

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL & GAS**

GENERAL WATER POLLUTION CONTROL PERMIT

Permit Number: GP-WV-1-88

Subject:	Industrial Wastes, Oil and Gas Exploratory/ Developmental Drilling, Reworking of Wells, Well Treatment Operations, and Plugging Operations.	Issue Date:	3/31/2016
		Effective Date:	4/01/2016
		Expiration Date:	3/31/2021

To Whom It May Concern:

This is to certify that any oil and/or gas entity or other person agreeing to be regulated under the terms of this general permit (the permittee) is hereby granted a General Water Pollution Control Permit to acquire, construct, install, modify and operate a system or parts thereof for the discharge to land of treated wastewaters generated during exploratory and/or developmental drilling, well treatment operations, plugging operations and reworking of wells.

This permit is subject to the following terms and conditions: (1) The information submitted on and with the fluids/cuttings disposal and reclamation plan (Form WW-9) and Groundwater Protection Plan (GPP) will hereby be made terms and conditions of the permit with like effect as if all such information were set forth herein; (2) the approval of such form, plans, specifications and procedures by the Office of Oil and Gas; and (3) other conditions set forth in Sections A, B, C, D, E, F, and G of this permit. Site registrations submitted for pits which are not in conjunction with a well work permit shall include a letter of explanation detailing the proposed work for which the pit will be used. The Office of Oil and Gas reserves the right to require a site-specific permit for any such work.

Operators may apply for coverage under this general permit by submitting to the Office of Oil and Gas a fluids/cuttings disposal and reclamation plan form and a GPP containing the information required by the Office of Oil and Gas. Upon approval of such registration by the Office of Oil and Gas, the permittee may begin discharging in accordance with this permit. Because of the nature of the operations, it is recognized that in some instances it will be impossible to provide all data requested on the fluids/cuttings disposal and reclamation plan form at the time of its initial filing. In other cases, the information may change before the discharge takes place. Any changes or additions to information contained on the fluids/cuttings disposal and reclamation plan form shall be noted at the time of the filing of a discharge monitoring report (DMR); however, should a permittee elect to conduct a land application operation that was not indicated on the original fluids/cuttings disposal and reclamation plan form, the permittee shall file a revised site

fluids/cuttings disposal and reclamation plan form with the Office of Oil and Gas and serve a copy of that revised form on the surface owner of record at least 15 days prior to actual discharge.

This permit shall be subject to proposal for renewal by the Office of Oil and Gas every five years, unless adverse comment is received during the public notice and comment period as provided in W.Va. Code § 29A-1-1 et seq. Such public notice and comment opportunity shall be announced at least thirty days prior to planned renewal.

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. During the term of this permit the permittee is authorized to discharge to land wastewaters generated during exploratory and/or developmental drilling, well treatment operations, plugging operations and reworking of wells permitted under Article 6, Chapter 22 of the West Virginia Code. Such discharges shall be limited and monitored by the permittee as required in this permit.

2. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS FOR DRILLING PIT WASTE WATERS.

The permittee is authorized to discharge from outlet number(s) 001 treated wastewaters generated during exploratory/developmental drilling, reworking of wells, plugging operations and well treatment operations. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Limitations for Land Application</u>		<u>Monitoring Requirements</u>	
	<u>Discharge</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>
Volume, gallons	Monitor		Just Before Discharge Upon Occurrence	Estimate
Total Iron, mg/1 (Max.)	6.0		"	Composite
Dissolved Oxygen, mg/1 (Min.)	2.5 (a)		"	"
Settleable Solids mg/1 (Max.)	0.5		"	"
Chloride, mg/1 (Max.)	12,500		"	"
Total Aluminum	Monitor (b)		"	"
Oil and Grease, mg/1 (Max.)	Monitor (d)		"	"
Total Manganese, mg/1 (Max.)	Monitor		"	"
Flow, gallons/minute	Monitor		"	Estimate
Free or floating Oil	(c)		"	Composite

The pH shall not be less than 6.0 standard units and not greater than 10.0 standard units for land application and shall be monitored by using a composite sample. The pH shall be measured on site.

Samples taken in compliance with the predischARGE monitoring requirements specified above shall be taken from various locations in the pit. Refer to Section E.7. for records retention requirement. Refer to Section G. for other requirements.

Footnotes for Section A2

- a. Shall be measured on site.
 - b. Only when pH of wastewaters is equal to or greater than 9 S.U.
 - c. None other than in trace amounts, see also Section G.3.
 - d. Refer to Section G.14.
3. For the purposes of treatment as outlined in Section G.4, pits shall be categorized based on the following pre-treatment quality characteristics:
- a. Category 1 pits shall contain no stimulation flowback, hydraulic fracturing fluid or significant oil. The initial dissolved oxygen concentration must exceed 4.0 mg/l. Initial chloride concentration must be less than 5,000 mg/l.
 - b. Category 2 pits shall contain no significant oil. The initial dissolved oxygen concentration shall exceed 2.5 mg/l. Initial chloride concentration shall be treatable to obtain the necessary discharge concentration not to exceed 12,500 mg/l.
 - c. Category 3 pits shall contain no significant oil. Initial chloride concentration shall be treatable to obtain the necessary discharge concentration not to exceed 12,500 mg/l.
 - d. Category 4 pits shall contain no significant oil. Initial chloride concentration shall be treatable to obtain the necessary discharge concentration not to exceed 12,500 mg/l. These pits differ from Category 3 pits in that the Chief may authorize expedited treatment.
 - e. Pits not meeting the above listed pre-treatment criteria may not be treated and discharged to land.

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the provisions for waste treatment and the discharge limitations and monitoring requirements specified in this permit.

C. MANAGEMENT CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Permit noncompliance constitutes a violation of Section 7, Article 6, Chapter 22 of the West Virginia Code and is grounds for enforcement action; for permit modification, revocation and reissuance, suspension or revocation; or for denial of a fluids/cuttings disposal and reclamation plan form.

2. Duty to mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit.

3. Permit Actions

Authority to operate under this permit may be modified, suspended or revoked for cause. The filing of a request by the permittee for a change in its authorization or a notification of planned changes or anticipated noncompliance does not stay any permit condition. In addition, this permit may be modified, revoked and reissued, suspended, or revoked for any individual permittee without affecting the status of this permit as it applies to other individual permittees.

4. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege. (See also G.10.)

5. Signatory Requirements

All fluids/cuttings disposal and reclamation plan forms and GPPs, reports or information submitted to the Chief shall be signed and certified as follows:

(a) Applications. All permit applications shall be signed as follows:

- (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: DEP does not require specific assignments or delegations of authority to responsible corporate offices identified above. The Agency will presume that these responsible corporate officers have

the requisite authority to sign permit applications unless the corporation has notified the Chief to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes; (i) the Chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).
- (b) All reports required by permits and other information requested by the Chief shall be signed by a person described in paragraph (a), or by a duly authorized representative of that person. A person is a duly authorized person only if:
- (1) The authorization is made in writing by a person described in paragraph (a) of this section:
 - (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) The written authorization is submitted to the Chief.
- (c) Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Chief prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (d) For the purposes of this permit the discharge monitoring report (DMR) should be signed by a person knowledgeable of, and responsible for, the sampling and discharge of a drilling pit. This person can be a responsible

company representative or a contractor hired for the purpose of treating and discharging a drilling pit. If a company plans to designate a contractor to be its authorized representative for purposes of completing discharge monitoring reports, that company will provide a letter to the Chief in advance of the filing of a DMR indicating that the contractor will be the company's authorized representative for that purpose. It will be acceptable for a company to provide one letter to the agency identifying a contractor as an authorized agent for purposes of multiple discharges and completion of these reports for those sites.

- (e) Certification. Any person signing a document under paragraph (a), (b) or (d) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

6. Transfers

This permit is not transferable to any person, except after approval by the Chief. The Chief may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

7. Duty to Provide Information

The permittee shall furnish to the Chief, within a specified time, any information which the Chief may request to determine whether cause exists for modifying, revoking and reissuing, suspending, or revoking this permit, or to determine compliance with this permit. The permittee shall also furnish to the Chief, upon request, copies of records required to be kept by this permit.

8. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a fluids/cuttings disposal and reclamation plan form, or submitted incorrect information in a fluids/cuttings disposal and reclamation plan form or in any report to the Chief, it shall promptly submit such facts or information, except as noted on page 1 of this permit.

9. Inspection and Entry

Whenever required to carry out the objectives of this permit, the permittee shall allow the Chief, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- (a) Enter upon or through any premises in which an effluent source or activity is located, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy at reasonable times any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by Article 6, Chapter 22 of the West Virginia Code, any streams in the area as well as sample, monitor or analyze any effluents which the permittee is required to sample.

10. Permit Modification

This permit may be modified, suspended, or revoked in whole or in part during its term in accordance with the provisions of Section 12, Article 11, Chapter 22 of the West Virginia Code.

11. Water Quality

Any activities covered under this permit shall not lead to violation of surface or ground water quality standards. For each land discharge site, permittees shall file with the Office a Groundwater Protection Plan (GPP) in accordance with Title 47, Series 58 of the West Virginia Legislative Rules.

12. Outlet Markers

A marker at the establishment shall be posted at the general boundary of the land application area in accordance with the requirements of Title 35, Series 1, Section 6 of the West Virginia Legislative Rules.

D. OPERATION AND MAINTENANCE

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. Unless otherwise required by Federal or State law, this provision requires the operation of back-up auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass

(a) Definitions

- (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility; and
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations.

If required for essential maintenance to assure efficient operation, the permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded. Such bypass is not subject to the provisions of D.3.c. and D.3.d. of this permit.

(c) Notification of need for bypass

- (1) If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) If the permittee does not know in advance of the need for a bypass, notice shall be submitted as required in F.2.b. of this permit.

(d) Prohibition of bypass

- (1) Except as allowed under Section D.3.b. above, bypass is permitted only under the following conditions, and the Chief may take enforcement action against a permittee for bypass unless:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (C) The permittee submitted notices as required under D.3.c. of this permit.
- (2) The Chief may approve an anticipated bypass, after considering its adverse effects, if the Chief determines that it will meet the three conditions listed in D.3.d(1) of this permit.

4. Upset

- (a) **Definition.** “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- (b) **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of D.4.c. are met. Determinations made during administrative review of claims that noncompliance was caused by upset, and made before an action for noncompliance, is not final administrative action subject to judicial review.
- (c) **Conditions necessary for a demonstration of upset.** A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the specific causes(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in F.2.b. of this permit; and
 - (4) The permittee complied with any remedial measures required under C.2. of this permit.
- (d) Burden of proof. In any enforcement proceedings the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Removed Substances

Solids, sludges, filter backwash or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from violating water quality standards.

E. MONITORING AND REPORTING

1. Representative Sampling

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All samples required to be analyzed under this permit, unless otherwise noted, shall be analyzed by a West Virginia Certified Laboratory pursuant to Title 47, Series 32 of the West Virginia Legislative Rules.
- (b) In incidences where a specific test method is not defined, the permittee shall utilize an EPA-approved method with a method detection limit (MDL) sensitive enough to confirm compliance with the permit effluent limit for that parameter. If an MDL is not sensitive enough to confirm compliance, the most sensitive approved method must be used. If a more sensitive EPA-approved method becomes available, that method shall be used. Should the current and/or new method not be sensitive enough to confirm compliance with the permitted effluent limit, analytical results reported as "not detected" at the MDL of the most sensitive method available will be deemed compliant for purposes of permit compliance. Results shall be reported on the Discharge Monitoring Reports as a numeric value less than the MDL.

2. Protection of standards

The permittee shall conduct surface and/or groundwater sampling as directed by the Office of Oil and Gas to assure discharges have not caused a violation of water quality standards.

3. Reporting

- (a) Permittee shall submit after the discharge, according to the format returned to the permittee following site registration, a Discharge Monitoring Report (DMR) along with a lab analysis report from a certified lab indicating in terms of concentration and/or quantities, of the constituents listed in Section A.2. analytically determined to be in the pit effluent(s).
- (b) The required pre-discharge and discharge reports should be postmarked no later than 30 days following the discharge and be addressed to:

Chief
Office of Oil and Gas
Attention: Discharge Monitoring Reports
WV Department of Environmental Protection
601 57th Street, SE
Charleston, West Virginia 25304

- (c) Enter reported values under "Concentration" in the units specified for each parameter, as appropriate.
- (d) Specify the number of analyzed samples that exceed the allowable permit conditions in the columns labeled "N.E." (i.e., number exceeding).
- (e) Specify frequency of analysis for each parameter as number of analyses/specified period (e.g. "3/month" is equivalent to 3 analyses performed every calendar month). If continuous, enter "Cont.". The frequency listed in the permit is the minimum required.

4. Test Procedures

Any samples taken for analysis prior to treatment may be conducted using field test kits.

Prior to discharge, final samples shall be collected, preserved and analyzed in accordance with 40 C.F.R. Part 136 (regulations in effect at the time the samples are taken, preserved and analyzed as appropriate) unless other test procedures have been specified elsewhere in this permit. After final samples have been collected and analyses have been received, but prior to discharge, pit fluids shall be analyzed for pH and dissolved oxygen on site using field test kits to confirm suitability for land application.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- (a) The date, exact place, and time of sampling or measurement;
- (b) The date(s) analyses were performed;
- (c) The individual(s) who performed the sampling or measurement;

This information is not to be submitted to this agency, but is to be retained as required in E.7.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at any monitoring point specified in this permit more frequently than required by this permit, using approved test procedures or others as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report Form. Such increased frequency shall also be indicated.

Calculating for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Chief at any time during the retention period.

8. Definitions

- (a) "Daily discharge" means the discharge of a pollutant measured during a calendar day or within any specified period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

- (b) "Maximum daily discharge limitation" means the highest allowable daily discharge.
- (c) "Composite Sample" is a combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to discharge flow rates or the sampling interval (for constant volume samples) is proportional to the flow rates over the time period used to produce the composite. The maximum time period between individual samples shall be two hours.
- (d) "Grab Sample" is an individual sample collected in less than 15 minutes.
- (e) "Estimate" means to be based on a technical evaluation of the sources contributing to the discharge including, but not limited to pump capabilities, water meters and batch discharge volumes.
- (f) "Predischarge" means prior to commencement of the discharge.

F. OTHER REPORTING

1. Reporting Spills and Accidental Discharge

- (a) Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to Title 35, Series 1, Section 3 of the West Virginia Legislative Rules.

2. Immediate Reporting

- (a) The permittee shall report any noncompliance which may endanger health or the environment immediately after becoming aware of the circumstances by using the DEP's designated spill alert telephone number (1-800-642-3074). A written submission shall be provided within five days of the time the permittee becomes aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- (b) The following shall also be reported immediately to the Office of Oil and Gas.
 - (1) Any unanticipated bypass;

- (2) Any upset which exceed any effluent limitation in the permit; and
 - (3) Violation of maximum daily discharge limitation for any of the pollutants listed by the Chief in the permit to be reported immediately. This list shall include any toxic pollutant or hazardous substance, or any pollutant specifically identified as the method to control a toxic pollutant or hazardous waste.
- (c) The Chief may waive the written report on a case-by-case basis if the oral report has been received in accordance with the above.
 - (d) Compliance with the requirements of F.2. of this section shall not relieve a person of compliance with Title 35, Series 1, Section 3 of West Virginia Legislative Rules.

3. Reporting Requirements

- (a) **Planned changes.** The permittee shall give notice to the Chief as soon as possible of any planned physical alterations or additions to the permitted facility which may affect the nature or quantity of the discharge and of any planned changes in the method of operating the facility which may affect the nature or quantity of the discharge.
- (b) **Anticipated noncompliance.** The permittee shall give advance notice to the chief of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

4. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under the above paragraphs at the time monitoring reports are submitted. The reports shall contain the information listed in F.2.a.

G. OTHER REQUIREMENTS

- 1. The discharge of treated and untreated pit wastewater or sludge, caused by any reason such as, but not necessarily limited to, leaking, overflowing or an unstable, breached or un-reclaimed pit, into waters of the State is prohibited.
- 2. A temporary fence or suitable barrier shall be constructed surrounding the pit(s), as needed, to prevent vandalism or inadvertent livestock intrusion.
- 3. Before treating the pit, free-floating oil shall be skimmed off and removed from the pit. Then, a representative sample for D.O. shall be taken, analyzed and reported on the DMR as the pretreatment D.O. value for that site. This D.O. value is to be

used to determine the classification of the pit waste as to category (refer to Section A.3.). The permittee may utilize Category 3 requirements (Section A.3.) independent of this D.O. value. In addition, if free floating oil is observed (in the pit) before the discharge, it shall be skimmed off and removed.

4. Minimum Treatment Requirements

- (a) For Category 1 pit wastewaters, the treatment of pit waste shall include mixing and extended settling for at least five days.
- (b) For Category 2 pit wastewaters, the treatment of pit waste shall include mixing, aeration (as set forth in G.4.g.) and extended settling for at least ten days. If reaeration is required (to achieve the D.O. limit) prior to the final discharge, the settling time of at least 24 hours shall be provided before commencing the discharge.
- (c) For Category 3 pit wastewaters, the treatment of pit waste shall include mixing, aeration (as set forth in G.4.g.) and extended settling for at least 20 days. If reaeration is required (to achieve the D.O. limit) prior to the final discharge, the settling time of at least 24 hours shall be provided before commencing the discharge. This category may be utilized by the permittee without regard to the results of the pretreatment sampling analysis; however, such results shall be reported on the DMR.
- (d) For Category 4, the expedited treatment of pit wastewaters:
 - (i) Prior approval from the Chief shall be obtained.
 - (ii) The treatment of pit waste shall include mixing, aeration, addition of powdered activated carbon and settling for at least 24 hours.
 - (iii) Minimum amount of powdered activated carbon shall be 0.175 pound per barrel (42 gallons) of pit waste.
 - (iv) The pit and the drilling site shall be reclaimed (pit filled, seeded and mulched) within ten days. In specific cases, this requirement may be modified by the inspector under unusual circumstances.
- (e) The Chief or his authorized representative may reduce the required settling time for Category 1 and Category 2 pits to two and five days respectively, if the permittee agrees to begin implementation of the approved reclamation plan for the site in accordance with the schedule agreed to between the permittee and the Chief or his representative. No such provision exists for Category 3 pits.

- (f) Residues left in the pit shall be covered promptly with adequate soil within 30 days to prevent contact with the surface runoff and reduce the potential for pollution of surface water. Pit reclamation methods specified in DEP's technical manual are to be followed. In no case is the reclamation method to result in inadequate cover for the residues. Inadequately covered residues represent a violation of the terms and conditions of this general permit.
- (g) Category 2 and Category 3 pit wastewaters must be aerated equivalent to a minimum of two pit volume turnovers. The individual companies must supply to the Chief exact details of the aeration technique employed. The description may contain diagrams and/or narrative, but it must have sufficient detail so as to allow another party to duplicate the methodology.

More than one aeration technique may be used. DEP strongly encourages the use of more than one aeration technique on different pits. The DMR shall contain the information on aeration utilized for that site. DEP, after reviewing an individual company's aeration techniques and results, may require individual companies to employ other aeration techniques on a case-by-case basis.

- 5.
 - (a) Notification shall be given to the district oil and gas inspector at least 48 hours prior to treatment.
 - (b) Each discharge shall require at least 48 hours prior notification to a representative of the Chief in the district where the site is located.
 - (c) The inspector may allow a period of less than the 48 hours for notification at his/her discretion.
- 6. Land Application Measures:
 - (a) Land application shall not be carried out when the ground is saturated, frozen or impermeable for other reasons.
 - (b) Land application shall be carried out only on vegetated land (including the drilling site).
 - (c) No land application shall be made to cultivated garden plots regardless of season.
 - (d) The wastewater shall be applied at a rate that, given the characteristics of the land, shall not cause ponding, erosion or run-off into the waters of the State.
 - (e) There shall be no discharge of floating solids or visible foam or free oil in other than trace amounts.

- (f) There shall be a discharge device that ensures that the discharge shall be from near the surface of the water level in the pit and sludge shall not be discharged.
- (g) At the time of filing of the Discharge Monitoring Report required by E.3., the permittee shall furnish DEP a topographic map showing the location of the application site and providing the acreage covered by the land application.
- (h) The maximum chloride concentration allowable for land application is 12,500 mg/l. The permittee may use dilution to achieve this concentration.
- (i) Land application shall not be carried out on food crops.
- (j) Land application shall be carried out in such a manner as to minimize chloride loading into the soil. Minimum land areas to be used for discharge should be determined to prevent application of chlorides in excess of 3,500 lbs/acre. Chloride load shall be calculated based on the following formula:

$$Load \left(\frac{lbs}{acre} \right) = \frac{volume \ (bbls) * chloride \ concentration \ \left(\frac{mg}{L} \right) * 0.00035}{application \ area \ (acres)}$$

- (k) Multiple land applications over the same disposal area on multiple days may only occur in such a manner that the total chloride loading standard defined in Section G.6.j. is not exceeded.
- (l) Land application shall be limited to the area designated in the permittee's WW-9, the boundary of which shall be generally marked at the site. Methods of demarcation may include, but are not limited to: ribbons, stakes, tape lines, etc.

7. The following practices are prohibited:

- (a) The dumping of production brine (or produced water) from a production well into the pit;
- (b) The dumping of unused fracturing fluid or acid into the pit;
- (c) The dumping of compressor oil, trash, rubbish and other refuse into the pit;
- (d) The dumping of diesel, kerosene, halogenated phenol and drilling additives prepared in diesel or kerosene into the pit;
- (e) The dumping of any waste fluids after initial treatment of the pit waste into the pit; or

- (f) The dumping of radioactive materials or wastes containing radioactive materials into the pit.
8. Best Management Practices (BMPs):
- (a) All appropriate precautions shall be taken to prevent release of sediment and toxic materials into waters of the State during various phases of drilling activities such as, but not necessarily limited to, site planning and preparation, drilling and maintenance practices, materials and waste materials handling, pit construction, erosion and sediment control practices and reclamation of the drilling site.
 - (b) Waste oils, or other potentially harmful materials if left on site, temporarily, shall be stored in acceptable containers and handled in a manner that shall prevent them from entering the pit or waters of the State. Final disposal of these oils and other materials shall be conducted in an environmentally acceptable manner.
 - (c) Equipment maintenance shall be performed in a manner that shall minimize the contribution of waste to the drilling area.
 - (d) During drilling operations, empty solvent or oil containers left onsite shall be stored in a manner that prevents or minimizes the waste contribution to the site. After drilling, any such containers shall be disposed of properly.
9. Nothing in this general permit shall relieve the permittee of any obligations to comply with all applicable requirements relating to CWA Section 208, area wide waste treatment management practices and other requirements of law.
10. Nothing in this general permit shall be deemed in any way to create new, or enlarge existing rights of riparian owners or others. Neither does anything in this general permit create new, or enlarge existing, obligations or duties of an operator pursuant to the requirements of West Virginia Code § 22B-1-1 et seq. The issuance of this general permit does not convey any property rights of any sort, nor shall the issuance of this general permit give any presumptions of law or findings of fact inuring to or for the benefits of persons other than the State of West Virginia.
11. To be covered by this general permit, the operator of a facility or discharge site shall file a fluids/cuttings disposal and reclamation plan form and a GPP along with a \$100.00 filing fee with the Office of Oil and Gas. The operator shall be responsible for completing the fluids/cuttings disposal and reclamation plan form and serving it on the surface owner of record as listed on the oil and gas drilling well work permit along with the other oil and gas permit documents that are otherwise served on that surface owner. When the fluids/cuttings disposal and reclamation plan form is filed with the Office of Oil and Gas it shall be

accompanied by proof of service of the registration/application form to the surface owner of Oil and Gas at the time of the filing of an application for a permit from the Office of Oil and Gas for the well or well work associated with the facility or discharge. In any case, the form shall be filed with the Office of Oil and Gas and served on the surface owner of record no later than 15 days prior to the commencement of pit construction and/or discharge whichever comes first.

The operator may serve the surface owner of record by certified mail. Any such surface owner of record who has a reasonable belief that treatment and disposal methodologies may cause unreasonable harm to the land or the environment may request that the Office of Oil and Gas review certain site-specific conditions in order to determine whether special treatment and/or discharge under the provisions of the general permit are applicable. Such a request for review shall be made by the surface owner of record to the Office of Oil and Gas no later than 15 days after such owner has been served with the form. Such requests shall be forwarded in writing by the surface owner of record to the Chief, Office of Oil and Gas, West Virginia DEP, 601 57th Street SE, Charleston, West Virginia 25304 and shall be verbally communicated to the district Oil and Gas Inspector as soon as possible to ensure prompt review in the limited time frame.

If the Office of Oil and Gas agrees that the general permit conditions are not adequate and specific changes are needed because of water quality concerns such changes will be made. The Office of Oil and Gas will attempt to resolve such disputes cooperatively; however, if the parties cannot agree, the Office of Oil and Gas will invoke the provisions contained under Condition G.12. of this general permit to enforce such needed changes. Should the surface owner of record or the operator object to an action of the Office of Oil and Gas in addressing these site-specific concerns, that objection shall promptly be communicated to the Chief of the Office of Oil and Gas.

A landowner that has no objection to the proposed pit under the general permit, or otherwise has resolved with the operator whatever objections the landowner might have had, may waive the 15-day time period for administrative review and allow the commencement of pit construction and/or discharge, as appropriate, in advance of the running of the 15-day time period.

12. Conditions imposed by this permit should be protective of the environment. However, it is recognized that certain site-specific circumstances may be such that the permit conditions will not be adequate. In cases where this is determined to be the case, the Chief may temporarily suspend the coverage of the general permit to said site, and may require changes in the permit conditions for that particular site to address such problems.
13. If land application is proposed to occur off the tract of land on which the associated well is located, an operator must file a certification of approval of the surface owner of record of the site on which the land application will occur. This certification will

be required in all cases. A fluids/cuttings disposal and reclamation plan form (WW-9) and a GPP must be approved by the Chief no later than 15 days prior to discharge.

In addition, any proposed land application on the tract of land with the associated well must have prior approval of the Chief or his authorized representative. Approval shall not be given where a land application has occurred on a particular site within the past six months preceding the date of discharge unless specifically allowed by the Chief.


14. When oil and grease exceed 15 mg/1 (max), the operator shall submit, along with the DMR, an explanation of the cause of oil and grease at such a level, steps to be taken to reduce oil and grease below 15 mg/1, and prevent future exceedances.
15. This general permit will be reviewed by the Chief at time of reissuance, or earlier, for possible revisions. Based upon such review, revisions may be more or less stringent than the limitations, standards and conditions contained in this general permit.

The herein described activity is to be constructed or installed and operated, used and maintained strictly in accordance with the terms and conditions of this permit, with any plans, specifications, and information submitted with the individual fluids/cuttings disposal and reclamation plan form and a GPP, with any plan of maintenance and method of operation thereof submitted, and with any applicable rules and regulations promulgated by WVDEP.

Failure to comply with the terms and conditions of this permit and all relevant plans, specifications and information submitted which therein become provisions of this permit, shall constitute grounds for revocation or suspension and may result in the invocation of enforcement procedures set forth in Article 6, Chapter 22 of the West Virginia Code.

This permit is issued in accordance with the provisions of Article 6, Chapter 22 of the West Virginia Code.

This permit is issued in accordance with the provisions of Article 6, Chapter 22 of the Code of West Virginia and may be modified, suspended, or revoked in accordance with said Article 6.



James Martin, Chief
Office of Oil and Gas