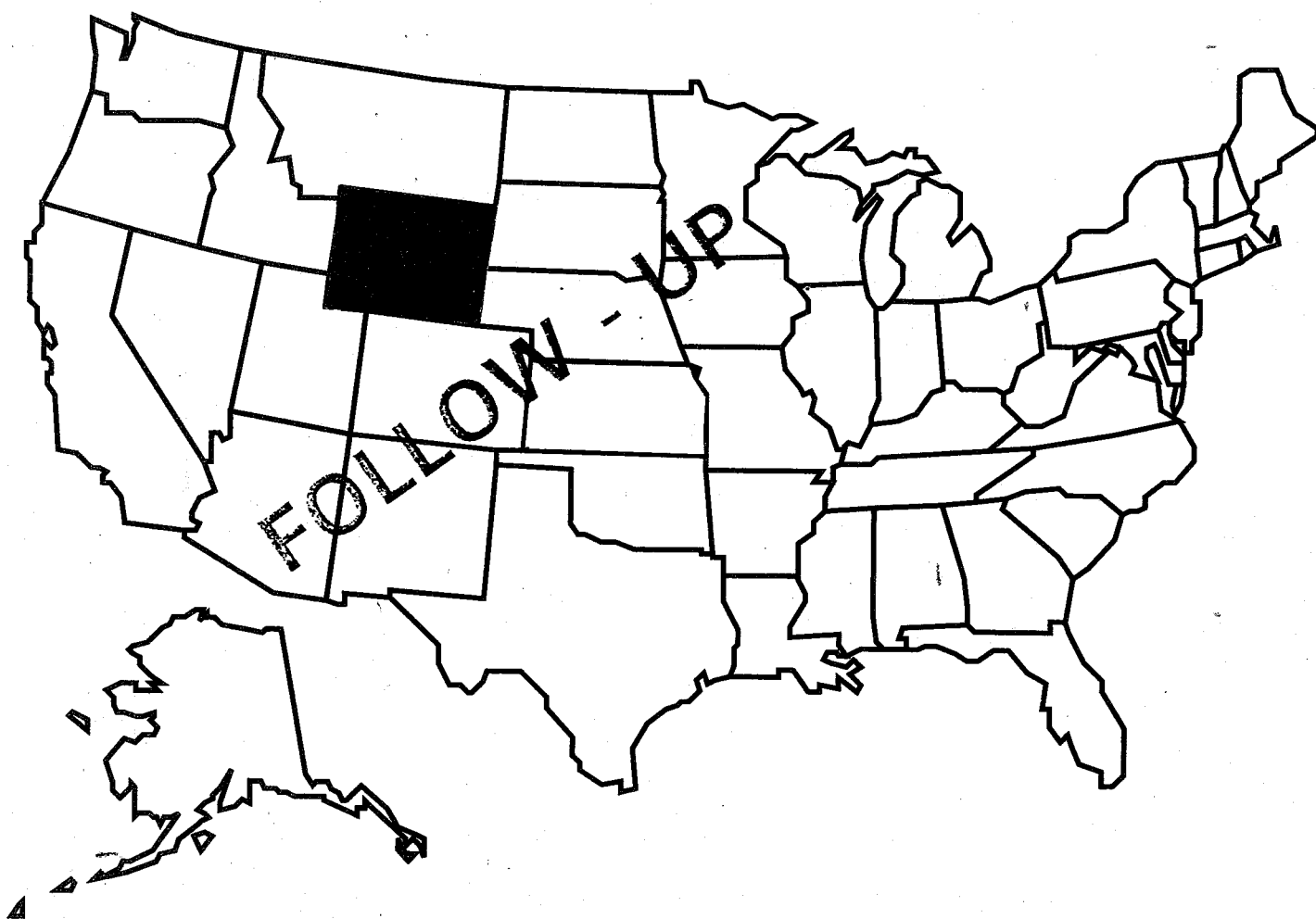


**IOGCC/EPA STATE REVIEW OF
OIL & GAS EXPLORATION & PRODUCTION
WASTE MANAGEMENT REGULATORY PROGRAMS**

Wyoming State Review



**A PROJECT OF THE
Interstate Oil & Gas Compact Commission
MAY 1994**

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INTRODUCTION

In June, 1991, a four person team appointed by the Interstate Oil and Gas Compact Commission (IOGCC) reviewed components of the regulatory programs of the State of Wyoming that pertained to the management of wastes derived from the exploration and production of crude oil and natural gas. The review was coordinated by the IOGCC in cooperation with the U. S. Environmental Protection Agency (EPA) and other interest groups. This was the first review of a state regulatory program undertaken in this collaborative process which has since reviewed eleven additional states' programs.

The primary basis for that review was the report titled *EPA/IOGCC Study of State Regulation of Oil and Gas Exploration and Production Waste*, December, 1990 also referred to as the "IOGCC Guidelines" or "IOGCC Guidance". The review team evaluated Wyoming's exploration and production (E&P) waste regulatory programs using the guidelines and criteria listed in the IOGCC Guidance as a model. It should be noted that as of this writing an IOGCC committee has reviewed the original IOGCC Guidance and modified and expanded the document to address E&P waste management issues, i.e. Naturally Occurring Radioactive Material (NORM), etc., not covered in the original publication.

The review team focused its evaluation on Wyoming's regulatory requirements for drilling wastes and produced waters prior to their discharge to surface waters or injection wells. The team addressed management of those wastes in on-site and off-site pits, at commercial oilfield waste disposal facilities, in land application units and in roadspreading. Statutory and administrative components of the Wyoming programs, including staffing and funding levels, and enforcement activities were assessed against applicable criteria in the IOGCC Guidance. How Wyoming's programs interface with federal programs applicable to E&P wastes were also reviewed.

The ultimate purpose of the review was to identify and recommend improvements for Wyoming's E&P waste regulatory programs. The review, and the criteria upon which it was based, was an evaluation of whether the state had certain elements of an E&P waste regulatory program, rather than a determination of the extent to which the Wyoming program was protective of human health and the environment.

The results of the Wyoming review were published by the IOGCC in October, 1991 and is titled *Wyoming State Review - IOGCC/EPA State Review of Oil and Gas Exploration and Production Waste Management Regulatory Programs*. A total of forty-one (41) recommendations were made by the review team, of which twenty-eight (28) pertained to the Wyoming Oil and Gas Conservation Commission (WOGCC) and nine (9) to the Wyoming Department of Environmental Quality (WDEQ). Four of the review team recommendations were directed to both agencies. It is also noteworthy that the review team reached consensus on all of the recommendations.

This report is a follow-up to the Wyoming State Review to determine what actions the state agencies have taken to implement the recommendations made by the review team. The follow-up review was conducted by M. G. "Marty" Mefferd, IOGCC contractor, in May, 1994. Mr. Mefferd interviewed staff of the regulatory agencies and found that they had fully implemented or were in the process of implementing twenty-six (26) of the review team's forty-one (41) recommendations and had partially responded to five.

The WOGCC made numerous changes and modifications to their existing program as a result of this state review, having implemented or in the process of implementing twenty-two (22) of the twenty-eight (28) recommendations made on their E&P waste regulatory program. Partial response was taken on two of the recommendations and no action had been taken on four.

WDEQ is in the process of implementing one of the review team's nine recommendations made on their program and has partially responded to two others. Of the four recommendations directed to both agencies; three are being implemented and one has been partially implemented.

This report gives a brief introduction to each of the ten sections of the Wyoming State Review and a summary of the state agencies responses to the recommendations made in that section. That is followed by the specific recommendation and the state's response to that recommendation. Where the state agency indicated an action had been taken on a recommendation, the action was confirmed with documentation. The documents that confirm those actions are referenced on page 24 of this report.

I. GENERAL - REGULATORY JURISDICTIONS AND AUTHORITIES

The first section of the Wyoming state review outlined the jurisdictions and authorities of the three agencies that have primary responsibility for the regulation of oil and gas exploration and production wastes in the state. Those three agencies are the Wyoming Oil and Gas Conservation Commission (WOGCC); the Wyoming Department of Environmental Quality (WDEQ); and the U. S. Bureau of Land Management (BLM).

Basically the WOGCC has general authority over all oil and gas production on private, state, and in some cases, federal lands (excluding Indian lands) in Wyoming. This authority includes the specific responsibility to monitor and regulate, by the promulgation of rules and the issuance of orders, the location, operation, and reclamation of produced water and emergency overflow pits associated with oil and gas production.

WDEQ is primarily responsible for regulation of oil and gas industry waste management practices which extend off the oil and gas lease site. The BLM regulates all oil and gas drilling and production operations on federal lands including the disposition of waste generated during drilling and production operations.

In this section, the review team made five recommendations they believed would improve and/or clarify the regulatory jurisdictions or authorities of the state agencies, pursuant to the IOGCC Guidance. Three of the recommendations were directed to the WOGCC. Of those three recommendations the WOGCC has taken positive action on two. One recommendation was directed to the WDEQ and they have found no action necessary on that recommendation. One recommendation was directed to both agencies and that recommendation is being implemented.

The agencies responses to each of the five recommendations made on jurisdictions and authorities are as follows:

Recommendation I.1.

The State of Wyoming should develop a formal mechanism (statute, policy statement, etc.) for WOGCC recognizing the need for balance between environmental and public health protection and maintenance of a viable oil and gas industry as recommended by IOGCC Guidance section 3.2.

State response:

The preamble to Rule 201 (Effective Scope of Rules and Regulations) now includes the statement "These rules are intended to protect human health and the environment through the utilization of proven methods which are designed to avoid contamination of the soil, groundwater, and surface water at a drilling or producing location.

Compliance with these rules does not relieve the owner or operator of the obligation to comply with applicable federal, local or other state permits or regulatory requirements".

Revised Rule 401 (formerly Rule 326) also contains a similar statement regarding "protection of human health and the environment.....".

Recommendation I.2.

WOGCC should, consistent with the IOGCC Guidelines, determine what part of its staff time and funding is dedicated to E&P waste regulation. Additional staff positions should be dedicated to E&P waste regulation, permitting, inspection, and legal support.

State response:

WOGCC now codes budget line items to better reflect staff time devoted to E&P waste regulation. Also, a full-time staff attorney has been employed to work on E&P waste related issues. Although the need for additional staff has not been fully evaluated, budget constraints currently prevent employment of additional staff for permitting and inspection.

Recommendation I.4.

To avoid areas of implementation overlap and to clarify uncertainties in jurisdiction, WDEQ and WOGCC should update and amend the Memorandum of Agreement (MOA) on a regular basis to reflect each agency's responsibilities for E&P waste management. These responsibilities should be delineated in writing as policy statements or regulations and communicated to operators and the public.

State response:

WOGCC and the WDEQ have drafted a revised MOA that addresses areas of responsibility and coordination. At the time of the follow-up review, the MOA is near the signature stage. A detailed staff guidance document is being developed by the agencies to implement the provisions of the MOA.

Recommendation I.5.

The review team believes WOGCC should consider co-locating inspectors at WDEQ's district offices in Cheyenne, Lander and Sheridan. Close proximity would enhance daily communication on problems and increase mutual understanding of program goals. It would also allow for joint inspections of lease operations where both agencies have common program responsibilities.

State response:

WOGCC gave the recommendation detailed examination and consideration; however, budget constraints and related considerations make it infeasible to implement at this time. The WOGCC will continue to evaluate this recommendation and search for opportunities to work toward its ends.

II. PERMITTING

This section of the state review outlined the permitting processes employed by the state agencies to manage the disposition of oil and gas exploration and production waste.

The review team made nine recommendations on the permitting processes of the state agencies. The WOGCC has taken action on all of the seven recommendations made regarding their permitting process. The WDEQ has partially implemented one of the recommendations and has taken no action on the other recommendation made on their process.

The agencies responses to each of the review teams recommendations on permitting are as follows:

Recommendation II.1.

The review team strongly encourages the Commission to review its records to determine the number and location of pits that existed prior to June 1, 1984, and the percentage of those pits that have been closed. The Commission should "call in" those existing pits that have never been permitted and require the operators of those pits to demonstrate compliance with Rule 326 or to commence closure as soon as practicable. A priority "call-in" system should be developed based on the relative threat to groundwater, surface water, sensitive environments, and people in residential areas. The IOGCC Guidance sections 4.2.6. and 5.3.6.f., underscores the legal and technical importance of identifying and maintaining records on locations of closed sites. (This recommendation applies only to pits that are within WOGCC's jurisdiction, although pits on BLM lands should also be identified and located.)

State response:

WOGCC has developed a priority "call-in" system for the approximately 4,500 pits that existed prior to June 1, 1984. The priority system is based on complaints, areas of shallow groundwater and the sensitivity of the environment. Target areas include pits located in the Colorado River drainage, over the Ogallala aquifer and areas that

have wells that produce highly saline waters. To date, approximately 800 of the pre-1984 pits have been closed. The WOGCC currently has an inventory of 6,500 active pits in their computer database. This could become a model system for other states to emulate.

Recommendation II.3.

WOGCC should establish a formal permitting or review process for pits that receive less than five barrels of produced water per day.

State response:

The five barrel exemption has been deleted from revised Rule 401 (formerly Rule 326). WOGCC is also working with the BLM to have this exemption removed from federal rules.

Recommendation II.4.

All permit requirements that involve consideration of site-specific characteristics or the performance of individual operators should be in written form as enforceable regulations. (See IOGCC Guidance section 4.1.1.) The review team recognizes that a certain amount of flexibility on the part of the permitting staff is necessary and desirable, as suggested in IOGCC Guidance section 5.1.c. Written procedures and rules, however, will achieve consistency of regulation.

State response:

WOGCC has addressed the provisions of this recommendation in the new sections of Rule 401 (Workover and Completion Pits) and Rule 401 (Location). Approval for workover or completion pits, located by definition in a critical area, must be applied for and obtained on Form 14B "Application for Permit to Use and Construct Earthers Pit for Temporary Use or For Reserve Pit", prior to construction and use.

Recommendation II.5.

WOGCC should regulate produced water storage tanks either individually or in facility-wide permits, consistent with the recommendation in the IOGCC Guidance section 4.1.1.

State response:

WOGCC agreed with this recommendation in drafting revised regulations. As recommended by the review team, the WOGCC in revised Rule 404 (Workmanlike Operations) section (g) states in part; "Maintain tanks in a workmanlike manner which

will preclude seepage from their confines and provide for all applicable safety measures....."

Recommendation II.6.

The Commission should complete the evaluation of blanket bonds to assure that they are set at a level that is commensurate with the costs of plugging and abandonment. The Commission has regulatory authority (Rule 304) to require higher bonds. The Commission could, by rule, authorize a category of "phased-in bonds" to allow small operators to post cash, certificates of deposit, or forms of collateral in specified increments over certain periods of time. The review team recommends that such phased-in bonds be accrued over a reasonable period of time. WOGCC indicated that the Commission takes the position that bonds that are posted for drilling operations (Rule 304 (1)-(3)) cover closure of reserve pits located on the drilling sites. Such bonds are released when an operator demonstrates to the satisfaction of the Commission staff that the pit has been closed properly and the well plugged and abandoned properly. WOGCC said the Commission has enforced reserve pit closure through its well bonding authority "at a number of oil and gas hearings".

State response:

WOGCC began to address this recommendation soon after publication of the Wyoming State Review. The WOGCC initiated two regulatory changes in early 1992. Pursuant to Docket No. 4-92 and 4-92(A) dated May-11, 1992 the WOGCC amended Rule 304 (Bonding Requirements) to, among other provisions, create five classifications of wells; producing, temporarily abandoned, shut-in, dormant and permanently abandoned or plugged wells. The rule also provides four bonding options for dormant wells and several alternate forms of bonding, i.e. surety bond, cash deposit, certificate of deposit, or a letter of credit.

Recommendation II.7.

The Commission's pit closure requirements and process need to be formalized by rule. A mechanism should be developed for prior notification of an operator's intent to close any pit. (See IOGCC Guidance section 5.3.6.)

State response:

This is another instance where the WOGCC moved quickly to respond to the review team recommendation. The WOGCC's pit closure requirements and process is detailed in revised Rule 401 (Closure). Rule 401 also requires that if closure plans have changed from the original proposal approved on Form 14A or 14B, or anytime wastes are disposed off-site, a Sundry Notice (Form 4) must be submitted and approved prior to closure. Guideline No. 2 (Crude Oil and Salt Contaminated Soil

Clean-up) has also been developed to give staff specific instructions and criteria for site rehabilitation, clean-up and closure.

Recommendation II.8.

The Commission should evaluate its past permit requirements for specific sites to determine if the conditions prevented contamination of surface water or groundwater and whether groundwater monitoring would have been appropriate. The Commission should propose and adopt new regulations based on the results and analyses of those data, if conditions warrant. (See IOGCC Guidance sections 5.1.a. and 5.3.4.) If WOGCC adopts groundwater protection standards for pits under its jurisdiction, those standards should be consistent with those administered by WDEQ. Absent data showing the effectiveness of the groundwater protection requirements of Rule 326, we recommend that the Commission adopt mandatory pit-lining and monitoring requirements in order to prevent contamination of groundwater. (IOGCC Guidance section 5.1.a.) This recommendation also applies to pits receiving less than five barrels of produced water per day.

State response:

WOGCC is unaware of any groundwater or surface water contamination that has occurred due to a permitted pit, and believes that had this occurred they would be aware of such contamination. Therefore, conditions in Wyoming do not currently warrant action on this recommendation. However, no field evaluations have been conducted to date. WOGCC has adopted standards detailed in Rule 401 that outline pit liner standards, location criteria, monitoring, remediation and closure.

A hydrologist is also on staff to identify depth to groundwater and she has developed some vulnerability maps for staff use.

The WOGCC also provides Optional Form 18 for operator use, if they choose to supplement Form 14A (produced water pits) or 14B (temporary or reserve pit) to record and document shallow groundwater and subsoil types when they drill shallow holes, such as, the rat hole, mouse hole or conductor on the drill site. This form can be used to demonstrate that a well is not in a critical area where groundwater is at a depth of less than twenty (20) feet or in an area that has a permeable subsoil.

III. SITING

This section of the state review outlined the siting requirements for exploration and production waste facilities. The review team made two recommendations on the siting

requirements of the state agencies. Both recommendations were directed to the WGOCC and both have been responded to positively.

WOGCC's responses to the recommendations made by the review team on siting are as follows:

Recommendation III.1.

The Wyoming Oil and Gas Act should be amended to authorize the Commission to adopt rules, regulations, or orders to protect public health and sensitive environments in order to control the siting of facilities under the Commission's jurisdiction for reasons other than to prevent water pollution. Once such authority is granted by legislative action, the Commission should adopt such additional rules and regulations as may be necessary to expand the Commission's control over the siting of E&P facilities, especially in areas where local land use authorities do not apply or are not used. Such authority would be consistent with the recommendations of the IOGCC Guidance sections 5.1.a. and 5.3.3.

State response:

WOGCC has won several court cases based on the current provisions of the Wyoming Oil and Gas Act that has given them broad environmental authority. Revised Rule 401 (Location) gives the Commission authority "to provide additional protection to human beings when operations are conducted in close proximity to water supplies, residences, schools, hospitals, or other places where people are known to congregate, or to provide protection to livestock or wildlife, the Commission may require such modifications or changes in the owner's plans as it deems necessary.....". These significant legal developments establish that the WOGCC has all necessary statutory and regulatory authority needed to properly oversee this vital state function and that additional legislative activity is not necessary.

Rule 404 (h) states in part "where facilities are in close proximity to populated areas or where there is an eminent and present danger to public health and safety, the Supervisor may.....require evidence that the facility has been constructed in accordance with good engineering practices and with considerations of safety measures".

Recommendation III.2.

The Commission should adopt rules that provide for a buffer zone between E&P waste management facilities and water supplies to residences, schools, hospitals, or other structures where people are known to congregate. (IOGCC Guidance section 5.3.3.)

State response:

WOGCC Rule 322(f) (General Drilling Rules) provides that pits shall be located no closer than 350 feet from water supplies, residences, schools, hospitals, or other structures where people are known to congregate. The Supervisor may for good cause increase this distance and also grant exceptions. This complies with the recommendation, and also creates necessary flexibility to deal with areas of greater population concentrations.

IV. PUBLIC PARTICIPATION

This section reviewed how the regulatory agencies outreach to the general public and industry regarding proposed rules, regulations, orders and operations, in general, that relate to oil and gas exploration and production waste.

The review team made seven recommendations in this section. Four of the recommendations were directed to the WOGCC. Three of those recommendations the WOGCC believes are already in place; however, parts of two of the recommendations have been included in their regulations; one was fully responded to and one, although considered will not be implemented. The two recommendations directed to the WDEQ although considered meritorious were not completed. The one recommendation directed to both agencies was a positive recommendation and required no action. The agencies responses to the review teams recommendations on the agencies public participation processes are as follows:

Recommendation IV.1.

The 45-day notice procedure for proposed rules and regulations should be codified in Section V of the Commission's Rules and Regulations. In addition, the Oil and Gas Act should provide a 45-day notice for proposed rules and regulations (the 10-day notice for routine orders should be retained.)

State response:

WOGCC Rule 501 now states in part "Notice of a proposed change and/or addition to these rules and regulations requires forty-five (45) days advance notice prior to hearing....". WOGCC states it is unnecessary to go to the Wyoming Legislature to change the Wyoming Oil and Gas Act to require a 45-day notice for proposed rules and regulations since this is already a requirement in section 16-3-103(u)(i) of the Wyoming Administrative Procedures Act. The Wyoming Administrative Procedures Act governs the way all regulations are developed in Wyoming, therefore making separate statements in each agency's enabling legislation unnecessary.

Recommendation IV.2.

Consistent with IOGCC Guidance 4.2.2., WOGCC should adopt by rule, notice procedures for applications for permit to drill and their concurrent applications for construction of reserve pits and production pits that will be located adjacent to or within inhabited areas or sensitive environments. (See IOGCC Guidance section 5.3.3. i.e., sensitive areas) These special notice procedures also should apply to area wide projects and centralized disposal facilities. Authorities for imposition of such special notice procedures should be accomplished by--

- * Extending the statutory notice in W.S. 30-5-111(b) to applications for permits to drill (APDs) wells and construct reserve pits and to all production pits;
- * Adopting rules specially aimed at noticing proposed actions that have close proximity to people or present special risks to sensitive environments; and
- * Authorizing public hearings for wells to be located within inhabited areas or sensitive environments, allowing such "special notice hearings" to be held before a hearing examiner, and amending W.S. 30-5-105 and Rule 513 or W.S. 30-5-106 and Rule 512 to provide for such authority.

Rules for providing special notice could include--

- * Provisions requiring the applicant or his/her agent(s) to give written notice to contiguous landowners or tenants/occupants within a reasonable distance of the proposed facility in the form of certified mail or hand-delivery with evidence of receipt by the landowner or tenant/occupant;
- * Opportunity to submit written comments and to request a public hearing within 30 days of the notice; and
- * Opportunity to appear and present views, arguments and data to the hearing examiner or Commission, if a hearing is required.

State response:

After careful consideration, the WOGCC has decided not to extend the statutory notice in W.S.30-5-111(6) to applications for permits to drill wells because the sparse population of Wyoming makes detailed hearing processes less necessary than in more populous states where individuals are unfamiliar with their neighbors and with what is happening in their area. However, revised Rule 401 (Centralized Pits) gives the Supervisor authority to require "special notice of hearing" and this has been required by the Supervisor on recent cases. Rule 516(b) has not been amended to increase the opportunity to submit written comment from 15 to 30 days. Rule 513 provides opportunity for the general public to appear and present views, arguments and data to the hearing examiner or Commission. Wyoming has always had the greatest interest in public participation in its government processes, and the culture of the state makes unnecessary such detailed rules mandating opportunity to be heard.

Recommendation IV.3.

WOGCC should take steps to increase the accessibility of permitting, compliance, and other program data to the public. For example, the Supervisor and the Commission staff could publish annual reports on the environmental and public health components of their program. Each report should include data on the number of pits permitted, the number of noncommercial injection wells permitted (a statistic that is readily available), the number of pits closed, the number of spills reported, and the number of notices of violations (and other enforcement actions) issued for environmentally related incidents. The report could include summaries of environmental monitoring data and site-specific contamination investigations, if any. The report could also include summaries of the agency's responses (such as new rules, policies or guidance documents) to emerging environmental problems and concerns. (See related IOGCC Guidance section 4.2.2.2.)

State response:

Although the WOGCC publishes no report on the environmental and public health components of their program, their records are open to public inspection, excluding confidential files, that detail enforcement actions, pit closures, spills and other environmental incidents. A statistical report is also published that includes the number of injection wells permitted, among other statistical data. These records are well known to the interested general public, government leaders and the print and electronic media, all of whom avail themselves of the records and are assisted, when necessary, in locating specific information.

Recommendation IV.4.

The Commission's staff should more frequently communicate with and involve in the Commission's environmental programs members of citizens groups and environmental organizations. An advisory board having balanced representation of environmental and industry organizations, other interested parties, and officials of WOGCC, WDEQ and BLM, should be created to advise the Commission on matters of public concern and policy regarding environmental protection in the oil and gas industry. As a general matter, the Commission's staff should more frequently communicate with and involve members of citizens' groups and environmental organizations in the Commission's environmental programs. The involvement and participation of these interests will build knowledge, expertise and understanding among non-industry members of the public and provide the Commission with perspectives it does not routinely receive. (IOGCC Guidance section 4.2.2.3.)

State response:

WOGCC has not created an advisory board at this time. However, monthly Commission meetings are held and are open to the general public. The WOGCC staff also speak to various citizen groups and encourage feedback. WOGCC has expanded its outreach program to reach even more citizen groups and welcomes invitations to discuss practices of the WOGCC with all groups. Through the IOGCC, the WOGCC is working to create training opportunities for specialized state employee groups and create video presentations for more general citizen groups.

Recommendation IV.5.

The Wyoming Environmental Quality Act (section 35-11-306) should be amended to give WDEQ the authority to provide notice and hold public hearings on commercial oil field disposal facilities. Otherwise, WDEQ should use its general authority to hold public hearings on proposed permits for COWDFs. The notice and hearing requirements for such facilities should be patterned after the special notice procedures in Recommendation IV.2., consistent with IOGCC Guidance section 4.2.2.1.

State response:

WDEQ believes this recommendation has merit and was planning on including it in their new regulations on COWDF's but the project was put on hold because of recent budget cuts. However, as a matter of policy, WDEQ holds hearings on any permit application where the public shows an interest. Should the financial situation of the state improve, WDEQ will reactivate this project.

Recommendation IV.6.

The agencies' policies that encourage and promote full public disclosure are commendable and could serve as models for other government entities. They should be continued as evidence of openness in government.

State response:

This recommendation is noted by both agencies as a pat on the back. Again, this demonstrates the strong history in Wyoming to openness and participation.

Recommendation IV.7.

WDEQ should consolidate all laws, rules, regulations, orders, and policies that pertain to the management of exploration and production waste in one handbook or reference guide. Such consolidation will help the regulated community comply with applicable requirements and assist the public in reviewing the agency's authorities and

requirements. The compilation could be patterned after WOGCC's Rules and Regulations (the "green book"), which includes a copy of the statutes that mandate the Commission's responsibilities and authorities.

State response:

WDEQ believes this is an excellent idea but the lack of staff and resources precludes the development of such a document at this time. WDEQ continues to hope for a changed state financial picture which would permit development of such a document.

V. CONTINGENCY PLANNING

This section outlined the planning processes developed by the state agencies to respond to emergency situations regarding oil and gas exploration and production waste spills, releases, etc.

The review team made one recommendation in the section and it was directed to the WDEQ who has taken action on the recommendation.

WDEQ's response to the review teams recommendation on contingency planning is as follows:

Recommendation V.1.

WDEQ is, and should continue to be, the lead agency for reporting spills of E&P waste. Spill reporting forms, and spill and release notification requirements should be standardized between the agencies and information should be shared among WOGCC, WDEQ, BLM, and other agencies with responsibilities for E&P waste.

State response:

The revised MOA that is nearly finalized clarified the role of the WDEQ and information sharing between the agencies. The Commission adopted a spill reporting form modeled after WDEQ requirements and accepts their reports. The Commission is negotiating a revised MOU with BLM.

VI. TECHNICAL CRITERIA

This section basically outlined construction and closure rules, policies and practices the agencies utilizes to manage the various types of E&P waste disposal.

The review team made eight recommendations on the technical criteria used by the state agencies. Six recommendations were directed to the WOGCC which has responded in a positive manner to all six by revising its regulations and adopting some new directives to employees which supplement the revised regulations. The one recommendation directed to the WDEQ has been partially responded to. One recommendation was directed to both agencies and that recommendation has been partially implemented.

The agencies responses to the review teams recommendations on technical criteria are as follows:

Recommendation VI.1.

WOGCC should develop guidelines that encourage operators to prevent pollution, consistent with IOGCC Guidance sections 5.1.a,b,d, and e. Such guidelines also have potential to streamline regulations, while reducing operator and State liability from improper waste management practices. Over time, many of these guidelines should be phased in as regulatory requirements. Operators could be required to submit a waste management plan that addresses the following guidelines.

- i) Facilities and sites operated for the storage, treatment or disposal of E&P waste should not receive, collect, store, or dispose of any waste that are listed or defined as hazardous waste and regulated under Subtitle C or RCRA, except in accordance with state and federal hazardous waste laws and regulations.
- ii) A list of exempt and nonexempt E&P waste and an explanation of the mixture and derived-from rules should be provided to improve operator understanding compliance with WOGCC Rule 326 and RCRA regulations. (IOGCC Guidance section 2.6.)
- iii) Operators should be encouraged to choose E&P chemical additives which are lower in toxicity or do not exhibit a RCRA hazardous characteristic and to substitute such additives into operations, when possible. Consideration should be given to providing a generic additive list.
- iv) Operators should be encouraged to increase the use of solids removal equipment to minimize drilling fluid waste, when feasible.
- v) Procedures for waste management, such as fully using commercial products or returning unused portions to vendors, practicing waste segregation, and recycling drilling and workover/completion fluids, should be explored. (IOGCC Guidance section 2.6.)
- vi) Workover and completion fluids and wastes should be managed in tanks for later recycling, reuse or proper disposal.

State response:

WOGCC has included the provisions of this recommendation in revised Rule 401 (Operation). The rule states in part "pits shall not receive, collect, store, or dispose of any waste that are listed under Subtitle C of RCRA, except in accordance with state and federal hazardous waste laws and regulations". Rule 401 also states "operators are encouraged to increase the use of solids removal equipment to minimize drilling fluid waste....encourages the recycling of drilling fluids....commercial products should be returned to the vendor if appropriate or segregated from other waste for management or disposal".

To address the exempt and nonexempt E&P waste issue, WOGCC has included as Appendix C in their regulations the U. S. Environmental Protection Agency's Regulatory Determination for Oil and Gas and Geothermal Exploration, Development and Production Wastes, Vol. 53, No. 128, dated July 6, 1988, which contains the list of exempt and nonexempt waste.

Recommendation VI.2.

Prescriptive requirements (e.g. mandatory pit lining) or performance standards (e.g. groundwater monitoring, leak detection, in-pit fluid monitoring) should be enacted in the regulations of both agencies to ensure prevention of groundwater contamination. (IOGCC Guidance section 5.1.a.)

State response:

WOGCC in Rule 401 (Construction) details the circumstances that would require a pit liner. These include "but are not limited to, sandy soils, shallow groundwater, groundwater recharge areas, drilling or production locations immediately adjacent to the Green River or Colorado River drainage, and other sensitive environments or circumstances identified by the Commission". The rule also includes construction standards for pits that are required to be met or exceeded.

WDEQ requires that a facility not impact groundwater and this generally requires a liner. The enforcement actions taken on existing facilities have, in some cases, involved monitoring to ensure no off-site migration.

Recommendation VI.3.

WOGCC should formally evaluate liner thicknesses that are required in pit construction and include minimum liner specifications in its regulations. Pit fluid analysis should be required for all pit closures; at a minimum, the analysis should include pH, chlorides, and hydrocarbon content. (IOGCC Guidance section 5.3.6.c.)

State response:

WOGCC in Rule 401 (Construction) includes liner specifications in subsections (a) and (b) of the rule. In the Testing section of Rule 401 the Commission can require, when it deems appropriate, the following tests: Standard Water Analysis - Form 17; Toxicity Characteristic Leaching Procedures; and Oil and Grease or Total Petroleum Hydrocarbon. Further, Rule 401 (Closure) in subsection (c) states "Closure standards and testing requirements for all pits will be determined by the Supervisor based on site specific standards".

Recommendation VI.4.

The pit review process, which includes evaluation of drilling fluid programs and offset production wells and water wells, should be formalized as a written procedure or policy.

State response:

This recommendation was favorably viewed by the state and adopted in revised regulations. In WOGCC Rule 401 (Reserve Pits) Form 14B (Application for Permit to Use and Construct Earthen Pit for Temporary Use or For Reserve Pit) must be submitted and approved in conjunction with the Application for Permit to Drill. Form 14B requires information on the drilling fluid program, location, water analysis and other data.

Recommendation VI.5.

Regulations for pit closure should be adopted by the Commission and incorporated in Rule 326. Such regulations should include, at a minimum, the elements in section 5.3.6. of the IOGCC Guidance, in addition to the existing "reclamation" requirement of Rule 326 (WOGCC Rules and Regulations, p.32). The regulations should also include specific numerical criteria, verifiable either through pit fluid analysis or through analysis of the final waste/soil mixture. The criteria should include a maximum limit on the oil and grease content of pit-disposed waste. A procedure should be established whereby WOGCC has both advance notice to review the pit closure and an opportunity to provide additional guidance to the closure process/plan. (IOGCC Guidance sections 5.4. and 5.5.)

State response:

WOGCC in Rule 401 (Closure) has addressed the provisions of this recommendation and the elements in section 5.3.6. of the IOGCC Guidance. WOGCC has also developed Guidance No. 2 (Crude Oil and Salt Contaminated Soil Cleanup) that

provides staff-specific numerical criteria and information regarding pit analysis, remediation and closure.

Recommendation VI.6.

Centralized disposal facilities and production pits should be uniquely addressed in WOGCC regulations. Technical criteria should follow those recommended in IOGCC Guidance sections 5.3. and 5.7., including the establishment of additional chemical criteria for determining appropriate construction standards for these facilities that receive produced water that exceeds the current 10,000 ppm TDS standard.

State response:

WOGCC in Rule 401 has sections on (Centralized Pits) and (Produced Water Pits) that follow the recommendation of the IOGCC Guidance. Specifically, Rule 401 (Construction) states in the preamble that "Pits constructed to retain produced water with a total dissolved solids concentration in excess of 10,000 milligrams per liter must be lined".

Recommendation VI.7.

WOGCC should require operators both to conduct and document pit inspections. Such operator inspection documentation should be available for review, as requested by WOGCC inspectors. (IOGCC Guidance section 5.3.5.e.)

State response:

WOGCC in Rule 401 (Construction) (g) states in part that "periodic inspections, weekly at a minimum, of pits must be made by the owner or operator and documentation of such inspections may be required to be submitted to the Supervisor at his request".

Recommendation VI.9.

Existing statutes and WDEQ regulations should be revised to address the lack of operating requirements and permits for COWDFs; such revisions should establish uniform rules for both new and existing facilities. (See previous finding and recommendation II.9.2.) The acceptance of aquifer clean-up as a method to demonstrate groundwater protection should not be allowed; this practice is not preventive of groundwater contamination. (See IOGCC Guidance section 5.1.a.) Special emphasis should be placed on the need for groundwater monitoring at both new and existing COWDFs. (IOGCC Guidance section 5.7.2.2.c. and 5.7.2.2.d.)

State response:

WDEQ began to implement this recommendation but budget costs have postponed the project. As with other projects put on hold due to budget constraints, this will be

revisited by WDEQ when the state's financial picture brightens and the WDEQ budget is increased. The acceptance of aquifer clean-up, as a method to demonstrate groundwater protection, is a past practice that is not allowed today.

VII. WASTE TRACKING

The waste tracking section reviewed the state's process for tracking and documenting the movement of E&P waste from their generation to their final disposition.

The review team made one recommendation in this section that was directed to the WDEQ. The WDEQ has not implemented that recommendation.

The WDEQ's response to the review teams recommendation on waste tracking is as follows:

Recommendation VII.1.

WDEQ should adopt operational regulations for all commercial disposal facilities which should include requirements for manifesting all waste delivered to such facilities and for the permitting and waste haulers (consistent with IOGCC Guidance section 4.2.5. and 5.7.2.3.e.)

State response:

WDEQ had planned on putting the provisions of this recommendation in their new regulations, but as noted earlier, budget cuts have postponed that project.

VIII. DATA MANAGEMENT

The section on data management basically reviewed the capabilities and extent to which computer technology has been utilized by the state agencies in their exploration and production waste regulatory programs.

The review team made two recommendations to the WOGCC on data management. The WOGCC believes one of the recommendations already is in effect and is completing the documentation required by the second recommendation.

The WOGCC's responses to the review teams recommendations on data management are as follows:

Recommendation VIII.1.

This database should be used to improve operator compliance and performance and to prevent pollution problems. The database should also be used to determine inspection frequencies and to track the results of inspections, as well as to compile information on spills. It should also be used as a management tool for program planning and evaluation. (IOGCC Guidance section 4.2.7.)

State response:

WOGCC currently has approximately 16,000 active oil and gas wells in their computer database which allows them to monitor wells that have high water cuts and that produce highly saline waters. They also use it to track spills and the pit inventory includes the date the pit was inspected.

The computer program is continually being upgraded to provide better inspection tracking, compliance and program evaluation.

Recommendation VIII.2.

The WOGCC computer program and capabilities should be documented so that the system can be utilized by additional staff members and the public. (IOGCC Guidance section 4.2.7.)

State response:

WOGCC agreed with this recommendation and acted upon it. The UIC computer program has been documented and a user guide has been developed. A flyer has also been developed that catalogs information that is available to the public.

IX. INSPECTION, SURVEILLANCE, COMPLIANCE EVALUATION

This section of the state review outlined the state agencies inspection practices, surveillance techniques, compliance documentation and follow-up with regard to exploration and production waste regulations.

The review team made four recommendations on the state agencies inspection, surveillance and compliance evaluation processes. Three of the recommendations pertained to the WOGCC program. The WOGCC has responded in a positive manner to two of the recommendations and is actively evaluating the third currently. The fourth recommendation was directed to both WOGCC and WDEQ and the two agencies have implemented that recommendation.

The agencies responses to each of the review teams recommendations on inspection, surveillance and compliance evaluation are as follows:

Recommendation IX.1.

WOGCC inspectors should take all available information, including any E&P waste disposal plans applicable to the company and well-site, when conducting inspections and should use such information, as a basis of comparison with conditions found during the inspection. (IOGCC Guidance section 4.1.2.1.)

State response:

It is the WOGCC's practice to have inspectors take a copy of the permit, letter of non-compliance or copy of last inspection, whichever is pertinent, with them when making an inspection.

Recommendation IX.2.

WOGCC should provide written documentation to its files and to operators of all inspections so that a record of compliance inspections is developed for all sites for the period of time between the initial pit construction inspection and the bond release inspection. (IOGCC Guidance section 4.1.2.1.e.)

State response:

WOGCC has taken no additional action on this recommendation. However, WOGCC inspectors keep a daily log of all inspections. When a violation is noted, a memorandum is written to the file and a letter is sent to the operator detailing the violation and requiring correction within a prescribed time frame. These are all maintained in the permanent files of the WOGCC.

Recommendation IX.3.

WOGCC should develop an inspection report form which list activities typical of conditions being inspected to ensure regulatory consistency and to promote public/industry confidence. (IOGCC Guidance section 4.1.2.1.e.)

State response:

WOGCC reviewed and agreed with this recommendation and has drafted an inspection report form to ensure regulatory consistency.

Recommendation IX.4.

Both the WOGCC and the WDEQ should develop inspection plans, including inspection frequencies and priorities, for facilities within their jurisdictions. Such plans should

be shared with the other agency and inspection should be coordinated where appropriate.

State response:

WOGCC and the WDEQ worked jointly in addressing this recommendation. The staff guidance document that is being developed to implement the provisions of the revised MOA between the WOGCC and the WDEQ will contain provisions on inspection plans and priorities, as well as agency coordination.

X. ENFORCEMENT

This section reviewed how the agencies ensure that exploration and production waste regulatory requirements are complied with and what actions they can take against those in non-compliance.

The review team made two recommendations on enforcement. Each agency had a recommendation directed to it. The WOGCC evaluated the recommendation and elected to stay with their current practice. WDEQ also elected not to implement the provisions of this recommendation.

The agencies responses to the recommendations on enforcement are as follows:

Recommendation X.1.

WOGCC should adopt guidelines for the calculations of penalties that include factors such as the economic benefit resulting from the violation, willfulness, harm to the environment and the public, harm to wildlife, fish or aquatic life or their habitat, expenses incurred by the state in removing, correcting or terminating the effects of the unauthorized activity, conservation of the resource, timeliness of corrective action, notification of appropriate authority, and history of violations. (IOGCC Guidance section 4.1.3.2.)

State response:

After discussion and consideration, WOGCC elected not to implement the provisions of this recommendation because they believe this is a Commission action that requires flexibility based on differing circumstances with each case, not unlike the flexibility given to judges in judicial matters. This is the responsibility of the Commissioners who are charged with evaluating a great range of issues in an individual case.

Recommendation X.2.

The Wyoming Environmental Quality Act should be amended to provide the WDEQ with the authority to assess fines and penalties.

State response:

WDEQ stated that to implement this recommendation would be a major policy shift that at this time has little Legislative or political support.

REFERENCES

1. Memorandum of Agreement between the Wyoming Department of Environmental Quality, The Wyoming Oil and Gas Conservation Commission and The Wyoming State Engineer's Office, Draft, May, 1994.
2. Wyoming Administrative Procedures Act, 1988.
3. Wyoming Environmental Quality Act, 1992 Edition.
4. Wyoming Oil and Gas Conservation Commission Rules and Regulations, Revised October, 1993.
5. Wyoming Oil and Gas Conservation Commission - Guideline No. 2 - Crude Oil and Salt Contaminated Soil Cleanup - Draft No. 5, January, 1994.
6. Wyoming Department of Environmental Quality - Water Quality Division - Substance Release Form, Revised, March 1, 1991.
7. Wyoming Oil and Gas Conservation Commission, Docket No. 4-92 and 4-92(A), March 13, 1992.
8. Wyoming Oil and Gas Conservation Commission, Inspection Report, Draft, May, 1994.