



Alabama Department of Environmental Management
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June 25, 2019

Jack Richardson
President & Chief Executive Officer
Warrior Met Coal Gas, LLC
16243 Highway 216
Brookwood, AL 35444

RE: Draft Permit
South Deerlick Creek
NPDES Permit No. AL0049760
Tuscaloosa County (125)

Dear Mr. Richardson:

Transmitted herein is a draft of the above referenced permit. Please review the enclosed draft permit carefully. If previously permitted, the draft may contain additions/revisions to the language in your current permit. Please submit any comments on the draft permit to the Department within 30 days from the date of receipt of this letter.

Since the Department has made a tentative decision to reissue the above referenced permit, ADEM Admin. Code r. 335-6-6-.21 requires a public notice of the draft permit followed by a period of at least 30 days for public comment before the permit can be issued. The United States Environmental Protection Agency will also receive the draft permit for review during the 30-day public comment period.

Any regulated activity proposed to be authorized by this draft permit is prohibited prior to the effective date of the formal permit.

The Department utilizes a web-based electronic environmental (E2) reporting system for electronic DMR submittal. Please read Part I.D of the permit carefully and visit <https://e2.adem.alabama.gov/npdes>.

Should you have any questions concerning this matter, please contact Jasmine White by email at jasmine.white@adem.alabama.gov or by phone at (334) 270-5622.

Sincerely,

Catherine A. McNeill, Chief
Mining and Natural Resource Section
Stormwater Management Branch
Water Division

CAM/jlw File: DPER/9504

Enclosure

cc: Jasmine White, ADEM
Environmental Protection Agency Region IV
Alabama Department of Conservation and Natural Resources
U.S. Fish and Wildlife Service
Alabama Historical Commission
Advisory Council on Historic Preservation





NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM INDIVIDUAL PERMIT

PERMITTEE: Warrior Met Coal Gas, LLC
16243 Highway 216
Brookwood, AL 35444

FACILITY LOCATION: South Deerlick Creek
12031 Lake Nicol Road
Tuscaloosa, AL 35406
Tuscaloosa County
T20S, R9W, Sections 13, 14, 21-28, and 33-36

PERMIT NUMBER: AL0049760

DSN & RECEIVING STREAM: 001-1 Black Warrior River

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

**** DRAFT ****

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

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PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

Produced and/or Process Wastewater Discharge Limitations and Monitoring Requirements

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. Discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency ¹
pH 00400	6.0 s.u.	-----	9.0 s.u.	Grab	2/Month
Oil & Grease 00556	-----	-----	15.0 mg/L	Grab	2/Month
Chloride, Dissolved in Water 00941	-----	Report mg/L	Report mg/L	Grab	2/Month
Iron, Total (As Fe) 01045	-----	3.0 mg/L	6.0 mg/L	Grab	1/Month
Manganese, Total (As Mn) 01055	-----	2.0 mg/L	4.0 mg/L	Grab	1/Month
Flow, In Conduit or Thru Treatment Plant ² 50050	-----	Report MGD	Report MGD	Totalizer	1/Day
Toxicity, Ceriodaphnia Acute ³ 61425	-----	-----	0 pass(0)/fail(1)	24 hour Composite	1/Quarter ⁴
Toxicity, Pimephales Acute ³ 61427	-----	-----	0 pass(0)/fail(1)	24 hour Composite	1/Quarter ⁴

¹ See Part I.F.2. for further measurement frequency requirements.

² Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

³ See Part IV.B. for Effluent Toxicity Limitations and Biomonitoring Requirements for Acute Toxicity.

⁴ See Part IV.B.2.d. regarding Effluent Toxicity monitoring frequency reduction.

B. REQUIREMENTS TO ACTIVATE A PROPOSED OUTFALL

1. Discharge from any point source identified on Page 1 of this Permit which is a proposed outfall is not authorized by this Permit until the outfall has been constructed and certification received by the Department from a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed according to good engineering practices.
2. Certification required by Part I.B.1. shall be submitted on a completed ADEM Form 433. The certification shall include the latitude and longitude of the constructed and certified outfall.
3. Discharge monitoring and Discharge Monitoring Report (DMR) reporting requirements described in Parts I.F. and I.G. of this Permit do not apply to point sources that have not been constructed and certified.
4. Upon submittal of the certification required by Part I.B.1. to the Department, all monitoring and DMR submittal requirements shall apply to the constructed and certified outfall.

C. RECEIVING STREAM MONITORING REQUIREMENTS

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is required to monitor the receiving stream for each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. The receiving stream shall be monitored by the Permittee downstream of the discharge at the edge of the Zone of Initial Dilution (ZID) as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency ⁵
Specific Conductance 00095	-----	Report µS/cm	Report µS/cm	Grab	1/Quarter
pH 00400	Report s.u.	-----	Report s.u.	Grab	1/Quarter
Chloride, Dissolved in Water 00941	-----	Report mg/L	Report mg/L	Grab	1/Quarter

D. STORMWATER DISCHARGE MONITORING AND INSPECTION REQUIREMENTS

1. Stormwater Discharge Monitoring Requirements

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge stormwater associated with the construction and operation of the facility provided that:

- a. The Permittee prepares, implements, and maintains a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 and Part II.A.2.d. of this Permit.

⁵ See Part I.F.2. for further measurement frequency requirements.

- b. Best Management Practices (BMPs) be used to prevent pollution of stormwater from construction and operation of the facility. The BMPs shall, at a minimum, meet the requirements of Part II.A.2.b.
- c. Stormwater discharge(s) shall have no sheen, and there shall be no discharge of visible oil, floating solids, or visible foam in other than trace amounts.

2. Stormwater Inspection Requirements

- a. Complete and comprehensive inspections of a minimum of four percent (4%) of all wellpads, pipeline right-of-ways, treatment ponds, compressor stations, other facilities and related appurtenances, etc. covered by this Permit, including all BMPs implemented, by a professional engineer, registered in the State of Alabama or personnel under his direct supervision shall be performed every month until expiration of coverage under this Permit. The Permittee shall inspect different or additional 4% increments until all facilities (100%) have been inspected prior to repeating inspections.
- b. Inspections shall be performed as often as is necessary to determine if, and ensure that, appropriate BMPs have been fully implemented and properly maintained and that stormwater runoff from the facility complies with limitations pursuant to Part I.D. of this Permit.

3. Recording of Results

For each inspection taken pursuant to the requirements of Part I.D.2. of this Permit, the Permittee shall record on a Department approved form the following information:

- a. The NPDES#, facility name, and location, source identifier (wellpad, compressor station, pipeline, etc.), and source location;
- b. The name(s) of person(s) who performed the inspection;
- c. The date and time the inspection was performed;
- d. Any deficiencies noted during the inspection, any corrective action or mitigation needed to correct the deficiencies, and a proposed compliance schedule for deficiencies noted as requiring significant maintenance not to exceed 14 days, unless approved in writing by the Department.

4. Reporting of Inspection and Monitoring Requirements

- a. Inspection Summary Reports (Form 343) for stormwater discharges shall be submitted to the Director or his designee:
 - (1) By July 28 of each year for all inspections and monitoring performed during the preceding 12 month period ending on the last day of the month of June.
 - (2) With any Noncompliance Notification Form submitted pursuant to Part I.G.2. of this Permit.
- b. Results of all inspections and monitoring shall be summarized on an appropriate form approved by the Department, and shall be available for inspection no later than 21 days following the date of the inspection or monitoring. Reports must be legible and bear original signature(s). Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit.

E. LAND APPLICATION OF TEMPORARY PIT WASTEWATERS

1. Administrative and Reporting Requirements

- a. Notwithstanding any other provisions of this Permit, one-time land application of temporary pit wastewater in conjunction with pit closure from any pit which is associated with any drilling, wellpad construction, well stimulation, collecting, land application, transport, treatment, storage, discharge, or other facility(s) and associated appurtenances for each development or production field or permitted area whose waste stream or produced water is authorized by this Permit is prohibited unless conducted or operated in accordance with all provisions of this Permit, Departmental regulations and good engineering practices.

With the exception of a one-time land application of pit wastewater in conjunction with pit closure, land application of produced water and other wastewaters generated during drilling, well stimulation, well completion, and well development is not authorized.

- b. The Permittee shall prepare and submit to the Department a comprehensive, detailed operations management plan for **ONE-TIME** land application of pit wastewater in conjunction with pit closure. As a minimum, this plan must address the types of equipment utilized, application rates and procedures, and site preparation and revegetation. Application of wastewater for dust suppression or other purposes on private or public roadways, access roads, trails, or other areas must also be addressed.
- c. The plan shall be prepared and certified by a professional engineer, registered in the State of Alabama.
- d. The Permittee shall notify the Department at least **48 hours** prior to beginning land application. The Permittee shall re-notify the Department if land application operations are not completed within **7 days** of the initial 48 hour notification. The Permittee must report the field name, county name, wellpad number, township-range-section, nearest surface stream, and the anticipated time of application.
- e. The Permittee shall complete and make available for inspection at the facility office, or at a Department-approved alternate location, the appropriate Department-approved **Land Application Certification**. The Permittee shall submit such certification(s) as required to the Department - Attn. Chief, Mining and Natural Resource Section, Water Division - within **14 days** of completion of land application operations for each pit which is associated with any drilling, well stimulation, construction, collecting, transport, treatment, storage, discharge, or other facility(s) and associated appurtenances for each development or production field or permitted area whose waste stream or produced water discharge is authorized by this Permit.

- (1) The certification form must be complete and correct. Forms that contain missing or incomplete responses are not acceptable. The certification must be signed by a registered professional engineer, registered in the State of Alabama, along with the registration number and stamped with the professional seal. In addition, the certification must be signed by a Responsible Corporate Official (RCO) of the level of vice-president or above with the authority to prevent and abate possible violations. The RCO may designate an employee such as a project manager with environmental experience who is familiar with the plan to sign the certification form as an agent of the RCO. The RCO must notify the ADEM in writing with the name of the designated employee.

(2) The certification shall contain at a minimum the name of the Permittee, field name, NPDES number, county, wellpad name and number, latitude and longitude, township-range-section to the nearest 1/4 section, nearest surface receiving stream, pH (s.u.), TDS (mg/l), and the date and the name of the Department representative that was notified.

(3) In addition the certification shall contain the following statement:

"Based upon the inspections of (dates and times) _____ performed prior to and during land application of pit wastewater from the pit(s) located at the site referenced above, which I or personnel under my direct supervision (list: _____) conducted, I certify that each land application site and all application equipment was in accordance with the land application procedures plan filed with the Department, that the pumped pit wastewater did not contain visible, floating material or oil & grease, and that all application procedures and operations were conducted in accordance with the above-referenced NPDES permit and ADEM regulations.

I further certify that no unauthorized discharge to surface or ground waters has occurred as a result of these activities."

f. The Permittee shall **IMMEDIATELY** notify the Department upon learning of any possible or probable discharge to State waters resulting from land application or any other activities associated with coalbed methane operations.

2. Technical Requirements

- a. Approval of a land application plan assumes that a relatively small volume of wastewater will be disposed of and, due to the small quantity involved, groundwater quality will be unaffected. Land application of pit sludge, solids or other wastes is prohibited.
- b. Only wastewater having a total dissolved solids concentration (TDS) of 2,000 mg/l or less and a pH between 6.0 and 9.0 standard units may be land applied. Wastewater must be free of visible, floating solids or oil and grease. The Permittee must ensure that **ONLY** wastewater is land applied and that all solids and sediments remain in the pit. It may be necessary to filter the wastewater during land application to ensure compliance. Land application **MUST** cease immediately if at any time the applied effluent does not comply or will not comply, if application continues, with the minimum standards as stated above.
- c. Wastewater must be uniformly applied over an area of sufficient expanse and at such a rate to prevent runoff of applied wastewater. Wastewater may be land applied **ONLY** to areas that wastewater has not previously been applied, unless re-application is specifically authorized in writing by the Department.
- d. Application of wastewater is prohibited during rain events or when the soil is saturated or sufficiently moist as to prevent percolation of all wastewater applied.
- e. Wastewater shall not be applied in such a manner that natural vegetation is discolored, killed, or otherwise adversely impacted. If the natural vegetation is adversely impacted, the Permittee shall ensure that the application area is revegetated to pre-spray conditions.
- f. Wastewater shall not be applied on severe slopes, near sink holes, near natural drainage courses, near streams or other water bodies, nor in any other manner that will allow runoff of the wastewater from the application area.

- g. The Permittee shall maintain a record of the results of the tests performed prior to land application to include the date the sample was collected, the name of the person performing the analysis, method of analysis, the date that the analysis was performed, the last date on which any substance was placed in the pit, the date that the wastewater was land applied, the amount of wastewater applied, and the location of the area on which the pit wastewater was land applied. This record shall be signed by the appropriate representative of the Permittee and retained for a period of at least three years after pit closure. Land application records shall be made available on request to the Department.
- h. In recognition that land application is site specific in nature the Department reserves the right to require the operator to provide additional information or implement added measures in addition to the above described minimum standards to ensure compliance with this Permit, State law, and Departmental regulations.

3. Prohibitions

Unless specifically authorized elsewhere in this Permit, Part I.E. of this Permit does not authorize the Permittee to land apply produced water from coalbed methane production operations.

F. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Sampling Schedule and Frequency

- a. The Permittee shall collect samples of the discharge from each constructed and certified point source identified on Page 1 of this Permit and described more fully in the Permittee's application, at the frequency specified in Part I.A. Analysis of the samples shall be conducted for the parameters specified in Part I.A.
- b. The Permittee may increase the frequency of sampling listed in Parts I.F.1.a; however, all sampling results must be reported to the Department and included in any calculated results submitted to the Department in accordance with this Permit.

2. Measurement Frequency

Measurement frequency requirements found in Parts I.A. and I.C. shall mean:

- a. A measurement frequency of one day per week shall mean sample collection on any day of discharge which occurs every calendar week.
- b. A measurement frequency of two days per month shall mean sample collection on any day of discharge which occurs every other week, but need not exceed two sample days per month, and are no less than seven days apart. However, if discharges occur only during one seven-day period in a month, then two days per month shall mean sample collection on any two days during that seven-day period.
- c. A measurement frequency of one day per month shall mean sample collection on any day of discharge which occurs during each calendar month.
- d. A measurement frequency of one day per quarter shall mean sample collection on any day of discharge which occurs during each calendar quarter.
- e. A measurement frequency of one day per six months shall mean sample collection on any day of discharge which occurs during the period of January through June and during the period of July through December.

- f. A measurement frequency of one day per year shall mean sample collection on any day of discharge which occurs during each calendar year.

3. Monitoring Schedule

The Permittee shall conduct the monitoring required by Parts I.A. and I.C. in accordance with the following schedule:

- a. MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this Permit and every month thereafter. More frequently than monthly and monthly monitoring may be done anytime during the month, unless restricted elsewhere in this Permit, but the results should be reported on the last Discharge Monitoring Report (DMR) due for the quarter (i.e., with the March, June, September, and December DMRs).
- b. QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The Permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this Permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this Permit, but the results should be reported on the last DMR due for the quarter (i.e., with the March, June, September, and December DMRs).
- c. SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The Permittee shall conduct the semiannual monitoring during the first complete semiannual calendar period following the effective date of this Permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this Permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., with the June and December DMRs).
- d. ANNUAL MONITORING shall be conducted at least once during the period of January through December. The Permittee shall conduct the annual monitoring during the first twelve (12) month period following the effective date of this Permit and is then required to monitor once during each calendar annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this Permit, but it should be reported on the December DMR.

4. Sampling Location

Unless restricted elsewhere in this Permit, samples collected to comply with the monitoring requirements specified in Part I.A. shall be collected at the nearest accessible location just prior to discharge and after final treatment, or at an alternate location approved in writing by the Department.

5. Representative Sampling

Sample collection and measurement actions taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this Permit.

6. Test Procedures

For the purpose of reporting and compliance, Permittees shall use one of the following procedures:

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136, guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h), and ADEM Standard Operating Procedures. If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this Permit the Permittee shall use the newly approved method.
- b. For pollutant parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the Permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the Permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures identified in Parts I.F.6.a. and b. shall be reported on the Permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

7. 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 facility name and location, point source number, date, time, and exact place of sampling or measurements;
- b. The name(s) of person(s) who obtained the samples or measurements;
- c. The dates and times the analyses were performed;
- d. The name(s) of the person(s) who performed the analyses;
- e. The analytical techniques or methods used including source of method and method number; and
- f. The results of all required analyses.

8. Routine Inspection by Permittee

- a. The Permittee shall inspect all certified point sources identified on Page 1 of this Permit and described more fully in the Permittee's application and all treatment or control facilities or systems used by the Permittee to achieve compliance with the terms and conditions of this Permit at least as often as the applicable sampling frequency specified in Part I.A. of this Permit.
- b. If required by the Director, the Permittee shall maintain a written log for each point source identified on Page 1 of this Permit and described more fully in the Permittee's application in which the Permittee shall record the following information:
 - (1) The date and time the point source and any associated treatment or control facilities or systems were inspected by the Permittee;
 - (2) Whether there was a discharge from the point source at the time of inspection by the Permittee;
 - (3) Whether a sample of the discharge from the point source was collected at the time of inspection by the Permittee;
 - (4) Whether all associated treatment or control facilities or systems appeared to be in good working order and operating as efficiently as possible, and if not, a description of the problems or deficiencies; and
 - (5) The name and signature of the person performing the inspection of the point source and associated treatment or control facilities or systems.

9. Records Retention and Production

- a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Permit, and records of all data used to complete the above reports or the application for this Permit, for a period of at least three (3) years from the date of the sample collection, measurement, report, or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA, AEMA, and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.
- b. All records required to be kept in accordance with Part I.F.9.a. shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

10. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this Permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The Permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

G. DISCHARGE REPORTING REQUIREMENTS

1. Requirements for Reporting of Monitoring

- a. Monitoring results obtained during the previous three (3) months shall be summarized for each month on a Discharge Monitoring Report (DMR) Form approved by the Department, and submitted to the Department so that it is received by the Director no later than the 28th day of the month following the quarterly reporting period (i.e., on the 28th day of January, April, July, and October of each year).
- b. The Department utilizes a web-based electronic environmental (E2) reporting system for submittal of DMRs. **Except as allowed by Part I.G.1.c. or d., the Permittee shall submit all DMRs required by Part I.G.1.a. by utilizing the E2 reporting system.** The E2 reporting system Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>.
- c. If the electronic environmental (E2) reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the E2 system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 system resuming operation, the Permittee shall enter the data into the E2 reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date).
- d. The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable. Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The Permittee shall submit the Department-approved DMR forms to the address listed in Part I.G.1.i.
- e. If the Permittee, using approved analytical methods as specified in Part I.F.6., monitors any discharge from a point source identified on Page 1 of this Permit and describe more fully in the Permittee's application more frequently than required by this Permit; the results of such monitoring shall be included in the calculation and reporting of values on the DMR Form, and the increased frequency shall be indicated on the DMR Form.
- f. In the event no discharge from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application occurs during a monitoring period, the Permittee shall report "No Discharge" for such period on the appropriate DMR Form.

- g. Each DMR Form submitted by the Permittee to the Department in accordance with Part I.G.1. must be legible and bear an original signature or electronic signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit.
- h. All reports and forms required to be submitted by this Permit, the AWPCA, and the Department's rules and regulations, shall be signed by a "responsible official" of the Permittee as defined in ADEM Admin. Code r. 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Admin. Code r. 335-6-6-.09 and shall bear 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."

- i. All DMRs, reports, and forms required to be submitted by this Permit, the AWPCA and the Department's rules and regulations, shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

- j. Unless authorized in writing by the Department, approved reporting forms required by this Permit or the Department are not to be altered, and if copied or reproduced, must be consistent in format and identical in content to the ADEM approved form. Unauthorized alteration, falsification, or use of incorrectly reproduced forms constitutes noncompliance with the requirements of this Permit and may significantly delay processing of any request, result in denial of the request, result in permit termination, revocation, suspension, modification, or denial of a permit renewal application, or result in other enforcement action.
- k. If this Permit is a reissuance, then the Permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.G.1.

2. Noncompliance Notification

- a. The Permittee must notify the Department if, for any reason, the Permittee's discharge:
 - (1) Potentially threatens human health or welfare;

- (2) Potentially threatens fish or aquatic life;
- (3) Causes or contributes to an exceedance of an in-stream water quality standard or causes or contributes to an exceedance of the EPA suggested chronic criteria for total chlorides of 230 mg/L at the downstream edge of the regulatory mixing zone and, when the discharge is mixed with the receiving stream by a high rate diffuser, the EPA suggested acute criteria for total chlorides of 860 mg/L at the downstream edge of the zone of initial dilution;
- (4) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. §1317(a);
- (5) Contains a quantity of a hazardous substance which has been determined may be harmful to the public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. §1321(b)(4); or
- (6) Exceeds any discharge limitation for an effluent parameter as a result of an unanticipated bypass or upset.

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects of such discharge to the Director within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit to the Director a written report as provided in Part I.G.2.c., no later than five (5) days after becoming aware of the occurrence of such discharge.

- b. If for any reason, the Permittee's discharge does not comply with any limitation of this Permit, the Permittee shall submit a written report to the Director, as provided in Part I.G.2.c. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Part I.G.1. of this Permit after becoming aware of the occurrence of such noncompliance.
- c. Any written report required to be submitted to the Director in accordance with Parts I.G.2.a. and b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (<http://adem.alabama.gov/DeptForms/Form421.pddf>) and include the following information:
 - (1) A description of the discharge and cause of noncompliance;
 - (2) The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue; and
 - (3) A description of the steps taken and/or being taken to reduce or eliminate the noncompliance and to prevent its recurrence.

3. Modification, Reduction, Suspension, or Termination of Monitoring and/or Reporting Requirements

- a. The Director may, with respect to any point source identified on Page 1 of this Permit and described more fully in the Permittee's application, authorize the Permittee to modify, reduce, suspend, or terminate the monitoring and/or reporting required by this Permit upon the submission of a written request for such modification, reduction, suspension, or termination by the Permittee, supported by sufficient data as provided in applicable sections of this Permit.

- b. It remains the responsibility of the Permittee to comply with the monitoring and reporting requirements of this Permit until written authorization to modify, reduce, suspend, or terminate such monitoring and/or reporting is received by the Permittee from the Director.

H. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Well Drilling Notification Requirements

Notification shall be provided to the Department at least seven days prior to the commencement of the well drilling phase of construction of each well.

2. Anticipated Noncompliance

The Permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

3. Termination of Discharge

The Permittee shall notify the Director, in writing, when all discharges from any point source(s) identified on Page 1 of this Permit and described more fully in the Permittee's application have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for termination of the Permit.

4. Updating Information

- a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or officer(s) having the authority and responsibility to prevent and abate violations of the AWPCA, the AEMA, the Department's rules and regulations, and the terms and conditions of this Permit, in writing, no later than ten (10) days after such change. Upon request of the Director, the Permittee shall furnish the Director with an update of any information provided in the permit application.
- b. If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

5. Duty to Provide Information

- a. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, suspending, terminating, or revoking and reissuing this Permit, in whole or in part, or to determine compliance with this Permit. The Permittee shall also furnish to the Director upon request, copies of records required to be maintained by this Permit.
- b. The Permittee shall furnish to the Director upon request, within a reasonable time, available information (name, phone number, address, and site location) which identifies offsite sources of material or natural resources (mineral, ore, or other material such as iron, coal, coke, dirt, chert, shale, clay, sand, gravel, bauxite, rock, stone, etc.) used in its operation or stored at the facility.

I. SCHEDULE OF COMPLIANCE

The Permittee shall achieve compliance with the discharge limitations specified in Part I.A. of this Permit in accordance with the following schedule:

Compliance must be achieved by the effective date of this Permit.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

The Permittee shall at all times 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 includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.

2. Best Management Practices (BMPs)

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director has granted prior written authorization for dilution to meet water quality requirements.
- b. No later than ninety (90) days after the issuance date of this Permit, the Permittee shall prepare, submit to the Department, and implement a Best Management Practices (BMPs) Plan that addresses the control of all nonpoint source pollution that is or may be associated with the Permittee's operations. These BMP plans should be based on best available technology, and include, but not be limited to, containment of any or all process liquids or solids in a manner such that these materials do not present a potential for discharge; stormwater runoff associated with wellpad construction and maintenance, roads, borrow pits less than 5 acres in size, and dirt or other material stockpiles; and water, wastewater, and other fluids acquisition operations that is or may be associated with the Permittee's operations. Protection and preservation of all surface waters onsite should be discussed, including (but not limited to) stream crossing(s), access roads, and other construction activities adjacent to waters of the State. When submitted, the BMP Plan shall become a part of this Permit and all requirements of the BMP Plan shall become requirements of this Permit. The BMPs shall include at a minimum:
 - (1) Plans to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with this Permit and water quality standards;
 - (2) Plans to prevent the spillage or loss of any fluids, oil, grease, etc. and thereby prevent the contamination of stormwater from these substances;
 - (3) Plans to provide for the disposal of all used oils, hydraulic fluids, solvent degreasing materials, etc. in accordance with good management practices and any applicable state or federal regulations;
 - (4) Plans to prevent or minimize stormwater contact with any pollutants present at the facility;
 - (5) Descriptions of stormwater volume and velocity controls within the site to minimize soil erosion;
 - (6) Plans to minimize the amount of soil exposed during construction activity through the use of project phasing or other appropriate techniques;
 - (7) Plans to minimize the disturbance of steep slopes, unless infeasible;
 - (8) Plans to minimize sediment discharges from the site;

- (9) Plans to minimize the generation of dust;
 - (10) Descriptions of construction entrance and exit stabilization to minimize off-site tracking of sediment from vehicles;
 - (11) Plans to minimize soil compaction and, unless infeasible, preserve topsoil;
 - (12) If applicable, the location and description of each borrow pit, a description of the stormwater discharge controls, and how the borrow pits will be reclaimed or closed in order to remediate any potential adverse impacts on water quality;
 - (13) If applicable, the exact location of each water, wastewater, and other fluids acquisition site and the method of withdrawal;
 - (14) If applicable, plans for the protection and preservation of all surface waters at all fluids acquisition sites or other waters which might be impacted, including, but not limited to, rivers, perennial and intermittent streams, lakes or impoundments, ponded areas, old treatment lagoons and sedimentation basins, dry hollows, subsurface wells, and all areas adjacent to waters of the State that are disturbed during water acquisition.
- c. All borrow pits authorized by this permit must at all times total less than five unreclaimed acres, and must be used exclusively by the Permittee for the permitted facility. In addition to the inspections conducted by the Permittee referenced in Part I.D.2., of this Permit, the Permittee must conduct, at a minimum, monthly inspections of the borrow pits. The inspections of the borrow pits may not be used when calculating the monthly 4% increments of the Permitted facility.
- d. **Spill Prevention, Control, and Management**

The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan acceptable to the Department that is prepared and certified by a Professional Engineer (PE), registered in the State of Alabama, for all onsite petroleum product or other pollutant storage tanks or containers as required by applicable state (ADEM Admin. Code r. 335-6-6-.12 (r)) and federal (40 C.F.R. §§112.1-7) regulations. The Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a ground or surface water of the State or a publicly or privately owned treatment works. Careful consideration should be applied for tanks or containers located near treatment ponds, water bodies, or high traffic areas. In most situations this would require construction of a containment system if the cumulative storage capacity of petroleum products or other pollutants at the facility is greater than 1320 gallons. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. Such containment systems shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided. The applicant shall maintain onsite or have readily available flotation booms to contain, and sufficient material to absorb, fuel and chemical spills and leaks. Soil contaminated by chemical spills, oil spills, etc., must be immediately cleaned up or be removed and disposed of in an approved manner.

3. Biocide Additives

- a. The Permittee shall notify the Director in writing not later than sixty (60) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in any cooling or boiler system(s) regulated by this Permit. Notification is not required for additives that

should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the Permittee. Such notification shall include:

- (1) Name and general composition of biocide or chemical;
- (2) 96-hour median tolerance limit data for organisms representative of the biota of the water(s) which the discharge(s) enter(s);
- (3) Quantities to be used;
- (4) Frequencies of use;
- (5) Proposed discharge concentrations; and
- (6) EPA registration number, if applicable.

- b. The use of any biocide or chemical additive containing tributyl tin, tributyl tin oxide, zinc, chromium, or related compounds in any cooling or boiler system(s) regulated by the Permit is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the Permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this Permit or in the application for this Permit or not exempted from notification under this Permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

4. Facility Identification

The Permittee shall clearly display prior to commencement of any regulated activity and until permit coverage is properly terminated, the name of the Permittee, entire NPDES permit number, facility or site name, and other descriptive information deemed appropriate by the Permittee at an easily accessible location(s) to adequately identify the site, unless approved otherwise in writing by the Department. The Permittee shall repair or replace the sign(s) as necessary upon becoming aware that the identification is missing or is unreadable due to age, vandalism, theft, weather, or other reason(s).

5. Removed Substances

Solids, sludges, filter backwash, or any other pollutants or other wastes removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department rules and regulations.

6. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facility, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Part I.A. of this Permit or any other terms or conditions of this Permit, cease, reduce, or otherwise control production and/or discharges until treatment is restored.

7. Duty to Mitigate

The Permittee shall promptly take all reasonable steps to minimize or prevent any violation of this Permit or to mitigate and minimize any adverse impact to waters resulting from noncompliance with any discharge limitation specified in Part I.A. of this Permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as is necessary to determine the nature and impact of the noncomplying discharge.

B. BYPASS AND UPSET

1. Bypass

- a. Any bypass is prohibited except as provided in Parts II.B.1.b. and c.
- b. A bypass is not prohibited if:
 - (1) It does not cause any applicable discharge limitation specified in Part I.A. of this Permit to be exceeded;
 - (2) The discharge resulting from such bypass enters the same receiving water as the discharge from the permitted outfall;
 - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system; and
 - (4) The Permittee monitors the discharge resulting from such bypass at a frequency, at least daily, sufficient to prove compliance with the discharge limitations specified in Part I.A. of this Permit.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Part I.A. of this Permit if:
 - (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There are 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 the Permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days, if possible, prior to the anticipated bypass or within 24 hours of an unanticipated bypass, the Permittee is granted such authorization, and Permittee complies with any conditions imposed by the Director to minimize any adverse impact to waters resulting from the bypass.
- d. The Permittee has the burden of establishing that each of the conditions of Parts II.B.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in Part II.B.1.a. and an exemption, where applicable, from the discharge limitations specified in Part I.A. of this Permit.

2. Upset

- a. A discharge which results from an upset need not meet the applicable discharge limitations specified in Part I.A. of this Permit if:
 - (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director; and
 - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, design drawings, construction certification, maintenance records, weir flow measurements, dated photographs, rain gauge measurements, or other relevant evidence, demonstrating that:
 - (a) An upset occurred;
 - (b) The Permittee can identify the specific cause(s) of the upset;
 - (c) The Permittee's treatment facility was being properly operated at the time of the upset; and
 - (d) The Permittee promptly took all reasonable steps to minimize any adverse impact to waters resulting from the upset.
- b. The Permittee has the burden of establishing that each of the conditions of Part II.B.2.a. have been met to qualify for an exemption from the discharge limitations specified in Part I.A. of this Permit.

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

- a. Notwithstanding any other provisions of this Permit, any discharge(s) from any point source(s) from the permitted facility which was not certified to the Department by a professional engineer, registered in the State of Alabama, as being designed, constructed, and able to be operated in accordance with design plans reviewed by the Department, terms and conditions of this Permit, Departmental regulations and good engineering practices, is prohibited until the Permittee submits to the Department, on a form approved by the Department, a certification by a professional engineer certifying that all such facility(s) have been constructed and are able to be operated in accordance with design plans reviewed by the Department, terms and conditions of this Permit, Departmental regulations and good engineering practices.

2. Permit Modification, Suspension, Termination, and Revocation

- a. This Permit may be modified, suspended, terminated, or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
 - (1) The violation of any term or condition of this Permit;
 - (2) The obtaining of this Permit by misrepresentation or the failure to disclose fully all relevant facts;

- (3) The submission of materially false or inaccurate statements or information in the permit application or reports required by the Permit;
 - (4) The need for a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
 - (5) The existence of any typographical or clerical errors or of any errors in the calculation of discharge limitations;
 - (6) The existence of material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
 - (7) The threat of the Permittee's discharge on human health or welfare; or
 - (8) Any other cause allowed by ADEM Admin. Code ch. 335-6-6.
- b. The filing of a request by the Permittee for modification, suspension, termination, or revocation and reissuance of this Permit, in whole or in part, does not stay any Permit term or condition of this Permit.

3. Automatic Expiration of Permits for New or Increased Discharges

- a. Except as provided by ADEM Admin. Code r. 335-6-6-.02(g) and 335-6-6-.05, if this Permit was issued for a new discharger or new source, it shall expire eighteen months after the issuance date if construction has not begun during that eighteen month period.
- b. Except as provided by ADEM Admin. Code r. 335-6-6-.02(g) and 335-6-6-.05, if any portion of this Permit was issued or modified to authorize the discharge of increased quantities of pollutants to accommodate the modification of an existing facility, that portion of this Permit shall expire eighteen months after this Permit's issuance if construction of the modification has not begun within eighteen month period.
- c. Construction has begun when the owner or operator has:
 - (1) Begun, or caused to begin as part of a continuous on-site construction program:
 - (i) Any placement, assembly, or installation of facilities or equipment; or
 - (ii) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - (2) Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

- d. The automatic expiration of this Permit for new or increased discharges if construction has not begun within the eighteen month period after the issuance of this Permit may be tolled by administrative or judicial stay.

4. Transfer of Permit

This Permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of this Permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership, or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership, or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership, or control, he may decide not to modify the existing Permit and require the submission of a new permit application.

5. Groundwater

Unless authorized on page 1 of this Permit, this Permit does not authorize any discharge to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

6. Property and Other Rights

This Permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the State or of the United States.

D. RESPONSIBILITIES

1. Duty to Comply

- a. The Permittee must comply with all terms and conditions of this Permit. Any permit noncompliance constitutes a violation of the AWPCA, AEMA, and the FWPCA and is grounds for enforcement action, permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.
- b. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the FWPCA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the effluent standard, prohibition or requirement.
- c. For any violation(s) of this Permit, the Permittee is subject to a civil penalty as authorized by the AWPCA, the AEMA, the FWPCA, and Code of Alabama 1975, §§22-22A-1 et. seq., as amended, and/or a criminal penalty as authorized by Code of Alabama 1975, §22-22-1 et. seq., as amended.
- d. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of this Permit shall not be a defense for a Permittee in an enforcement action.

- e. Nothing in this Permit shall be construed to preclude or negate the Permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or local government permits, certifications, licenses, or other approvals.
- f. The discharge of a pollutant from a point source not specifically identified in the permit application for this Permit and not specifically included in the description of an outfall in this Permit is not authorized and shall constitute noncompliance with this Permit.
- g. The Permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this Permit or to minimize or prevent any adverse impact of any permit violation.

2. Change in Discharge

- a. The Permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants, increase the quantity of a discharged pollutant, or that could result in an additional discharge point. This requirement also applies to pollutants that are not subject to discharge limitations in this Permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.
- b. The Permittee shall notify the Director as soon as it is known or there is reason to believe:
 - 1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this Permit, if that discharge will exceed the highest of the following notification levels:
 - a. one hundred micrograms per liter;
 - b. two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;
 - c. five times the maximum concentration value reported for that pollutant in the permit application; or
 - 2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the Permit, if that discharge will exceed the highest of the following notification levels:
 - a. five hundred micrograms per liter;
 - b. one milligram per liter for antimony;
 - c. ten times the maximum concentration value reported for that pollutant in the permit application.
- c. The Permittee shall notify the Director as soon as it knows or has reason to believe that it has begun or expects to begin to discharge any pollutant listed as a toxic pollutant pursuant to Section 307(a) of the FWPCA, 33 U.S.C. §1317(a), any substance designated as a hazardous substance pursuant to Section 311(b)(2) of the FWPCA, 33 U.S.C. §1321(b)(2), any waste listed as a hazardous waste pursuant to Code of Alabama 1975,

§22-30-10, or any other pollutants or other wastes which is not subject to any discharge limitations specified in Part I.A. of this Permit and was not reported in the Permittee's application, was reported in the Permittee's application in concentrations or mass rates lower than that which the Permittee expects to begin to be discharged, or has reason to believe has begun to be discharged.

3. Compliance with Toxic or Other Pollutant Effluent Standard or Prohibition

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Sections 301(b)(2)(C),(D),(E) and (F) of the FWPCA, 33 U.S.C. §1311(b)(2)(C),(D),(E), and (F); 304(b)(2) of the FWPCA, 33 U.S.C. §1314(b)(2); or 307(a) of the FWPCA, 33 U.S.C. §1317(a), for a toxic or other pollutant discharged by the Permittee, and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Part I.A. of this Permit or controls a pollutant not limited in Part I.A. of this Permit, this Permit shall be modified to conform to the toxic or other pollutant effluent standard or prohibition and the Permittee shall be notified of such modification. If this Permit has not been modified to conform to the toxic or other pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the authorization to discharge in this Permit shall be void to the extent that any discharge limitation of such pollutant in Part I.A. of this Permit exceeds or is inconsistent with the established toxic or other pollutant effluent standard or prohibition.

4. Compliance with Water Quality Standards and Other Provisions

- a. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this Permit will assure compliance with applicable water quality standards. However, this Permit does not relieve the Permittee from compliance with applicable State water quality standards established in ADEM Admin. Code ch. 335-6-10, and does not preclude the Department from taking action as appropriate to address the potential for contravention of applicable State water quality standards which could result from discharges of pollutants from the permitted facility.
- b. Compliance with Permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point source(s) identified on Page 1 of this Permit cause(s) or contribute(s) to a condition in contravention of State water quality standards, the Department may require abatement action to be taken by the Permittee, modify the Permit pursuant to the Department's rules and regulations, or both.
- c. If the Department determines, on the basis of a notice provided pursuant to Part II.D.2. of this Permit or any investigation, inspection, or sampling, that a modification of this Permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the noticed act until the Permit has been modified.

5. Compliance with Statutes and Rules

- a. This Permit has been issued under ADEM Admin. Code div. 335-6. All provisions of this division, that are applicable to this Permit, are hereby made a part of this Permit. A copy of this division may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36110-2059.
- b. This Permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules

implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

6. Right of Entry and Inspection

The Permittee shall allow the Director, 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 the 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 the AWPCA, any substances or parameters at any location.

7. Duty to Reapply or Notify of Intent to Cease Discharge

- a. If the Permittee intends to continue to discharge beyond the expiration date of this Permit, the Permittee shall file with the Department a complete permit application for reissuance of this Permit at least 180 days prior to its expiration.
- b. If the Permittee does not desire to continue the discharge(s) allowed by this Permit, the Permittee shall notify the Department at least 180 days prior to expiration of this Permit of the Permittee's intention not to request reissuance of this Permit. This notification must be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Admin. Code r. 335-6-6-.09.
- c. Failure of the Permittee to submit to the Department a complete application for reissuance of this Permit at least 180 days prior to the expiration date of this Permit will void the automatic continuation of this Permit as provided by ADEM Admin. Code r. 335-6-6-.06, and should this Permit not be reissued for any reason, any discharge after the expiration of this Permit will be an unpermitted discharge.

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under this Permit shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

3. Permit Enforcement

This NPDES Permit is a Permit for the purpose of the AWPCA, the AEMA, and the FWPCA, and as such all terms, conditions, or limitations of this Permit are enforceable under State and Federal law.

4. Relief From Liability

Except as provided in Part II.B.1. (Bypass) and Part II.B.2. (Upset), nothing in this Permit shall be construed to relieve the Permittee of civil or criminal liability under the AWPCA, AEMA, or FWPCA for noncompliance with any term or condition of this Permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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 to which the Permittee is or may be subject to under Section 311 of the FWPCA, 33 U.S.C. §1321.

C. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, §22-22-9(c), all reports prepared in accordance with the terms of this Permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for in Section 309 of the FWPCA, 33 U.S.C. §1319, and Code of Alabama 1975, §22-22-14.

D. DEFINITIONS

1. Alabama Environmental Management Act (AEMA) - means Code of Alabama 1975, §§22-22A-1 et. seq., as amended.
2. Alabama Water Pollution Control Act (AWPCA) - means Code of Alabama 1975, §§22-22-1 et. seq., as amended.

3. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
4. Arithmetic Mean - means the summation of the individual values of any set of values divided by the number of individual values.
5. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.
6. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
7. Daily maximum - means the highest value of any individual sample result obtained during a day.
8. Daily minimum - means the lowest value of any individual sample result obtained during a day.
9. Day - means any consecutive 24-hour period.
10. Department - means the Alabama Department of Environmental Management.
11. Director - means the Director of the Department or his authorized representative or designee.
12. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state." Code of Alabama 1975, §22-22-1(b)(8).
13. Discharge monitoring report (DMR) - means the form approved by the Director to accomplish monitoring report requirements of an NPDES permit.
14. 8HC - means 8-hour composite sample, including any of the following:
 - a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
 - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
15. EPA - means the United States Environmental Protection Agency.
16. Federal Water Pollution Control Act (FWPCA) - means 33 U.S.C. §§1251 *et. seq.*, as amended.
17. Flow - means the total volume of discharge in a 24-hour period.
18. Grab Sample - means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
19. mg/L - means milligrams per liter of discharge.
20. MGD - means million gallons per day.

21. Mixing Zone - that portion of the receiving waters where mixture of effluents and natural waters take place. Mixing zones must meet the requirements of ADEM Admin. Code r. 335-6-6-.15(10).
22. Monthly Average - means, other than for E. coli bacteria, the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for E. coli bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period. (Zero discharges shall not be included in the calculation of monthly averages.)
23. New Source - means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - a. After promulgation of standards of performance under Section 306 of FWPCA which are applicable to such source; or
 - b. After proposal of standards of performance in accordance with Section 306 of the FWPCA which are applicable to such source, but only if the standards are promulgated in accordance with Section 206 within 120 days of their proposal.
24. Permit application - means forms and additional information that are required by ADEM Admin. Code r. 335-6-6-.08 and applicable permit fees.
25. Point Source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. §1362(14).
26. Pollutant - includes for purposes of this Permit, but is not limited to, those pollutants specified in Code of Alabama 1975, §22-22-1(b)(3) and those effluent characteristics, excluding flow, specified in Part I.A. of this Permit.
27. Pollutant of Concern - means those pollutants for which a water body is listed as impaired or which contribute to the listed impairment.
28. Process Wastewater – means any discharge(s) of water other than stormwater discharges.
29. Produced Water – means all water produced from the dewatering of coal and related seams, not to include flowback from fracturing and cement returns.
30. Receiving Stream - means the “waters” receiving a “discharge” from a “point source”.
31. 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.
32. Stimulation - means any process used to clean a well bore, enlarge channels, increase permeability or increase pore spaces in a formation, thus making it possible for formation fluids to move more rapidly and greater distances through the formation, and may include surging, jetting, acidizing, or fracturing.
33. Stimulation fluids - means all fluids used for and associated with the stimulation of coal seams.
34. Stormwater discharges - means any discharges related to storm events or snow melt.

35. Treatment facility and treatment system - means all structures which contain, convey, and as necessary, chemically or physically treat coalbed methane extraction operations process wastewater, produced wastewater, or drainage from associated areas, which remove pollutants limited by this Permit from such drainage or wastewater. This includes all pipes, channels, ponds, tanks, and all other equipment serving such structures.
36. 24 Hour Composite - means a 24-hour composite sample, including any of the following:
- a. The mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
 - b. A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
 - c. A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
37. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate facilities, lack of preventive maintenance, or careless or improper operation.
38. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, §22-22-1(b)(2). "Waters" include all "navigable waters" as defined in §502(7) of the FWPCA, 33 U.S.C. §1362(7), which are within the State of Alabama.
39. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
40. Weekly (7-day and calendar week) Average - the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.
41. Zone of Initial Dilution (ZID) - the area extending from the port openings of a high rate diffuser to the initial edge of the mixing zone where, due to great turbulence, a constant instream waste concentration (IWC) cannot be determined. A ZID must meet the requirements of ADEM Admin. Code r. 335-6-6-.02(ggg)

E. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

F. PROHIBITIONS AND ACTIVIES NOT AUTHORIZED

1. Discharges from disposal or landfill activities as described in ADEM Admin. Code div. 335-13 are not authorized by this Permit unless specifically approved by the Department.
2. Relocation, diversion, or other alteration of a water of the State is not authorized by this Permit unless specifically approved by the Department.
3. The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the Permittee or not identified in the application for this Permit or not identified specifically in the description of an outfall in this Permit is not authorized by this Permit.
4. Discharges of stormwater, process water, produced water, other wastewaters, or other pollutants from exploration, development, production, closure, and associated activities, of hydrocarbons from sources other than coal seams (e.g., conventional oil and natural gas operations) are not authorized by this Permit unless specifically approved in writing by the Director. The Permittee shall submit documentation and must receive approval from the Department prior to inclusion, under this Permit discharges of stormwater, process water, and other wastewaters from any well that has been, or will be converted from conventional oil and gas exploration or other hydrocarbon development, or production operations to coalbed methane operations

PART IV SPECIAL REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

A. DISCHARGES TO IMPAIRED WATERS

1. This Permit does not authorize new sources or new discharges of pollutants of concern to impaired waters unless consistent with an EPA-approved or EPA-established Total Maximum Daily Load (TMDL) and applicable State law. Impaired waters are those that do not meet applicable water quality standards and are identified on the State of Alabama's §303(d) list or on an EPA-approved or EPA-established TMDL. Pollutants of concern are those pollutants for which the receiving water is listed as impaired or contribute to the listed impairment.
2. Facilities that discharge into a receiving stream which is listed on the State of Alabama's §303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the waters are impaired, must within six (6) months of the Final §303(d) list approval, document in its BMP plan how the BMPs will control the discharge of the pollutant(s) of concern, and must ensure that there will be no increase of the pollutants of concern. A monitoring plan to assess the effectiveness of the BMPs in achieving the allocations must also be included in the BMP plan.
3. If the facility discharges to impaired waters as described above, it must determine whether a TMDL has been developed and approved or established by EPA for the listed waters. If a TMDL is approved or established during this Permit cycle by EPA for any waters into which the facility discharges, the facility must review the applicable TMDL to see if it includes requirements for control of any water discharged by the Permittee. Within six (6) months of the date of TMDL approval or establishment, the facility must notify the Department on how it will modify its BMP plan to include best management practices specifically targeted to achieve the allocations prescribed by the TMDL, if necessary. Any revised BMP plans must be submitted to the Department for review. The facility must include in the BMP plan a monitoring component to assess the effectiveness of the BMPs in achieving the allocations.

B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR ACUTE TOXICITY

Except as provided below, the Permittee shall perform 48-hour acute toxicity screening tests on the discharges required to be tested for acute toxicity in Part I.A. of this Permit.

In addition to the frequency specified in Part I.A. of this Permit, acute toxicity screening tests shall be performed in conjunction with the discharge of each new formulation of stimulation fluid that is discharged through any outfall(s). The testing in conjunction with the discharge of stimulation fluid may coincide with the regularly required testing.

The Permittee may certify, in writing, that the activities at the site at the time of sample collection will result in representative discharges, and therefore perform the toxicity tests on only the samples collected from the representative outfalls. The certification must be signed by a responsible official of the Permittee as defined in ADEM Admin Code r. 335-6-6-.09 and include the following statement:

"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."

1. Test Requirements

- a. The tests shall be performed using effluent diluted, using appropriate control water, to the Instream Waste Concentration (IWC) which is 8.34% effluent for Outfall 001.
- b. Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this Permit.

2. General Test Requirements

- a. A 24 hour composite sample shall be obtained for use in the above biomonitoring tests. The holding time for each sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-012 or most current edition or another control water selected by the Permittee and approved by the Department.
- b. Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the Permittee shall rerun the tests as soon as practical within the monitoring period.
- c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.
- d. Should results from four consecutive testing periods indicate that effluent from a point source identified on Page 1 of this Permit does not exhibit acute toxicity, the Permittee may request that the toxicity testing frequency be reduced to semiannual. A reduction in toxicity testing frequency will be allowed only if approved by the Department in writing. The required toxicity testing frequency will revert back to once per quarter under the following conditions:
 - (1) If effluent from a point source identified on Page 1 of this Permit continues to exhibit acute toxicity in any of the four (4) additional acute toxicity tests following the initial indication of acute toxicity as specified in Part IV.B.4., unless waived in writing by the Department; and
 - (2) If the characteristics of the effluent from a point source identified on Page 1 of this Permit changes significantly from the effluent which was discharging when the reduction in frequency was approved. Such changes in characteristics may include, but are not limited to, changes in stimulation fluids.

3. Reporting Requirements

- a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
- b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. An effluent toxicity report containing the information in Part IV.B.6. shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

4. Additional Testing Requirements

- a. If acute toxicity is indicated (noncompliance with permit limit), the Permittee shall perform four (4) additional valid acute toxicity tests in accordance with these procedures. The toxicity tests shall be performed once per week and shall be performed during the first four calendar weeks after becoming aware of the acute toxicity. The results of these tests shall be submitted no later than 28 days following the month in which the tests were performed. Additional testing sample collection and analysis timeframes may be extended, as necessary, to obtain the samples during discharges.
- b. After evaluation of the results of the additional tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The Permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).

5. Test Methods

The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).

6. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate this requirement or may increase or decrease the frequency of submittals.

- a. Introduction
 - (1) Facility Name, location and county
 - (2) Permit number
 - (3) Toxicity testing requirements of permit
 - (4) Name of receiving water body
 - (5) Contract laboratory information (if tests are performed under contract)
 - (i) Name of firm
 - (ii) Telephone number
 - (iii) Address
 - (6) Objective of test
- b. Plant Operations
 - (1) Discharge operating schedule (if other than continuous)

- (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection date (MGD, CFS, GPM)
- c. Source of Effluent and Dilution Water
- (1) Effluent samples
 - (i) Sampling point
 - (ii) Sample collection date(s) and time(s)
 - (iii) Sample collection method
 - (iv) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
 - (v) Sample temperature when received at the laboratory
 - (vi) Lapsed time from sample collection to delivery
 - (vii) Lapsed time from sample collection to test initiation
 - (2) Dilution Water samples
 - (i) Source
 - (ii) Collection date(s) and time(s) (where applicable)
 - (iii) Pretreatment (if applicable)
 - (iv) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, specific conductivity, etc.)
- d. Test Conditions
- (1) Toxicity test method utilized
 - (2) End point(s) of test
 - (3) Deviations from referenced method, if any, and reason(s)
 - (4) Date and time test started
 - (5) Date and time test terminated
 - (6) Type and volume of test chambers
 - (7) Volume of solution per chamber
 - (8) Number of organisms per test chamber
 - (9) Number of replicate test chambers per treatment
 - (10) Test temperature, pH and dissolved oxygen as recommended by the method (to include ranges)

- (11) Feeding frequency, and amount and type of food
- (12) Light intensity (mean)
- e. Test Organisms
 - (1) Scientific name
 - (2) Life stage and age
 - (3) Source
 - (4) Disease treatment (if applicable)
- f. Quality Assurance
 - (1) Reference toxicant utilized and source
 - (2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)
 - (3) Dilution water utilized in reference toxicant test
 - (4) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.
 - (5) Physical and chemical methods utilized
- g. Results
 - (1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate
 - (2) Provide table of endpoints: LC50, NOAEC, Pass/Fail (as required in the applicable NPDES permit)
 - (3) Indicate statistical methods used to calculate endpoints
 - (4) Provide all physical and chemical data required by method
 - (5) Results of test(s) (LC50, NOAEC, Pass/Fail, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD)
- h. Conclusions and Recommendations
 - (1) Relationship between test endpoints and permit limits
 - (2) Action to be taken

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION**

NPDES INDIVIDUAL PERMIT RATIONALE

Company Name: Warrior Met Coal Gas, LLC
Facility Name: South Deerlick Creek
County: Tuscaloosa
Permit Number: AL0049760
Prepared by: Jasmine White
Date: April 30, 2019
Receiving Waters: Black Warrior River
Permit Coverage: Coalbed Methane Exploration, Production, and Associated Areas
SIC Code: 1311

The Department has made a tentative determination that the available information is adequate to support reissuance of this permit.

This proposed permit covers produced water and stormwater discharges from coalbed methane exploration, production, and associated areas.

This proposed permit authorizes treated discharges into a stream segment, other State water, or local watershed that currently has a water quality classification of Swimming and Other Whole Body Water-Contact Sports (S) and Fish and Wildlife (F&W) (ADEM Admin. Code r. 335-6-10-.09).

Full compliance with the proposed permit terms and conditions is expected to be protective of instream water quality and ensure consistency with applicable instream State water quality standards for the receiving stream.

The instream water quality standards for pH in streams classified as F&W is 6.0 – 8.5 s.u. per ADEM Admin. Code r. 335-6-10-.09. A discharge limitation for pH of 9.0 s.u. is imposed in this permit because the IWC indicates that enough dilution is considered to be available in-stream to allow for a discharge at 9.0 s.u. without endangering water quality. However, the discharge shall not be allowed to cause the in-stream pH to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u., nor greater than 8.5 s.u.

The Instream Waste Concentration (IWC) at the Zone of Initial Dilution (ZID) is 8.34% for Outfall 001-1. This IWC was calculated through a CORMIX model conducted by CFM Group on behalf of the Permittee and reviewed by the Department's Water Quality Branch in 2013.

Total iron and total manganese limitations are based on Best Professional Judgment (BPJ). These limitations have been used in previous permits and are believed to be adequate to protect water quality. The oil and grease daily maximum limit of 15 mg/L has been shown to provide a reasonable assurance of compliance with ADEM Admin. Code r. 335-6-10-.06(b) which says "State waters shall be free from floating debris, oil..."

The Department's experience with existing discharges on receiving streams with greater than 100:1 dilution has shown that acute toxicity requirements are more stringent than chronic requirements. This permit proposes discharges from Outfall 001-1 with a flow rate of 0.4059 cfs to a receiving stream with a 7Q₁₀ of 103.81 cfs, resulting in greater than 100:1 dilution. Therefore, acute toxicity testing with two species (*Ceriodaphnia dubia* and *Pimephales promelas*) is required using effluent diluted to the IWC at the perimeter of the ZID (ADEM Admin. Code r. 335-6-6-.15(10)(a)). The acute toxicity testing is required once per quarter. In addition, Part IV.B. of the

permit requires the Permittee to conduct toxicity testing in conjunction with the discharge of any new stimulation fluids into the waste stream.

Effluent and instream monitoring for dissolved chlorides and instream monitoring for specific conductance will continue be required in order to develop permit limitations in the future if needed to protect water quality.

The applicant has submitted, in accordance with 40 CFR Part 122.21 and their NPDES permit application, a complete EPA Form 2C for Outfall 001-1 as part of this application. The Department completed a reasonable potential analysis (RPA) of the discharge to determine whether or not pollutants in the treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standards, based on the analytical data submitted by the Permittee for Outfall 001. The RPA indicates that there was no reasonable potential for in-stream water quality standards to be exceeded. The Department has also reviewed available data in ALAWADR, ADEM's water quality database, and found nothing to contradict the data submitted by the applicant.

If there is a reasonable potential that a pollutant present in the treated discharges from a facility could cause or contribute to a contravention of applicable State water quality standards above numeric or narrative criteria, 40 CFR §122 requires the Department to establish effluent limits using calculated water quality criterion, establish effluent limits on a case-by-case basis using criteria established by EPA, or establish effluent limits based on an indicator parameter. Based on available information, potential pollutants discharged from this facility, if discharged within the concentrations allowed by this permit, would not have a reasonable potential to cause or contribute to a contravention of applicable State water quality standards.

Pursuant to ADEM Admin. Code r. 335-6-6-.12(r) this Permit requires the Permittee to prepare, implement, and maintain a Spill Prevention Control and Countermeasures (SPCC) plan for all stored chemicals, fuels and/or stored pollutants that have the potential to discharge to a water of the State. This plan must meet the minimum engineering requirements as defined in 40 CFR Part 112 and must provide for secondary containment adequate to control a potential spill.

A Best Management Practices (BMP) Plan is required for the control of all nonpoint sources of pollution from all areas that are or may be associated with the Permittee's operations. This plan must be based on best available technology and include, but not be limited to, containment of process liquids and solids such that these do not present a potential for discharge; stormwater runoff associated with wellpad construction and maintenance; roads, borrow pits, and dirt or other material stockpiles; and water, wastewater, and other fluids acquisition operations that may be associated with the Permittee's operations. The Permittee is required to inspect a minimum of 4% of its facilities each month to ensure that their BMPs are effective in minimizing pollutants in stormwater runoff and are adequate for compliance with State water quality standards.

The applicant is not proposing discharges of pollutants to a water of the State with an approved Total Maximum Daily Load (TMDL).

The applicant is not proposing discharges into a stream segment or other State water that is included on Alabama's current CWA §303(d) list.

The applicant is not proposing new discharges of pollutant(s) to an ADEM identified Tier I water.

The proposed permit does not authorize new or increased discharges of pollutants to a Tier II water. Therefore, the Antidegradation Policy (ADEM Admin. Code 335-6-10-.04) does not apply to this permit.

Facility Name: **Warrior Met Coal Gas, LLC - South Deerlick Creek**

NPDES No.: **AL0049760** Outfall 001-1²³⁴

Freshwater F&W classification.														Freshwater Acute (µg/l) Q _a = 1Q10					Freshwater Chronic (µg/l) Q _a = 7Q10					Human Health Consumption Fish only (µg/l) Carcinogen Q _a = Annual Average Non-Carcinogen Q _a = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant ¹ (C _{dmax})	Water ² Quality Criteria (C _c)	Draft Permit Limit (C _{dmax})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant (C _{davg}) ⁴	Water Quality Criteria (C _c)	Draft Permit Limit (C _{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C _c)	Draft Permit Limit (C _{davg})	20% of Draft Permit Limit	RP?								
1	Antimony			0	0	-	-	-		0	0	-	-	-		3.79E+02	6.21E+04	1.24E+04	No								
2	Arsenic		YES	0	0	340.000	42490.790	8498.158	No	0	0	150.000	24944.583	4988.917	No	3.03E-01	3.37E+03	6.74E+02	No								
3	Beryllium			0	0	-	-	-		0	0	-	-	-		-	-	-	-								
4	Cadmium			0	0	2.014	251.661	50.332	No	0	0	0.248	40.909	8.182	No	-	-	-	-								
5	Chromium/ Chromium III			0	0	569.763	71205.001	14241.000	No	0	0	74.115	12325.039	2465.008	No	-	-	-	-								
6	Chromium/ Chromium VI			0	0	16.000	1999.567	399.913	No	0	0	11.000	1829.269	365.854	No	-	-	-	-								
7	Copper			0	0	13.439	1679.525	335.905	No	0	0	8.956	1489.317	297.863	No	1.30E+03	2.18E+05	4.32E+04	No								
8	Lead			0	0	64.581	8070.923	1614.185	No	0	0	2.517	418.511	83.702	No	-	-	-	-								
9	Mercury			0	0	2.400	299.935	59.987	No	0	0	0.012	1.998	0.399	No	4.24E-02	7.08E+00	1.41E+00	No								
10	Nickel			0	0	488.236	58516.790	11703.358	No	0	0	52.007	8648.543	1729.709	No	9.93E+02	1.65E+05	3.30E+04	No								
11	Selenium			0	0	20.000	2499.458	499.892	No	0	0	5.000	831.486	166.297	No	2.43E+03	4.04E+05	8.08E+04	No								
12	Silver			0	0	3.217	402.008	80.402	No	0	0	-	-	-		-	-	-	-								
13	Thallium			0	0	-	-	-		0	0	-	-	-		2.74E-01	4.55E+01	9.10E+00	No								
14	Zinc			0	25.06	117.180	14644.383	2928.877	No	0	25.06	118.139	19646.185	3929.237	No	1.49E+04	2.48E+08	4.95E+05	No								
15	Cyanide			0	0	22.000	2749.404	549.881	No	0	0	5.200	864.746	172.949	No	9.33E+03	1.55E+06	3.10E+05	No								
16	Total Phenolic Compounds			0	0	-	-	-		0	0	-	-	-		-	-	-	-								
17	Hardness (As CaCO3)			0	0	-	-	-		0	0	-	-	-		-	-	-	-								

¹Outfall 001-1 discharges to the Black Warrior River. The 7Q10 for the receiving stream is 103.81 cfs. The mean annual flow is 6987 cfs.

This is the receiving stream flow value used in the calculations.

²Outfall 001-1 is reported to have a design discharge flow rate of 0.4059 MGD. This is the discharge flow rate used in the calculations.

³A hardness of 100 mg/L was used in the calculations based information provided in the application.

⁴Discharge data for all parameters are the results of samples obtained from Outfall 001-1 at the South Deerlick CBM Facility on June 11, 2018.

Instream data is the result of a sample obtained from the Black Warrior River on June 7, 2018.



Alabama Department of Environmental Management
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1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

CORMIX Modeling Review – South Deerlick Creek Outfall 001

Prepared For: Mining and Natural Resources Section
Prepared By: James Mooney, ADEM Water Quality Branch
Date: August 15th, 2013

The Water Quality Branch has performed a CORMIX modeling review for Walter Black Warrior Basin – South Deerlick Creek outfall DSN001. The facility discharges to the Black Warrior River with a modeled effluent flow rate of 0.4059 MGD.

A limiting dilution of 289.5:1 was calculated using the design effluent flow rate of 0.4059 MGD and a Black Warrior River 7Q10 value of 180.90 cfs. Based upon the established ADEM protocol for Whole Effluent Toxicity (WET) determination, acute toxicity using the 1Q10 flow applicable at the edge of the ZID will be employed for the review. The applicable ZID is 22.15 feet (6.75 meters), based upon the criterion stating the ZID is equal to *50 times the discharge length scale (DLS), applicable in any spatial direction.*

The South Deerlick Facility 001 currently discharges to the Black Warrior River using a submerged multiport diffuser. Based upon the modeling efforts of McGiffert and Associates, the current outfall design of the diffuser will be modified to meet the mixing requirements and achieve the desired IWC. The 4 ports, or openings, along the length of the manifold will be plugged. The endcap of the manifold will be removed, and a single 6 inch port, angled 45 degrees from the horizontal plane and also 45 degrees upstream, will be placed at the end of the manifold. All the effluent will exit the diffuser through this single endpipe port.

An IWC of 8.34% was predicted at the edge of the ZID. This value is identical to the IWC calculated by McGiffert and Associated LLC. Therefore, after the review the Water Quality Branch agrees with the findings from McGiffert and Associated LLC.



Mixing Zone Analysis Summary

Comments included

Yes No

General Information

Page 1

Year File Was Started 2013

Information Verified By JJM

Date of MZ Response 8/14/2013

Name of Receiving Stream Black Warrior River

Previous file name: Or-AKA (if applicable)

Facility Name Walter Black Warrior Basin - South Deerlick

Previous Name of Discharger Highmount Black Warrior Basin - Deerlick Creek Or-AKA (if applicable)

11 Digit HUC Code-USGS 03160112070

Other Point Sources? Yes No

12 Digit HUC Code 031601120306

Sources Included in the Model:

River Basin Black Warrior

County Tuscaloosa

Use Classification S / F&W

Discharge Latitude 33.25648

Discharge Longitude -87.44222

Site Visit Completed? Yes No

Date of Site Visit 8/12/2013

Print Record

Close Form

Permit Information

Type of Discharger

Municipal
 Industrial
 Semipublic/Private

Permit Number AL0049760

Permit Status Active

Hydrology

Drainage Area 4217 sq mi

Stream 7Q10 180.9 cfs

Stream 1Q10 135.6 cfs

Stream 7Q2 cfs

Method Used to Calculate

ADEM Estimate w/USGS Gage Data

ADEM Estimate w/USGS Gage Data

Date of MZ Analysis 7/31/2013

Model Completed by James Mooney

Discharge Design Flow 0.4059 MGD

Seasonal? Yes No

If not seasonal, only the summer sections will be used

Pollutant Category

Whole Effluent Toxicity (WET) Thermal Pathogens

Mixing Zone Analysis Summary - Page 2

WET Parameters

Summer

Acute

Ambient Streamflow | 135.6 | cfs
 ZID Length | 6.75 | Meters
 ZID IWC | 8.34 | %

Chronic

Ambient Streamflow | | cfs
 Mixing Zone Length | | Meters
 Mixing Zone IWC | | %

Winter

Acute

Ambient Streamflow | 135.6 | cfs
 ZID Length | 6.75 | Meters
 ZID IWC | 8.34 | %

Chronic

Ambient Streamflow | | cfs
 Mixing Zone Length | | Meters
 Mixing Zone IWC | | %

Thermal Parameters

Summer

Ambient Streamflow | | cfs
 Mixing Zone Length | | Meters
 Max. Effluent Temp | | °C

Winter

Ambient Streamflow | | cfs
 Mixing Zone Length | | Meters
 Max. Effluent Temp | | °C

Pathogen Parameters

Summer

Ambient Streamflow | | cfs
 ZID Length | | Meters
 Max. Effluent Fecal Conc | | Cols/100 mls
 Max. Effluent Enterococci Conc (for coastal waters) | | Cols/100 mls

Winter

Ambient Streamflow | | cfs
 ZID Length | | Meters
 Max. Effluent Fecal Conc | | Cols/100 mls
 Max. Effluent Enterococci Conc (for coastal waters) | | Cols/100 mls

Comments and/or Notations

A CORMIX review was requested by the Chase Gamble of the Mining and Natural Resources Section on July 24, 2013 for the Walter Black Warrior Basin - South Deerlick Facility 001 discharge to the Black Warrior River, just upstream of Holt L&D. The original CORMIX modeling was conducted by the engineering firm McGiffert and Associates LLC on behalf of Walter Black Warrior Basin. The Department agrees with the calculated IWC of 8.34%.

If comments are made, check the "yes" box at the top of page one.

Last Revision: 8/30/06

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION**

**COALBED METHANE OPERATIONS – EXPLORATION, DEVELOPMENT, OPERATION, CLOSURE, AND
ASSOCIATED ACTIVITIES AND AREAS**

R# 18-46983

INSTRUCTIONS: COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS OR MISSING SIGNATURES WILL DELAY PROCESSING. ATTACH ADDITIONAL COMMENTS OR INFORMATION AS NEEDED. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. COMMENCEMENT OF ACTIVITIES APPLIED FOR AS DETAILED IN THIS APPLICATION ARE NOT AUTHORIZED UNTIL THE EFFECTIVE DATE OF PERMIT COVERAGE ISSUED BY THE DEPARTMENT.

PLEASE TYPE OR PRINT IN INK ONLY.

~~\$15,750.00~~
\$7875.00

PURPOSE OF THIS APPLICATION

- Initial Permit Application for New Operations Modification of Existing Permit Reissuance of Existing Permit
 Reissuance & Modification of Existing Permit Reissuance & Transfer of Existing Permit Other: _____

RECEIVED

I. GENERAL INFORMATION

AUG 31 2018

NPDES Permit Number (Not applicable if initial permit application): <i>AL 0049760</i>	County(s) in which Operations are Located: Tuscaloosa
--	--

STORM WATER

MANAGEMENT BRANCH

Company/Permittee Name Warrior Met Coal Gas, LLC	Operations Name South Deerlick Creek	
Mailing Address of Company/Permittee: 16243 Highway 216	Physical Address of Operation (as near as possible to main entrance): 12031 Lake Nicol Road	
City: State: Zip: Brookwood AL 35444	City: State: Zip: Tuscaloosa AL 35406	
Permittee Phone Number (205) 554-6150	Permittee Fax Number: (205) 554-6149	Latitude and Longitude of Main Entrance: N33°18'15.0", W87°27'18.0"

Responsible Official (as described on Page 8 of this application); Jack Richardson	Responsible Official Title: President & Chief Operating Officer	
Mailing Address of Responsible Official: 16243 Highway 216	Physical Address of Responsible Official: 16243 Highway 216	
City: State: Zip: Brookwood AL 35444	City: State: Zip: Brookwood AL 35444	
Phone Number of Responsible Official: (205) 554-6150	Fax Number of Responsible Official: (205) 554-6149	Email Address of Responsible Official: jack.richardson@warriormetcoal.com

Operations Contact: Charles Hamner	Operations Contact Title: General Manager	
Physical Address of Operations Contact: 12031 Lake Nicol Road	Phone Number of Operations Contact: (205) 247-4256	Fax Number of Operations Contact: (205) 759-1380
City: State: Zip: Tuscaloosa AL 35406	Email Address of Operations Contact: charles.hamner@warriormetcoal.com	

II. MEMBER INFORMATION

A. Identify the name, title/position, and unless waived in writing by the Department, the resident address of every officer, general partner, LLP partner, LLC member, investor, director, or person performing a function similar to a director, of the applicant, and each person who is the record or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the operations:

Name	Title/Position	Physical Address of Residence (P.O. Box is Not Acceptable)
See Attachment		

B. Other than the "Company/Permittee" listed in Part I, identify the name of each corporation, partnership, association, and single proprietorship for which any individual identified in Part II.A. is or was an officer, general partner, LLP partner, LLC member, investor, director, or individual performing a function similar to a director, or principal (10% or more) stockholder, that had an Alabama NPDES permit at any time during the five year (60 month) period immediately preceding the date on which this form is signed:

Name of Corporation, Partnership, Association, or Single Proprietorship:	Name of Individual from Part II.A.:	Title/Position in Corporation, Partnership, Association, or Single Proprietorship:
See Attachment		

III. LEGAL STRUCTURE OF APPLICANT

A. Indicate the legal structure of the "Company/Permittee" listed in Part I:

- Corporation
 Association
 Individual
 Single Proprietorship
 Partnership
 LLP
 LLC
 Government Agency _____
 Other _____

B. If not an individual or single proprietorship, is the "Company/Permittee" listed in Part I properly registered and in good standing with the Alabama Secretary of State's office. (If the answer is "No," attach a letter of explanation.) Yes No

C. Parent Corporation and Subsidiary Corporations of Applicant, if any: Warrior Met Coal Intermediate Holdco LLC

D. Land owner(s): Information available to the department upon request

E. Mining Sub-contractor(s)/Operator(s), if known: Not Applicable

IV. COMPLIANCE HISTORY

A. Has the applicant ever had any of the following:

	Yes	No
(1) An Alabama NPDES, SID, or UIC permit suspended or terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2) An Alabama or federal environmental permit suspended/terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3) An Alabama State Oil & Gas Board permit or other approval suspended or terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4) An Alabama or federal performance/environmental bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(If the response to any item of Part IV.A. is "Yes," attach a letter of explanation.)

B. Identify every Warning Letter, Notice of Violation (NOV), Administrative Action, or litigation issued to the applicant, parent corporation, subsidiary, general partner, LLP partner, or LLC Member and filed by ADEM or EPA during the three year (36 month) period preceding the date on which this form is signed. Indicate the date of issuance, briefly describe alleged violations, list actions (if any) to abate alleged violations, and indicate date of final resolution:

See Attachment

V. OTHER PERMITS/AUTHORIZATIONS

A. List any other NPDES, State Oil & Gas Board (OGB) Class II Injection wells, or other environmental permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, Alabama Surface Mining Commission (ASMC), Alabama Department of Industrial Relations (ADIR), or other agency, to the applicant, parent corporation, subsidiary, or LLC member for these operations whether presently effective, expired, suspended, revoked or terminated:

OGB Permits for wells will be provided upon request.

B. List any other NPDES or other ADEM permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, OGB, ASMC, or ADIR to the applicant, parent corporation, subsidiary, or LLC member for other facilities whether presently effective, expired, suspended, revoked, or terminated:

See Attachment

VI. PROPOSED SCHEDULE

Anticipated Activity Commencement Date: March 1988

Anticipated Activity Completion Date: 2040 +/-

VII. ACTIVITY DESCRIPTION & INFORMATION

A. Proposed Total Area of the Permitted Site: 8,960 acres Proposed Total Disturbed Area of the Permitted Site: 75 +/- acres

B. Township(s), Range(s), Section(s): T20S, R9W, Sec 13, 14, 21, 22, 23, 24, 25, 26, 27, 28, 33, 34, 35, & 36

C. Detailed Directions to Site: (Field office) from Birmingham, AL; travel East on I20/59 to US Hwy 82, go West, Exit and travel East on Rice Mine Road - 2 to 3 miles; turn right (East) at New Watermelon Road and travel approximately 3 miles to Fire Station; turn right at "T" in road and travel approximately 4 miles, field office will be on your right.

D. Is/will this operation:	Yes	No
(1) an existing operation which currently results in discharges to State waters?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(2) a proposed operation which will result in a discharge to State waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3) be located within any 100-year flood plain?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(4) discharge to Municipal Separate Storm Sewer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5) discharge to waters of or be located in the Coastal Zone?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6) need/have ADEM UIC permit coverage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(7) be located on Indian/historically significant lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(8) need/have ADEM SID permit coverage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(9) need/have State Oil & Gas Board coverage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(10) need/have ADIR permit coverage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(11) generate, treat, store, or dispose of hazardous or toxic waste? (If "Yes," attach a detailed explanation.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(12) be located in or discharge to a Public Water Supply (PWS) watershed or be located within 1/2 mile of any PWS well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VIII. PROPOSED ACTIVITY TO BE CONDUCTED

A. Type(s) of activity presently conducted at applicant's existing operations or proposed to be conducted at operations (check all that apply):

- | | |
|---|--|
| <input checked="" type="checkbox"/> CBM exploration/production (drilling, fracturing, etc.) | <input type="checkbox"/> Surface water withdrawal |
| <input checked="" type="checkbox"/> Land application of temporary pit waters | <input type="checkbox"/> Conventional Oil & Gas exploration |
| <input checked="" type="checkbox"/> Creek/stream pipeline or road crossings | <input checked="" type="checkbox"/> Gob well development |
| <input checked="" type="checkbox"/> Construction related temporary borrow pits/areas | <input checked="" type="checkbox"/> Chemicals used in process or wastewater treatment (coagulant, biocide, etc.) |
| <input checked="" type="checkbox"/> Onsite construction debris or equipment storage/disposal | <input checked="" type="checkbox"/> Construction Excavation |
| <input checked="" type="checkbox"/> Grading, clearing, grubbing, etc. | <input checked="" type="checkbox"/> Reclamation of disturbed areas |
| <input type="checkbox"/> Waterbody relocation or other alteration | <input checked="" type="checkbox"/> Other (describe): <u>Natural Gas Production (Coalbed Methane)</u> |
| <input type="checkbox"/> Other beneficiation/manufacturing operations. If "Yes", please describe: _____ | |

B. Primary SIC Code 1311 Description Coalbed methane (crude petroleum and natural gas)

Secondary SIC Code(s) _____ Description _____

C. Narrative Description of the Activity: Coalbed methane exploration, production, operation, and associated activities.

IX. FUEL – CHEMICAL HANDLING, STORAGE & SPILL PREVENTION CONTROL & COUNTERMEASURES (SPCC) PLAN

- A. Will fuels, chemicals, compounds, or liquid waste be used or stored onsite? Yes No
 B. If "Yes," identify the fuel, chemicals, compounds, or liquid waste and indicate the volume of each: See Attached Plan

Volume	Contents	Volume	Contents	Volume	Contents
_____ gallons	_____	_____ gallons	_____	_____ gallons	_____
_____ gallons	_____	_____ gallons	_____	_____ gallons	_____

- C. If "Yes", a detailed SPCC Plan with acceptable format and content, including diagrams, must be attached to application in accordance with ADEM Admin. Code R. 335-6-6-.12(r). Unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis, Material Safety Data Sheets (MSDS) for chemicals/compounds used or proposed to be used at the operations must be included in the SPCC Plan submittal. The attached SPCC Plan was Prepared by Tom Joiner & Associates, Inc. with an update underway. The MSDS sheets will be provided upon request.

X. TOPOGRAPHIC MAP SUBMITTAL

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary), of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, operations name, county, and township, range, & section(s) where the operations are located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show:

- | | |
|---|---|
| (a) An outline of legal boundary of entire operations (property lines and lease boundaries) | (k) All surrounding unimproved/improved roads |
| (b) Compressor stations | (l) High-tension power lines and railroad tracks |
| (c) All existing and proposed disturbed areas | (m) Buildings and structures, including fuel/water tanks |
| (d) Operations gas and water pipelines | (n) Contour lines, township-range-section lines |
| (e) Proposed and existing discharge points | (o) Drainage patterns, swales, washes |
| (f) Perennial, intermittent, and ephemeral streams | (p) All drainage conveyance/treatment structures (ditches, berms, etc.) |
| (g) Lakes, springs, water wells, and wetlands | (q) Any other pertinent or significant structure/feature |
| (h) All known dirt/improved access roads for operations | (r) Location of any waste storage/disposal areas |
| (i) Wellpads and service roads | (s) Location of operations sign showing Permittee name, operations name, and NPDES Number |
| (j) Other information relevant to operations | |

XI. RECEIVING WATERS

List the requested permit action for each outfall (issue, reissue, add, delete, move, etc.), outfall designation including denoting "E" for existing and "P" for proposed outfalls, name of receiving water(s), latitude and longitude (to seconds) of location of each discharge point, the receiving water(s) use classification, whether or not the outfall discharges to an ADEM listed CWA Section 303(d) waterbody segment at the time of application submittal, and whether or not the stream is included in a TMDL.

Action	Outfall E/P	Receiving Water	Latitude	Longitude	ADEM WUC	303(d) Segment (Y/N)	TMDL Segment* (Y/N)
Reissue	001E	Black Warrior River	33°15'23.2"	87°26'31.9"	S / F&W	N	N

*If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation: (1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.); (2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be reported as available); (3) Requested interim limitations, if applicable; (4) Date of final compliance with TMDL limitations; and (5) Any other additional information available to support the requested compliance schedule.

XII. DISCHARGE CHARACTERIZATION

EPA Form 2C/2D Submittal

Yes No A complete and correct EPA Form 2C and/or 2D or a Department-approved version of the EPA Form 2C is attached for each proposed and/or existing outfall. If "No", provide explanation:

See Attached - ADEM Modified EPA 2C form for effluent and in-stream up-gradient background.

XIII. INFORMATION

Contact the Department prior to submittal with any questions or to request acceptable alternate content/format. Be advised that you are not authorized to commence regulated activity until this application can be processed, publicly noticed, and approval to proceed is received in writing from the Department.

EPA Form(s) 1 and 2F need not be submitted unless specifically required by the Department. EPA Form(s) 2C and/or 2D (or a Department-approved version of the forms) are required to be submitted. The applicant should ensure that other than those proposed activities described in this application, there are no other potential pollutants, processes, process wastewaters or activities that require NPDES permit coverage. Permit coverage will allow for use of captive borrow areas used solely for the permitted operation. Coverage under the Department's NPDES Construction Stormwater Permit Program allows for short-lived, construction related, limited removal or relocation of fill material offsite, and does not provide coverage for coalbed methane operations.

The applicant should understand by submission of this application, that they are advised to contact:

- 1) The Alabama State Oil & Gas Board;
- 2) The Alabama Historical Commission for requirements related to any potential historic or culturally significant sites;
- 3) The Alabama Department of Conservation and Natural Resources (ADCNR) for requirements related to potential presence of threatened/endangered species; and
- 4) The US Army Corps of Engineers, Mobile or Nashville Districts, if this project could cause fill to be placed in federal waters/wetlands or could interfere with navigation.

The Department must be in receipt of a completed version of this form, including any supporting documentation, and the appropriate processing fee (including Greenfield Fee and Biomonitoring & Toxicity Limits fee(s), if applicable), prior to development of a draft NPDES permit. Send the completed form, supporting documentation, and the appropriate fees to:

Water Division—Mining and Natural Resource Section
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, AL 36130-1463
Phone: (334) 394-4372
Fax: (334) 279-3051
h2omail@adem.state.al.us
www.adem.alabama.gov

XIV. PROPOSED NEW OR INCREASED DISCHARGES

A. Pursuant to ADEM Admin. Code Ch. 335-6-10-.12(9), responses to the following questions must be provided by the applicant requesting NPDES permit coverage for new or expanded discharges of pollutant(s) to Tier 2 waters (except discharges eligible for coverage under general permits). As part of the permit application review process, the Department is required to determine, based on the applicant's demonstration, that the proposed new or increased discharge to Tier 2 waters is necessary for important economic or social development in the area in which the waters are located.

Yes. New/increased discharges of pollutant(s) or discharge locations to Tier 2 waters are proposed.

No. New/increased discharges of pollutants(s) or discharge locations to Tier 2 waters are not proposed.

B. If "Yes," complete this Part (XV.B.), Part XVI, and XVII. **Attach additional sheets/documentation and supporting information as needed.**

1) What environmental or public health problem will the discharge be correcting? _____

Not Applicable

2) How much will the discharger be increasing employment (at its existing operations or as a result of initiating new operations)?

Not Applicable

3) How much reduction in employment will the discharger be avoiding? _____

Not Applicable

4) How much additional state or local taxes will the discharger be paying? _____

Not Applicable

5) What public service to the community will the discharger be providing? _____

Not Applicable

6) What economic or social benefit will the discharger be providing to the community? _____

Not Applicable

XV. ALTERNATIVES ANALYSIS – ADEM Form 311 3/02

Pursuant to ADEM Admin. Code Ch. 335-6-10, an evaluation of the discharge alternatives identified below has been completed and the following conclusions were reached. All proposed new or expanded discharges of pollutant(s) covered by the Individual NPDES permitting program are subject to the provisions of the antidegradation policy. As part of the permit application review process, the Department is required to determine, based on the applicant's demonstration, that the proposed new or increased discharge to Tier 2 waters is necessary for important economic or social development in the area in which the waters are located. As a part of this demonstration, a registered professional engineer (PE) licensed to practice in the State of Alabama must complete an evaluation of the discharge alternatives, to include calculation of total annualized project costs (Item XVII) for each technically feasible alternative. Technically feasible alternatives with total annualized pollution control project costs that are less than 110% of the preferred alternative total annualized pollution control project costs for the Tier 2 new or increased discharge proposal are considered viable alternatives. **Supporting documentation is attached, referenced, or otherwise handled as appropriate.**

Alternative	Viable	Non-Viable	Reason/Rationale For Indicating Non-Viable
1) Treatment/Discharge Proposed In This Application			Not Applicable
2) Land Application			
3) Pretreatment/Discharge to POTW By SID Permit			
4) Relocation of Discharge			
5) Reuse/Recycle -- Pollution Prevention			
6) Other Process/Treatment Alternatives			
7) Underground Injection By UIC Permit			
8) Other Project Specific Alternative(s) Identified By the Applicant Or The ADEM			
9) Other Project Specific Alternative(s) Identified By the Applicant Or The ADEM			

COMMENTS: _____

XVI. CALCULATION OF TOTAL ANNUALIZED PROJECT COSTS FOR PRIVATE SECTOR PROJECTS - ADEM Form 313 3/02
 (ADEM Form 312 3/02 - Public Sector Project is available upon request)

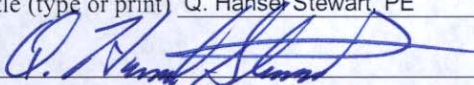
This item must be completed for each technically feasible alternative evaluated in Item XVI. **Copy, complete, and attach additional blocks/sheets and supporting information as needed.** Not Applicable

Capital Costs of pollution control project to be expended or financed by applicant (Supplied by applicant)	\$ _____ (1)	* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
Interest Rate for Financing (Expressed as a decimal)	_____ (i)	
Time Period of Financing (Assume 10 years *)	_____ 10 years (n)	
Annualization Factor ** = $\frac{j}{(1+i)^{10}-1} + i$ i = Interest Rate	_____ (2)	** Or refer to Appendix B (application information) for calculated annualization factors.
Annualized Capital Cost [Calculate: (1) x (2)]	\$ _____ (3)	
Annual Cost of Operation & Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration & replacement) ***	\$ _____ (4)	*** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).
Total Annual Cost of Pollution Control Project [(3) + (4)]	\$ _____ (5)	

XVII. PROFESSIONAL ENGINEER (PE) CERTIFICATION

A detailed, comprehensive Pollution Abatement/Prevention Plan (PAP) must be prepared, signed, and certified by a professional engineer (PE), registered in the State of Alabama as follows:

"Except for the pages, portions, maps, plans, etc. contained in this application that are specifically certified by a professional engineer registered in the state of Alabama, I certify on behalf of the applicant, that I have completed an evaluation of discharge alternatives (Item XV) for any proposed new or increased discharges of pollutant(s) to Tier 2 waters and reached the conclusions indicated. I certify under penalty of law that technical information and data contained in this application, and any attached SPCC plan, maps, engineering designs, etc., has been prepared under my supervision for this operation utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6. If the treatment systems are properly implemented and maintained by the permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other permit requirements. The applicant has been advised that Best Management Practices must be fully implemented and regularly maintained as needed at the operation in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality."

Address 2814 Stillman Blvd.; Tuscaloosa, AL 35401 PE Registration # 30097
 Name and Title (type or print) Q. Hansel Stewart, PE Phone Number (205) 759-1521
 Signature  Date Signed 8/30/18

XVIII. RESPONSIBLE OFFICIAL SIGNATURE*

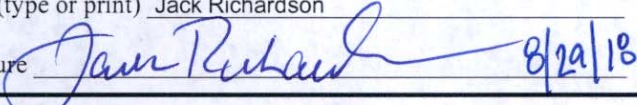
This application must be signed by a Responsible Official of the applicant pursuant to ADEM Admin. Code R. 335-6-6-.09 who has overall responsibility for the activities of the operation.

"I certify under penalty of law that this document, including technical information and data, including any SPCC plan, maps, engineering designs, and all other attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the PE and other person or persons under my supervision 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 or imprisonment for knowing violations.

I understand that regular inspections must be performed by, or under the direct supervision of, a PE and all appropriate treatment facilities and structural & nonstructural management practices or Department approved equivalent management practices identified by the PE must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the operation in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that the Best Management Practices must be fully implemented and regularly maintained so that discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other requirements to ensure protection of groundwater and surface water quality. I understand that failure to fully implement and regularly maintain required management practices for the protection of groundwater and surface water quality may subject the myself and/or the organization for which I represent to appropriate enforcement action. I understand that applicable records of data and information used to complete this application and any supplemental information submitted as part of this application must be retained pursuant to applicable requirements of ADEM Admin. Code Ch. 335-6.

I certify that this form has not been altered, and if copied, reproduced, or completed electronically, is consistent in format and identical in content to the ADEM approved form.

I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-mining associated beneficiation/process pollutants and wastewaters have been fully identified."

Name (type or print) Jack Richardson Official Title President & Chief Operating Officer
 Signature  Date Signed 8/29/18

*335-6-6-.09 Signatories to Permit Applications and Reports.

- (1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:
 - (a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;
 - (b) In the case of a partnership, by a general partner;
 - (c) In the case of a sole partnership, by the proprietor, or
 - (d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

**ATTACHMENT
WARRIOR MET COAL GAS, LLC
SOUTH DEERLICK CREEK FACILITY
ADEM FORM 549 m3 5/14
NPDES PERMIT NO. AL0049760
TUSCALOOSA COUNTY, ALABAMA**

Item II.A. MEMBER INFORMATION

<u>Name</u>	<u>Title/Position</u>	<u>Addresses</u>	<u>City / State / Zip</u>
Jack Richardson	Chief Operating Officer & President	16243 Highway 216	Brookwood, AL 35444
Dale W. Boyles	Chief Financial Officer	16243 Highway 216	Brookwood, AL 35444
Kelli K. Gant	Chief Administrative Officer	16243 Highway 216	Brookwood, AL 35444
Phillip C. Monroe	General Counsel	16243 Highway 216	Brookwood, AL 35444
Philip Saunders	Vice President, Engineering	16243 Highway 216	Brookwood, AL 35444
William Stanhouse	Vice President, External Affairs	16243 Highway 216	Brookwood, AL 35444
Brian M. Chopin	Chief Accounting Officer & Controller	16243 Highway 216	Brookwood, AL 35444
Richard A. Marlowe	Vice President, Safety	16243 Highway 216	Brookwood, AL 35444

**ATTACHMENT
WARRIOR MET COAL GAS, LLC
SOUTH DEERLICK CREEK FACILITY
ADEM FORM 549 m3 5/14
NPDES PERMIT NO. AL0049760
TUSCALOOSA COUNTY, ALABAMA**

Item II.B. MEMBER INFORMATION

Name of Corporation, Partnership, Association, or Single Proprietorship:	Name of Individual from Part II.A.:	Title/Position in Corporation, Partnership, Association, or Single Proprietorship:
Warrior Met Coal BCE, LLC	Jack Richardson	Chief Operating Officer & President
Warrior Met Coal BCE, LLC	Dale W. Boyles	Chief Financial Officer
Warrior Met Coal BCE, LLC	Kelli K. Gant	Chief Administrative Officer
Warrior Met Coal BCE, LLC	Phillip C. Monroe	General Counsel
Warrior Met Coal BCE, LLC	Phillip Saunders	Vice President, Engineering
Warrior Met Coal BCE, LLC	William Stanhouse	Vice President, External Affairs
Warrior Met Coal BCE, LLC	Brian M. Chopin	Chief Accounting Officer & Controller
Warrior Met Coal BCE, LLC	Richard A. Marlowe	Vice President, Safety
Warrior Met Coal Land, LLC	Jack Richardson	Chief Operating Officer & President
Warrior Met Coal Land, LLC	Dale W. Boyles	Chief Financial Officer
Warrior Met Coal Land, LLC	Kelli K. Gant	Chief Administrative Officer
Warrior Met Coal Land, LLC	Phillip C. Monroe	General Counsel
Warrior Met Coal Land, LLC	Phillip Saunders	Vice President, Engineering
Warrior Met Coal Land, LLC	William Stanhouse	Vice President, External Affairs
Warrior Met Coal Land, LLC	Brian M. Chopin	Chief Accounting Officer & Controller
Warrior Met Coal Land, LLC	Richard A. Marlowe	Vice President, Safety
Warrior Met Coal Mining, LLC	Jack Richardson	Chief Operating Officer & President
Warrior Met Coal Mining, LLC	Dale W. Boyles	Chief Financial Officer
Warrior Met Coal Mining, LLC	Kelli K. Gant	Chief Administrative Officer
Warrior Met Coal Mining, LLC	Phillip C. Monroe	General Counsel
Warrior Met Coal Mining, LLC	Phillip Saunders	Vice President, Engineering
Warrior Met Coal Mining, LLC	William Stanhouse	Vice President, External Affairs
Warrior Met Coal Mining, LLC	Brian M. Chopin	Chief Accounting Officer & Controller
Warrior Met Coal Mining, LLC	Richard A. Marlowe	Vice President, Safety
Warrior Met Coal TRI, LLC	Jack Richardson	Chief Operating Officer & President
Warrior Met Coal TRI, LLC	Dale W. Boyles	Chief Financial Officer
Warrior Met Coal TRI, LLC	Kelli K. Gant	Chief Administrative Officer
Warrior Met Coal TRI, LLC	Phillip C. Monroe	General Counsel
Warrior Met Coal TRI, LLC	Phillip Saunders	Vice President, Engineering
Warrior Met Coal TRI, LLC	William Stanhouse	Vice President, External Affairs
Warrior Met Coal TRI, LLC	Brian M. Chopin	Chief Accounting Officer & Controller
Warrior Met Coal TRI, LLC	Richard A. Marlowe	Vice President, Safety
Blue Creek Energy, Inc.	Brian M. Chopin	Controller
Jim Walter Resources, Inc.	Brian M. Chopin	Director
Jim Walter Resources, Inc.	Kelli K. Gant	Vice President
Taft Coal Sales & Associates, Inc.	Brian M. Chopin	Director & Controller
Taft Coal Sales & Associates, Inc.	Kelli K. Gant	Vice President
Tuscaloosa Resources, Inc.	Brian M. Chopin	Director & Controller
Tuscaloosa Resources, Inc.	Kelli K. Gant	Vice President
Walter Black Warrior Basin, LLC	Brian M. Chopin	Director & Controller
Walter Black Warrior Basin, LLC	Kelli K. Gant	Vice President
Walter Coke, Inc.	Brian M. Chopin	Vice President
Walter Coke, Inc.	Kelli K. Gant	Director & Controller
Walter Minerals, Inc.	Brian M. Chopin	Director & Controller
Walter Minerals, Inc.	Kelli K. Gant	Vice President

**ATTACHMENT
WARRIOR MET COAL GAS, LLC
SOUTH DEERLICK CREEK FACILITY
ADEM FORM 549 m3 5/14
NPDES PERMIT NO. AL0049760
TUSCALOOSA COUNTY, ALABAMA**

Item IV.B. COMPLIANCE HISTORY

Applicant/Parent Corporation	Permit No.	Type	Date of Issuance	Description of Alleged Violations
Warrior Met Coal Mining, LLC	ALG160192	Warning Letter	3/14/2016	Failure to Enroll in Electronic Environmental (E2) Reporting System
Warrior Met Coal Land, LLC	AL0074012	Litigation	6/5/2017	Plaintiff's Motion for Dismissal Without Prejudice filed by Alabama River Alliance, Inc. & Friends of Hurricane Creek is Granted.
Warrior Met Coal Mining, LLC	AL0074349	Litigation	6/5/2017	Plaintiff's Motion for Dismissal Without Prejudice filed by Alabama River Alliance, Inc. & Friends of Hurricane Creek is Granted.

Item V.B. OTHER PERMITS/AUTHORIZATIONS

- **ADEM Permits:** 63-20, 63-21, AL0026590, AL0029181, AL0029475, AL0049760, AL0057312, AL0070777, AL0073458, AL0074012, AL0074349, AL0074420, AL0075043, AL0075558, AL0080578, AL0081477, ALG140042, ALG160192, ALR109605, ALR10A788, ALR10AB78, ALSI9929374, ALSI9963512, ALSI9963634, ALSI9963636
- **ASMC Permits:** P-3247, P-3256, P-3260, P-3774, P-3817, P-3819, P-3839, P-3852, P-3906, P-3927, P-3944, P-3964
- **OGB Permits:** Will be provided upon request.

NPDES MINING AND PREPARATION PLANT OUTFALL DATA FOR METALS, CYANIDE, AND TOTAL PHENOLS

NPDES Permit No.: AL0049760		Applicant: Warrior Met Coal Gas, LLC			Facility: South Deerlick Creek
Outfall Sample ¹ : DSN-001E	Date of Sampling: 6/11/18	Was Sample Taken In-Pond? No	Was Sample Taken from Discharge? Yes	Substantially Identical Outfalls: NA	Description of Discharge: Effluent and In-stream Up-gradient Background Sample *

Please supply the following information separately for every P or E outfall evaluated or tested. If necessary, attach extra sheets. If you are a coal facility, mark "X" in appropriate column for all listed metals, cyanide, and total phenols. If the outfall is existing, you must provide the results of at least one representative analysis for that pollutant for a substantially identical existing outfall at the facility. If the outfall is proposed, you must either submit at least one representative analysis for a substantially identical existing outfall at the facility or, if not available, at least one representative analysis for a substantially identical outfall at another similar facility.

Pollutant and CAS No. (if available)	Mark "X"			Effluent										Instream				
	Existing Outfall (Testing Required)	Proposed Outfall – Parameter Believed Present	Proposed Outfall – Parameter Believed Absent	Maximum Daily Value		Maximum 30 Day Value (if available)		Long Term Average Value (if available)		# of Analyses	Frequency of Discharge (Days/Month Hours/Day)	EPA Approved Method Analysis Used ²	Method Detection Limit (µg/L)	Receiving Water TQ10 Flow (cfs)	Discharge Flow (cfs)	Background Instream Concentration (µg/L)	Instream Hardness (optional) (mg/L CaCO ₃) ³	Instream Flow (optional) (cfs)
				Concentration (µg/L)	Mass (lbs)	Concentration (µg/L)	Mass (lbs)	Concentration (µg/L)	Mass (lbs)									
1M. Antimony, Total (7440-36-0)	X			<1.92						1		EPA200.8			<1.92	-	-	
2M. Arsenic, Total (7440-39-2)	X			<0.27						1		EPA200.8			<0.27	-	-	
3M. Beryllium, Total (7440-41-7)	X			<2.20						1		EPA200.8			<2.20	-	-	
4M. Cadmium, Total (7440-43-9)	X			<0.08						1		EPA200.8			<0.08	-	-	
5M. Chromium, Total (744-47-3)	X			<1.64						1		EPA200.8			<1.64	-	-	
6M. Copper, Total (7440-50-8)	X			<0.90						1		EPA200.8			<0.90	-	-	
7M. Lead, Total (7439-92-1)	X			<0.31						1		EPA200.8			<0.31	-	-	
8M. Mercury, Total (7439-97-6)	X			<0.01						1		EPA245.2			<0.01	-	-	
9M. Nickel, Total (7440-02-0)	X			<6.86						1		EPA200.8			<6.86	-	-	
10M. Selenium, Total (7782-49-2)	X			<0.95						1		EPA200.8			<0.95	-	-	
11M. Silver, Total (7440-22-4)	X			<0.15						1		EPA200.8			<0.15	-	-	
12M. Thallium, Total 74440-28-0)	X			<0.08						1		EPA200.8			<0.08	-	-	
13M. Zinc, Total (7440-66-6)	X			25.06						1		EPA200.8			<16.45	-	-	
14M. Cyanide, Total (57-12-5)	X			<3.0						1		SM4500-CN-E			<3.0	-	-	
15M. Phenols, Total	X			<6.0						1		EPA420.1			<6.0	-	-	

*-The in-stream sample was taken up-gradient of the outfall location in Black Warrior River on 6/7/18

¹ Sampling results must be representative of the discharge.

² Test methods used must be in accordance with 40 CFR Part 136 and 40 CFR 122.21(g)(7)(i).

³ Instream Hardness (CaCO₃) will be assumed to be either 50 mg/L or 100 mg/L based on the location of the discharge if Hardness data is not submitted.

WARRIOR MET COAL GAS, LLC

SOUTH DEERLICK CREEK

NPDES PERMIT AL0049760

TUSCALOOSA COUNTY, ALABAMA

POLLUTION AND ABATEMENT PLAN

AUGUST 2018

PREPARED BY



2814 STILLMAN BLVD. • P.O. BOX 20559
TUSCALOOSA, ALABAMA 35402-0559

WWW.MCGIFFERT.COM (205) 759-1521 FAX (205) 759-1524

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I. INTRODUCTION

This document is in support of the reissuance of NPDES Permit AL0049760 for Warrior Met Coal Gas, LLC (WMC) to discharge their produced and processed water from the South Deerlick Creek facility to the Black Warrior River. WMC's South Deerlick Creek facility is located in Tuscaloosa County, Alabama. See Item VII of ADEM form 549 m3 05/14 for a list of the Sections. This Pollution Abatement Plan is being prepared in accordance with the rules and regulations of the Alabama Department of Environmental Management (ADEM), Water Division Water Quality and Control Program, Chapter 335-6-9.

The Pollution Abatement Plan is presented in one part that is a brief narrative presented herein. The location of existing wells, project roads, pipelines, and other appurtenances are shown on WMC's project drawing but the location of all proposed facilities has yet to be determined. This narrative is intended to address the format as outlined by the ADEM Water Division - Water Quality and Control Program, Rules and Regulations. Generally, the narrative will follow the outline of Chapter 335-6-9-.03, Surface Mining Rules, Water Division - Water Quality and Control Program, Alabama Department of Environmental Management.

II. OPERATOR

The operator of this facility is Warrior Met Coal Gas, LLC and their mailing address is as follows:

Warrior Met Coal Gas, LLC
16243 Highway 216
Brookwood, AL 35444

III. GENERAL INFORMATION

The WMC South Deerlick Creek facility is an existing facility that is anticipated to be in operation for an additional twenty to twenty-five years. It is planned to continue developing new coalbed methane wells and to enhance the development of existing coalbed methane wells within the project boundaries.

The coalbed methane facility has approximately 90 producing coalbed methane wells active and plans to drill additional wells as market conditions allow. WMC employs many full time personnel at the facility and varying numbers of full time contract workers. Any new wells will be drilled to the appropriate coal seam or seams. The coal seam will be "fractured" or "developed" to enhance the flow of methane gas to the well bore. The methane gas will flow from the coal seam to the well bore and then to the methane gas gathering-lines that will transport the produced methane gas to an existing compressor station that will transfer the gas to the gas main for conveyance to a sales station then to a cross-country natural gas pipeline.

Water is removed from the coal seams by means of a pump, typically a sucker rod positive displacement pump. The removal of "Produced Water" from the coalbed methane wells will allow the methane gas that is trapped in the coal seams to travel up the well bore to the gathering lines. The produced water is transported by water gathering lines to the Waste Water Treatment facility. WMC treats the produced water per NPDES requirements and discharges the produced water to the Black Warrior River via the NPDES Permit Number AL0049760.

IV. TOPOGRAPHIC MAP

The topographical map in accordance with Item X of ADEM form 549 m3 05/14 is a reproduction of US Geological Survey Quadrangle Sheets with the project area outlined along with the location of existing and proposed coalbed methane wells. The location of the Waste Water Treatment facility, discharge point, compressor stations, and sales point are also shown.

V. METHOD OF DIVERTING SURFACE WATER RUNOFF

The project roads, pipeline rights-of-way, power line rights-of-way, staging areas and other disturbed areas will be constructed in accordance with the Best Management Practices Plan for this facility. Silt fence, water diversion berms, rock filter dams, check dams, and other BMPs will be utilized until the disturbed areas are stable. Stormwater inspections will be performed in accordance with the NPDES Permit. Maintenance of implemented BMPs will be performed as required to maintain integrity of their performance.

VI. RAW MATERIALS, PROCESSES AND PRODUCTS

Coalbed Methane Gas is the only product produced for sale. A well was drilled to the coal formation for extraction of Coalbed Methane Gas and produced water. The water will be removed from the well by means of a pump and transported by pipelines to the WMC Waste Water Treatment Facility prior to discharge to the Black Warrior River. The methane gas will be piped to a WMC compressor station prior to being transported to the cross-country natural gas pipeline.

VII. SCHEMATIC DIAGRAM

A schematic flow diagram is enclosed as Attachment No. 1.

VIII. POST TREATMENT QUANTITY AND QUALITY OF EFFLUENT

The WMC Waste Water Treatment facility currently treats produced wastewater from the coalbed methane wells prior to discharging thru the outfall diffuser into the Black Warrior River. There is the possibility that there will be numerous additional wells in the current project area. The additional wells would be drilled over a period of time. The overall water produced with the current wells should decrease as time progresses.

The disturbed areas of this facility will consist of project roads, pipelines, and power line rights-of-way, well pads, and a staging area or storage yard for materials. All disturbed areas will either have a crushed stone or clay/gravel base surface or have established permanent vegetation prior to removal of silt fence, water diversion berms, rock filter dams, check dams, and other BMPs. The disturbed surfaces will be stabilized as soon as construction allows.

IX. WASTE TREATMENT FACILITIES

Waste generated as a result of facility operation will be treated and disposed of as required by all current ADEM regulations.

X. SEDIMENT CONTROL FOR FACILITY ROADS

Facility roads will have a rock wearing surface and the side slopes of the road way will be grassed with permanent vegetation. The facility roads will be constructed in accordance with the Best Management Practices Plan proposed for this facility.

XI. LOCATION OF ALL STREAMS ADJACENT TO DISTURBED AREAS

The topographical map submitted in accordance with Item X of ADEM form 549 m3 05/14 is a reproduction of US Geological Survey Quadrangle Sheets with the project area outlined showing the streams in the project area. The location of the existing wells, project roads, compressor stations, diffuser and monitors, sales station, waste water treatment facilities, and field office and disturbed area are illustrated on the project drawing. Some potential wells and project roads have been shown on the drawing; however, additional development within the NPDES permitted boundary and will be illustrated on an updated drawing as they are planned. This facility is a Coalbed Methane Project and will not have a typical surface mining operation.

XII. NON-POINT SOURCE POLLUTION

All disturbed areas will be grassed or have a stone surface. Prior to grassing and placing stone, BMPs will be utilized to contain silt within the project area. BMPs are covered more extensively in the Best Management Practices Plan prepared for this facility.

XIII. PUBLIC WATER SUPPLY IMPOUNDMENT

The receiving water is the Black Warrior River and it is classified for swimming, fishing, and wildlife.

XIV. SPILL PREVENTION CONTROL & COUNTERMEASURES PLAN

This facility has a Spill Prevention Control & Countermeasures Plan that is regularly evaluated and updated as required in accordance with 40 CFR Part 112 requirements. Tom Joiner & Associates, Inc. prepared the current Spill Prevention Control & Countermeasures Plan for this facility which is attached with this application. This plan is currently being reviewed and updated as needed. A copy of the updated plan will be provided to ADEM following completion for their record.

XV. RUN-OFF CALCULATIONS

The only locations that may require pipes for storm water are along the roadways. Pipes used in the construction of roadways will be designed in accordance with the Best Management Practices Plan for this facility.

XVI. RECLAMATION PROCEDURE

When a pipeline or powerline right-of-way is constructed all disturbed areas will be stabilized with vegetation or a stone wearing surface. Disturbed areas associated with the construction of roads, wastewater treatment facilities, and compressor stations will be stabilized with vegetation or stone. When a portion or all of this facility is no longer in use the disturbed areas will be graded and permanent vegetation will be planted to control erosion. Project roads and well pads may remain in place at the request of the landowner. All other areas will be shaped with slopes less than 3:1 and grassed to control erosion.

XVII. BMP TYPICAL

BMPs shown on the typical drawings should be implemented to control potential runoff pollution, help prevent off-site sedimentation, and ultimately protect the receiving waters. The typical drawings provide a standard approach for implementation across the facility.

The following typical drawings can be found in the Spill Prevention Control & Countermeasures Plan and the Best Management Practices Plan for Nonpoint Source Discharge Control.

1. Silt Fence Type "A"
2. Sediment Control Log (Wattle) Barrier
3. Water Diversion Berm
4. Runoff Sump Sediment Trap with Outlet Protection
5. Rock Filter Dam and Erosion Control Sediment Trap
6. Temporary Rip-Rap Check Dam
7. Slope Stabilization
8. Construction Exit Pad
9. Typical Road Crossing Creek with less than 10 CFS flow
10. Typical Pipeline Crossing Creek with less than 10 CFS flow

XVIII. CHEMICAL/COMPOUNDS AND POTENTIAL TOXICITY SOURCES

The use of, hydrocarbons by WMC personnel will be limited to lubricating oils in pump jacks and hydrocarbons used in pickup trucks or other vehicles and compression equipment. Chemicals may be used at the Waste Water Treatment facility to help test the waste water. Chemicals may also be used in the control of vegetation and fertilizers may be used to enhance the growth of vegetation.

Contractors employed by WMC will have established written Spill Prevention Control & Countermeasures Plan and a Best Management Practices Plan in place prior to working at this facility and follow the plans approved for this facility by ADEM.

Construction equipment used in the construction of the well pads, project roads and rights-of-way use oil and diesel fuel. Contractors employed at this facility will be required to conform to ADEM standards and their Spill Prevention Control & Countermeasures Plan in the handling of hydrocarbons.

Well Drilling and Well Completion contractors will operate on well pads that have a containment berm constructed around all equipment and drain to a drilling pit. Please refer to typical drawings found in the Spill Prevention Control & Countermeasures Plan dated and the Best Management Practices Plan for Nonpoint Source Discharge Control.

XIX. EPA FORM 2D AND/OR EPA FORM 2C

The ADEM required EPA Modified 2C Form submitted for this facility.

XX. COPY OF ASMC REQUIRED WATER QUALITY RELATED DATA AND INFORMATION

The Alabama surface mining commission does not regulate COALBED METHANE facilities.

XXI. DESIGN DATA

At this time there are not any proposed new structures, impoundments or other features that have associated design data. Each diffuser has been evaluated by utilizing CORMIX modeling software. The analysis and engineering reports were previously submitted, reviewed, and approved by ADEM and the Water Quality Group.

XXII. P.E. CERTIFICATION

PREPARED BY:

McGiffert and Associates, LLC

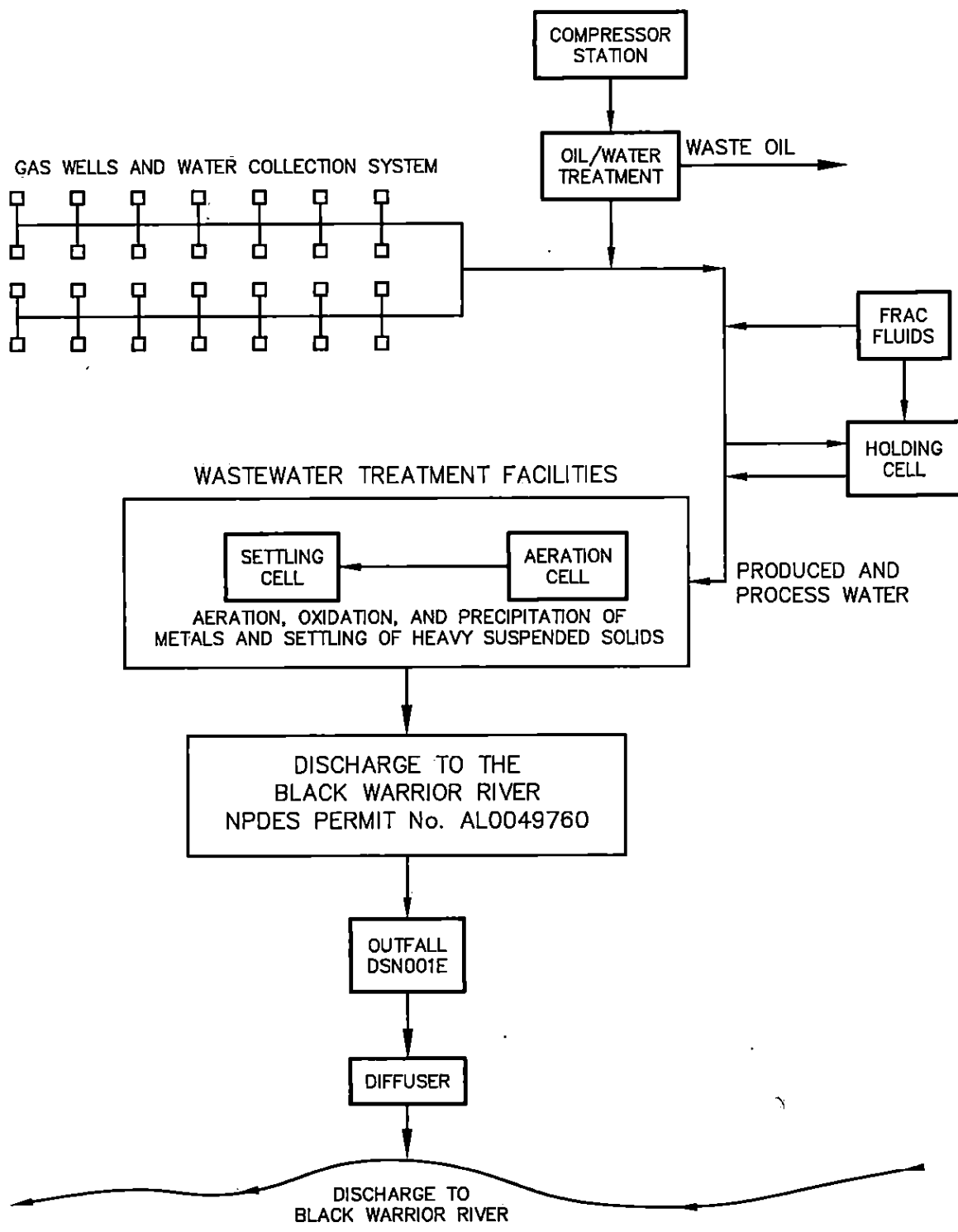
Q. Hansel Stewart, P.E.

AL Reg. No. 30097

Date: _____

ATTACHMENT NO. 1

FLOW DIAGRAM



McGiffert
and Associates, LLC
— SINCE 1949 —
CIVIL ENGINEERS

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WARRIOR MET COAL GAS, LLC
SOUTH DEERLICK CREEK
NPDES DISCHARGE PERMIT
NO. AL0049760

TUSCALOOSA COUNTY ALABAMA

FLOW DIAGRAM

REVISION		
DATE	DESCRIPTION	BY

SCALE: NA
DATE OF FIELD SURVEY: NA
FB. PG.
DRAWN BY: DDH
JOB No. 18-3077
FILE NAME: WMCG-SDC-Flow

SHEET No. 1 of 1

CHECKED BY: QHS
DWG. No. 310-18

ATTACHMENT NO. 2

FACILITY TOPOGRAPHIC MAP

**WARRIOR MET
COAL GAS, LLC**

**COALBED METHANE
PROJECTS - ALABAMA**

**NPDES PERMIT AL0057312
NPDES PERMIT AL0049760**

**TUSCALOOSA & FAYETTE
COUNTIES, ALABAMA**

**BEST MANAGEMENT PRACTICES PLAN
FOR
NON-POINT SOURCE DISCHARGE CONTROL**

UPDATED AUGUST 2018

PREPARED BY



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SECTION 1: FACILITY INFORMATION AND INTRODUCTION

1.1 Facilities Operation and Management

The Operator shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Operator to achieve compliance with the conditions of the Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Alabama Department of Environmental Management (ADEM) will recognize good faith efforts undertaken by or on the behalf of the Operator. However, it is the responsibility of the Operator to implement and maintain all measures necessary to ensure compliance with applicable State Law and regulations set forth by ADEM through the EPA's National Pollutant Discharge Elimination System (NPDES) permit program.

In accordance with Part II.A.2.b of the NPDES permit, this Best Management Practices Plan (BMPP) has been developed as minimum requirements to address the control of all nonpoint source pollution associated with the Permittee's operations. This plan addresses current construction techniques and operational practices necessary to contain and manage any pollutants that may present a potential for discharge to receiving waters of the State.

1.2 Facility Information

Project/Site Name: Black Warrior River Basin Project
NPDES Permit Number: AL0057312
Project Street/Location: 12031 Lake Nicol Road; Tuscaloosa, AL
County(ies): Tuscaloosa & Fayette State: Alabama ZIP Code: 35406
Latitude/Longitude of the Project Office: 33° 18' 15.4" N, 87° 27' 18.3" W
Method for determining latitude/longitude: Google Earth

Project/Site Name: South Deerlick Creek
NPDES Permit Number: AL0049760
Project Street/Location: 12031 Lake Nicol Road; Tuscaloosa, AL
County(ies): Tuscaloosa State: Alabama ZIP Code: 35406
Latitude/Longitude of the Project Office: 33° 18' 15.4" N, 87° 27' 18.3" W
Method for determining latitude/longitude: Google Earth

1.3 Contact Information/Responsible Parties

Legal Business Name: Warrior Met Coal Gas, LLC Phone: (205) 247-4256
Name, Title: Charles Hamner, General Manager Fax: (205) 759-1380
Address: 12031 Lake Nicol Road Cell: (205) 361-3450
Tuscaloosa, AL 35406 Email: charles.hamner@warriormetcoal.com

BMPP Development, QCP, and QCI Contact:

McGiffert and Associates, LLC
W. David McGiffert, PE/PLS/QCP
Q. Hansel Stewart, PE/QCP
Daniel Homan, QCI
2814 Stillman Boulevard
Tuscaloosa, Alabama 35401
Phone (205) 759-1521
Fax (205) 759-1524

1.4 Applicable Federal, State, or Local Programs

The Federal Clean Water Act of 1972 established water quality goals for all waters of the United States. In 1987, congress amended the Clean Water Act to provide a renewed effort to meet water quality goals. Related areas targeted for renewed emphasis in this Act are under Section 319, which deals with non-point source pollution (NPS), and Section 402, which addresses storm water discharges. In 1992 the US Environmental Protection Agency (EPA) implemented rules regulating stormwater discharges from most industrial facilities and larger municipalities.

The Alabama Department of Environmental Management (ADEM) regulates the EPA's National Pollutant Discharge Elimination System (NPDES) permit program at the state government level. ADEM modified the coalbed methane NPDES permits to include these stormwater discharge requirements. The coalbed methane operator's NPDES permit requires the operator to implement practices for reducing or eliminating pollutants in stormwater runoff. These practices are known as Best Management Practices (BMPs), and the combination of all the operator's BMPs (selection, implementation, maintenance, stabilization, etc.) are known as the BMP Plan.

EPA has published a document titled Storm Water Management for Construction Activities. This EPA document is intended to assist the construction industry in developing BMP plans for individual construction sites. Though many of the pollutants in stormwater runoff from coalbed methane operations may be associated with the construction of roads, well pads and gathering systems, there are some pollutants in stormwater runoff from coalbed methane operations that are not typical of construction projects. This document is intended to supplement EPA's guidance document in assisting coalbed methane operators to comply with their NPDES permits and protect water quality. Some examples of items that must be addressed by the coalbed methane operator in their BMP Plan are reduction of pollution in stormwater runoff from the construction and maintenance of access roads, well pads, gathering line right-of-ways, and stream crossings; and from other industrial effects such as leaking well heads, land application fields, pipe yards, compressor stations, vehicle maintenance areas, spills in material stockpile areas, borrow pits, etc.

The coalbed methane industry has attempted to prevent contamination of water bodies caused by sediment and other pollutants in stormwater runoff. This BMPP has been developed utilizing EPA, ADEM, and industry standards to address the control of pollution in stormwater discharges. This facility will periodically evaluate this BMP plan to determine if that plan should be updated to meet the requirements of the facility NPDES permit and protect water quality.

1.5 Introduction to Pollutants

Pollutants discharged in stormwater associated with coalbed methane operations are suspended solids which primarily result from sediment particles from soils. Other pollutants, such as oil and grease, pesticides, herbicides, etc., can also be transported once in contact with stormwater runoff or can attach to the sediments, and the sediments act as a carrier of these pollutants. Sediment reduction in stormwater runoff is important in reducing the discharge of other pollutants in stormwater.

Erosion is the primary process that contributes to sediment migration and stormwater pollution in runoff during rain events from coalbed methane operations. Erosion is the process of dislodging soil particles from the ground, and sedimentation is the deposition of these dislodged soil particles. Since the primary pollutant and carrier of other pollutants in stormwater runoff from coalbed methane operations are sediments, BMPs for the coalbed methane industry are similar to the BMPs used in the construction industry. Refer to Section 2.2 for a list of typical structural BMPs and how, if properly implemented, they reduce erosion and sedimentation transport to receiving waters.

It could be stated that items entering water bodies that changes the composition or condition of the water are pollutants. Some examples of pollutants that may be in stormwater runoff from coalbed methane operations are suspended solids (soils and other sediments), produced water, trash, sewage, paints and solvents, oil and grease, and even items such as fertilizers, pesticides, and detergents. Any dissolved (solids, oil and grease, fertilizers, herbicides, pesticides, putrescibles, etc.) or un-dissolved (silt and other sediments, tree debris, rocks, trash, etc.) components of a discharge into water are pollutants. Also, water that has undesirable characteristics such as an extremely low/high pH or water that can excessively change the receiving water's temperature is a pollutant.

Stormwater discharges can be either point source or non-point source discharges. Discharges to waters through a discrete conveyance such as a pipe or a ditch are point source discharges, and all other discharges are non-point source discharges. An example of a non-point source discharge from a coalbed methane facility would be sediment laden stormwater runoff from a poorly vegetated pipeline right-of-way. In addition, non-point source discharges include oil, grease, or other toxic chemicals that are introduced into stormwater runoff from rainfall events.

Description of typical pollutants

The major pollutants in stormwater runoff from coalbed methane operations may include:

- A. Sediments – Sediments deposited in water bodies due to soil erosion are, according to some experts, the largest single pollution problem in the United States. Even though sedimentation is a process that occurs naturally, studies have shown that erosion rates from construction sites that have not implemented proper BMPs may be up to 10,000 times greater than under natural conditions. Sedimentation reduces stream capacities which can cause flash flooding and property damage, covers stream and lake bottoms killing benthic organisms (bottom dwelling plants and animals that are the base of the food chain), damages fish gills, decreases the ability of sunlight to penetrate the water decreasing photosynthesis necessary to generate oxygen in the water, changes the stream hydrology, destroys fish beds during spawning season, and carries other pollutants that attach to the sediment particles into water bodies.
- B. Oil and Grease – Machinery used to extract coalbed methane utilizes hydrocarbon products. These hydrocarbons may include lubricants, solvents, fuels, antifreeze, etc. Handling of these products and the machinery using these products should be done with care and with desire to prevent these components from entering water bodies. Coalbed methane production does not typically produce oil and grease in the produced/process water stream. However, oil and grease may get into the produced water lines and gas/water separators from lubricants used in the pumping systems. Any pooled oil spills should be promptly removed with oil absorbent materials and properly disposed. Contaminated soils need to be remediated or properly disposed.
- C. Fertilizers (Nutrients) – Nutrients, primarily phosphorous and nitrogen fertilizers, are sometimes applied to the construction area to stimulate vegetation growth. Both elements occur naturally in soils. Fertilizers when applied at proper rates rarely will cause problems in waters. Fertilizers cause problems when they are over applied, applied during or immediately before a rain event, applied during the wrong time of the year, or broadcast directly to a water. Improper application of fertilizers may cause eutrophication. A eutrophic condition is when water becomes nutrient rich. Eutrophication causes algal blooms that rob the water of dissolved oxygen. Proper application of fertilizers will help prevent eutrophication. Also, nutrients will attach to sediments that are in stormwater runoff. Effective erosion and sediment controls will help prevent sediments from transporting these nutrients into waters.

- D. Produced Water Leaks – Often produced water leaks occur at the well heads and from the gathering lines. Produced water from coalbed methane wells typically has high chloride concentrations. Chlorides discharged into freshwater systems can cause toxic conditions to fish and other aquatic wildlife if levels are high enough. Non-structural BMPs should be implemented to reduce occurrences of produced water leaks at well heads and pipelines. In addition, both structural and non-structural BMPs should be ready to quickly mitigate any potential pollution caused by these leaks.
- E. Herbicides – Sometimes herbicides are used on well pads and gathering line right-of-ways. These materials are very toxic and should be applied according to the manufacturer’s directions.

SECTION 2: GENERAL BEST MANAGEMENT PRACTICES FOR CONTROLLING SEDIMENT

2.1 Erosion and Sedimentation Controls

Implementation of erosion and sedimentation controls will be conducted under the guidance of a company representative experienced in construction techniques involving the proper installation and maintenance of BMPs. This representative shall have the authority to take special actions as necessary to assure that effective BMPs have been implemented and maintained to prevent water quality degradation. Factors that influence erosion and sedimentation are rainfall amounts and intensities, soil types, slope length and gradient, groundwater elevation, season, wind velocities, and geology.

The locations of selected BMPs should be chosen to control stormwater volume and velocity, according to characteristics of each BMP in the following categories: erosion reduction, runoff conveyance, sediment diversion, detention, filtration, and other sediment control and reduction properties. The selected BMPs shall be implemented and maintained to provide the previously listed characteristics to control stormwater runoff to minimize soil erosion, reduce runoff velocity, and minimize downstream channel and streambank erosion.

The company representative shall continually examine what effects variable operations create on-site and whether changing conditions require the need for additional BMPs to control pollutants in stormwater run-off. In areas where stormwater concentrations are high, a Qualified Credentialed Professional (QCP) as defined by ADEM may be needed in order to determine if adequate BMPs are being utilized and make recommendations for additional BMPs to be implemented to protect receiving waters.

2.2 Description of Typical Structural BMPs

Because there are so many influencing factors, implementation and layout of structural BMPs should be site specific. Multiple BMPs may be used in developing and implementing a BMP approach for the construction of well pads, roads, utility right-of-ways, and other appurtenances associated with coalbed methane operations. The following are descriptions of some BMPs that may be utilized during construction and maintenance at the facility:

- **Silt Fence Sediment Barriers** – A silt fence sediment barrier is a temporary sediment control device used to protect water quality in nearby streams, rivers, lakes and seas from sediment in stormwater runoff. Sediment is captured by silt fences primarily through ponding of water and settling, rather than filtration by the fabric. Sand and silt tends to clog the fabric, and then the sediments settle in the temporary pond. Their effectiveness in controlling sediment can be limited, due to problems with poor installation, proper placement, and/or inadequate maintenance.
- **Construction Exit Pad** – A construction exit pad is a stone-base structure designed to provide a buffer area where mud and collected soil can be removed from vehicle tires and avoid transporting it onto public roads. Roads adjacent to disturbed areas should be kept clean for the general safety of the public.

- **Sediment Control Logs** – A sediment control log is designed to reduce hydraulic energy and filter sediment from stormwater flows in low flow depressions and on slopes. These control logs are flexible and conform to the soil surface by wooden stakes. Proper installation, including keying in a trench and precise staking, will determine the effectiveness and lifespan of this temporary BMP.
- **Outlet Protection** – Outlet protection is designed to prevent channelized erosion by reducing stormwater velocity and dissipating the energy and have been shown in areas to slow stormwater exit velocity thereby reducing scour or erosion of the receiving stream at and down-gradient of the discharge point. It is constructed with loose rip rap to absorb the initial impact of stormwater discharging from a disturbed area prior to entering the receiving waters.
- **Water Diversion Berms** – Water diversion berms are generally narrow, earthen ridges built across roads or disturbed slopes. They divert stormwater off of roads and away from disturbed slopes to naturally vegetated areas which reduces stormwater concentrations and erosion. Berms should be maintained as needed until construction in an area is complete and the disturbed area has been stabilized with permanent vegetation. These type structures may require a splash pad or other energy dispersion structures at the discharge end to prevent erosion. In addition, if these structures are designed to carry concentrations of water at high velocities they may require lining with riprap and/or geotextiles to maintain their structural integrity.
- **Runoff Sump Sediment Traps with Outlet Protection** – Runoff sump sediment traps with outlet protection shall be used to flatten the gradient of flow and slow the stormwater velocity while allowing sediment deposition within the storage basin impoundment area; also reducing turbidity.
- **Rock Filter Dams** – Rock filter dams are temporary erosion control items that shall be installed in natural or constructed drainage ways where high stormwater concentrations are anticipated. They should be located so that the impoundment area intercepts runoff from disturbed areas and has adequate storage capacity.
- **Temporary Sediment Traps** – Temporary sediment traps shall be used to slow stormwater velocity and allow for ponding which also encourages sediment deposition within the excavated area. If these type controls are an integral part of the BMP plan they should be properly installed prior to or concurrent with initial soil disturbances. In addition, sediment traps will not work if they are not continuously maintained.
- **Rip-Rap Check Dams** – Rip-rap check dams are temporary erosion control items that shall be installed across defined drainage ways where high stormwater concentrations are anticipated. The type, size, and class of rip-rap used to construct the dam shall be chosen in accordance with anticipated stormwater flows and velocities. Rip-rap check dams in series should be installed so that the toe of the up-gradient dam is the same elevation as the top of the down-gradient dam.
- **Slope Stabilization** – All disturbed slopes should be stabilized as soon as grading is complete in order to minimize erosion. On critical areas that may be susceptible to erosion because of steep slopes or concentrated flows, geosynthetics and/or rip-rap may be required. Some examples of geosynthetics are fiber mats, synthetic mats, geotextiles, porous concrete, and gabions. If geosynthetics are utilized, they must be implemented in accordance with the manufacturer's recommendations.
- **Soil Stabilization** – All areas shall remain vegetated and stable until such time that active construction for that area begins. Once construction is underway for a particular area, efforts shall be made to disturb as little of the area as possible. Roadsides, cut and fill slopes at drilling locations, and pipeline right-of-ways should be limed, fertilized, seeded, and mulched as necessary as soon as practical after construction and in accordance with accepted soil conservation practices. Mulching is important because the mulch helps prevent erosion and retains soil moisture until the grasses are established.
- **Final Stabilization** – Once construction is complete in an individual area, all areas that are disturbed, regardless of location, will be paved, covered with gravel, or vegetated as soon as practical. All erosion and sedimentation controls will be maintained until the disturbed area is covered or permanent vegetation is re-established.

Erosion Control Standard Details drawings for structural BMPs mentioned above show installation requirements that meet or exceed the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* and the *Alabama Department of Transportation (ALDOT)* specifications where applicable, and have been included in *Appendix A* of this document.

2.3 Stabilization

Stabilization is the most critical component of protecting areas from erosion and stormwater pollution. Both Temporary and permanent stabilization should be implemented throughout the facility as construction progresses. Stabilization includes both vegetative cover as well as non-erodible cover including stone or other permanent ground cover materials.

All areas shall remain vegetated and stable until such time that active construction for that area begins. Once construction is underway for a particular area, efforts shall be made to disturb as little of the area as possible. Areas that will not be under active or progressive construction for a period of 13 days or more shall be temporarily grassed to stabilize the area in accordance with ADEM regulations. As construction progresses, non-erodible cover such as crushed stone shall be implemented to stabilize disturbed areas that will receive vehicular traffic. Disturbed areas not stabilized with non-erodible cover shall be stabilized with temporary or permanent vegetation in accordance with the Grassing Specifications detailed below.

All bare areas not under active or progressive construction must be temporarily grassed, to minimize the generation of dust or on-site erosion, depending on the timeframe to continue active construction. Final stabilization of disturbed areas should be initiated immediately whenever earth disturbing activities have permanently ceased on any portion of the site. If an unforeseeable event halts construction at the site for an unknown period of time, temporary stabilization practices shall be implemented in accordance with the details below until such time that construction can continue.

A. Grassing Specifications

1) Materials

No seed shall contain more than 1% weed seed. Limitations of noxious weed seeds will be as specified by rules and regulations for administration of the current State Seed Law. All seed shall meet the requirements of these specifications and comply with the current Seed Law, Act No. 424, General Acts 1963, and rules and regulations promulgated there under and any revision of the Act. Seed shall be certified by an Official Seed Certifying Agency, Alabama Crop Improvement Association, to meet high quality standards. Each bag shall bear a "Certified Seed" tag or label bearing the seal of the Official Seed Certifying Agency. They shall be tested within nine months prior to use in accordance with the latest edition of Rules for Seed Testing, approved by the Association of Official Seed Analysis.

2) Permanent Seeding

The required weight shown in the chart is the actual seed weight as delivered and takes into account the minimum required percentage of pure seeds and minimum required germination rates. Seeding mixtures shall be classed according to the time of year when seeding will take place. Areas subject to frequent mowing are roadway shoulders, medians and front slopes flatter than 3:1 extending 60 feet beyond the edge of pavement or to the toe of the front slope whichever is less. All other areas designated for seeding shall be considered to be areas not subject to frequent mowing. The following mixtures and application rates shall apply for permanent seeding mixtures:

AREAS SUBJECT TO FREQUENT MOWING REQUIRED POUNDS PER ACRE OF PURE LIVE SEED			
TYPE/DESCRIPTION	DATE OF PLANTING		
	Aug. 16 to Feb. 29	Mar. 1 to April 15	April 16 to August 15
Annual Ryegrass	10		
Hulled Bermuda grass		18	24
Unhulled Bermuda grass	30	12	
Annual Lespedeza (Kobe)			38
White Dutch Clover	5	6	
Notes	1		
Required Permanent Plant	Bermuda grass		
1. During this season Ryegrass, Bermuda grass and Clover are required where vegetation must be established within an area no further than 15 feet from the edge of mainline pavement.			

AREAS NOT SUBJECT TO FREQUENT MOWING REQUIRED POUNDS PER ACRE OF PURE LIVE SEED				
TYPE/DESCRIPTION	DATE OF PLANTING			
	Jan. 1 to Feb. 15	Feb. 16 to August 31	Sept. 1 to Nov. 15	Nov. 16 to Dec. 31
Annual Ryegrass	10	5	10	10
Hulled Bermuda grass		18	12	
Unhulled Bermuda grass	24	12	12	24
Tall Fescue	29		35	29
Weeping Lovegrass		2	2	
Annual Lespedeza (Kobe)		50		
Reseeding Crimson Clover	29		29	29
Pensacola Bahia Grass	29	29	29	29
Required Permanent Plant	Mixed			

3) Temporary Seeding

The required weight shown in the chart is the actual seed weight as delivered and takes into account the minimum required percentage of pure seeds and minimum required germination rates. Seeding mixtures shall be classed according to the time of year when seeding will take place.

The following mixtures and application rates shall apply for temporary seeding mixtures:

SEED TYPE	DATE OF PLANTING	SEEDING RATE / AC PLS
Millet, Brown top or German	Apr 1-Aug 15	40 lbs
Ryegrass	Sep 1-Oct 15	30 lbs
Common Bermuda grass	Mar 15-Jul 15	10 lbs

4) Fertilizer

The fertilizer shall be a commercial grade, complying with the current State Fertilizer Laws. Fertilizer shall be of a commonly accepted analysis and conform to the following table and points:

PERCENT BY WEIGHT			
Type	Nitrogen	Phosphorus	Potash
15-0-15	15	0	15
13-13-13	13	13	13
10-10-10	10	10	10
8-8-8	8	8	8
0-14-14	0	14	14
4-12-12	4	12	12
4-16-8	4	16	8
Super Phosphate		18	
Ammonium Nitrate	33.5		
Ammonium Sulphate	20.5		
Nitrate of Soda	16		
Muriate of Potash			60

- i. An allowance of five percent variation or tolerance of the above proportions will be permitted based on relative commercial value.
- ii. Cottonseed meal shall contain 41 percent protein or 6.56 percent nitrogen.
- iii. If the fertilizer is furnished from bulk storage, the contractor shall furnish the supplier certification of analysis and weight.

5) Agricultural Limestone

The limestone shall have a neutralizing value of 90% calcium carbonate or better and meet the following gradation requirements:

- Sieve Size #10, 90% by weight passing.
- Sieve Size #60, 50% by weight passing.

6) Mulch

- Mulch materials shall be air dried and shall not be spoiled or rotted to the extent that plant stems are caked together.
- Mulch material containing noxious weed seeds will not be acceptable.
- Dry blown mulch shall be hay or straw. Mulch material application rate shall be 1 ½ to 2 tons per acre or conform to most recent version of Table MU-1 of the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas. The mulch shall be spread by hand or machine to attain 75% groundcover.

- Mulch shall be anchored with a mulch anchoring tool or a regular form disk in areas subject to high wind conditions or on slopes greater than 4:1. The form disk shall be set to run straight and weight should be added to aid in the crimping process. However, the disk should not be sharp enough to cut the straw.
- Hydraulic mulch materials shall consist of paper, mechanically processed straw, wood, or natural fibers and tackifier.
- Bonded fiber matrix materials shall consist of organic defibrated fibers, cross linked insoluble hydro-colloidal tackifiers, and reinforcing natural or synthetic fibers.

7) Application

- The contractor shall dress the area to be seeded to a reasonably smooth surface, sloped to drain, and tie with surrounding contours.
- The contractor shall break all lumps, clods, and crusty surfaces by tillage, discing. All boulders, stumps, roots and other particles that would interfere with a mowing operation shall be removed.
- Fertilizer shall be spread uniformly in sufficient quantity to provide at least 120 pounds of nitrogen, 120 pounds of available phosphoric acid, and 120 pounds of total potash per acre as computed from the nominal contents of fertilizing ingredients.
- Agricultural lime shall be uniformly and evenly applied at a rate of 4,000 pounds per acre.
- The fertilizer and lime shall be thoroughly mixed into the soil by discing, or tilling
- Dry blown mulch shall be applied at the rate of not less than 4,000 lbs per acre and shall be done within 48 hours after seeding. On slopes steeper than 3H:1V, an adhesive applied at the manufacturer's recommended rate shall be used on the mulch. On slopes 3H:1V or flatter, a mulch crimper may be used instead of the adhesive.
- Hydraulic mulch shall be applied at the rate of 1,500 lbs per acre and shall be done concurrently with hydroseeding. In no case shall the applied rate be less than 1 ton per acre for hydraulically applied mulches.
- Bonded fiber matrix shall be applied at the rate of 4,000 lbs per acre and shall be done concurrently with hydroseeding.

B. Topsoil Preservation

Topsoil preservation is a necessary part of construction operations which involves removing and stockpiling the topsoil with the expectation of replacement following construction activities. Topsoil is necessary for providing a blend of structural nutrient rich material that is natural fertile and promotes thicker healthier vegetation growth. During the construction of access roads and well pads, slopes that are created are highly susceptible to erosion. The placement of topsoil on these slopes is the single most significant BMP that will ultimately provide for a stabilized vegetative cover. The lack of placing topsoil prior to grassing will make stabilization by grassing difficult and sometimes not possible due to the clayey or sandy soils lack of nutrients. Topsoil preservation is a construction technique utilized to prevent runoff and erosion and to lessen the degradation of water quality.

The topsoil should be removed with heavy equipment and then piled in large, deep piles for the duration of construction. When construction is complete, the soil is spread over disturbed areas to allow for the reestablishment of permanent vegetative cover. A topsoil material stockpile should have BMPs implemented as necessary around the perimeter. Areas that will not be under active or progressive construction for a period of 13 days or more shall be temporarily grassed to stabilize the area in accordance with ADEM regulations and the *Alabama Handbook for Erosion Control and Stormwater Management on Construction Sites and Urban Areas, Latest Edition*.

C. BMP Maintenance

Stream crossings, roads, roadsides, pipelines and drilling pads will be maintained to prevent erosion and sediment loss to stormwater runoff. A visually acceptable standard will be maintained during the entire life of the project.

All BMPs within current construction areas shall be inspected daily and any corrective actions needed shall be performed immediately. If current construction activities conflict with the BMP location, the corrective actions must be complete by the end of the workday. Sediment deposits shall be removed once they reach 50% of the structural BMPs original design volume. To prevent BMP failure and non-compliant discharges, it is strongly recommended that the BMPs be cleaned out after every appreciable rain event, regardless of sediment volume, in order to maintain a 100% holding capacity. The reclaimed sediment must be returned to the eroded area or elsewhere on-site and graded, seeded, and mulched to stabilize up-gradient of installed BMPs.

If an event occurs where sediment migrates past BMPs to a stormwater conveyance channel, sediment shall be removed in accordance with the following procedure:

- Sediment in or near conveyance channels shall be removed by utilizing minimal land disturbance techniques, including small equipment and hand labor if necessary.
- The reclaimed sediment must be returned to the eroded area or the designated material storage area. The sediment shall be graded, seeded, and mulched to stabilize up gradient of installed BMPs.
- Disturbed areas outside of the construction area caused by the removal of migrated sediment shall be stabilized with seed and mulch immediately following the reclamation process

All grassed areas shall be maintained until final stabilization has been achieved. This shall include mowing to release grass. The acceptance of designated grassed areas will be based on verification of a satisfactory stand of grass in the season for each seed species required by the mix designated for use. If a satisfactory stand of grass is not established, the area shall be re-seeded and repeated as many times as necessary to establish a satisfactory stand of grass. A satisfactory stand is defined as a cover of healthy, living plants, after true leaves are formed, of the seed species required by the mix designated for use in which gaps larger than five (5) inches square do not occur with uniform density.

SECTION 3: FACILITY CONSTRUCTION

Road construction is necessary to provide access to each well and other facilities with permanent structures. These access roads will allow movement of equipment in and out of the locations as required initially during construction as well as needed during subsequent operation, monitoring, and maintenance. The facility location placement and access routes shall be determined and selected while considering the surrounding topography and potential for minimizing the resulting land disturbance and possible adverse stormwater runoff management issues that could affect receiving streams. Facility locations and associated appurtenances shall be graded such that stormwater is directed away from disturbed areas which will reduce erosion of exposed soil material and minimize contact with possible pollutants.

3.1 Considerations for Road Siting

Consideration of the following, to the extent practical, shall be utilized during road siting:

- Existing roads should be used, where suitable, to prevent further soil disturbance.
- Ridgelines should be followed to minimize road grades and lessen the potential of watercourse disturbance.
- Road grades should be minimized whenever practical.
- Roads should be constructed following natural contours as much as possible.

3.2 Considerations for Road Construction

Consideration of the following, to the extent practical, shall be utilized during road construction:

- To control high velocity flow and potential erosion, velocity breakers (water diversion berms) should be utilized.
- Roads should be constructed with a crown along the centerline with properly constructed side ditches, and where appropriate, wing ditches (turnouts) should be constructed to move water off the road to naturally vegetated areas. These turnouts should be implemented at more frequent locations as road grades increase to prevent large volume and velocity of channelized runoff within the road side ditches. Silt fence sediment barriers and/or temporary sediment traps with outlet protection shall be implemented at the discharge of the turnouts to create temporary stormwater settling impoundments. Since the purpose of wing ditches is to move water off the road system and onto a well-vegetated area, temporary structural BMPs should be removed from the end of turnouts once the road is stabilized. Properly constructed rip-rap check dams should be used, if necessary, to reduce flow rates in ditches. Rip-rap and/or geotextile linings should be used, if necessary, to protect portions of a ditch from erosion.
- Whenever feasible, road construction should avoid areas of highly erodible soils, wetlands, or wet meadows. However, if it is necessary to construct roads in these areas, erosion control methods, as well as wetland road construction techniques, should be utilized to minimize the disturbance to these areas. If operations are not automatically authorized under Section 404 of the Clean Water Act (Nationwide permit) the operator must obtain authorization or the necessary permits from the Corps of Engineers (COE) prior to the disturbance of any wetland area. Additionally, a COE permit may be necessary under the requirements of Section 10 of the Rivers and Harbors Act of 1899 and/or Section 103 of the Marine Protection, Research and Sanctuaries Act.
- Course large particle mine tailings (i.e., black or red rock), if used in roadbed construction, will be initially tested for pH and acidity by testing each source prior to utilization during construction. Records shall be maintained for a period of 3 years. This testing shall be for each source of "black or red" rock and shall be in a pH range of 6 to 9. No known hazardous or toxic materials will be utilized in roadbed construction. Mine tailings do not have the most desirable characteristics for road construction and tailings with large amounts of fines will not be used. If practical, gravel or crushed limestone should be used to construct roadbeds.
- Vegetated filter strips and undisturbed buffers of at least 25 feet should be implemented to assist with sediment deposition and maintained, whenever possible, between streams and roads. If terrain limitations necessitate, other permanent methods (geotextiles, rip-rap, matting, etc.) may be used instead of or in conjunction with vegetated filter strips, provided a receiving water is not altered or diverted.
- Measures will be taken to prevent construction materials, (dirt, boulders, rock, trees, etc.) from being deposited into adjacent water bodies. However, if these materials inadvertently enter the water body, measures will be taken to remove them immediately. These measures should be of such to prevent further environmental damage (i.e., it may be necessary to remove objectionable materials by hand if heavy equipment cannot be brought in without magnifying the problem).
- Road construction and roadway drainage should be conducted under the guidance of a person experienced in construction techniques and erosion and sedimentation control.

3.3 Considerations for Stream Crossings

Due to the topography and expansive reach of the coal degas operation area, stream crossings will be necessary by roads. Roadways may cause more watercourse disturbance, redirect flow, potentially limit movement of biota, and increase discharges of pollutants to the stream. It is possible, through planning and careful construction, that potential environmental damage can be lessened significantly and even eliminated.

The following guidelines, where practical, shall be used in developing road-stream crossings:

- Stream crossings should be minimized as much as practical. Existing culverts, bridges, fords and/or other crossings should be utilized whenever possible.
- Crossings, where practical and/or limiting environmental damage, should be made at right angles to the main stream channel.
- No known hazardous or toxic materials should be utilized as part of the construction or proposed fill material.
- Construction stormwater should be evaluated during the construction of the crossing in accordance with the NPDES permit and samples taken as necessary to evaluate water quality. Temporary structural BMPs should be implemented prior to beginning construction and maintained throughout until final stabilization is achieved.

A. Stream Crossings of Less than 10 cfs

Streams with flows less than 10 cfs are small in size and will require smaller amounts of fill and result in fewer potential areas that could adversely affect water quality during and after construction of a stream crossing. A typical crossing plan has been submitted to ADEM for pre-approval with this BMPP Plan that can be followed when new access roads are constructed across these type and size of streams. This crossing plan is based upon mean stream water flow (based on best available historical data) of less than 10 cfs. Applications of new proposed stream crossings utilizing this pre-approved typical plan should be submitted at least 30 days in advance of the beginning date, but must be received by ADEM no less than 14 days prior to beginning construction. The application for a new crossing utilizing the typical pre-approved plan shall meet the following criteria that have been previously agreed to by the coalbed methane industry and ADEM:

1. The crossing application will contain a brief narrative description of the project.
2. The application will include a 1"-2,000' (or larger) USGS topographic map showing the location of area operations.
3. The plan will include a copy of the typical crossing plan and profile drawings and associated water quality control protection measures.
4. The typical design will be of such to allow an opening large enough to pass mean water flow.
5. Placement of rock fill without opening for passage of water and biota is not acceptable.
6. If the crossing is considered to be permanent (greater than 120 days) then the design criteria shall be based on a 25-year flood event.
7. If the crossing is considered to be a temporary structure (less than 120 days) then the design criteria shall be based on a 2-year flood event.
8. If operations are not automatically authorized under Section 404 of the Clean Water Act (Nationwide permit) the Operator must obtain authorization or the appropriate permit from the Corps of Engineers prior to the disturbance of any jurisdictional wetland area or stream channel.
9. After approval of a new proposed crossing application in accordance with the pre-approved typical crossing plan by ADEM, no notification will be required to ADEM before construction.

Typical stream crossing drawings have been prepared by McGiffert and Associates, LLC and are included in *Appendix B* of this document.

B. Stream Crossings of 10 cfs or Greater

When roads are necessary and must cross larger streams, a detailed design of the proposed crossing will be prepared to address long term stability and reduce potential adverse effects to a stream of greater size. A site specific stream crossing plan will be developed for crossings where the stream has a mean water flow of 10 cfs or greater or where there is greater than 200 cubic yards of fill below the plane of the ordinary high water mark. This plan will be submitted to ADEM for approval and the application should be submitted at least 30 days in advance of the beginning date. A minimum of 14 days is required by ADEM, after a complete and non-deficient plan is received, for application processing to make determination of administrative approval of the plan. However, ADEM will make every effort to make the determination within 14 days of submission and process emergency requests on an individual basis. This application for a new crossing shall meet the following criteria that have been previously agreed to by the coalbed methane industry and ADEM:

1. Crossing plan prepared and certified by a professional engineer registered in the State of Alabama.
2. Crossing plan will contain a brief narrative description of the project.
3. The plan will include a 1"-2,000' USGS (or larger) topographic map showing the location of the crossing.
4. The plan will contain plan and profile drawings of the crossing and associated water quality control protection measures.
5. The design will be of such to allow an opening large enough to pass mean water flow.
6. Placement of rock fill without opening for passage of water or biota is unacceptable. A culvert should not be placed in such a manner to inhibit passage of water and biota during normal stream flows.
7. The structure, if permanent (greater than 120-day life), must be designed in accordance with engineering standards to ensure structural integrity and stability for safe passage of water during 25 years interval flood events.
8. Temporary structures (less than 120-day life), must be designed in accordance with engineering standards based on a 2-year interval flood event.
9. If operations are not automatically permitted under Section 404 of the Clean Water Act (Nationwide permit) the operator must obtain authorization and/or an individual permit from the Corps of Engineer prior to the disturbance of any wetland or stream jurisdictional water of the U.S. (If conditions of the applicable Nationwide Permit are not met then an individual permit will be required).
10. After approval of these plans by ADEM, 48-hour verbal notification will be required to ADEM before construction begins. This notification requires no action by ADEM before construction begins.
11. As built certification shall be submitted by a registered professional engineer, registered in the State of Alabama, within 45 calendar days of completion of the stream crossing.
12. It is noted that projects of this nature are site specific and ADEM reserves the right to request submission of information or accept reasonable alternatives on an individual basis, in order to make water quality certification determination.

3.4 Drilling Pad and Drilling Pit Construction

Drilling pad construction is necessary to allow the movement of a drilling rig into the location to drill a hole into the coal seams. This location is usually an all-weather installation to provide access for maintenance and observation of the well. The drilling pad is kept as small as possible to lessen the environmental disturbance. However, the pad should be sufficiently sized to allow placement and movement of equipment in locations that minimize the potential for discharges of pollutants. Typically during fracing operations several frac tanks must be placed on the location along with other heavy equipment. The site should be adequately sized such that the frac tanks and pumps can be placed in a location that keeps any leakage or spillage from hose hook-ups and disconnection contained on the well pad.

A drilling or reserve pit is a temporary earthen pit used to store materials used or generated in the drilling or workover operation. These materials usually consist of water, shale cuttings removed from the drill hole, drilling fluids which normally are formulated using clay, water, and pH adjustment materials, and/or workover fluids which normally consist of water, clay, and biodegradable, environmentally safe polymers. The reserve pit may also be used as an emergency catch basin for such items as location runoff, water produced during drilling operations and/or oil from equipment which may be accidentally spilled. This pit essentially prevents fluids and solids from being discharged off the drilling pad and minimizes potential environmental damages.

The following guidelines will be implemented where practical in drilling pad and pit construction:

- Pad size will be minimized to the extent practical to lessen the amount of surface area disturbed.
- All slopes should be minimized (if possible the slopes should be no steeper than 3:1) and/or appropriate erosion control and construction techniques utilized to lessen erosion of those slopes. Steep and/or long slopes should be constructed with terraces or other diversionary structures. The edge of the top of the pad (flat section) should have a berm to prevent runoff down slopes. The runoff should be directed to a controlled drop structure. A typical drop structure may be piping with a splash pad at the bottom or a riprap lined channel with the riprap extending far enough to prevent erosion at the bottom. The discharge from the channel or pipe should be directed along an even contour elevation when possible and into an existing rooted undisturbed location.
- Well pads should be constructed in lifts that do not exceed twelve inches and each lift should be properly compacted (ASTM recommends 95% density based on standard proctor). In addition, large stones, tree debris or other objectionable materials should be removed from the fill material to allow for adequate compaction and prevent future sink holes or erosional features over time.
- The operator should use temporary and/or long term structural BMPs to control sedimentation until the site is permanently stabilized. These devices should be properly installed prior to or concurrent with the initial clearing and grubbing phase of construction. In addition, these sediment trapping devices should be installed in a location that doesn't interfere with the construction equipment (i.e., there should be adequate room between the toe of the well pad and the silt fence or hay bale barrier to allow movement by the heavy equipment used to construct the pad without damaging the sediment traps).
- Pads and/or pits should be constructed a sufficient distance from a waterbody for maintenance of a streamside management zone (SMZ). Where pads and/or pits are necessarily constructed adjacent to waterbodies, appropriate measure shall be taken to protect that waterbody and water quality. A streamside management zone is an area along a stream bank where existing vegetation is not disturbed which helps prevent pollutants from moving into the stream. Where sufficient SMZ area is not available, other measures of erosion control may be utilized in conjunction with available SMZ to lessen potential water quality damage. However, the watercourse should not be altered or diverted.
- Measures will be taken to prevent construction materials, (dirt, boulders, rock, trees, etc.) from being deposited into waterbodies. However, if these materials inadvertently enter the waterbody, measures will be taken to remove those immediately. These measures should be of such to prevent further environmental damage.

- Sites should be contoured during construction to prevent stormwater runoff from creating erosion paths. Stormwater, if practical, should not be directed across fill material and sheet flow drainage for runoff should be provided by the grading of the slopes and pad whenever possible.
- Temporary reserve pits are to be constructed in accordance with the requirements of the Alabama State Oil and Gas Board.
- Operators shall prevent, as practical, the placing of oil, trash, or other materials into a reserve pit which would increase the difficulty in cleanup of the pit or otherwise harm the environment. Such material shall be properly stored and disposed of according to applicable State or Federal regulations. No garbage is to be burned or buried on site. All garbage and trash shall be disposed of at an approved landfill site.
- Trees and stumps (not household garbage or construction debris) may be burned on location after notice has been made to the Alabama Forestry Commission in accordance with local, State and Federal regulations. Some areas of the State may not allow any burning during certain times of the year.

3.5 Pipeline Construction

Pipelines are necessary in coalbed methane operations to allow for the collection of produced water to a central water treatment facility and to discharge sites. In addition, pipelines are used to gather gas from individual wells and transport it to compression facilities. High pressure gas pipelines connect the compression facilities to high-pressure gas sales lines. Due to burial, pipelines usually generate a very short time disturbance to watercourses. Through proper erosion/sedimentation control techniques, as previously outlined, limited environmental damage should occur. The following guidelines shall be followed during the siting, construction, and maintenance of pipeline right-of-ways:

- Consideration of the following, to the extent practical, shall be utilized during pipeline siting:
 1. Gathering lines should follow road rights-of-way whenever possible.
 2. Stream crossings should be minimized if roadways cannot be followed. This may not be possible with high pressure line routing. If necessary to conduct stream crossings during pipeline construction care should be taken to minimize stream disturbance and erosion controls shall be used to prevent sedimentation of the stream body downstream of the crossing. If operations are not automatically authorized under Section 404 of the Clean Water Act (Nationwide permit) the operator must obtain authorization or other permits from the Corps of Engineers prior to the disturbance of any wetland area or stream channel.
 3. Grades should be minimized where possible. This helps to prevent erosion during construction as well as allow for better maintenance of the grassed right-of-way.
 4. Rights-of-way should be minimized within acceptable pipeline construction techniques. However, pipeline right-of-ways should be adequately sized to allow for the installation and maintenance of necessary erosion and sedimentation controls.
 5. To the extent practicable, utility right-of-ways should be constructed in phases and areas should progress linearly as the project progresses. This includes the planning of access by various construction trades and working in a systematic approach.
- Consideration of the following, to the extent practical, shall be utilized during pipeline construction:
 1. Sediment barriers and traps required to prevent sedimentation will be installed prior to or concurrent with the initial clearing and grubbing of the right-of-way in locations that do not interfere with the construction equipment.

2. On extreme pipeline right-of-way grades, water bars, terracing or other diversionary structures should be used to reduce runoff velocities. These structures must be properly compacted and vegetated.
3. Whenever feasible pipeline construction should avoid areas of highly erodible soils, wetland, and wet meadows. However, if necessary to construct pipelines in these areas, erosion control methods, as well as, wetland pipeline construction techniques should be utilized to minimize the disturbance to these areas.
4. Vegetated filter strips of sufficient length to assist sediment deposition shall be maintained between streams and pipelines. If terrain limitations necessitate, other permanent methods (geotextiles, riprap, matting, etc.) may be used instead of or in conjunction with vegetated filter strips.
5. Trenches should not be excavated until immediately prior to the pipeline installation and if possible spoil from the excavation shall be placed on the up gradient side of the ditch.
6. Trenches will be backfilled as soon as possible after installation of the pipeline according to accepted pipeline construction techniques.
7. To the extent practical, pipeline surface disturbance shall be minimized.
8. Pipeline construction should be conducted under the guidance of a person experienced in pipeline construction techniques and erosion control.

SECTION 4: BEST MANAGEMENT OPERATING PROCEDURES

4.1 Other Stormwater Pollution Controls

- Produced water leaks periodically occur from well heads and/or gathering systems. Produced water typically will have high concentrations of chlorides and elevated iron and other naturally occurring metals that may make contaminated stormwater toxic to plant and animal life. Regular inspection and maintenance of these facilities should minimize or prevent these pollutants in stormwater discharges. In addition to regular inspections and maintenance, properly insulating exposed pipes and valves is an example of an effective BMP for preventing produced water leaks due to freezing. Soils that have become contaminated due to produced water leaks may have to be disposed in a permitted landfill.
- Areas around the well head and pumping unit are required by the Oil and Gas Board to be clear of vegetation. Herbicides are utilized to stop and prevent growth in these areas and should be applied in accordance with the manufacturer's directions. This includes applying these substances during a period when rain is not expected. Also, areas that need help to grow vegetation to stabilize the area often need fertilizers which should only be applied during the time of year when the grasses can uptake the nutrients.
- Field offices, pipe yards and other staging areas are often places used to stockpile industrial materials, dry and liquid chemicals, fuels, etc. Also, vehicle fueling, cleaning and maintenance activities may be conducted at these facilities. The operator will address fuel and liquid chemical storage in their Spill Prevention Control and Countermeasures (SPCC) plan. These facilities should be inspected regularly and spilled fuels or chemicals should be cleaned up immediately with absorbent or adsorbent materials. There are several products on the market designed for cleaning up spills. They should be selected based on the fuels/chemicals stored at the facility. Soils that have become contaminated with oils, greases, solvents, antifreeze, etc., must be remediated or properly disposed consistent with applicable regulatory requirements. If caustic or acidic substances (i.e., NaOH, HCl, etc.) are stored at the site, appropriate neutralizers should be available. Materials should be stored in a manner preventing contact between incompatible substances. Some of the most effective BMPs for preventing the contamination of stormwater runoff from these facilities are proper employee training and good housekeeping.

- In drilling operations and secondary enhancement (fracing) operations there is some potential exposure of pollutants to stormwater that are unique to coalbed methane operations. The operator's SPCC plan address equipment fueling and leakage from drilling rigs and associated equipment. The well pad will be constructed such that any spills or leaks will flow to the temporary holding pit and not off the well pad location. This temporary holding pit is an integral part of the SPCC plan for the well pad during construction so adequate storage must be designed and maintained for containing spills, and for containing expected rainfall. These pits should be designed and constructed to prevent discharges to ground water, and absorbent/adsorbent materials must be readily available to remove the spilled substances from the pit. In some circumstances a vacuum truck will be utilized to collect the spilled substances.
- Drilling mud should be adequately contained in temporary pits or containers to prevent discharges to surface and ground waters. In fracing operations, the frac tanks should be located in an area that would contain any spills. The well pads should be adequately sized so that the frac tanks can be placed away from any ditches, stream or other water bodies. When air-drilling, care should be taken to prevent cuttings from migrating beyond the pit and potentially contaminating stormwater runoff.
- The unusable wastes resulting from oil or chemical consumption at this facility will be treated, disposed of and/or reused in accordance with applicable Alabama Department of Environmental Management (ADEM) regulations. In the event that waste, outside of typical debris, is generated or discovered during construction, a Hazardous Waste Determination shall be conducted per ADEM Administrative Code rule 335-14-3-.01(2). If the results of the determination prove to be hazardous, the Operator shall obtain a waste disposal approval for the generated material in question. Records of the test results, waste analysis, and other determinations shall be maintained for a minimum of three years from the date the waste was generated; per ADEM requirements.

4.2 Good Housekeeping

Good housekeeping practices include the preservation of the environment in as near an undisturbed condition as before the project began. This includes removal of all trash, litter, and other potential sources of pollution to the environment or waterways. Waste receptacles shall be easily accessible and visibly marked, and if necessary multiple receptacles shall be provided. Recycling receptacles shall also be provided if possible. The Operator shall determine the number of receptacles required for current construction needs and shall determine the location of receptacles as to prevent a conflict with current construction activities. The waste receptacle(s) shall not be located on or near where they may come into contact with concentrated stormwater flows. A waste receptacle shall be provided on the initial day of construction. The project area shall be inspected at the end of each workday and all trash shall be properly disposed or recycled. In the event that construction debris or worker trash is blown or washed off-site it shall be the responsibility of the Operator to return the material to the site for proper disposal. Portable toilet(s) shall be provided on level ground when necessary and not be located on or near where they may come into contact with concentrated stormwater flows.

Construction materials and sites should be maintained in a visually acceptable manner. The Operator will determine the location of the building material staging area(s) and the required BMPs needed to contain pollutants within the given area(s). The area(s) shall be easily accessible and shall not conflict with concentrated stormwater flows. Building materials shall not be stored on top of or against any BMP or in any other manner that conflicts with or interferes with the operation, inspection, and maintenance of the BMP.

4.3 Water Acquisition

Due to the nature of operations, it is often necessary to obtain water for use in drilling, completions, and maintenance of the coalbed methane well. The operator's NPDES permit requires the operator to develop and implement a Best Management Practices plan that specifically addresses water acquisition. This plan is based on best available technology for protecting water resources, and it identifies all water acquisition sites and specifies the method of withdrawal. Anyone overseeing water acquisitions should be familiar with the operator's BMP plan to assure that water resources are protected and to avoid violating the NPDES permit. Some typical guidelines for water acquisition are:

1. Trucks will avoid damage to shore lines and banks of streams. (i.e., Trucks will NOT be backed to the edge of the water). Suction lines will be laid to prevent SMZ damage.
2. Suction lines will not be allowed to back flush.
3. Damages that may result from this practice will be remediated as per this BMP plan.

4.4 Dilution Water

Dilution water shall not be added to achieve compliance with discharge limitations except when ADEM has granted prior written authorization for dilution to meet water quality requirements.

4.5 Ground Water

In accordance with the NPDES permit, any discharge to groundwater is not authorized. Should a threat of groundwater contamination occur, ADEM may require groundwater monitoring to properly assess the degree of contamination and may require that the operator undertake measures to abate any such discharge and/or contamination.

4.6 Water Use for Dust Suppression

Water used for dust suppression should be spread with a spray bar that has an on-off valve in the cab of the water truck to allow the driver to stop spraying when turning around or crossing a stream. The water truck should be driven at sufficient speed to prevent ponding or runoff from the road. No discharge should occur as a result of dust control spraying; however, the BMPs discussed in this BMP plan shall be implemented to prevent any discharge from affecting the receiving water.

In some instances, the operator will land apply temporary pit water (drilling and fracing fluids) to the roads for dust suppression. The operator's NPDES permit has specific requirements for land application of temporary pit water. If the operator plans to use temporary pit water for dust suppression, they must address this in their operations management plan, and the plan must be followed to protect water resources and to prevent violations of their NPDES permit.

SECTION 5: MONITORING, INSPECTIONS, & REPORTING

5.1 Monitoring

All stormwater discharges associated with coalbed facility operations and construction of access roads, well pads, and pipeline right-of-ways shall be monitored periodically for the presence of pollutants and the effectiveness of implemented BMPs.

5.2 Inspections

Complete and comprehensive inspections of all well pads, pipeline right-of-ways, treatment ponds, compressor stations, other facilities, related appurtenances, and implemented BMPs shall be performed as required by Part I.D.2 of the NPDES permit. A professional engineer, registered in the State of Alabama or personnel under his direct supervision shall perform inspections of a minimum of four percent (4%) every month until the expiration or termination of coverage under the NPDES permit. Different or additional 4% increments shall be inspected each month until all facilities (100%) have been inspected prior to repeating.

Any needed repairs or maintenance noted shall be done as soon as possible and in accordance with the NPDES permit requirements. Also, any spilled materials or waste must be cleaned up or mitigated immediately.

5.3 Reporting

In the event that a non-compliant effluent discharge from the site occurs and is identified by the Operator's representative, ADEM shall receive a verbal notification within 24 hours. An inspection shall be performed by the Facilities operation Manager that notes any deficiencies recognized and identifies corrective/remedial action to be taken. This information shall be documented on ADEM Forms 401 or 421 and submitted to ADEM. Paperwork shall then be submitted to ADEM within five (5) days of the noncompliance or within an ADEM accepted alternative schedule. The steps taken to reduce or eliminate the non-compliance shall be performed in accordance with ADEM requirements. Completed actions shall be verified and documented by the Permittee's representative.

SECTION 6: FACILITY CHANGES AND CLOSURES

6.1 Exceptions and changes to the BMP Plan

Due to the site specific nature of many operations of the coalbed methane industry and growth within that industry (both regulatory and technical), alternate plans and changes to this plan may be submitted by the operator to ADEM for review and subsequent approval or disapproval on a case by case basis. These updated plans may be in lieu and/or in addition to the current Best Management Practices Plan.

This BMP plan will be reviewed on a biennial basis to allow the incorporation of new technology and regulation. Any significant changes or updates to the BMP Plan following this review will be submitted to ADEM for their records.

6.2 ADEM Assistance

ADEM will furnish, at the request of the operator, assistance in pre-assessing a project and/or operations to control the discharge of pollutants in storm water runoff. The ADEM will review, on a case by case basis, new technology or innovative designs proposed to be implemented in conjunction with or in addition to accepted practices, which are not detailed or covered under this document.

In areas where water-courses must be altered or diversions are necessary, coordination with the ADEM and the U.S. Army Corp of Engineers is required and will be on a case by case basis. It should be noted that other Local, State, and Federal agencies may provide additional assistance upon request in planning and implementing best management practices. This includes Local and County Commissions, Local Soil and Water Commissions, State of Alabama Department of Conservation and Natural Resources, Alabama Forestry Commission, Alabama Surface Mining Commission, and the USDA Natural Resources Conservation Service.

The operator and subcontractor shall be familiar with this plan and follow the guidelines set forth herein. Cooperation by the Coalbed Methane industry, subcontractors, and ADEM will allow for diligent implementation of this plan.

6.3 Well Closure

The wellbore will be plugged in accordance with the State of Alabama Oil and Gas Board Regulations. Reclamation of the well pad shall be in accordance with existing lease or surface owner provisions, unless in conflict with State and/or Federal regulations. If in conflict, the State and/or Federal Regulation shall control. The necessary BMPs shall be implemented during the reclamation process to protect water quality and all structural BMPs shall be removed once all areas have been stabilized and permanently closed.

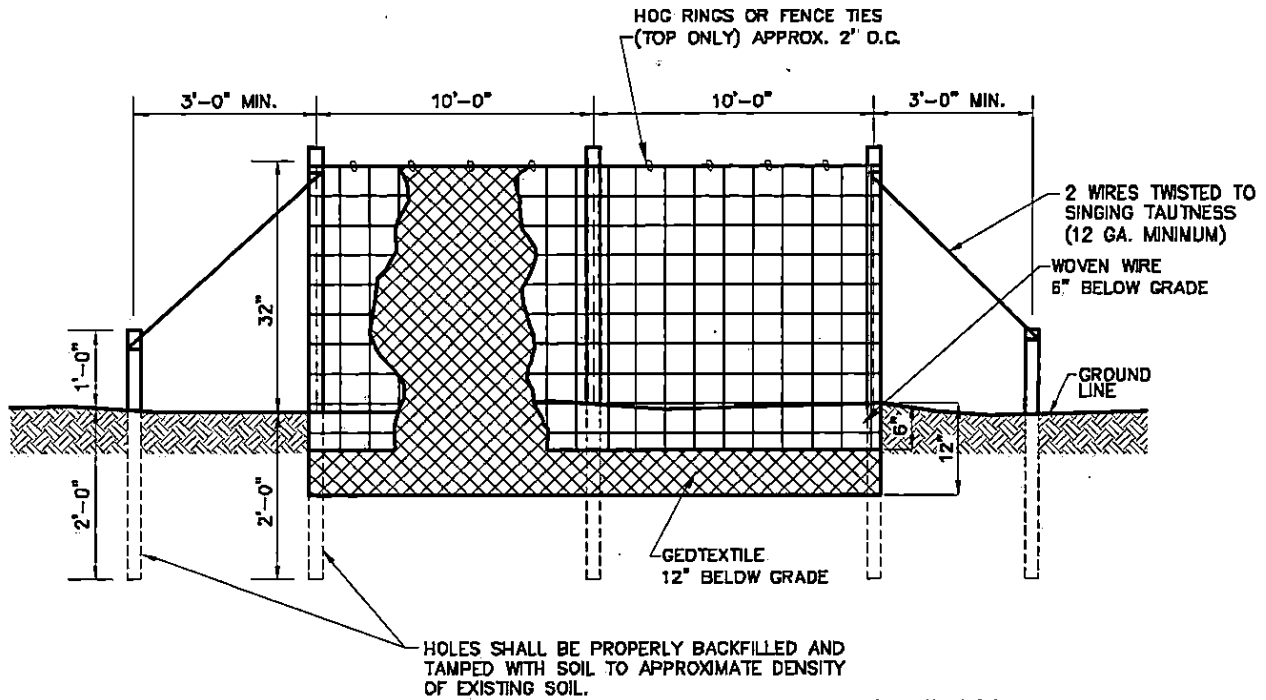
SECTION 7: EMERGENCY RESPONSE AND NOTIFICATION

During an emergency, i.e., oil or chemical spills, treatment facility upset or bypass, pit failure, stream crossing failure, etc, the operator should contact the appropriate emergency response phone numbers as listed in the Spill Prevention Control and Counter Measure Plan.

The National Response Center (NRC), which is operated by the U.S. Coast Guard, receives reports required when oil or hazardous materials are spilled. After receiving notification of an incident, the NRC will immediately notify the appropriate Federal On-Scene Coordinator and concerned Federal Agencies. Federal law requires that anyone who releases into the environment a reportable quantity of a hazardous substance (including oil when water is, or may be affected) or a material identified as a marine pollutant, must immediately notify the NRC. When in doubt as to whether the amount released equals reporting levels for these materials, the NRC should be notified. The phone number for the NRC in the United States is 1-800-424-8802.

The Alabama Emergency Management Agency should be contacted immediately if there is a spill of oil or hazardous materials (any petroleum product) that goes into a water or has the potential to go into a water. The phone number for the EMA is 1-800-843-0699.

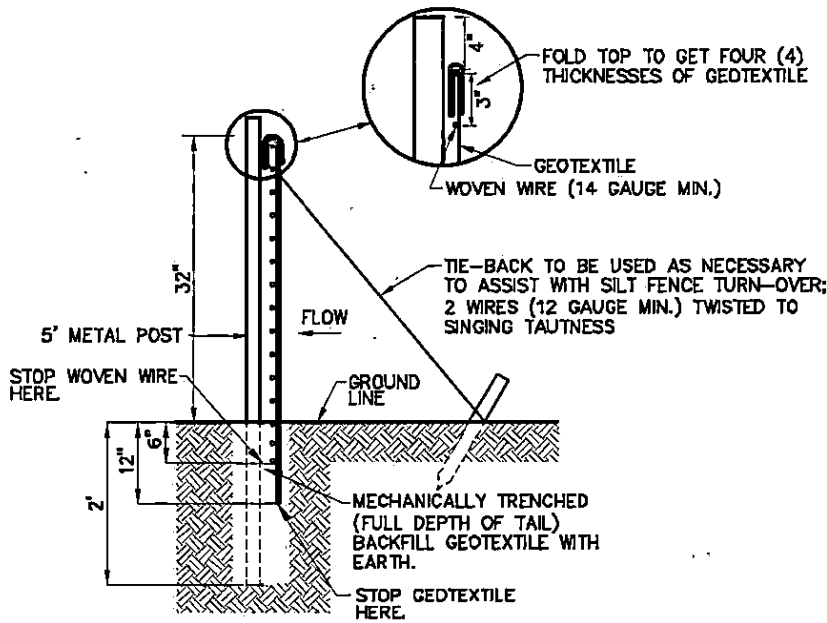
Appendix A
Erosion Control
Standard Details



ELEVATION

GENERAL NOTES:

1. SILT FENCES ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERECTED OPPOSITE ERODABLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS, CHANNELS, STREETS, CURBS, ETC.
2. SILT FENCE SHOULD BE PLACED WELL INSIDE CLEARING LIMITS. THIS WILL ALLOW ROOM FOR A BACK-UP FENCE IF FIRST BECOMES FULL. SILT FENCES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION OPERATION.
3. WHEREVER POSSIBLE, SILT FENCES SHALL BE CONSTRUCTED ACROSS A FLAT AREA IN THE SHAPE OF A HORSESHOE. THIS AIDS IN PONDING OF RUNOFF AND FACILITATES SEDIMENTATION.
4. SILT FENCE SHALL BE FASTENED TO UPSTREAM SIDE OF POST & WIRE BY HOG RINGS OR FENCE TIES. (17 GAUGE MIN.)
5. REMOVE SEDIMENT DEPOSITS WHEN THEY REACH A DEPTH OF 15" OR 1/2 THE HEIGHT OF THE FENCE AS INSTALLED TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN EVENT AND TO REDUCE PRESSURE ON THE FENCE
6. SHOULD THE SILT FENCE BECOME DAMAGED OR OTHERWISE INEFFECTIVE WHILE THE BARRIER IS STILL NECESSARY, IT SHALL BE REPAIRED PROMPTLY WITH A NEW SECTION OF FILTER OVERLAPPING A MINIMUM OF 12 INCHES ON EACH SIDE OF A BREAK.
7. AFTER THE CONSTRUCTION AREA IS STABILIZED AND EROSION ACTIVITY CURTAILED, SILT FENCES SHALL BE REMOVED.



SECTION

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COALBED METHANE
PROJECTS—ALABAMA BMP PLAN**

TUSCALOOSA & FAYETTE COUNTIES

ALABAMA

EROSION CONTROL DETAILS

REVISION		
DATE	DESCRIPTION	BY

SCALE: NOT TO SCALE

DATE OF FIELD SURVEY: N/A

FB. N/A PG. N/A

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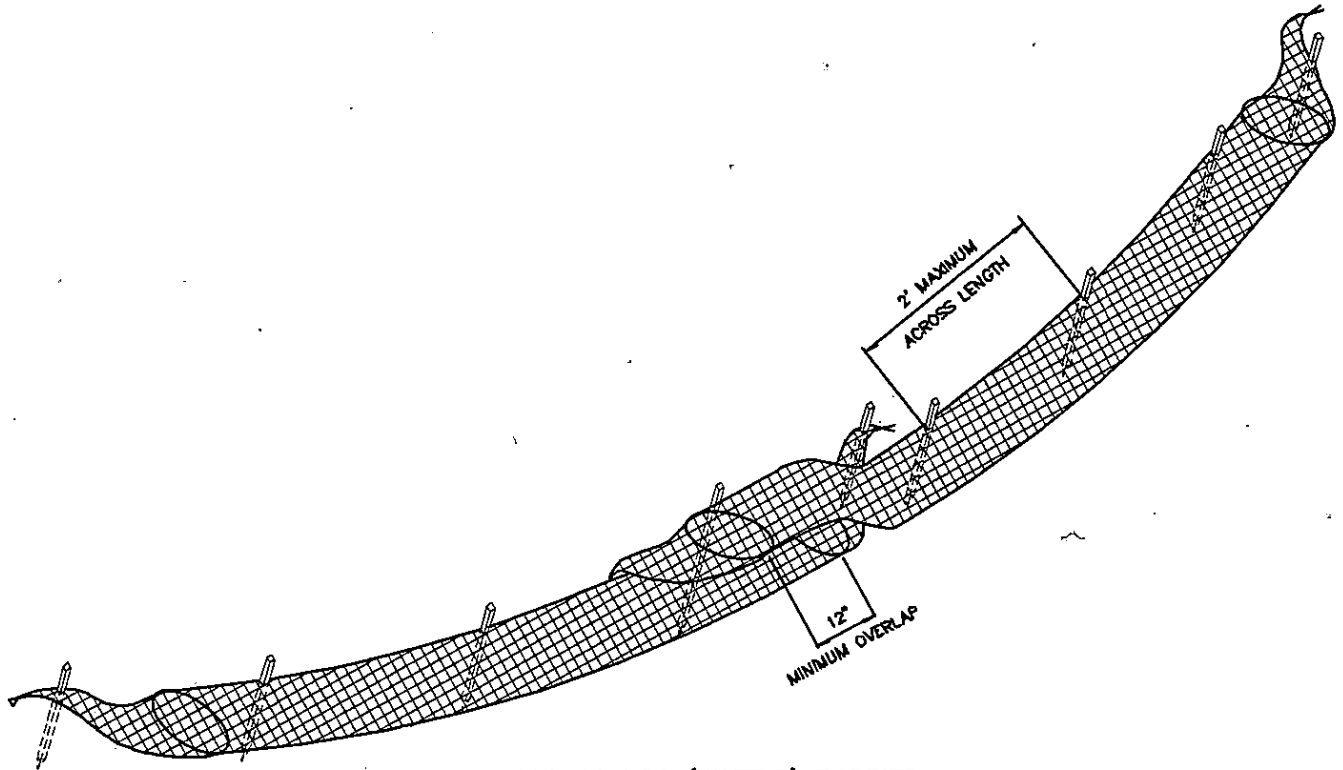
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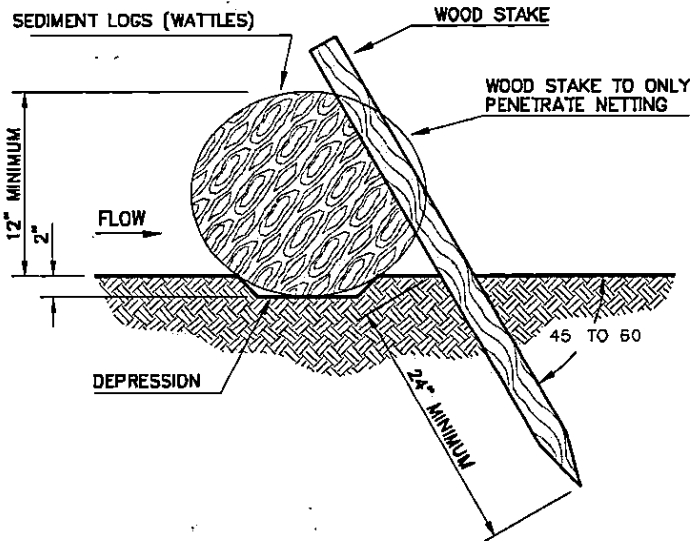
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SEDIMENT CONTROL LOG (WATTLE) BARRIER
N.T.S.



SEDIMENT CONTROL LOG (WATTLE) BARRIER INSTALLATION DETAIL

NOTES:

1. SEDIMENT LOGS (WATTLES) ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERECTED TO REDUCE EROSION STORM WATER VELOCITIES AND COLLECT SEDIMENT ON THE UP-GRADE SIDE OF THE BMP.
2. SEDIMENT LOGS SHALL BE SECURED TO THE SUB-GRADE BY A 1" MINIMUM DIAMETER WOOD STAKE EVERY 2 LINEAR FEET ACROSS THEIR LENGTH.
3. SEDIMENT DEPOSITS MUST BE REMOVED AND STABILIZED WHEN THEY REACH A DEPTH OF 1/2 THE HEIGHT OF THE WATTLE TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN EVENT.
4. WORN, DAMAGED, OR ROTTEN WATTLES MUST BE REPLACED.
5. AFTER THE CONSTRUCTION AREA IS STABILIZED AND EROSION ACTIVITY CURTAILED, WATTLES MUST BE REMOVED.

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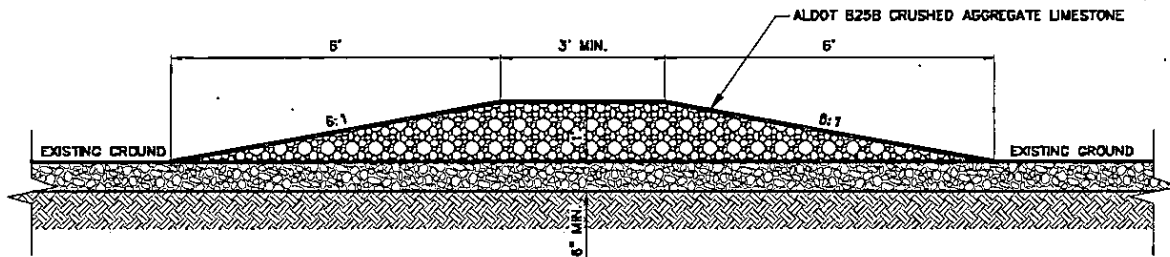
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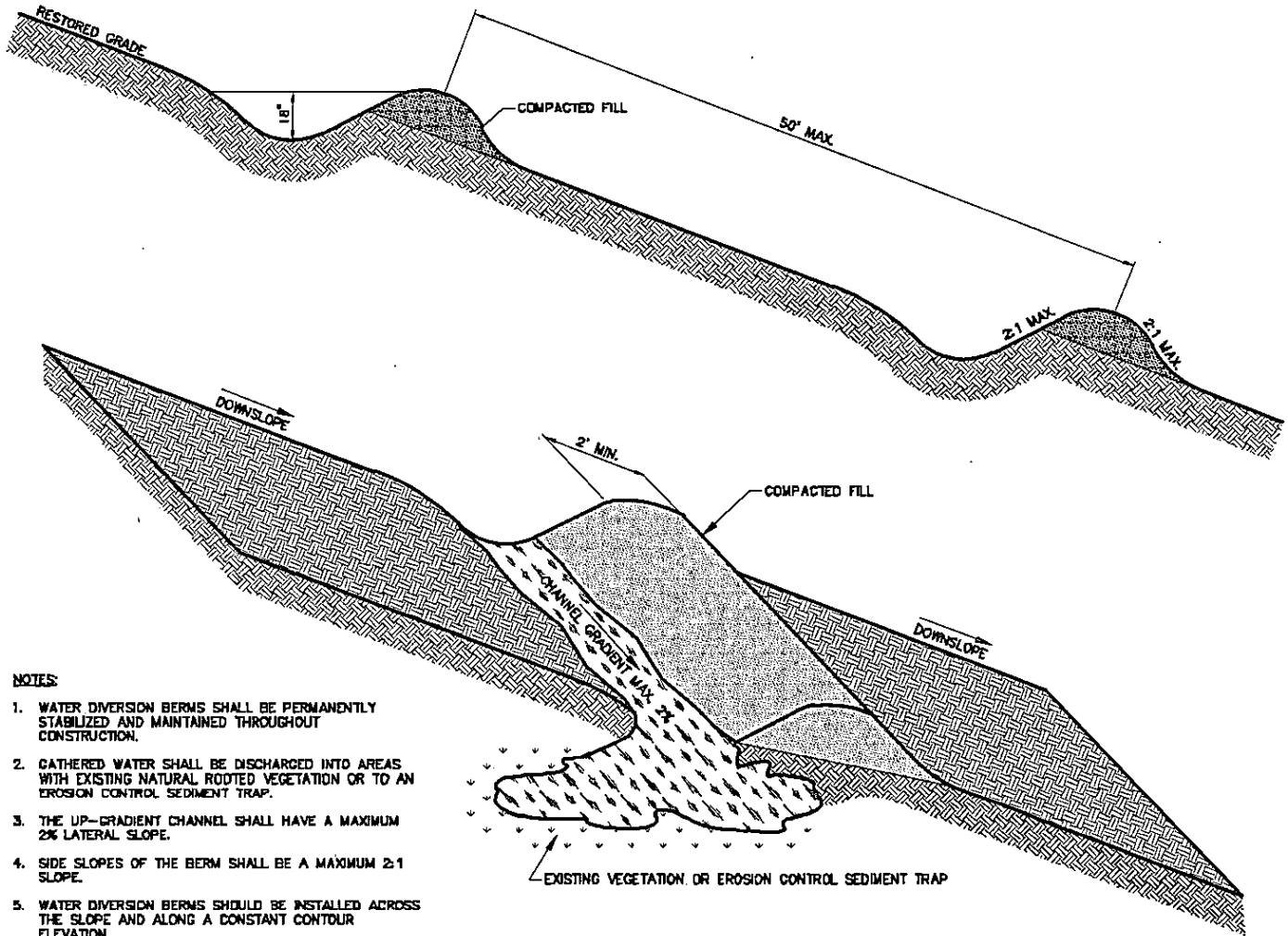
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**WATER DIVERSION BERMS
IN GRAVEL ROADWAY**

N.T.S.



**WATER DIVERSION BERMS
ON SLOPES**

N.T.S.

NOTES:

1. WATER DIVERSION BERMS SHALL BE PERMANENTLY STABILIZED AND MAINTAINED THROUGHOUT CONSTRUCTION.
2. GATHERED WATER SHALL BE DISCHARGED INTO AREAS WITH EXISTING NATURAL ROOTED VEGETATION OR TO AN EROSION CONTROL SEDIMENT TRAP.
3. THE UP-GRADE CHANNEL SHALL HAVE A MAXIMUM 2% LATERAL SLOPE.
4. SIDE SLOPES OF THE BERM SHALL BE A MAXIMUM 2:1 SLOPE.
5. WATER DIVERSION BERMS SHOULD BE INSTALLED ACROSS THE SLOPE AND ALONG A CONSTANT CONTOUR ELEVATION.
6. IN AREAS WHERE VEHICLES WILL CROSS THE BERM, GRAVEL SHALL BE INSTALLED INSTEAD OF A VEGETATION COVER TO STRENGTHEN THE SECTION FOR VEHICLE CROSSING.



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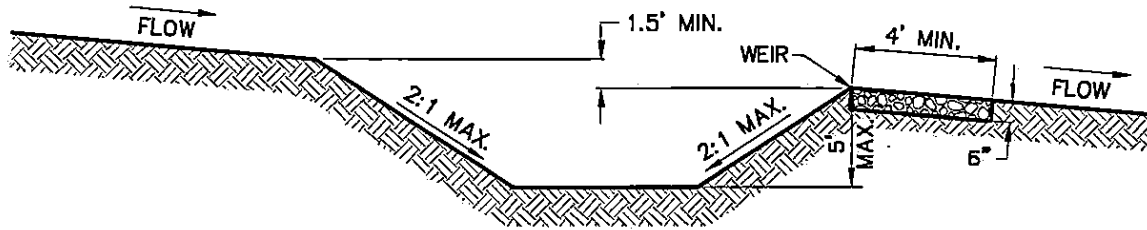
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EROSION CONTROL DETAILS

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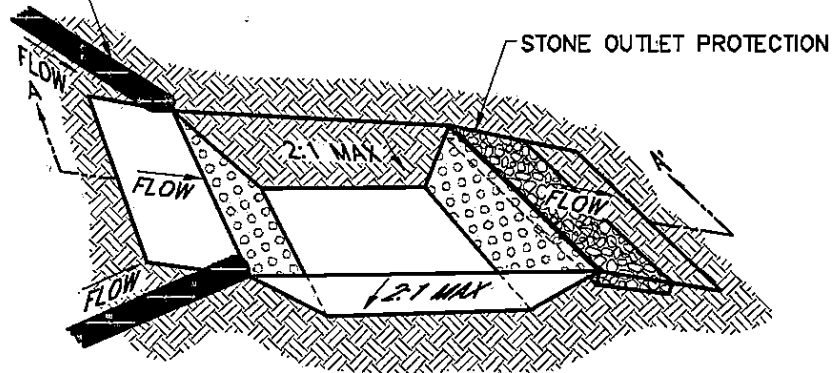
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SECTION A-A'

TEMPORARY DIVERSIONS
OR SWALES



RUNOFF SUMP SEDIMENT TRAP WITH OUTLET PROTECTION DETAIL

N.T.S

NOTES:

1. SEDIMENT TRAP SHALL BE ACCESSIBLE FOR PERIODIC SEDIMENT REMOVAL.
2. SEDIMENT TRAP SHALL BE INSPECTED FOLLOWING EACH RAINFALL EVENT TO EVALUATE OPERATION AND ACCUMULATED SEDIMENT VOLUME.
3. REMOVE SEDIMENT FROM THE TRAP WHEN IT ACCUMULATES 1/2 THE DESIGN VOLUME.
4. SLOPES WITHIN THE SEDIMENT TRAP SHALL BE MACHINE COMPACTED TO ENSURE STABILITY.
5. IN THE EVENT THE TRAP MUST BE PUMPED DOWN, THE WATER SHALL BE DISCHARGED UP-GRADE OF EXISTING BMPS AND SHALL NOT BE DISCHARGED DIRECTLY TO RECEIVING WATERS.
6. OUTLET PROTECTION SHALL CONSISTS OF A MINIMUM 6" THICKNESS OF ALDOT No. 1 COURSE AGGREGATE OR RIP-RAP SIZED AS NEEDED TO PREVENT EROSION AT THE OUTLET DTERMINED BY RUN-OFF VOLUMES AND VELOCITIES.
7. OUTLET PROTECTION TO BE IMPLEMENTED AS REQUIRED BASED ON ANTICIPATED DISCHARGE FLOW.
8. AS CONSTRUCTION PROGRESSES AND DRAINAGE RUN-OFF AREAS CHANGE, THE SEDIMENT TRAP SHALL PROVIDE A STORAGE AREA OF 67 C.Y. PER ACRE OF THE CURRENT DRAINAGE AREA.



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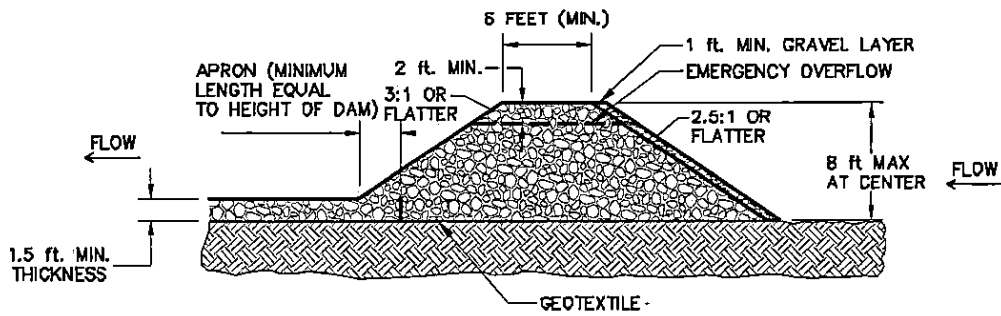
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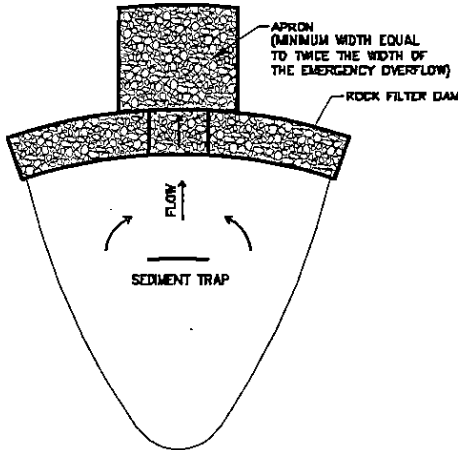
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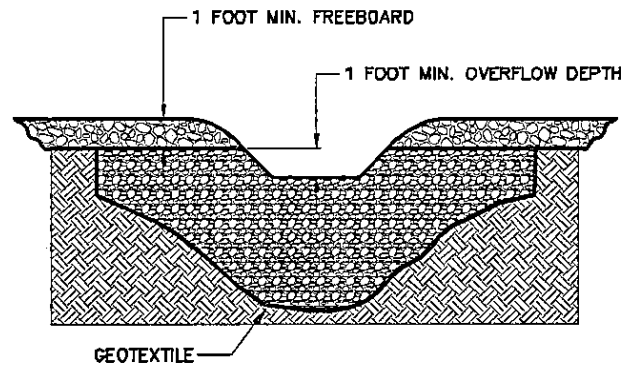
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TYPICAL SECTION



TYPICAL TOP SECTION



TYPICAL FRONT VIEW

ROCK FILTER DAM AND EROSION CONTROL SEDIMENT TRAP

N.T.S.

GENERAL NOTES:

1. SEDIMENT TRAP SHALL BE ACCESSIBLE FOR PERIODIC SEDIMENT REMOVAL.
2. DAM SHALL BE FACED WITH 1 FOOT OF SMALLER STONE ON UPSTREAM SIDE, (TYPICALLY No. 57 STONE).
3. REMOVE SEDIMENT FROM THE TRAP AREA WHEN IT ACCUMULATES 1/2 THE DESIGN VOLUME.
4. IF THE BASIN DOES NOT DRAIN BETWEEN STORM EVENTS DUE TO THE SMALLER STONE ON THE UPSTREAM FACE BEING CLOGGED, THE CLOGGED STONE SHOULD BE REPLACED WITH CLEAN STONE.



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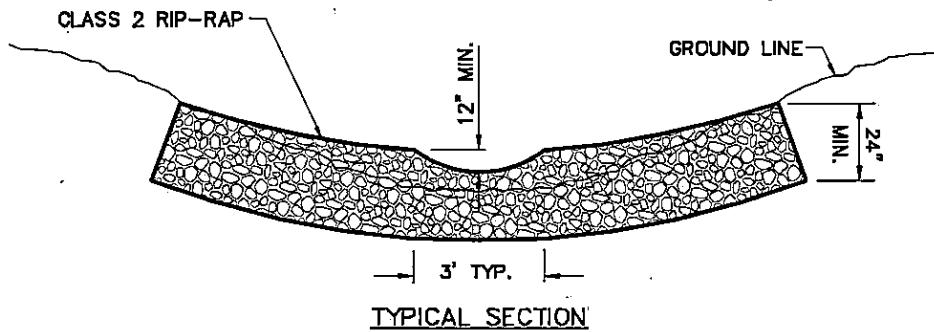
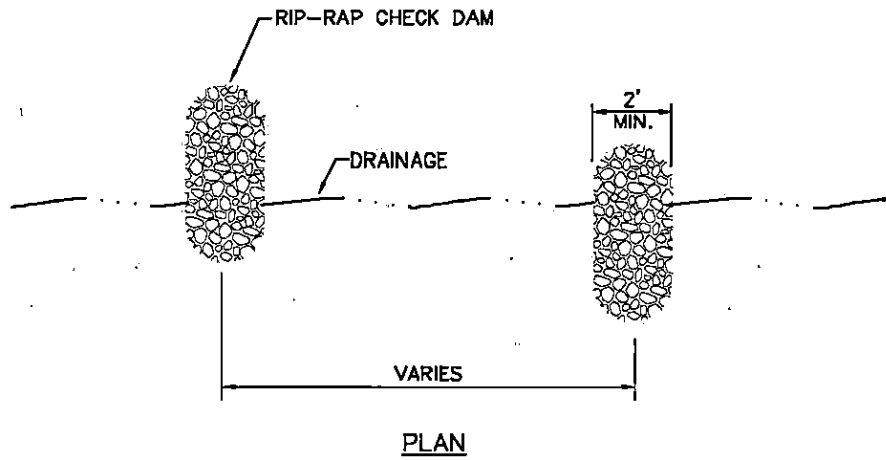
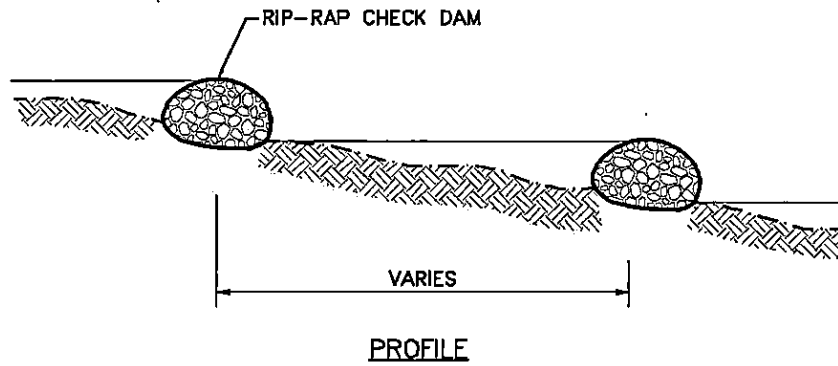
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SHEET No. 5 of 8

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TYPICAL TEMPORARY RIP-RAP CHECK DAM DETAIL
N.T.S.

GENERAL NOTES:

1. RIP-RAP CHECK DAMS ARE PERMANENT EROSION CONTROL ITEMS THAT SHALL BE INSTALLED ACROSS DRAINAGE WAYS NEAR NEWLY GRADED AREAS.
2. RIP-RAP CHECK DAMS SHALL REMAIN IN PLACE AFTER DISTURBED AREA HAVE BEEN STABILIZED.



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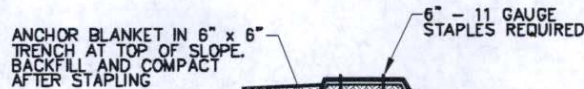
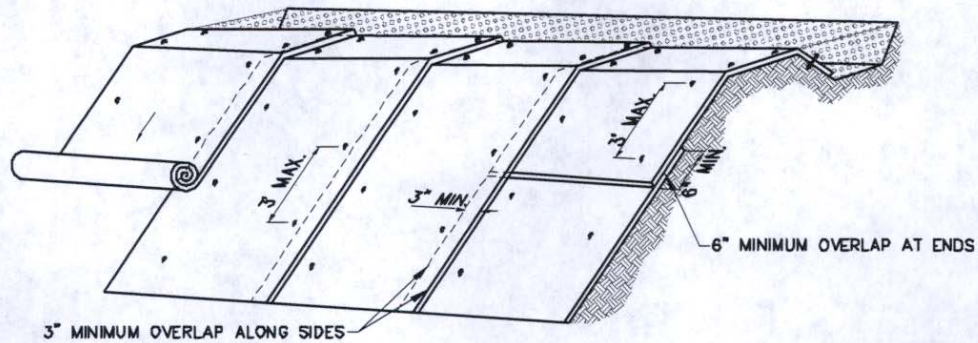
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JOB No. 14-3098
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SHEET No. 5 of 8

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DWG. No. 218-16



SECTION

SLOPE STABILIZATION

N.T.S.

GENERAL NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS AND SOIL CLODS TO MAINTAIN GOOD SOIL CONTACT.
2. APPLY SEED, FERTILIZER, AND/OR LIME PRIOR TO THE INSTALLATION OF THE BLANKET.
3. STRIPS SHALL BE ROLLED OUT FLAT, PARALLEL TO DIRECTION OF FLOW WITHOUT BEING STRETCHED.
4. WHEN MULTIPLE STRIPS ARE REQUIRED TO COVER THE WIDTH OF THE SLOPE, THE SIDES SHALL OVERLAP A MINIMUM OF 3".
5. WHEN MULTIPLE STRIPS ARE REQUIRED TO COVER THE LENGTH OF THE SLOPE, THE ENDS SHALL OVERLAP A MINIMUM OF 6".
6. THE UPSLOPE END SHALL BE ANCHORED IN A 6" VERTICAL TRENCH AND BACKFILLED (NOTE: WHEN, IN THE OPINION OF THE QCP, CONDITIONS WARRANT, OTHER EDGES EXPOSED TO EXCESSIVE FLOW SHALL BE INSTALLED AS PREVIOUSLY SPECIFIED).
7. STAPLES SHALL BE U-SHAPED WIRE WITH A MINIMUM 11 GAUGE THICKNESS, AND THE LEGS SHALL BE AT LEAST 6" LONG WITH A 1" CROWN.
8. EACH STRIP SHALL BE STAPLED IN 3 ROWS, AT EDGES AND CENTER, WITH STAPLES SPACED NOT MORE THAN A 3 FOOT GRID.



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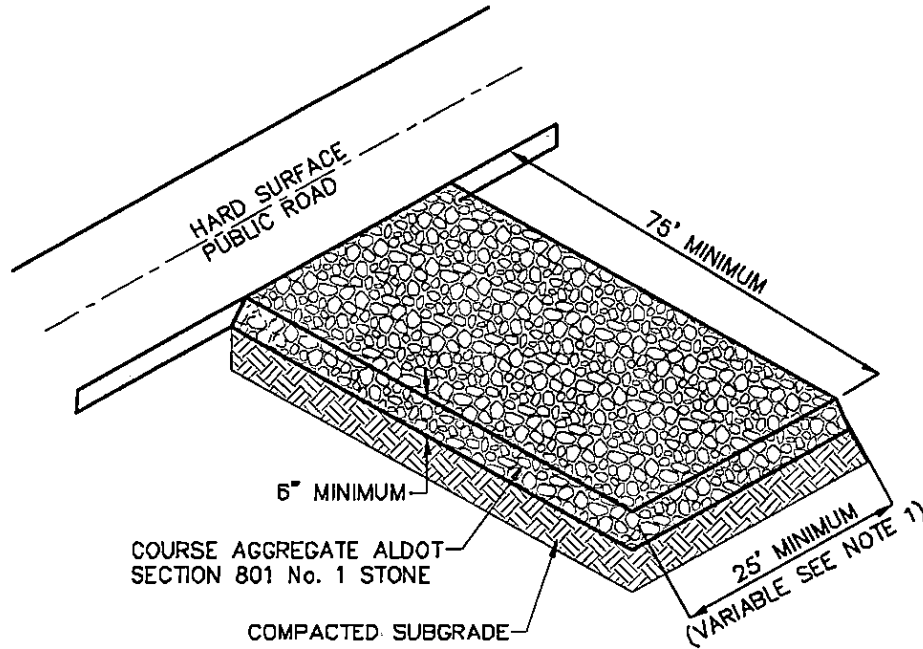
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SHEET No. 7 of 8

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CONSTRUCTION EXIT PAD

N.T.S.

NOTES:

1. WIDTH SHALL BE 25 FEET MINIMUM BUT MAY BE ADJUSTED TO EQUAL FULL WIDTH OF VEHICULAR EGRESS.
2. A CLASS IV NON-WOVEN GEOTEXTILE MEETING THE REQUIREMENTS SHOWN IN TABLE CEP-1 OF THE ALABAMA HANDBOOK SHOULD BE USED UNDER RACK WHEN SUBGRADE IS SOFT & WILL NOT SUPPORT TRAFFIC WHEN WET.
3. REMOVE LARGE CHUNKS OF MUD OR SOIL FROM EXIT PAD DAILY.
4. TOP-DRESS WITH CLEAN STONE AS NEEDED TO MAINTAIN EFFECTIVENESS.



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EROSION CONTROL DETAILS

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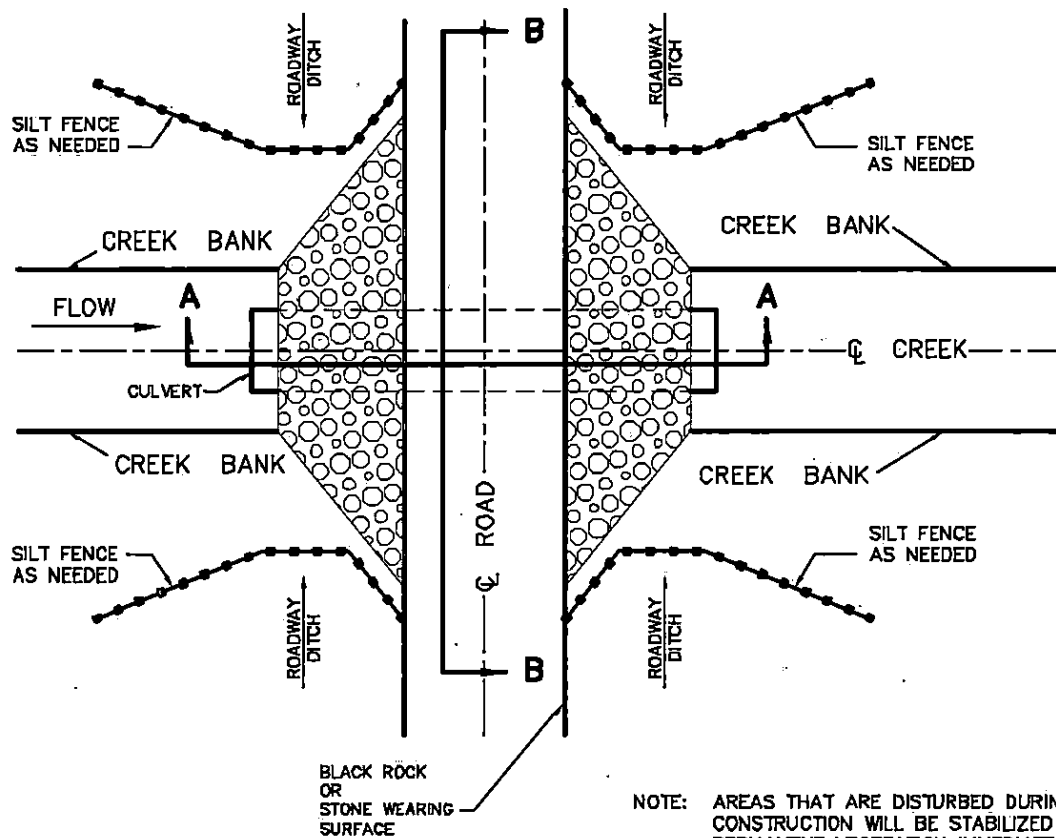
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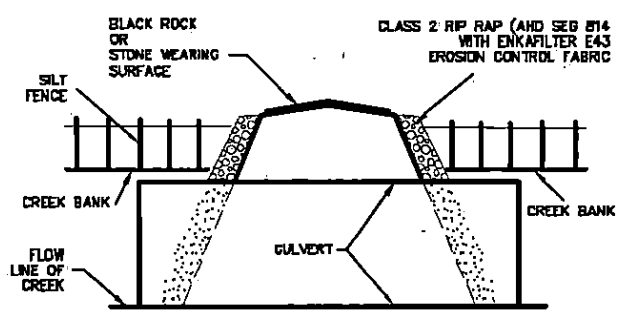
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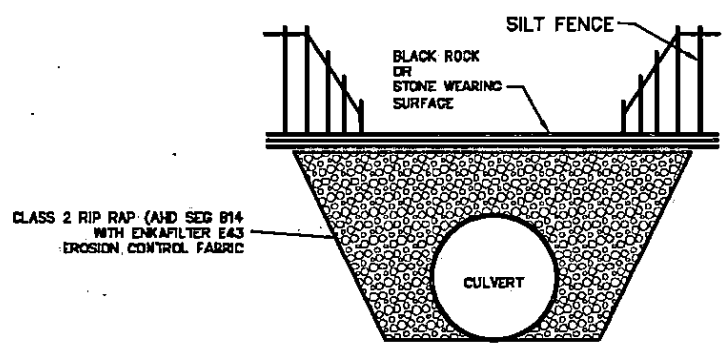
Appendix B
Typical Stream
Crossing Drawings



NOTE: AREAS THAT ARE DISTURBED DURING CONSTRUCTION WILL BE STABILIZED WITH PERMANENT VEGETATION IMMEDIATELY FOLLOWING DISTURBANCE ACTIVITIES.



SECTION A-A



SECTION B-B

TYPICAL ROAD CROSSING CREEK WITH LESS THAN 10 CFS FLOW DETAIL



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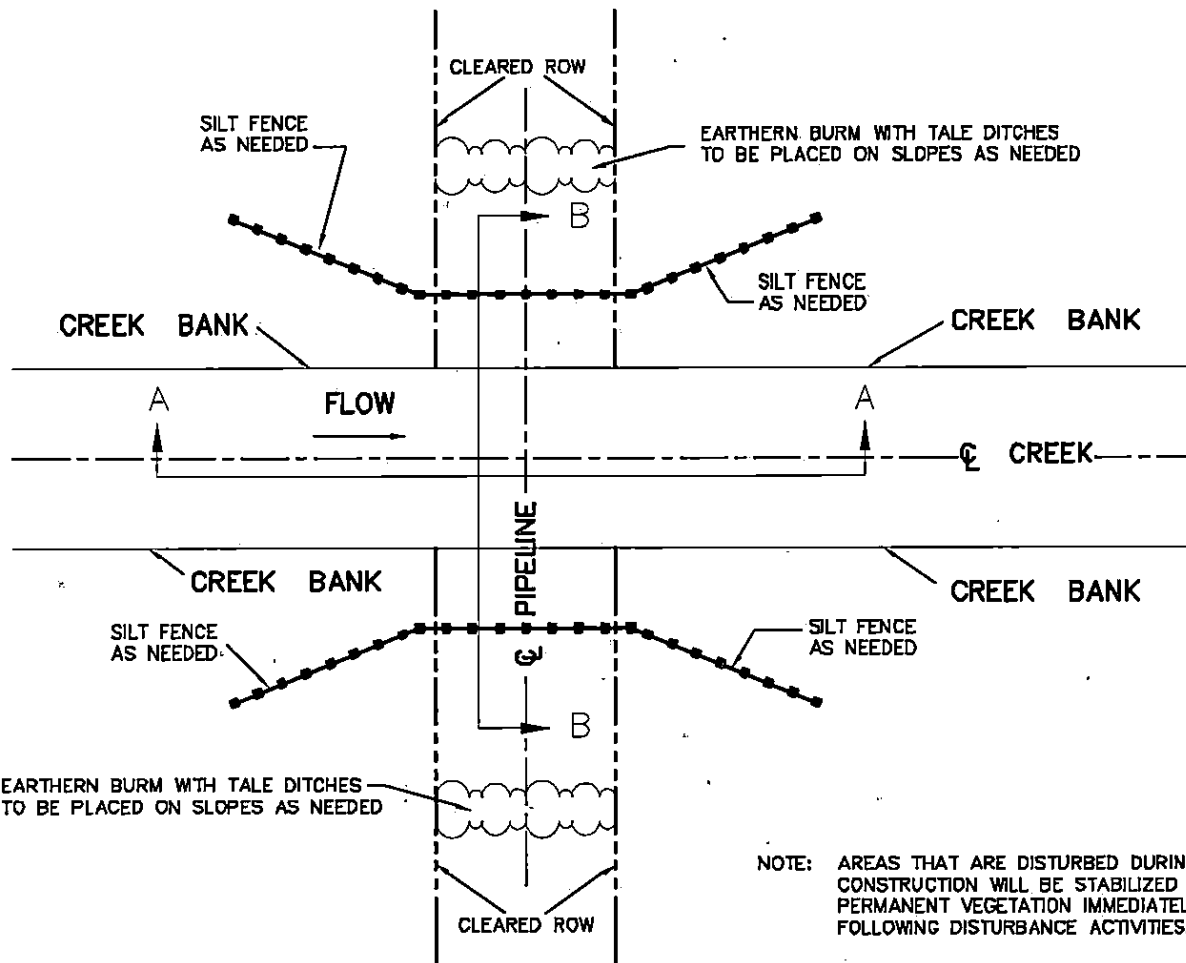
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REVISION		
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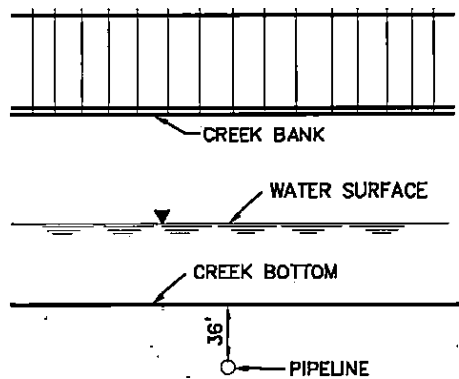
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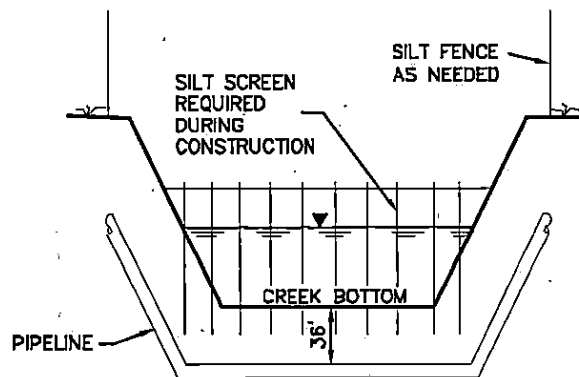
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NOTE: AREAS THAT ARE DISTURBED DURING CONSTRUCTION WILL BE STABILIZED WITH PERMANENT VEGETATION IMMEDIATELY FOLLOWING DISTURBANCE ACTIVITIES.



SECTION A-A



SECTION B-B

TYPICAL PIPELINE CROSSING CREEK WITH LESS THAN 10 CFS FLOW DETAIL



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TYPICAL CREEK CROSSING DRAWING

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STORM WATER
MANAGEMENT BRANCH

Site Design

August 30, 2018

Ms. Catherine McNeill
Chief of Mining and Natural Resource Section
Water Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36130

Utility Design

Re: Warrior Met Coal Gas, LLC
South Deerlick Creek
NPDES Permit No. AL0049760
REISSUANCE APPLICATION PACKAGE
Tuscaloosa County, AL

Transportation

Dear Ms. McNeill:

Environmental

On behalf of Warrior Met Coal Gas, LLC, please find the following enclosed for your use and review in the reissuance of the above referenced NPDES Permit No. AL0049760:

Surveying

1. ADEM Application Form 549 M3 5/14
2. ADEM Modified 2C Form
3. POLLUTION ABATEMENT PLAN
4. SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN
5. BEST MANAGEMENT PRACTICES PLAN FOR NON-POINT SOURCE DISCHARGE CONTROL
6. This permit reissuance fee of \$7,875 equaling half of the attached check totaling \$15,750.

Construction
Contract
Administration

If there is additional information which I can provide, please advise.

Yours truly,

McGiffert AND ASSOCIATES, LLC

Q. Hansel Stewart
QHS/ts

2814 Stillman Boulevard
Tuscaloosa, AL 35401

Post Office Box 20559
Tuscaloosa, AL 35402

Enclosures

Telephone 205.759.1521
Fax 205.759.1524

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www.mcgiffert.com

WARRIOR MET COAL GAS, LLC

BLACK WARRIOR RIVER BASIN PROJECT

(NPDES No. AL0057312)

AND

SOUTH DEERLICK CREEK

(NPDES No. AL0049760)

RECEIVED

AUG 31 2018

STORM WATER
MANAGEMENT BRANCH

TUSCALOOSA, WALKER, AND FAYETTE
COUNTIES, ALABAMA

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

PREPARED BY:
TOM JOINER & ASSOCIATES, INC.
P. O. BOX 1490; TUSCALOOSA, AL 35403
(205) 345-2311

UPDATE UNDERWAY AUGUST 2018



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Spill Prevention Control and Countermeasures Plan

FOR



HighMount Black Warrior Basin LLC

12031 Lake Nicol Road; Tuscaloosa, AL 35406

NPDES Permit No. AL0057312

Tuscaloosa, Fayette and Walker Counties, Alabama

March 2009

Prepared by:

Tom Joiner & Associates, Inc.

P.O. Box 1490

Tuscaloosa, AL 35403

205-345-2311

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- B Facility Inspection Procedures and Forms**
 Facility Inspection Procedures
 Annual Facility Inspection Form
- C Spill Notification Form**
- D SPCC Training and Briefing Record**
- E Oil Spill Contingency Plan**
- F Diked Area Drainage Record**

CERTIFICATIONS

The definition of a production facility as per 40 CFR 112.2, means "all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil, or associated storage or measurement, and located in a single geographical oil or gas field operated by a single operator." This Spill Prevention Control and Countermeasures (SPCC) plan has been developed to address procedures that HighMount will employ in the Black Warrior Basin to comply with 40 CFR 112.7 and SPCC related requirements in the Facility's NPDES Permit.

Management Certification

This SPCC plan has been developed or reviewed by personnel under my supervision in accordance with 40 CFR Part 112. I hereby commit the necessary resources to fully implement this plan as well as any action items identified in the plan. The plan, including any future revisions and amendments, will be implemented as written.

Authorized Management Representatives:

Robert F. Singleton

Signature: Robert F. Singleton Date 3/3/09

Professional Engineer Certification

In accordance with 40 CFR Part 112.3(d), I hereby certify that I (or personnel under my direction) have visited and examined each facility, and being familiar with the requirements of 40 CFR Part 112, attest that this SPCC plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, procedures for required inspections and testing have been established, and that the SPCC plan is adequate for each facility.

Professional Engineer: Joseph E. Patrick, P. E.

Registration: -AL PE 22251

Signature: Joseph E. Patrick

Date: 3-3-2009

CERTIFICATIONS

The definition of a production facility as per 40 CFR 112.2, means "all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil, or associated storage or measurement, and located in a single geographical oil or gas field operated by a single operator." This Spill Prevention Control and Countermeasures (SPCC) plan has been developed to address procedures that HighMount will employ in the Black Warrior Basin to comply with 40 CFR 112.7 and SPCC related requirements in the Facility's NPDES Permit.

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Professional Engineer: Joseph E. Patrick, P. E. Registration: -AL PE 22251

Signature:  Date: 3-3-2009

ONSHORE OIL PRODUCTION FACILITY - REGULATORY CROSS-REFERENCE

Citation	Description	Page
§112.3(d)	Professional Engineer Certification	1
§112.4	Amendment of Spill Prevention, Control, and Countermeasure Plan by EPA	5
§112.5(a)	Amendment of Spill Prevention, Control, and Countermeasure Plan by owners or operators	6
§112.5(b)	Management of Five Year Review	7
§112.5(c)	PE Certification of technical amendments	7
§112.7	General requirements for Spill Prevention, Control, and Countermeasure Plans	---
§112.7(a)	discussion of facility's conformance with rule requirements	9,10
	deviations from Plan requirements	10
	facility layout	11, Appx A
	discharge prevention	11,13,24, Appx A
	drainage	23
	type of oil in each container	Appx A
	countermeasures for discovery, response and clean-up	11, Appx E
	disposal	12
	spill reporting phone list	12, Appx E
	response procedures	Appx E
§112.7(b)	prediction of the direction, rate of flow, and total quantity of oil which could be discharged	Appx A
§112.7(c)	containment and/or diversionary structures or equipment to prevent a discharge	Appx A
§112.7(d)	Contingency planning	---
	Written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.	1, 14, 15
§112.7(e)	Inspections, tests, and records	16
§112.7(f)	Personnel, training and discharge prevention procedures	18
§112.7(g)	Security (excluding oil production facilities)	19
§112.7(h)	Facility tank car and tank truck loading/unloading rack	20
§112.7(i)	Brittle fracture evaluation requirements	21
§112.7(j)	Conformance with State requirements	12, 22, Appx E
§112.9	Requirements for onshore production facilities	----
§112.9(a)	Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures	Entire SPCC Plan
§112.9(b)	Facility drainage	---
	close and seal drains of dikes or drains of equivalent measures except when draining uncontaminated rainwater	23, Appx F
	inspect the diked area and take action	23, Appx F
	remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.	23, Appx F
	inspect field drainage systems and oil traps, sumps, or skimmers, for an accumulation of oil	23, Appx F
§112.9(c)	Oil production facility bulk storage containers	---
	not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.	24
	provide all tank battery, separation, and treating facility installations with secondary containment for the capacity of the largest container and sufficient freeboard to contain precipitation. Safely confine drainage from undiked areas in a catchment basin or holding pond.	24

ONSHORE OIL PRODUCTION FACILITY - REGULATORY CROSS-REFERENCE

Citation	Description	Page
§112.9(c), Continued	visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.	24
	container capacity adequate to assure that a container will not overflow if a pumper/gauger is delayed in making regularly scheduled rounds.	24,25
	Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.	24,25
	Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.	24,25
	High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.	25
§112.9(d)	Facility transfer operations, oil production facility	---
	inspect all aboveground valves and piping for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.	26
	inspect saltwater disposal facilities often to detect possible system upsets capable of causing a discharge.	26
	have a program of flowline maintenance to prevent discharges from each flowline.	26
§112.10	Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.	27

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Facility Name: Facilities located in the Black Warrior Basin (Tuscaloosa, Fayette, and Walker, Counties, Alabama)

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes ___ No X

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes ___ No X

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula ¹) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan.

Yes ___ No X

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula ¹) such that a discharge from the facility would shut down a public drinking water intake ²?

¹ If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

² For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Yes ___ No X

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes ___ No X

Certification

I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature _____ Name (please type or print) Joseph E. Patrick

Title Professional Engineer Date _____

1.0 AMENDMENTS OF SPCC PLAN

1.1 Amendment of Plan by EPA

Regulatory Requirement: Amend your Plan, if after review by the Regional Administrator of the information you submit under paragraph (a) of this section, or submission of information to EPA by the State agency under paragraph (c) of this section, or after on-site review of your Plan, the Regional Administrator requires that you do so. The Regional Administrator may require you to amend your Plan if he finds that it does not meet the requirements of this part or that amendment is necessary to prevent and contain discharges from your facility. (40 CFR 112.4)

At this facility: Certain facility information needs to be submitted to the EPA (and to the State agencies in charge of oil pollution control activities) within 60 days, if the facility has discharged more than 1,000 gallons (23.8 barrels) of oil in a single discharge or discharged more than 42 gallons (1 barrel) of oil in each of two discharges occurring within 12-month period into navigable waters. This information is as follows:

- Name of the facility;
- Name of person giving the report;
- Location of the facility;
- Maximum storage or handling capacity of the facility and normal daily throughput;
- Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;
- An adequate description of the facility, including map, flow diagram, and topographical map, as necessary;
- The cause of such discharge as described in §112.1(b), including a failure analysis of the system or subsystem in which the failure occurred;
- Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence; and
- Such other information as the Regional Administrator may reasonably require pertinent to the Plan or discharge.

The facility diagram and topographic map for each facility covered by this SPCC plan are included as Appendix A and Figure 1, respectively. Any prior spill events (if any) are discussed in Section 4.0. Any additional information requested by the EPA or ADEM will be provided by the Facility's Senior Environmental and Safety Representative:

Name: William K. Rey, Jr. – Senior Environmental and Safety Specialist

Phone: (205) 247-4258

1.2 Amendment of Plan by Owner/Operator

Regulatory Requirement: Amend the SPCC Plan for your facility in accordance with the general requirements in §112.7, and with any specific section of this part applicable to your facility, when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in §112.1(b). Examples of changes that may require amendment of the Plan include, but are not limited to: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures at a facility. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment. (40 CFR 112.5(a))

Any technical amendments and updates, including adding new facilities will also be documented in Appendix A.

Non-technical changes not requiring the exercise of good engineering practice do not require PE certification. Such non-technical changes include but are not limited to such items as: changes to the contact list; more stringent requirements for stormwater discharges to comply with NPDES rules; phone numbers; product changes if the new product is compatible with conditions in the existing tank and secondary containment; and, any other changes which do not materially affect the facility's potential to discharge oil or produced water/fluids.

1.3 Record of Reviews

Regulatory Requirement: *Notwithstanding compliance with paragraph (a) of this section, complete a review and evaluation of the SPCC Plan at least once every five years from the date your facility becomes subject to this part; or, if your facility was in operation on or before August 16, 2002, five years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your SPCC Plan within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in §112.1(b) from the facility. You must implement any amendment as soon as possible, but not later than six months following preparation of any amendment. You must document your completion of the review and evaluation, and must sign a statement as to whether you will amend the Plan, either at the beginning or end of the Plan or in a log or an appendix to the Plan. The following words will suffice, "I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result." (40 CFR 112.5(b))*

Have a Professional Engineer certify any technical amendment to your Plan in accordance with §112.3(d). (40 CFR 112.5(c))

At this facility: The plan shall be reviewed, amended and re-certified, as required. The required 5-year review and/or amendments are recorded in the Record of Reviews, noted below: Any technical amendments and updates, including adding new facilities will be documented in Appendix A.

For a list of facilities certified under this SPCC plan and date of certification and/or amendments and updates, see Appendix A.

RECORD OF REVIEWS					
Date of Review ¹	Will Plan Require Amendment? ²		Reviewer's Signature ³	Reason for Revision ⁴	Date of Amendment (or N/A)
	Yes	No			
9-22-1995			Law Engineering	NPDES Permit	9-22-1995
11-30-1998				NPDES Permit Renewal	11-30-1998
5-2002	X		River Gas/Phillips	Name Change (River Gas to Phillips)	5-2002
1-2004	X			Name Change (Phillips to Dominion)	1-2004
2-2005	X			Update of Plan with Facility improvements	2-2005
8-2007			HighMount	Name Change to HighMount	2-2007
3-2009			HighMount	NPDES Permit Reissuance	3-2009

⁽¹⁾ A full review of the plan must be performed at least once every 5 years.

⁽²⁾ The SPCC plan must be amended when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in §112.1(b). Examples of changes that may require amendment of the Plan include, but are not limited to: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures at a facility. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment.

⁽³⁾ Reviewer's signature indicates that he/she has completed review and evaluation of the SPCC plan for the facility on the date indicated and will or will not amend the plan as a result.

⁽⁴⁾ Briefly describe reasons for plan amendment. These may include one or more of the reasons in footnote (2) above, and administrative changes or non-technical amendments such as updates to names or phone numbers, regulatory changes, or changes in company policies, do not require certification by a Professional Engineer.

2.0 ACTION ITEMS

Regulatory Requirement: *If the Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, you must discuss these items in separate paragraphs, and must explain separately the details of installation and operational start-up. (40 CFR 112.7)*

At this facility: Action items, as identified during the required 5-year SPCC plan reviews, will be listed in the implementation schedule below. William Rey, Senior Environmental & Safety Specialist, will enter the actual date of completion of each item. Completed action items will be removed from the list at the next Plan revision. New facilities added to the Plan are included in Appendix A.

ACTION ITEM IMPLEMENTATION SCHEDULE			
Action Required	Responsible Person	Completion Deadline	Actual Date Completed

3.0 CONFORMANCE WITH 40 CFR PART 112.7 REQUIREMENTS

Regulatory Requirement: *Include a discussion of your facility's conformance with the requirements listed in this part. (40 CFR 112.7(a)(1))*

At this facility: The Plan does not entirely follow the sequence specified in 40 CFR 112.7, thus a regulatory cross-reference has been prepared, and found as Onshore Production Facilities – Regulatory Cross-Reference, on page 2. Additional facilities or procedures, methods, or equipment not yet fully operational are discussed in the Action Item Implementation Schedule on page 8.

This SPCC Plan complies with all applicable parts of the 40 CFR 112 regulation, as detailed within this plan. Any deviations from that regulation are provided equivalent environmental protection by some other means of spill prevention, control, or countermeasure and are fully discussed herein. In addition, an oil spill contingency plan, following the provisions of 40 CFR 109 is included.

4.0 FACILITY DESCRIPTION, DISCHARGE PREVENTION AND COUNTERMEASURES

Regulatory Requirement: *Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container. The facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under §112.1(d)(4). The facility diagram must also include all transfer stations and connecting pipes. . (40 CFR 112.7(a)(3))*

At this facility: The facilities covered in this plan are onshore coal-bed methane production facilities. Typically, production facilities produce methane gas, and/or produced water from individual wells. Methane gas is separated from produced water at the wellhead and pumped, via compressors, to a sales pipeline (Cassidy Sales 1 and 2 and Whitson Compressor Station and West Whitson Compressor Station). Produced water is transmitted via pipeline to wastewater treatment facilities that discharge to the Black Warrior River under an NPDES Permit.

Facility specific diagrams showing the production equipment, storage tank volumes/contents, secondary containment dimensions, and a topographic map showing (any) navigable waters and general flow direction, for each facility covered by this SPCC plan, are included in Appendix A and Figure 1, respectively.

Regulatory Requirement: *You must also address in your Plan: (ii) Discharge prevention measures including procedures for routine handling of products (loading, unloading and facility transfers, etc.). 40 CFR 112.7(a)(3)(ii)*

The discharge prevention measures including procedures for routine handling of products (loading, unloading areas, and facility transfers, etc.) and discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge, are addressed in the separate sections of the Plan.

Regulatory Requirement: *You must also address in your Plan: (v) Methods of disposal of recovered materials in accordance with applicable legal requirements.*

(vi) Contact list and phone numbers for the response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge as described in 112.1(b). 40 CFR 112.7(a)(3)(v) & (vi)

The methods of disposal of recovered materials, contact list and phone numbers for National Response Center, cleanup contractors, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge are addressed in the Oil Spill Contingency Plan in Appendix E.

5.0 FAULT ANALYSIS, SPILL POTENTIAL AND SECONDARY CONTAINMENT

Regulatory Requirement: *Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.*

Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, you must use one of the following prevention systems or its equivalent:

- *Dikes, berms or retaining walls sufficiently impervious to contain oil;*
- *Curbing;*
- *Culverting, gutters or other drainage systems;*
- *Weirs, booms or other barriers;*
- *Spill diversion ponds;*
- *Retention ponds;*
- *Sorbent materials.*

(40 CFR 112.7(b)&(c))

At this facility: Table 1 includes a listing of equipment at each facility that could fail (such as tank or equipment overflow, rupture, or leakage), and secondary containment structures that will prevent discharged oil from reaching navigable waters. Additional information concerning the prediction of flow direction, total volume of oil/fluid that could be discharged as a result of a tank failure is included under "General Information" for each Facility in Appendix A.

HighMount also uses mobile trailers for changing oil in pumping units and motors. These mobile trailers are parked and stored inside earthen-bermed containment at the Freshwater Pond Facility and Oil Treatment Facility.

5.1 Contingency Plan

Regulatory Requirement: *If you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c) to prevent a discharge as described in §112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable. (40 CFR 112.7(d))*

At this facility: Secondary containment is considered practicable for all SPCC-regulated oil storage containers, except as described below.¹ Secondary containment is not provided for certain SPCC-regulated containers, as the secondary containment structure will either not practically contain a leak or the construction of a containment system will create a structural or safety hazard.

Facility piping and gathering lines do not have secondary containment because secondary containment is not practical as discussed below:

- Secondary containment is not provided for piping and flowlines. HighMount has installed a pressure monitoring leak detection system that continuously monitors line pressures. This, combined with field inspections provides an effective program to detect and respond to leaks as they occur.
- The gathering line system is already in place and the volume of water that flows through this line would exceed the capacity of any secondary containment that could be installed.
- The provision of secondary containment is not practical or financially viable and, if implemented, it would amount to the disturbance of many miles of pipeline ROW and would cause or potentially contribute to water quality violations.
- Separators and line heaters are operated at high pressures and secondary containment is not practical since a release of oil in all situations except a very slow leak will likely overshoot the confines of the dike or berm. HighMount operates line heaters and separators as follows:

They are installed and operated so that if they failed, the process line would be shut down and the fluids, if any, that escape would be controlled. In addition, all facilities containing pressurized vessels are constructed on bermed pads for stormwater runoff control.

¹ Note: Line heaters, heater treaters, open-fired heaters and separators are to be included in secondary containment unless specific local conditions make containment impracticable. If impracticable, describe in detail the conditions preventing containment.

Regulatory Requirement: *If you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c) to prevent a discharge as described in §112.1(b) from any onshore or offshore facility is not practicable, ... and, unless you have submitted a response plan under §112.20, provide in your Plan the following:*

- (1) An oil spill contingency plan following the provisions of part 109 of this chapter.*
- (2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be 40 CFR 112.7(d)(1)&(2)*

At this facility: An oil spill contingency plan is included in Appendix E. A written commitment of manpower is stated in Management Certification, and is found on page 1.

6.0 INSPECTIONS, TESTS AND RECORDS

Regulatory Requirement: *Inspections, tests, and records. Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph. (40 CFR 112.7(e))*

At this facility: Company pumper(s) inspects each facility at every work visit. In addition, a documented annual facility inspection of each facility will be performed in accordance with the annual facility inspection form located in Appendix B)

6.1 Routine Work Visit Inspections

Company pumper(s) will perform a general inspection of each facility daily, or during each work visit.

Field drainage ditches, road ditches, and oil traps, sumps, or skimmers are inspected during work visits for accumulation of oil/produced water that may have escaped from small leaks. Any such accumulations are removed and the leaks will be promptly reported and repaired.

Produced water treatment facilities are frequently examined to detect possible system upsets that could cause a non-compliant discharge. Leaks and other problems observed during these inspections are referred to maintenance and reported to the appropriate Production Supervisor for repairs or replacement.

6.2 Annual/Semiannual Documented Inspections

Production Foreman or the assistant production foreman will perform a documented inspection of each facility annually, using the inspection form and instructions in Appendix B.

The annual inspection will include examination of:

- all storage tanks, including the foundation and supports of tanks
- all production handling, separating and treating vessels
- all aboveground valves, pipelines, and gathering lines for general condition of items, such as flange joints, valve glands and bodies, drip pans, pipeline supports, bleeder and gauge valves
- all wellheads and flowlines
- produced water handling equipment

- secondary containment areas

Semiannual Inspections will be conducted on all compressor stations. Each inspection will be documented on an inspection form included in Appendix B. The inspection will identify any deficiency noted with recommendations for correcting the deficiency.

All inspections are logged with William Rey, Senior Environmental and Safety Specialist. The inspection forms will be kept on file at the Tuscaloosa Field Office for not less than three years.

The Company pumper (s) and production foreman will note any deficiencies or problems on the inspection form. The Production Foreman and Senior Environmental and Safety Specialist, will address each item identified on the inspection and, if necessary, take corrective action. The resolution of problems and deficiencies identified in the annual inspection shall be documented and kept on file for at least 3 years.

7.0 PERSONNEL TRAINING AND DISCHARGE PREVENTION PROCEDURES**7.1 Personnel Training**

Regulatory Requirement: *At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan (40 CFR 112.7(f)(1))*

At this facility: William Rey, Senior Environmental and Safety Specialist, will perform annual training classes on SPCC plan for the company's oil/chemical-handling personnel. The annual training will include at minimum the operation and maintenance of equipment to prevent oil/chemical discharges; discharge procedure protocols; applicable pollution control laws, rules and regulations; general facility operations; and, the contents of the facility's SPCC plan. Records of personnel receiving SPCC training will be documented at least annually and maintained at least for 3 years. The SPCC training record form is included in Appendix D.

7.2 Designated Person

Regulatory Requirement: *Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management. (40 CFR 112.7(f)(2))*

At this facility: The pumper assigned to the facility is responsible for the day-to-day operations and spill prevention at the facility. The Production Foreman (who is the supervisor of the pumper) is the designated person who reports to facility management and is responsible for the proper cleanup of spills when they occur.

7.3 Spill Prevention Briefings

Regulatory Requirement: *Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in §112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures. (40 CFR 112.7(f)(3))*

At this facility: William Rey, Senior Environmental and Safety Specialist, will perform spill prevention briefings for the company's oil/chemical-handling personnel at least once a year. Such briefings will include past spills, failures, malfunctions and recently developed spill prevention measures. The record of personnel receiving the annual SPCC briefing and training is documented in Appendix D.

8.0 SECURITY

HighMount believes the natural gas production facilities contained in this SPCC Plan are equivalent to oil production facilities excluded from the Security provisions in 40 CFR 112.7(g), in that a typical natural gas production facility usually stores smaller quantities of oil than oil production facilities, present a smaller risk of oil spills, are typically located in rural and isolated locations, and are operated in accordance with good engineering practices and SPCC requirements.

However, HighMount's NPDES permit requires that they provide spill prevention and countermeasures for all on-site petroleum products or other pollutant storage tanks or containers. HighMount uses numerous ASTs for the storage of petroleum lubricants and chemicals. All these ASTs are equipped with drains and valves on some of the primary tanks and all tanks are contained within a secondary containment berm sufficient to contain at least 110% of the volume of the largest AST. Additionally, many of the primary tanks are hooked up to machinery or pumps to allow for the operation of various equipment. For this reason, HighMount has implemented a procedure where all secondary containment berms are either constructed without drain valves or have valves that are closed and have a bull plug tack welded into the drain to prevent unauthorized opening. Since the tanks are equipped with secondary containment that exceeds the capacity of the individual storage tanks, HighMount feels that the system of management meets the security provisions of 40 CFR 112.7(g) and will prevent the un-authorized discharge of oil or other chemicals due to acts of vandalism.

HighMount will provide the following security measures to prevent any spills of pollutants from entering groundwater or surface water of the State:

1. All drains on Tanks will be locked in the closed position except when opened by authorized HighMount personnel. In the event that a AST is to be supplied with additional fluid (lubricating oil, chemicals, etc.), the delivery will not be made unless there is sufficient volume within the secondary containment to contain 110% of the AST when filled.
2. Loading/Unloading connections for ASTs will be blanked flanged or capped after fueling/filling is conducted.
3. All drains on secondary containment structures (berms, double wall tanks, etc.) will be locked in the closed position or will be sealed with a plug that is tack welded into the drain/valve. If a valve is closed and secured with a lock, it will only be opened by authorized HighMount personnel.
4. Facilities with above ground high pressure lines and pumps will be secured within locked gates/fences.

9.0 Facility Tank Car and Tank Truck Loading/Unloading Rack(s)

HighMount has determined that the secondary containment provisions for tank car and tank truck loading/unloading rack(s) found at 40 CFR 112.7(h) do not apply because there are no loading/unloading rack(s) located at any of the facilities covered by this SPCC Plan.

However, HighMount operates facilities where oil is transferred by tank trucks. HighMount requires that the following procedures be followed by the truck drivers and HighMount's facility personnel:

Truck loading/unloading areas: Truck drivers are warned not to depart before they completely disconnect transfer/loading lines.

Facility personnel will ensure that all loading and unloading procedures comply with the following minimum requirements:

- Vehicle engine is stopped
- Emergency/hand brake of vehicle is set
- Vehicle wheels are chocked
- No open flame in area
- Buckets, catchments or portable drip pans will be placed under both the hose connection at the truck and at the unloading pipe, as necessary, to catch any oil that might drop or be spilled during truck loading or unloading operations.
- Truck drivers shall remain with their vehicle during loading and unloading to provide continuous visual inspection to prevent overfilling or accidental release.
- Prior to filling and departure, the driver is to examine the lowermost drain and all outlets of the truck for leakage, and make any necessary adjustments or repairs.

10.0 BRITTLE FRACTURE EVALUATIONS

Regulatory Requirement: *If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action. (40 CFR 112.7(i))*

At this facility: Such evaluations will be conducted if a field-constructed aboveground container undergoes a repair or a change in service that might increase the risk of a discharge or a failure due to brittle fracture.

11.0 COMPLIANCE WITH STATE AND OTHER REQUIREMENTS

Regulatory Requirement: *In addition to the minimal prevention standards listed under this section, include in your Plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines. (40 CFR 112.7(j))*

At this facility: In addition to the requirements established in 40 CFR 112; HighMount must also comply with the more stringent standards established in ADEM Admin Code R. 335-6-6-.12(r) and the Alabama State Oil and Gas Board Rule 400-3-6.07.

12.0 FACILITY DRAINAGE - OIL PRODUCTION (ONSHORE)

12.1 Diked Storage Areas

Regulatory Requirement: *At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in §112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under §112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in §112.8(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods. (40 CFR 112.9(b)(1))*

Drainage of accumulated rainwater from diked areas:

For secondary containment systems equipped with drain valves, the following actions will be taken prior to drainage:

1. Inspection of the runoff rainwater prior to discharge will be done to ensure that the discharge will not be harmful (will not cause a film, sheen, or discoloration of the water or adjoining shorelines, or cause an emulsion or sludge beneath the surface of the water or upon adjoining shorelines). Any observed oil should be removed and properly disposed of prior to drainage.
2. Inspection will be conducted to determine that the water is sourced from rainfall or process water. If the inspection indicates that the water within the containment has process waters, it will be removed using a vacuum truck
3. The valve is resealed and locked following drainage.
4. Adequate records are kept of such events (time, date, name of employee performing drainage) and made part of the SPCC plan.

At this facility: For secondary containments with no discharge valves or with a sealed valve, drainage of spilled fluids or process waters contained inside diked areas does not occur. These fluids are removed by a vacuum truck, by transferring them back into tanks or by reprocessing them through production equipment.

12.2 Field Drainage Ditches, Road Ditches, Oil Traps, Sumps or Skimmers

Regulatory Requirement: *Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil. (40 CFR 112.9 (b) (2))*

At this facility: These areas are inspected at regularly scheduled intervals in accordance with Section 6.0 - Inspections and Records, and Appendix B - Facility Inspection Procedures and Forms, for accumulation of oil/produced water that may have escaped from small leaks. Any such accumulations will be promptly removed and the leak will be reported and promptly repaired.

13.0 FACILITY BULK STORAGE TANKS - OIL PRODUCTION (ONSHORE)**13.1 Materials and Construction**

Regulatory Requirement: *If you are the owner or operator of an onshore production facility, you must not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage. (40 CFR 112.9(c)(1))*

At this facility: All storage tanks are designed, fabricated and installed to conform to industry standards. The tanks are compatible with fluids stored, adequate in size and are equipped with internal pressure and vacuum protection vents. If the facility contains multiple oil/water storage tanks, overflow equalizing lines between tanks are constructed so that a full tank can overflow to an adjacent tank.

13.2 Secondary Containment

Regulatory Requirement: *Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond. (40 CFR 112.9(c)(2))*

At this facility: Section 6.0 - Inspections and Records includes a description of secondary containment for each aboveground storage tank.

An earthen or otherwise impervious dike is constructed around all oil/chemical/water storage tanks. For production related storage tanks, dike areas must contain 150% of the storage volume of the largest tank. All other tanks must have sufficient secondary containment capacity to hold 110% the volume of the largest container with sufficient freeboard for rainfall.

13.3 Tank Examination

Regulatory Requirement: *Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground. (40 CFR 112.9 (c)(3))*

At this facility: Tanks are visually examined by the company pumper(s) daily during their normal work schedule. Additionally, an annual inspection will be performed in accordance with Section 6.0 - Inspections and Records, and documented in the inspection form located in Appendix B.

13.4 Fail-Safe Engineering

Regulatory Requirement: Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:

1. Container capacity adequate to assure that a container will not overflow if a pumper/gauger is delayed in making regularly scheduled rounds.
2. Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.
3. Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.
4. High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system. (40 CFR 112.9(c)(4))

At this facility: Fail-safe engineering for tanks are accomplished by performing items 1 or 2, and 3 listed above.

14.0 FACILITY TRANSFER OPERATIONS - OIL PRODUCTION (ONSHORE)

14.1 Aboveground Valves and Pipelines

Regulatory Requirement: *Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.. (40 CFR 112.9(d)(1))*

At this facility: Inspections are conducted as discussed in Section 6.0 - Inspections and Records using the procedures and form found in Appendix B.

14.2 Saltwater (Oil Field Brine)

Regulatory Requirement: *Inspect saltwater (oil field brine) disposal facilities often, particularly following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge. (40 CFR 112.9(d)(2))*

At this facility: Inspections are conducted as discussed in Section 6.0 - Inspections and Records using the procedures and form found in Appendix B.

14.3 Flowline Maintenance

Regulatory Requirement: *Have a program of flowline maintenance to prevent discharges from each flowline. (40 CFR 112.9(d)(3))*

At this facility: Inspections are conducted in accordance with Section 6.0 – Inspections and Records. A program of flowline maintenance is necessary to prevent leaks and unauthorized discharges. The flowline maintenance program consists of minimum standards to be applied across the company’s onshore operations, supplemented by area-specific prevention and control practices applicable for the type of fluid moving through the line, the corrosive nature of the fluid, soil corrosivity, and ambient conditions of the region.

Formal facility inspections are conducted at least annually, and include inspection of facility flowlines, valves and appurtenances. Inspections are documented as discussed in Section 6.0 - Inspections and Records.

The Pumper’s regular operating routine includes monitoring the pressures of the flowlines, risers, and well head. Pumpers also examine the equipment for signs of corrosion, pitting, damage, vandalism and leaks. Flowlines found to contain excessive corrosion or developing signs of failure are repaired or replaced, as warranted. In addition, HighMount has installed an in-line gathering line leak detection system through the Warrior and Whitson fields. This system is automated and is used to detect pipeline pressure variations and leaks.

15.0 OIL DRILLING AND WORKOVER FACILITIES (ONSHORE)

HighMount Exploration and Production, Inc. does not own or operate any drilling or workover, wireline equipment, frac units, etc. All drilling and workover services are performed by independent contractors.

HighMount assures through contract and periodic inspection that drilling and workover contractors comply with applicable SPCC requirements while working at HighMount locations.

However, while spill prevention of mobile drilling or workover equipment is the responsibility of the independent contractors, certain spills or cleanups from drilling and/or workover operations are the responsibility of HighMount (i.e. well blowouts, spills, etc.). Therefore, HighMount has determined that the SPCC requirements for “onshore oil drilling and workover facilities” are applicable to certain HighMount operations and are included as follows:

15.1 Mobile Drilling or Workover Equipment.

Regulatory Requirement: *Equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters. (40 CFR 112.10 (a)-(b))*

At this facility: Mobile drilling and workover equipment will be positioned away from drainage ways as much as possible for the given operations.

15.2 Catchment Basins or Diversion Structures

Regulatory Requirement: *Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil or oily drilling fluids. (40 CFR 112.10 (c))*

At this facility: Catchment basins or diversion structures are provided as needed.

15.3 Blowout Prevention

Regulatory Requirement: *Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system will be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements. (40 CFR 112.10 (d))*

At this facility: BOP, installed at HighMount wells, will be operated in accordance with the Alabama Oil and Gas Board requirements. BOP installed will be capable of controlling any wellhead pressures that may be encountered during drilling and well work operations.

APPENDICES

Appendix A

Facility Information

Contact Information

Area Location Map

Facility Plot Plans

Berm Calculations

Potential Discharges

Facility Information	
Name of Field:	HighMount Black Warrior Basin LLC
Type of Field:	Onshore Production Facility Coalbed Methane
Location of Field:	Tuscaloosa, Fayette, and Walker Counties
Name and Address of Owner or Operator:	HighMount Exploration & Production, Inc. 1415 Louisiana Street, Suite 2700 Houston, Texas 77002

Facility and Coordinates		
Facility	Latitude <i>NAD 27 Central</i>	Longitude <i>NAD 27 Central</i>
See Table 1		

Designated Person Accountable for Oil Spill Prevention at This Facility	
Name:	William K. Rey, Jr.
Title:	Senior Environmental and Safety Specialist
Telephone:	Office: (205) 247-4258 (Office) Mobile: (205) 361-8205 (Cell)

Potential Spills					
Source	Type of Failure	Volume bbls/gal	Rate bbls/hr	Direction of Flow	Containment Capacity bbls/gal

Appendix B

Facility Inspection Procedures and Forms

FACILITY INSPECTION PROCEDURES**Inspection Instructions:**

Items to be inspected and documented in the Facility Inspection Form

1. Storage tanks:
 - a. Examine foundation and supports of tanks that are above the surface of the ground. There should be no large gaps between the foundation and the tank bottom or between the ground surface and the tank bottom (if tank sits directly on the ground).
 - b. Concrete foundations (if any) should not be crumbling or excessively cracked. Storage tank foundations should provide adequate support for tanks.
 - c. Examine for leaks through bolts, gaskets, rivets, seams, and any other part of tank. Tanks should be structurally intact, with no cracks, holes, or leaks.
 - d. Examine tanks for excessive rust and exterior corrosion.
 - e. Examine sides of tanks for oil streaks, which is evidence of tank overfilling.
 - f. Examine field drainage ditches, oil traps and sumps for signs of leaks.
2. Production Handling, Separating, and Treating Vessels
 - a. Inspect all valves, gauges, sight glass, and other related equipment for proper operation.
 - b. Check for proper operation and settings for all emergency relief valves.
3. Valves, piping, truck loading and unloading areas
 - a. Examine all aboveground valves, pipelines, and flowlines for general condition of items, such as flange joints, valve glands and bodies, drip pans, pipeline supports.
 - b. Check truck loading and unloading areas, under loading valves and catchments for spills.
4. Wellheads and flowlines:
 - a. Inspect all valves for proper operation and condition.
 - b. Inspect all joints, flanges, unions and connections for any indication of leaks.
 - c. Inspect polish rod stuffing boxes for any needed repair or replacement.
 - d. Walk flow or gathering lines and inspect for any indication of leaks, needed repairs or replacement.
5. Containment areas:
 - a. Inspect for accumulations of oil inside containment.
 - b. Examine containment walls for deterioration such as cracking, settlement, erosion, animal burrows or excessive vegetation.

Annual Facility Inspection Form

Date: _____ Time: _____

Signature of Inspector: _____

Location: _____

Item: _____ Condition: _____

Tanks & Foundations _____

Piping & Valves _____

Production Equipment _____

- Heater Treaters _____

- Separators _____

- Pumps _____

- Miscellaneous _____

Truck Loading Area _____

Containment Dikes _____

Wells _____

Flow & Gathering Lines _____

Other Items _____

Semi-Annual Compressor Inspection Form

Date: _____ Time: _____

Signature of Inspector: _____

Location: _____

Item: _____ Condition: _____

No. of Compressors at Location

Piping & Valves _____

Production Equipment _____
Motor Seals _____

Oil Seals _____

Compressor Skid Containment _____

Secondary Containment for Lubricating Oil ASTs _____

Used Oil Storage Tanks and Containment _____

Used Oil Filter Management _____

Other Items _____

Deficiencies noted

Recommendations for Correcting Deficiencies

Appendix C
Spill Notification Form

SPILL NOTIFICATION FORM

Reporter's last name: _____ First: _____ M.I. _____
Reporter's daytime phone number:(____) _____
evening phone number:(____) _____ home phone number: (____) _____
Reporter's company: _____
Reporter's department/section: _____
Reporter's position: _____
Owner's address: _____
Owner's City, State and Zip: _____

Initial or follow-up notification:
Were materials released? _____ (Y/N)?
Confidential _____ (Y/N)?
Reportable quantity _____ (Y/N)?
Surface waters impacted _____ (Y/N)? If yes, contact National Response Center (NRC) immediately.
Call made to NRC (800) 424-8802 _____ (Y/N)? Date: _____ Time: _____
Call Incident Commander: _____ (Y/N)?

INCIDENT DESCRIPTION

Source and cause of incident: _____

Date of incident: _____ Time of incident: _____

Incident address/location: _____

Incident location: Section, Township and Range: _____

Facility Latitude (degrees, minutes, and seconds): _____

Facility Longitude (degrees, minutes and seconds): _____

Nearest city (also list county, state and zip code): _____

Distance from the nearest city (give units): _____

Direction from the nearest city: _____

Container type: _____

Container capacity (include units): _____

Facility capacity (include units): _____

Total bulk storage capacity (include units) _____

MATERIAL

CAS Number: _____

Released quantity (with bbls): _____

Material released in water? If so, quantity (include bbls): _____

RESPONSE ACTION

Actions being taken on -site to correct, control, or mitigate incident: _____

WEATHER CONDITIONS:

(Current) _____ (Forecast) _____

IMPACT

Number of injuries: _____ Number of deaths: _____

Were there evacuations: _____ (Y/N)? If yes, the number of people evacuated: _____

Was there any property damage: _____ (Y/N)? If yes, describe the damage including the medium affected and the approximate dollar amount of damage. (Be complete): _____

ADDITIONAL INFORMATION

Any information about the incident not recorded elsewhere in the report? _____

GOVERNMENT AGENCY	LOCATION	TELEPHONE	NOTIFICATIONS
HighMount, Manager, Environmental, Dale Birdwell	Oklahoma	405-748-2792	Notify Immediately
HighMount Black Warrior Basin, Robert F. Singleton	Alabama	205-247-4222 (Off) 205-361-1688 (Cell)	Notify Immediately
HighMount, Black Warrior Basin, Sr. Environmental & Safety Specialist, William Rey	Alabama	205-247-4258 (Off) 205-361-8205 (Cell)	Notify Immediately
HighMount, Black Warrior Basin, Production Supervisor, Larry Strider	Alabama	205-247-4227 (Off) 205-361-6862 (Cell)	Notify Immediately
HighMount Black Warrior Basin, Exploration and Production Supervisor, Aaron Terry	Alabama	205-247-4229 (Off) 205-361-7647 (Cell)	Notify Immediately
National Response Center	Washington, DC	(800) 424-8802 (24 hour) (202) 267-2675	Notify immediately, but within 1 hour of release to water.
Alabama EMA After Hours State Warning Point	Alabama	205-280-2310 800-843-0699	Notify within 24 hours.
ADEM Ombudsman Field Operations (After Hours)	Alabama	800-533-2336 205-942-6168 205-583-5560	Notify within 24 hours.
National Response Center		800-424-8802	Notify within 24 hours.
U.S. EPA - Region 4 Emergency Hotline	Atlanta, GA	(214) 665-6444 (24 hour) (866) 372-7745	Notify within 24 hours.
County Local Emergency Planning Committees (LEPC)	Tuscaloosa, Fayette & Walker Counties	911	Notify within 24 hours.

Appendix D

SPCC Training and Briefing Record

Appendix E
Oil Spill Contingency Plan

OIL SPILL CONTINGENCY PLAN

Regulatory Requirement: *If you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c) to prevent a discharge as described in §112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under §112.20, provide in your Plan the following:*

(1) An oil spill contingency plan following the provisions of part 109 of this chapter. (40 CFR 112.7 (d)(1))

1.0 AUTHORITY, RESPONSIBILITIES AND DUTIES

Facility and management personnel are committed to implementing the manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged from the Facility covered by this plan.

The company pumpèr(s) and Production Supervisor are responsible for spill prevention at this facility. The facility’s Production Supervisor’s contact information is listed on the “facility information sheet” located in Appendix A.

Spill reporting to the appropriate state and federal regulatory agencies and any associated correspondence are the responsibilities of the Senior E&P Environmental Engineer:

Dale Birdwell
Manager, Environmental
405-748-2792

2.0 RESOURCES

HighMount Exploration & Production, Inc. will rely on third party equipment and manpower for cleanup of spills that impacts navigable waters. The following is a list of approved spill response contractors.

Spill Response Contractors		
In case of a release, the following contractors may be called to assist HighMount Exploration & Production, Inc. with the control and clean up of a release of oil.		
Contractor	Location	Phone Number
Bowen Oil Field Services	Fayette, AL	205-932-6181
Onyx	Bessemer, AL	205-426-4443
Rev		
Fair Contracting	Tuscaloosa, AL	205-752-1958
T. K. Stanley Oil Field Contractors	Tuscaloosa, AL	205-391-9329
Spectrum Environmental	Birmingham	

3.0 SPILL DETECTION AND RESPONSE PROCEDURES

Any employee observing a spill of any quantity, in accordance with the company's safety policy, should take necessary steps to try to close off the source of the spill.

First On-Scene Responder

- The first on-site responder will contact the Supervisor.
- The only actions initiated by the first on-scene responder will be those that do not present any threat to his safety.

Supervisor and Alternates

The Supervisor is responsible for spill mitigation programs and will act as the Incident Commander, with the responsibility and authority for directing and coordinating response operations.

- Notify all personnel as needed. Call on-site supervisor, pumpers and contract personnel for first response actions:
 - Remove sources of ignition.
 - Shut in the source of the spill.
 - Dispatch personnel to spill site as conditions permit.
 - Identify the character, exact source, amount and extent of release, as well as the other information needed for agency notification. Use the Spill Notification Form found in Appendix B for guidance on information gathering.
 - Establish a safety perimeter around the area, preventing unauthorized entry into the release area.
 - Establish a safe staging area and command post, as warranted. If a field command post is established, the nearest field office may serve as the communications center, enabling communications through multiple phone lines and other electronic media, transmitting information to/from the field command post.
- Safety First
 - Do not risk personal safety in a rescue attempt. Take appropriate actions to protect additional personnel.
 - Use only personnel trained and competent in the response task they are asked to perform.
 - Coordinate rescue actions with local emergency response professionals (i.e. EMTs and fire department).
- Initiate and maintain a log indicating all conversations and actions from the time the spill is first identified by company personnel until the spill is successfully cleaned up. Assign a recording assistant, as necessary.

- Notify the appropriate Federal, State, and Local authorities, including but not limited to the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee, as the magnitude of the release warrants. The assistance of these personnel may include minimization of the public exposure to hazards, evacuation of the public, controlling traffic, fire control, and providing emergency medical care, as appropriate.
- As soon as spill size, movement and composition are determined, and sensitive areas are outlined, assess the equipment and manpower needed to prevent spills from reaching sensitive areas. The degree of involvement from internal and external personnel will depend on the magnitude of the release, with additional response resources deployed as the situation warrants
- Implement prompt actions to contain and remove the substance released. Immediately initiate clean-up activities, assessing the impact and developing remediation plans, as necessary.
- Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel or any inherent dangers.
- Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e. the effects of any toxic, irritating, or asphyxiating gasses that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion).
- The Supervisor will maintain supervision on containment and cleanup process until relieved by an alternate.

Other Facility Personnel

The facility Pumper will assist the Supervisor in evaluating the situation to establish the personnel, materials, and equipment required to initiate, support, or completely implement the spill response activities, making facility repairs and cleaning the release area.

Spill Response Contractors

The Supervisor will immediately contact outside emergency response contractors, and safety and/or environmental professionals for assistance if any of the following situations occur:

- When the magnitude of the response required to gain control of the situation is beyond the capabilities of the spill response team.

- Public evacuation, injury or death occurs.
- When a primary water intake, shorelines or groundwater is threatened.
- When wildlife damage occurs.

Spill Mitigation

This section is not intended to be a directive for a specific spill response procedure that is best for any particular incident and location. Specific conditions of the spill scenario must be evaluated at the time of an actual spill to establish appropriate response priorities. These priorities should reflect the human safety considerations, actual resources threatened, weather, estimated type and volume of oil spilled, and the availability of response personnel and equipment.

Initial efforts for mitigation of spills to water should focus on the deployment of diversionary and exclusion booms to prevent oil from moving. In areas where the open stretches of water are too wide or currents are too great to prevent oil from moving under or over booms, multiple diversionary booms should be considered.

	METHOD	APPLICABILITY
SORBENTS	Applied manually or mechanically to the surface. Oil/sorbent is then removed manually or mechanically.	<ul style="list-style-type: none"> ▪ Prevents penetration of oil into substrate. ▪ Sorbent pads preferable to loose-fiber materials for ease of collection. ▪ Synthetic products have higher absorption capacity than natural materials. ▪ Can be recycled and reused.
BOOM	Applied manually to water or low areas to corral released fluids.	<ul style="list-style-type: none"> ▪ Oil can be vacuumed from containment boom area. ▪ Absorbent boom can be recycled.
SURFACE TREATMENT AGENTS	Applied to surface and shore zone before oil is stranded. Prevents oil from adhering to the substrate	<ul style="list-style-type: none"> ▪ May be difficult to apply on long sections of shore.
COLLECTION AGENTS	Reduces natural dispersion of oil	<ul style="list-style-type: none"> ▪ Reduces area of shoreline contamination. ▪ Reduces penetration into surface.
DIKES AND/OR DITCHES	Sediment removed from ditch used to build dikes.	<ul style="list-style-type: none"> ▪ Can be constructed quickly. ▪ Ditch acts as a collector of oil that can be removed by mechanical means.
DAM	Used for shallow streams where booms cannot be deployed	<ul style="list-style-type: none"> ▪ Acts as a boom for exclusion of oil. ▪ Can be constructed to allow water to flow through dam (flume).

<p>RETENTION AND DIVERSION PONDS</p>	<p>Used as a point for collection of migrating fluids.</p>	<ul style="list-style-type: none"> ▪ Fluids can be vacuumed from containment area for recycling or disposal. ▪ Assists in preventing contaminated storm water runoff.
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Recovery and Remediation

Remediation of the impacted soil will be evaluated and a remediation plan implemented, as applicable to the spill event. Remediation will be conducted using the following hierarchy for waste management:

- Recycle – return recovered fluids to the process whenever practical. Materials that can't be recycled onsite should be considered for commercial recycling.
- Reuse – as applicable. Impacted soil may be appropriate for use where storm water runoff will not come in contact with the contaminants. Consult state agencies for the criteria for reuse of impacted soil.
- Treatment – bioremediation or otherwise render the material harmless for onsite use with insitu remediation. Soil amendments may be applied to encourage insitu remediation. Onsite and offsite treatment of impacted soil will be conducted in accordance with applicable regulations and lease restrictions.
- Disposal – onsite or offsite, as a last option.

Confirmation sampling may be required by the jurisdictional agency. Clean-up spill as per Texas Railroad Commission Rule 91 - Cleanup of Soil Contaminated by a Crude Oil Spill standards.

Surface water (including wetlands), shoreline and ground water remediation will be conducted with the assistance of environmental professionals. Wildlife impact, rehabilitation and relocation will be assessed and conducted by environmental and wildlife professionals as well as state and federal agencies.

Critical Areas to Protect

The critical areas to protect are classified as high, moderate, and low sensitivity to oil for non-coastal/inland environments. The Federal, State, and local authorities will further clarify these categories at the time of the response. The categories are defined as follows:

HIGH SENSITIVITY

- Areas which are high in productivity, extremely sensitive, or inhabited by threatened/endangered species.
- Areas which consist of shallow seagrass flats, mangroves, tidally influenced marshes/wetlands, and sheltered tidal flats with vegetated margins.
- Areas which are abundant in many species and are very difficult to clean and rehabilitate.

MODERATE SENSITIVITY

- Areas which are less sensitive and are able to partially resist the effects of oil.
- Areas which consist of the riparian zone along freshwater rivers with saltwedge, oyster reefs, exposed tidal flats, dredged spoil deposits, and partially exposed bay margins.

LOW SENSITIVITY

- Areas of low productivity and/or high energy along with man-made structures.
- Areas which consist of sand-shell substrate, fine-grained sand, seawalls, jetties, bulkheads, revetments, and erosional scarps.

Environmental/Socio-Economic Sensitivities

Environmental/socio-economic sensitivities are of extreme importance when planning a response effort. The health and safety of the public and the environment, as well as the protection of the various socio-economic sensitivities, must be promptly addressed in order to mitigate the extent of damage and minimize the co

4.0 INTERNAL NOTIFICATION PROCEDURE

1. Notify the appropriate Production Supervisor.

Name: Dale Birdwell, Environmental Manager, HighMount
Phone: 405-748-2792

Name: Robert Singleton, Asset Manager
Phone: 205-247-4222 (Office)
205-361-1668 (Cell)

Name: William K. Rey, Jr. Environmental & Safety Specialist
Phone: 205-247-4258 (Office)
205-361-8205 (Cell)

Name: Larry Strider, Production Supervisor
Phone: 205-247-4227 (Office)
205-361-6862 (Cell)

Name: Aaron Terry, Exploration and Production Supervisor
Phone: 205-247-4229 (Office)
205-361-7647 (Cell)

2. Fill out the company Spill Notification Form found in Appendix C.

5.0 GOVERNMENT AGENCY NOTIFICATION PROCEDURE

Dale Birdwell (Manager, Environmental) will make the appropriate notifications to the local, state and federal agencies. These notifications will be oral and include the information contained in the Spill Notification Form. Follow-up written reports or forms may be required to be submitted to various regulatory agencies.

Any release of oil to navigable waters is reportable.

Navigable waters means the waters of the United States, including the territorial seas.

(1) The term includes:

(i) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;

(ii) All interstate waters, including interstate wetlands;

(iii) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

(A) That are or could be used by interstate or foreign travelers for recreational or other purposes; or

(B) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or,

(C) That are or could be used for industrial purposes by industries in interstate commerce;

(iv) All impoundments of waters otherwise defined as waters of the United States under this section;

(v) Tributaries of waters identified in paragraphs (1)(i) through (iv) of this definition;

(vi) The territorial sea; and

(vii) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraph (1) of this definition. (40 CFR 112.2)

ALABAMA AND FEDERAL AGENCY NOTIFICATIONS			
A REPORTABLE RELEASE IS DEFINED AS:			
Release to Land	-	>5 bbls of oil	
Release to Water	-	Sheen of oil on navigable waters of the U.S.	
GOVERNMENT AGENCY	LOCATION	TELEPHONE	NOTIFICATIONS
HighMount, Manager, Environmental, Dale Birdwell	Oklahoma	405-748-2792	Notify Immediately
HighMount Black Warrior Basin, Robert F. Singleton	Alabama	205-247-4222 (Off) 205-361-1688 (Cell)	Notify Immediately
HighMount, Black Warrior Basin, Sr. Environmental & Safety Specialist, William Rey	Alabama	205-247-4258 (Off) 205-361-8205 (Cell)	Notify Immediately
HighMount, Black Warrior Basin, Production Supervisor, Larry Strider	Alabama	205-247-4227 (Off) 205-361-6862 (Cell)	Notify Immediately
HighMount Black Warrior Basin, Production Foreman-Onshore, Aaron Terry	Alabama	205-247-4229 (Off) 205-361-7647 (Cell)	Notify Immediately
National Response Center	Washington, DC	(800) 424-8802 (24 hour) (202) 267-2675	Notify immediately, but within 1 hour of release to water.
Alabama EMA After Hours State Warning Point	Alabama	205-280-2310 800-843-0699	Notify within 24 hours.
ADEM Ombudsman Field Operations (After Hours)	Alabama	800-533-2336 205-942-6168 205-583-5560	Notify within 24 hours.
U.S. EPA - Region 4 Emergency Hotline	Atlanta, GA	(214) 665-6444 (24 hour) (866) 372-7745	Notify within 24 hours.
County Local Emergency Planning Committees	Tuscaloosa, Fayette	205-349-0150 (Tusc) 205-932-1911 (Fay)	Notify within 24 hours.

<i>(LEPC)</i>	<i>Counties</i>		
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LOCAL EMERGENCY RESPONSE AGENCIES		
Agency	Location	Number
Police Agencies		
State Police		911
Fire Departments		
Fire Marshal (Fire, EMS, Hazmat)		911
Medical Services		
Hospital		911
Other Services		
Tuscaloosa Water & Sewer		205-349-0247
US Army Corp of Engineers Bankhead Lock		205-339-1921
Holt Lock		205-553-1711

Table 1

HighMount Black Warrior Basin LLC

Facilities Certified in SPCC Plan

Compressor Stations			
Facility Name	S	T	R
189 Booster Station	7	17S	8W
Allgood 1	13	19S	9W
Cassidy 1	36	18S	9W
Cassidy 2	36	18S	9W
Cassidy 4	6	19S	8W
Cassidy 5	32	18S	8W
Cassidy 6	20	18S	8W
Cassidy 7	21	18S	8W
Cassidy Sales 1	6	19S	8W
Cassidy Sales 2	34	18S	9W
Chevron 06-08-144 Booster Compressor	6	18S	9W
East Deerlick 1	13	20S	9W
East Deerlick 2	19	20S	8W
GSPC 25-12 Booster Compressor	25	20S	9W
Compressor Stations			
Facility Name	S	T	R
Hassinger 18-01-190 Booster Compressor	18	17S	8W
Hassinger 18-09-169 Booster Compressor	18	17S	8W
Lake Nicol 1	11	20S	9W
Moore Creek 1	35	18S	9W
North Deerlick Creek 1	2	20S	9W
North Deerlick Creek 2	1	20S	9W
North Yellow Creek 1	8	18S	8W
South Deerlick Compressor Station	23	20S	9W
South Deerlick Sales Station	24	20S	9W
Warrior Ridge 1	25	19S	9W
Warrior Ridge 2	25	19S	9W
Watermelon Road	11	19S	9W
West Warrior Ridge 1	23	19S	9W
West Whitson	14	18S	10W
West Yellow Creek 1	19	18S	8W
Whitson Compressor Station	35	17S	9W
Yellow Creek 1	16	18S	8W

Table 1

HighMount Black Warrior Basin LLC

Facilities Certified in SPCC Plan

Oil Handling Facilities			
Facility Name	S	T	R
Field Office	14	20S	9W
Cassidy 29-4-91 Lubircating Oil	29	18S	8W
Cassidy 6-3-44 Lub. Oil and Dumpsters	6	19S	8W
Chevron 4-7-141 Crude Oil	4	18S	9W
Holeman 34-1-66 Lubircating Oil	34	17S	9W
No. 1 Pig Receiver	5	19S	8W
Oil Treatment Facility	5	19S	8W
Stedman 13-6-18 Lubricating Oil	13	19S	9W
West 11-2-35 Lubricating Oil	11	20S	9W
West 19-2-10 Lubricating Oil	19	20S	8W
Whitson DOT Pig Receiver	34	18S	9W
Water Handling Facilities			
Facility Name	S	T	R
1042 Tank Site	35	17S	10W
Allgood Water Treatment Facility	18	19S	8W
Blue Rock Pit Water Tanks	25	18S	9W
Chevron 1-12-15 Water Tanks (RED HILL)	1	18S	9W
Chevron 13-16-109 Water Tanks	13	17S	9W
Chevron 29-15-358 Water Tanks	29	17S	9W
East Deerlick Holding Pond	13	20S	9W
Freshwater Pond	11	20S	9W
Million Dollar Hill Water Tanks	19	18S	8W
North Cassidy Water Treatment Facility	22	18S	8W
North Deerlick 2 Tanks	1	20S	9W
Ramsay-McCormack 35-6 #4 Water Tanks	35	20S	9W
South Cassidy Water Treatment Facility	32	18S	8W
South Deerlick Water Treatment Facility	26	20S	9W
West Warrior Ridge Water Tanks	25	19S	9W
West Whitson Water Treatment Facility	14	18S	10W
West Yellow Creek 1 Tanks	19	18S	8W
Whitson Water Treatment Facility	36	17S	9W

Table 2

HighMount Black Warrior Basin LLC

Listing of Above Ground Storage Tanks and Containment For All Facilities

Compressor Stations									
Facility Name	S	T	R	No. of Compressors	Quantity	Gallons	Contents	Secondary Containment >110% of	Type of Berm
189 Booster Station	7	17S	8W	1	1	1,680	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Allgood 1	13	19S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Cassidy 1	36	18S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Compressor Oil	Y	Metal
Cassidy 2	36	18S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Compressor Oil	Y	Metal
Cassidy 4	6	19S	8W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Cassidy 5	32	18S	8W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Cassidy 6	20	18S	8W	2	2	2,100	Used Oil	Y	Metal/Liner
					1	1,932	Used Oil	Y	earthen
					3	285	Lubricating Oil	N	metal
					1	340	Used Oil filters	Y	earthen
Cassidy 7	21	18S	8W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Cassidy Sales 1	6	19S	8W	2	1	8,820	Used Oil	Y	Metal/Liner
					1	3,780	Used Oil	Y	Metal/Liner
					1	100	Used Oil	Y	earthen
					3	285	Triethylene Glycol	Y	Metal
					1	500	Lubricating Oil	Y	Metal
					3	285	Lubricating Oil	Y	Metal
					1	2,100	Out of Service	Y	Metal
Cassidy Sales 2	34	18S	9W	4	1	8,820	Used Oil	Y	Metal/Liner
					8	285	Lubricating Oil	Y	Metal
					3	265	Triethylene Glycol	Y	Metal
					1	4,200	Used Oil	Y	Metal/Liner
Chevron 06-08-144 Booster Compressor	6	18S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
East Deerlick 1	13	20S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
East Deerlick 2	19	20S	8W	2	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
GSPC 25-12 Booster Compressor	25	20S	9W	1	1	1,250	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal

Table 2

HighMount Black Warrior Basin LLC

Listing of Above Ground Storage Tanks and Containment For All Facilities

Compressor Stations									
Facility Name	S	T	R	No. of Compressors	Quantity	Gallons	Contents	Secondary Containment >110% of Largest Tank	Type of Berm
Hassinger 18-01-190 Booster Compressor	18	17S	8W	1	1	1,680	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Hassinger 18-09-169 Booster Compressor	18	17S	8W	1	1	1,200	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Lake Nicol 1	11	20S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
Moore Creek 1	35	18S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
North Deerlick Creek 1	2	20S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	280	Lubricating Oil	Y	Metal
North Deerlick Creek 2	1	20S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
North Yellow Creek 1	8	18S	8W	2	1	2,100	Used Oil	Y	Metal/Liner
					2	280	Lubricating Oil	Y	Metal
South Deerlick Compressor Station	23	20S	9W	2	1	4,200	Used Oil	Y	Metal/Liner
					2	285	Lubricating Oil	Y	Metal
South Deerlick Sales Station	24	20S	9W	0	1	1,680	Used Oil	Y	Metal
					1	110	Triethylene Glycol	Y	Metal
					1	115	DEHI DRIP	Y	earthen
Warrior Ridge 1	25	19S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	350	Lubricating Oil	Y	Metal
Warrior Ridge 2	25	19S	9W	0	1	2,100	Used Oil	Y	Metal
Watermelon Road	11	19S	9W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	285	Lubricating Oil	Y	Metal
West Warrior Ridge 1	23	19S	9W	2	1	2,100	Used Oil	Y	Metal/Liner
					2	285	Lubricating Oil	Y	Metal
West Whitson	14	18S	10W	1	1	8,820	Used Oil	Y	Metal/Liner
					2	285	Lubricating Oil	Y	Metal
					1	135	Triethylene Glycol	N	--
West Yellow Creek 1	19	18S	8W	2	1	265	Lubricating Oil	Y	Metal/Liner
					1	2,100	Used Oil	Y	Metal
Whitson Compressor Station	35	17S	9W	5	11	285	Lubricating Oil	Y	Metal
					1	500	Lubricating Oil	Y	Metal
					1	55	Triethylene Glycol	Y	Metal
					1	16,800	Used Oil	Y	Concrete
Ilow Creek 1	16	18S	8W	1	1	2,100	Used Oil	Y	Metal/Liner
					1	265	Lubricating Oil	Y	Metal

Table 2

HighMount Black Warrior Basin LLC

Listing of Above Ground Storage Tanks and Containment For All Facilities

Oil Handling Facilities									
Facility Name	S	T	R	No. of Compressors	Quantity	Gallons	Contents	Secondary Containment >110% of Largest Tank	Type of Berm
Field Office	14	20S	9W	0	1	1,200	Diesel Fuel	Y	Earthen
					1	450	Used Oil	Y	Earthen
					1	55	Muriatic Acid	Y	Concrete
					1	55	Hydraulic Oil	Y	Concrete
Cassidy 29-4-91 Lubricating Oil	29	18S	8W	0	1	280	Lubricating Oil	Y	Metal
					1	55	Used Antifreeze	Y	Plastic
					1	250	Antifreeze	Y	Metal
Cassidy 6-3-44 Lub. Oil and Dumpsters	6	19S	8W	0	1	275	Lubricating Oil	Y	Metal
					1	275	Antifreeze	Y	Metal
					1	280	Antifreeze	Y	Plastic
					1	280	Lubricating Oil	Y	Plastic
					1	55	Used antifreeze	Y	Plastic
Chevron 4-7-141 Crude Oil	4	18S	9W	0	1	1,200	Crude Oil	Y	Earthen
Holeman 34-1-66 Lubricating Oil	34	17S	9W	0	1	285	Lubricating Oil	Y	Metal
No. 1 Pig Receiver	5	19S	8W	0	1	4,200	Used Oil	Y	Metal/Liner
					1	325	Used Oil	Y	Metal
Oil Treatment Facility	5	19S	8W	0	2	8,820	Used Oil	Y	Concrete
					2	16,800	Process Water	Y	earthen
					1	8,820	Process Water	Y	earthen
					1	55	Solvit WC-9340	Y	Concrete
					1	200	Solvit MPA-7747	Y	Concrete
					2	55	Solvit MPA-7747	Y	Concrete
					1	365	Solvit D4573	Y	Metal
Stedman 13-6-18 Lubricating Oil	13	19S	9W	0	1	280	Lubricating Oil	Y	Metal
					1	55	Antifreeze Drum	N	Plastic
West 11-2-35 Lubricating Oil	11	20S	9W	0	2	280	Lubricating Oil	Y	Metal
					2	55	Used Antifreeze	Y	Metal
					1	250	Antifreeze	Y	Metal
West 19-2-10 Lubricating Oil	19	20S	8W	0	0				
Whitson DOT Pig Receiver	34	18S	9W	0	1	1,680	Used Oil	Y	Metal/Liner

Table 2

HighMount Black Warrior Basin LLC

Listing of Above Ground Storage Tanks and Containment For All Facilities

Water Handling Facilities									
Facility Name	S	T	R	No. of Compressors	Quantity	Gallons	Contents	Secondary Containment >110% of Largest Tank	Type of Berm
1042 Tank Site	35	17S	10W	0	2	16,800	Process Water	Y	metal/liner
Allgood Water Treatment Facility	18	19S	8W	0	0				
Blue Rock Pit Water Tanks	25	18S	9W	0	1	16,800	Process Water	Y	earthen
					1	16,800	out of service	Y	earthen
Chevron 1-12-15 Water Tanks (RED HILL)	1	18S	9W	0	2	16,800	Process Water	Y	earthen
Chevron 13-16-109 Water Tanks	13	17S	9W	0	2	21,000	Process Water	Y	metal
					1	16,800	Process Water	Y	metal
					1	110	Lubricating Oil	Y	metal
Chevron 29-15-358 Water Tanks	29	17S	9W	0	1	23,772	Process Water	Y	metal/liner
					2	17,850	Process Water	Y	metal/liner
East Deerlick Holding Pond	13	20S	9W	0	1	100	Diesel Fuel	N	--
East Deerlick Water Treatment Facility	17	20S	8W	0	1	300	Solvit WC9340	Y	Poly
					1	55	Muratic Acid	Y	Poly
					1	1,100	Aluminum Sulfate	Y	Concrete
Freshwater Pond	11	20S	9W	0	1	1,932	Used Oil	Y	earthen
Million Dollar Hill Water Tanks	19	18S	8W	0	3	16,800	Process Water	Y	earthen
North Cassidy Water Treatment Facility	22	18S	8W	0	1	1,500	Aluminum Sulfate	Y	Concrete
					1	300	Solvit WC9340	Y	metal
North Deerlick 2 Tanks	1	20S	9W	0	3	16,800	Process Water		
Ramsay-McCormack 35-6 #4 Water Tanks	35	20S	9W	0	1	21,000	Process Water	Y	metal
					1	21,000	Process Water	Y	metal
South Cassidy Water Treatment Facility	32	18S	8W	0	1	300	Solvit WC9340	Y	
					1	55	Muratic Acid	Y	
					1	300	Polyaluminum Chloride	Y	
South Deerlick Water Treatment Facility	26	20S	9W	0	1	1,000	Causitic	Y	Metal
					1	1,000	Aluminum Sulfate	Y	Concrete
					1	300	Mixing Tank	Y	Concrete
Warrior Ridge Water Tanks	25	19S	9W	0	2	16,800	Process Water	Y	earthen
West Whitson Water Treatment Facility	14	18S	10W	0	0				
West Yellow Creek 1 Tanks	19	18S	8W	0	2	16,800	Process Water	Y	earthen
Whitson Water Treatment Facility	36	17S	9W	0	1	65	Solvit MPA-7747	Y	Metal
					1	330	Poyaluminum Chloride	Y	Metal
					1	220	Solvit S-6673	Y	Metal

\RT I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Cassidy 8

Out of Service – No tanks on site – To be reclaimed

Discussion:

(1) Compressor Station Out-of-Service July 2002.

(2) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.

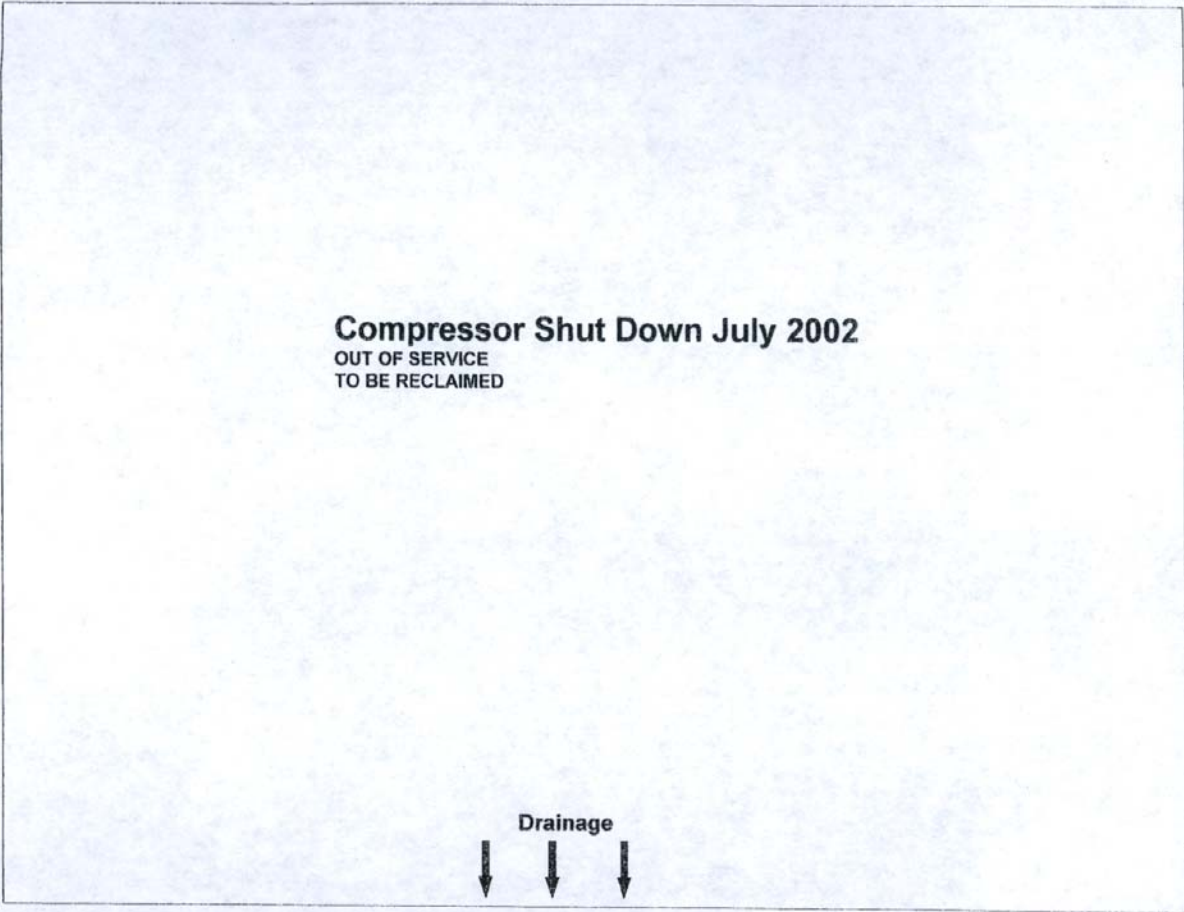
* **See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map**

Name of facility: Cassidy 8

Operator of facility: HighMount Black Warrior Basin LLC



North



Compressor Shut Down July 2002
 OUT OF SERVICE
 TO BE RECLAIMED

Drainage

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Cassidy & <i>OUT OF SERVICE</i> Tuscaloosa County Sec. 29-T18S-R08W
				Black Warrior Basin	

P. T. I
GENERAL INFORMATION

Potential Spills-Prediction and Control: East Deerlick 3

Facility Taken Out Of Service

Discussion:

- (1) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary to the Black Warrior River.

* **See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map**

Name of facility: East Deerlick 3

Operator of facility: HighMount Black Warrior Basin LLC



North


Fencing

Compressors removed from site prior to January 2002
Piping to be Disconnected from Main Lines and removed
Fence to be removed and site to be reclaimed.

Drainage



Gate

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWG	05/01/02	Tuscaloosa, AL	East Deerlick 3 Tuscaloosa County Sec. 19-T20S-R8W 
				Black Warrior Basin	

F. T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: 189 Booster Station

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
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Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of produced water from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Jim Mack Branch.

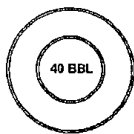
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: 189 Booster Station

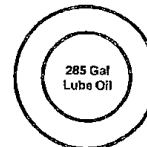
Operator of facility: HighMount Black Warrior Basin LLC



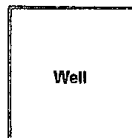
North



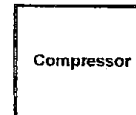
Metal Containment




Metal Containment



Pumping



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/25/09	Tuscaloosa, AL	189 Booster Station Tuscaloosa County
				Black Warrior Basin	

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Allgood 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	NE	No
Used Oil Tank (1-2100 gal)	Leaks/Overflow/Tank or Piping Rupture	2,100	50	NE	Yes
Compressor Lubricating Oil Storage Tank (1 -285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	n/a	NE	Yes
Scrubber (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No
Scrubber (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Panther Branch.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Allgood 1

Operator of facility: HighMount Black Warrior Basin LLC



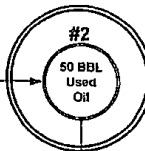
North



Drainage

Scrubber
(18" x 6')

Berm # D-1



Metal Dike with Liner:
15' diameter X 33" high

Gas
Compressor

Berm # O-1
#1

Metal Dike: 8' x 6' x 24"

285 gal.
Lubricating Oil
Storage Tank

Dike Drain

Scrubber
(24" x 6')

Used Oil
(Trucked Off-Site)

Gate

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	
				Black Warrior Basin	
					Allgood 1 Tuscaloosa County Sec. 13-T19S-R9W



**PART I GENERAL
INFORMATION**

Potential Spills-Prediction and Control: Cassidy 1

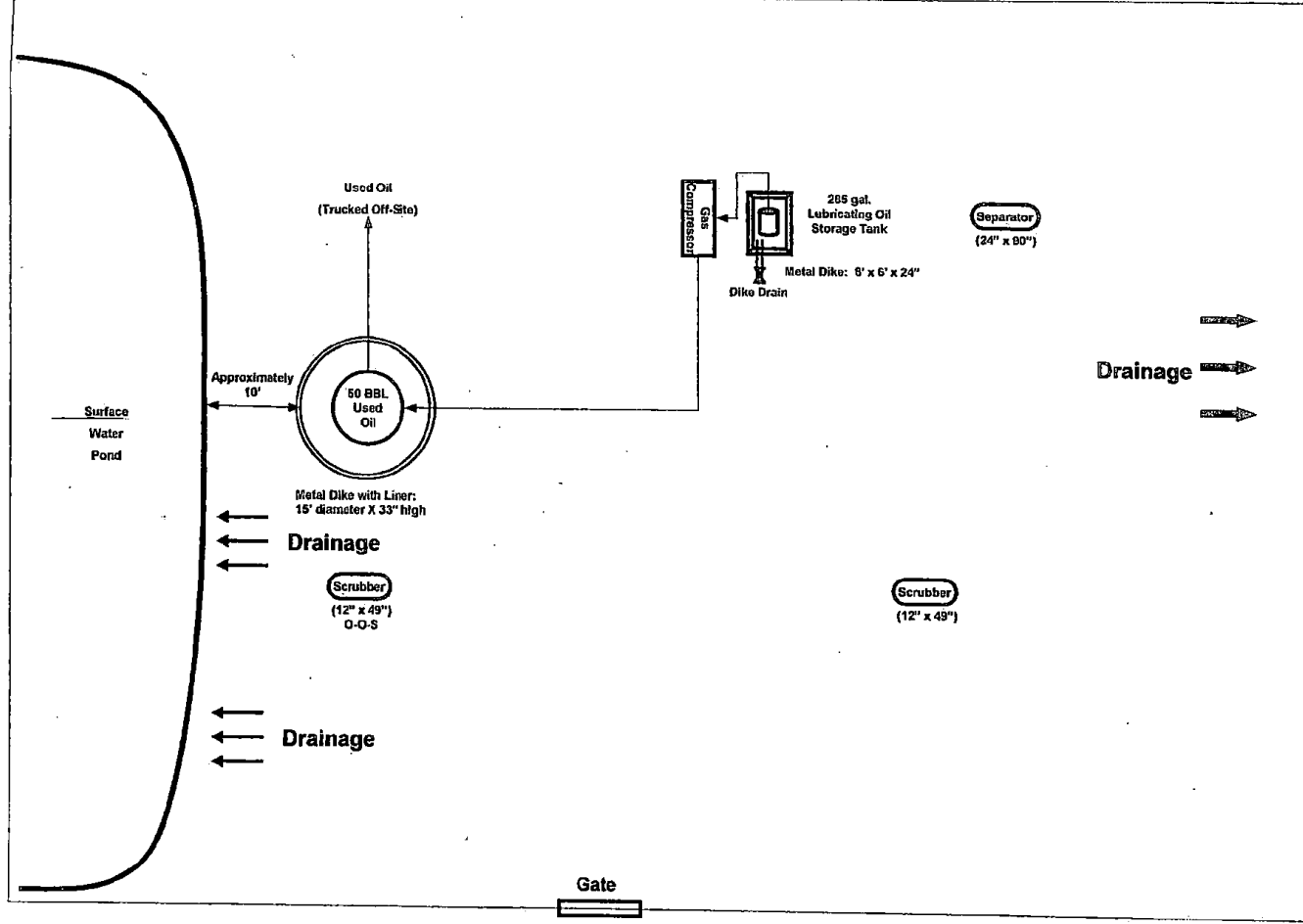
<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	E	No
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	E	Yes
Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	n/a	E	Yes
Scrubber (2- 12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No
Separator (24"x 90")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Jock Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy 1
Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Cassidy 1 Tuscaloosa County Sec. 36-T18S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/18/07	Black Warrior Basin		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy 2

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	N & SW	No
Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	N & SW	Yes
Used Oil Tank (1-2,100 gal)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	N & SW	Yes
Scrubber (12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N & SW	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for pumping units (Pumpers Oil) and compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Jock Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

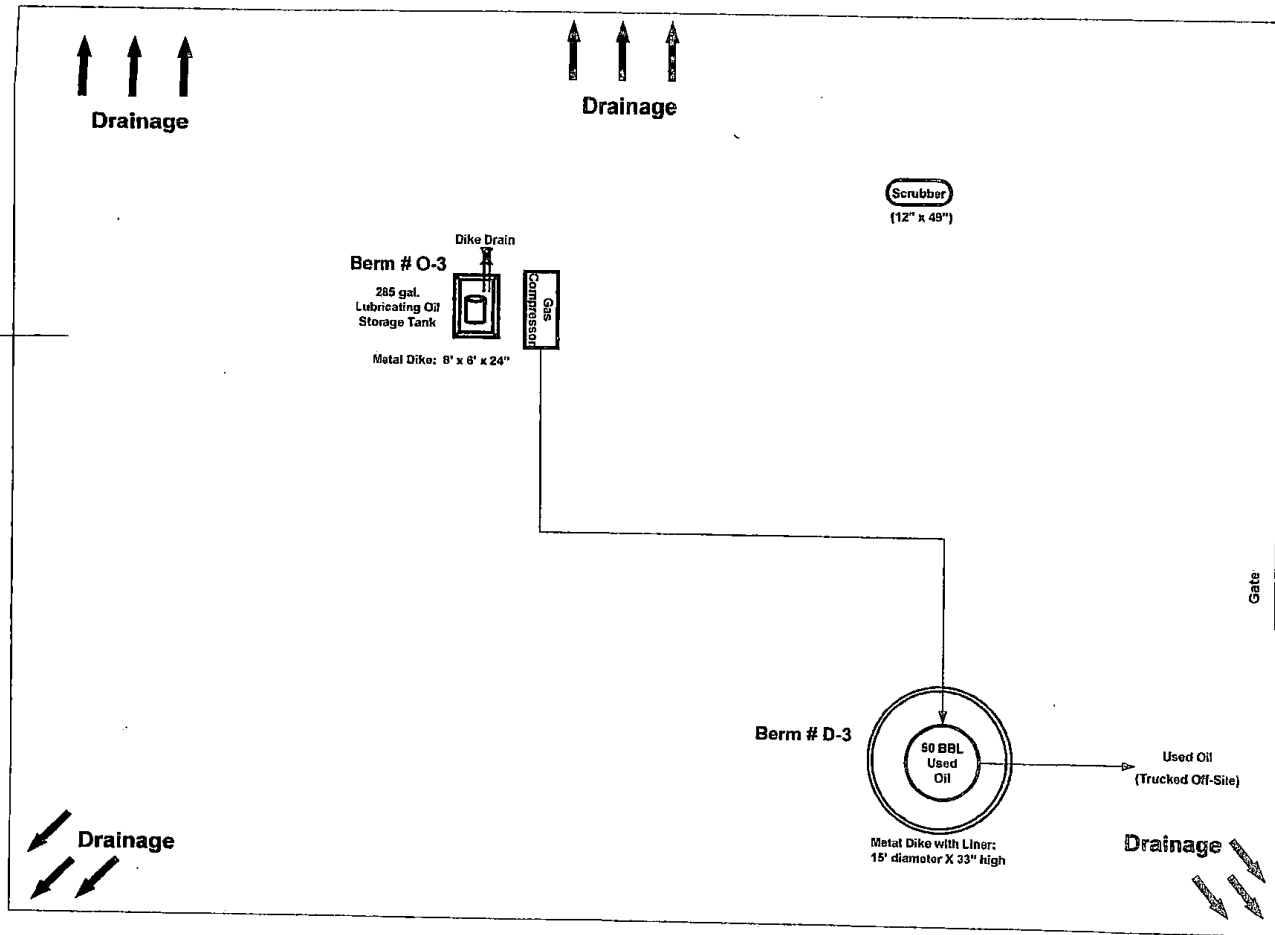
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy 2

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Cassidy 2 Tuscaloosa County Sec. 36-T18S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy 4

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	E/NE	No
Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	E/NE	Yes
Used Oil Tank (1-2100 gal)	Leaks/Overflow/Tank or Piping Rupture	2100	2,100	E/NE	Yes

Discussion:

- (1) All storage tanks are not contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Black Warrior River.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

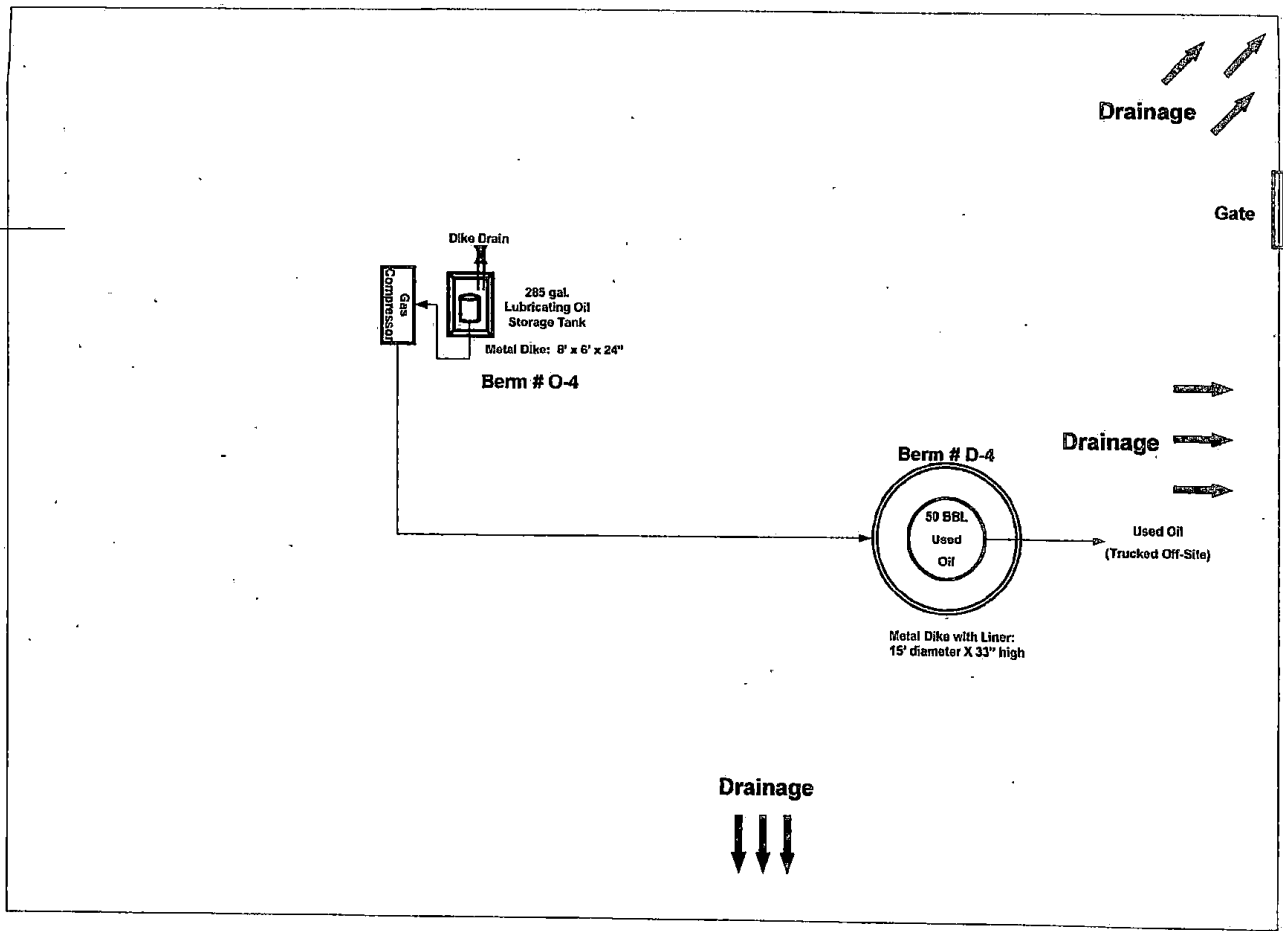
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map


Name of facility: Cassidy 4

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWG	05/01/02	Tuscaloosa, AL	Cassidy 4 Tuscaloosa County Sec. 6-T19S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/18/07	Black Warrior Basin	

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy 5

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow *</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	W & NE	No
Used Oil Tank (1 -2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	W & NE	Yes
Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	W & NE	Yes
Scrubber (12"x 48")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W & NE	No
Separator (24"x 7' 6")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W & NE	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

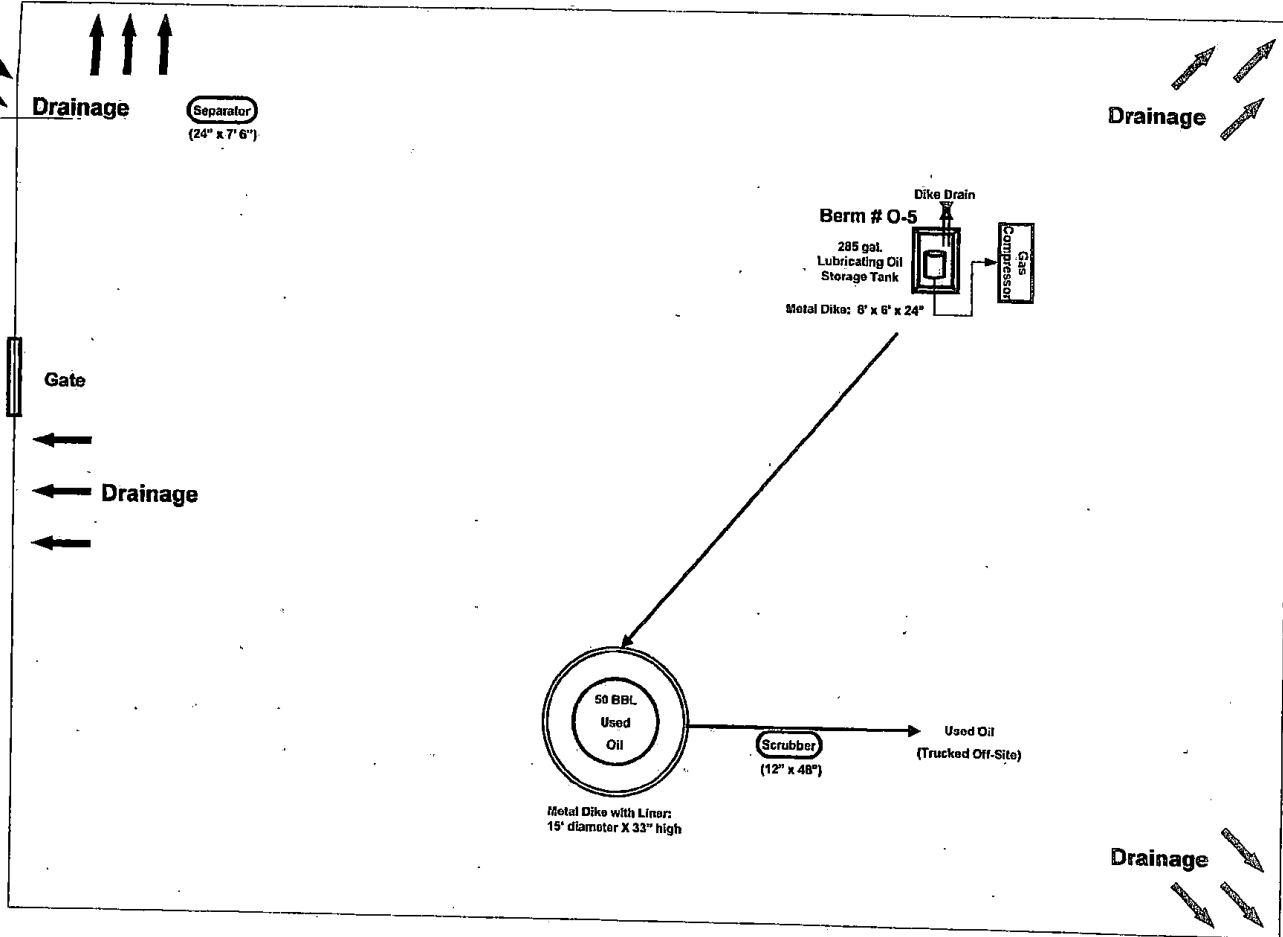
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

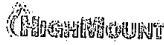
Name of facility: Cassidy 5

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	06/01/02	Tuscaloosa, AL	Cassidy 5 Tuscaloosa County Sec. 32-T18S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/23/09		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy 6

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S	No
Lubricating Oil Storage Tank (2-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	530	285	S	Yes
Lubricating Oil Storage Tank (2-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	530	285	S	Yes
Used Oil Tanks (2-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	4,200	2,100	S	Yes
Used Oil Tanks (1-1,932 gal.)	Leaks/Overflow/Tank or Piping Rupture	1,932	1,932	S	Yes
Used Oil Filters and Used Oil	Leaks/Overflow	n/a	n/a	S	Yes
Separator (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S	No
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S	No

Discussion:

- (1) All storage tanks are not contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for pumping units (Pumpers Oil) and compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

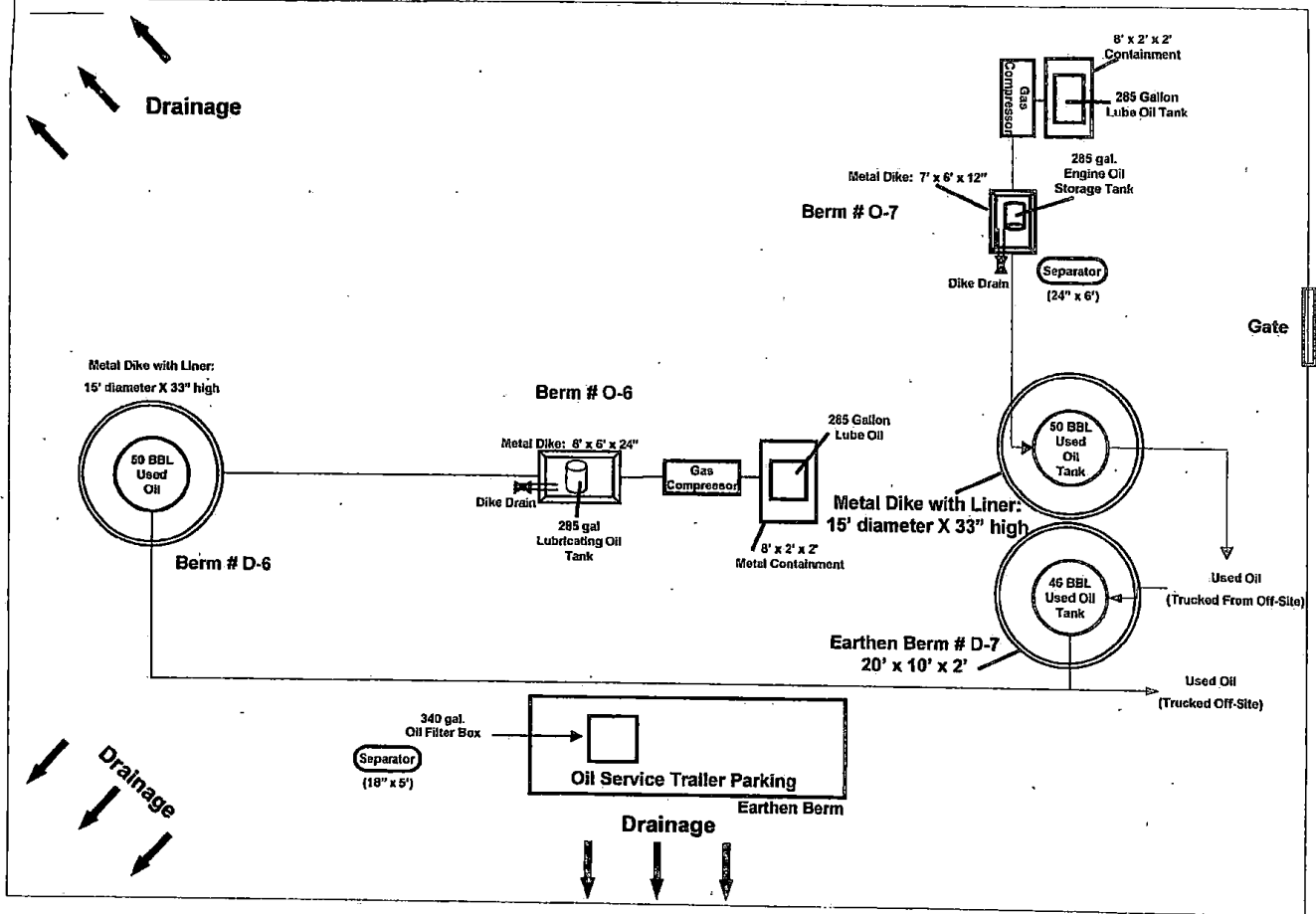
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy 6

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Cassidy 6 Tuscaloosa County Sec. 20-T18S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy 7

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	W/SW	No
Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	W/SW	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	W/SW	Yes
Separator (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W/SW	No
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W/SW	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Little Indian Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

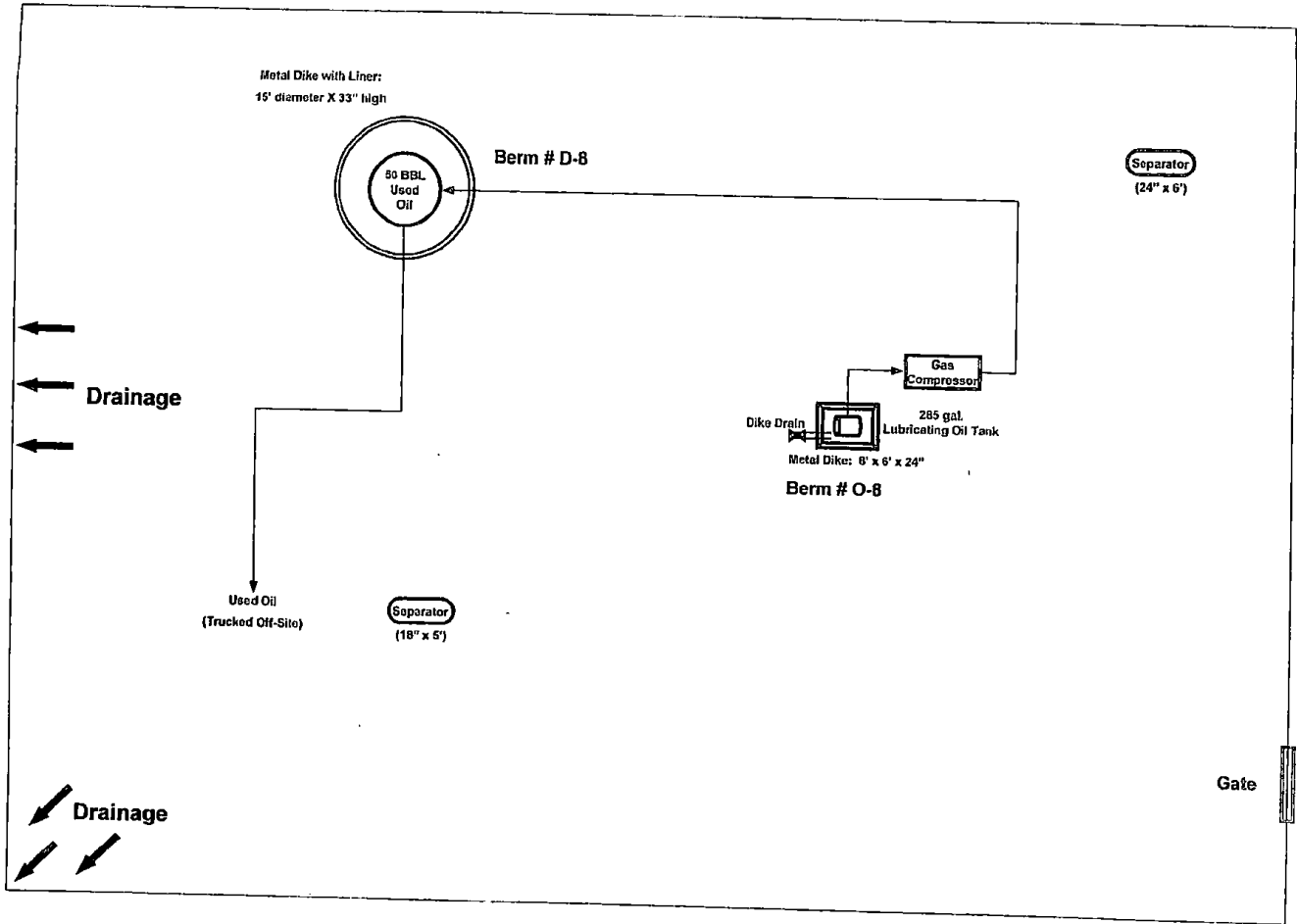
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy 7

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Cassidy 7 Tuscaloosa County Sec. 21-T18S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy Sales 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	E	No
Engine Lubricating Oil Storage Tank (2-285 gal)	Leaks/Overflow/Vessel or Piping Rupture	570	285	E	Yes
Compressor Lubricating Oil Storage Tank (2-285 gal)	Leaks/Overflow/Vessel or Piping Rupture	570	285	E	Yes
Used Oil Tank (1-8,820 gal)	Leaks/Overflow/Tank or Piping Rupture	8,820	1,260	E	Yes
Used Oil Tank (1-3,780 gal.)	Leaks/Overflow/Tank or Piping Rupture	4,200	840	E	Yes
Scrubber (30"x 10')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No
Separator (20"x 22')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No
Separator (3 - 24" x 7' 6")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No
Separator (48"x 30')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No
Triethylene Glycol Dehy Tower (3 - 48"x 30')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E	No
Triethylene Glycol Dehy Tanks (3 - 285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	855	n/a	E	Yes
Out of Service Tank (1 - 2,100 gal.)	Leaks/Overflow/Vessel or Piping Rupture	2,100	n/a	n/a	Yes

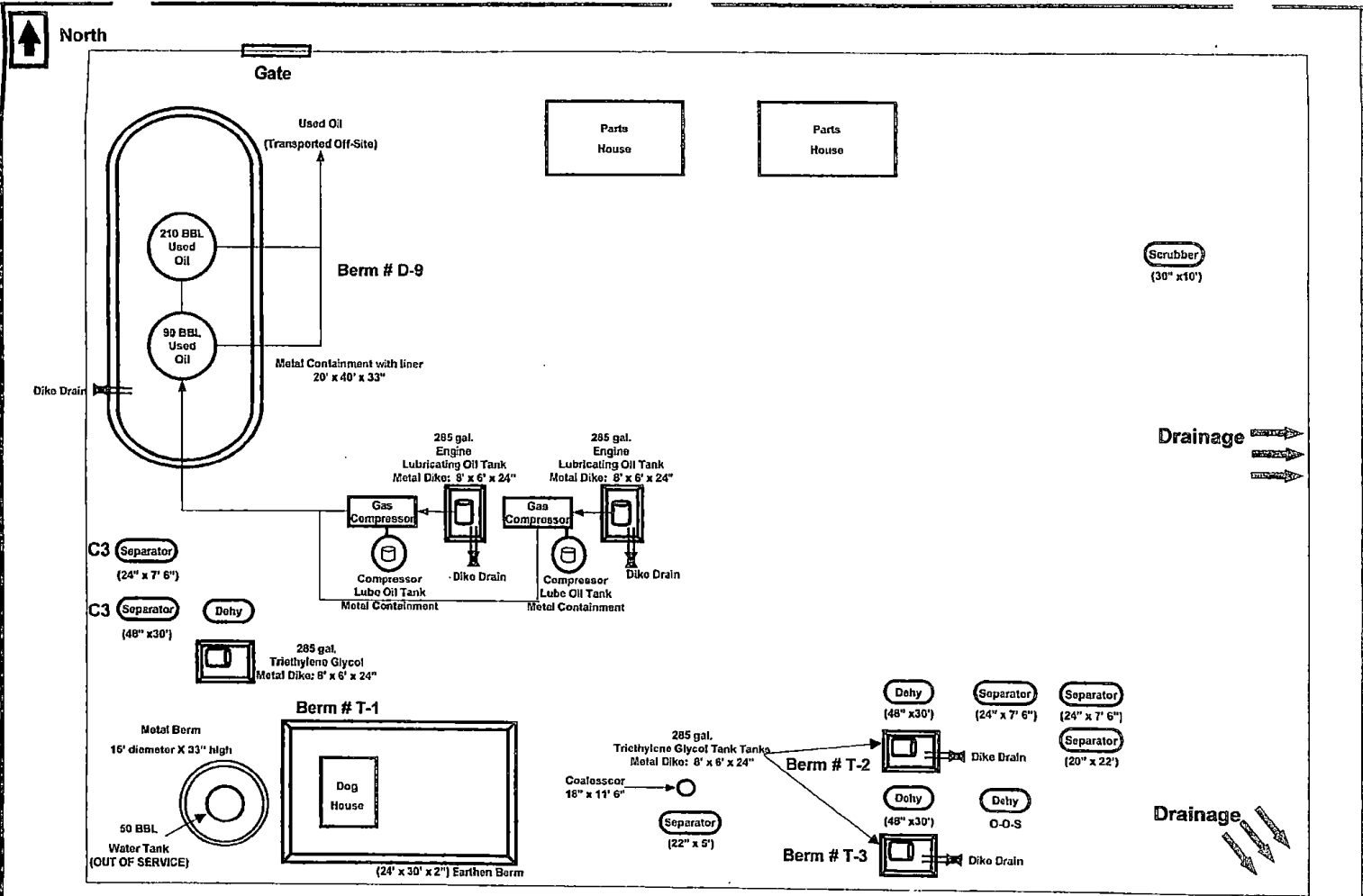
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Panther Branch.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy Sales 1

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Cassidy Sales 1 Tuscaloosa County Sec. 6-T19S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/23/09		



P A K T I

GENERAL INFORMATION

Potential Spills-Prediction and Control: Cassidy Sales 2

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	NE	No
Compressor Lubricating Oil Storage Tank (8-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	2,280	285	NE	Yes
Used Oil Tank (1-8,820 gal.)	Leaks/Overflow/Tank or Piping Rupture	8,820	8,820	NE	Yes
Used Oil Tank (1-4,200 gal.)	Leaks/Overflow/Tank or Piping Rupture	4,200	4,200	NE	Yes
Scrubber (3 - 30"x 10')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No
Triethylene Glycol Dehy Tower (2 - 24"x 30')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No
Triethylene Glycol Dehy Tower (2 - 24"x 22')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No
Triethylene Glycol Dehy Tank (3 - 265 gal.)	Leaks/Overflow/Vessel or Piping Rupture	795	265	NE	Yes

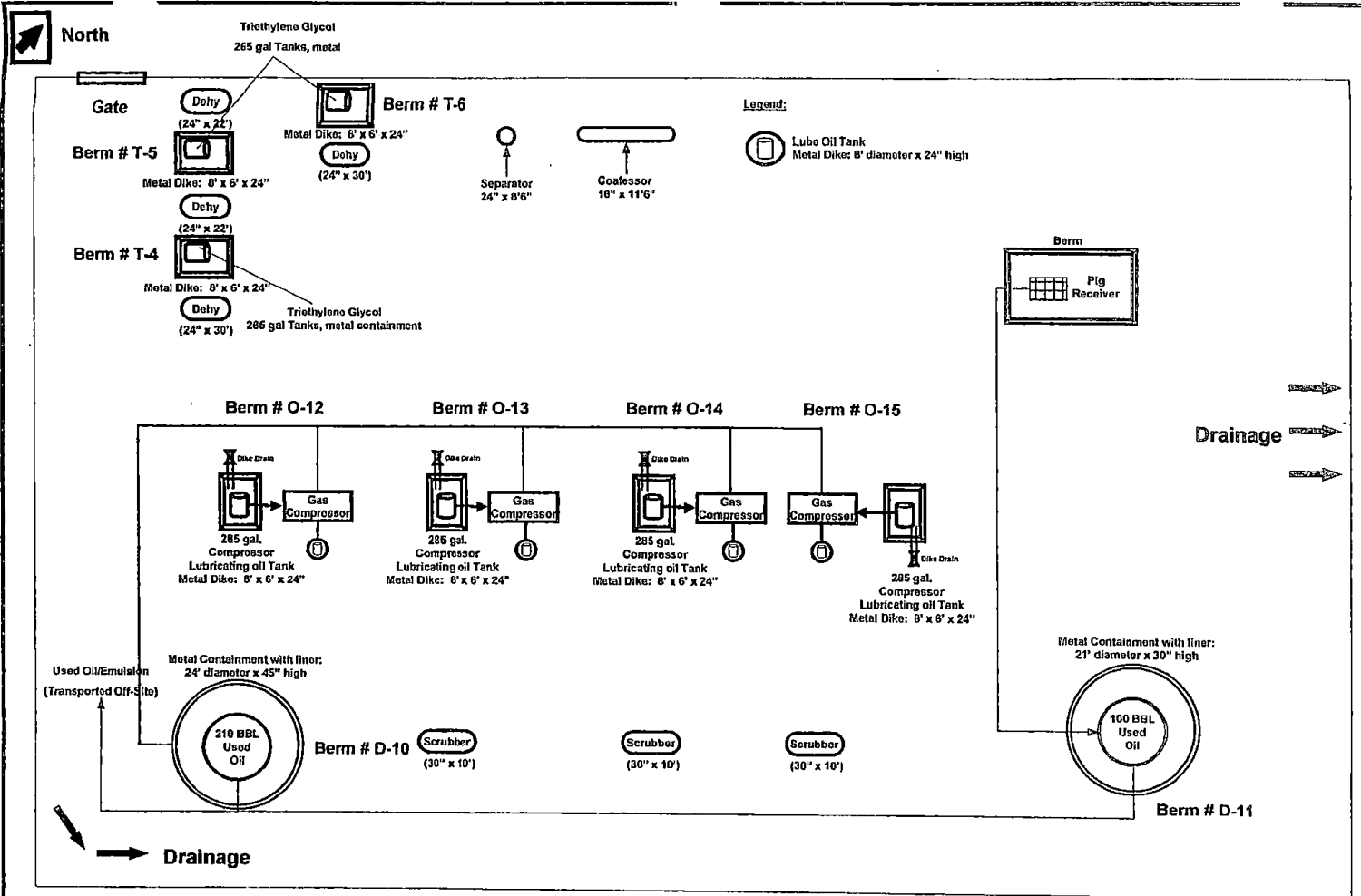
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy Sales 2

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	09/01/02	Tuscaloosa, AL	Cassidy Sales 2 Tuscaloosa County Sec. 34-T18S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/25/09		



**Part I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Chevron 6-8-144 Booster Station

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	N & SW	No
Lubricating Oil Storage Tank (1-205 gal.)	Leaks/Overflow/Vessel or Piping Rupture	265	265	N & SW	Yes
Used Oil Tank (1-2,100 gal)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	N & SW	Yes
Scrubber (12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N & SW	No

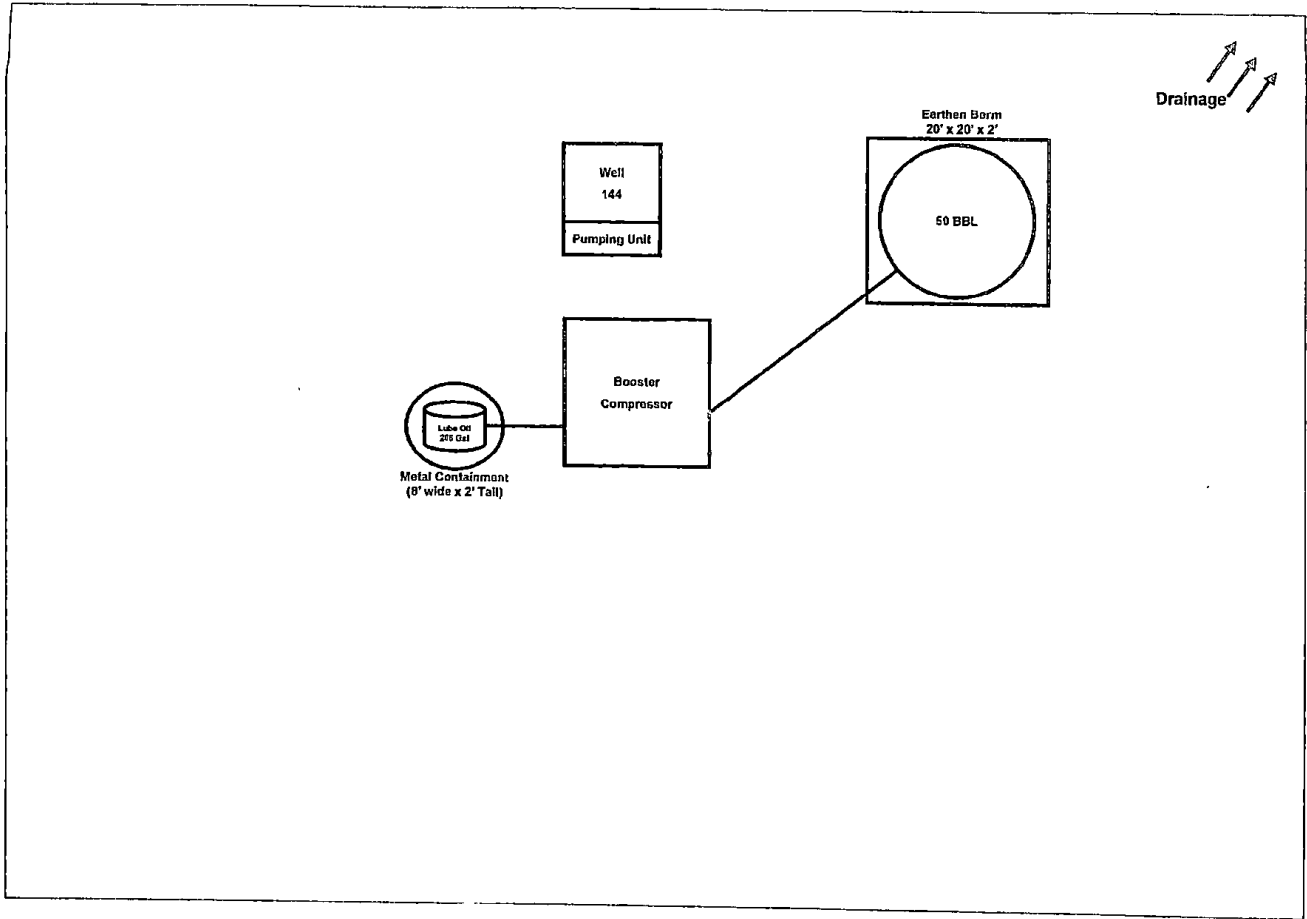
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for pumping units (Pumpers Oil) and compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Chevron 6-8-144 Booster Station **Operator of facility:** HighMount Black Warrior Basin LLC

North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Chevron 6-8-144 Booster Compressor
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/23/09		



PART I

GENERAL INFORMATION

Potential Spills-Prediction and Control: East Deerlick 1

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	NE/E/SE	No
Compressor Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	NE/E/SE	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	NE/E/SE	Yes
Scrubber (12" x 48")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE/E/SE	No
Separator (24" x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE/E/SE	No
Separator (18" x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE/E/SE	No

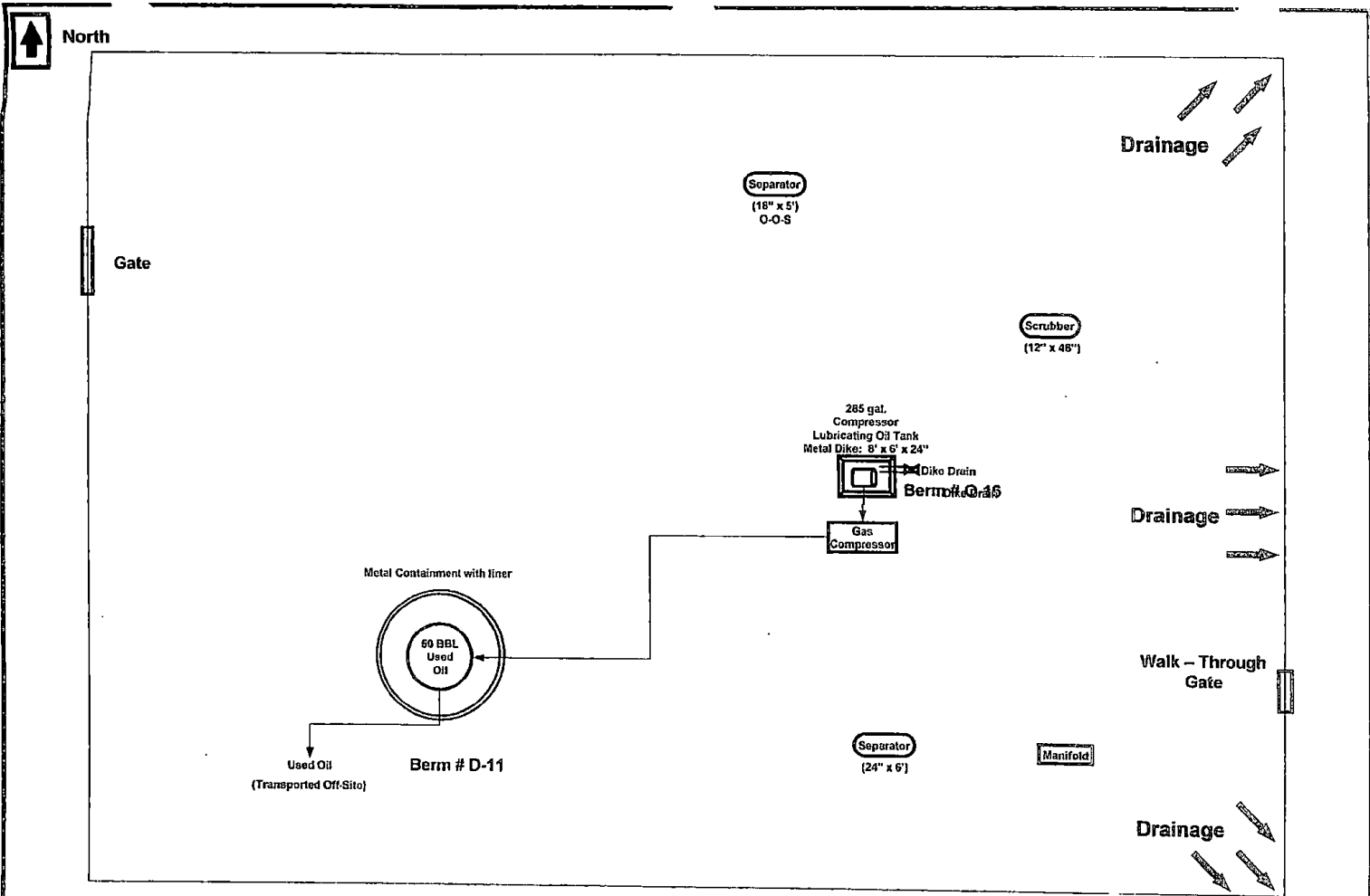
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Sexton Spring Branch.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: East Deerlick 1

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	East Deerlick 1 Tuscaloosa County Sec. 13-T20S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: GSPC 25-12 Booster Station

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	N & SW	No
Lubricating Oil Storage Tank (1-265 gal.)	Leaks/Overflow/Vessel or Piping Rupture	265	265	N & SW	Yes
Used Oil Tank (1-1,250 gal)	Leaks/Overflow/Tank or Piping Rupture	1,250	1,250	N & SW	No (See Action Item)
Separator (24" x 5')	Leaks/Overflow/Tank or Piping Rupture	n/a	n/a	N & SW	No
Separator (24" x 6')	Leaks/Overflow/Tank or Piping Rupture	n/a	n/a	N & SW	No

- (1) All storage tanks are not contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for pumping units (Pumpers Oil) and compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

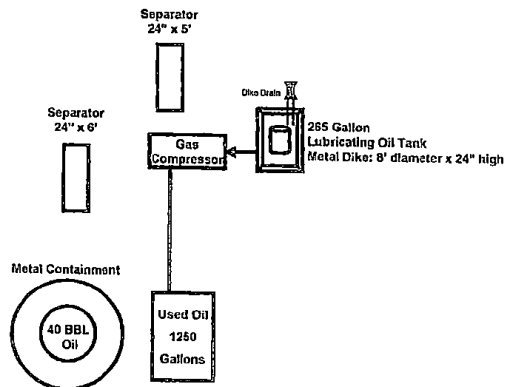
Name of facility: GSPC 25-12 Booster Station


Operator of facility: HighMount Black Warrior Basin LLC



North

GSFC 25-12
Pumping Unit



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWG	05/01/02	Tuscaloosa, AL	GSFC 25-12 Tuscaloosa County Sec. 25-T20S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/25/09		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Hassinger 18-01-190 Booster Compressor

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Used Oil (1-1,680 gal.)	Tank Rupture	1,680	1,680	S/SE	Yes
Lube Oil (1-285 gal.)	Tank Rupture	285	285	S/SE	Yes

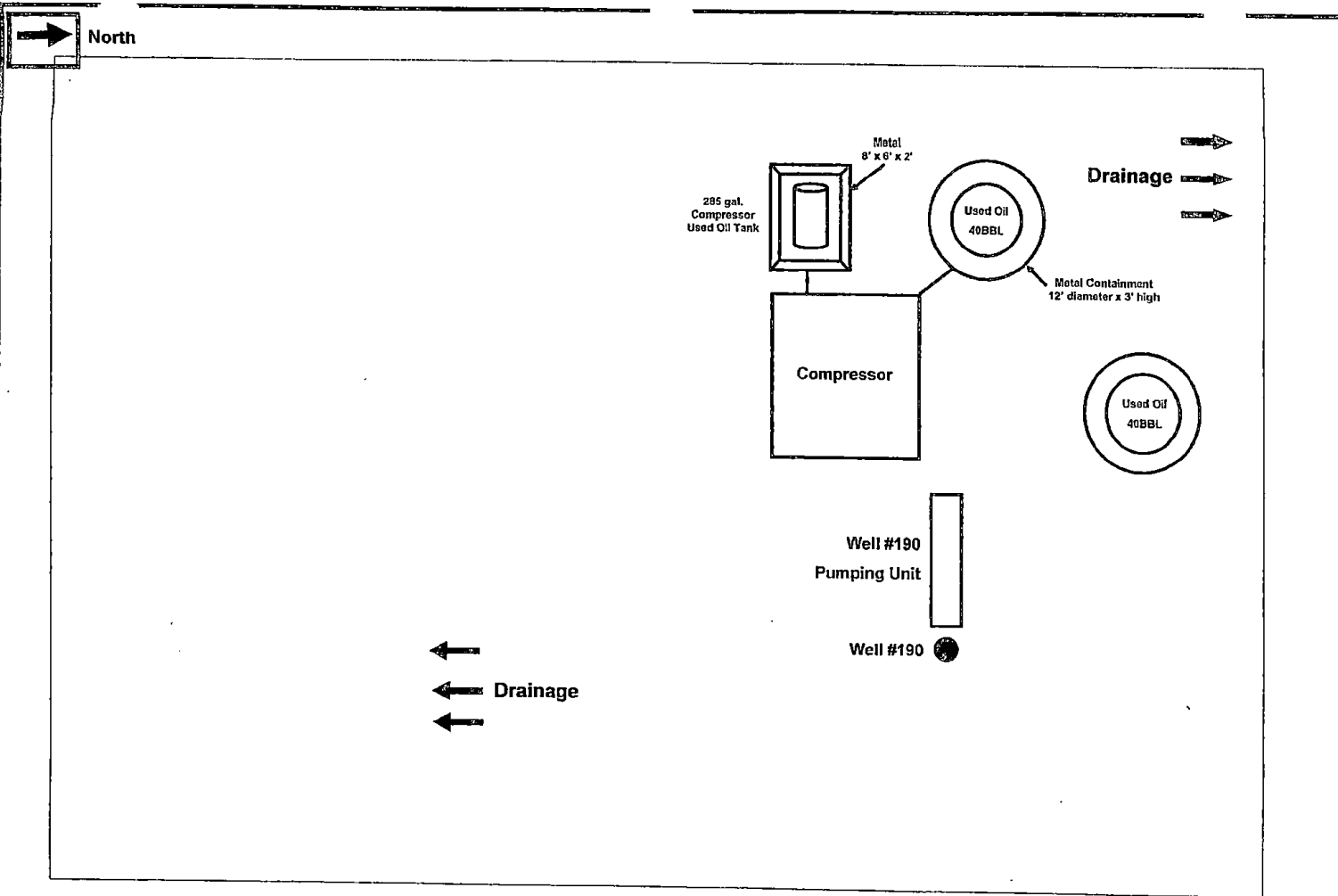
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Big Yellow.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Hassinger 18-01-190 Booster Compressor

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Hassinger 18-01-190 Booster Compressor Tuscaloosa County Sec. 18-T17S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/25/09		

F . . . T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Hassinger 18-09-169 Booster Compressor

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Used Oil (1-1680 gal.)	Tank Rupture	1,680	1,680	S/SE	Yes
Lube Oil (1-285 gal.)	Tank Rupture	285	285	S/SE	Yes

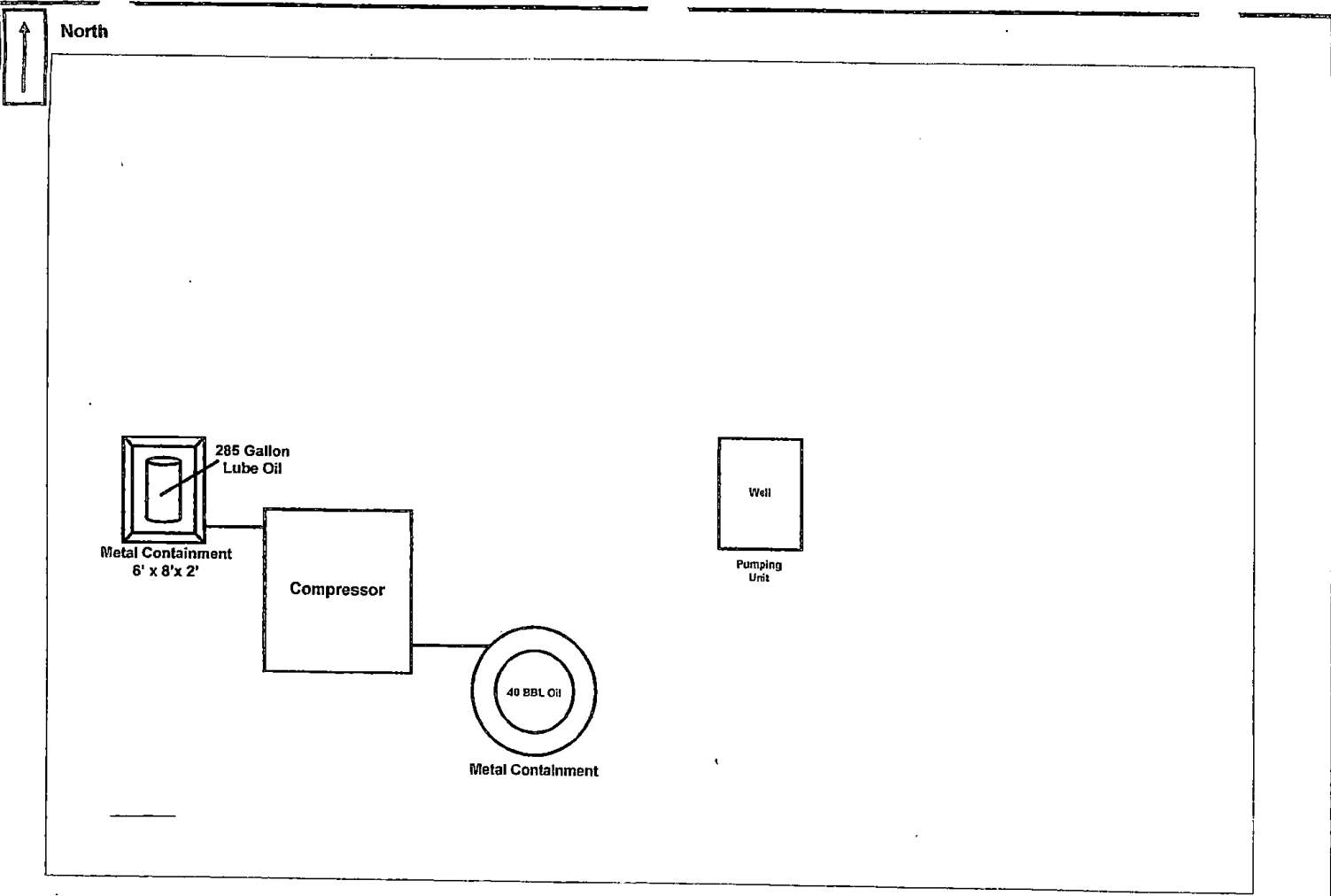
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Yellow Creek.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Hassinger 18-09-169 Booster Compressor

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Hassinger 18-9-169 Booster Station Tuscaloosa County 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/25/09		

F. T. I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Lake Nicol 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	NE	Yes
Compressor Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	NE	Yes
Used Oil Tank (1-2, 100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	NE	Yes
Scrubber (12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No
Separator (24"x 90")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NE	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

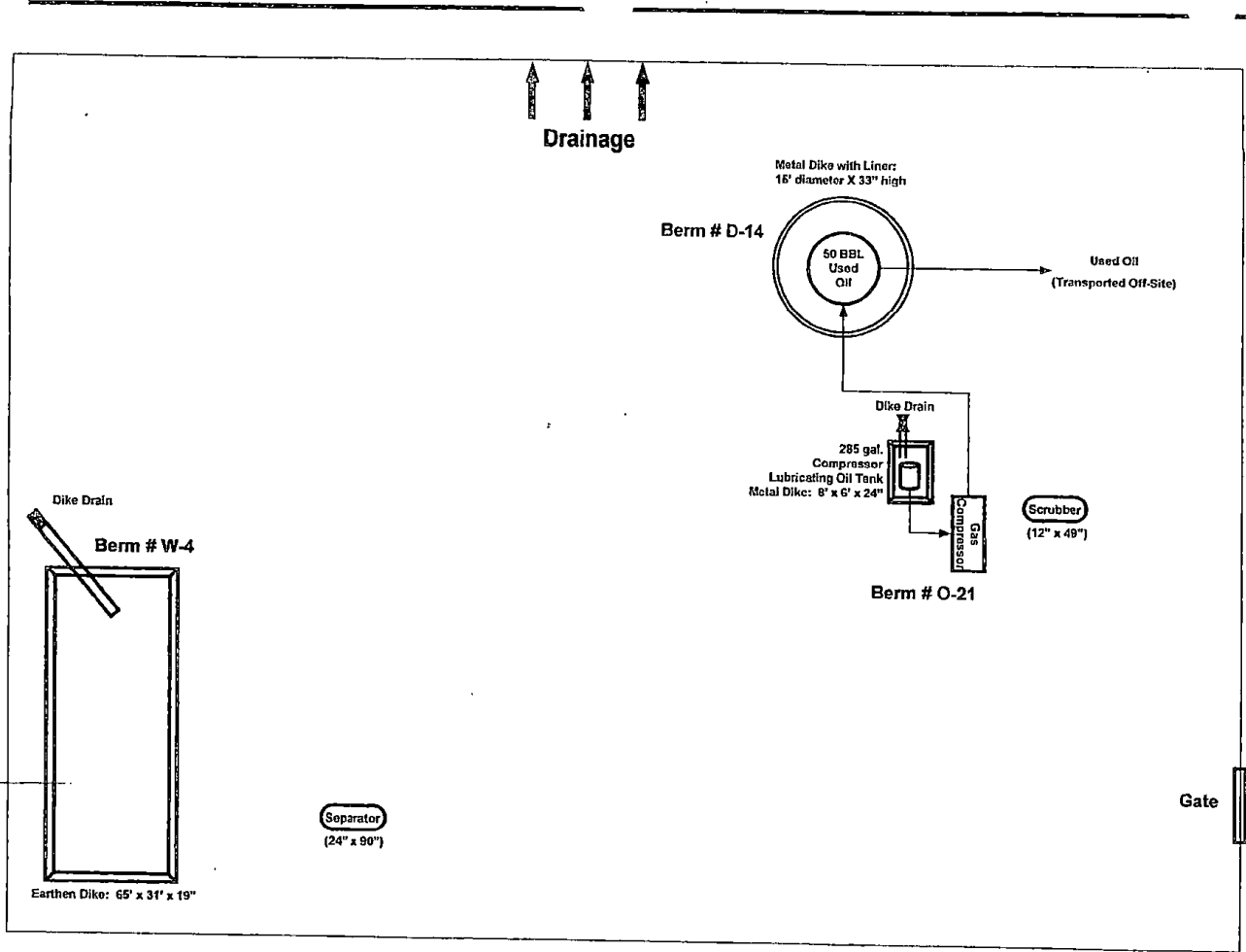
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map


Name of facility: Lake Nicol 1

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Lake Nicol 1 Tuscaloosa County Sec. 11-T20S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Moore Creek 1

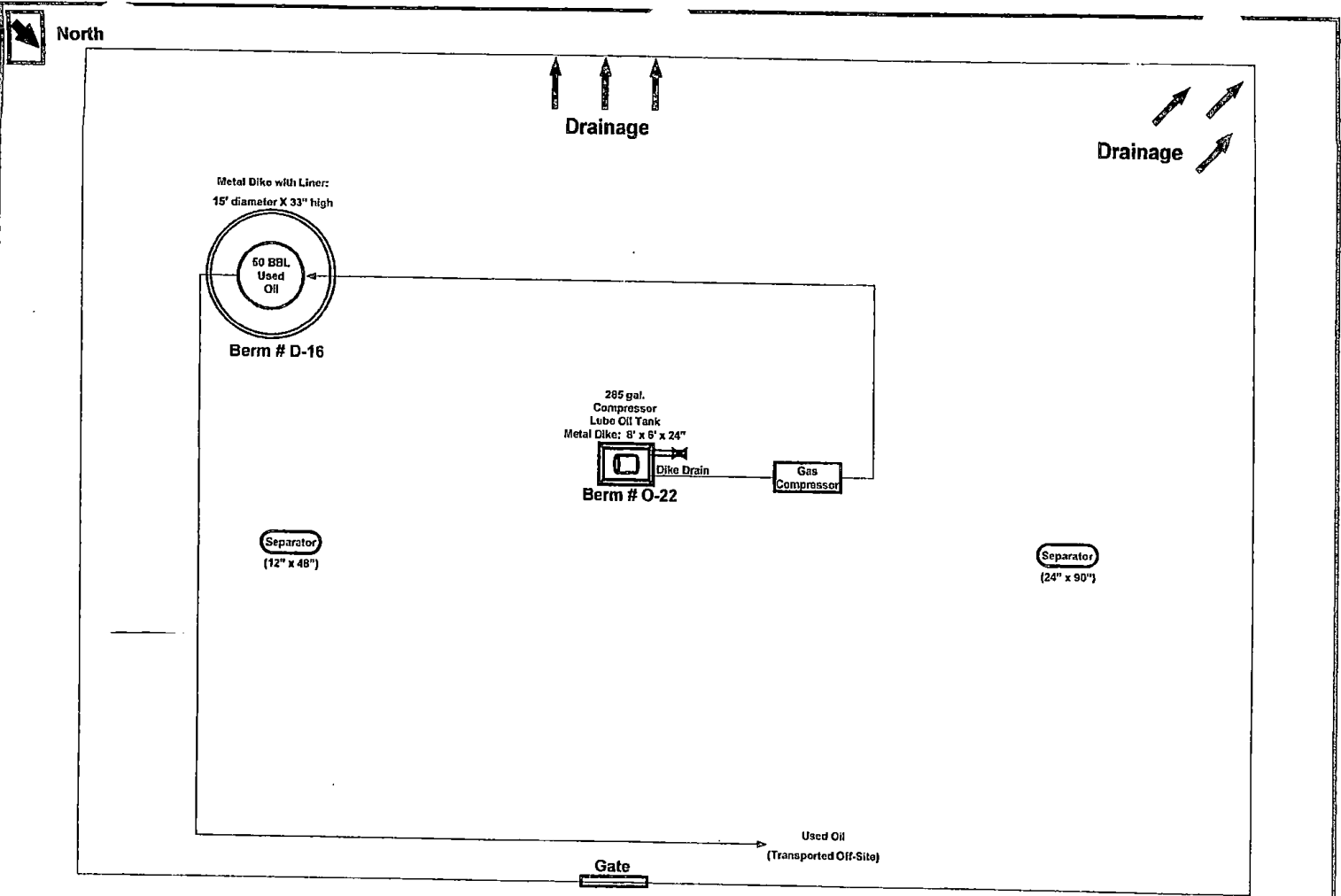
<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	E/NE	No
Compressor Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	E/NE	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	E/NE	Yes
Separator (12"x 48")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E/NE	No
Separator (24"x 90")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	E/NE	No

Discussion;

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Moore Creek 1
Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Moore Creek 1 Tuscaloosa County Sec. 35-T18S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: North Deerlick Creek 2

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	NW	No
Compressor Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	NW	Yes
Used Oil Tank (1-2,100 gal)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	NW	Yes
Scrubber (12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NW	No
Scrubber	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NW	No
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NW	No
Water Tanks (3-16,800)	Leaks/Overflow/Tank or Piping Rupture	50,400	50,400	NW	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Laurel Branch.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

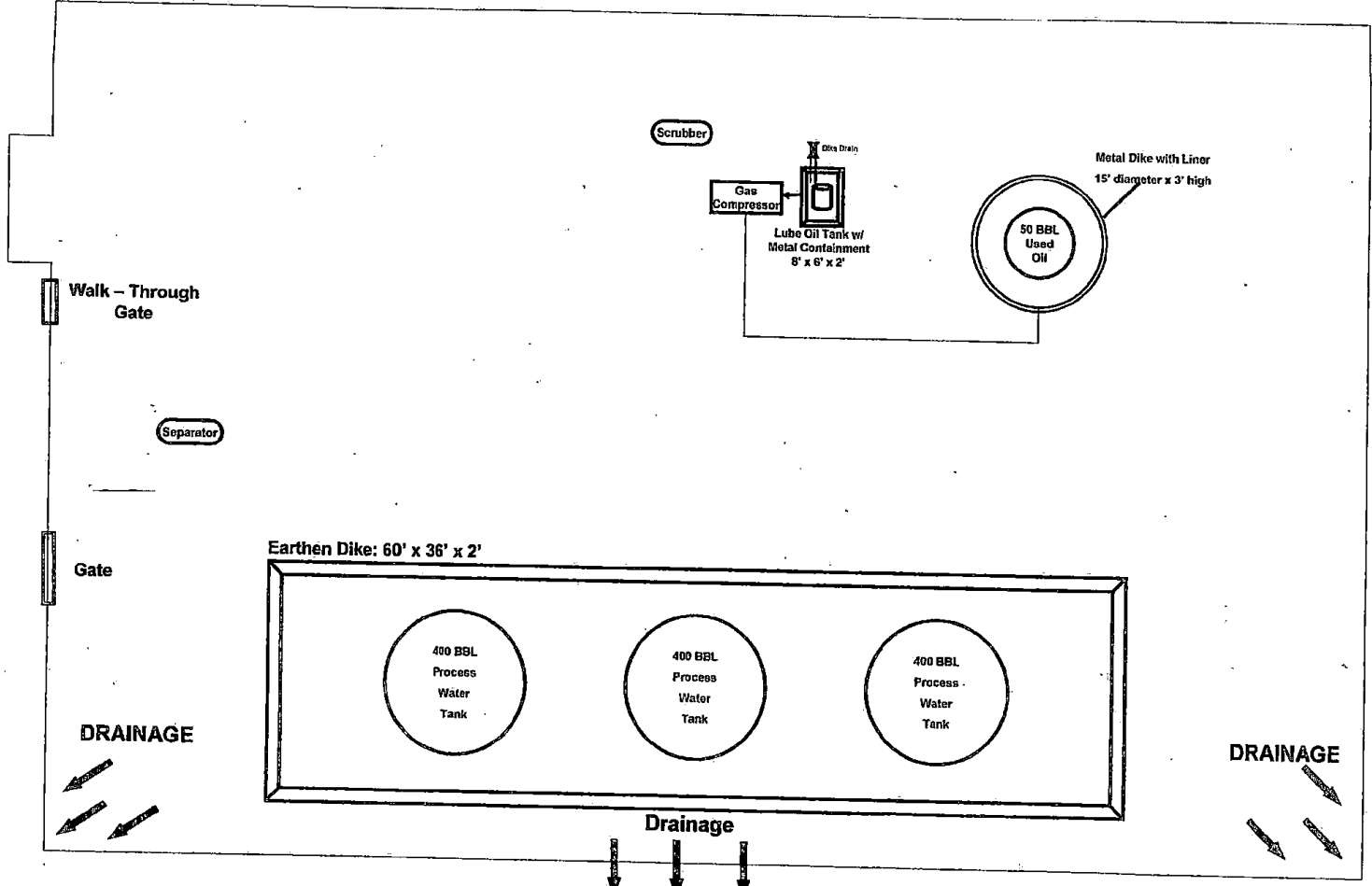
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map


Name of facility: North Deerlick Creek 2

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		North Deerlick Creek 2 Tuscaloosa County Sec. 19-T185-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: North Yellow Creek 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	SE & NW	No
Compressor Lubricating Oil Storage Tank (2-280 gal.)	Leaks/Overflow/Vessel or Piping Rupture	560	280	SE & NW	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	SE & NW	Yes
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	SE & NW	No
Separator (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	SE & NW	No

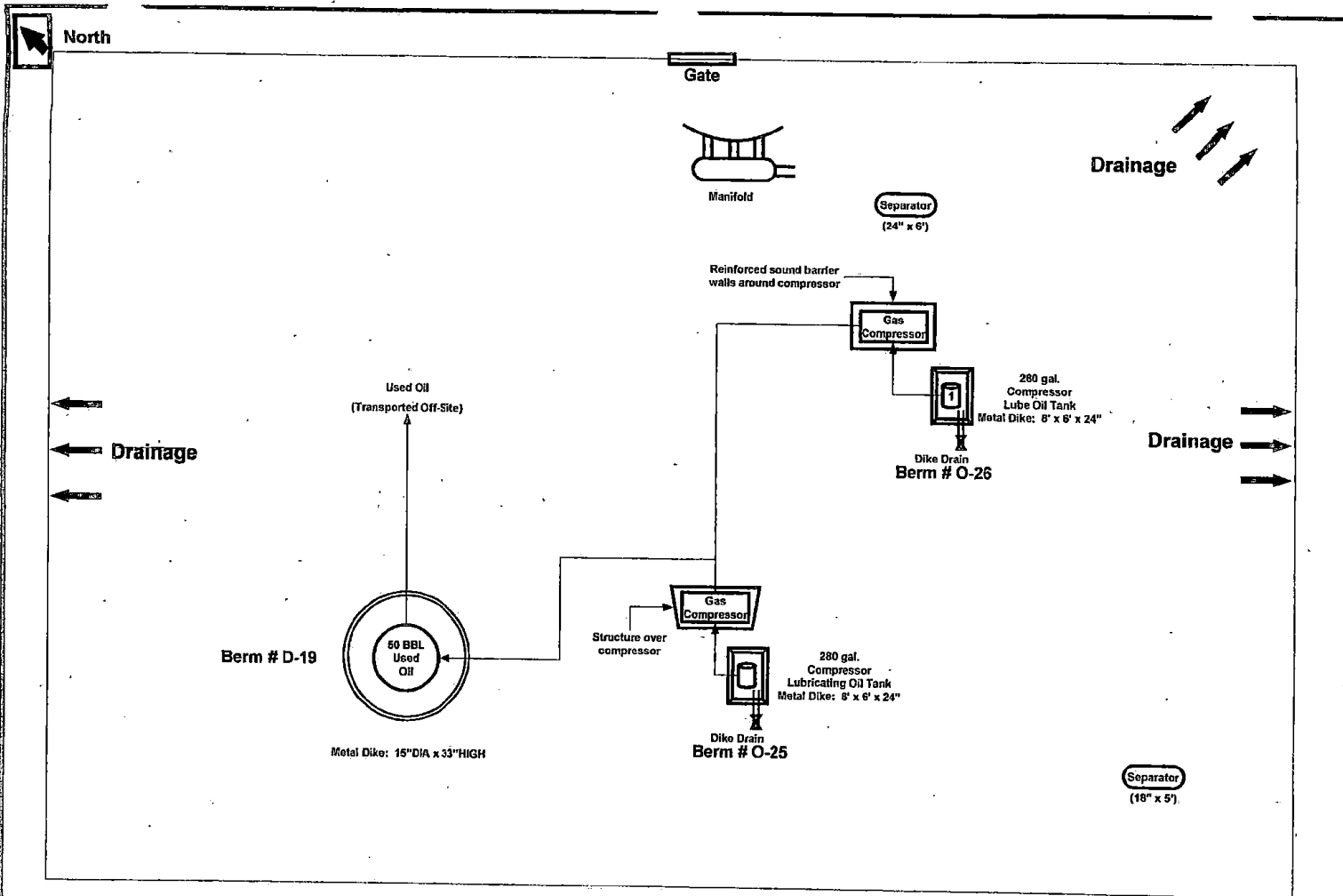
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for pumping units (Pumpers Oil) and compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Wyatt Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: North Yellow Creek 1

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	North Yellow Creek 1 Tuscaloosa County Sec. 8-T18S-R6W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/20/09		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: South Deerlick Creek Compressor Station

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	N/E	No
Compressor Oil Storage Tank (2-265 gal.)	Leaks/Overflow/Vessel or Piping Rupture	530	265	N/E	Yes
Used Oil Tank (1-4,200 gal.)	Leaks/Overflow/Vessel or Piping Rupture	4,200	4,200	N/E	Yes
Scrubber (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N/E	No
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N/E	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Cypress Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

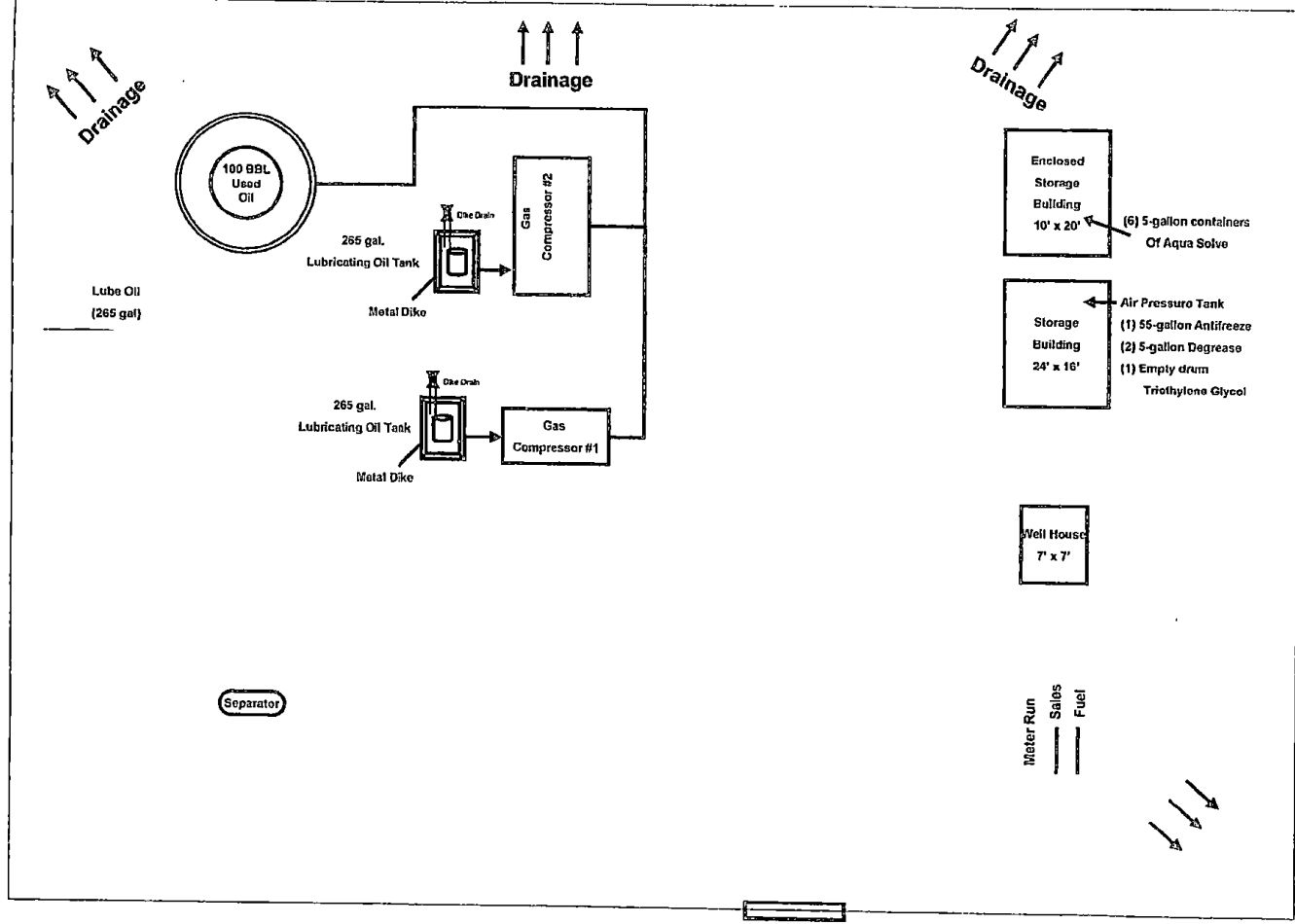
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: South Deerlick Creek Compressor Station

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	Drawing Not to Scale	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL		
2	SPCC Drawing, Not to Scale	TJA	02/25/09	Black Warrior Basin	South Deerlick Compressor Station Tuscaloosa County	

PART I
GENERAL INFORMATION

Potential Spills-Prediction and Control: South Deerlick Creek Sales Station

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S	No
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	S	Yes
Triethylene Glycol Dehy Tower	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S	Yes
Triethylene Glycol Dehy Tank (1 - 90 gal.)	Leaks/Overflow/Vessel or Piping Rupture	90	90	S	Yes
Triethylene Glycol Dehy Tank (1 - 110 gal.)	Leaks/Overflow/Vessel or Piping Rupture	110	110	S	Yes
Separator (24" x 7'6")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S	No
Separator (24" x 12')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S	No

Discussion:

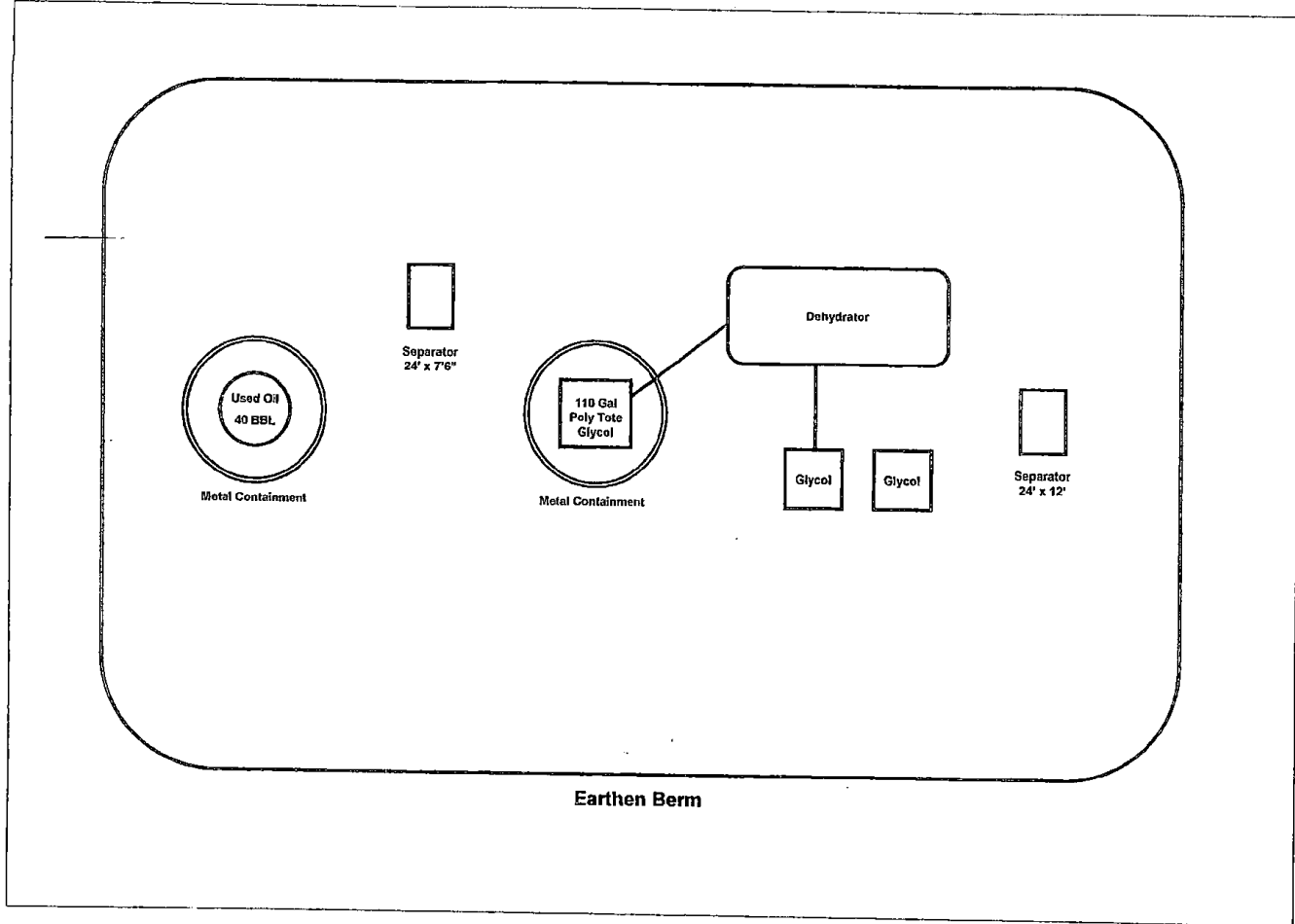
- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Black Warrior River.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.


* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: South Deerlick Creek Sales Station
Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	Drawing Not to Scale	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL	South Deerlick Creek Sales Station	
2	SPCC Drawing, Not to Scale	TJA	02/25/09	Black Warrior Basin		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Warrior Ridge 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Water Tanks (1-2,100 gal. Used Oil) (1-165 gal. Lubricating Oil)	Leaks/Overflow Tank or Piping Rupture	2,100	n/a	S/SW	Yes
Scrubber (12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	165	n/a	S/SW	No
Separator (24"x90")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S/SW	No
Dehydrator	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S/SW	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Black Warrior River.

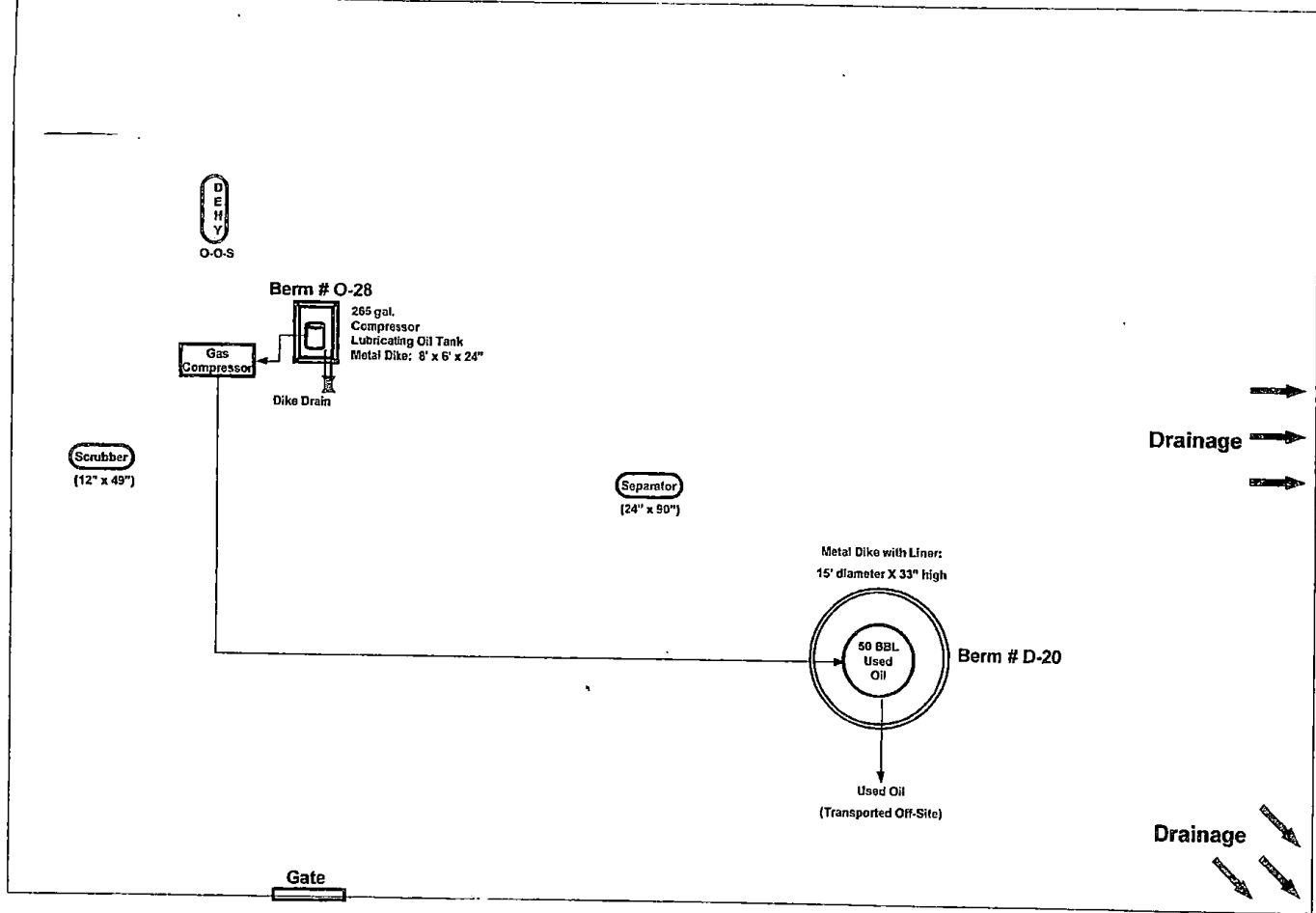
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Warrior Ridge 1

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	06/01/02	Tuscaloosa, AL	Warrior Ridge 1 Tuscaloosa County Sec. 25-T19S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/18/07	Black Warrior Basin	



**Part I
GENERAL INFORMATION**

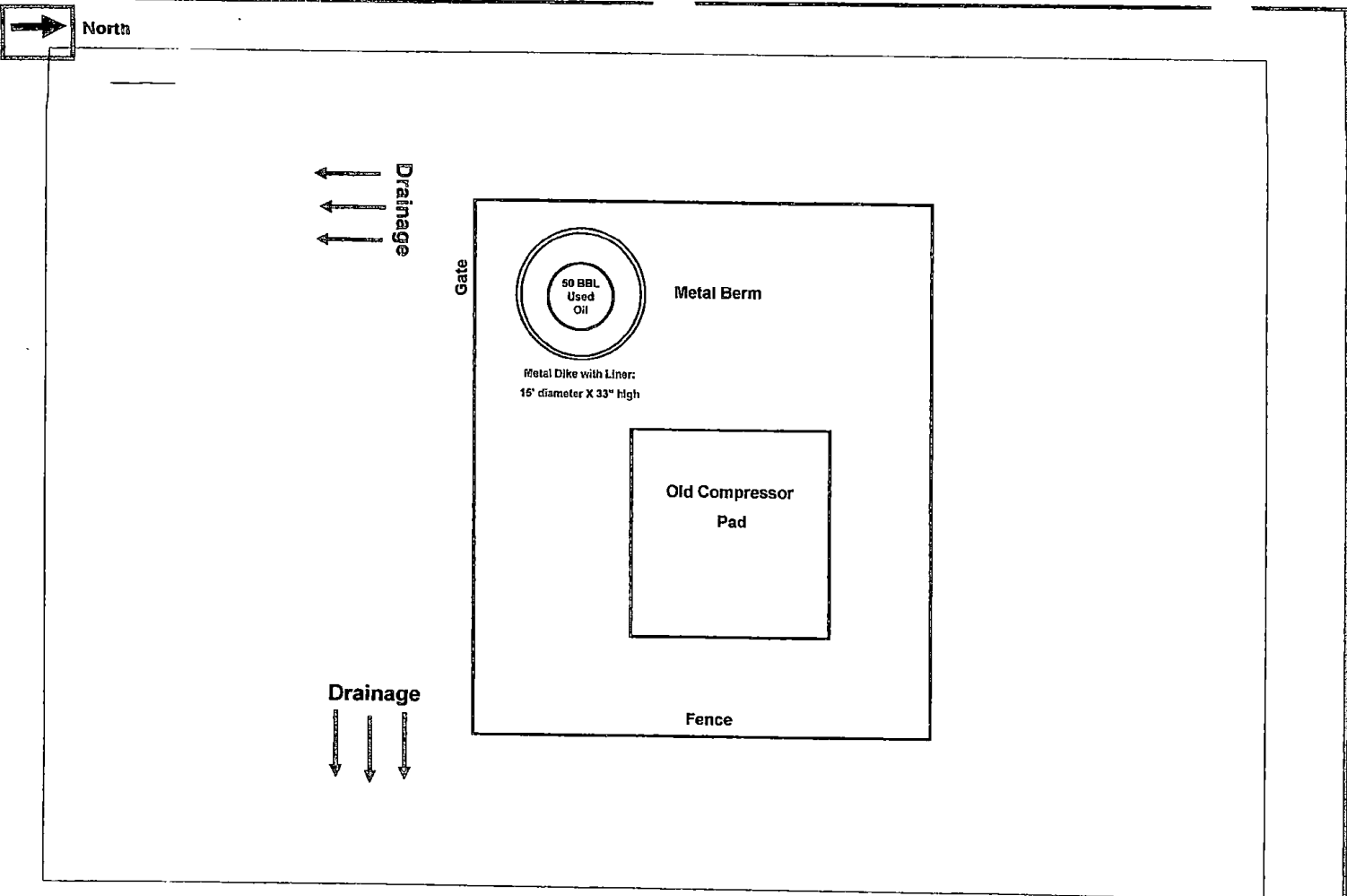
Potential Spills-Prediction and Control: Warrior Ridge 2


<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines(see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Water Tanks (1-2,100 gal. Used Oil)	Leaks/Overflow Tank or Piping Rupture	2,100	2,100	S/SW	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Warrior Ridge 2 Tuscaloosa County Sec. 25-T19S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/25/08		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Watermelon Road

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal.)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	NW	No
Compressor Lubricating Oil Storage Tank (1-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	NW	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	NW	Yes
Scrubber (24"x 90")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NW	No
Scrubber (12"x 49")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	NW	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Watermelon Road

Operator of facility:HighMount Black Warrior BasinLLC



North



Drainage

Gate

Scrubber
(24" x 90")

285 gal.
Compressor
Lubricating Oil Tank
Metal Dike: 8' x 6' x 24"

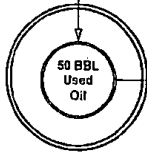


Dike Drain

Berm # O-29

Gas
Compressor

Scrubber
(12" x 49")



Berm # D-21

Metal Dike with Liner:
15' diameter X 33" high

Used Oil
(Transported Off-Site)

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Watermelon Road Tuscaloosa County Sec. 11-T19S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	



PART I

GENERAL INFORMATION

Potential Spills-Prediction and Control: West Warrior Ridge 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Weilhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	W	No
Compressor Lubricating Oil Storage Tanks (2-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	570	280	W	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	W	Yes
Scrubber (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W	No
Scrubber (2-12.75"x 48")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W	No
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W	No

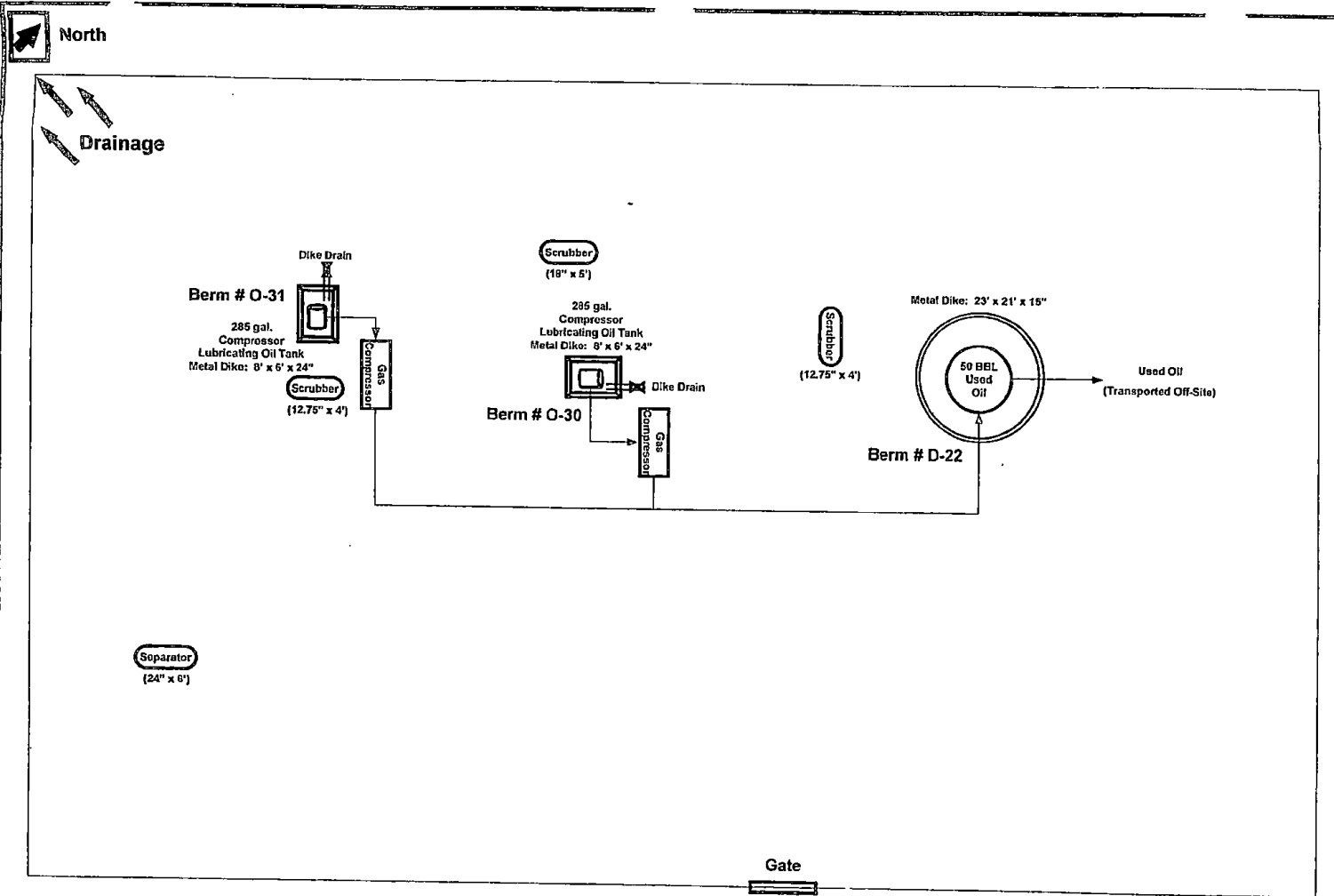
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient free-board. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for pumping units (Pumpers Oil) and compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: West Warrior Ridge 1

Operator of facility: HighMount Black Warrior BasinLLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	West Warrior Ridge 1 Tuscaloosa County Sec. 23-T19S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	

PART I
GENERAL INFORMATION

Potential Spills-Prediction and Control: West Yellow Creek 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	No
Compressor Lubricating Oil Storage Tanks (1-265 gal.)	Leaks/Overflow/Vessel or Piping Rupture	265	265	S/SW	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	S/SW	Yes
Separator (2-24"x 90")	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S/SW	No
Water Tanks (2-16,800)	Leaks/Overflow/Vessel or Piping Rupture	16,800 each	16,800	S/SW	Yes

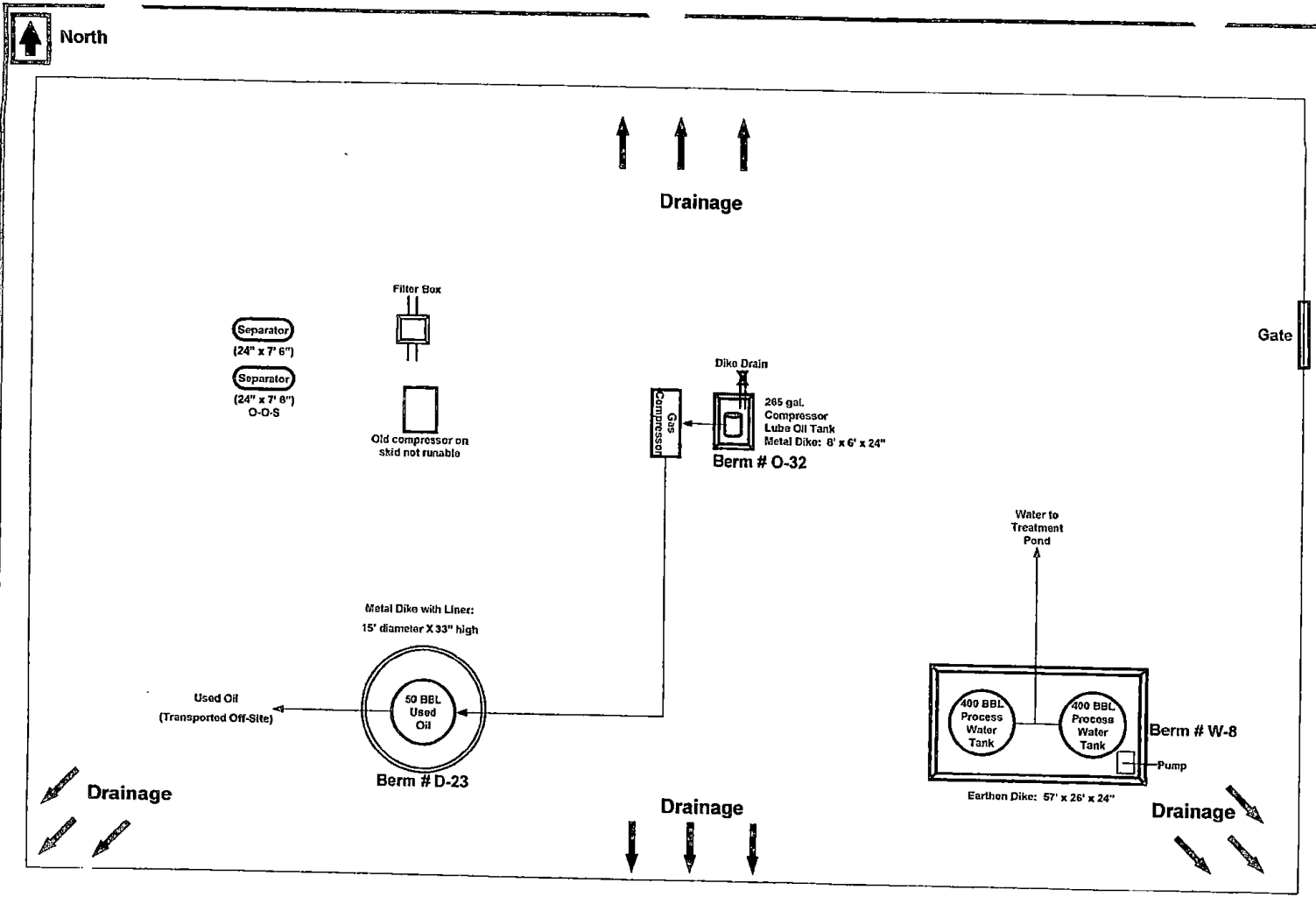
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Little Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: West Yellow Creek 1

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	West Yellow Creek 1 Tuscaloosa County Sec. 19-T18S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07		
3	SPCC Drawing, Not to Scale	TJA	02/20/09	Black Warrior Basin	

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Whitson Compressor Station

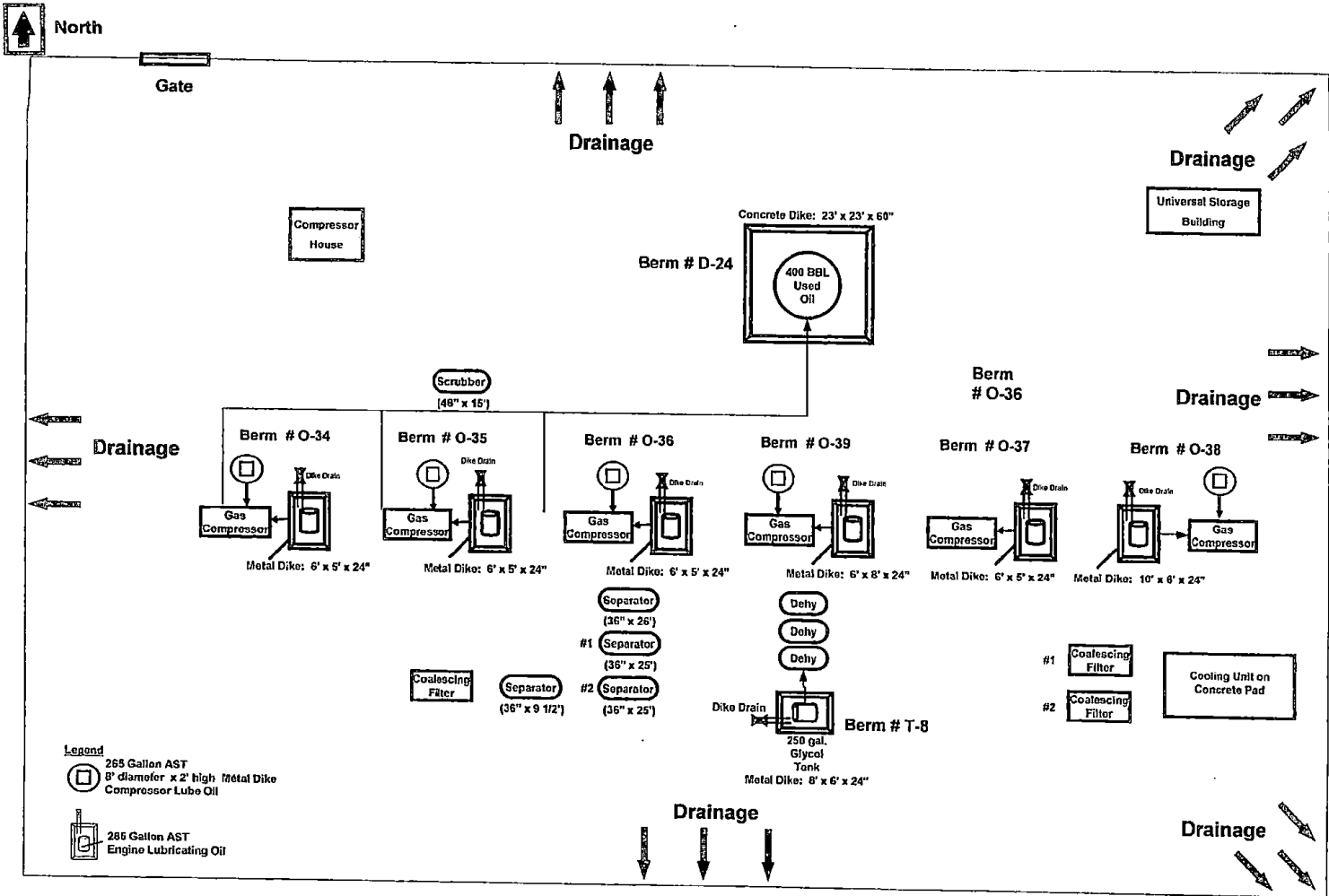
<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	N-E-S	No
Compressor Lubricating Oil Storage Tank (6-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	1,710	285	N-E-S	Yes
Engine Lubricating Oil Storage Tank (6-265 gal.)	Leaks/Overflow/Vessel or Piping Rupture	1,590	500	N-E-S	Yes
TEG Storage Tank (1-250 gal.)	Leaks/Overflow/Vessel or Piping Rupture	250	n/a	N-E-S	Yes
Used Oil Tank (1-16,800 gal.)	Leaks/Overflow/Tank or Piping Rupture	16,800	16,800	N-E-S	Yes
Inlet Scrubber (48"x 15')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N-E-S	No
Separator (2-36"x 25')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N-E-S	No
Coalescing Filter (2)	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N-E-S	No
Triethylene Glycol Dehy Tower (2)	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	N-E-S	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading- Oil used for compressors and TEG is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of McDuff Spring Branch.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Whitson Compressor Station **Operator of facility:** HighMount Black Warrior Basin LLC



No.	Revision	By	Date
1	SPCC Drawing, Not to Scale	MWC	05/01/02
		BD	02/15/05
		WJM	02/20/06
		TJA	02/16/07

Not used here in this drawing
in 2/2/05

SPCC Plan

Whitson Compressor Station
Tuscaloosa County
Sec. 35-T17S-R9W

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: West Whitson Compressor Station

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S-E-W	No
Compressor Lubricating Oil Storage Tank (2-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	285	285	S-E-W	Yes
Engine Lubricating Oil Storage Tank (2-285 gal.)	Leaks/Overflow/Vessel or Piping Rupture	255	255	S-E-W	Yes
Used Oil Tank (1-5,880 gal.)	Leaks/Overflow/Tank or Piping Rupture	5,880	5,880	S-E-W	Yes
Inlet Scrubber	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S-E-W	No
Separator (2)	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S-E-W	No
Triethylene Glycol Dehy Tower (2)	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S-E-W	No

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading- Oil used for compressors and TEG is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Little Creek and Cripple Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

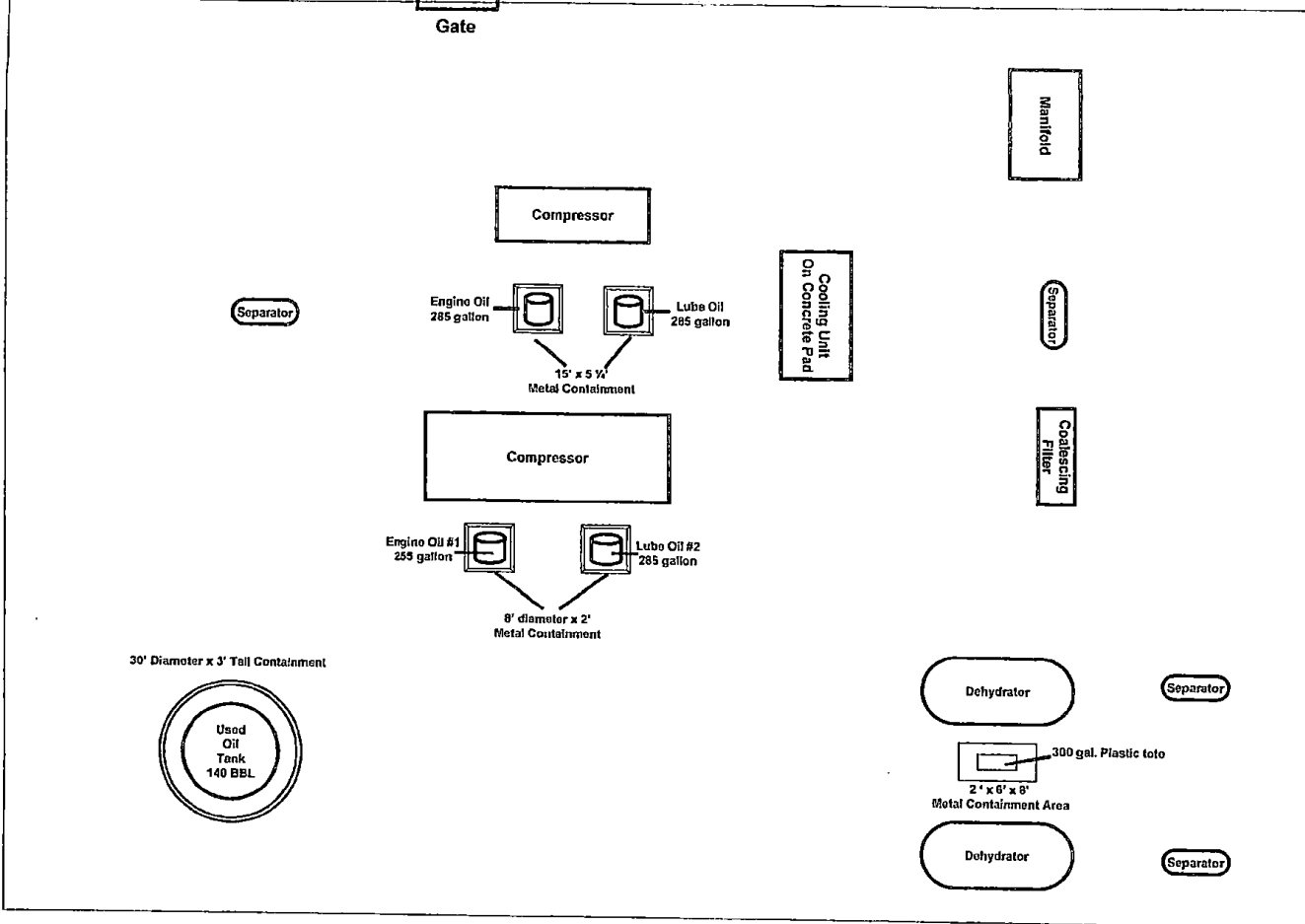
Name of facility: West Whitson Compressor Station



North



Gate



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	Drawing Not to Scale	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL	West Whitson Facility Compressor	
2	SPCC Drawing, Not to Scale	TJA	02/23/08	Black Warrior Basin		
3	SPCC Drawing, Not to Scale	TJA	02/23/09			

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Yellow Creek 1

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	W/SW	No
Compressor Oil Storage Tank (1-265 gal.)	Leaks/Overflow/Vessel or Piping Rupture	265	265	W/SW	Yes
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Vessel or Piping Rupture	2,100	2,100	W/SW	Yes
Scrubber (18"x 5')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W/SW	No
Separator (24"x 6')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	W/SW	No

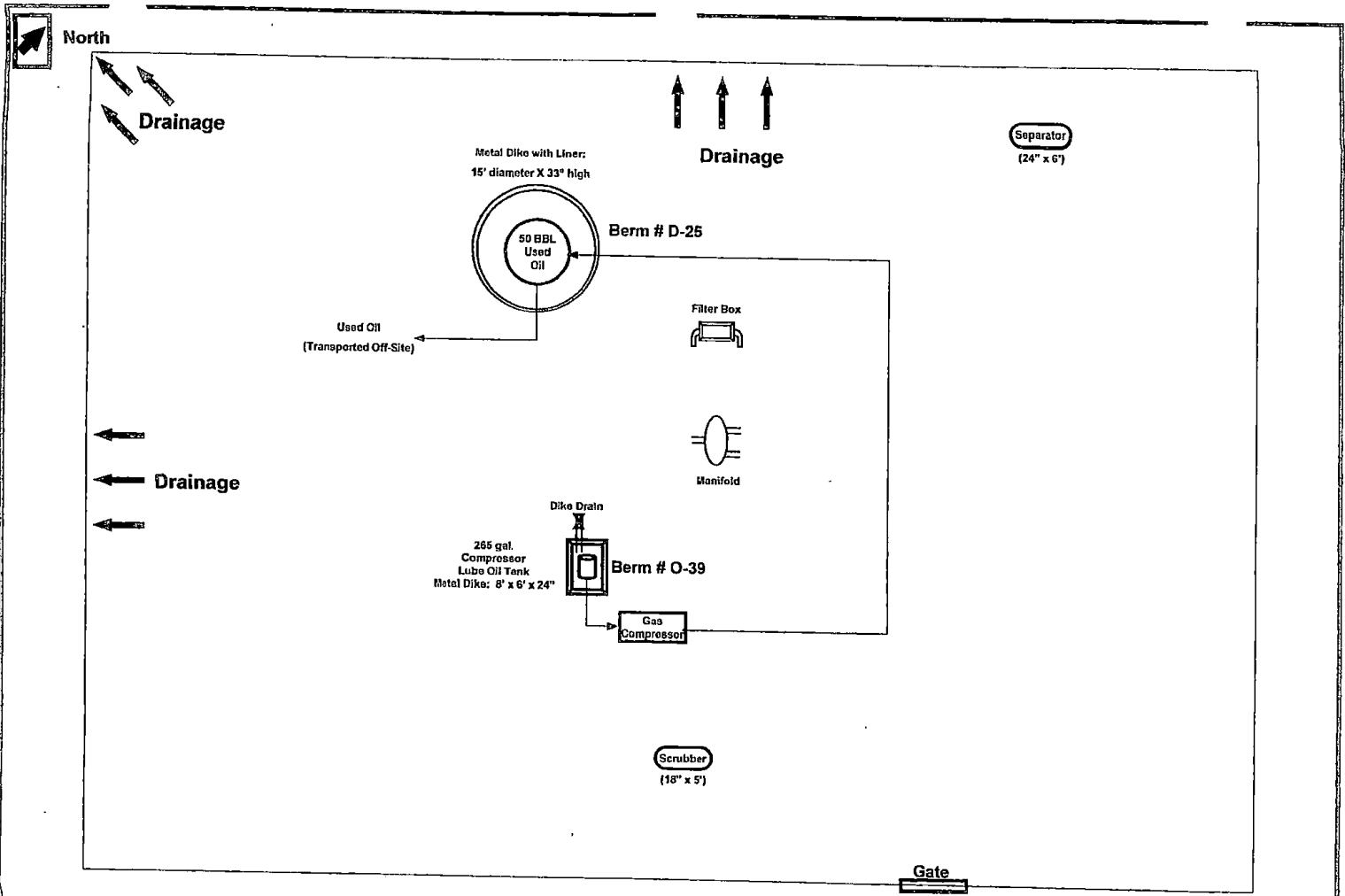
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Big Yellow Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Yellow Creek 1

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Yellow Creek 1 Tuscaloosa County Sec. 16-T18S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		
3	SPCC Drawing, Not to Scale	TJA	02/20/09			

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Field Office

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal.)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Diesel Storage Tank (1-1200 gal.)	Leaks/Overflow/Vessel or Piping Rupture	1,200	n/a	S	Yes
Used Oil Tank (1-450 gal.)	Leaks/Overflow/Tank or Piping Rupture	450	1	S	Yes
Chemical Shed	n/a	50 # bag	n/a	S	No (see action items)
4-Wheeler Shed	n/a		n/a		
Drum Storage Concrete Berm	Leaks/Overflow/Vessel or Piping Rupture	55 gal. each	n/a	S	Yes
Muratic Acid					
Antifreeze					
Metal Cleaner					

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Motor Oil, gasoline and diesel are transported to the facility via tank truck. Chemical/Oil drums are transported to the facility via truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Cypress Creek.

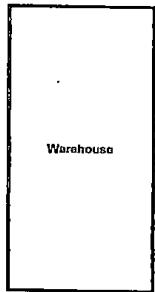
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Field Office



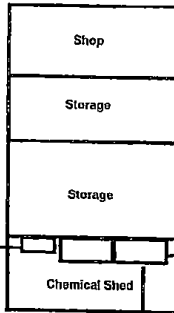
North

Lake Nicol Road



Concrete Dike:
18' x 19' x 12"

Berm # O-18



Plastic Dike
30' x 65' x 6" high

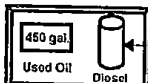
Transformer Storage

Chemical Shed

Concrete Dike
140' x 45' x 6" high



Berm # D-13



1200 gal.


Earthen Dike: 50' x 22' x 24"

Equipment Storage

Pipe Yard

Drainage



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Field Office Tuscaloosa County Sec. 14-T20S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07		
3	SPCC Drawing, Not to Scale	TJA	02/23/08	Black Warrior Basin	

PA. . . I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Cassidy 6-3-44 Lubricating Oil and Trash Dumpsters

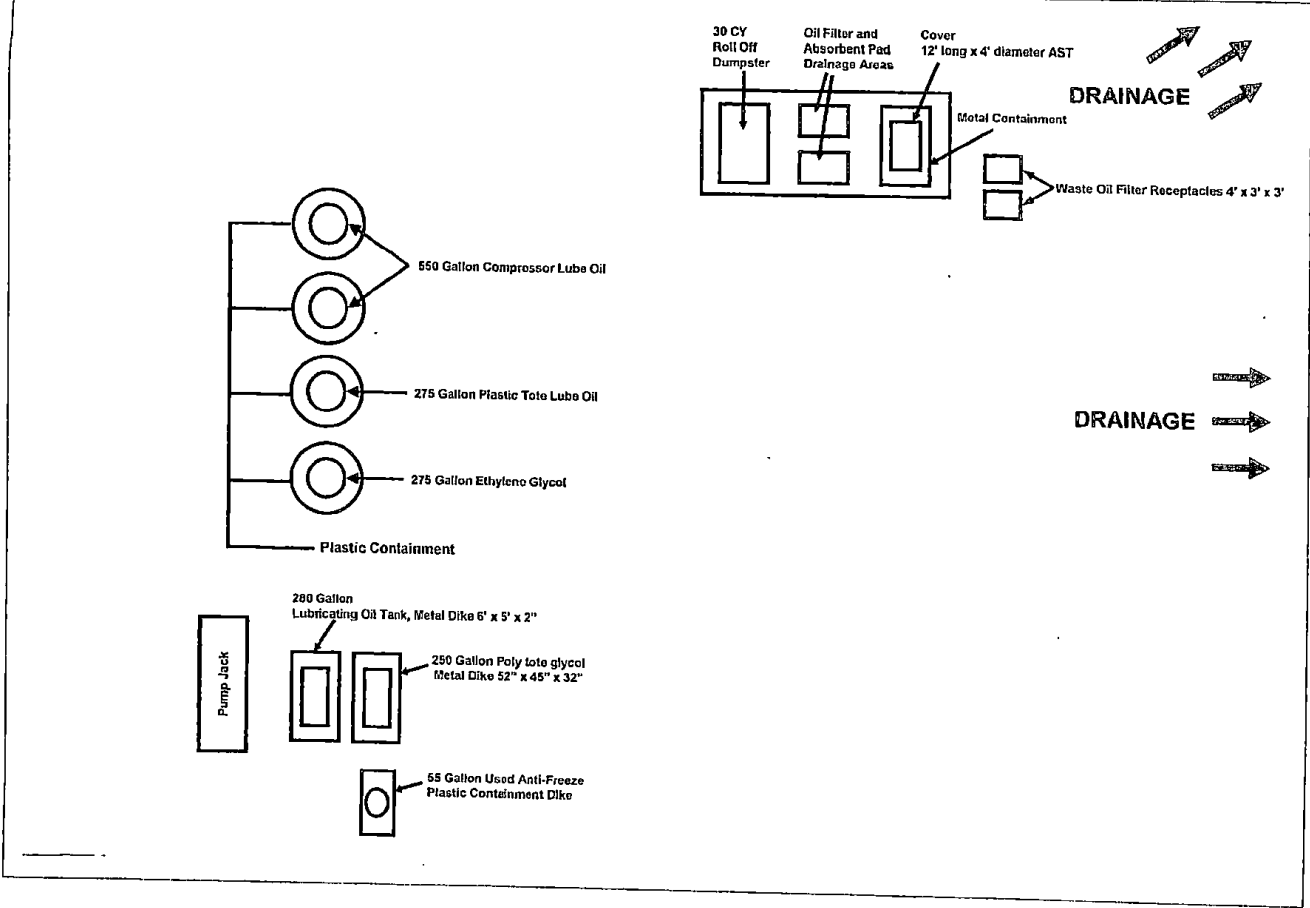
<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	No
Pumpers Lube Oil Tank (1-280 gal.)	Leaks/Overflow/Tank or Piping Rupture	280	n/a	S/SW	Yes
Used Anti-Freeze Drum	Leaks/Overflow/Tank or Piping Rupture	55	n/a	S/SW	Yes
Plastic Tote Lube Oil (1-275 gal.)	Leaks/Overflow/Tank Rupture	275	n/a	S/SW	Yes
Ethylene Glycol (1-275 gal.)	Leaks/Overflow/Tank Rupture	275	n/a	S/SW	Yes
Oil Tank (2-550 gal.)	Leaks/Overflow/Tank Rupture	1,100	n/a	S/SW	No (see action item)
Variable Drum Storage	Leaks/Overflow/Tank Rupture	55	n/a	S/SW	No (see action item)

Discussion:

- (1) All storage tanks are not contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any off site releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Panther Branch.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Cassidy 6-3-44 Lubricating Oil and Trash Dumpsters
Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Cassidy 6-3-44 Lubricating Oil and Dumpsters Tuscaloosa County Sec. 6-T19S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/19/09		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Cassidy 29-4-91

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Well head/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	No
Lube Oil Tank (1-280 gal.)	Leaks/Overflow/Tank or Piping Rupture	280	n/a	S/SW	Yes
Used Anti-Freeze Drum	Leaks/Overflow/Tank or Piping Rupture	55	n/a	S/SW	Yes
Glycol Tank (1-250 gal.)	Leaks/Overflow/Tank or Piping Rupture	250	n/a	S/SW	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

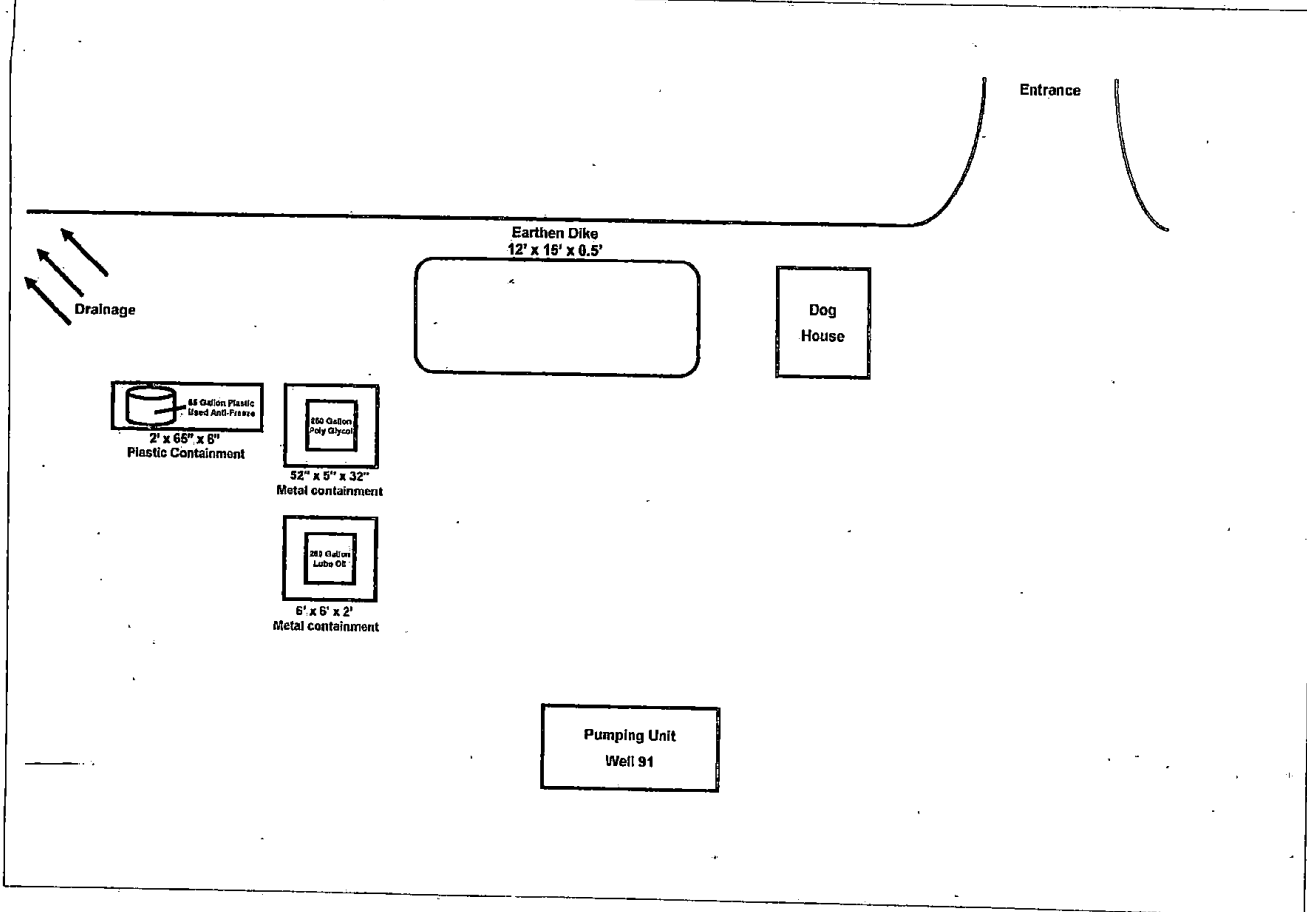
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map


Name of facility: Cassidy 29-4-91

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Cassidy 29-4-91 Tuscaloosa County Sec. 29-T18S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07		
3	SPCC Drawing, Not to Scale	TJA	02/19/09	Black Warrior Basin	

**PA. 11
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Chevron 4-7-141 Crude Oil

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Water Tanks (1-1,200 gal. Crude Oil)	Leaks/Overflow Tank or Piping Rupture	33,600	n/a	W/NW	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Blue Creek.

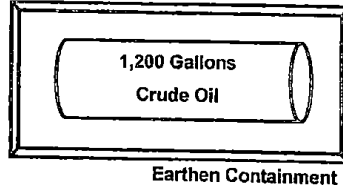
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Chevron 4-7-141 Crude Oil

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Chevron 4-7-141 Crude Oil Tuscaloosa County Sec. 4-T18S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	

F. T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Holeman 34-1-66 Lubricating Oil

There are no oil, chemical or other storage tanks at this site.

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary to Spring Branch.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

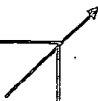
Name of facility: Holeman 34-1-66 Lubricating Oil

Operator of facility: HighMount Black Warrior Basin LLC




North

Drainage



Well &
Pumping Unit

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Holeman 34-1-66 Lubricating Oil Tuscaloosa County Sec. 34-T17S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	Deleted oil tank	TJA	02/19/09		

PART I

GENERAL INFORMATION

Potential Spills-Prediction and Control: Number 1 Pig Receiver

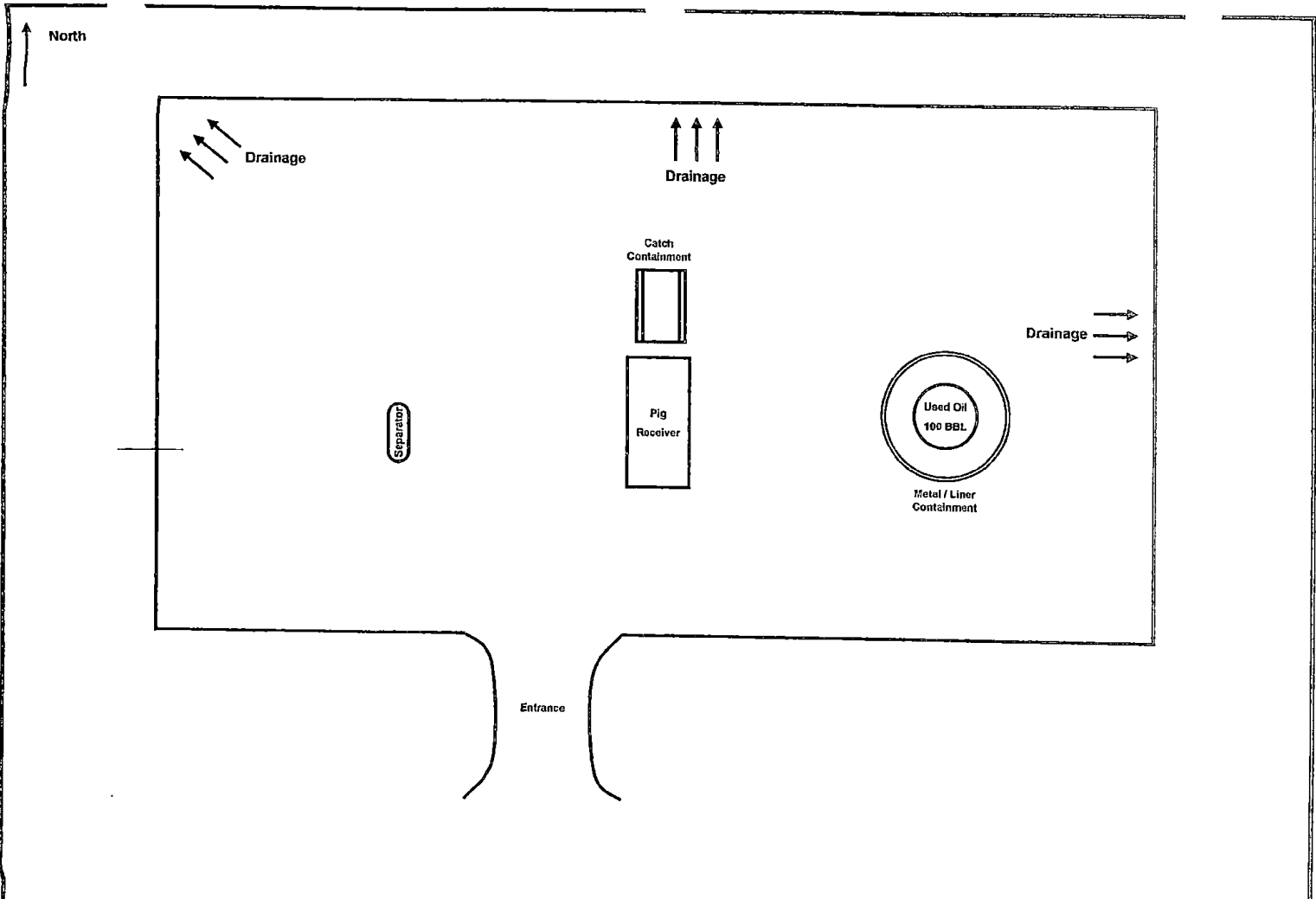
<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S	No
Used Oil Tank (1-2,100 gal.)	Leaks/Overflow/Tank or Piping Rupture	2,100	2,100	S	Yes
Separator (30" x 10')	Leaks/Overflow/Vessel or Piping Rupture	n/a	n/a	S	No
Metal Containment	Leaks/Overflow/Vessel or Piping Rupture	325	325	S	No


Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Number 1 Pig Receiver
Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	01/18/07	Tuscaloosa, AL	Number 1 Pig Receiver Tuscaloosa County Sec. 5-T19S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/25/09	Black Warrior Basin	

P. 1 T 1
GENERAL INFORMATION

Potential Spills-Prediction and Control: Oil Treatment Facility

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal.)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Used Oil Tanks (2-8,820 gal.)	Leaks/Overflow/Tank or Piping Rupture	8,820	n/a	NE	Yes
Water Tank (1-8,820 gal.)	Leaks/Overflow/Tank or Piping Rupture	26,460	n/a	NE	Yes
Water Tank (3 -16,800 gal.)	Leaks/Overflow/Tank or Piping Rupture	33,600	n/a	NE	Yes
Heater Treater (48"x 15')	Leaks/Overflow/Vessel or Piping Rupture	1,260	n/a	NE	No
Chemical Tank (Solvit WC-9340) (1-55 gal.)	Leaks/Overflow/Vessel or Piping Rupture	55	n/a	NE	Yes
Chemical Tank (MPA 7757) (2-55 gal.)	Leaks/Overflow/Vessel or Piping Rupture	110	n/a	NE	Yes
Chemical Tank (Solvit MPA 7747) (1-200 gal.)	Leaks/Overflow/Vessel or Piping Rupture	200	n/a	NE	Yes
Chemical Tank (Solvit D4573) (1-365 gal.)	Leaks/Overflow/Vessel or Piping Rupture	365	n/a	NE	Yes

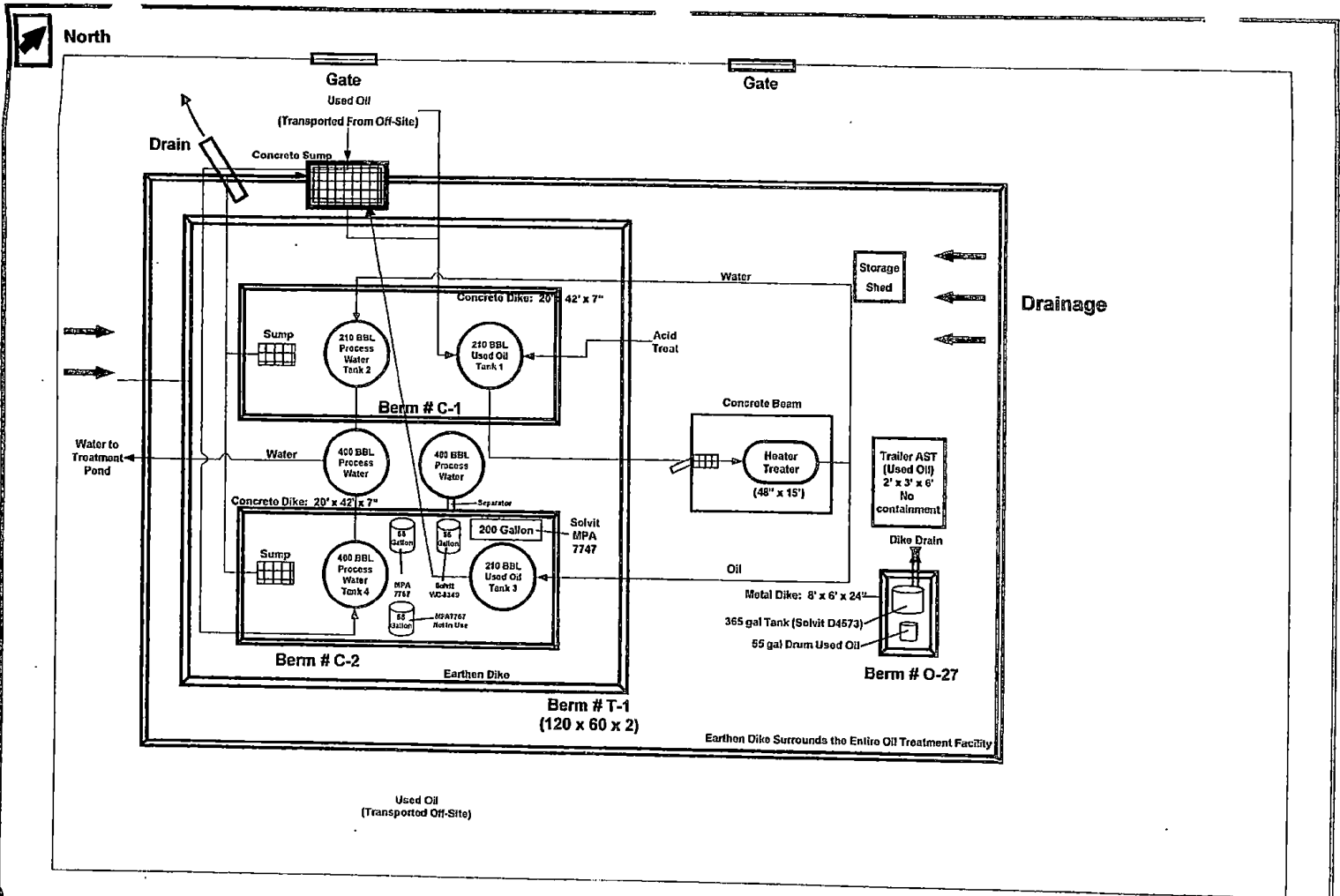
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Used Oil is transported via tank truck. Truck loading/unloading valve located within dike to contain drips/releases during loading/unloading.
- (3) The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Black Warrior River.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Oil Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Oil Treatment Facility Tuscaloosa County Sec. 5-T19S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/23/09		

Part I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Stedman 13-6-18

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Pumpers Oil Tank (1-280 gal.)	Leaks/Overflow/Vessel or Piping Rupture	280	n/a	N	Yes
Used Anti-Freeze Drum	Leaks/Overflow/Vessel or Piping Rupture	55	n/a	N	Yes

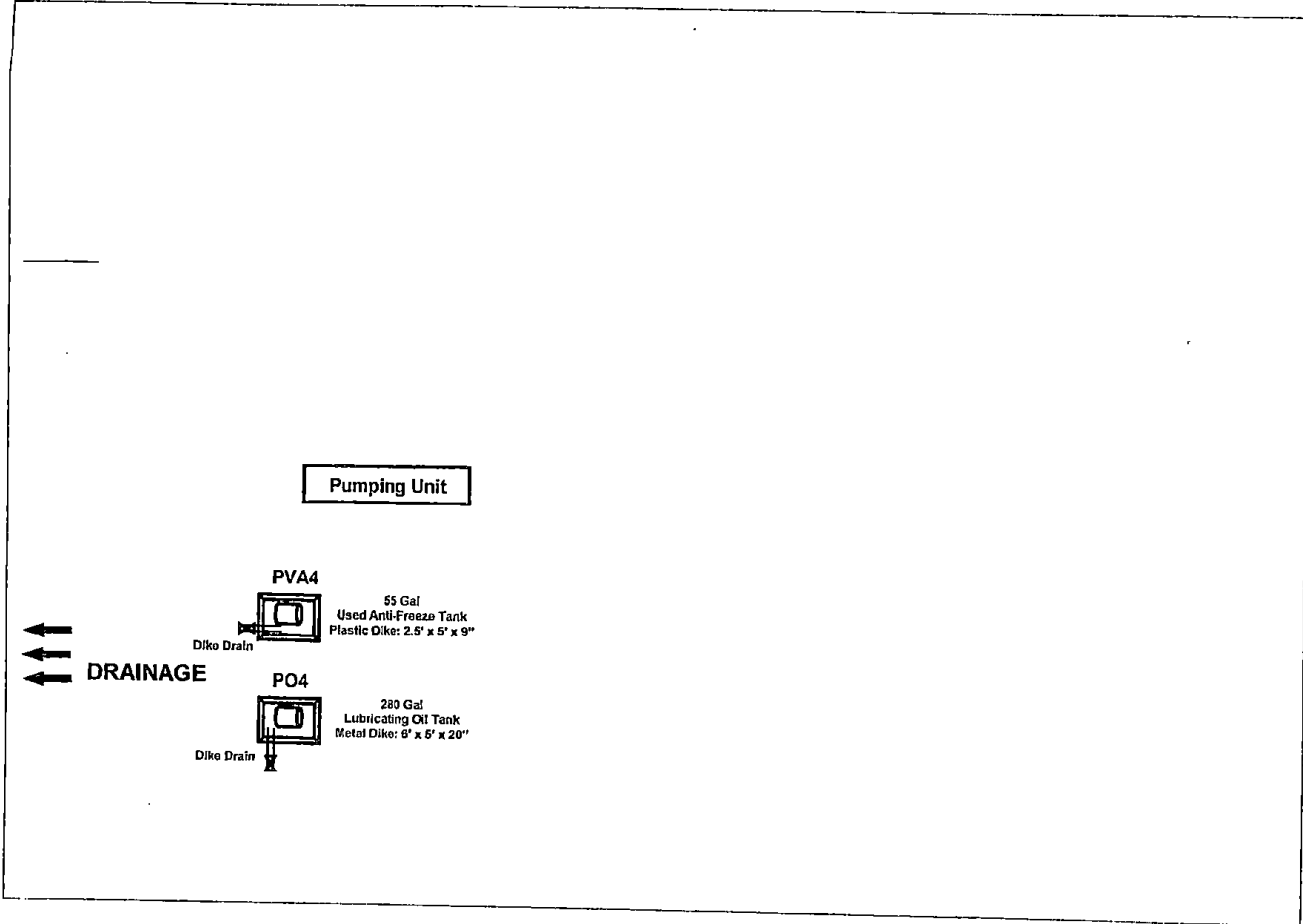
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Black Warrior River.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Stedman 13-6-18

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Stedman 13-6-18 Lubricating Oil Tuscaloosa County Sec. 13-T19S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: West 11-2-35

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Lubricating Oil Tank (1-280 gal.)	Leaks/Overflow/Vessel or Piping Rupture	280	280	S/SW	Yes
Used Anti-freeze Drum	Leaks/Overflow/Tank or Piping Rupture	55	55	S/SW	Yes
Anti-freeze Tank (1-250 gal.)	Leaks/Overflow/Tank or Piping Rupture	250	250	S/SW	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Laurel Branch.

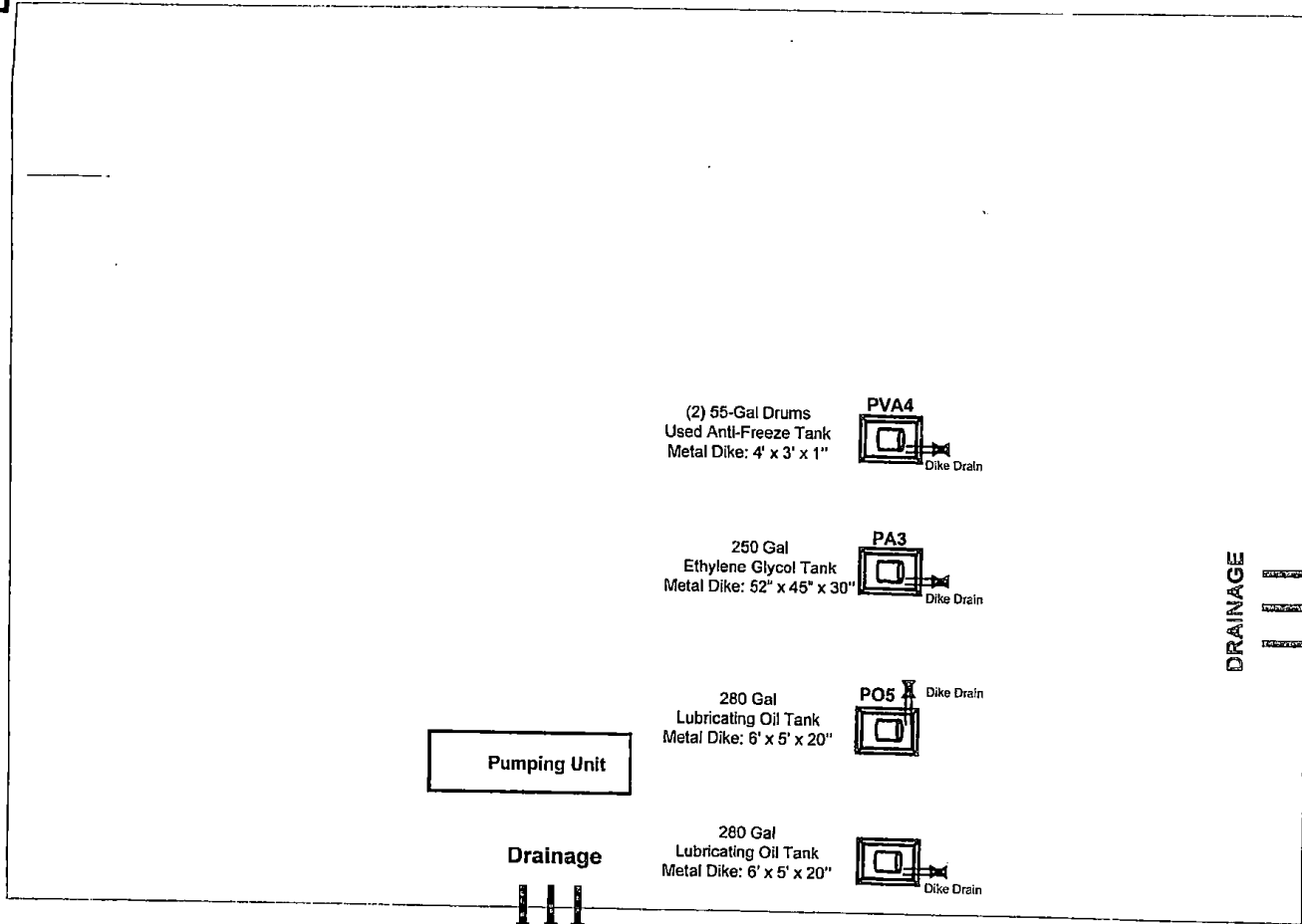
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: West 11-2-35

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		West 11-2-35 Lubricating Oil Tuscaloosa County Sec. 11-T20S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin		



PART I

GENERAL INFORMATION

Potential Spills-Prediction and Control: Whitson DOT Pig Receiver

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S	No
Used Oil Tank (1-1,680 gal.)	Leaks/Overflow/Tank or Piping Rupture	1,680	1,680	S	Yes

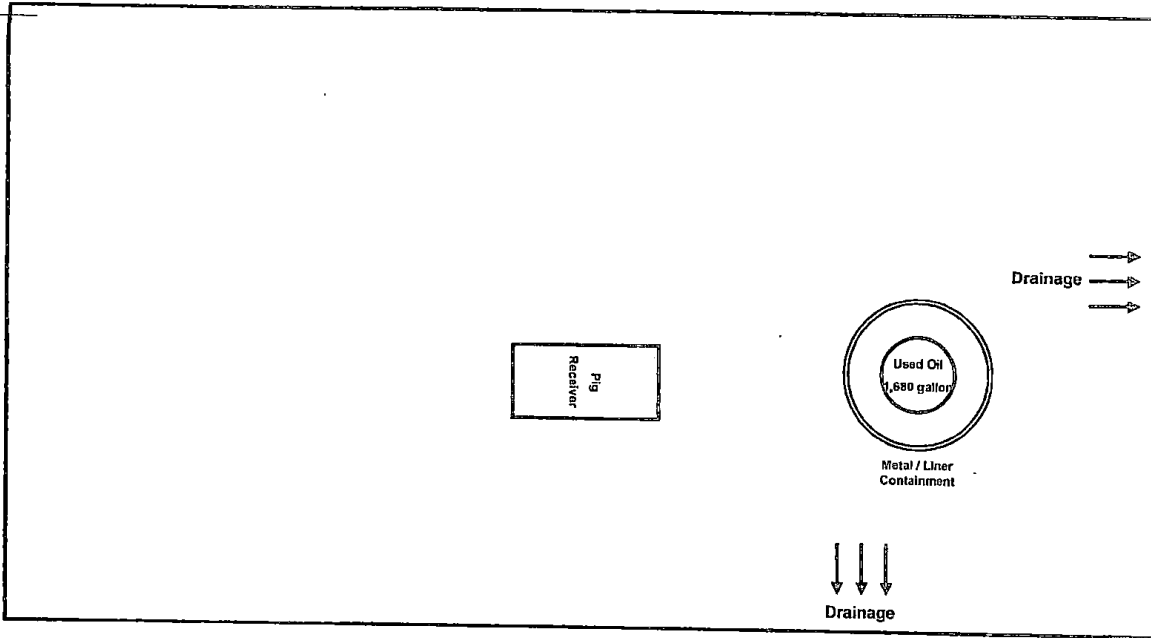
Discussion:


- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline. Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading. Oil used for compressors is transported to the facility via tank truck.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. The well, separators/scrubbers and flowlines are not contained within the diked area. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Whitson DOT Pig Receiver

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/22/07	Tuscaloosa, AL	Whitson DOT Pig Receiver Tuscaloosa County Sec. 5-T195-R8VV
				Black Warrior Basin	

P. T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: 1642 Tank Site

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
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Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of produced water from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Jim Mack Branch.

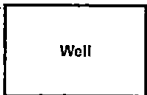
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: 1642 Tank Site

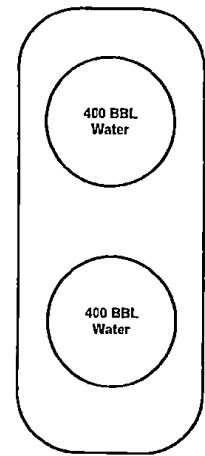
Operator of facility: HighMount Black Warrior Basin LLC



North



#1 Pump #2 Pump



Metal Containment
36' x 42'

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/25/03	Tuscaloosa, AL	1042 Tank Site Tuscaloosa County
				Black Warrior Basin	



P. T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Allgood Water Treatment Facility

There are no oil, chemical or other storage tanks at this site.

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.

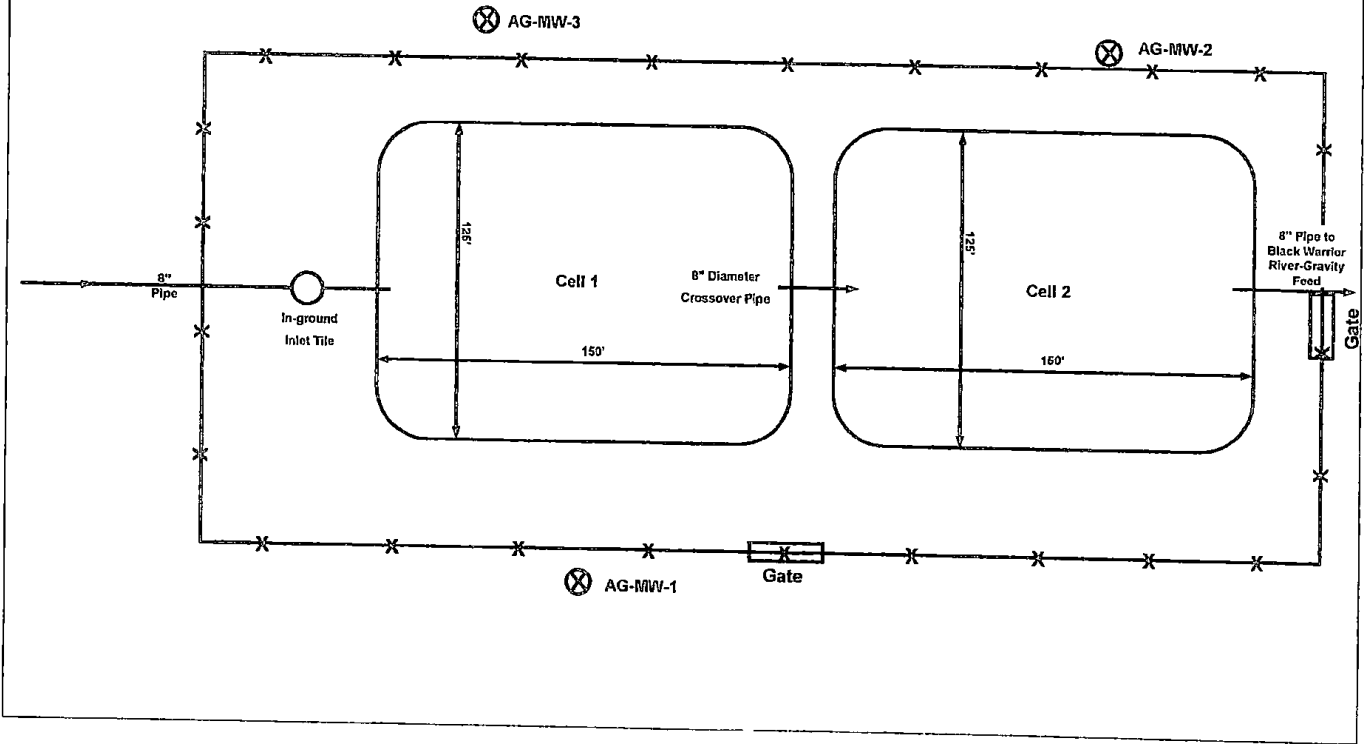
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Allgood Water Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL		Allgood Water Treatment Facility Tuscaloosa County Sec. 18-T19S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/20/09	Black Warrior Basin		



**Part II
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Blue Rock Pit Water Tanks

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Water Tank (1-16,800 gal.)	Leaks/Overflow/Tank or Piping Rupture	16,800	n/a	S/SE	Yes
Un-used Tank (1-16,800 gal.)	Leaks/Overflow/Tank or Piping Rupture	16,800	n/a	S/SE	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Blue Creek.

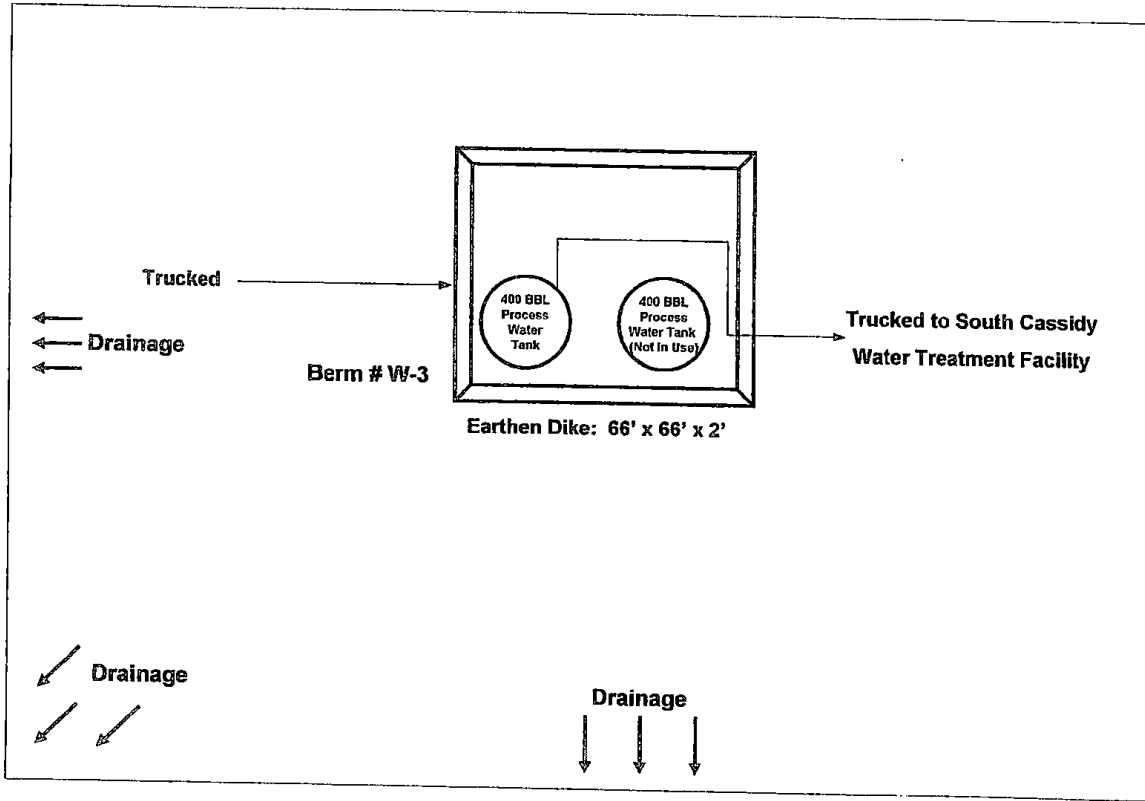
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Blue Rock Pit Water Tanks

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC		SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL		Blue Rock Pit Water Tanks Tuscaloosa County Sec. 25-T18S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/18/07	Black Warrior Basin		



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Chevron 1-12-15 Water Tanks (Red Hill)

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Water Tanks (2-16,800 gal.)	Leaks/Overflow Tank or Piping Rupture	33,600	33,600	S/SW	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

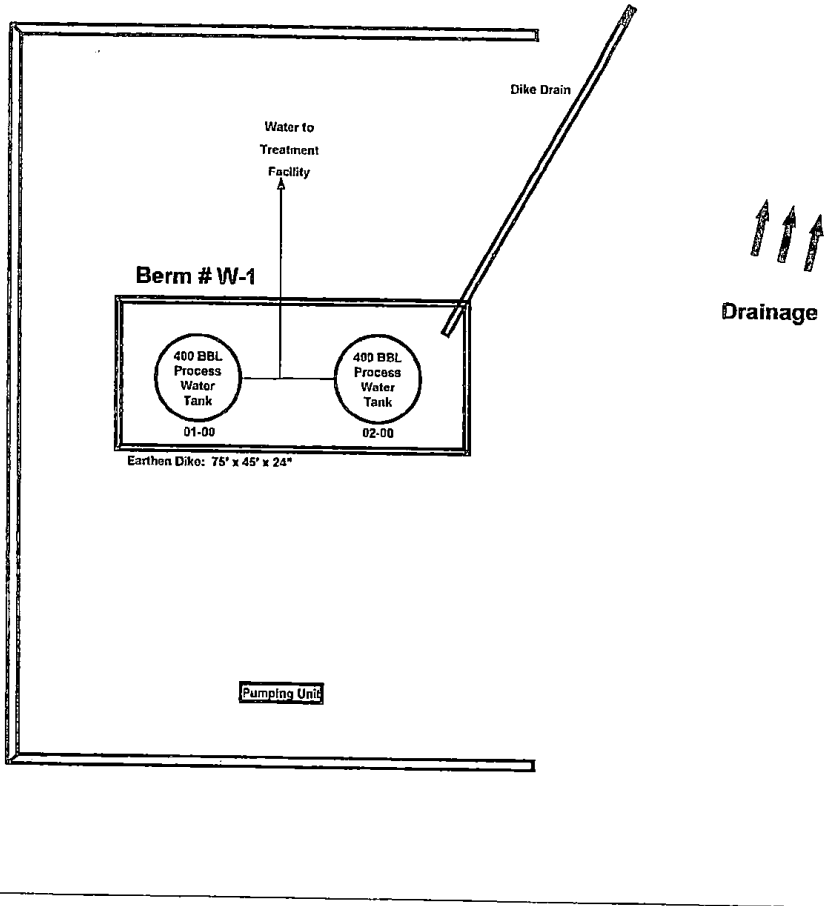
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Chevron 1-12-15 Water Tanks (Red Hill)

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	06/04/02	Tuscaloosa, AL	Chevron 1-12-15 Water Tanks (Red Hill) Tuscaloosa County Sec. 1-T18S-R9W
2	SPCC Drawing, Not to Scale	T.JA	02/16/07	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Chevron 13-16-109 Water Tanks

Source	Major Type Of Failure	Total Quantity (gal.)	Rate (gal/day)	Direction of Flow*	Secondary Containment
Wellhead/Flowlines	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
Process Water Tanks (2-21,000 gal.) (1-16,800 gal)	Leaks/Overflow/Tank or Piping Rupture	58,800	n/a	S/SW	Yes
Used Oil (1-110 gal.)	Leaks/Overflow/Tank or Piping Rupture	110	n/a	S/SW	Yes

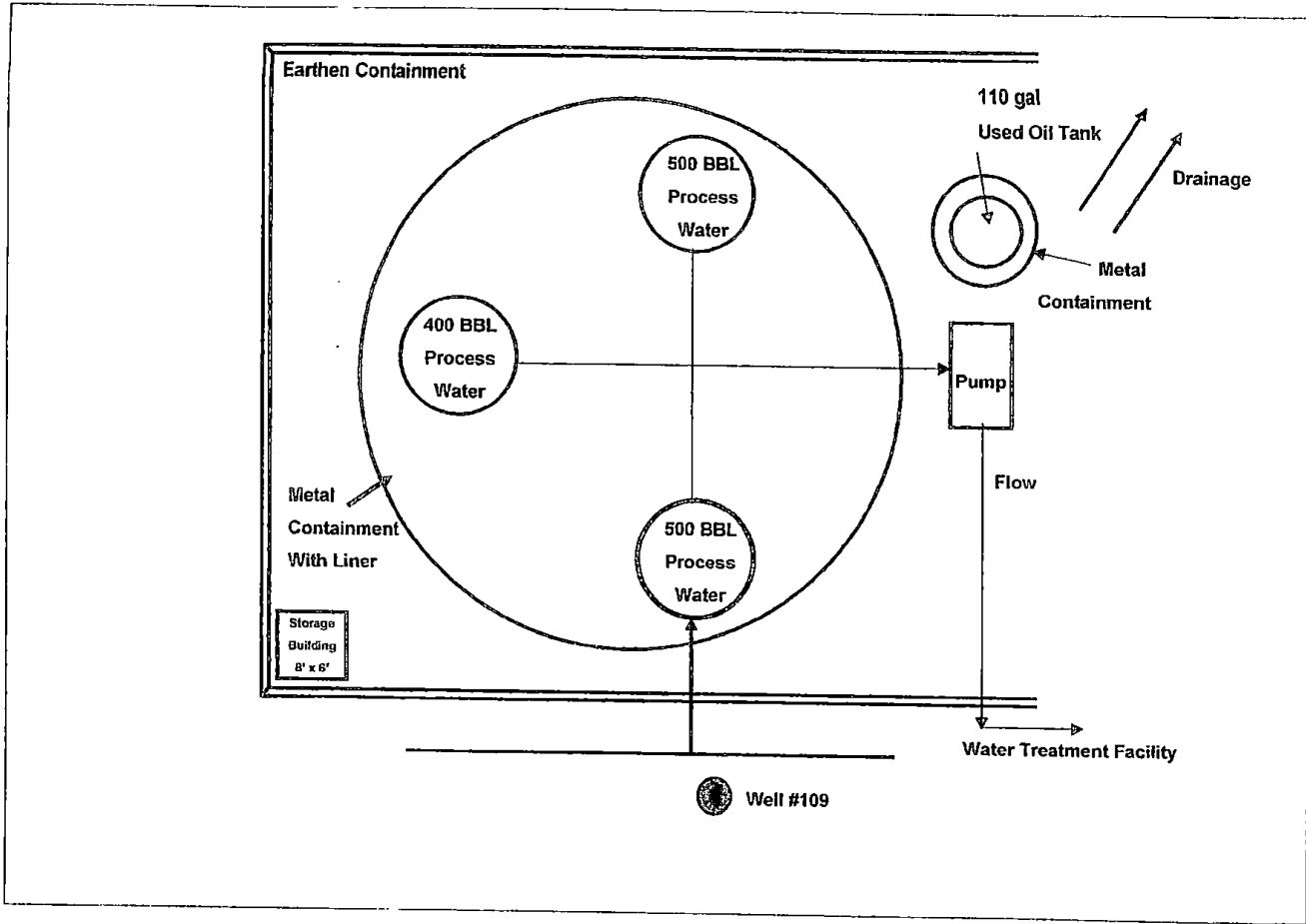
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Fourmile Creek.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Chevron 13-16-109 Water Tanks

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	06/01/02	Tuscaloosa, AL	Chevron 13-16-109 Water Tanks Tuscaloosa County Sec. 13-T17S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Chevron 29-15-358 Water Tanks

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	N/NE	Yes
Water Tanks (2-17,850 gal.) (1-23,772 gal)	Leaks/Overflow Tank or Piping Rupture	41,622	n/a	N/NE	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

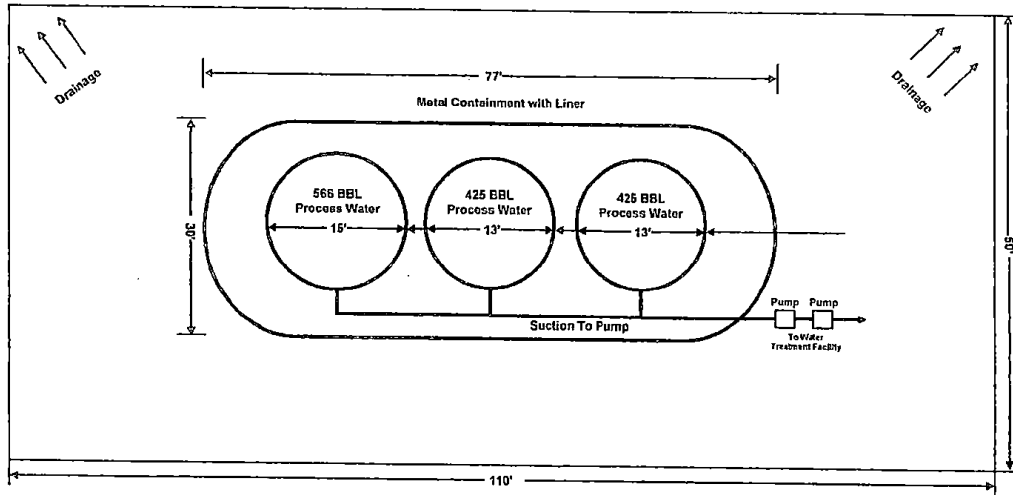
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Chevron 29-15-358 Water Tanks


Operator of facility: HighMount Black Warrior Basin LLC



North



← NORTH

No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	NW/C	05/01/02	Tuscaloosa, AL	Chevron 29-15-358 Water Tanks Tuscaloosa County Sec. 29-T17S-R9W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/25/09		

**FACT I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: East Deerlick Holding Pond

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
1-100 gal Tank	Tank Rupture	100	n/a		

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.

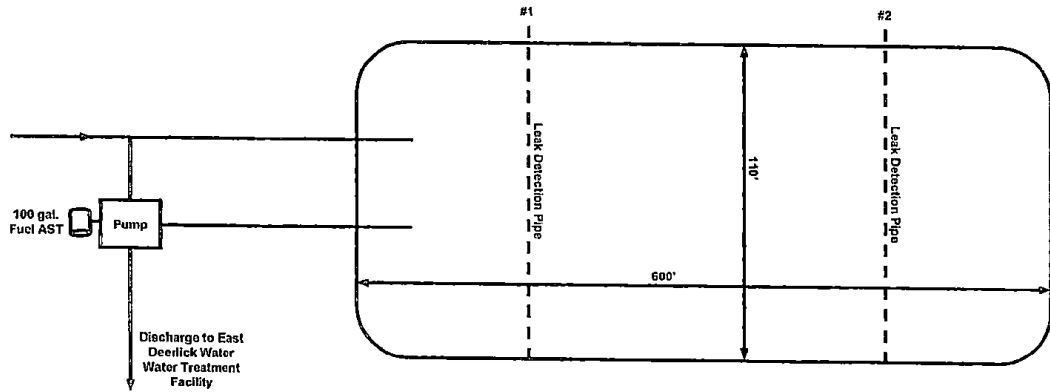
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map


Name of facility: East Deerlick Holding Pond

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL	East Deerlick Holding Pond Tuscaloosa County Sec. 13-T20S-R9W 
				Black Warrior Basin	

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: East Deerlick Water Treatment Facility

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
1,100-gal Tank (Aluminum Sulfate)	Tank Rupture	1,100	n/a	To Pond	Yes
Used oil Trailer (1-270 gal)	Tank Rupture	270	n/a	To Pond	Yes
Used oil Trailer (1-165 gal)	Tank Rupture	165	n/a	To Pond	Yes
1 250-gal Tank (Solvit WC9340)	Tank Rupture	250	n/a	To Pond	Yes
1 55-gal gal Tank (Muratic Acid)	Drum Rupture	55	55	To Pond	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.

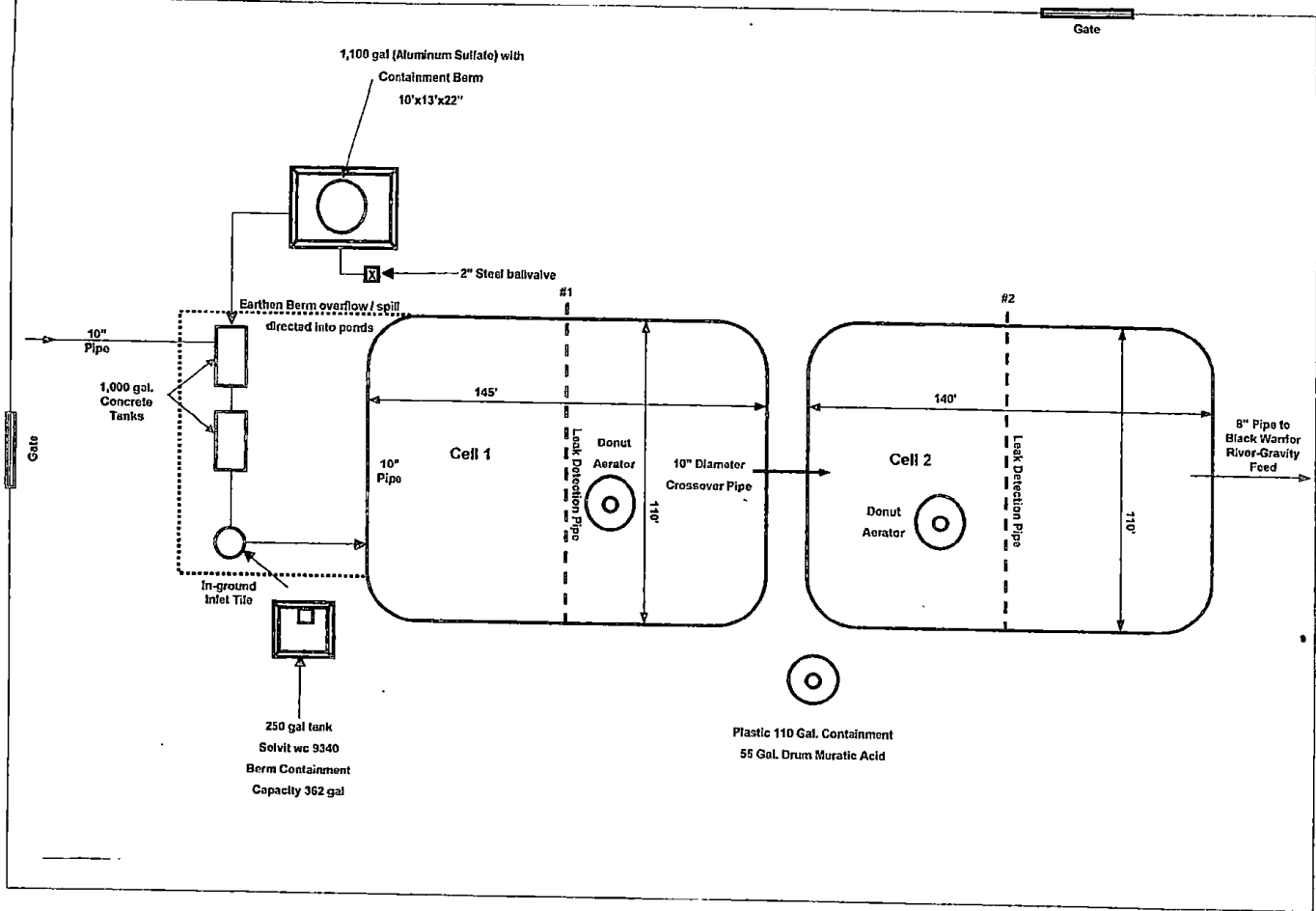
* **See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map**

Name of facility: East Deerlick Water Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL	East Deerlick Water Treatment Facility Tuscaloosa County Sec. 17-T20S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/20/08	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Freshwater Pond

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Used Oil Tank (1-1,932 gal.)	Leaks/Overflow/Tank or Piping Rupture	1,932	n/a	E	Yes

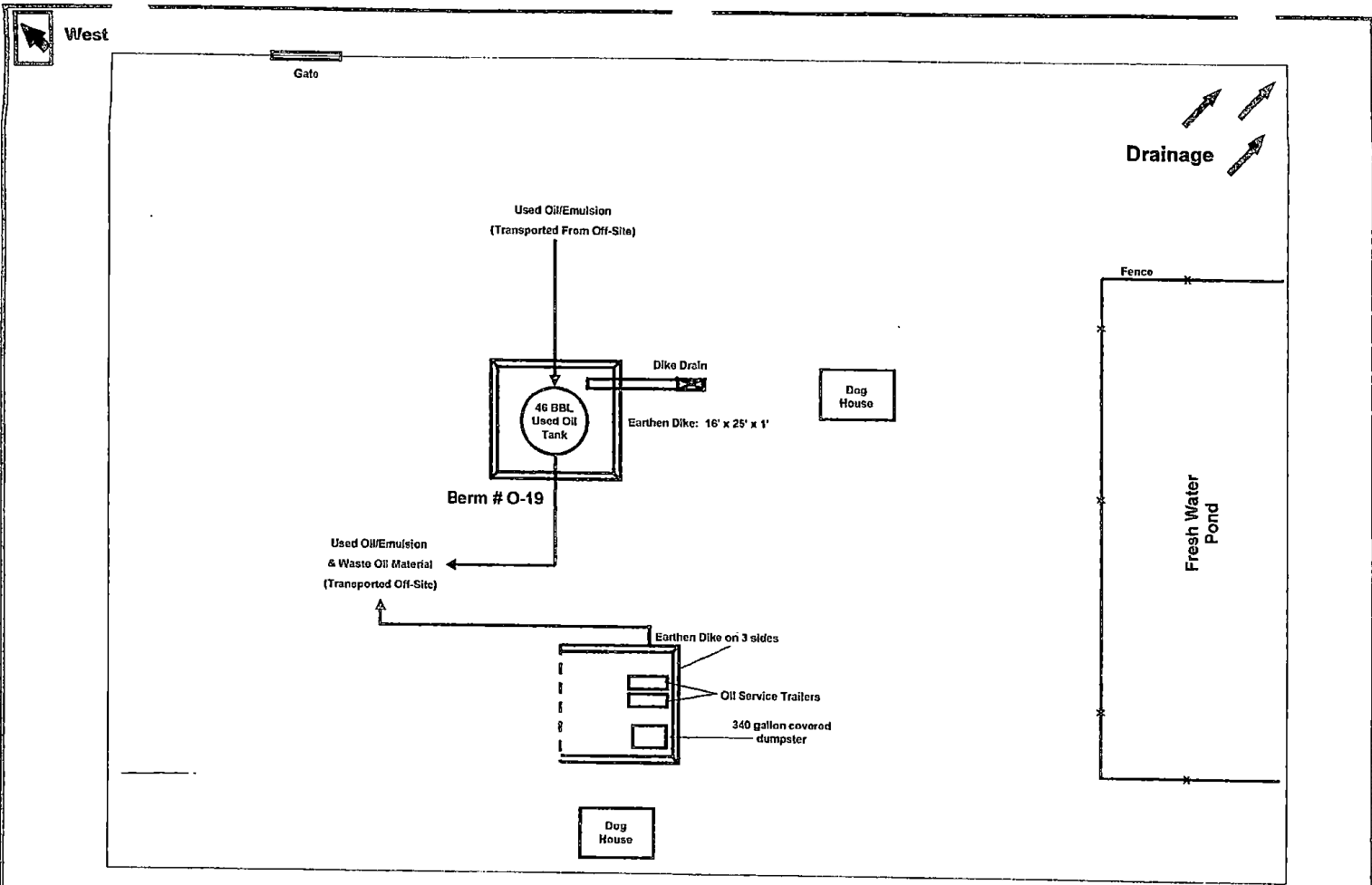
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Used Oil is transported via tank truck. Truck loading valve located within dike to contain drips/releases during loading.
- (3) The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any off site releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Laurel Branch.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Freshwater Pond

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Freshwater Pond Tuscaloosa County Sec. 11-T20S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Million Dollar Hill Water Tanks

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Water Tanks (3-16,800 gal.)	Leaks/Overflow/Tank or Piping Rupture	50,400	50,400	S	Yes

Discussion:

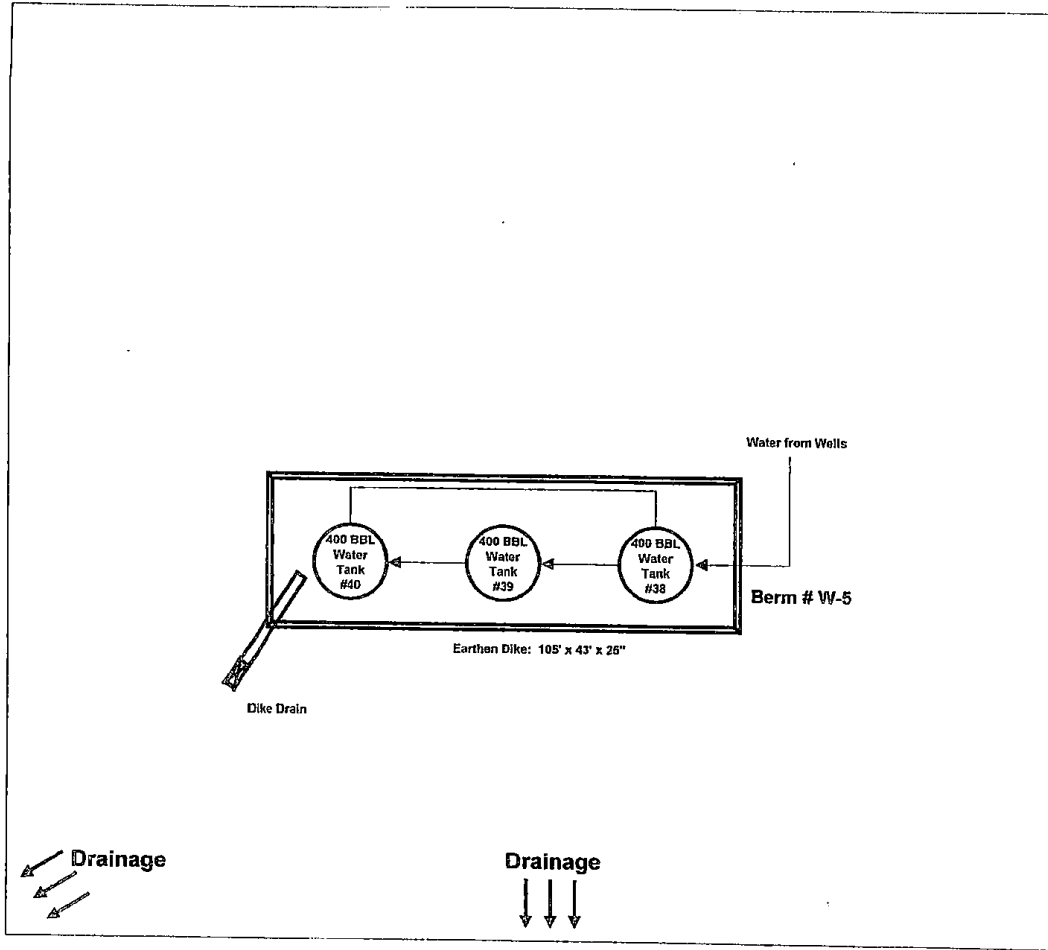
- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Blue Creek.


* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Million Dollar Hill Water Tanks
Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Million Dollar Hill Water Tanks Tuscaloosa County Sec. 19-T18S-R8W 
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/23/09		

**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: North Cassidy Water Treatment Facility

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
1-1,500 gal. Tank (Aluminum Sulfate)	Leaks/Overflow Tank or Piping Rupture	1,500	1,500	To Pond	Yes
1-300 gal. Tank (Solvit W-C 9340)	Leaks/Overflow Tank or Piping Rupture	300	1,500	To Pond	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

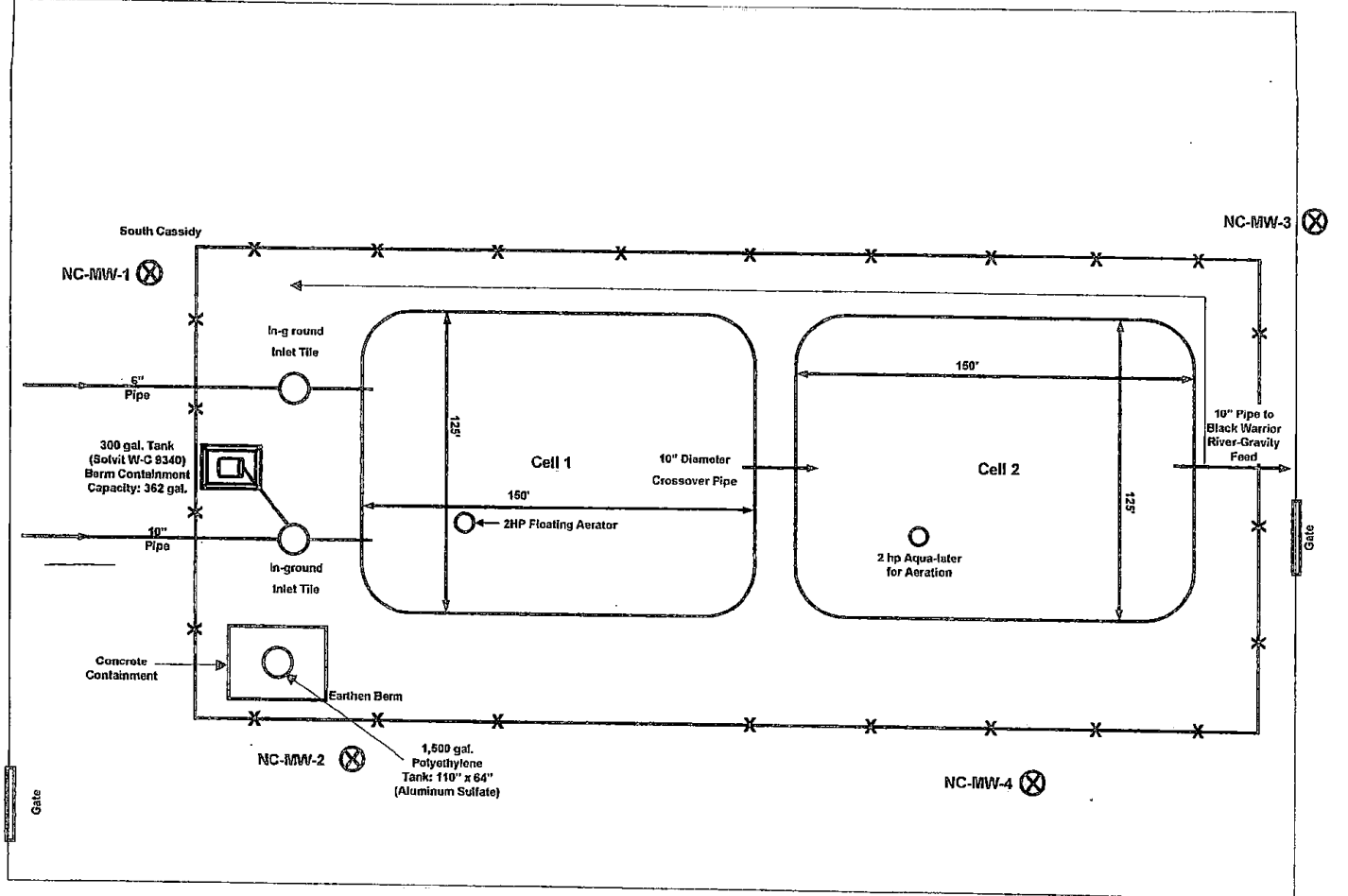
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: North Cassidy Water Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/16/07	Tuscaloosa, AL	North Cassidy Water Treatment Facility Tuscaloosa County Sec. 22-T18S-R6W
2	SPCC Drawing, Not to Scale	TJA	02/20/09	Black Warrior Basin	



F. T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Ramsay McCormack 35-6 #4 Water Tanks

Site contains 2 500-BBL process water above ground storage tanks; there are no other storage tanks at this site (chemical or oil).

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of produced water from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to Jim Mack Branch.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Ramsay-McCormack 35-6 #4 Water Tanks

Operator of facility: HighMount Black Warrior Basin LLC



North

Pipelines

POWER LINE

Gravel Road

EXIT

ENTRANCE

Flare

Meter Run

WELL PUMPJACK

POWER SWITCHES

Transfer Pumps and Electrical

Open Metal Canopy

Controls

Cap

Metal Containment with Polyethylene Liner 3.5' High

500 BBL Produced Water

Height: 25'
SN. 5591

500 BBL Produced Water

Height: 25'
SN. 07-504

Water Column Pressure Meter



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	RAH	2/18/08	Tuscaloosa, AL	Ramsay-McCormack 35-6 #4 Water Tanks Tuscaloosa County Sec. 35-T20S-R9W
				Black Warrior Basin	

E T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: South Cassidy Water Treatment Facility

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
1-300 gal. Tank (Aluminum Sulfate)	Leaks/Overflow Tank or Piping Rupture	300	300	To Pond	Yes
1-300 gal. Tank (Solvit 9340)	Leaks/Overflow Tank or Piping Rupture	300	300	To Pond	Yes
1-55 gal. Drum (Muratic Acid)	Leaks/Overflow Tank or Piping Rupture	55	55	To Pond	Yes

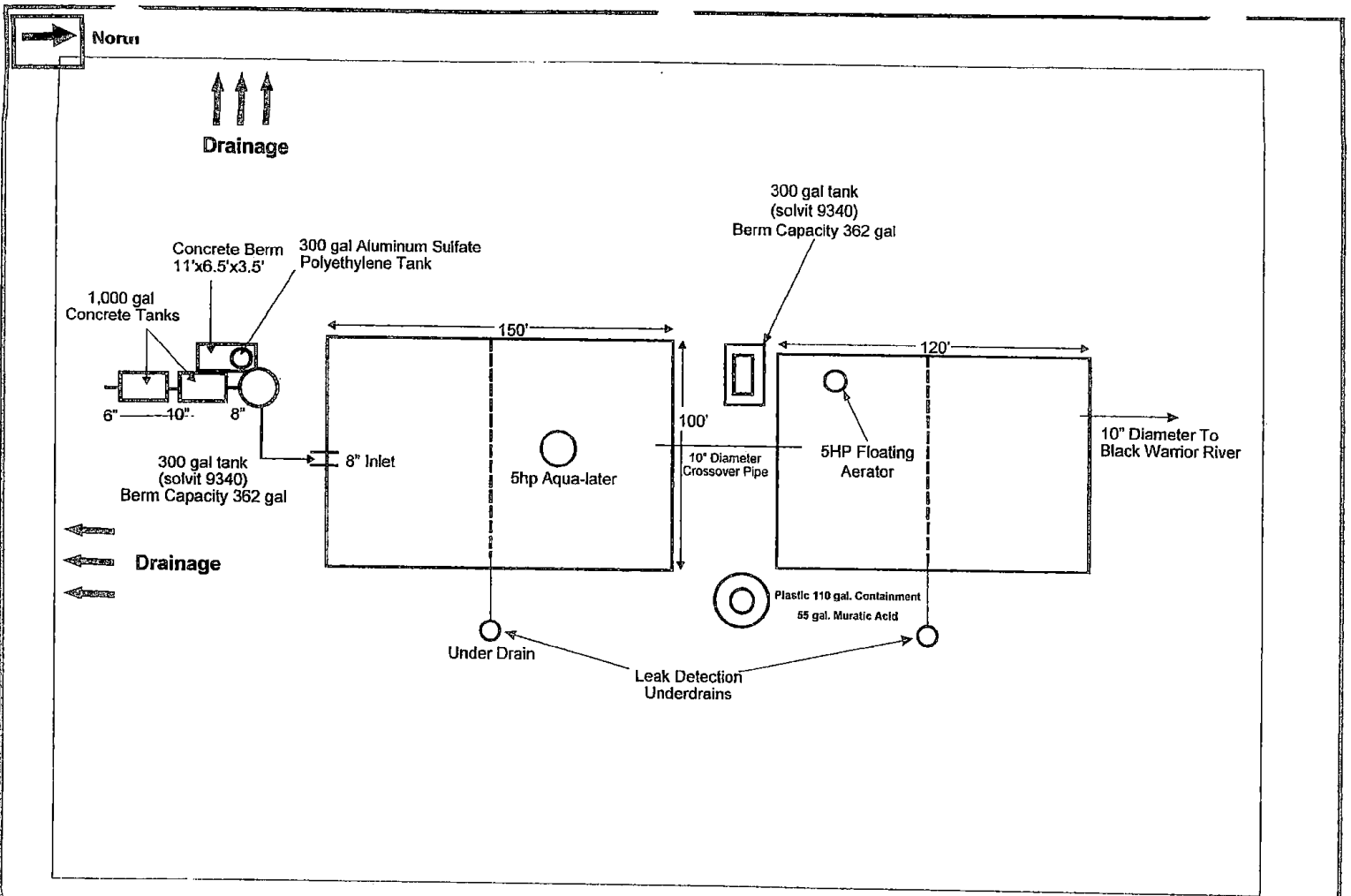
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: South Cassidy Water Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	South Cassidy Water Treatment Facility Tuscaloosa County Sec. 32-T18S-R8W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	
3	SPCC Drawing, Not to Scale	TJA	02/23/09		



F. 2T1
GENERAL INFORMATION

Potential Spills-Prediction and Control: South Deerlick Water Treatment Facility

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
1-1,000 gal. Tank (Aluminum Sulfate)	Leaks/Overflow Tank or Piping Rupture	1,000	1,000	To Pond	Yes
1-1,000 gal. Tank (Caustic)	Leaks/Overflow Tank or Piping Rupture	1,000	1,000	To Pond	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

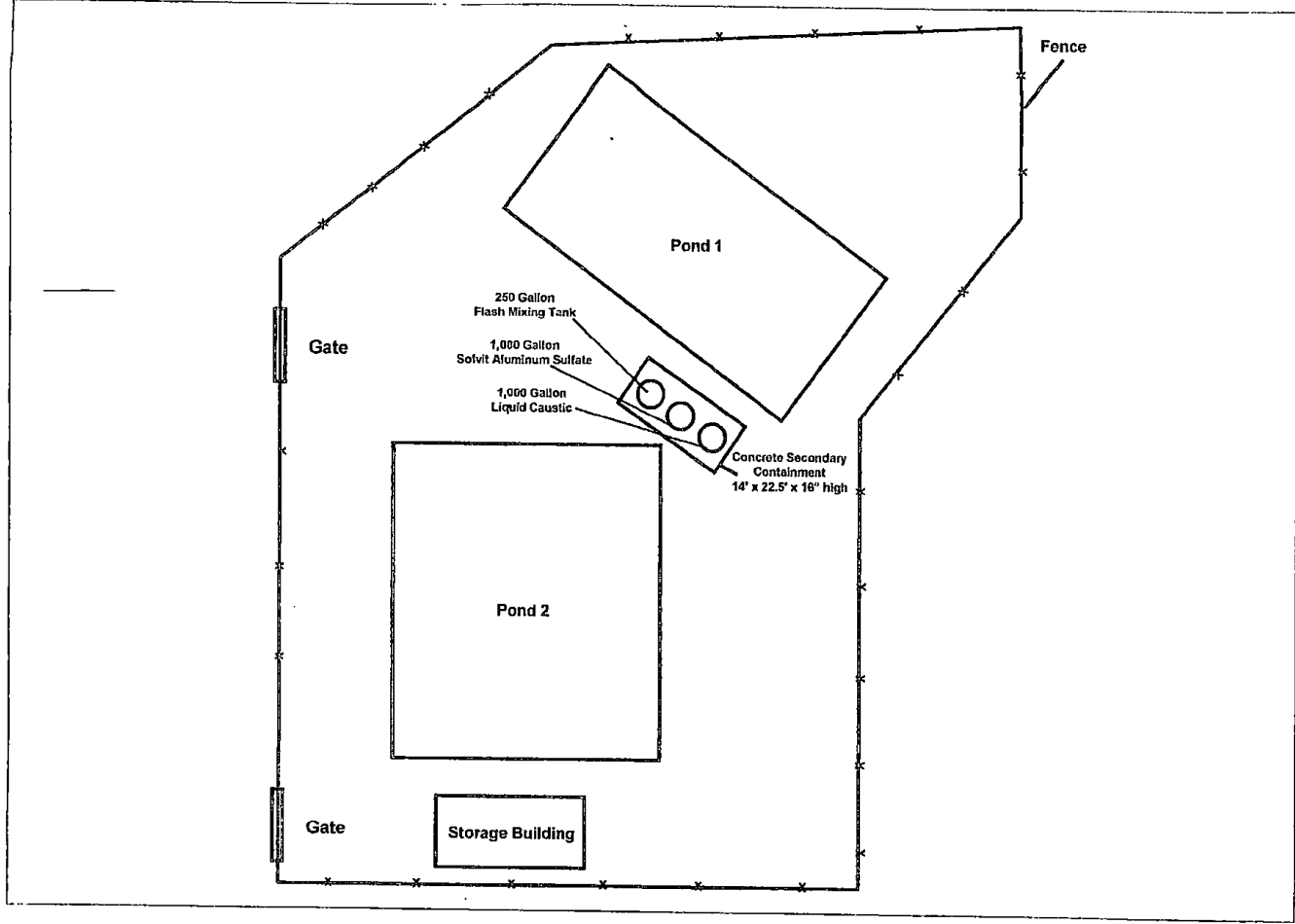
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: South Deerlick Water Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	South Deerlick Water Treatment Facility Tuscaloosa County Sec. 25-T20S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/18/07		
3	SPCC Drawing, Not to Scale	TJA	02/25/08	Black Warrior Basin	



**PART I
GENERAL INFORMATION**

Potential Spills-Prediction and Control: Warrior Ridge Water Tanks

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Water Tanks (2-16,800 gal.)	Leaks/Overflow/Tank or Piping Rupture	33,600	n/a	S/SW	Yes

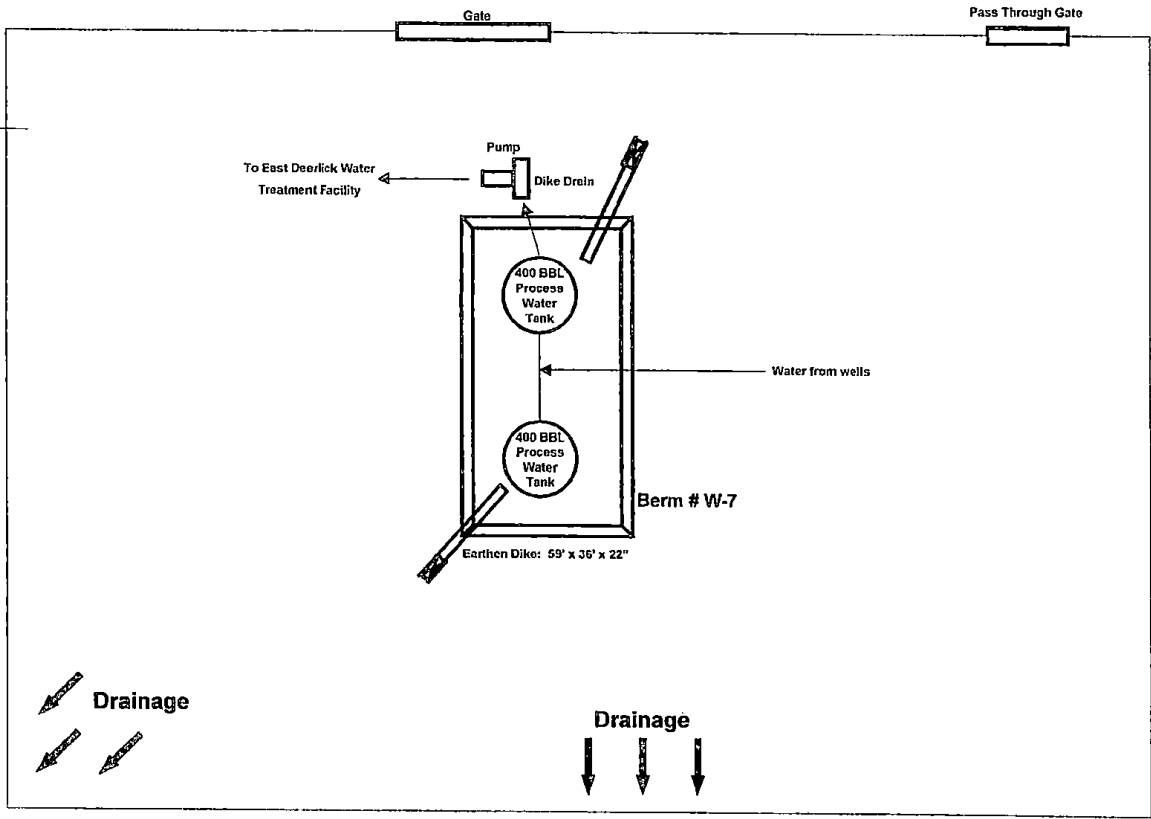
Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Black Warrior River.

* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Warrior Ridge Water Tanks

Operator of facility: HighMount Black Warrior Basin LLC



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	MWC	05/01/02	Tuscaloosa, AL	Warrior Ridge Water Tanks Tuscaloosa County Sec. 25-T19S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/16/07	Black Warrior Basin	

F T I
GENERAL INFORMATION

Potential Spills-Prediction and Control: Whitson Water Treatment Facility

<u>Source</u>	<u>Major Type Of Failure</u>	<u>Total Quantity (gal)</u>	<u>Rate (gal/day)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
Wellhead/Flowlines (see 5 below)	Leaks/Piping Rupture	n/a	n/a	S/SW	Yes
1-65 gal. Tank (Solvit MPA-7747)	Leaks/Overflow Tank or Piping Rupture	65	65	To Pond	Yes
1-220 gal. Tank (Solvit S-6673)	Leaks/Overflow Tank or Piping Rupture	220	220	To Pond	Yes
1-330 gal. Tank (Polyaluminum Chloride)	Leaks/Overflow Tank or Piping Rupture	330	330	To Pond	Yes

Discussion:

- (1) All storage tanks are contained within a diked area that is large enough to hold the contents of the largest storage tank plus sufficient freeboard. There has been no history of tank failure at the facility.
- (2) Produced water and natural gas are transported via pipeline.
- (3) Wells produce a dry gas with no (or negligible) Oil in the production stream. Produced water is separated from the dry gas, stored, treated and discharged to Black Warrior River via NPDES permitted outfalls. Secondary containment around the well location, including flowlines and associated equipment, is not practical. The operator visually examines equipment and aboveground flowlines during normal work activities.
- (4) Any offsite releases of Oil/chemicals from the facility would flow to an intermittent stream (dry drainage conveyance) located near the facility to an Unnamed Tributary of Bear Creek.
- (5) Wellhead/flowlines continuously monitored with automated leak detection system.

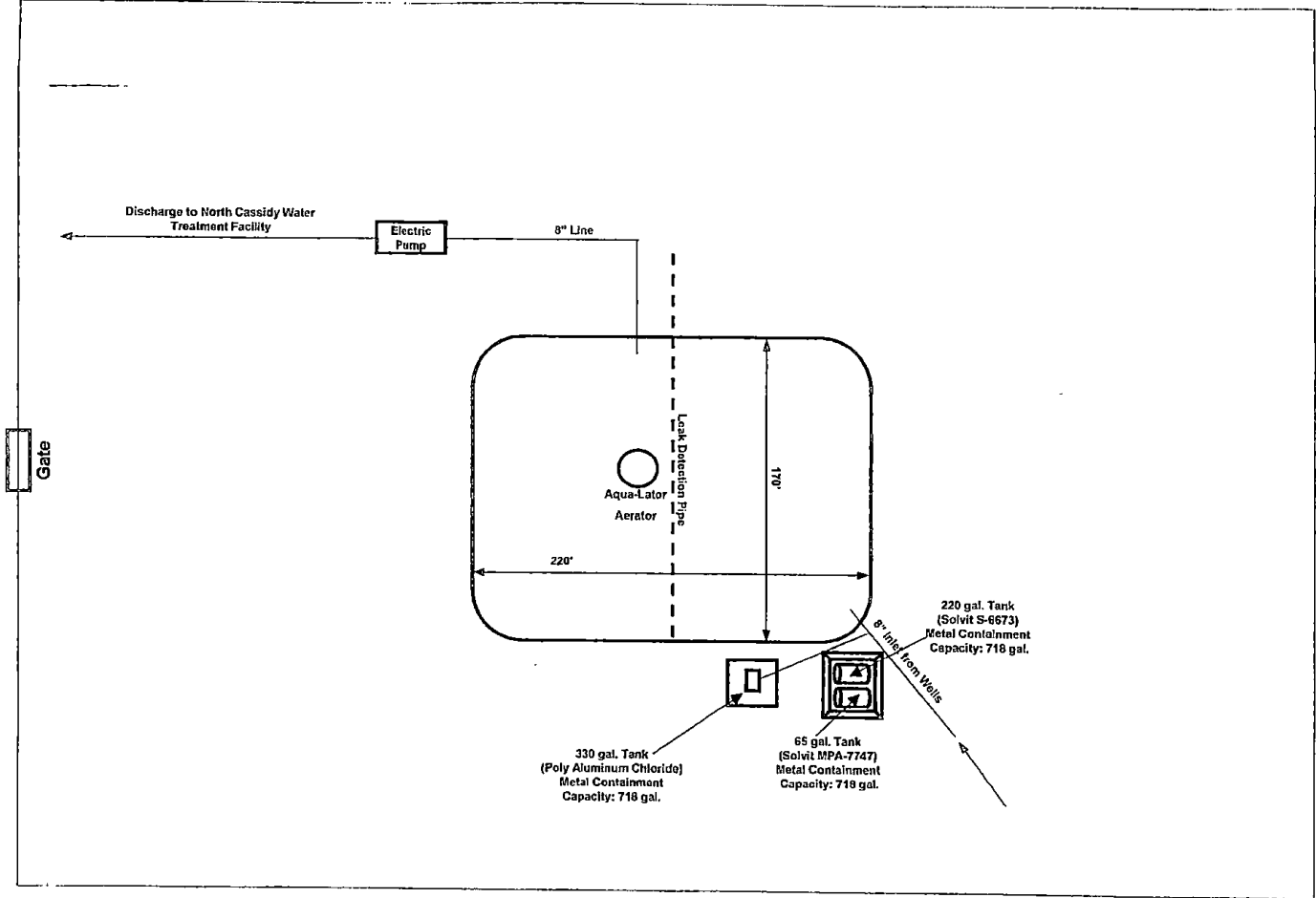
* See Site Plat and Attachment 1 - USGS 7.5 Minute Series Topographic Map

Name of facility: Whitson Water Treatment Facility

Operator of facility: HighMount Black Warrior Basin LLC



North



No.	Revision	By	Date	HighMount Black Warrior Basin LLC	SPCC Plan
1	SPCC Drawing, Not to Scale	TJA	02/22/07	Tuscaloosa, AL	Whitson Water Treatment Facility Tuscaloosa County Sec. 36-T17S-R9W
2	SPCC Drawing, Not to Scale	TJA	02/20/09	Black Warrior Basin	

