilling pads may not physically be able to accommodate flare outlets 150 feet away from the well. The language should be modified to require flare outlets 150 feet from the well "if feasible."

c. Remote Controlled Choke. When a potentially hazardous volume of H₂S may be present in any public area, the following measures shall be taken:

i. The person, operator or facility shall install a remote controlled choke during drilling and during completion and well servicing operations when the 100-ppm H₂S radius of exposure includes a public area, unless exempted pursuant to Subsection J;

ii. For completion or workover operations, the person, operator or facility may install a suitable alternative to a remote choke (i.e. a remote controlled valve, blow out preventer with remote accumulator, etc. may be used); and

COMMENT: Marbob Energy Corp.: A blowout preventer is not a suitable alternative to a remote controlled choke. The blowout preventer is the most important equipment for blowout prevention. It should not replace the choke in the hierarchy of important well control equipment. The two previous paragraphs should be combined and rewritten. The rule should instead specify the use of a blowout preventer with remote accumulator while leaving the use of the choke manifold and remote choke to the operator's discretion, and perhaps tie the use of a choke manifold to expected maximum surface pressure.

iii. For drilling operations, the person, operator or facility shall install a remote controlled choke or remote controlled valve that includes, at a minimum, a pressure and hydrogen sulfide-rated well control choke and kill system including manifold and blowout preventer pursuant to specifications API-16C and API-RP 53. The blowout preventer stack shall have at least one spool for the kill and choke lines, two pipe rams, one blind ram, one annular device and a rotating head. Mud-gas separators shall also be used. These systems shall be tested and maintained pursuant to the specifications referenced or other division rules, if more stringent. Variations to blowout preventer stack arrangements may be granted by the division for good cause shown.

COMMENT: Pierce Production Company, Marathon Oil Company: Rigs in the Permian Basin cannot accommodate this stack arrangement under the rotary table beams. Some BOPs have choke and kill line inlets and outlets as an integral part of the preventer without requiring an additional spool, and this should be permitted in lieu of the specified equipment. This subparagraph should be rewritten to permit use of an existing dual ram, annular and rotating head arrangement unless the Division requires additional equipment with "good cause shown."

COMMENT: Marbob Energy Corp.: The use of a remote controlled choke during completion and workover operations is almost unheard of. The requirement in this paragraph is unnecessary, complicates well operations and is expensive. The blow out preventer is the primary means of well control. The use of a remote controlled choke should be left to the operator's discretion. Finally, the reference to drilling operations is redundant of "part iii."

RESPONSE: Oil Conservation Division: The workgroup had the same concerns voiced by these operators. However, it should be noted that the Division requires these BOP arrangements only if a potentially hazardous volume is present at a given location. Some blowout preventers include integral choke and kill lines and the Division will approve use of such designs. Therefore, the Division recommends no change in the wording.

d. Mud Program. A mud program, including de-gassing and flaring, capable of handling H₂S conditions and well control shall be used.

COMMENT: Pierce Production Company, Marathon Oil Company: This subparagraph should also require that a sufficient amount of weighting material on hand to raise the mud weight to a level that would exert sufficient hydrostatic pressure on the formation to prevent influxes, but only for operations conducted within a municipality.

RESPONSE: Oil Conservation Division: One commenter was concerned that the language did not address the need for “sufficient amount of weighting material on hand to prevent influxes”. The Division responds that loss control is extremely important, but this rule is not intended to address that concern. Also, the Division notes the phrase “well control” appears in the proposed rule that should adequately address this issue, and the Division recommends no change in the wording. Another comment requested that the weighting material requirement be limited to wells within municipal boundaries, however, the Division notes that the proposed rule is intended to apply to operations where there a concentration of H₂S exists in excess of 100 ppm and in these situations additional mud should be maintained on hand to assure that the ability to control the well is present and the proposed language is therefore warranted. The Division accordingly recommends no change in the wording.

e. Well Testing. Except with prior approval by the division, the drill-stem testing shall be conducted only during daylight hours and formation fluids shall not be permitted to flow to the surface (closed chamber only). An operator shall notify the division 24 hours in advance of a drill-stem test if an H₂S contingency plan is required pursuant to this Section.

COMMENT: Pierce Production Company, Marathon Oil Company: Closed chamber drill stem testing is more expensive and unnecessary in most cases, and the requirement of 24 hours notice is impractical. Conventional drill stem testing can be accomplished safely utilizing the proper surface gas separation and flaring equipment.

COMMENT: Marbob Energy Corp.: A requirement for drill-stem testing that restricts the hours of testing to daylight hours, requires closed chamber testing, and requires 24 hours notice is impractical and unnecessary. Industry has routinely conducted drill-stem tests without these requirements without any problems.

RESPONSE: Oil Conservation Division: The Division recognizes the burden imposed by these requirements but also notes that these requirements apply only if an H₂S contingency plan is required. The Division responds that the additional requirements provide an additional safety margin to assure public safety and recommends no change in the wording.

G. Protection from Hydrogen Sulfide at Crude Oil Pump Stations, Producing Wells, Tank Batteries and Associated Production Facilities, Refineries, Gas Plants and Compressor Stations.

COMMENT: Greg Nibert: This subsection should be deleted because it seeks to protect worker safety rather than public safety and is duplicative of OSHA and requirements of the Bureau of Land Management.

COMMENT: Harvard Petroleum Corp.: The concerns addressed in this subsection are sufficiently addressed by Rule 118(E). The additional requirements above and beyond what Rule 118 already requires are onerous, expensive and unnecessary.

1. API Standards. Operations at crude oil pump stations and producing wells, tank batteries and associated production facilities shall be conducted according to the guidelines published by the API in its publication entitled "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide," RP-55, latest edition.

COMMENT: Marbob Energy Corp.: The API standards referred to are in fact "recommended practices" of API, not a requirement or statute. RP-55 should not be changed into a regulation in this manner. RP-55 should be attached to the Rule.

2. Minimum Standards. At a minimum, production from crude oil pump stations and producing wells, tank batteries and associated production facilities shall also be conducted in accordance with the following Subparagraphs and Sub subparagraphs. Where API standards referred to in the previous paragraph are less stringent than the following, the more stringent standards shall apply.

COMMENT: Marbob Energy Corp.: The API standards referred to are in fact "recommended practices" of API, not a requirement or statute and shouldn't be changed into a regulation in this manner.

a. Gaseous Mixtures Containing 100 ppm or more. Producing wells containing 100 ppm or more of hydrogen sulfide in the gaseous mixture, crude oil pump stations, tank batteries and associated production facilities, refineries, gas plants and compressor stations, shall be subject to the following:

i. H₂S Contingency Plan. If a potentially hazardous volume of H₂S exists, an H₂S contingency plan shall be required.

ii. Signage. A danger sign or signs shall be posted within 50 feet of each facility to alert the public of the potential hydrogen sulfide danger. If fenced, a danger sign at the gates shall suffice. The signs shall read "DANGER - POISON GAS - HYDROGEN SULFIDE PRESENT", or, as appropriate "CAUTION - POISON GAS - HYDROGEN SULFIDE MAY BE PRESENT" or equivalent language approved by the division. Each sign shall be painted in colors that satisfy Table 1 of ANSI standard Z53.1-1967 or regulations of the federal occupational safety and health administration. The signs shall be legible and large enough to be read by all persons entering the well site. A sign shall be placed at each point where a flow line or gathering line crosses a public road. Each sign shall be legible and shall contain the name of the owner or operator and an emergency telephone number. [Division proposed change, August <>, 2002]

COMMENT: Pierce Production Company, Marathon Oil Company: There is no need to post each gathering line and flow line if a well pad already requires the entire pad to be signed. Flow lines and gathering lines should be signed at their intersection with a public road.

COMMENT: Marbob Energy Corp.: ANSI Z53.1-1967 and the pertinent OSHA regulations should be attached to the rule.

RESPONSE: Oil Conservation Division: The Division proposes the amended paragraph to address these concerns.

iii. Fencing. Fencing and gates shall be required when crude oil pump stations and producing wells, tank batteries and associated production facilities are located in a public area or within a 1/4-mile of a residence, school, church, park, playground, school bus stop or place of business. The fence shall consist of a 5-foot chain link topped by two strands of barbed wire or other designs approved by the division. Gates shall be locked when unattended.

COMMENT: Pierce Production Company: Fencing should be at the operators' discretion outside the boundaries of a municipality.

RESPONSE: Oil Conservation Division: The Division responds that the workgroup had consensus on this issue and wanted to make a standard to assist operators, but acknowledged that there could be exceptions to the fencing requirement. Therefore, the Division recommends no change in the wording.

iv. Wind Direction Indicators. Wind direction indicators shall be required at every crude oil pump station, producing well, tank battery and associated production facility where the H₂S concentration in a gaseous state exceeds 100 PPM.

v. Secondary Well Control. Wells where the 100-ppm H₂S radius of exposure incorporates a public area shall possess a secondary means of immediate well control through the use of appropriate christmas tree or downhole completion equipment. Such equipment shall allow downhole accessibility (reentry) under pressure for permanent well control operations.

COMMENT: Marbob Energy Corp.: The requirements of this paragraph cannot be met where a rod pump or a progressive cavity pump is producing a well. The paragraph should be rewritten to make operational sense.

vi. Automatic Safety Valve or Shutdown. If the 100-ppm radius of exposure involves a public area, the person, operator or facility shall install an automatic safety valve or shutdown at the facility or wellhead or shall install other appropriate shut-in control. The automatic safety valve shall be set to activate upon a release of a potentially hazardous volume of hydrogen sulfide.

b. Tanks or vessels containing 300 ppm or more of hydrogen sulfide in the gaseous mixture shall be subject to the following additional requirements:

i. Each stair or ladder leading to the top of any storage tank shall be chained or marked to restrict entry. For any tank battery that requires fencing pursuant to this Section, a danger sign posted at the gates may be substituted for chaining and signs.

ii. The person, operator or facility shall post a danger sign on or within 50 feet of any storage tank to alert persons of the potential hydrogen sulfide danger. For any storage tank for which fencing is required, a danger sign posted at the locked gates shall suffice. The signs shall read "DANGER - POISON GAS - HYDROGEN SULFIDE PRESENT", or, as appropriate "CAUTION - POISON GAS - HYDROGEN SULFIDE MAY BE PRESENT" or equivalent language approved by the division. Each sign shall be painted in colors that satisfy Table 1 of ANSI standard Z53.1-1967 or regulations of the federal occupational safety and health administration. The sign(s) shall be legible and large enough to be read by all persons entering the site.

COMMENT: Marbob Energy Corp.: ANSI Z53.1-1967 and the pertinent OSHA regulations should be attached to the rule.

3. Compliance Schedule. Each existing crude oil pump station and producing well, tank battery and associated production facility not currently meeting the requirements and minimum standards set forth herein shall be brought into compliance within one year of the effective date of this Section except that contingency plans shall be submitted within 180 days. Each crude oil pump station and producing well, tank battery and associated production facility constructed following the effective date of this Section shall be designed, constructed and operated to meet the requirements set forth herein.

H. Personnel Protection and Training. All persons responsible for the implementation of any H₂S contingency plan shall be provided training in hydrogen sulfide hazards, detection, personal protection and contingency procedures.

COMMENT: Greg Nibert: This subsection should be deleted because it seeks to protect worker safety rather than public safety and is duplicative of OSHA and requirements of the Bureau of Land Management.

COMMENT: Harvard Petroleum Corp.: The concerns addressed in this subsection are sufficiently addressed by Rule 118(E). The additional requirements above and beyond what Rule 118 already requires are onerous, expensive and unnecessary.

I. Standards for Equipment That May Be Exposed to Hydrogen Sulfide. Persons, operators and facilities shall choose equipment with consideration for both the H₂S working environment and anticipated stresses. NACE Standard MR0175 (latest edition) shall be used for selection of metallic equipment or, if applicable, adequate protection by chemical inhibition or other methods that control or limits the corrosive effects of H₂S shall be used.

COMMENT: Greg Nibert: This subsection should be deleted because it seeks to protect worker safety rather than public safety and is duplicative of OSHA and requirements of the Bureau of Land Management.

COMMENT: Harvard Petroleum Corp.: The concerns addressed in this subsection are sufficiently addressed by Rule 118(E). The additional requirements above and beyond what Rule 118 already requires are onerous, expensive and unnecessary.

COMMENT: Marbob Energy Corp.: NACE Standard MR0175 should be attached to the rule.

J. Exemptions. An exemption to certain requirements of this Section may be granted by petitioning the director. Any such petition shall provide specific information as to the circumstances that warrant approval of the exemption requested and how the public safety will be protected. Submission of a safety plan required by other governmental agencies may accompany the petition for exemption. The director, after considering all relevant factors, may approve an exemption if the circumstances warrant an exemption.

COMMENT: Harvard Petroleum Corp.: The proposed new section should be rewritten so that operators will not have to file for exemptions resulting from poor drafting.

K. Release. Upon a release of hydrogen sulfide the following actions must be taken:

COMMENT: Greg Nibert: This section should be deleted along with the subsection that requires preparation of contingency plans.

COMMENT: Harvard Petroleum Corp.: This paragraph would need to be substantially revised to reflect the many changes suggested in previous comments.

COMMENT: Marbob Energy Corp.: The Division should consider defining the length of time a release has occurred before the contingency plan is put into effect. A short release might not produce a potentially hazardous volume before it is contained.

1. Activation of the H₂S Contingency Plan. The person, operator or facility shall activate the H₂S contingency plan immediately upon an H₂S release where the potential exists for exposure to a

potentially hazardous volume of H₂S, or where a concentration of H₂S greater than 50 ppm exists at the facility boundary of any well, facility or operation.

COMMENT: Marbob Energy Corp.: The clause requiring activation of the contingency if the sustained concentration of hydrogen sulfide at the property line reaches 50 ppm should be deleted. The words "sustained" and "property line" are not adequately defined. The contingency plan should only be activated if a potentially hazardous volume is present, not on these more subjective criteria.

VCOKMENT: IPANM: The term sustained is not defined, but should be because it could be interpreted as five minutes, ten minutes or twelve hours. Where is property line? Is it the mineral estate or the surface estate? Word "facility" not defined.

RESPONSE: Oil Conservation Division: Two operators requested that the language referring to the "property line" be stricken. OCD agrees and proposes that the phrase "facility boundary" be inserted. The term "facility boundary" allows the operator some flexibility in determining the threshold for activation and at the same time provides them with a definite activation number to implement the contingency plan. OCD feels this provides the best protection for the public while allowing operators the flexibility needed to prevent nuisance activation of contingency plans.

2. Notification of the Division. The person, operator or facility shall notify the division upon a release of hydrogen sulfide requiring activation of the H₂S contingency plan as soon as practicable, preferably within one hour of discovery of the release or as soon as possible in cases where prompt response should supercede notification. The person, operator or facility shall submit a full report of the incident to the division on Form C-141 no later than fifteen (15) days following the release.

L. Corrective Actions. The division may require corrective actions if necessary to maintain control of a well or any other facility or to safeguard public safety.