91 7199 9991 7035 6665 9872

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

UIC Permit Reissuance

CAMP CREEK DISPOSAL SERVICES, INC.
Post office box 555
Rosedale, VA 24280-

Dear KENNY MORGAN,

Enclosed you will find the Underground Injection Control Renewal Permit # UIC2D0550319 dated January 11, 2016. Be advised that the duration of the permit is for a period of five (5) years.
Also be advised that all conditions established by the UIC Permit Number UIC2D0550319 either expressly or incorporated by reference, must be strictly adhered to. All monitoring forms shall be submitted to the Office of Oil and Gas in the manner and frequency prescribed. The monitoring forms will be compared with the scope of the permitted activity to verify compliance.
Please review the permit carefully and be aware of all permit conditions. Compliance of all permit conditions will be strictly enforced.

The operation of this injection well facility in general, including maintenance of all related surface equipment, shall be conducted so as to preclude any unlawful discharge of waste materials into the surface or ground waters of the state.

James Martin
Chief,
Office of Oil and Gas

Enclosures as stated

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James Martin
Chief,
Office of Oil and Gas

Enclosures as stated

UNDERGROUND INJECTION CONTROL PERMIT

For

Camp Creek Disposal Services, Inc.

Number UIC2D0550319

AUTHORIZATION TO OPERATE AN UNDERGROUND INJECTION CONTROL (UIC) INJECTION WELL PERMIT NUMBER # UIC 2D0550319

In compliance with provisions of the West Virginia Code, Chapter 22, Article 6, Article 11 and Article 12, as well as Legislative Rules, Title 47, Series 13 and Series 58, Title 47, Series 55, and Title 35 Series 1 and Series 4.

NAME	Camp Creek Disposal Services, Inc.	FACILITY TYPE	Brine Disposal
ADDRESS	P.O. Box 555	WELL API #	**47-055-00319**
ADDRESS	Rosedale, VA 24280	FIELD NAME	NA

is authorized by this permit to inject Class II fluids that are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection into the **Huron Shale** formations in accordance with the conditions set forth herein. The permitted injection depth shall be **4608** feet to **5720** feet. The injection well is located in **Mercer** County, 7.5' **Athens** Quadrangle. The coordinates for this injection well are:

UTM NAD 83 Northing **4149812.1** and UTM NAD 83 Easting **490704.2**.

The maximum permitted wellhead injection pressure is established as **1465** PSI.

All references to West Virginia Regulations are to those that are in effect on the date that this permit becomes effective.

Any person who holds a permit shall pay an annual permit fee in accordance with the provisions of Title 47 Series 9 section 7 of the Legislative Rule. The first annual permit fee shall be remitted to the Office of Oil and Gas one (1) calendar year from the date of permit issuance; subsequent annual permit fees shall be remitted on or before the anniversary date of the permit issuance. The annual permit fee for a Class II disposal well is twenty five dollars ($25). The permit becomes void if the annual permit fee has not been paid within one hundred eighty (180) days of the due date. The Chief shall not reissue a permit until all annual permit fees due during prior terms of that permit have been paid in full.

Failure to pay the annual groundwater fee of $75.00 for Class IID as required by the West Virginia Code, Chapter 22, Article 11 and/or Article 12, shall be cause for revocation of this permit. The annual permit fee is due on the anniversary date of permit issuance and shall be paid on the anniversary date of issuance of this permit.

Non-compliance with the terms of this permit shall be cause for revocation of Certification under the terms of Chapter 22, Article 12, and revocation of the permit under Chapter 22, Article 11 of the West Virginia Code.

This permit and its authorization to inject shall remain in effect for five (5) years from the date of issuance of the final permit provided all terms of the permit are met.

James Martin, Chief
Office of Oil and Gas

PART I

A. REAPPLICATION

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit an administratively complete application, along with application fee payment, for a new permit at least one hundred and eighty (180) days before this permit expires. ,

B. IMMEDIATE REPORTING

The permittee shall report any noncompliance which may endanger human health or the environment immediately after becoming aware of the circumstances by using the WVDEP Emergency Spill line number, 1-800-642-3074. Written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, permittee shall provide the anticipated time it is expected to continue; and the steps taken or planned to be taken to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported immediately:

i. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water (USDWs).

ii. Any non-compliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between the USDWs, or failure of mechanical integrity test demonstrations.

C. RIGHT OF APPEAL

Notice is hereby given of your right to appeal the terms and conditions of this permit by which you are aggrieved to the State Environmental Quality Board by filing a NOTICE OF APPEAL on the form prescribed by such Board for this purpose, with the Board, in accordance with the provisions of Chapter 22 Article 11, Section 21 of the code of West Virginia within thirty (30) days after the date of receipt of the above permit.

D. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit based on an approved permit application. The permittee shall not allow the underground injection activity authorized by this permit to cause or allow the movement of fluid containing any contaminant into underground sources of drinking water and may not cause a violation of any primary drinking water regulation or any health-based limit promulgated under 40 CFR Chapter 1, Part 142, of the Code of Federal Regulations, or of any water quality standard promulgated by the West Virginia Department of Environmental Protection/Division of Water and Waste Management. Any underground injection activity not authorized in this permit is prohibited. Compliance with the terms of this permit does not constitute a defense to any action brought under Part C and the imminent and substantial endangerment provisions in Part D of the Safe Drinking Water Act (SDWA) or any other common or statutory law for any breach of any other applicable legal duty.

E. PERMIT ACTIONS

1. This permit can be modified, revoked and reissued or terminated for cause specified in Chapter 22, Article 11 (hereafter §22-11), and Chapter 22, Article 12 (hereafter §22-12) of the West Virginia Code, and Title 47, Series 13 (hereafter 47 CSR 13) of the Legislative Rules. The filing of a request by the permittee for a permit modification, revocation and reissuance, suspension or revocation, or notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. Transfer of Permits. This permit is not transferable to any person unless notice is first provided to the Office of Oil and Gas and the permittee complies with requirements of 47 CSR 13-13.17. The Office of Oil and Gas

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 under the Safe Drinking Water Act (SDWA).

F. SEVERABILITY

The provisions of this permit are severable, and if any condition of this permit or the permittee's application of any provision of this permit to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of other provisions of the permit and the remainder of this permit shall not be affected.

G. DURATION OF PERMIT

This permit and the authorization to inject are issued for a period of five (5) years unless terminated under Part I Section H paragraph 11 of this permit. However, when through no fault of the permittee the West Virginia Department of Environmental Protection does not issue a new permit with an effective date on or before the expiration date of the previous permit and the permittee has submitted a timely administratively complete application as required in Part I section A of this permit, which is a complete application for a new permit, the expired permit shall continue to remain fully effective and enforceable.

H. GENERAL REQUIREMENTS

1. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the SDWA and the State Act and is grounds for enforcement action; for permit suspension or revocation, revocation and reissuance, or modification; or for denial of a permit renewal application. (47 CSR 13-13.12.a) Copies of UIC Program regulations (§22-11) may be obtained from the West Virginia Legislature's Web Site http://www.legis.state.wv.us/WVCODE/Code.cfm, and (47 CSR 13) may be obtained from the West Virginia Secretary of State's Web Site at http://www.sos.wv.gov/.

2. Duty to Reapply. If the permittee wishes to continue activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit as required in Part I section A of this permit as well as obtain a new permit.

3. Duty 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.

4. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on health of persons or the environment resulting from noncompliance with this permit.

5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities, systems of treatment and control, and related equipment which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, adequate security at the facility to prevent unauthorized access, adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of this permit.

6. Duty to Provide Information. The permittee shall furnish to the Chief within a reasonable time, any information which the Chief may request to determine whether cause exists for modifying, revoking and reissuing, 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. If the permittee becomes aware of any incomplete or incorrect information in the permit application or subsequent report(s), the permittee shall promptly submit information addressing these deficiencies to the Chief.

7. Inspection and Entry. 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 the permittee's premises where a regulated facility or activity is located or conducted, 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 for any substances or parameters at any location.

8. Penalties. Any person who violates a permit requirement is subject to civil penalties, criminal penalties, fines and other enforcement actions under §22-11 and §22-12.

9. Signatory Requirements. Only a duly authorized person may sign documents and reports associated with this permit.

   a. All reports required by this permit and other information requested by the Chief shall be signed as follows:

      (1) For a corporation, by a responsible corporate officer of at least the level of vice-president;

      (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 or a ranking elected official.

   b. A duly authorized representative of the official designated in paragraph a. above may also sign only if:

      (1) The authorization is made in writing by a person described in paragraph a. above;

      (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, and;

      (3) The written authorization is submitted to, and approved by, the Chief.

   c. If an authorization under paragraph (b) of this section is no longer accurate because a different individual 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. Any person signing a document under paragraph (b) of this section shall make the following certification: (47 CSR 13-13.11.d). "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

10. Property Rights. Issuance of this permit does not convey property rights or mineral rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, any infringement of State or local law or regulations, or any exclusive privilege.

11. Permit Actions. This permit may be modified, revoked and reissued, suspended, or revoked for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, suspension or revocation, or notification of planned changes or anticipated noncompliance, does not stay any permit condition.

12. Confidentiality of Information.

    a. In accordance with 47 CSR 13-13.21, any information submitted to the State pursuant to this rule may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions, or in the case of other submissions, by stamping the words "CONFIDENTIAL BUSINESS INFORMATION" on each page containing such information. If no claim is made at the time of submission, the State may make the information available to the public without further notice.

    b. Claims of confidentiality for the following information will be denied:

        i. The name and address of any permit applicant or permittee.

        ii. Information which deals with the existence, absence, or level of contaminants in drinking water.

13. Monitoring Reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

14. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than thirty (30) days following each schedule date.

15. Other information. Where a permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Chief, he/she shall promptly submit such facts or information.

16. It shall be unlawful for any person, unless an authorization has been issued by a groundwater regulatory agency, to deliberately allow crude oil, or any petroleum product derived from crude oil, or seepage, or natural gas, or condensate, or salt water, or any chemical mixture which may impact groundwater quality to escape from any well, pipeline, impoundment, storage tank, treatment unit, or storage container, or be deliberately allowed to flow onto or under the land surface in such a manner that could impact groundwater quality.

17. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution on any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any State or Federal law or regulation.

PART II

A. RECORD RETENTION

1. Required Records. The permittee shall retain all records concerning the permitted underground injection well until three (3) years after completion of any plugging and abandonment. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period.

B. MONITORING REQUIREMENTS

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the fluid to be analyzed and the procedure for analysis of the sample shall be in accordance with test procedures approved under 40 CFR 136.3, unless otherwise approved by the Chief. The permittee shall identify the types of tests and methods used to generate the monitoring data.

2. All environmental measurements required by the permit, including but not limited to, measurements of pressure, temperature, mechanical, and chemical analyses shall be done in accordance with state guidance on quality assurance. All analysis must be performed by a West Virginia certified laboratory.

3. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;
    b. The individual(s) who performed the sampling or measurements;
    c. The date(s) analysis(es) were performed;
    d. Individual(s) who performed the analyses;
    e. The analytical techniques or methods used; and
    f. The results of such analyses.

4. The permittee shall daily monitor all the casing annuli with pressure sensitive devices or with such a method as approved or required by the Office of Oil and Gas to allow early detection of any leaks from the injection zone or casing. The Permittee shall also monitor injection pressure, volume, and rate daily. This information shall be reported monthly using the Office of Oil and Gas electronic WR-40 Form. Submittal shall be through the current WVDEP Electronic Submittal System (ESS).

5. The Permittee shall utilize a pressure recording device, with an accuracy of +/- 1% of span, to continuously record the annulus pressure. Prior to injection the operator shall note the daily annulus pressure (daily baseline). Any deviation plus or minus 25 psi during injection of the daily baseline annulus pressure shall be considered a MIT failure.

6. The permittee shall sample, analyze and record the nature of all the injected fluid for the parameters listed in TABLE 1 below at the initiation of the injection operation and upon request by the Chief or whenever the operator observes or anticipates a change in the injection fluid.

TABLE 1

-pH	-Manganese
-Specific Gravity	-Total Dissolved Solids
-Barium	-Hydrogen Sulfide
-Specific Conductance	-Sodium
-Iron	-Alkalinity
-Magnesium	-Hardness
-Chloride	-Total Organic Carbon (TOC)
-Dissolved Oxygen	

7. Any analysis result of specific gravity greater than 1.2 or any analysis of TOC greater than 250.0 mg/L shall be reported to the Chief within twenty-four (24) hours of the results.

8. The permittee shall maintain a record (manifest) of every load of fluid received. The record shall include the hauler's name and signature, the operator's name and signature, API number for the well the fluid was collected or the location from where the load was obtained, the volume of the load and whether the load of fluid delivered was a split load. If the load was a split load, each operator's name and location shall be listed and, if possible, the volumes of fluid received from each operator documented. This information shall be maintained on the Class II disposal manifest attached to this permit and maintained at the facility.

9. A wellhead pressure gauge shall be installed and maintained on the injection tubing to facilitate inspection and ensure compliance of maximum injection pressures as approved on Oil and Gas Form WR-37. A daily reading of the injection pressure shall be taken and reported on Form WR-40.

10. All pipeline(s) from the injection pump to the injection well shall be tested for integrity at least once every four (4) years with the results reported and on WR-37 Form along with the pressure test recording graph/chart and then submitted to the Office of Oil and Gas within thirty (30) days. The pipeline integrity test shall pressurize the injection pipeline(s) to the maximum permitted wellhead injection pressure for a minimum of thirty (30) minutes, allowing for no more than five (5) percent loss after completion. The permittee shall notify the Chief of his or her intent to conduct an integrity test of the pipeline(s) no less than twenty-four (24) hours prior to such test. Upon failure of a mechanical integrity test or expiration of the four (4) year mechanical integrity test regulatory period, the permittee shall cease operation/injection and shut-in the well immediately until successfully repaired, replaced and then tested. Repairs shall be completed by the permittee and approved by the Office of Oil and Gas. All repairs shall be completed within ninety (90) days of the failure date. If repaired, the well must be re-tested and an updated WR-37 Form must be submitted to the Office of Oil and Gas for approval. Any change made to the pipeline fittings or piping will require integrity testing.

11. The permittee shall conduct a mechanical integrity test (see Attachment 3) of the injection well at a minimum frequency of once every four (4) years per 35 CSR 4-7.7.b. The MIT procedure, as set forth in Appendix 3, maybe deviated from with written approval from the WVDEP/Office of Oil and Gas. The permittee shall notify the Chief of his or her intent to conduct a mechanical integrity test no less than twenty-four (24) hours prior to such demonstration. The permittee must submit a WR-37 Form with each mechanical integrity test along with the pressure test recording graph/chart to the Office of Oil and Gas within thirty (30) days. Upon failure of a mechanical integrity test or expiration of the four (4) year mechanical integrity test regulatory period, the permittee shall cease operation/injection and shut-in the well immediately until successfully repaired, tested or permanently plugged and abandoned per regulation. Corrective action for repairs shall be completed for approval by the Office of Oil and Gas and be conducted within ninety (90) days of the failure date. If repaired, the well must be re-tested and an updated WR-37 Form must be submitted to the Office of Oil and Gas for approval.

12. In addition to the above requirement, a mechanical integrity test demonstration shall be conducted whenever protective casing or tubing is removed from the well, the packer is replaced or reseated, if well failure is likely, or as requested by the Chief. The permittee may continue operation only if he or she has successfully demonstrated to the Chief the mechanical integrity of the permitted well. The permittee shall cease injection operations if a loss of mechanical integrity becomes evident or if mechanical integrity cannot be demonstrated.

C. REPORTING AND NOTIFICATION REQUIREMENTS

1. 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.

2. Other Noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs Part I Section B, and Part II Section C Paragraph 3 of this permit, at the time monitoring reports are submitted. The report shall contain the information listed in Part I Section B of this permit. The permittee shall report all other instances of noncompliance in writing within ten (10) days of the time the permittee becomes aware of the circumstances. The reports shall contain the information listed in this permit.

3. Planned Changes. The permittee shall give notice to the Chief as soon as possible of any planned significant physical alterations, additions to the permitted facility, and/or any significant changes planned in the operation of the facility.

4. Cessation of Injection Activity. Any well which is not in use for a period of twelve (12) consecutive months shall be presumed to have been abandoned and shall promptly be plugged by the operator in accordance with the provisions in Chapter 22, Article 6 Section 24 of the West Virginia Code, unless the operator furnishes satisfactory proof to the Chief that there is a bona fide future use for such well.

5. Report on Permit Review. Within thirty (30) days of receipt of this permit, the permittee shall report to the Chief that he or she has read and understands and accepts all terms and conditions of the permit.

6. The owner or operator or person in charge of a facility subject to this rule from which a reportable discharge as described in subsection 3.3 of 35CSR1 occurs shall notify the Office of Oil and Gas by calling 1-800-642-3074 immediately; but in no case, later than twenty-four (24) hours after becoming aware of the discharge.

PART III

A. OPERATING REQUIREMENTS

1. Injection Fluid. The permittee shall not inject any hazardous substances, as defined by 40 CFR 261, or any other fluid, other than the fluids produced solely in association with oil and gas production operations.

2. Any well that penetrates the injection zone with an inactive and/or abandoned status within the permitted Area of Review, that does not have cement casing through the injection zone, shall be monitored immediately by a method approved by the Office of Oil and Gas, as well as properly plug and abandon such wells, as necessary.

3. Injection between the outermost casing protecting underground sources of drinking water and the wellbore is prohibited, as is injection into any USDW.

4. Corrective Action. The applicant must satisfy the requirement of the Office of Oil and Gas regarding any corrective action needed on all known wells penetrating the injection zone within the area of review. This must be done in a manner which satisfies the requirements of 47 CSR 13-13.9.

5. Loading and unloading stations shall have spill prevention and control facilities and procedures as well as secondary containment. Spill containment and cleanup equipment shall be readily accessible.

6. The permittee shall ensure that secondary containment for existing above ground storage tank(s) shall be adequately designed and constructed to be sufficiently impervious to prevent the released substance from penetrating the containment structure until the release can be detected and recovered, but in no case will that time be less than seventy-two (72) hours.

7. The above ground storage tank(s) associated with this underground injection facility shall have secondary containment sufficient capacity to contain 110% volume of the largest tank. Tank batteries or tanks connected in series by manifold, the combined volume of the tanks must be considered if the tanks are capable of simultaneous release. The combined capacity of the tanks connected by manifold shall be considered, unless the tanks are operated in a manner that prevents fluids flowing from one tank to another under any conditions.

8. Above ground tanks connected in series by manifold shall utilize a system where valves are closed and locked to isolate tanks when their combined volume exceeds the secondary containment capacity. At no point in time shall the combined volume be accessible through the manifold system exceed the capacity of the secondary containment without someone being on site to monitor.

9. Pumps and ancillary equipment (e.g. valves, flanges, filters, condensate lines and instrumentation) handling materials that have the potential to contaminate groundwater shall be selected and installed to prevent or contain any spills or leaks.

10. Sumps containing materials which have the potential to contaminate groundwater shall be designed,

constructed, and operated utilizing leak detection or secondary containment, or other appropriate controls that are capable of preventing groundwater contamination.

11. No third party haulers shall be permitted without approval by the Office of Oil and Gas. For approval, the permittee shall designate by letter to the Office of Oil and Gas, any third party hauler proposed to be used for the transportation of fluids to the facility. The third party hauler may not commence transportation of fluids to the facility until approved by the Office of Oil and Gas.

12. Facility Security. The gate on the access road to the site shall be closed and locked at all times when there is not a company representative at the facility. All valves, water drains, containment areas, and storage areas shall be secured and locked utilizing locking devises and/or plugs. During the life of this permit all gates and access points shall be secured and locked while no representative is at the facility. All visitors must check in upon arriving at the facility. Haulers (if used) shall not be allowed to off load without the proper paperwork and documentation.

B. PLUGGING AND ABANDONMENT

1. Any well which is not in use for a period of twelve (12) consecutive months shall be presumed to have been abandoned and shall promptly be plugged by the operator in accordance with the provisions of Chapter 22, Article 6, of the West Virginia Code, unless the operator furnishes satisfactory proof to the Chief that there is a bona fide future use for such well.

2. Prior to well plugging, the permittee shall apply for and receive a plugging permit from the Office of Oil and Gas to plug and abandon the well in accordance with an approved plugging and abandonment plan.

3. Plugging and abandonment shall be conducted in a manner to prevent movement of fluids into or between underground sources of drinking water.

4. Pursuant to Legislative Rule 47-13-13.7.f, the permittees plugging and abandonment plan shall be incorporated into the UIC permit. See attachment 1.

PART IV

A. SITE SPECIFIC CONDITIONS

1. Appendix A: Specific operational conditions.

2. Appendix H: Groundwater Protection Plan (GPP) The GPP shall be maintained and updated as necessary to protect groundwater quality.

3. Appendix I: Requirement for Financial Responsibility to plug/abandoned an injection well.

4. Attachment 1: Plugging and Abandonment Plan.

5. Attachment 2: Site/Facility Diagram.

6. Attachment 3: Mechanical Integrity Testing (MIT) Procedure

APPENDIX A

1) GEOLOGIC TARGET FORMATION Huron Shale

Depth 4,608 Feet (top) 5,720 Feet (bottom)

2) Estimated Depth of Completed Well, (or actual depth of existing well): 5,876 Feet

3) Approximate water strata depths: Fresh 22, 93, 225, & 310 Feet Salt N/A Feet

4) Approximate coal seam depths: N/A

5) Is coal being mined in the area? Yes _____ No X

6) Virgin reservoir pressure in target formation 780 psig Source Field Estimate

7) Estimated reservoir fracture pressure 3,985 psig (BHFP)

8) MAXIMUM INJECTION OPERATIONS:

Injection rate (bbl/hour) 100

Injection volume (bbl/day) 2,400

Injection pressure (psig) 1,465

Bottom hole pressure (psig) 3,687

9) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES

Produced fluids from various production wells and coalbed methane wells, along with pipeline fluids and drilling pit fluids, additives to be determined

Temperature of injected fluid: (°F) Ambient

10) FILTERS (IF ANY) 3 phase filtering form 100 micron to 5 micron

11) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

N/A

APPENDIX A (cont.)

12. Casing and Tubing Program

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	12 ¾ "	New	LS		21	21	Sand in
Fresh Water	9 ⅝"	New	N/A	26	225	225	410 sks
Coal							
Intermediate 1	7"	New	LS	17	1,281	1,281	230 sks
Intermediate 2							
Production	4 ½"	New	M-65	9.5	5,828	5,828	410 sks
Tubing	2 ⅜"	New	J-55	4.6		4,595	
Liners							

TYPE	Wellbore Diameter	Casing Size	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)	Cement to Surface ?
Conductor							
Fresh Water							
Coal							
Intermediate 1							
Intermediate 2							
Production							
Tubing							
Liners							

Packers

	Packer #1	Packer #2	Packer #3	Packer #4
Kind:	Tension Packer			
Sizes:	2 ⅜" X 4 ½"			
Depths Set:	4,563'			

APPENDIX H

GROUNDWATER PROTECTION PLAN

Facility Name: Camp Creek Disposal Services

County: Mercer

Facility Location:

Postal Service Address:	P.O. Box 555 Rosedale, Va	24280
Latitude and Longitude:	54965.188	590700.520

Contact Information:

Person:	C. Thomas Shrader
Phone Number:	276-880-2323
E-mail Address:	pitstop@mounet.com

Date: 8/26/2014

1. A list of all operations that may contaminate the groundwater.

The well is grouted the entire depth to the confining layer. The disposal layer is confined above and below by shale that lacks porosity and that has no fractures or porosity streaks. These characteristics make the shale great at containing fluids. Therefore, any groundwater contamination would originate from surface contamination. The main possibility of a contamination comes from the pipes and pumping station on the site (i.e. a leak or break down of a section of pipe or a pump malfunction).

2. A description of procedures and facilities used to protect groundwater quality from the list of potential contaminant sources above.

Berms are constructed around the above ground storage tanks and the well head itself to prevent and contain any type of spillage. Several pumps are in place on the pipes and pumping station to immediately stop and depressurize the system in case of a spill or malfunction of the system. Also, the initial two inch steel pipe leading to the well head is double cased within a four inch pipe.

3. List procedures to be used when designing and adding new equipment or operations.

A lock out and tag out procedure will be used to shut down all pumps while new equipment is being installed. The pipes will be depressurized and drained before any parts of the system will be serviced or replaced. ENPAC portable spill pallets will be used to catch any small remnants of fluid from the exposed pipes. Any fluid caught will be placed back into the storage tanks to be processed through the pumping system and disposed of into the well.

4. Summarize all activities at your facility that are already regulated for groundwater protection.

The well is grouted, there is a cinder block containment with a concrete base in place around the above ground storage tanks. Also, the brine water is stored in storage tanks to prevent spillage onto the ground and the tanks themselves are in a concrete containment to catch any leakage in case a tank does malfunction. Pipes are used to safely transport the material from the tanks to the well. Gauges are used to monitor this transport of fluids.

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

There are three water wells within the area near the disposal well. The water analysis shows that the water wells are not affected or influenced by the disposal well at all. The water wells are drilled to a maximum of 200' while the disposal well is approximately 5,876' deep. Also, the analysis illustrates that there is no leaching, flow or contact of the injection fluid and the USDW.

6. Provide a statement that no waste material will be used for deicing or fill material on the property unless allowed by another rule.

No waste material from the well or above ground storage tanks will be used for deicing or fill material. All fluid on site being stored in the above ground storage tanks will be pumped directly into the disposal well.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direotion on how to prevent groundwater contamination.

The employees will be trained and familiar with the GPP and will be trained in the maintenance and inspection of the equipment on site to better prevent a spill. Employees will also be trained in proper cleanup procedures according to the GPP.

8. Include provisions for inspections of all GPP elements and equipment. Inspections must be made quarterly at a minimum.

All pipes and pumps will be inspected to insure no leaks or spills. Storage tanks will also be inspected to prevent any leakage. The pumps and pipes will be regularly tested to insure they are functioning properly (i.e. that the pumps and pipes are pressurized normally).

Signature: Tommy Shuler

Date: 9/12/14

-(4/25)

APPENDIX I

Requirement for Financial Responsibility to Plug/Abandon an Injection Well

To: WV Department of Environmental Protection
Office of Oil and Gas
601 57th Street, SE
Charleston, West Virginia 25304-2345
ATTN: Underground Injection Control Program

From: Camp Creek Disposal Services
P.O. Box 555
Rosedale, VA 24280

Date: 9-12-14

Subject: Underground Injection Control (UIC) Permit Application
047-055-00319
Requirement for Financial Responsibility

I, Tommy SHRADER, verify in accordance with 47CSR13-13.7.g., that I will maintain financial responsibility and resources to close, plug, and abandon underground injection wells(s) in a manner prescribed by the Chief of the Office of Oil and Gas.

Name: Tommy SHRADER

Signature: Tommy Shrader

Date: 9/12/14

RECEIVED
dep
Office of Oil and Gas
Environmental Protection

Attachment 1

Plugging and Abandonment Plan

For

UIC# 2D0550319

Camp Creek Disposal Services Inc.
P.O. Box 555
Rosedale, VA 24280
Phone: (276) 880-2323

Received
SEP 8 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

Table of Contents

List of Appendices

Introduction

This Plugging and Abandonment (P&A) Plan for this facility has been prepared to meet all the applicable requirements of the West Virginia Department of Environmental Protection Office of Oil and Gas.

Unsealed or improperly sealed wells may threaten public health and safety, and the quality of groundwater resources. Therefore, the proper abandonment of a well is a critical final step in its service life.

This plan will ensure that this facility properly plugs and abandons their disposal well if and when its ability to accept brine fluid has reached its maximum potential and economic operations have ended, the well encounters a problem that cannot be economically repaired, or the bottom hole location of the well will be moved to a higher elevation.

This plan shall isolate and protect all fresh and near fresh water zones, isolate and protect all commercial producing horizons for future development, and prevent leaks from or into the well.

1.0 General Facility Information

Name:	Camp Creek Disposal Services Inc.
Address:	Exit 20, I-77 N Camp Creek, WV (276) 880-2323
Geographic Location	USGS Quadrangle: Princeton, WV Latitude: 37°29'32.68N Longitude: 81°06'14.61"W County: Mercer
Owner/Operator:	Camp Creek Disposal Services Inc. 19708 Highway 19 Rosedale, VA 24280 (276) 880-2323
Primary Contacts:	1. Tommy Shrader, President Office: (276) 880-2323 2. Zachary Reed, Vice-President Office: (276) 880-2323

1.1 Location and Activities

The Camp Creek Disposal Services Inc. brine water storage is located in Mercer County, West Virginia near I-77. The facility is a brine water storage and disposal facility on an area of approximately 3-7 acres, off Interstate 77 North, Exit 20, Near Camp Creek. A Location Map (Figure A-1) is included in Appendix A depicting the location of this facility.

The facility is a brine water disposal plant, which disposes of brine water products used in gas well production. Brine water is stored on site in bulk containers for disposal.

The plant operates 6 days per week, year round. This office is attended from 8:00 am to 5:00 pm, Monday through Friday, with variable operation on Saturday, Sunday and holidays. A facility layout drawing (Figure A-2) showing the location of brine water storage structures is shown in Appendix A.

2.0 Well Characterization

Effective abandonment will depend on knowledge of the wells construction, geology, and the hydrogeology. The importance of a full characterization increases as the complexity of the well construction, site geology, and the rick of aquifer contamination increases. A Drill Log for Camp Creek Disposal Services well is included in Appendix B.

2.1 Well Preparation

If possible, the borehole must be cleared of obstructions prior to abandonment. Obstructions such as pumps, pipes, wiring, and air lines must be pulled. All obstacles must be removed from the borehole. An attempt should be made to pull the casing when it will not jeopardize the integrity of the borehole.

Damaged or poorly constructed wells may need to be redrilled in order to apply proper abandonment techniques. In a situation where intermixing of aquifers is likely, the borehole may need to be redrilled.

3.0 Materials and Methods

Sealant will be used the plugging and abandonment of the well to provide a watertight barrier to the migration of water into the well bore, in the annular spaces or in fractures and openings adjacent to the well bore. Sealants usually consist of Portland cement based grouts, "bentonite" clay "pills", or combinations of these substances. Additives are frequently used to enhance or delay specific properties such as viscosity, setting time, shrinkage, or strength.

This disposal well shall use a combination of neat cement grout and concrete grout as its sealants. Neat cement grout is generally formulated using a ratio of one 94lb. bag of Portland cement to no more than 6 gallons of water. This grout is typically used for sealing small openings, for penetrating any annular space outside the casings, and for filling voids in the surrounding rocks. Concrete grout consists of a ratio of not more than 6 gallons of water, one 94lb. bag of Portland cement, and an equal volume of sand. This grout is typically used for filling the upper part of the well above the water bearing zone, for plugging short sections of casings, or for filling large-diameter wells.

3.1 Recommendations and Methods

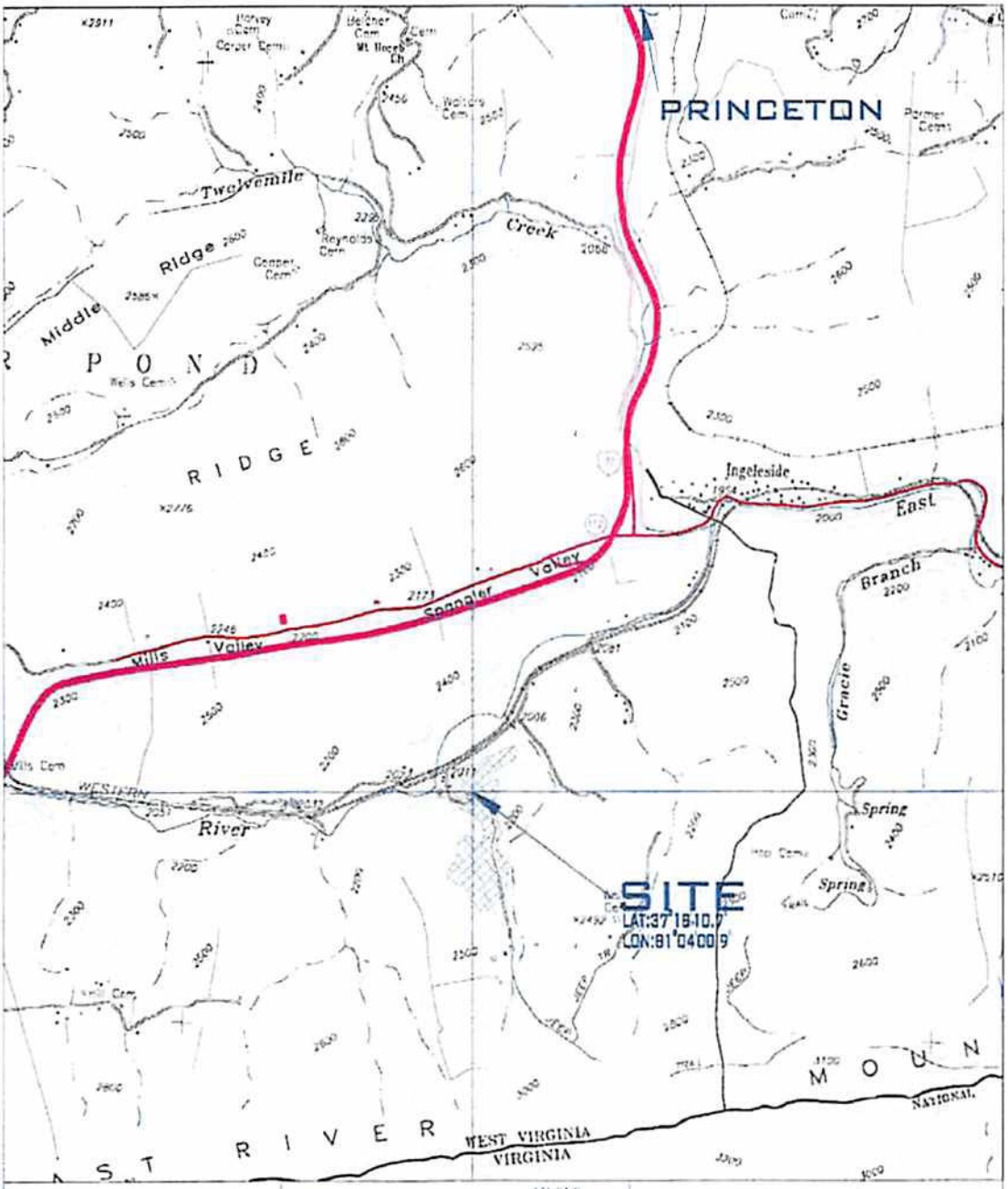
Using the Drillers Log attached Appendix B, the location of cement plugs shall be determined. The Drillers Log should identify the depths to perforations, joints, packers, etc. Cement to be pumped into the borehole using a tremie pipe.

1. Prior to the plugging and abandonment of the injection well the applicant will submit a revised plugging and abandonment plan to the director of the Underground Injection Control program (UIC) for review and approval.
2. A pressure mechanical integrity test should be performed on the well. The pressure test will be witnessed by the UIC and the test procedure will follow UIC Program procedures for pressure testing the disposal well. If leakage is indicated by the test, the location of the leakage will be identified, the impact to the environment evaluated, and this information submitted to UIC. An environmental remediation plan and implementation schedule and/or a repair plan will be submitted to the UIC for review and approval. No work will commence until the plan has been approved by the UIC.
3. The tubing and packers will be removed from the well.
4. A cement bond log and a gamma ray-neutron log will be run on the well and any other tests or logs determined necessary by UIC. The logs and test results will be submitted to UIC for review and approval. The logs and test results will include an interpretation of the log and tests by a person with the technical expertise to evaluate the data.
5. Based on the evaluation of the logs and tests conducted on the well, a plan for remedial work must be submitted to UIC for review and approval. The remedial work, determined necessary by UIC, will be performed. Remedial work will not commence until the plan has been approved by the UIC.
6. A cement retainer will be set at the base of the long string casing just above the injection interval. Failure risk shall be minimized by ensuring crossflow can be stopped. Use a tubing end plug with circulation to the side and upward, not downward. Use a heavily gelled bentonite "pill" below the cement plug depth. Use a custom spacer to separate the pill and the cement slurry. Use viscous thixotropic cement with setting time equal to the job time plus ½ hour. Rotate the centralized tubing during placement and gently withdraw at the end of pumping.
7. Cement will be displaced through the retainer, squeezing the injection interval with cement.
8. Perforations shall be identified and cement plugs shall be placed 100 ft. above and below perforations.
9. The well will be filled with neat cement grout and abandonment mud as needed.
10. Within 150 feet of the surface, a surface plug of concrete grout shall be placed in the borehole for strength.
11. The cement level will be observed in the casing after cement has set for 24 hours. If cement has fallen back, the casing will be filled with cement back to surface.
12. A metal cap will be welded to the casing inscribed with the UIC permit number and the date the well plugging was completed.
13. A map showing the tri-coordinate location (includes elevation) of the remaining wellhead prepared by a licensed professional land surveyor or professional engineer licensed to practice will be submitted to the UIC.
14. A plugging report with related details will be submitted to the UIC within 30 days of completing the plugging operation on a form provided by UIC. The work done with appropriate service company cementing reports and "day" reports will be submitted to the UIC.

4.0 Plugging Permit Packet

See Appendix D.

Appendix A
Location Map



APPENDIX A

LOCATION MAP

SCALE: 1" = 2000' DATE: 1/07/14

Appendix B
Well Drillers Log

WELL DETAIL SUMMARY REPORT

Today: 4/15/2009 Page: 1
As Of: 4/15/2009

Dominion WELL: [illegible] Event: 1 Description: DEVELOPMENT DRILL & COMPL

WELL ID#: [illegible]	API#: 4703900310
Prod: 98552	State: WV County: WYOMING
Company ID: 0571	Operator: DOMINION EXPLORATION & PRODUCTION
Well Type: DEV	Plan Formation: LOWER HURON
PLAN NO. 5803 Rptg: STOVALL RIDGE	Permit:
Spud Date: [illegible] Permit:	T.D. Date: TC Date: [illegible]
TD: 3,672 TVD: 0 PBTD: 0 Date:	Contractor:
CWC:	Rig Name:
GL: 2310 KB:	Rig Name: GASCO RIG #3

Operations @ Report Time: WELL SOLD (EFFECTIVE)

Initial Production Rates: MCFD: BOPD: BWPD: SICP: FCP: Tubing:

CASING DATA

Casing String	OD size	Weight	Grade	Conn	Hole Size	Shoe Depth	Pkr Depth	% Cmt	Comments

CEMENT DATA

Casing String	Slurry Proc	Cmt Type	Sacks	Wt. Returns	Additives

ZONE PERFORATION DATA

ZONE	DATE	Start Depth(ft)	End Depth(ft)	Total Shots	Hole Size	Comments

STIMULATION DATA

ZONE	DATE	Vol(bbls)	Prop	Max BD Conc	Total N2 (mscf)	Max Pres(psi)	Avg Rate/Avg Pressure	Comments

Operations Summary

Date : 4/15/2009
04/14/09 WELL SOLD TO GAS FIELD SERVICES APRIL 1, 2009.
Date : 4/14/2009
03/28/08 RU SLB W/ PUMPED 12 BBL FRESH WATER DOWN THE TUBING INTO THE SHALE
THEN WELL WENT ON VACUUM. PUMPED @ 3.0 BBL/MIN - 0#, 4.6 BBL/MIN - @ 50#.
PUMPED 510 BBL INTO THE SHALE. INJECTED THROUGH THE ANNULUS OF TUBING
AND 4-1/2" CASING INTO SALES LINE. PUMPED 500 BBL OF FRESH WATER.
3.0 BBL/ MIN - 0#, 4.0 BBL/MIN - 100#. SION EVALUATING.
Date : 9/30/2008
03/28/08 RU SLB W/ PUMPED 12 BBL FRESH WATER DOWN THE TUBING INTO THE SHALE
THEN WELL WENT ON VACUUM. PUMPED @ 3.0 BBL/MIN - 0#, 4.6 BBL/MIN - @ 50#.
PUMPED 510 BBL INTO THE SHALE. INJECTED THROUGH THE ANNULUS OF TUBING
AND 4-1/2" CASING INTO SALES LINE. PUMPED 500 BBL OF FRESH WATER
3.0 BBL/ MIN - 0#, 4.0 BBL/MIN - 100# SION EVALUATING.
Date : 9/29/2008
09/28/08 RAN 148 JTS 2 3/8" [illegible] TUBING, SET @ 4595.45' 4-1/2" PACKER SET @ 4593.15
Date : 9/26/2008
09/25/08 MIRU GFS SERVICE RIG. FILLED TK - 750 BBL TANKS FOR INJECTION TEST SOON.
Date : 9/25/2008
4/27/07 EVALUATING
Date : 8/17/2007
4/27/07 165# SICP. SWABBED HIT FLUID @ 3900'. SWABBED TO 4800'. FLUID STAYING AT 4800'.
8 HR OPEN FLOW - 20 TENTHS ON 1" - 47 MCF/D. EVALUATING
Date : 4/27/2007
4/26/07 195# SICP. SWABBED TO 5100'. FLUID (BRINE) LEVEL STAYING @ SION
MAKING @ 10 BBL/HR OF BRINE. IS SWABBED. 8 HR OPEN FLOW - UNABLE NOT
MEASURE ON 2" - <50 MCF/D
Date : 4/26/2007
04/25/07 SICP - 200# SWABBED TO 4500' WELL SURGING. 8 HR OPEN FLOW - 18 TENTHS
ON 2" - 175 MCF/D
Date : 4/25/2007
4/24/07 700# SICP. DRLD OUT REMAINING BAFFLES AND CHECKED TO @ 5700'. SAND PUMPED
TO 5705', WELL SURGING. 8 HR OPEN FLOW - 16 TENTHS ON 2" - 160 MCF/D SION
Date : 4/24/2007
04/23/07 MI GFS SWAB RIG. 720# SICP. DRLD OUT BAFFLE @ 2335'. WELL SURGING
8 HR OPEN FLOW -20 TENTHS ON 2" - 185 MCF/D. S.O.N.
Date : 4/22/2007
04/17/07 FLOWED WELL ON THROUGHOUT DAY BLOWING WITH A STEADY W/ LIGHT MIST
24 HR OPEN FLOW - 24 ON 2" - 1.20 MMCF/D.

Date : 4/18/2007
4/17/07 PERFORATED 6 STAGE FRAC W/ SLB AND KEY ENERGY

Received
SEP 8 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

Operations Summary

LOWER HURON (1) 5540'- 5720' (20 HOLES) - 75 Q FOAM FRAC - 15,171# 20/40 SAND.
152 BBL CLEAN FLUID, 444,000 SCF N2, BDP 2555#, ATP 2810#, AIR 25.1 BPM.
UPPER HURON (2) 5120'- 5124' (20 HOLES) PUMPED 500 GAL 15% HCL
(DROPPED 3 1/4" FRAC BALL) - 75 Q FOAM FRAC - 20,024# 20/40 SAND, 159 BBL CLEAN
FLUID, 420,700 SCF N2, BDP 3000#, ATP 2667#, AIR 25.1 BPM
SHALE FRACTURE (3) 4606'- 4910' (21 HOLES) PUMPED 500 GAL 15% HCL
(DROPPED 3 3/8" FRAC BALL) - 75 Q FOAM FRAC - 15,279# 20/40 SAND, 147 BBL CLEAN
FLUID, 272,200 SCF N2, BDP 2515#, ATP 2116#, AIR 25.1 BPM.
PICKAWAY (4) 2560'- 2572' (12 HOLES) - PUMPED 500 GAL 15% HCL
(DROPPED 3 1/2" FRAC BALL) - ACID/ N2 ASSIST - 3000 GAL OF 28% HCL, 98 BBL CLEAN
FLUID, 46,200 SCF N2, BDP 1500#, ATP 980#, AIR 10 BPM
LIME FRACTURE (5) 2262'-2272' PUMPED 500 GAL 15% HCL
(DROPPED 3 3/4" FRAC BALL) - ACID / N2 ASSIST - 3000 GAL OF 28% GELLED ACID.
70 BBL CLEAN FLUID, 50,400 SCF N2, BDP 1450#, ATP 947#, AIR 10 BPM. ISIP 1154#.
5 MIN SIP 1071#. OPENED WELL ON 3/8" CHOKE TO PIT AND WORKED UP TO 2"
OVERNIGHT. 10# ON 2" AND RECOVERED 2 FRAC BALLS, 2 FRAC BALL REMAINING.
FLOWING WELL TO PIT ON 2" (REPORT TIME 4/18)

Date : 4/17/2007

4/16/07 RU KEY ENERGY AND RAN BOND LOG. TD - 5817', TOC - 1140'.

Date : 4/16/2007

4/5/07 ROMO GASCO RIG #3

Date : 4/9/2007

4/5/07 DRLD 6-1/2" HOLE THROUGHOUT DAY. TD 6 1/2" HOLE @ 5073' ON A/D TOOH
LOGGED W/ WFT. LTD - 5075' PAY ZONES IN LOWER HURON, UPPER HURON,
DEVONIAN SHALE FRACTURES, PICKAWAY AND UNION. RAN 137 JTS 4 1/2" (M65, 9.5#)
CSG PLUS 3 PUPS, TP 5924' SET @ 5926' KB. LD INSERT - 5818'. RAN 7 CENTRALIZERS
AND 3 BASKETS 3.08" BAFFLE - 5519', 3.285" BAFFLE - 4667' 3.395" BAFFLE - 2675',
3.50" BAFFLE - 2335', MARKER JT - 2155'- 2165'. GAS CHECK @ TD AFTER CSG - TRACE
RU SLB AND CEMENT W/ 410 SAX C8L POZ (1.42 YLD). PUMPED 3 BBL FW AHEAD.
DISPLACED W/ 500 GAL 15% HCL AND 83 BBL TW. GTS PD @ 7:20 AM. (4/7) BUMPED
PLUG TO 600#. SDOW, WAITING TO BOND LOG. (REPORT 4/8) 323' LAST 24 HOURS

4/5/07 DRLD 6-1/2" HOLE THROUGHOUT DAY. DRLG 6-1/2" HOLE ON A/D @ 5550'.
1170' LAST 24 HOURS

Date : 4/5/2007

4/4/07 DRLD 6-1/2" HOLE THROUGHOUT DAY. DRLG 6-1/2" HOLE ON A/D @ 4380'
GAS CHECKS - 3200' - 133 MCF/D, 3400' - 133 MCF/D, 3700' - 133 MCF/D,
4200' - 133 MCF/D RIG BROKE DOWN (REPORT 4/5 - 8:30AM) 1630' LAST 24 HOURS

Date : 4/4/2007

4/3/07 FINISH WOC. TIH W/ 6-1/2" HAMMER BIT AND RESUME DRLG. DRLD 6-1/2" HOLE
THROUGHOUT DAY. GAS CHECK @ 2281' - 12 TENTHS ON 7" - 1.519 MMCF/D.
GAS CHECK @ 2503' - 4 TENTHS ON 7" - 877 MCF/D DRLG 6-1/2" HOLE ON
A/D @ 2750'. (4/4) 1434' LAST 24 HOURS

Date : 4/3/2007

4/2/07 TD 8-7/8" HOLE @ 1315' ON A/D. MADE BIT TRIP @ 1050'. TOOH.
RAN 29 JTS 7" (17#, LS) CSG SET 1281'. RU SLB AND CEMENT W/ 230 SAX OF
CLASS A - 2% CACL2 - 1/4 PPS FLAKE (1.20). GTS PD @ 11:30 PM. WOC.
(REPORT TIME 4/3) 515' LAST 24 HOURS

Date : 4/2/2007

4/1/07 FINISH WOC. TIH W/ 8-7/8" HAMMER BIT. RESUME DRLG. DRLD TO 310' HIT 2" WATER
STREAM. CONT. DRLG TO 350'. TOOH. TIH W/ OPENENDED DRILL PIPE. RU SLB AND
CEMENT 60 SKS CEMENT PLUG W/ TYPE I + 10 PPS GYPSUM + 2% CACL2 + 10 PPS
KOLITE (13.8 PPG, 1.79 CF/SK). JOB COMPLETED @ 5:00 PM. WOC. TIH W/ 8-7/8"
HAMMER BIT AND RESUME DRLG. DRLG 8-7/8" HOLE @ 800' ON A/D
450' LAST 24 HOURS

3/31/07 RU SLB AND CEMENT 9-5/8" W/ 200 SAX OF CLASS A + 2% CACL2 + 1/4 PPS
FLAKE (1.20). GTS (100 SKS). PD @ 5:30AM. WOC. TIH W/ 8-7/8" HAMMER BIT
AND RESUME DRLG. ENCOUNTERED 3" STREAM OF WATER @ 225'. TOOH. RU
SUPERIOR AND SQUEEZED 50 SKS OF TYPE I + 10 PPS GYPSUM + 2% CACL2 + 10 PPS
KOLITE (13.8 PPG, 1.79 CF/SK). JOB COMPLETED @ 11:30 PM. BEGIN WOC. 1' LAST
24 HOURS

3/30/07 MIRU GASCO RIG #3. SPUD WELL @ 7:00 PM. SET 21' 12-3/4" CONDUCTOR.
TIH W/ 12-1/4" HAMMER BIT AND BEGIN DRLG. ENCOUNTERED 2" WATER STREAM @ 22'
ENCOUNTERED 3" WATER STREAM @ 93'. TD 12-1/4" HOLE @ 226' ON FLUID
TOOH. RAN 5 JTS 9-5/8" (26#, I 51 CSG SET 225'. 225' LAST 24 HOURS

Date : 2/27/2007

3/30/07 WILL MOVE IN GASCO RIG #3 TODAY

Date : 2/26/2007

2/26/07 BUILDING LOCATION

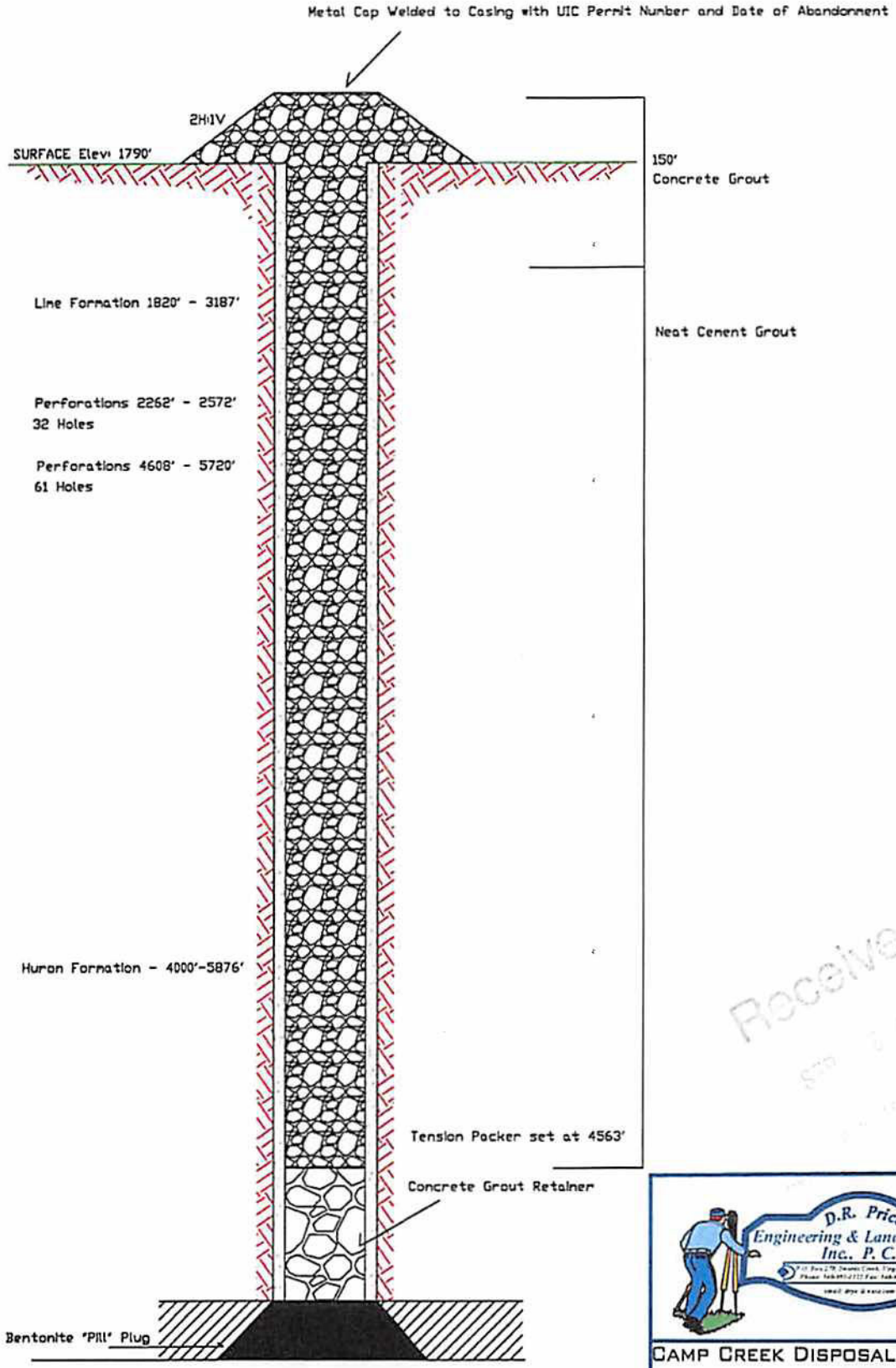
Date : 7/31/2006

07/27/06 BUILDING LOCATION

Appendix C
Disposal Well Schematic

Disposal Well Schematic

Note: Not Drawn to Scale



D.R. Price
Engineering & Land Surveying
Inc., P.C.

Camp Creek Disposal Services, In

P.O. Box 555 Rosedale, VA 24280

Underground Injection Well

Plugging and Abandonment Plan

Appendix D
Plugging Permit Packet

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number
_____

3) API Well No.: 47 - _____ - _____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name _____
Address _____
_____
(b) Name _____
Address _____
_____
(c) Name _____
Address _____
_____
6) Inspector _____
Address _____
_____
Telephone _____

5) (a) Coal Operator
Name _____
Address _____
_____
(b) Coal Owner(s) with Declaration
Name _____
Address _____
_____
Name _____
Address _____
_____
(c) Coal Lessee with Declaration
Name _____
Address _____
_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

(1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
(2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator _____
By: _____
Its: _____
Address _____
_____
Telephone _____

Subscribed and sworn before me this _____ day of _____

_____ Notary Public

My Commission Expires _____

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.

WW-4B
Rev. 2/01

1) Date _____, 20_____
2) Operator's
Well No. _____
3) API Well No. 47-_____-_____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil _____/ Gas _____/ Liquid injection _____/ Waste disposal _____/
(If "Gas, Production ____ or Underground storage ____) Deep ____/ Shallow____

5) Location: Elevation_____ Watershed_____
District _____ County_____ Quadrangle_____

6) Well Operator _____
Address _____
_____

7) Designated Agent_____
Address_____
_____

8) Oil and Gas Inspector to be notified
Name_____
Address_____
_____

9) Plugging Contractor
Name_____
Address_____
_____

10) Work Order: The work order for the manner of plugging this well is as follows:

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector _____ Date _____

SURFACE OWNER WAIVER

Operator's Well Number _____

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have FIVE (5) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

1) The proposed well work will constitute a hazard to the safety of persons.
2) The soil erosion and sediment control plan is not adequate or effective;
3) Damage would occur to publicly owned lands or resources;
4) The proposed well work fails to protect fresh water sources or supplies;
5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON ETC.

_____ Date _____
Signature

FOR EXECUTION BY A CORPORATION,

Name _____
By _____
Its _____ Date _____

Signature Date

Received

WW-4B

API No. _____
Farm Name _____
Well No. _____

INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less then five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator _____/ owner _____/ lessee _____/ of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____

_____

By: _____

Its _____

WW-9
(5/13)

Page _____ of _____
API Number 47 - _____ - _____
Operator's Well No. _____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name _____ OP Code _____

Watershed (HUC 10) _____ Quadrangle _____

Elevation _____ County _____ District _____

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ No _____

Will a pit be used for drill cuttings? Yes _____ No _____

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes _____ No _____ If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
_____ Underground Injection (UIC Permit Number _____)
_____ Reuse (at API Number _____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
_____ Other (Explain _____

Will closed loop system be used? _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature _____

Company Official (Typed Name) _____

Company Official Title _____

Subscribed and sworn before me this _____ day of _____, 20_____

_____ Notary Public

My commission expires _____

Form WW-9

Operator's Well No._____

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime _____ Tons/acre or to correct to pH _____

Fertilizer (10-20-20 or equivalent) _____ lbs/acre (500 lbs minimum)

Mulch_____ Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre

Attach:
Drawing(s) of road, location,pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:_____

Comments: _____

Title:_____ Date:_____

Field Reviewed? (_____) Yes (_____) No

WW-9
(2/15)

API Number 47 - _____ - _____
Operator's Well No._____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name_____ OP Code _____

Watershed (HUC 10)_____ Quadrangle _____

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ☐ No ☐

Will a pit be used? Yes ☐ No ☐

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes ☐ No ☐ If so, what ml.?_____

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
_____ Underground Injection (UIC Permit Number_____)
_____ Reuse (at API Number_____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
_____ Other (Explain_____

Will closed loop system be used? If so, describe: _____

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc._____

Additives to be used in drilling medium?_____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc._____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)_____

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature_____

Company Official (Typed Name)_____

Company Official Title_____

Subscribed and sworn before me this_____ day of_____, 20_____

_____ Notary Public

My commission expires_____

Received
SEP 6 2015

Form WW-9

Operator's Well No._____

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime _____ Tons/acre or to correct to pH _____

Fertilizer type _____

Fertilizer amount_____lbs/acre

Mulch_____Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

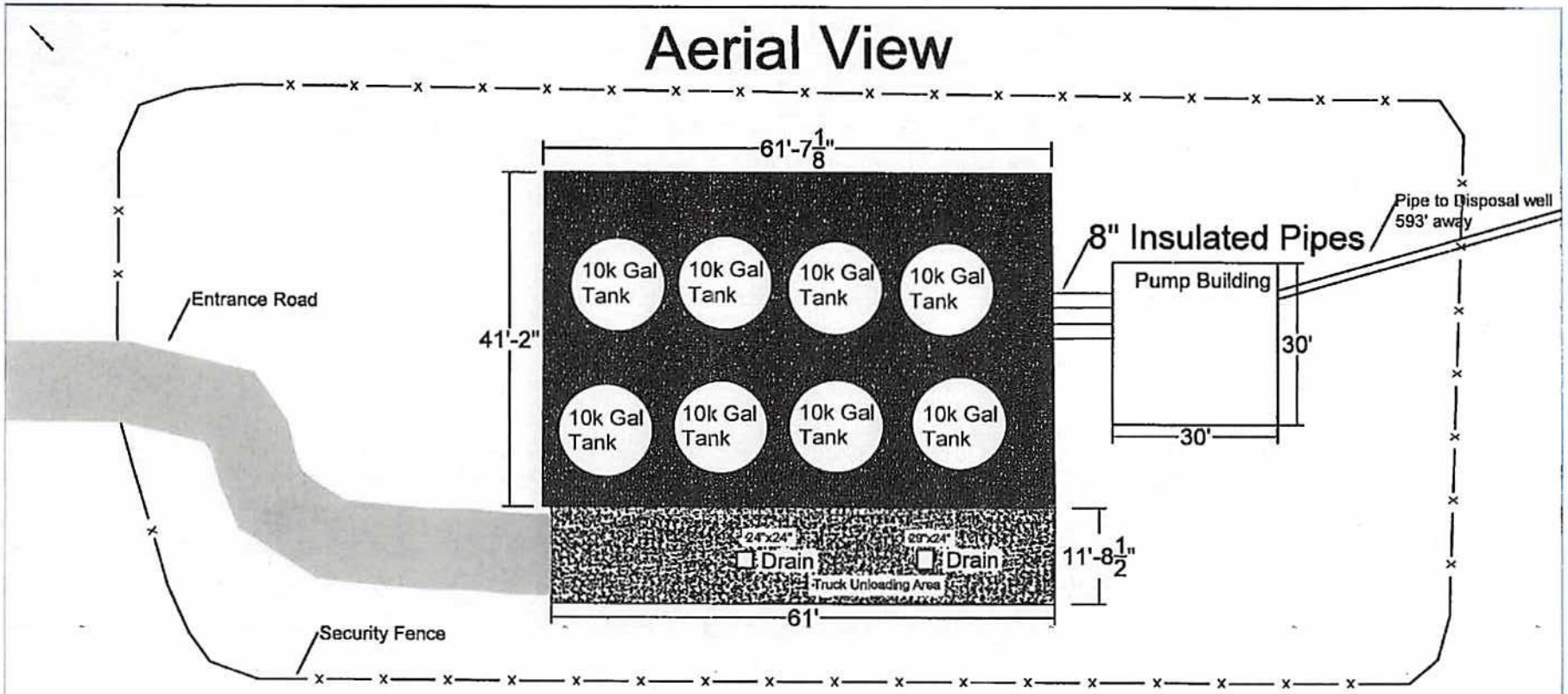
Plan Approved by:_____

Comments: _____

Title:_____ Date:_____

Field Reviewed? (_____) Yes (_____) No

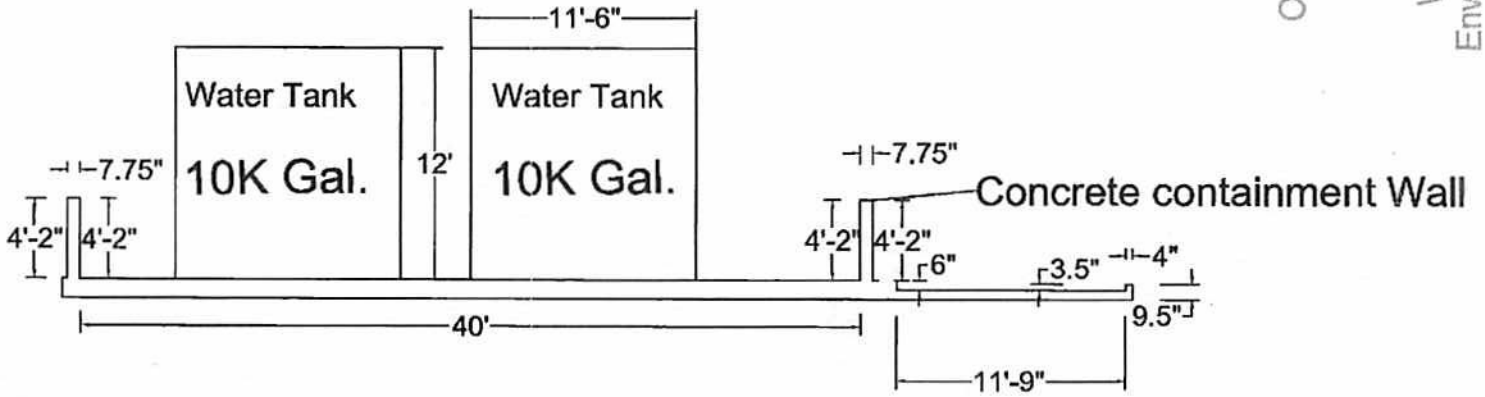
Attachment 2



1. The drains in the truck unloading area are recirculated back into the disposal well.
2. First two tanks closest to pump building are used for containment.
3. Two 8" insulated pipes transport fluid to the pump

	Camp Creek Disposal Services P.O. BOX 555 Rencdale, VA. 24260	SECONDARY CONTAINMENT SYSTEM AERIAL VIEW Scale: ~1"=30'

Cross Section View



1. The volume of the containment is 7,152 cf. or (53,496 gal.)
-Calculations: Volume=L x W x H,
-Containment Volume= 61.59 x 41.16 x 4.16 =10,607 cf
-10,607 cf - 3,455 cf (cubic feet displaced by the eight tanks) = 7,152 cf
-1 cf= 7.48 gal, 7,152 cf. x 7.48 gal.= 53,496 gal. 11,000 gal < 53,496
2. Tanks are single walled plastic.
3.Containment is constructed of cinder block and concrete

	Camp Creek Disposal Services P.O. BOX 555 Rosedale, VA. 24280	SECONDARY CONTAINMENT SYSTEM CROSS SECTION VIEW Scale: ~1"=10'

Attachment 3

Mechanical Integrity Test (MIT) Procedure

The Permittee shall utilize a pressure recording device to continuously record the injection pressure.

The 2 3/8" X 4 1/2" annulus currently maintains a consent pressure greater than two hundred (200) psi. The Permittee shall utilize a pressure recording device with an accuracy of +/- 1% of span, to continuously record the annulus pressure during the MIT.

Upon connection of the recording devices, the Permittee shall establish a baseline of five (5) minutes to establish an annulus stability pressure. Once stabilized, the Permittee shall commence injection at a pressure not to exceed one thousand four hundred sixty five (1465) psi for a period of twenty (20) minutes. However, the mechanical integrity injection pressure shall be executed at a minimum 200 psi greater than the established annulus daily baseline pressure.

*(annulus stability pressure + 200 psi) $\leq$ **mechanical integrity injection pressure** < maximum permitted injection pressure 1465 psi*

A deviation ± 25 psi of the annulus pressure shall constitute a MIT failure.

Step 1: Connect the pressure recording devices. (Accuracy of +/- 1% of span.)

Step 2: Document shut in pressure of both the injection pressure and annulus pressures. (5 minute stability)

Step 3: Commence injection at maximum permitted injection pressure (one thousand four hundred sixty five (1465) psi)

Step 4: Maintain maximum achievable injection pressure for a period of twenty (20) minutes.

Step 5: Shut in the injection tubing for at least fifteen (15) minutes. (Continue to record the pressure fall off)

Page ___ of___

Class II Manifest

UIC # _____

*I hereby certify that the contents of this shipment are Class II fluids that were brought to the surface in connection with oil or natural gas production.

Hauler' Name	*Signature	Receiver's Name	*Signature	API or Other	Volume of Load (Barrels)	Was the Load Split (Y/N)	Date

Make as many copies of the document as necessary to comply with the UIC permit.
Page numbers should be maintained sequentially to provide an adequate record.

RIGHT OF APPEAL

Notice is hereby given of your right to appeal the terms and conditions of this permit of which you are aggrieved to the Environmental Quality Board by filing a NOTICE OF APPEAL, on the form prescribed by such Board for this purpose, in accordance with the provisions of Section 21, Article 11, Chapter 22 of the Code of West Virginia within thirty (30) days after the date of receipt of this permit.

Underground Injection Control Permit

CERTIFICATION DOCUMENT

West Virginia Department of Environmental Protection
Office of Oil and Gas

Permit Id: 2D0550319

Permit Name: Camp Creek Disposal Services, Inc.

In accordance with Part II, Reporting and Notification Requirements, I hereby certify that I have read and am personally familiar with all the terms and conditions of this permit.

I understand that the underground injection of any waste streams other than those provided for in this permit is strictly prohibited. I understand that failure to pay the Annual Permit Fee or any other associated fees required by West Virginia Code, Chapter 22, Articles 11 and 12 shall be cause for revocation of this Permit. I further understand that reporting is required, and noncompliance with the terms of this permit will be cause for revocation of the permit and subject me to significant penalties including the possibility of fines and imprisonment.

_____

Signature

_____

Name and Title (Type or Print)

_____

Date