ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 147

[FRL–6316–4]

Underground Injection Control Program Revision; Aquifer Exemption Determination for Portions of the Lance Formation Aquifer in Wyoming

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final Rule—State program revision: aquifer exemption approval.

SUMMARY: The State of Wyoming has submitted a revision to its Underground Injection Control (UIC) Program, requesting that EPA approve an exemption from classification as an underground source of drinking water (USDW) portions of the Lance Formation in the Powder River Basin in Johnson County, Wyoming. The exemption area surrounds two Class I Non-Hazardous deep injection wells that will be used to dispose of operational bleed streams (excess fluids derived from the uranium mining) from commercial *in-situ* leaching uranium mining operations and fluids resulting from the ground water sweep (pumping out of contaminated fluids from the aquifer) operations for restoration of the Wasatch Formation aquifer being mined for uranium under a UIC Class III permit. After careful review of the exemption request and accompanying documents, EPA has determined that they contain sufficient information to meet the criteria for exempting portions of the Lance formation aquifer from the definition of a USDW. Based on the Wyoming Department of Environmental Quality (WDEQ) concurrence with the exemption, the request of the WDEQ director, the supporting technical documentation, and the lack of any public comment on the public notice to exempt the stated portions of the Lance Formation, EPA has decided to approve Wyoming's revision of its UIC program which exempts the designated portions of the Lance Formation from classification as an Underground Source of Drinking Water (USDW).

DATES: This rule shall become effective on April 26, 1999. In accordance with 40 CFR 23.7, this rule shall be considered promulgated for the purposes of judicial review at 1:00 p.m. Eastern Time on April 9, 1999.

FOR FURTHER INFORMATION CONTACT: Valois Shea-Albin, US EPA Region VIII, 8P–W–GW, 999 18th Street, Suite 500, Denver, CO 80202; (303) 312–6276.

SUPPLEMENTARY INFORMATION:

Regulated—Entities—Entities potentially affected by this action include the Wyoming Department of Environmental Quality (WDEQ) and the COGEMA Mining Company. The latter requested the exemption and the former recommended the approval of the exemption in October 1997. Any effect on these two entities would be positive, as they will be able to operate the disposal wells that are used for disposal of excess fluid in the uranium mining process and the restoration of the aquifer being mined.

I. Introduction

The Underground Injection Control (UIC) Program, established by the Safe Drinking Water Act (SDWA), provides for the protection of underground sources of drinking water (USDWs) from potential contamination from injection well practices. The UIC program regulations also provide for exempting aquifers from the definition of USDW, in 40 CFR 144.3, so that injection can occur. The UIC regulations, specifically 40 CFR 144.7 and 146.4, define and provide criteria for exempting aquifers.

In October, 1997, COGEMA Mining, Inc., (COGEMA) and the Wyoming Department of Environmental Quality (WDEQ) requested that EPA approve an aquifer exemption for the Lance Formation in the areas encompassed by a radius of 1,320 feet surrounding two Class I non-hazardous injection wells, the COGEMA DW No. 1 and the Christensen 18–3, in Johnson County, WY. The proposed injection intervals are 3,818 to 6,320 feet and 4,009 to 6,496 feet in depth below ground surface, respectively. The total area of the Lance Formation included in the exemption is approximately 0.4 square miles (0.2 square miles for each well).

The Lance Formation fluids contain less than 3,000 mg/l Total Dissolved Solids (TDS) and the exemption is associated with a Class I[1] injection well permit. These two criteria dictate that this aquifer exemption be a substantial revision of the Wyoming Underground Injection Control (UIC) program approved under section 1422 of the Safe Drinking Water Act. Criteria for classification of a program revision as substantial or not are in UIC Guidance #34, Guidance for Review and Approval of State UIC Programs and Revisions to Approved State Programs. The procedures to follow to approve or disapprove substantial program revisions in the UIC program are in 40 CFR 145.32 and in UIC Guidance #34. The aquifer proposed for exemption has been determined by WDEQ to be too deep to be considered as an economically feasible source of drinking water. On August 27, 1998, EPA published in the **Federal Register** a notice (63 FR 45810) requesting public comment on a substantial revision to Wyoming's UIC program to exempt a portion of the Lance Formation from designation as an underground source of drinking water. There were no comments or requests for public hearing submitted as a result of this notice. EPA has examined the aquifer exemption request, the accompanying information, and responses from WDEQ and COGEMA to EPA requests for additional supporting information, and, for reasons described herein, approves this request to exempt the designated portions of the Lance Formation from classification as a USDW.

II. Background

COGEMA operates the Christensen Ranch *in-situ* leaching uranium mine within the Wasatch Sandstone Formation in Johnson and Campbell Counties, WY. The Wasatch Formation overlies the Lance Formation by about 2,600 feet at the mine site. The mining operation has comprised five well fields to date, two of which are currently producing, and three that have been mined out. The operation has reached the phase where large scale restoration of the ground water within the mined out well fields is being conducted simultaneously with mineral extraction in the two producing well fields.

Ground water restoration is conducted to return the ground water affected by mining to its baseline condition or to a condition consistent with its pre-mining or potential use upon completion of mining activities. After the restoration process is completed, the concentrations of contaminants are reduced to levels below drinking water standards. For the successful restoration of the ground water quality within the mined-out areas of the Wasatch Formation, a wastewater disposal capacity of 300 to 500 gallons per minute (gpm) will be required over the next 18 years. Additionally, this type of operation requires the bleed-off[2] of part of the

[1] Injection wells are divided into 5 classes. Class I wells are associated with the disposal of industrial, municipal or radioactive waste into formations below the lowermost USDW. These wells have very strict standards for siting, construction and operation.

[2] In order to prevent fluids in the underground formation from polluting adjacent aquifer portions, more fluid is extracted than is injected. In the process of leaching out the Uranium salts, the leaching agent is also replenished. The combination of excess fluid extracted and the equivalent of the fluid that is replenished is called the ''bleed''

fluid extracted in order to keep underground water flow into the mining area and prevent the contamination of adjacent aquifers in the Wasatch Formation. To date, COGEMA has managed disposal of the fluid wastes under an NPDES permit to discharge to the surface, and through using evaporation ponds and limited non-hazardous Class I injection well disposal. The recent regulatory requirement that reduces the concentration of selenium that can be discharged to surface waters permitted under NPDES has force COGEMA to discontinue this type of discharge. After evaluating treatment methods to remove selenium from the wastewater in order to continue surface discharge, COGEMA found that reverse osmosis was the only method that consistently met the new selenium standard. The reverse osmosis process would treat 75% of the waste stream resulting in water of high enough quality for surface discharge. However, the high volume of remaining concentrated brine produced by the reverse osmosis process would still require the use of the two Class I injection wells and the aquifer exemption.

COGEMA was previously granted an aquifer exemption for the COGEMA DW No. 1 and the Christensen 18–3 wells to inject into the Teckla, Parkman, and Teapot Formations (between 3,000 and 10,000 TDS, containing traces of oil and gas, and too deep to be an economically feasible source of drinking water). The original exempted interval for the COGEMA DW No. 1 was 7,500 to 8,470 feet in depth and 7,631 to 8,604 feet in depth for the Christensen 18–3. Trial injection into these formations revealed they were only capable of receiving less than 10 gpm instead of the 75 to 150 gpm anticipated from the evaluation of porosity logs. As a result, the company has now requested a permit modification to inject into the Lance Formation, instead of the Teckla, Parkman and Teapot formations, an overlying geologic unit to the ones originally exempted.

III. Injectate

The fluid that will be injected (injectate) will consist of operational bleed streams from commercial *in-situ* leaching uranium mining operations as well as fluids from the restoration of the Wasatch formation. The constituents in the injectate include the following process and restoration bleed streams: normal overproduction (well field bleed) streams, laboratory wastewater, reverse osmosis brine, and ground water sweep [3] solutions. The bleed streams are defined as non-hazardous, and as beneficiation [4] wastes exempt from regulation as hazardous waste under the Resource Conservation and Recovery Act as stipulated by the Bevill Amendment (40 CFR 261.4(b)(7)).

IV. Basis for Approval of the Aquifer Exemption

The information provided by COGEMA in the reports included in the docket adequately addresses the requirements of 40 CFR 146.4 supporting approval of the aquifer exemption request for the Lance Formation.

Section 146.4 (a) The Formation Does Not Currently Serve as a Source for Drinking Water in the Vicinity of the Well Sites

There are no drinking water wells extracting water from the Lance formation in the intervals and areas that are recommended for exemption. Current information indicates that there are no wells that could be affected by the injection of the waste in the two injection wells in question. The general ground water flow in the area is from the West-North West, putting the proposed injection wells and the exemption formation ''down-flow'' (down gradient) and at a considerable distance from any water well developed in the Lance formation. The nearest documented water well completed in the Lance formation is over 24 miles to the west of the site. The exact use of this well is unknown, but appears to be associated with oil or gas development. Approximately 30 miles to the west, the Lance outcrops to the surface and wells developed there are for livestock use. Where the Lance Formation occurs near the surface at the western edge of the Powder River Basin 30 miles southwest of the exemption area, five wells extracted water from the Lance and Fox Hills formations to supply the municipalities of Midwest and Edgerton, WY, until 1997. At that time, the wells were abandoned because of low water productivity (40 gpm sustainable flow) and the expense of treatment that would be required to continue using these wells as a public water supply. The towns of Midwest and Edgerton have determined that piping in pre-treated water 50 miles from Casper, WY is more economically feasible than continuing operation of the wells completed in the Lance/Fox Hills formations, even at the relatively shallow depth of 1,500 to 2,000 feet. The capital costs associated with the development and operation of a new well field for the municipalities prevented them from taking this option. Therefore, the Lance is no longer supplying water to a public drinking water system within 30 miles of the aquifer exemption area.

Section 146.4(b)(2) The Formation Cannot and Will Not Serve as a Source of Drinking Water Because It Is Situated at a Depth or Location Which Makes Recovery of Water for Drinking Water Purposes Economically or Technologically Impractical

The depth of the Lance Formation within the aquifer exemption area ranges from 4,009 to 6,496 feet at the location of Christensen 18–3, and from 3,818 to 6,320 feet at the location of the COGEMA DW No. 1 well.

The Wasatch Formation overlies the Lance Formation in the aquifer exemption area and provides a shallower, potential water supply source available for use in the area. According to the USGS publications referenced by COGEMA, any water supply wells (aside from water flood wells related to oil production) in the aquifer exemption area are completed in the Wasatch Formation. The Wasatch Formation is a high quality, prolific aquifer, located at approximately 1,200 feet in depth or shallower throughout the Powder River Basin, which includes the aquifer exemption area. The Wasatch Formation, alone, contains a volume of water that would supply a population of approximately 1.3 million people for 100 years. Given this abundant, shallow supply of high quality ground water, it is reasonable to conclude that the deeper Lance Formation will never be required to provide drinking water in the area of the aquifer exemption.

COGEMA provided a cost evaluation for the capital costs and estimated operating costs for developing a private (50 gpm) and a public (750 gpm) drinking water well, including treatment costs based on the water quality analysis of samples collected from the Lance Formation as a water supply source within the aquifer exemption area. The costs to develop the Lance Formation within the exemption area were compared with estimated costs to develop the Wasatch Formation as an alternative public water supply (at the 750 gpm rate). The incremental cost increase to develop the

stream. This volume of fluid has to be treated and/or disposed in an environmentally safe process.

[3] The operator is required to restore the aquifer being mined for Uranium. To restore this aquifer, ground water is pumped out of the formation and treated and/or disposed. Eventually the water in the formation will be restored to a pre-agreed baseline.

[4] For a list of the processes included under beneficiation, please see Title 40 CFR 261.4(b)(7).

Lance Formation versus Wasatch Formation as a drinking water source for a public water supply is approximately $3,691,250. The incremental increase in operations and maintenance cost of using the Lance water over the Wasatch water as a drinking water source would be $2.40/1,000 gallons.

The Midwest-Edgerton public water supply scenario should be noted as the most compelling support for the approval of this aquifer exemption request and the infeasibility of using the Lance Formation as a public water supply. The five wells were abandoned in favor of piping drinking water in from Casper, WY. The decision to abandon these wells was based on the economic burden of treating the water and the low production rates of the wells, even though the costs of development had already been expended. Furthermore, the wells that used to serve the two municipalities tapped shallower portions of the Lance Formation as compared to any potential well tapping the Lance Formation within the aquifer exemption area. This added depth translates into significantly more expensive costs for the drilling and the operation of the wells.

In summary, the Lance Formation will never be considered to be an economically feasible source of drinking water in the area of the aquifer exemption due to the great depth, low water production capacity, and treatment costs that will be incurred as shown by the Midwest-Edgerton wells experience. The cost of developing the Lance Formation as a drinking water supply within the aquifer exemption area is high compared to that of developing shallow, more prolific, and higher quality sources of drinking water, such as the Wasatch Formation. The Wasatch is better suited for development in this area as a source of drinking water due to higher producing capability, significantly better water quality, and lower or no water treatment costs.

V. Regulatory Impact/Administrative Requirements

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is ''significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a ''significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review.

B. Executive Order 13045: Children's Health Protection

Executive Order 13045, ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to E.O. 13054 because it is not economically significant as defined in E.O. 12866, and because the Agency does not have reason to believe the environmental health or safety risks authorized by this action impact children. The rule authorizes injection in a formation that is deep underground and separated from any aquifer that can provide drinking water. Therefore, it does not present any foreseeable effect on children's health and well being.

C. Paperwork Reduction Act

There are no information collection requirements established by this rule. Therefore, the Paperwork Reduction Act does not apply.

D. Regulatory Flexibility Act

Under the Regulatory Flexibility Act (RFA), 5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), EPA generally is required to conduct a regulatory flexibility analysis describing the impact of the regulatory action on small entities as part of rulemaking. However, under section 605(b) of the RFA, if EPA certifies that the rule will not have a significant economic impact on a substantial number of small entities, EPA is not required to prepare a regulatory flexibility analysis. Pursuant to section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities. First, EPA is unaware of any small entities currently injecting into this aquifer, or using this aquifer as a source of drinking water. Furthermore, since this rule relieves existing regulatory requirements for entities injecting into the aquifer, this rule would have no regulatory impact on small entities, were there any.

E. Executive Order 12875: Enhancing Intergovernmental Partnerships

Under Executive Order 12875 (48 FR 58093, October 28, 1993), EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of the EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.''

Today's rule does not create a mandate on a State, local or tribal government. The rule does not impose any enforceable duties on these entities. The rule merely approves a request, from the State of Wyoming, to exempt the designated portions of the Lance Formation from classification as an underground source of drinking water.

F. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for

Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory provision of Title II of the UMRA), for State, local or tribal governments, or the private sector. The rule imposes no enforceable duty on any State, local or tribal governments or the private sector. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA. EPA has also determined that this rule contains no regulatory requirements that might significantly or uniquely affects small governments. Thus, today's rule is not subject to the requirements of section 203 of UMRA.

G. National Technology Transfer and Advancement Act

Under section 12(d) of the National Technology Transfer and Advancement Act (NTTAA), the Agency is required to use voluntary consensus standards in its regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices, etc.) that are developed or adopted by voluntary consensus standard bodies. Where available and potentially applicable voluntary consensus standards are not used by EPA, the Act requires the Agency to provide Congress, through the Office of Management and Budget, an explanation of the reasons for not using such standards.

EPA does not believe that this rule addresses any technical standards subject to the NTTAA.

H. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. There are no tribal jurisdictions on or near the area of the exemption. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective on April 26, 1999.

List of Subjects in 40 CFR Part 147

Environmental protection, Intergovernmental relations, Water supply.

Dated: March 22, 1999.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, 40 CFR part 147 is amended as follows:

PART 147—[AMENDED]

1. The authority citation for part 147 continues to read as follows:

Authority: 42 U.S.C. 300h; and 42 U.S.C. 6901 *et seq.*

Subpart ZZ—Wyoming

2. A new § 147.2555 is added to subpart ZZ to read as follows:

§ 147.2555 Aquifer exemptions since January 1, 1999.

In accordance with § 144.7(b) and § 146.4 of this chapter, the aquifers described in the following table are hereby exempted from the definition of an underground source of drinking water, as defined in 40 CFR 144.3:

Aquifer Exemptions Since January 1, 1999

Formation	Approx. depth	Location
Powder River Basin, only approximately 0.4 square miles of the Lance Formation which is less than 0.005% of the Basin at indicated depths and location..	3,800 to 6,800 feet from surface.	Two cylindrical volumes with centers in the wells COGEMA DW No. 1 and 18–3 Christensen respectively, and radius of 1,320 feet. Both wells are located in the Christensen Ranch, in Johnson County, WY. The COGEMA DW No. 1 well is located at approximately 450 feet West of N/S line and 100 feet North of E/W line of SE/4, NW/4, Section 7, T44N, R76W. The 18–3 Christensen well is located approximately 600 feet West of N/S line and 550 South of E/W line of NE/4, NW/4, Section 18, T44N, R76W.

[FR Doc. 99–7432 Filed 3–25–99; 8:45 am]
BILLING CODE 6560–50–P