GW - 356

PERMITS, RENEWALS, & MODS Application

Eric J. Barndt
Environmental Engineer
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1515 Wynkoop Street, Suite 500
Denver, CO 80202
P (303) 566-3446
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January 17, 2012

New Mexico Energy, Minerals and Natural Resource Department
Oil Conservation Division
Attention: Mr. Leonard Lowe
1220 S. St. Francis Drive
Santa Fe, N.M. 87505

RE: Notice of Responsible Official Change for Black Hills Midstream, LLC Espinosa Canyon Amine Plant (Discharge Permit GW-356 – permit rescinded August 16, 2011)

Dear Mr. Lowe:

This correspondence is intended to inform you that the Responsible Official for the Black Hills Midstream, LLC Espinosa Canyon Amine Plant (previously operated under New Mexico Energy, Minerals and Natural Resource Department (NMEMNRD) Oil Conservation Division (OCD) Discharge Permit GW-356 – permit rescinded August 16, 2011) has changed as follows:

Previously Assigned Responsible Official:
John Vering, Black Hills Exploration & Production, President and General Manager

Newly Assigned Official:
John Benton, Black Hills Exploration and Production Vice President and General Manager
Black Hills Corporation
1515 Wynkoop Street, Suite 500
Denver, Colorado 80202
Phone: 303-566-3391
Email: John.Benton@blackhillscorp.com

This change is effective immediately. Please update all appropriate NMEMNRD OCD databases regarding this change.

Please call me at (303) 566-3446 if you have any questions concerning this change in Responsible Official.

Sincerely,

Eric J. Barndt
Black Hills

cc: Fred Carl, Black Hills
John Benton, Black Hills
Doran Newlin, Black Hills
Gary Stripling, Black Hills

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

I hereby acknowledge receipt of check No. _____ dated 1/14/10

or cash received on _____ in the amount of $ 100 00

from Black Mills Midstream

for GW-356

Submitted by: Lawrence Romero Date: 4/14/10

Submitted to ASD by: Lawrence Romero Date: 4/14/10

Received in ASD by: _____ Date: _____

Filing Fee _____ New Facility _____ Renewal _____

Modification _____ Other _____

Organization Code 521.07 Applicable FY 2010

To be deposited in the Water Quality Management Fund.

Full Payment _____ or Annual Increment _____

Black Hills Midstream, LLC
1515 Wynkoop St, Suite 500
Denver, CO 80202

GW-356

No. 152940

Check Date: 01/14/2010

(005800) **WATER QUALITY MANAGEMENT FUND**, OIL CONSERVATION DIVISION, NEW MEXICO ENERGY, MINERALS, 1220 SOUTH ST FRANCIS DRIVE, SANTA FE NM 87505

Acct Mo.	Voucher	Inv. Date	Inv. #	Gross Amount	Discount Amount	Net Amount Paid
01/10	0001008409	01/11/10	01112010	$100.00	$0.00	$100.00
DESCRIPTION: 2010 DISCHRG PERMIT RENEWAL						
			Totals	$100.00	$0.00	$100.00

Detach at Perforation Before Depositing Check

Discharge Plan

For

Espinosa Canyon Amine Plant
Rio Arriba County, New Mexico

Prepared by:

Black Hills Midstream, LLC
(formerly known as Black Hills Exploration and Production, Inc.)
1515 Wynkoop Street, Suite 500
Denver, CO 80202

Prepared for:

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

January 20, 2010

Eric J. Barndt
Environmental Engineer
E-mail eric.barndt@blackhillscorp.com

1515 Wynkoop Street, Suite 500
Denver, Colorado 80202
P (303) 566-3446
F (720) 210-1361

January 20, 2010

New Mexico Energy, Minerals and Natural Resource Department
Oil Conservation Division
Attention: Mr. Leonard Lowe
1220 S. St. Francis Drive
Santa Fe, N.M. 87505

RE: Discharge Plan Renewal Application (Existing Discharge Permit GW-356)
Espinosa Canyon Amine Plant
Black Hills Midstream, LLC (formerly known as Black Hills Exploration and Production, Inc.)

Dear Mr. Lowe:

Attached are two copies of the Discharge Plan Renewal Application for the Black Hills Midstream, LLC (Black Hills), Espinosa Canyon Amine Plant (along with a $100.00 check for the renewal filing fee). This application is for renewal of Existing Discharge Permit GW-356 which was originally filed for and held by Black Hills Exploration and Production, Inc. Please note that our offices recently relocated. Please change our address in your database to update and send any future correspondence (including invoices for any remaining permit fees) to my attention at the following address:

Eric J. Barndt
Black Hills Corporation
1515 Wynkoop Street, Suite 500
Denver, Colorado 80202

The Black Hills Espinosa Canyon Amine Plant is located in Rio Arriba County approximately 16 miles southwest of Dulce, New Mexico. The facility is currently operating under Discharge Permit GW-356 as issued by the New Mexico Energy, Minerals and Natural Resource Department. This permit is due to expire on May 23, 2010. The enclosed Discharge Plan Renewal Application is being submitted to renew the permit for an additional 5 year term.

Once the New Mexico Energy, Minerals and Natural Resource Department Oil Conservation Division deems this application for discharge permit renewal administratively complete, Black Hills will provide notice (in accordance with the requirements of Subsection F of 20.6.2.3108 NMAC) to the general public by publishing a permit application synopsis (in English and Spanish) in a newspaper of general circulation in the location of the discharge. As we discussed previously, Black Hills plans to publish this notice in the Farmington Daily Times. We have enclosed a draft copy of the public notice that we plan to publish after receiving notice of administrative completeness and request that you review the draft and provide input on content. Within 15 days of public notice publication Black Hills will submit proof of notice, including proof of publication and an affidavit of posting.

Please note that Condition 10 of our Existing Discharge Permit GW-356 requires that underground process/wastewater pipelines be tested to demonstrate their mechanical integrity every 5 years. To meet this requirement Black Hills must propose the methods to be used to test and demonstrate mechanical integrity and notify the OCD at least 72 hours prior to conducting testing. Black Hills has until May 23, 2010 to complete the integrity testing as the Existing Discharge Permit GW-356 is in affect until that date (and represents the 5 year mechanical integrity testing deadline). Per your guidance, Black Hills has been in contact the OCD's Aztec, NM District Office Environmental Specialist, Mr. Brandon Powell, and are actively working to determine if and what testing is required. If testing is required we will work with Mr. Powell to determine the pipelines that need to be tested, agree on a testing method and plan for the testing. If required, once the method has been approved, we will notify OCD at least 72 hours before conducting and then proceed with testing. If required the results of the testing will be submitted to you and Mr. Powell for review.

Please call me at (303) 566-3446 if you have any questions while processing the enclosed Discharge Plan Renewal Application.

Sincerely,

Eric J. Barndt
Black Hills Corporation

Enclosures - Draft Public Notice
Renewal Filing Fee ($100.00 check)

cc: Brandon Powell, OCD; 1000 Rio Brazos Road; Aztec, New Mexico 87410
Fred Carl, Black Hills Corporation
Tim Mordhorst, Black Hills Corporation
Tim Hopkins, Black Hills
Doran Newlin, Black Hills
Gary Stripling, Black Hill

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal (**Existing Discharge Permit GW-356**) ☐ Modification

1. Type: Compressor Station with a combined site rated horsepower of 3,339 hp (3 compressors of 1,331 hp each)
2. Operator: Black Hills Midstream, LLC (formerly known as Black Hills Exploration and Production, Inc.)

   Address: 1515 Wynkoop Street, Suite 500; Denver, CO 80202

   Contact Person: Eric J. Barndt Phone: 303-566-3446
3. Location: ≈NW /4 ≈NE /4 Section: 13 Township: 30N Range: 4W

   Submit large scale topographic map showing exact location. See attached (Figure 1).
4. Attach the name, telephone number and address of the landowner of the facility site. See Attachment 4.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility. See Attachment 5 and attached figures (Figure 2/ENV-1001 and Figure 3/ENV-2001).
6. Attach a description of all materials stored or used at the facility. See Attachment 6.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included. See Attachment 7.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures. See Attachment 8.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems. See Attachment 9.
10. Attach a routine inspection and maintenance plan to ensure permit compliance. See Attachment 10.
11. Attach a contingency plan for reporting and clean-up of spills or releases. See Attachment 11.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included. See Attachment 12.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. See Attachment 13.
14. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Tim Hopkins Title: Vice President and General Manager, Black Hills Midstream, LLC

Signature:

Date: January 20, 2010

E-mail Address: Tim.Hopkins@blackhillscorp.com

ajc DN 1-20-2010

Attachment 3
Large Scale Topographic Map

See Figure 1.

Attachment 4
Name, Telephone Number and Address of Landowner of the Facility Site

Owner: Black Hills Midstream, LLC (formerly known as Black Hills Exploration and Production, Inc.)

Address: 1515 Wynkoop Street, Suite 500; Denver, Colorado 80202

Contact Person: Eric J. Barndt Phone: 303-566-3446

Attachment 5
Facility Description

The Espinosa Canyon Amine Plant is a natural gas conditioning facility that is owned and operated by Black Hills Midstream, LLC (Black Hills) which processes gas produced by Black Hills Gas Resources from adjoining well fields. It has the following processes: (1) compression, (2) amine treating, (3) dehydration, and (4) ancillary equipment including fuel and instrument air systems, generators, fugitive emissions and tanks. Figures 2 and 3 are a facility diagram and a process flow diagram, respectively.

Compression

Currently, the Espinosa Canyon Amine Plant operates three compressors and receives 8 to15 million standard cubic feet per day (MMscfd) of natural gas from the gathering system at a pressure of approximately 15 to 20 pounds per square inch gauge (psig). Black Hills, the owner and operator of the plant, has permitted an additional two compressors that may eventually be installed and operated at the existing facility. If and when this occurs it will increase the number of compressors from three to five and the facility would then be able to receive and compress up to 25 Mscfd of natural gas.

The natural gas contains hydrogen sulfide (H_2S) at a concentration near or below 250 parts per million (ppm) and carbon dioxide (CO_2) below 3% concentration. This inlet gas passes through a separator to remove entrained water and possibly some condensed hydrocarbons. These liquids are sent to storage tanks (sour water storage tanks).

The gas then enters a manifold where it is currently distributed to three engine driven compressors (with expansion plans to increase to a total of five engine driven compressors), each capable of handling approximately 5 MMscfd of gas (existing units C-101, C-201, C-301; future expansion units identified as C-401 and C-501). Each compressor boosts the pressure of the gas from inlet conditions (15 to 20 psig) to 500 psig. The engines that power these compressors release air emissions to the atmosphere under current New Source Review (NSR) Permit Number 3111-M3R2 and Title V Operating Permit Number P248, both held with the New Mexico Environment Department (NMED). Under normal operating conditions, the three existing natural gas compressor engines (emission units C-101, C-201 and C-301) receive "sour gas" (a natural gas stream that contains elevated levels of H_2S or CO_2). After compression, the "sour gas" is routed to the amine unit for H_2S and CO_2 removal.

In December 2006, revisions to the NSR Permit Number 3111-M3R2 allowed the facility to operate in the "sweet gas" or Alternate Operating Scenario (AOS) 1 mode. In AOS 1 mode the "sweet gas" (a natural gas stream that does not contain elevated levels of H_2S or CO) bypasses the amine unit and is routed directly to the dehydrator without the Amine and Thermal Oxidizer units in operation (see Amine Treating section below for more details). In order for the plant to operate in AOS 1 mode, the field gas wells that produce over 4 ppm H_2S must be shut down and not be allowed to enter the field gas supply system and the plant will operate by performing compression and dehydration only.

When installed/constructed, the two additional future natural gas compressor engines (assigned emission units C-401 and C-501) will operate in normal operating and AOS1 modes in identical fashion to the existing compressors.

The existing and future compressors have or will have three stages of compression, inter stage cooling, and after stage cooling. Between each stage, liquids are condensed, separated and sent to the hydrocarbon drain tank (TK-103). The pressurized natural gas then passes through a filter coalescer to remove water and trace amounts of lubricating oil.

Amine Treating

Under normal operating conditions the pressurized "sour gas" is then contacted by an amine and water solution through a column of trays. The amine solution absorbs the H_2S and CO_2 contained in the gas. The amine mixture stays in the amine treating process. The rest of the gas ("treated sweet gas") leaves this contactor and is sent to the dehydration process with an H_2S concentration below the pipeline sales specification of 4 ppm.

The amine mixture, now separated from the "treated sweet gas", consists of amine that is chemically bound to the H_2S and CO_2 and is referred to as rich amine. The rich amine enters a flash vessel, where its pressure is reduced to approximately 80 psig. The rich amine is heated by cross exchange with hot, lean amine (amine that is free of H_2S and CO_2) and fed to an amine still, comprised of a second column of trays. The amine enters at the top of the column and drops through the trays. Steam is produced at the bottom of the column by circulating amine through a fired amine reboiler (unit R-101B). This steam moves through the trays and acts to liberate the H_2S and CO_2 from the rich amine. The purified amine (lean amine) leaves at the bottom of the amine still and is pumped through the rich/lean heat exchanger and then through an air cooler and reduced in temperature to below 115 ^{o}F. It is then filtered and passed through a charcoal bed for removal of hydrocarbons. It is then boosted in pressure to 500 psig and recirculated back to the contactor.

The remaining gas stream from the amine still consists of H_2S, CO_2, methane, and water vapor liberated from the rich amine and is referred to as acid gas. The acid gas leaves the top of the amine still and passes through an air cooler. It then enters a reflux drum where condensed water is removed. This water is recycled back to the top of the still as reflux via reflux pumps.

The acid gas is sent to a secondary knockout vessel. This vessel captures any residual amine still entrained in the acid gas. The acid gas is then routed to the acid gas thermal oxidizer for disposal.

The acid gas thermal oxidizer (unit TO-101) incinerates the acid gas (along with vent gases from amines, glycols, storage tanks and the benzene, toluene, ethyl benzene, and xylene [BTEX] unit SK-103). The H_2S in this mixed gas stream is converted to sulfur dioxide (SO_2) and released to the atmosphere. Volatile organic compounds (VOCs) and other compounds are also released. The acid gas thermal oxidizer (TO-101) requires supplemental fuel to ensure the Btu content of the vent stream is sufficient for proper combustion.

Dehydration

Under normal operating conditions the "treated sweet gas" leaves the amine contactor and passes through a knockout vessel for any carry-over of entrained amine before being routed to the glycol contactor. Under AOS 1 mode operations the "sweet gas" that bypasses the amine unit is sent directly to the glycol contactor. The glycol contactor is a trayed column. In this vessel, triethylene glycol (TEG) is used to reduce the moisture content of the "treated sweet gas" and "sweet gas" to less than 7 pounds of water per million standard cubic feet (lb/MMscf). The TEG leaves the contactor and is sent to a glycol regenerator. The glycol regenerator contains a glycol reboiler (unit R-102B) which is a direct-fired vessel used to heat the glycol and liberate the water vapor.

The water vapor is removed by high regenerated glycol temperatures in which the steam vapors pass to a BTEX unit (R-102A). As this steam makes its passes through several condensing coils the steam is condensed to water and some hydrocarbons (including BTEX). The gas vapors pass out of the scrubber and onto the thermo oxidizer (T-101) for incineration.

Table 1, presented below contains a list of equipment currently located and in operation at the facility as well as the engines for the two additional future compressors (C-401 and C-501).

Table 1
Espinosa Canyon Amine Plant
Equipment List

Unit No.	Unit Description	Make & Model	Serial No.	Capacity	Manufacture Date
C-101	IC Compressor Engine	Caterpillar G3516 TALE	4EK02608	1113 HP	9/99
C-201	IC Compressor Engine	Caterpillar G3516 TALE	4EK01857	1113 HP	6/98
C-301	IC Compressor Engine	Caterpillar G3516 TALE	4EK01969	1113 HP	7/09
C-401	IC Compressor Engine	Caterpillar G3516 TALE	TBD*	1113 HP	TBD
C-501	IC Compressor Engine	Caterpillar G3516 TALE	TBD	1113 HP	TBD
TO-101	Acid Gas Thermal Oxidizer	Bekaert CEB-100 080404-20	080404-02	NA	NA
R-101A	Amine Regenerator Still	QB Johnson	472204	15 MMSCF/D	6/05
R-101B	Amine Reboiler	QB Johnson	471304	600,000 Btu/hr	6/05
R-102A	Dehydrator, Glycol Still	QB Johnson	474104	15 MMSCF/D	6/05
R-102B	Glycol Reboiler	QB Johnson	474104	800,000 Btu/hr	6/05
G-103	Primary Natural Gas Generator IC Engine	Caterpillar G3512	CTM00416	861 HP	7/07
G-104	Secondary Natural Gas Generator IC Engine	Ford WSG1068	07RS66831	96 HP	1/07

* TBD = to be determined

Ancillary Systems

The plant has the following ancillary systems to support the primary process of compression, amine treating and glycol dehydration.

Fuel and Instrument Air Systems

The purified natural gas from the plant is used to supply fuel to the reboilers, compressors, control building and thermal oxidizer (temperature control). This system consists of a knockout vessel to remove liquids and pressure regulators to control pressure of the distribution headers. The instrument air system contains an air compressor and pressure regulators for operation of plant instrumentation and control valves.

Generators

The plant is powered by a primary electrical generator engine fueled by natural gas (emission unit G-103). The backup power source is the secondary electrical generator engine, also fueled by natural gas (unit G-104). Information related to the generators is included on the Espinosa Canyon Amine Plant Equipment table (Table 1), above.

Fugitive Emissions

The plant contains connections, flanges, pumps and valves. Fugitive emissions are released from these components as a result of their operation.

Tanks

Several tanks are operated at the plant for various functions. The vapor emissions from most of the tanks are vented to and combusted in the acid gas thermal oxidizer (TO-101), thus reducing the emissions to insignificant levels. The other tanks are vented to the atmosphere. However the air emissions from these atmospherically vented tanks are negligible due to the: (1) limited size of tanks (500 gallons or less); and (2) low vapor pressure for both the amine and TEG resulting in insignificant emissions. Table 2, below lists and describes the tanks at Espinosa Canyon Amine Plant.

Table 2
Espinosa Canyon Amine Plant
Tank List

Name	Material	Form	Volume	Location	Construction	Spill Prevention/ Detection
TK-101 Glycol Drain Tank	Triethylene Glycol	Liquid	500 gallon	Below Grade	Steel, Double-walled	Leak Detection Gauges
TK-102 Amine Drain Tank	Amine	Liquid	500 gallon	Below Grade	Steel, Double-walled	Leak Detection Gauges
TK-103 Condensate Storage Tank	Condensate	Liquid	200 barrel (8,400 gallon)	Above Ground	Steel	Leak Detection Gauges
TK-104 Amine Storage Tank	Amine	Liquid	6,000 gallon	Above Ground	Steel	Earthen Berm
TK-105 Deionized Water Tank	Deionized Water	Liquid	6,000 gallon	Above Ground	Steel	Earthen Berm
TK-107 Glycol Storage Tank	Triethylene Glycol	Liquid	1,000 gallon	Above Ground	Steel	Earthen Berm
TK-108 Potable Water Tank	Potable Water	Liquid	100 barrel (4,200 gallon)	Above Ground	Steel	Earthen Berm
TK-109 Lube Oil Skid Drain Tank	Lube Oil	Liquid	500 gallon	Below Grade	Steel, Double-walled	Leak Detection Gauges
Slop Oil Tank	Slop Oil	Liquid	300 barrel (12,600	Above Ground	Steel	Earthen Berm

Table 2
Espinosa Canyon Amine Plant
Tank List

Name	Material	Form	Volume	Location	Construction	Spill Prevention/ Detection
			gallon)			
Refined Engine Oil Tank	Refined Engine Oil	Liquid	200 barrel (8,400 gallon)	Above Ground	Steel	Earthen Berm
Septic Tank	Waste	Solid, Liquid	1000 gallon	Below Grade	Concrete	Leak Detection Gauges

Note: TK-106, a 500 gallon Condensate Drain Tank, was taken out of service and removed in 2009. As required a notice of tank removal and a Tank Removal Closure Report were submitted to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division on May 28 and June 24, 2009, respectively.

Attachment 6

Materials Stored or Used at the Facility

Table 3 lists materials to be stored or used at the facility. Table 2 provides detailed description of the tanks in which the materials are stored.

Table 3
Espinosa Canyon Amine Plant
Material Stored or Used

Material	Storage Container 1	Storage Container 2
Process Specific Chemicals		
Amine	TK-102 Amine Drain Tank	TK-104 Amine Storage Tank
Lube Oil	TK-109 Lube Oil Drain Tank	Above ground steel tanks – stored within appropriate secondary containment
Triethylene Glycol	TK-101 Glycol Drain Tank	TK-107 Glycol Storage Tank
Acids/Caustics (small laboratory-sized commercial plastic or steel containers) – stored within appropriate secondary containment		
Detergents/soaps (commercial plastic or steel containers) – stored within appropriate secondary containment		
Solvents, inhibitors and degreasers (commercial plastic or steel containers) – stored within appropriate secondary containment		
Paraffin Treatment/Emulsion breakers (125 gallon tote) – stored within appropriate secondary containment		
Biocides (commercial plastic or steel drums or totes) – stored within appropriate secondary containment		
Others		
Condensate	TK-103 Condensate Storage Tank	NA
Deionized water	TK-105 Deionized Water Tank	NA
Potable Water/ Waste	Septic Tank	TK-108 Potable Water Tank
Liquid drainage from thermal oxidizer	TK-102 Amine Drain Tank	NA

Attachment 7
Effluent and Waste Solids Description

The Espinosa Canyon Amine Plant produces effluent and waste solids from both process and nonprocess streams.

Effluent and Waste Solids from Process Streams

Both effluents and waste solids are produced from the process streams. Effluents from the process stream are generated by the following sources.

- Produced water is generated from the East Blanco Gas Field operated by Black Hills Gas Resources. Unfiltered produced water samples from the East Blanco Gas Field has a TDS concentration that ranges from 1,500 to 7,000 mg/l. The largest dissolved component in the sample is chloride, followed by sulfate. The waste materials discharged to a salt water disposal (SWD) well (permitted separately with the New Mexico Energy, Minerals and Natural Resource Department as Simms Federal Well Number 1; SWD-665; API Number 3003922756).
- Condensate – Condensate is produced through the compression process and settles into the aboveground Condensate Storage Tank (TK-103). This waste is considered an exempt waste as stated in the RCRA Subtitle C regulations listed in 40CFR261.4(b)(5). This tank fills at approximately several hundred barrels per year. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.
- Dehydration – Periodic regeneration of dehydration units and triethylene glycol (TEG) creates a waste stream that settles into the below-grade Glycol Drain Tank (TK-101). This waste is considered an exempt waste as stated in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations listed in 40CFR261.4(b)(5). TK-101 fills at a rate of approximately 1,000 gallons per year. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.
- Amine – Wastewater is produced in the amine process that settles into the below-grade Amine Tank (TK-102). This waste is considered an exempt waste as stated in the RCRA Subtitle C regulations listed in 40CFR261.4(b)(5). TK-102 fills at a rate of approximately 500 to 1,000 gallons per year (with approximately 100 to 600 gallons per year derived from the amine process). Wastes are manifested or tracked with appropriate contractor for transportation and disposal.
- Thermal Oxidizer Scrubber Waste - The thermal oxidizing process produces some liquid waste which settles in the Thermal Oxidizer scrubber (V-108) and is dumped into a 100 gallon aboveground tank. This waste is considered an exempt waste as stated in the RCRA Subtitle C regulations listed in 40 CFR 261.4(b)(5). This is a relatively dry process and fills the aboveground 100 gallon tank at a rate below 500 gallons per year. This waste is manifested or tracked with appropriate contractor for transportation and disposal.
- Thermal Oxidizer Knockout Waste - The thermal oxidizing process produces additional liquid waste which settles in the Thermal Oxidizer Knockout (V-107) and is subsequently transferred to the below-grade Amine Tank (TK-102). As noted above, TK-102 fills at a rate of approximately 500 to 1,000 gallons per year (with approximately 400 gallons per

year derived from V-107). Wastes are manifested or tracked with appropriate contractor for transportation and disposal.

- Lube Oil – The compressor engine produces small amounts of lube oil waste that settle into the below-grade Lube Oil Drain Tank (TK -109). This waste is considered non exempt as stated in the RCRA Subtitle C and D regulations. TK-109 fills at a rate of approximately 500 gallons per year. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.

The industrial process also produces a small amount of solid waste from the used oil filter and oily rags. These wastes are considered non exempt as stated in the RCRA Subtitle C and D regulations. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.

Effluent and Waste Solids from Nonprocess Streams

Both effluents and waste solids in the nonprocess streams are produced by the following sources:

- Domestic Trash – Small amounts of trash are generated (usually less than one pound per day). These wastes are collected and sent to an appropriate landfill.
- Sanitary Waste – Sanitary waste is generated and collected in the septic tank at approximately 40 gallons per day. The waste is treated in a leach field just west of the septic tank.

Quality Characteristics of Effluents and Waste Solids from Process and Non Process Wastes

Operational testing programs for the analysis of these effluents and wastes have been developed with the approval of the Oil Conservation Division (OCD).

Commingled Effluent and Waste Streams

Individual effluents and solid wastes are not be commingled. Exceptions to this policy will only occur with the approval of the OCD.

Attachment 8
Liquid and Solid Waste Collection/Treatment/Disposal Procedures

The Espinosa Canyon Amine Plant contains both below-grade and aboveground tanks (Table 2). All aboveground tanks are surrounded by earthen berms with a capacity of at least 110% of the tank volume. Each berm contains a bed of gravel that is at least one inch deep. Except for the septic tank, all below-grade tanks are made of steel and double-walled. The below-grade tanks sit approximately 4 feet underground, rest on approximately 6 inches of sand, and are surrounded by soil. The septic tank accepts approximately 40 gallons per day of sanitary waste that feeds a leach field just west of the tank.

Attachment 9
Modifications to Existing Collection/Treatment/Disposal Systems

Other than the removal of TK-106 during 2009, as noted in Attachment 5, Facility Description, this discharge plan renewal application does not propose any material modifications from the original application. As noted in Attachment 5, TK-106 which is a 500 gallon Condensate Drain Tank, was taken out of service and removed in 2009. Required notices of tank removal and a Tank Removal Closure Report were submitted to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division on May 28 and June 24, 2009, respectively.

Attachment 10
Routine Inspection and Maintenance Plan

As part of daily plant walk-throughs, plant personnel visually inspect aboveground tanks. Monthly leak inspections of the aboveground tanks are be conducted at the facility. Monthly leak inspection sheets are kept onsite and at the Black Hills regional office in Bloomfield, New Mexico. Leaks from below-grade tanks are monitored by gauging primary and secondary tank shell monthly. Below-grade tank leaks are noted and addressed. Additional details are provided in the following Leak Detection System for Below-Grade Tanks section.

Leak Detection System for Below-Grade Tanks
The Espinosa Canyon Amine Plant has three underground process tanks:

TK-101 – Glycol Drain Tank
TK-102 – Amine Drain Tank
TK-109 – Lube Oil Drain Tank

These tanks are shown on the attached drawing, ENV-2001. Each tank has double walls that are constructed of steel. Each tank has the same dimensions and volumetric capacity: the tanks are 72 inches long and are 50 inches in diameter; with volumetric capacities of 560 gallons.

Per the Underground Tank Inspection Procedure, each tank is visually inspected for leaks on a monthly basis. The inspections include removal of a 2 inch plug from the surface of the tank, exposing the area between the tank walls. Then a dipstick-like rod is inserted into the annular space between the tank walls to the base of the tank. The rod is then removed so that the rod surface can be inspected for the presence of moisture, indicating that a leak has developed. The results of these inspections are documented on the Monthly Underground Tank Inspection Form. We have included copies of the Underground Tank Inspection Procedure and Monthly Underground Tank Inspection Form with this renewal application as Appendix A and B. Note that appropriate H_2S safety precautions are taken while inspecting the tanks as they pose the threat of exposure to small amounts of H_2S if found to be leaking (see following H_2S Safety Precautions section for additional details).

H_2S Safety Precautions
Black Hills has designed three levels of safety precautions for the Espinosa Canyon Amine Plant to prevent potential injury to personnel from accidental release of H_2S vapors per OCD rule 19NMAC 15.3.118.

The first level of safety measures is a fixed point ambient monitoring system that consists of several fixed point sensors capable of detecting H_2S, sulfur dioxide (SO_2), and lower explosive limit (LEL). These sensors are equipped with an audio (siren) and visual (strobe light) alarm system. If a sensor reaches a threshold value for any of these components, an alarm sounds that notifies people in the plant vicinity of the hazard and prompts the operators to follow the appropriate safety procedures.

The second level of safety measures is individual H_2S monitors. All plant personnel, contractors, and visitors will have individual H_2S monitors to detect unsafe airborne levels of H_2S. In addition, all operating activities that may potentially expose the operator to H_2S must be performed in

accordance with the "buddy system" and follow written safety procedures as a preventive measure against potential injury.

The third level consists of safety equipment, skid monitoring, and the plant emergency shutdown (ESD) system. The system contains:

- Automated block valves on the inlet and outlet headers;
- Automated vent valves at various points on the piping;
- Sensing devices on the piping and equipment to indicate when a problem exists; and
- A control system to receive input from the sensing devices and to send signals to the automated block and vent valves.

In the event one of the sensing devices reaches a threshold alarm setpoint, a signal to the control system is generated. This signal alerts operating personnel and triggers an automated shutdown of the facility. There are three types of shutdowns that can occur at the plant.

In addition to implementing these measures, our operators attend regular H_2S safety training to review safety protocols and discuss potential safety issues.

Attachment 11
Contingency Plan for Reporting and Clean-up of Spills or Releases

Black Hills procedures require prompt attention to spills. While major spills are unlikely at the plant, plant personnel will respond to spills using the following procedures:

- Employees will take appropriate cleanup actions.
- If a spill involves more than 25 gallons of stored material or any petroleum material, plant employees will immediately notify the Black Hills regional emergency coordinator or designee.
- The Black Hills regional emergency coordinator will confer with Black Hills corporate environmental staff to contact appropriate environmental agencies and the spill will be mitigated as soon as possible.

Absorbent pads and rags are available at the plant. Contaminated materials are handled according to applicable environmental regulations.

Attachment 12
Geological/Hydrological Information for the Facility

Hydrologic/Geologic Information

Surface water run-off from the Espinosa Canyon Amine Plant is expected to follow the local topographic contours (Figure 1). There are no significant bodies of water within one mile of the perimeter of the facility. An unnamed wash, with a maximum grade of approximately 20 feet per mile), runs from the southeast to the northwest of the plant site. This wash flows intermittently and is dry most of the year. A second even smaller wash runs south to north and crosses the western edge of the plant (Figure 1). This smaller wash also flows intermittently and is dry most of the year. The flooding potential at the facility is small.

Relatively shallow groundwater in the San Juan Basin is found in the Quaternary alluvium deposits that fill stream channels; however, the primary sources of groundwater are the Tertiary sandstones that compose the Uinta-Animas aquifer. The Uinta-Animas aquifer is a fluvial deposit that includes the San Jose formation, the underlying Animas formation and its lateral equivalent, the Nacimiento, and the Ojo Alamo sandstone. These fluvial deposits are heterogeneous in nature and contain localized variations in water quality and quantity (COGCC 2000). In the northeastern part of the San Juan Basin, the maximum thickness of the aquifer is approximately 3,500 feet (USGS 2001). Groundwater recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the hydrologic units. The available data in the area nearest the District indicate recharge in the area of Durango, Colorado. Groundwater generally flows toward the San Juan River and its tributaries, where it is discharged to streamflow, to the alluvium that is locally present in canyons, or to evapotranspiration (USGS 2001). Some water wells drilled to the San Jose, Nacimiento, and Ojo Alamo formations have demonstrated flow rates of 100 gallons per minute (gpm). Most wells display water yields of less than 20 gpm (BLM 1987). Groundwater recharge for the District area is derived from the edges of the San Juan Basin, a geologic structure mainly in southern Colorado where the rock formations are closer to the surface. The primary groundwater quality concerns identified by the State of New Mexico (NMED 2001) in the San Juan River watershed are caused by releases from leaking storage tanks and from oil and gas production including pipelines, storage, distribution, and refining sites. The Uinta-Animas aquifer contains fresh to moderately saline groundwater. Dissolved solids generally increase along the groundwater flow path toward the San Juan River. Although the chemical composition of the groundwater depends upon the characteristics of the producing aquifer and the location of discharge, groundwater is generally considered hard (BLM 1987). According to the New Mexico Office of the State Engineer, the approximate average depth to groundwater of two wells within a 5,000 meter radius of the Espinosa Canyon Amine Plant is 230 feet (New Mexico Office of the State Engineer 2010). The quality of groundwater ranges from fair to poor and the total dissolved solids (TDS) content in the San Juan Basin exceeds 1,000 milligrams per liter (mg/L), and can range from 500 to 4,000 mg/L (BLM 1987; USGS 2001).

The aquifer in the area of interest is the San Jose formation. The aquifer is composed of discontinuous, fluvial channel sandstones and over-bank mudstones. The San Jose formation is exposed at the surface. Soil cover is sandy and immature, and derived from weathered San Jose formation or, near intermittent streams, sandy alluvium.

Relevant additional information will be provided to the OCD at their request.

Attachment 13
Facility Closure Plan and Compliance Information with other OCD Rules, Regulations, or Orders

Information necessary to demonstrate compliance with any other OCD rules, regulations or orders will be provided as requested. In the future, when facility closure is planned, Black Hills will prepare a closure plan in accordance with the New Mexico Water Quality regulation number 3107A.11.

Appendix A
Underground Tank Inspection Procedure

Underground Tanks Inspections are required Monthly by OCD. Main purpose is to determine if leakage is present between the inner and outer shell of the tanks. Repeat Steps 1 – 3 below for Tanks:

TK – 101
TK – 102
TK – 109

Step 1
Remove the test port cap.

Step 2
Using Tank Gauge Tape, insert the tape into the test port piping.

Step 3
Remove the tape and determine if any liquid has been contacted by the tape. If not liquid is detected, record the results in Section 4 of the Discharge Water Permit Environmental Plan. If present, retest carefully with dry tank tape. If re-verified liquid is present, notify plant management. If a leak is detected the Environmental Department must also be notified so they can make a courtesy notification to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division.

If liquid is present in the annular space of the underground tank, the tank must be excavated and the liquid infiltration route determined. Repair must be made as soon as possible.

The following breakdown for spill volumes requires associated actions:

For Spills >0 to 25 Gallons, eliminate leak, clean up spill and report in Section 5 methods and repairs.

For Spills 25 Gallons to 5 barrels, eliminate leak, contain spill through excavation or containment, notify Plant Management and Corporate for instructions.

For Spills > 5 barrels to 25 barrels, eliminate leak, contain spill through excavation or containment, notify Plant Management and Corporate for instructions. State must be notified of MINOR Spill Event within 24 hours. Report to follow to State within 15 days.

For Spills > 25 barrels, eliminate leak, contain spill through excavation or containment, notify Plant Management and Corporate for instructions. State must be notified of MAJOR Spill Event within 24 hours. Report to follow to State within 15 days.

Appendix B
Monthly Underground Tank Inspection Form

Espinosa Canyon Amine Plant

Monthly Underground Tank Inspection Form

(file completed forms in Section 4)

Note: Permit Condition 2 references the Permit Application commitments. Underground Tank Inspection is required Monthly. Inspection required for TK-101 (Glycol), TK-102 (Amine) and TK-109 (Comp Waste Oil)

Underground Tank # Inspection Date	Performed By:	Results	Comment

If liquid/moisture is detected on "dip-stick" test device, retest. Report findings to management and in the comment column. See Procedure in Section 4.

References

Bureau of Land Management (BLM), 1987. Proposed Farmington Resource Management of Plan and Final Environmental Impact Statement, Farmington Field Office. Farmington, New Mexico, September.

Colorado Oil and Gas Conservation Commission (COGCC), 2000. Summary Report of Braderhead Testing, Gas Well Remediation, and Ground Water Investigations, San Juan Basin, La Plata County, Colorado. May.

New Mexico Water Quality control Commission, New Mexico Environment Department (NMED), 2001. "Water Quality And Water Pollution Control In New Mexico ~ 2000, A State Report Required By The U.S. Congress Under §305(b) of the Clean Water Act." In Part II: Surface and Groundwater Quality: Chapter 2 – New Mexico's Surface Water Basins. New Mexico Environment Department. Santa Fe, New Mexico. February.

U.S. Geological Survey (USGS), 2001. "Groundwater Atlas of the United States-Arizona, Colorado, New Mexico, Utah: HA 730-C. Colorado Plateau Aquifers." Reston, Virginia. http://sr6capp.er.usgs.gov/gwa/ch c/C-text8.html.

New Mexico Office of the State Engineer, 2010. New Mexico Water Rights (Online) Reporting System, Water Column/Avg Depth To Water Report; Using UTMNAD83 Radius Search feature found at: http://nmwrrs.ose.state.nm.us/WRDispatcher?page=waterColumn Accessed and ran January 19, 2010.

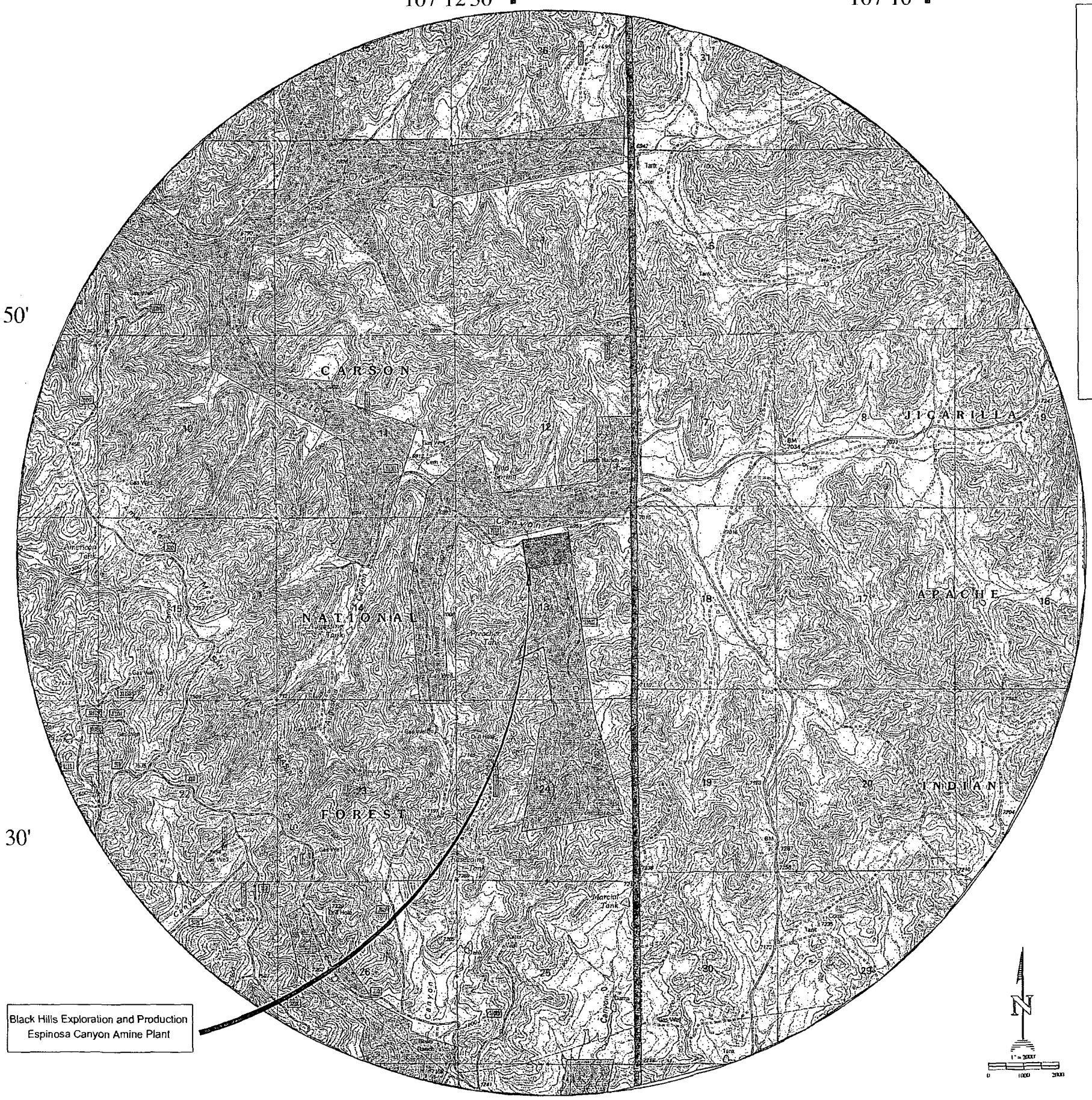
Figures

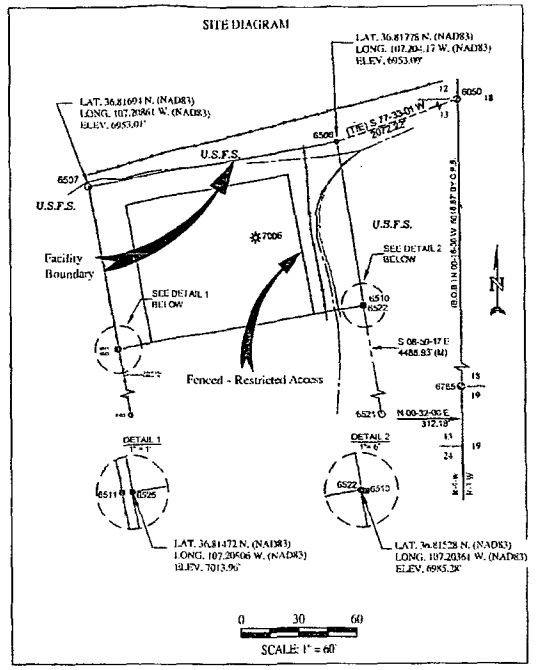
107 12'30"

107 10'

47 50'

47 30'





LEGEND

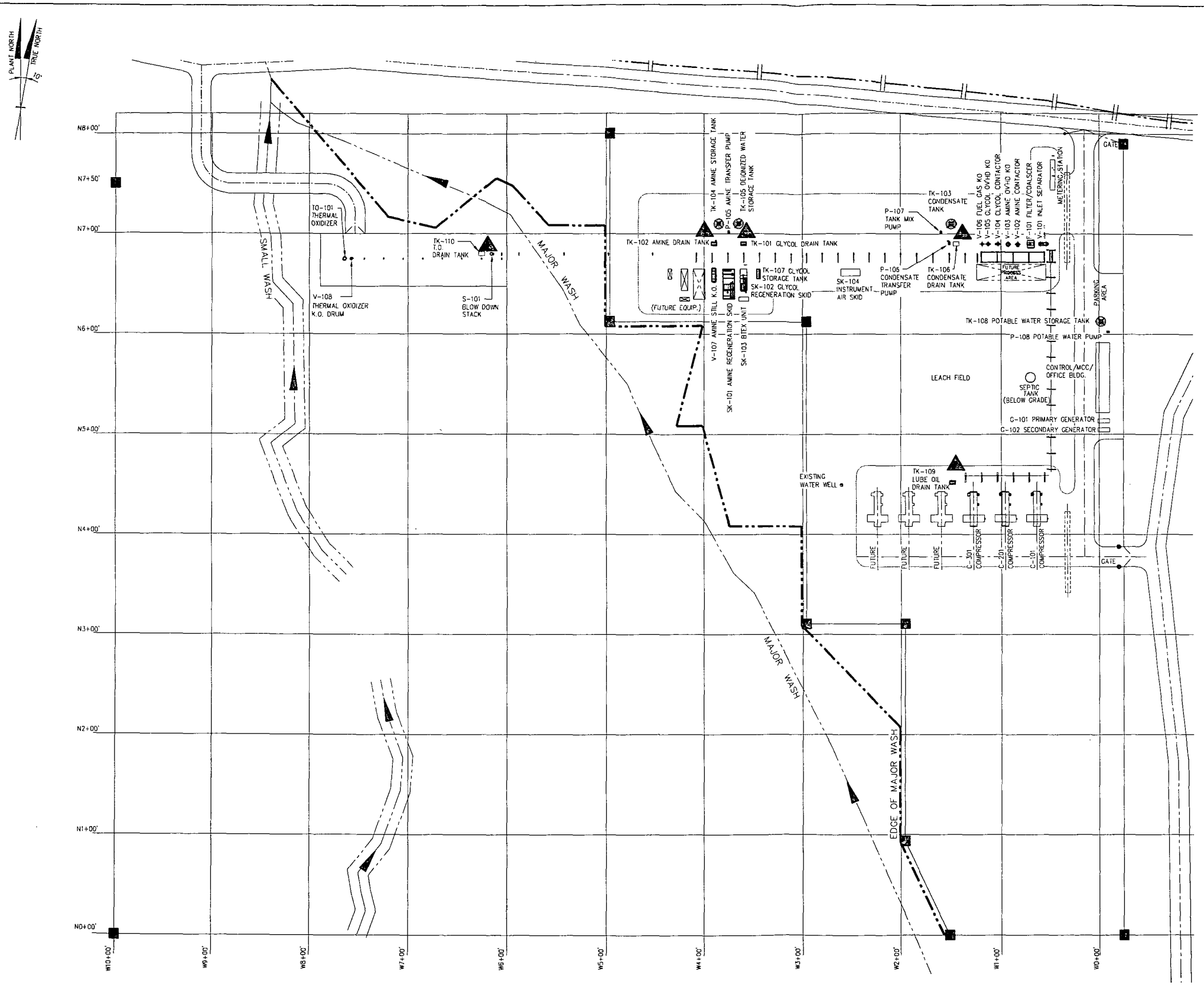
Access Roads

Black Hills Exploration and Production
Espinosa Canyon Amine Plant
Topographic Map Quadrangles
FIGURE 1
SEC. 13, T-30-N, R-4-W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO

REVISION	REV. BY	DATE

Daggett Enterprises, Inc.
Surveying and Oil Field Services
P. O. Box 15068 Farmington, NM 87401
Phone: (505) 326-1772 Fax (505) 326-6019

DRAWN BY: BL | RDWF: MN749 | CADD/E: MN749501 | DATE: 6/24/03



LEGEND:

BLACK HILLS PROPERTY FENCE
FENCE CORNER
INDICATES BELOW GROUND TANK

REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY
B	ISSUED FOR DESIGN	9/14/04	LKS		
A	ISSUED FOR APPROVAL	8/18/04	ROY		

NUMBER	REFERENCE

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

PEREGRINE	SIGNATURE	DATE
DRAWN	LKS	09/14/04
DESIGNED		
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME		

CLIENT PROJECT NO.

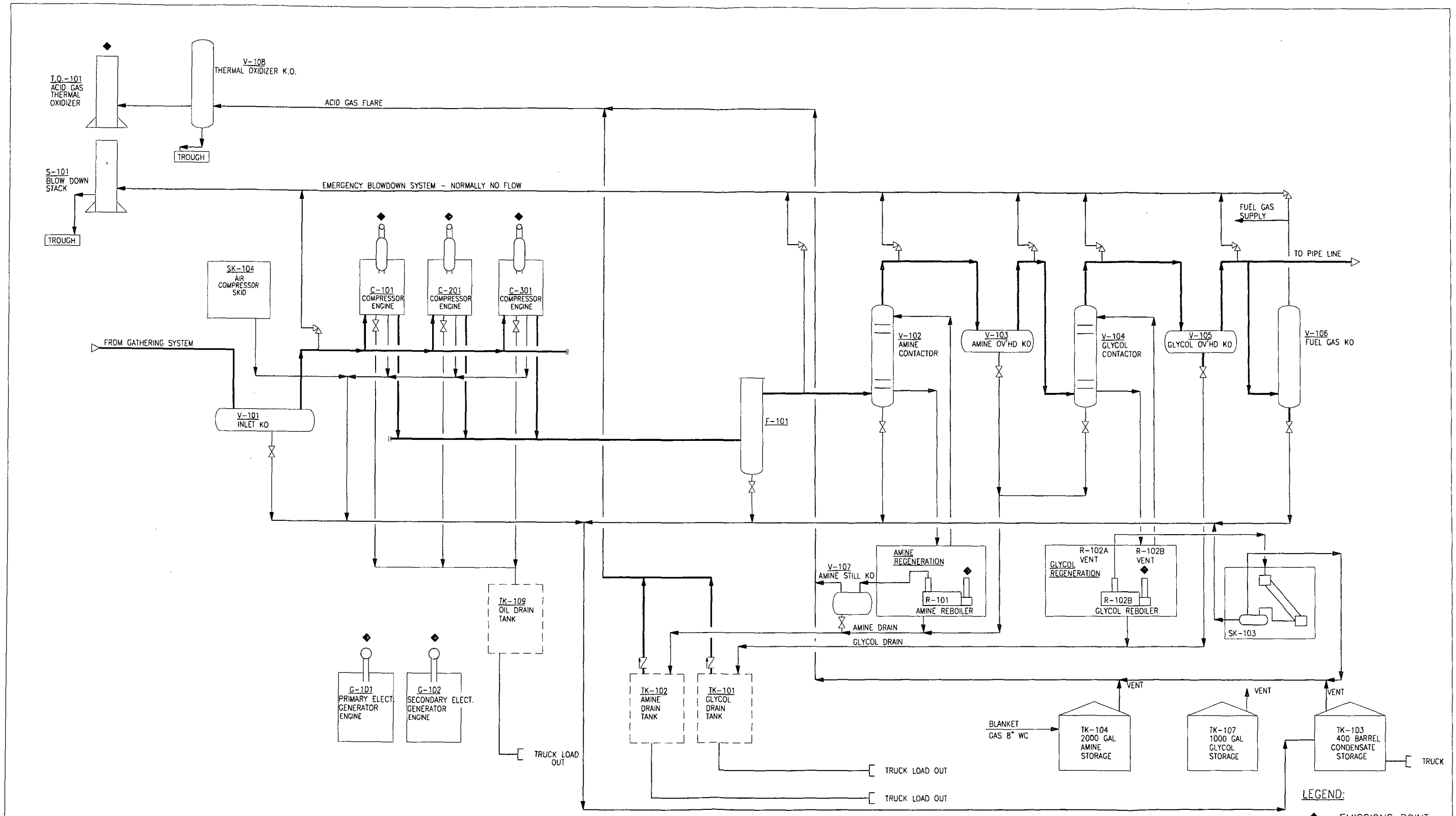
PROJECT NO. 200404103

SCALE: 1" : 50'-0"

BLACK HILLS EXPLORATION AND PRODUCTION, INC.
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION AND PRODUCTION ESPINOSA CANYON AMINE PLANT FIGURE 2

REVISION	DRAWING NO.	SHEET NO
B	ENV-1001	1 OF 1



REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY
B	REVISED PER AS-BUILT MARK UP	1/14/10	DSA		
A	ISSUED FOR APPROVAL				

NUMBER	REFERENCE

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

McDonald	SIGNATURE	DATE
DRAWN		
DESIGNED		
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME:		

CLIENT PROJECT NO.	
PROJECT NO.	200404103
SCALE:	NONE

BLACK HILLS EXPLORATION
AND PRODUCTION, INC.
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION AND PRODUCTION ESPINOSA CANYON AMINE PLANT FIGURE 3

REVISION	DRAWING NO.	SHEET NO.
B	ENV-2001	1 OF 1

Enclosures
Draft Public Notice
Renewal Filing Fee ($100.00 check)

PUBLIC NOTICE

Black Hills Midstream, LLC (formerly known as Black Hills Exploration and Production, Inc.), with offices at 1515 Wynkoop Street, Suite 500; Denver, CO 80202, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for renewal of their discharge plan permit *(GW-356) for their Espinosa Canyon Amine Plant located in the NW ¼, NE ¼ of Section 13, Township 30 North, Range 4 West in Rio Arriba County, New Mexico. The facility does not have a physical mailing address but is located approximately 16 miles southwest of Dulce, New Mexico.*

The facility provides compression, amine treating and dehydration of natural gas. Materials generated or used at the facility include field-grade and treated pipeline-quality natural gas; new and used compressor lubrication oil; gear oil; waste waters from facility operations and engine or scrubber wash downs; condensate; and sanitary waste water. The facility generates approximately: (1) 8,400 to 12,600 gallons per year of condensate generated through the natural gas compression process; (2) 1,000 gallons per year of waste water derived from the regeneration of dehydration units and triethylene glycol (TEG); (3) 100 to 600 gallons per year of waste water produced in the amine process; and (4) 900 gallons per year of waste water derived from the thermal oxidizing process. All of these wastes are considered exempt wastes as stated in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations listed in 40CFR261.4(b)(5). These wastes are manifested or tracked with appropriate contractor for transportation and disposal. In addition the facility generates approximately 500 gallons per year of lube oil waste produced by the compressor engines. This waste is considered non exempt as stated in the RCRA Subtitle C and D regulations and is manifested or tracked with appropriate contractor for transportation and disposal. The industrial process also produces a small amount of solid waste from the used oil filter and oily rags. These wastes are considered non exempt as stated in the RCRA Subtitle C and D regulations. Wastes are manifested or tracked with appropriate contractor for transportation and disposal.

All liquids utilized at the facility are stored in dedicated above ground or below-grade storage tanks prior to offsite disposal or recycling at an OCD approved site. All storage tanks are within properly engineered and OCD approved secondary containments. *The aquifer most likely to be affected is approximately 250 feet in depth, and the total dissolved solids concentration of this aquifer is approximately 1,000 milligrams per liter (mg/L), and can range from 500 to 4,000 mg/L 420 mg/l.*

Any interested person or persons may obtain information; submit comments or request to be placed on a facility-specific mailing list for future notices by contacting Leonard Lowe at the New Mexico OCD at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3492. The OCD will accept comments and statements of interest regarding the renewal and will create a facility-specific mailing list for persons who wish to receive future notices.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

May 23, 2005

Mr. Randy Fox
Black Hills Exploration and Production, Inc.
350 Indiana Street, Suite 400
Golden, Colorado 80401

RE: Discharge Permit GW-356
Black Hills Exploration and Production, Inc.
Espinosa Canyon Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Fox:

The ground water Discharge Permit application GW-356 for the Black Hills Exploration and Production, Inc. Espinosa Canyon Gas Plant located in the NW/4 NE/4 of Section 13, Township 30 North, Range 4 West, NMPM, Rio Arriba County, New Mexico, **is hereby approved** under the conditions contained in the enclosed attachment. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the New Mexico Oil Conservation Division (OCD) Santa Fe Office within 30 days of receipt of this letter.**

The original discharge permit application was submitted on March 20, 2005 plus all additional information supplied, dated May 16, 2005 and approved May 23, 2005. The Discharge Permit application, dated March 20, 2005, was submitted pursuant to 20 NMAC 3106 of the New Mexico Water Quality Control Commission (WQCC) Regulations. Please note 20 NMAC 3109.G., which provides for possible future amendment of the plan. Please be advised that approval of this permit does not relieve Black Hills Exploration and Production, Inc. of liability should operations result in pollution of surface water, ground water, or the environment.

Please be advised that all exposed pits, including lined pits and open tanks (tanks exceeding 16 feet in diameter), shall be screened, netted, or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that 20 NMAC 3104 of the regulations provides: "When a permit has been approved, discharges must be consistent with the terms and conditions of the permit." Pursuant to 20 NMAC 3107.C., Black Hills Exploration and Production, Inc. is required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Pursuant to Section 3109.G.4., this permit is valid for a period of five years. This discharge permit will expire on **May 23, 2010**, and Black Hills Exploration and Production, Inc. should submit an application in ample time before this date. Note that under 20 NMAC 3106.F. of the regulations, if a discharger submits a Discharge Permit application at least 120 days before the discharge permit expires and is in compliance with the approved permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved. It should be noted that all discharge permit facilities will be required to submit the results of an underground drainage testing program as a requirement for discharge permit.

The Discharge Permit application for the Black Hills Exploration and Production, Inc. Espinosa Canyon Gas Plant is subject to WQCC Regulation 3114. Every billable facility submitting a discharge permit application will be assessed a fee equal to the filing fee of $100. There is a flat fee assessed for gas plant facilities equal to $4,000.00. The OCD has received the filing fee.

On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

Sincerely,

Roger C. Anderson
Chief, Environmental Bureau
Oil Conservation Division

RCA/wjf
Attachment

cc: OCD Aztec District Office

ATTACHMENT TO THE DISCHARGE PERMIT GW-356
BLACK HILLS EXPLORATION AND PRODUCTION, INC.
ESPINOSA CANYON GAS PLANT
DISCHARGE PLAN APPROVAL CONDITIONS
(May 23, 2005)

1. Payment of Discharge Permit Fees: The $100.00 filing fee has been received by the OCD. There is a flat fee assessed for gas plants equal to $4,000.00. The required flat fee may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the permit, with the first payment due upon receipt of this approval.

2. Black Hills Exploration and Production, Inc. Commitments: Black Hills Exploration and Production, Inc. will abide by all commitments submitted in the Discharge Permit application dated August 16, 2004, including amendments, and these conditions for approval.

3. Waste Disposal: All wastes will be disposed of at an OCD approved facility. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt oilfield wastes that are non-hazardous may be disposed of at an OCD approved facility upon proper waste determination per 40 CFR Part 261. Any waste stream that is not listed in the discharge permit will be approved by OCD on a case-by-case basis.

4. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.

5. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

6. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.

7. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

8. Labeling: All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

9. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

10. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity every 5 years. The permittee may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing.

11. Class V Wells: No Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD regulated facilities that inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.

12. Housekeeping: All systems designed for spill collection/prevention will be inspected by a Black Hills Exploration and Production, Inc.'s representative on a regular basis and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained for a period of five years.

13. Spill Reporting: All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Aztec District Office.

14. Transfer of Discharge Permit: The OCD will be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge permit. A written commitment to comply with the terms and conditions of the previously approved discharge permit must be submitted by the purchaser and approved by the OCD prior to transfer.

15. Storm Water Permit: Black Hills Exploration and Production, Inc. shall maintain storm water runoff controls. As a result of Black Hills Exploration and Production, Inc.'s operations any water contaminant that exceeds the WQCC standards listed in 20 NMAC 6.2.3101 is discharged in any storm water runoff then Black Hills Exploration and Production, Inc. shall notify the OCD within 24 hours, modify the permit within 15 days and submit for OCD approval. Black Hills Exploration and Production, Inc. shall also take immediate corrective actions pursuant to Item 12 of these conditions.

16. Closure: The OCD will be notified when operations of the Espinosa Canyon Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Espinosa Canyon Gas Plant a closure permit will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.

17. Certification: Black Hills Exploration and Production, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Black Hills Exploration and Production, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

BLACK HILLS EXPLORATION AND PRODUCTION, INC..

by Larry B. Kellerson

Title Vice - President

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

May 23, 2005

Mr. Randy Fox
Black Hills Exploration and Production, Inc.
350 Indiana Street, Suite 400
Golden, Colorado 80401

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Black Hills Exploration and Production, Inc.
Espinosa Canyon Gas Plant
Rio Arriba County, New Mexico

Dear Mr. Fox:

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Please be advised that all exposed pits, including lined pits and open tanks (tanks exceeding 16 feet in diameter), shall be screened, netted, or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that 20 NMAC 3104 of the regulations provides: "When a permit has been approved, discharges must be consistent with the terms and conditions of the permit." Pursuant to 20 NMAC 3107.C., Black Hills Exploration and Production, Inc. is required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Pursuant to Section 3109.G.4., this permit is valid for a period of five years. This discharge permit will expire on **May 23, 2010**, and Black Hills Exploration and Production, Inc. should submit an application in ample time before this date. Note that under 20 NMAC 3106.F. of the regulations, if a discharger submits a Discharge Permit application at least 120 days before the discharge permit expires and is in compliance with the approved permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved. It should be noted that all discharge permit facilities will be required to submit the results of an underground drainage testing program as a requirement for discharge permit.

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On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

Sincerely,

Roger C. Anderson
Chief, Environmental Bureau
Oil Conservation Division

RCA/wjf
Attachment

cc: OCD Aztec District Office

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BLACK HILLS EXPLORATION AND PRODUCTION, INC.
ESPINOSA CANYON GAS PLANT
DISCHARGE PLAN APPROVAL CONDITIONS
(May 23, 2005)

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6. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.

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8. Labeling: All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

9. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

10. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity every 5 years. The permittee may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing.

11. Class V Wells: No Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD regulated facilities that inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.

12. Housekeeping: All systems designed for spill collection/prevention will be inspected by a Black Hills Exploration and Production, Inc.'s representative on a regular basis and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained for a period of five years.

13. Spill Reporting: All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Aztec District Office.

14. Transfer of Discharge Permit: The OCD will be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge permit. A written commitment to comply with the terms and conditions of the previously approved discharge permit must be submitted by the purchaser and approved by the OCD prior to transfer.

15. Storm Water Permit: Black Hills Exploration and Production, Inc. shall maintain storm water runoff controls. As a result of Black Hills Exploration and Production, Inc.'s operations any water contaminant that exceeds the WQCC standards listed in 20 NMAC 6.2.3101 is discharged in any storm water runoff then Black Hills Exploration and Production, Inc. shall notify the OCD within 24 hours, modify the permit within 15 days and submit for OCD approval. Black Hills Exploration and Production, Inc. shall also take immediate corrective actions pursuant to Item 12 of these conditions.

16. Closure: The OCD will be notified when operations of the Espinosa Canyon Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Espinosa Canyon Gas Plant a closure permit will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.

17. Certification: Black Hills Exploration and Production, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Black Hills Exploration and Production, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

BLACK HILLS EXPLORATION AND PRODUCTION, INC..

by_____

Title_____

Randy Fox
Environmental Engineer
E-mail rfox@bhenergy.com

350 Indiana St., Suite 400
Golden, Colorado 80401
P (720) 210-1334
F (720) 210-1361

May 16, 2005

W. Jack Ford, C.P.G.
Environmental Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Updated Information for Discharge Plan
Espinosa Canyon Amine Plant
Black Hills Exploration and Production, Inc.

Dear Mr. Ford:

Attached is the following information you requested in your January 26, 2005 letter (along with updated site maps) concerning the Discharge Plan for the Espinosa Canyon Amine Plant operated by Black Hills Exploration and Production:

1. A description of safety precautions being taken to prevent potential injury to personnel from accidental release of H_2S vapors per OCD rule 19NMAXC 15.3.118 (Attachment A).
2. The total dissolved solids (TDS) concentration of produced water separated during the processing of incoming natural gas as required in question 12 of the application (Attachment B).
3. The depth to ground water under the site as required in question 12 of the application (Attachment C).
4. Additional information and/or diagrams of the leak detection provision for all below-grade tanks (Attachment D).
5. Updated site map (Attachment E).

If you have any questions, please contact me at (720) 210-1334 or Scott Brown at (720) 210-1309.

Sincerely,

Randy Fox
Black Hills Energy

Attachments

cc: Fred Carl, Black Hills Energy
Scott Brown, Black Hills Exploration and Production
Lynn Benally, Black Hills Exploration and Production

ATTACHMENT A

SAFETY PRECAUTIONS FROM ACCIDENTAL RELEASE OF H2S VAPORS

H_2S Safety Precautions

Black Hills Exploration and Production, Inc. has designed three levels of safety precautions for the Espinosa Canyon Amine Plant to prevent potential injury to personnel from accidental release of hydrogen sulfide (H_2S) vapors per OCD rule 19NMAC 15.3.118.

The first level of safety measures is a fixed point ambient monitoring system that consists of several fixed point sensors capable of detecting H_2S, sulfur dioxide (SO_2), and lower explosive limit (LEL). These sensors are equipped with an audio (siren) and visual (strobe light) alarm system. If a sensor reaches a threshold value for any of these components, an alarm sounds that notifies people in the plant vicinity of the hazard and prompts the operators to follow the appropriate safety procedures.

The second level of safety measures is individual H_2S monitors. All plant personnel, contractors, and visitors will have individual H_2S monitors to detect unsafe airborne levels of H_2S. In addition, all operating activities that may potentially expose the operator to H_2S must be performed in accordance with the "buddy system" and follow written safety procedures as a preventive measure against potential injury.

The third level consists of safety equipment, skid monitoring, and the plant emergency shutdown (ESD) system. The system contains:

- Automated block valves on the inlet and outlet headers
- Automated vent valves at various points on the piping
- Sensing devices on the piping and equipment to indicate when a problem exists
- A control system to receive input from the sensing devices and to send signals to the automated block and vent valves

In the event one of the sensing devices reaches a threshold alarm setpoint, a signal to the control system is generated. This signal alerts operating personnel and triggers an automated shutdown of the facility. There are three types of shutdowns that can occur at the plant.

In addition to implementing these measures, our operators attend regular H_2S safety training to review safety protocols and discuss potential safety issues.

ATTACHMENT B

TOTAL DISSOLVED SOLIDS (TDS) CONCENTRATION OF PRODUCED WATER

TDS Concentration of Produced Water

Unfiltered water samples from the inlet of our Salt Water Disposal (SWD) facility located approximately 0.5 mile southeast of the Espinosa Canyon Amine Plant has a total dissolved solids concentration that ranges from 1500 to 7000 mg/L. The largest dissolved component in the sample is chloride, followed by sulfate. The SWD facility handles produced water from the East Blanco Gas Field operated by Black Hills Exploration and Production.

ATTACHMENT C

DEPTH TO GROUND WATER UNDER THE SITE

Depth to Groundwater under the Site

According to the New Mexico Office of the State Engineer, the approximate depth to groundwater of a well near the Espinosa Canyon Amine Plant is 250 feet.

ATTACHMENT D

LEAK DETECTION PROVISIONS FOR BELOW-GRADE STORAGE TANKS

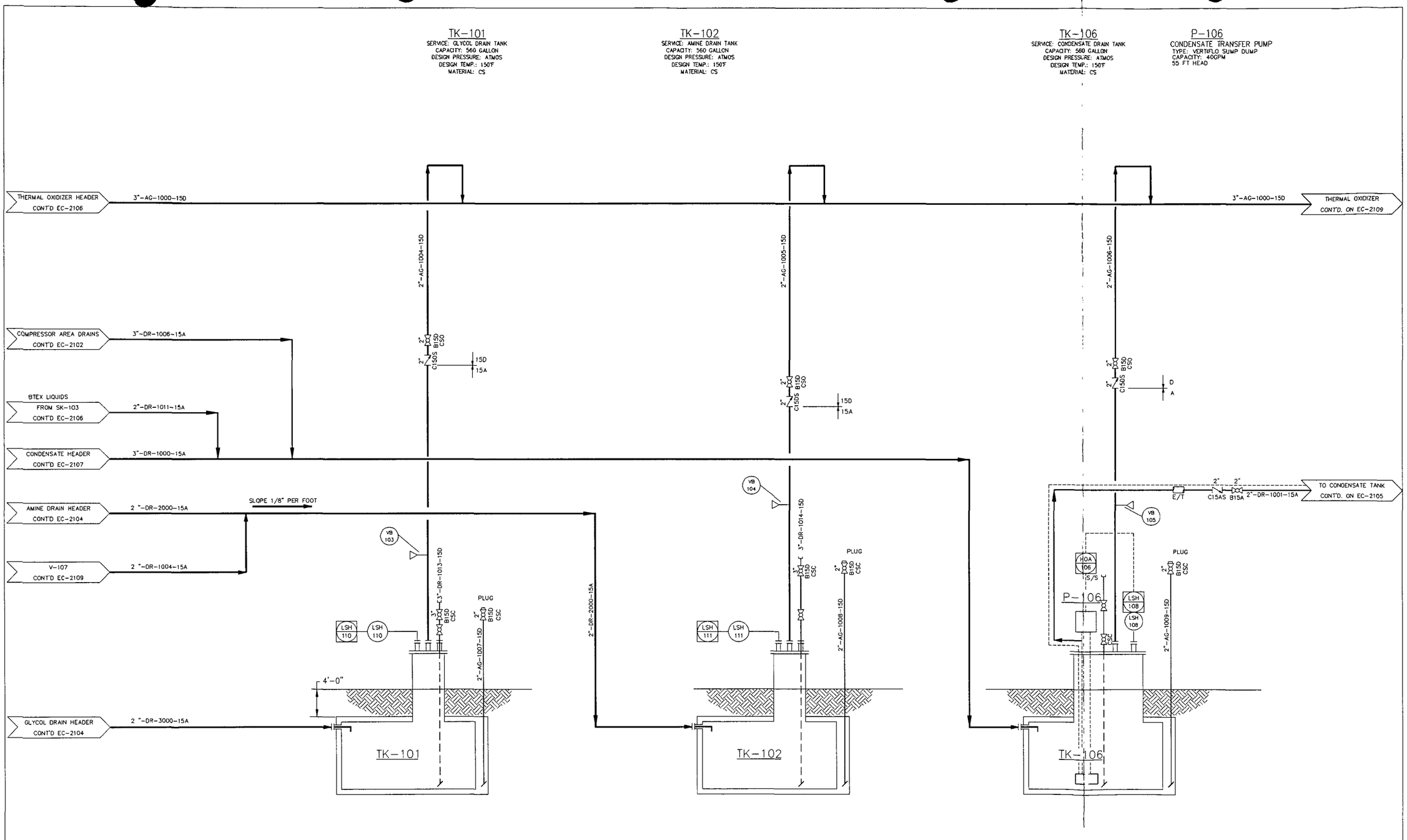
Leak Detection System for Below-Grade Tanks

The Espinosa Canyon Amine Plant has four underground process tanks:

TK-101 – Glycol Drain tank
TK-102 – Amine Drain tank
TK-106 – Hydrocarbon Drain tank
TK-110 – Thermal Oxidizer KO storage tank

These tanks are shown in the attached drawings, EC-2108 and EC-2109. Each tank has double walls constructed from steel. Each tank has the same dimensions and volumetric capacity. The tank is 72'' long with a 50'' diameter. Its volumetric capacity is 560 gallons.

Each tank will be visually inspected for leaks on a monthly basis. This will be done by removing a 2'' plug from the surface of the tank, exposing the area between the tank walls. Then, a dipstick-like rod will be inserted into the space between the tanks walls to the base and then removed so that the rod surface can be inspected for moisture. Note that appropriate H_2S safety precautions would be taken while inspecting TK-106 and TK-110 as they may cause exposure to small amounts of H_2S if found to be leaking.



REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY	NUMBER	REFERENCE
B	ISSUED FOR DESIGN	10/18/04	TD	DC	DC		
A	ISSUED FOR APPROVAL	7/28/04	NN	DC	DC		

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

PEREGRINE	SIGNATURE	DATE
DRAWN	NN	7/28/04
DESIGNED	DC	7/28/04
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME	EC-2108.DWG	

CLIENT PROJECT NO.

PROJECT NO. 200404103

SCALE: NONE

BLACK HILLS EXPLORATION AND PRODUCTION
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION
ESPINOSA CANYON AMINE PLANT
PIPING & INSTRUMENTATION DIAGRAM
DRAIN TANKS

REVISION: B | DRAWING NO.: EC-2108 | SHEET NO.: 1 OF 1

TK-110
TO DRAIN TANK
500 GALLON
DOUBLE WALL

S-101
SERVICE: BLOWDOWN STACK
OD:
LENGTH: 20'-0"
MATERIAL:

V-107: AMINE STILL KO
SERVICE: SURGE DRUM
OD: 60"
LENGTH: 12'-0" S/S
MATERIAL: CS, 1/8" C.A.
DESIGN PRESSURE: 75 PSIG
DESIGN TEMP.: -20'F TO 200'F

V-108 THERMAL OXIDIZER KO
SERVICE: THERMAL OXIDIZER KO POT
OD: 2'-6"
LENGTH: 5'-0" T/T
MATERIAL: CS, 1/8" C.A.
DESIGN PRESSURE: 150 PSIG
DESIGN TEMP.: -20'F TO 200'F

TO-101
SERVICE: ACID GAS
OD: UPPER: 2'-6" LOWER: 3'-6"
LENGTH: 75' S/S
MATERIAL: REFRACTORY LINED C.S.

B-101
SERVICE:
CAPACITY:
DISCHARGE:
RPM:
HP:

THERMAL OXIDIZER HEADER EC-2108
3"-AG-1000-15D
1/8" SLOPE/FT
BLOWDOWN HEADER CONT'D DWG EC-2107
20" FL-1000-15A
2"-FL-1013-15A
TRIM: 15A
S-101
LG 111
15D 15A
2" B15AF
3"-AG-1000-15D
SK-101 EC-2105
1/8" SLOPE/FT
3"-AG-1010-15D
3"-AG-1021-15D
2"-DR-4001-15D
SLOPE 1/8" PER FT.
2"-AG-1011-15D
TRIM: 15D
V-107
LG 112
2" B15D
3/4" B80F
E/T
SLOPE 1/8" PER FT.
3"-AG-1000-15D
TRIM: 15D
V-108
LSH 114
LC 114
LG 114
LCV 114
E/T
3" AG-1022-15D
XS 110
RUN
ESD
XV 110
TI 110
VENDOR SUPPLY
TE 300
TW 300
SAMPLE PORTS
TW 301
TE 301
TSH 301
SET @ 2200'F
TO-101
ESDY 303
ESD 301
FC
AE 300
AE 300
FIRE EYE
S/S 300
B-101
TIC 300
SET @ 1600'F
TO AMINE DRAIN HEADER
CONT'D ON EC-2108
18"
UG
AG
2"-DR-1004-150
2" C150S B15D
2"-DR-4000-15D
SLOPE 1/8" PER FT.
18"
VB 106
LSH 109
LSH 109
3"-DR-1015-15D
2" B150 CSC
2" B15D CSC
2"-AG-1006-15D
TK-110
PR 300
SET @ 50 PSIG
PI 300
3/4" N80
ESDY 300
TC 300
ESDY 302
TCV 300
PI 302
3/4" N80
1" B80AF
PR 301
SET @ 10 PSIG
ESDY 301
3/4" N80
PI 301
VENDOR SUPPLY
FUEL GAS
CONT'D DWG EC-2105
1"-FG-1001-15A

NOTES:
1. TANK TO BE SEAL CLOSED

REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY	NUMBER	REFERENCE
B	ISSUED FOR DESIGN	10/18/04	TD	DC	DC		
A	ISSUED FOR APPROVAL	8/12/04	NN	DC	DC		

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

PEREGRINE	SIGNATURE	DATE
DRAWN	NN	7/28/04
DESIGNED	DC	7/28/04
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME	EC-2109.DWG	

CLIENT PROJECT NO.	
PROJECT NO.	2004D4103
SCALE:	NONE

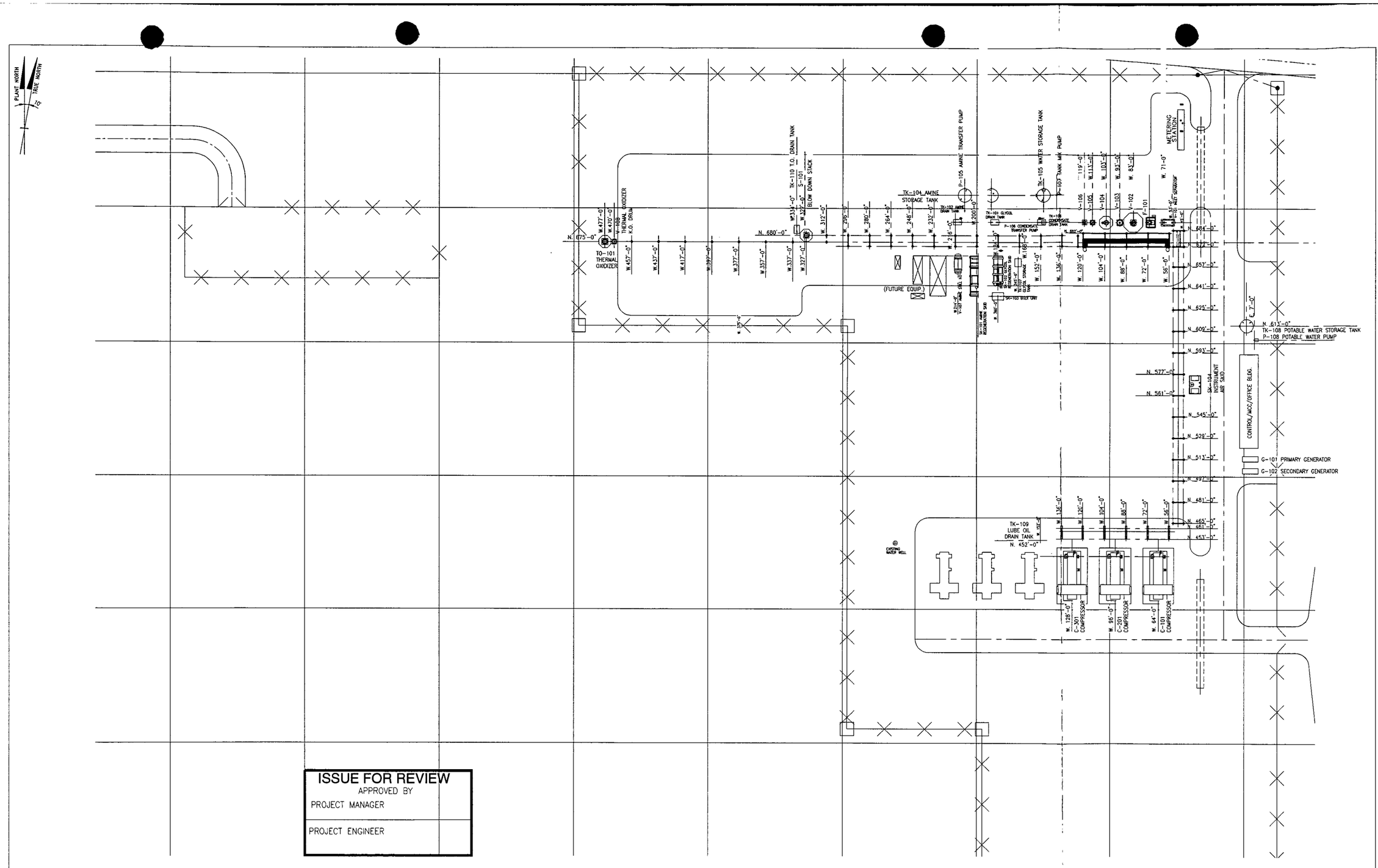
BLACK HILLS EXPLORATION
AND PRODUCTION
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION
ESPINOSA CANYON AMINE PLANT
PIPING & INSTRUMENTATION DIAGRAM
THERMAL OXIDIZER / B.D.STACK

REVISION:	DRAWING NO.	SHEET NO.
B	EC-2109	1 OF 1

ATTACHMENT E

UPDATED SITE MAPS



ISSUE FOR REVIEW

APPROVED BY

PROJECT MANAGER

PROJECT ENGINEER

REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY
A	ISSUE FOR REVIEW (BLACK HILLS REQUEST FOR ALTERNATIVE EQUIPMENT LOCATION)	3/21/05	NN		

NUMBER	REFERENCE

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

PEREGRINE	SIGNATURE	DATE
DRAWN	LKS	09/14/04
DESIGNED		
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME		

CLIENT PROJECT NO.	
PROJECT NO.	200404103
SCALE:	1" :30'-0"

BLACK HILLS EXPLORATION AND PRODUCTION Inc.
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION ESPINOSA CANYON AMINE PLANT EQUIPMENT AND STRUCTURAL SUPPORT LOCATION PLAN

REVISION	DRAWING NO.	SHEET NO.
A	EC-1004	3 OF 3

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

January 26, 2005

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

Mr. Randy Fox
Black Hills Exploration and Production, Inc.
350 Indiana Street, Suite 400
Golden, Colorado 80401

RE: Espinosa Canyon Compressor Station GW-356
Rio Arriba County, New Mexico

Dear Mr. Fox:

The New Mexico Oil Conservation Division (OCD) is in the process of reviewing the Black Hills Exploration and Production, Inc. application for a discharge permit for the Espinosa Canyon Compressor Station and Amine Plant located in the NW/4 NE/4 of Section 13, Township 30 North, Range 4 West, NMPM, Rio Arriba County, New Mexico. The following information is required to complete the review prior to issuing an approved discharge permit:

1. A description of safety precautions being taken to prevent potential injury to personnel from accidental release of H2S vapors per OCD rule 19NMAC 15.3.118.

2. The total dissolved solids (TDS) concentration of produced water separated during the processing of income natural gasses as required in question 12 of the application..

3. The depth to ground water under the site as required in question 12 of the application.

4. Provide additional information and/or diagrams of the leak detection provisions for all below-grade storage tanks.

When the OCD receives the above requested information the review of your application can proceed. Your early attention to this request would be appreciated. If you have any questions contact me at (505) 476-3489.

Sincerely,

W. Jack Ford, C.P.G.
Environmental Bureau
Oil Conservation Division

Randy Fox
Environmental Engineer
E-mail rfox@bhenergy.com

350 Indiana St., Suite 400
Golden, Colorado 80401
P (720) 210-1334
F (303) 568-3261

October 20, 2004

Roger Anderson
Environmental Bureau Chief
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: Discharge Plan
Espinosa Canyon Amine Plant
Black Hills Exploration and Production, Inc.

Dear Mr. Anderson:

Attached are two copies of the Discharge Plant for the proposed Espinosa Canyon Amine Plant (along with a $100.00 check for the filing fee). Please invoice Black Hills Exploration and Production, Inc. (Black Hills E&P) for any remaining permit and temporary permission fees. Send the invoice to:

Randy Fox
Black Hills Exploration and Production
350 Indiana Street, Suite 400
Golden, Colorado 80401

The proposed plant, located in Rio Arriba County approximately 16 miles southwest of Dulce, New Mexico, will be owned and operated by Black Hills E&P.

If you have any questions, please contact me at 702-210-1334 or Lynn Benally at 505-634-1111 (ext. 27).

Sincerely,

Randy Fox
Black Hills Energy

cc: Fred Carl, Black Hills Energy
Doran Newlin, Black Hills Exploration and Production

Discharge Plan

For

Espinosa Canyon Amine Plant
Rio Arriba County, New Mexico

Prepared by:

Black Hills Exploration and Production, Inc.
350 Indiana Street, Suite 400
Golden, Colorado 80401

Prepared for:

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

October 20, 2004

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☒ New ☐ Renewal ☐ Modification

1. Type: Compressor station with a combined site rated horsepower of 3,339 hp (3 compressors of 1,331 hp each)
2. Operator: Black Hills Exploration and Production, Inc.

   Address: 350 Indiana Street, Suite 400, Golden, CO 80401

   Contact Person: Randy Fox Phone: 720-210-1334
3. Location: ≈NW /4 ≈NE /4 Section 13 Township 30N Range 4W
   Submit large scale topographic map showing exact location.
4. Attach the name, telephone number and address of the landowner of the facility site.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility
6. Attach a description of all materials stored or used at the facility.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste wate must be included.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
11. Attach a contingency plan for reporting and clean-up of spills or releases.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
14. CERTIFICATION I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: ~~Larry~~ Kellison Title: Vice President Black Hills Exploration and Production, Inc.

Signature: Larry B Kellison Date: 3-20-04

E-mail Address: lkellison@blackhillscorp.com

Attachment 3
Large Scale Topographic Map

See Figure 1.

Attachment 4
Name, telephone number and address of the landowner of the facility site

Owner: Black Hills Exploration and Production, Inc.

Address: 350 Indiana Street, Suite 400, Golden, Colorado 80401

Contact Person: Randy Fox Phone: 720-210-1334

Attachment 5
Facility Description

The Espinosa Canyon Amine Plant is a natural gas conditioning facility that is owned and operated by Black Hills Exploration and Production, Inc. (Black Hills). It has the following processes: (1) compression, (2) amine treating, (3) dehydration, and (4) generators, and (5) tanks. Figures 2 and 3 are a facility diagram and a process flow diagram, respectively.

Compression

The Espinosa Canyon Amine Plant will receive from the gathering system 8 to15 million standard cubic feet per day (MMscfd) of natural gas at a pressure of approximately 15 to 20 pounds per square inch gauge (psig). The natural gas contains hydrogen sulfide (H_2S) at a concentration of approximately 250 parts per million (ppm) and carbon dioxide (CO_2) below 3% concentration.

This inlet gas passes through a separator to remove entrained water and possibly some condensed hydrocarbons. These liquids are sent to storage tanks (see Tank subsection).

The gas then enters a manifold where it is distributed to three engine driven compressors, each capable of handling approximately 5 MMscfd of gas (units C-101, C-102, C-103). Each compressor boosts the pressure of the gas from inlet conditions (15 to 20 psig) to 500 psig.

These compressors have three stages of compression, inter stage cooling, and after stage cooling. Between each stage, liquids are condensed and separated. The pressurized natural gas then passes through a filter coalescer to remove water and trace amounts of lubricating oil.

Amine Treating

The pressurized gas is then contacted by a diglycol amine (DGA) and water solution through a column of trays. The DGA absorbs the H_2S and CO_2 contained in the gas. The DGA mixture stays in the amine treating process. The rest of the gas leaves this contactor and is sent to the dehydration process with an H_2S concentration below 2 ppm. This gas, because to its reduced H_2S concentration, is referred to as sweet gas.

The DGA mixture, now separated from the sweet gas, consists of DGA that is chemically bound to the H_2S and CO_2 and is referred to as rich DGA. The rich DGA enters a flash vessel, where its pressure is reduced to approximately 80 psig. The rich DGA is heated by cross exchange with hot, lean DGA (DGA that is free of H_2S and CO_2) and fed to an amine still, comprised of a second column of trays. The DGA enters at the top of the column and drops through the trays. Steam is produced at the bottom of the column by circulating DGA through a fired amine reboiler (unit R-101). This steam moves through the trays and acts to liberate the H_2S and CO_2 from the rich DGA. The purified DGA (lean DGA) leaves at the bottom of the amine still leaves the bottom of the still and is pumped through the rich/lean heat exchanger and then through an air cooler and reduced in temperature to below 115 °F. It is then filtered and passed through a charcoal bed for removal of hydrocarbons. It is then boosted in pressure to 500 psig in another pump and recirculated back to the contactor.

The remaining gas stream consists of H_2S, CO_2, methane, and water vapor liberated from the rich DGA and is referred to as acid gas. The acid gas leaves the top of the amine still and passes through an air cooler. It then enters a reflux drum where condensed water is removed. This water is recycled back to the top of the still as reflux via reflux pumps.

The acid gas is sent to a secondary knockout vessel. This vessel captures any residual DGA still entrained in the acid gas. The acid gas is then routed to the acid gas thermal oxidizer for disposal.

The acid gas thermal oxidizer (unit TO-101) heats the acid gas (along with some rich amine vent gas and the vent stream from the storage tanks). The H_2S in this mixed gas stream is converted to sulfur dioxide (SO_2) and released in a vent.

Dehydration

The sweet gas leaves the amine contactor and passes through a knockout vessel for removal of entrained DGA. It is then sent to the glycol contactor, which is a trayed column. In this vessel, triethylene glycol (TEG) is used to reduce the moisture content of the sweet gas to less than 7 pounds per million standard cubic feet (lb/MMscf). The TEG leaves the contactor and is sent to a glycol regenerator. The glycol regenerator contains a glycol reboiler (unit R-102B) which is a direct-fired vessel used to heat the glycol and liberate the water.

The water vapor produced from the glycol regenerator is cooled against rich glycol from the contactor before venting to atmosphere (unit R-102A).

Generators

The plant will be powered by a primary electrical generator engine fueled by natural gas (emission unit G-101). The backup power source is the secondary electrical generator engine fueled by diesel oil (unit G-102).

Tanks

Table 1 lists and describes the tanks at Espinosa Canyon Amine Plant.

Table 1
Espinosa Canyon Amine Plant
Tanks

Name	Material	Form	Volume	Location	Construction	Spill Prevention/ Detection
TK-101 Glycol Drain Tank	Triethylene Glycol	Liquid	500 gallon	Below Ground	Steel, Double-walled	Leak Detection Gauges
TK-102 Amine Drain Tank	Amine	Liquid	500 gallon	Below Ground	Steel, Double-walled	Leak Detection Gauges
TK-103 Condensate Storage Tank	Condensate	Liquid	400 barrel	Above Ground	Steel	Leak Detection Gauges
TK-104 Amine Storage Tank	Amine	Liquid	2000 barrel	Above Ground	Steel	Earthen Berm
TK-105 Deionized Water Tank	Deionized Water	Liquid	350 barrel	Above Ground	Steel	Earthen Berm
TK-106 Condensate Drain Tank	Condensate	Liquid	500 gallon	Below Ground	Steel, Double-walled	Leak Detection Gauges
TK-107 Glycol Storage Tank	Triethylene Glycol	Liquid	1000 gallon	Above Ground	Steel	Earthen Berm
TK-108 Potable Water Tank	Potable Water	Liquid	400 barrel	Above Ground	Steel	Earthen Berm
TK-109 Lube Oil Drain Tank	Lube Oil	Liquid	500 gallon	Below Ground	Steel, Double-walled	Leak Detection Gauges
TK-110 Thermal Oxidizer Drain Tank	Water, Hydrocarbons	Liquid	500 barrel	Above Ground	Steel	Earthen Berm
Septic Tank	Waste	Solid, Liquid	1000 gallon	Below Ground	Concrete	Leak Detection Gauges

Attachment 6
Materials Stored or Used at the Facility

Table 2 lists materials to be stored or used at the facility. Table 1 provides detailed description of these tanks.

Table 2
Espinosa Canyon Amine Plant
Material Stored or Used

Material	Storage Container 1	Storage Container 2
Process Specific Chemicals		
Amine	TK-102 Amine Drain Tank	TK-104 Amine Storage Tank
Lube Oil	TK-109 Lube Oil Drainage Tank	NA
Triethylene Glycol	TK-101 Glycol Drain Tank	TK-107 Glycol Storage Tank
Acids/Caustics (No containers)		
Detergents/soaps (No containers)		
Solvents, inhibitors and degreasers (No containers)		
Paraffin Treatment/Emulsion breakers (No containers)		
Biocides (No containers)		
Others		
Condensate	TK-106 Condensate Drain Tank	TK-103 Condensate Storage Tank
Deionized water	TK 105 Deionized Water Tank	NA
Potable Water/ Waste	Septic Tank	TK-108 Potable Water Tank
Liquid drainage from thermal oxidizer	TK 110-Thermal Oxidizer Tank	NA

Attachment 7
Effluent and Waste Solids Description

The Espinosa Canyon Amine Plant will produce effluent and waste solids from both process and nonprocess streams.

Effluent and Waste Solids from Process Streams

Both effluents and waste solids will be produced from the process streams. Effluents from the process stream will be generated by the following sources.

- Dehydration – Periodic regeneration of dehydration units and triethylene glycol (TEG) creates a waste stream that will settle into Glycol Drain Tank (TK-101). This waste is consider an exempt waste as stated in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations listed in 40CFR261.4(b)(5). TK-101 will fill at a rate of approximately 1,000 gallons per year. Wastes will be manifested or tracked with appropriate contractor for transportation and disposal.
- Amine – Wastewater is produced in the amine process that will settle into Drain Tank (TK-102). This waste is consider an exempt waste as stated in the RCRA Subtitle C regulations listed in 40CFR261.4(b)(5). TK-102 will fill at a rate of approximately 500 to 1,000 gallons per year. Wastes will be manifested or tracked with appropriate contractor for transportation and disposal.
- Condensate – Condensate is produced through the compression process and will settle into Condensate Storage Tank (TK-103) and Condensate Drain Tank (TK-106). This waste is consider an exempt waste as stated in the RCRA Subtitle C regulations listed in 40CFR261.4(b)(5). Collectively, these tanks will fill at approximately several hundred barrels per year. Wastes will be manifested or tracked with appropriate contractor for transportation and disposal.
- Thermal Oxidizer Waste - The thermal oxidizing process will produce some liquid waste which will settle in the Thermal Oxidizer Drain Tank (TK-110). This waste is consider an exempt waste as stated in the RCRA Subtitle C regulations listed in 40CFR261.4(b)(5). TK-110 will be relatively dry and should fill at a rate below 500 gallons per year. Wastes will be manifested or tracked with appropriate contractor for transportation and disposal.
- Lube Oil – The compressor engine will produce small amounts of lube oil waste that will settle into the Lube Oil Drain Tank (TK -109). This waste is considered non exempt as stated in the RCRA Subtitle C and D regulations. TK-102 will fill at a rate of approximately 500 gallons per year. Wastes will be manifested or tracked with appropriate contractor for transportation and disposal.

The industrial process will also produce a small amount of solid waste from the used oil filter and oily rags. These wastes are considered non exempt as stated in the RCRA Subtitle C and D regulations. Wastes will be manifested or tracked with appropriate contractor for transportation and disposal.

Effluent and Waste Solids from Nonprocess Streams

Both effluents and waste solids in the nonprocess streams will be produced by the following sources:

- Domestic Trash – Small amounts of trash will be generated (usually less than one pound per day). These wastes will be collected and sent to an appropriate landfill.
- Sanitary Waste – Sanitary waste will be generated and collected in the septic tank at approximately 20 gallons per day. The waste will be treated in a leach field just west of the septic tank.

Quality Characteristics of Effluents and Waste Solids from Process and Non Process Wastes

Any operational testing program for the analysis of these effluents and wastes will be developed with the approval of the Oil Conservation Division (OCD).

Commingled Effluent and Waste Streams

Individual effluents and solid wastes will not be commingled. Exceptions to this policy will only occur with the approval of the OCD.

Attachment 8
Liquid and Solid Waste Collection/Treatment/Disposal Procedures

The Espinosa Canyon Amine Plant contains both belowground and aboveground tanks (Table 1). All aboveground tanks will be surrounded by an earthen berm with a volume at least 110% of the tank volume. Each berm will contain at a gravel bed at least one inch deep. Except for the septic tank, all belowground tanks will be made of steel and double-walled. The belowground tanks will sit approximately 4 feet underground, will rest on approximately 6 inches of sand, and be surrounded by soil. These belowground tanks will be equipped with electronic leak detectors. The septic tank will accept approximately 20 gallons per day of sanitary waste that will feed a leach field just west of the tank.

Attachment 9
Modifications to Existing Collection/Treatment/Disposal Systems

This is a new discharge plan application and modifications are not proposed.

Attachment 10
Routine Inspection and Maintenance Plan

As part of daily plant walk-throughs, plant personnel will visually inspect aboveground tanks. Monthly leak inspections of the aboveground tanks will be conducted at the facility. Monthly leak inspection sheets will be kept onsite and at the Black Hills regional office in Bloomfield, New Mexico. Leaks from belowground tanks will be monitored by electronic leak detection systems. Belowground tank leaks will be noted and addressed.

Attachment 11
Contingency Plan for Reporting and Clean-up of Spills or Releases

Black Hills procedures require prompt attention to spills. While major spills are unlikely at the plant, plant personnel will respond to spills using the following procedures:

- Employees will take appropriate cleanup actions.
- If a spill involves more than 25 gallons of stored material or any petroleum material, plant employees will immediately notify the Black Hills regional emergency coordinator or designee.
- The Black Hills regional emergency coordinator will confer with Black Hills corporate environmental staff to contact appropriate environmental agencies and the spill will be mitigated as soon as possible.

Absorbent pads and rags will be available at the plant. Contaminated materials will be handled according to applicable environmental regulations.

Attachment 12
Geological/Hydrological Information for the Facility

Hydrologic/Geologic Information

Surface water run-off from the Espinosa Canyon Amine Plant is expected to follow the local topographic contours (Figure 1). There are no significant bodies of water within one mile of the perimeter of the facility. An unnamed wash, with a maximum grade of approximately 20 feet, runs from the southeast to the northwest of the plant site. This wash flows intermittently and is dry most of the year. A second even smaller wash runs south to north and crosses the western edge of the plant (Figure 1). This smaller wash also flows intermittently and is dry most of the year. The flooding potential at the facility is small.

Relatively shallow groundwater in the San Juan Basin is found in the Quaternary alluvium deposits that fill stream channels; however, the primary sources of groundwater are the Tertiary sandstones that compose the Uinta-Animas aquifer. The Uinta-Animas aquifer is a fluvial deposit that includes the San Jose formation, the underlying Animas formation and its lateral equivalent, the Nacimiento, and the Ojo Alamo sandstone. These fluvial deposits are heterogeneous in nature and contain localized variations in water quality and quantity (COGCC 2000). In the northeastern part of the San Juan Basin, the maximum thickness of the aquifer is approximately 3,500 feet (USGS 2001). Groundwater recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the hydrologic units. The available data in the area nearest the District indicate recharge in the area of Durango, Colorado. Groundwater generally flows toward the San Juan River and its tributaries, where it is discharged to streamflow, to the alluvium that is locally present in canyons, or to evapotranspiration (USGS 2001). Some water wells drilled to the San Jose, Nacimiento, and Ojo Alamo formations have demonstrated flow rates of 100 gallons per minute (gpm). Most wells display water yields of less than 20 gpm (BLM 1987). Groundwater recharge for the District area is derived from the edges of the San Juan Basin, a geologic structure mainly in southern Colorado where the rock formations are closer to the surface. The primary groundwater quality concerns identified by the State of New Mexico (NMED 2001) in the San Juan River watershed are caused by releases from leaking storage tanks and from oil and gas production including pipelines, storage, distribution, and refining sites. The Uinta-Animas aquifer contains fresh to moderately saline groundwater. Dissolved solids generally increase along the groundwater flow path toward the San Juan River. Although the chemical composition of the groundwater depends upon the characteristics of the producing aquifer and the location of discharge, groundwater is generally considered hard (BLM 1987). The total dissolved solids (TDS) content of the groundwater in the region exceeds 1,000 milligrams per liter (mg/L), and can range from 500 to 4,000 mg/L (BLM 1987; USGS 2001).

The aquifer in the area of interest is the San Jose formation. The aquifer is composed of discontinuous, fluvial channel sandstones and over-bank mudstones. The San Jose formation is exposed at the surface. Soil cover is sandy and immature, and derived from weathered San Jose formation or, near intermittent streams, sandy alluvium.

Relevant additional information will be provided to the OCD at their request.

Attachment 13
Facility Closure Plan and Compliance Information with other OCD Rules, Regulations, or Orders

Information necessary to demonstrate compliance with any other OCD rules, regulations or orders will be provided as requested. In the future, when facility closure is planned, Black Hills will prepare a closure plan in accordance with the New Mexico Water Quality regulation number 3107A.11.

References

Bureau of Land Management (BLM), 1987. Proposed Farmington Resource Management of Plan and Final Environmental Impact Statement, Farmington Field Office. Farmington, New Mexico, September.

Colorado Oil and Gas Conservation Commission (COGCC), 2000. Summary Report of Braderhead Testing, Gas Well Remediation, and Ground Water Investigations, San Juan Basin, La Plata County, Colorado. May.

New Mexico Water Quality control Commission, New Mexico Environment Department (NMED), 2001. "Water Quality And Water Pollution Control In New Mexico ~ 2000, A State Report Required By The U.S. Congress Under §305(b) of the Clean Water Act." In Part II: Surface and Groundwater Quality: Chapter 2 – New Mexico's Surface Water Basins. New Mexico Environment Department. Santa Fe, New Mexico. February.

U.S. Geological Survey (USGS), 2001. "Groundwater Atlas of the United States-Arizona, Colorado, New Mexico, Utah: HA 730-C. Colorado Plateau Aquifers." Reston, Virginia. http://sr6capp.er.usgs.gov/gwa/ch c/C-text8.html.

Figures

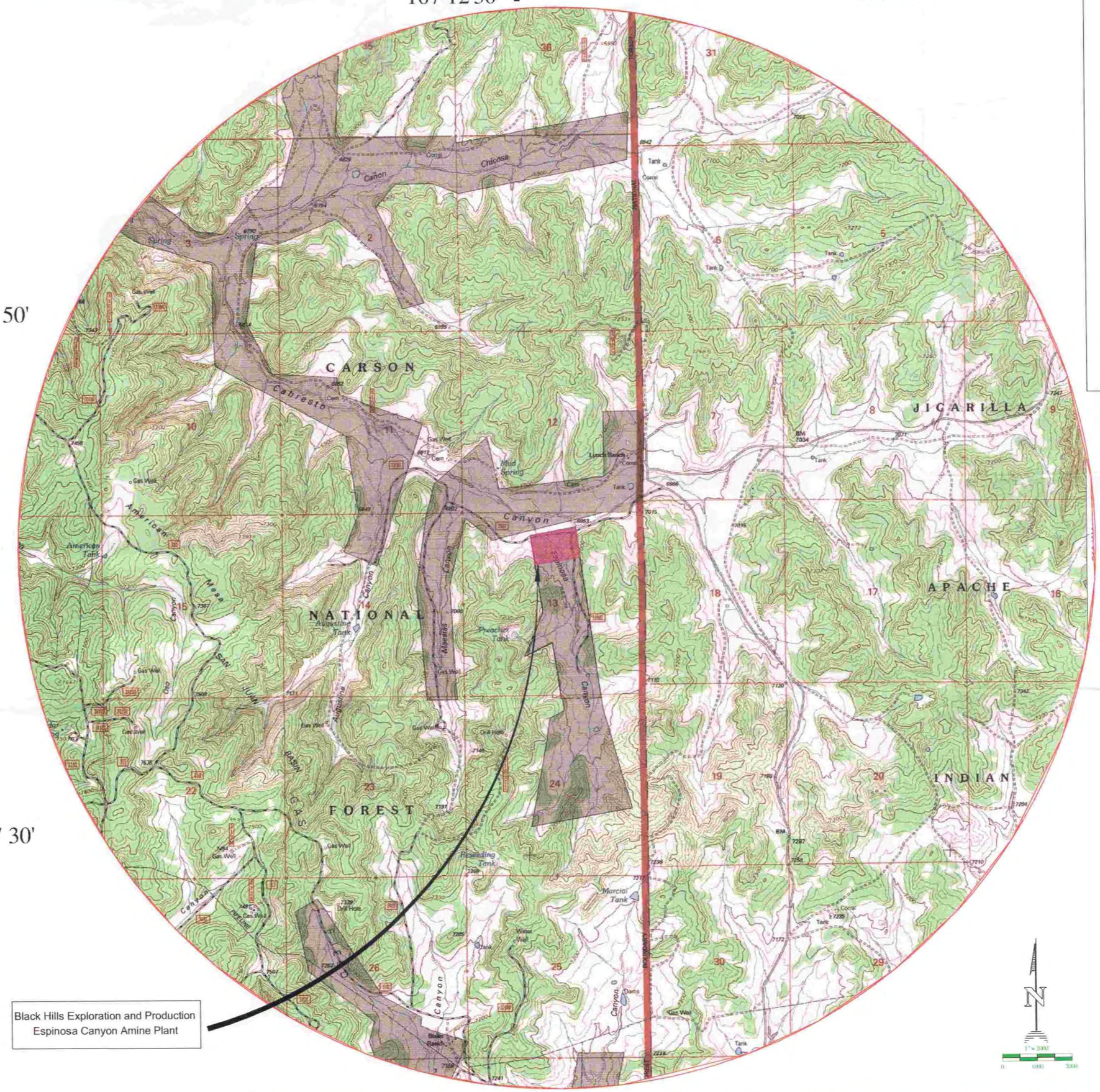
Insert Topographic Map
Insert Facility Diagram
Insert Process Flow Diagram

107 12'30"

107 10'

47 50'

47 30'



LEGEND

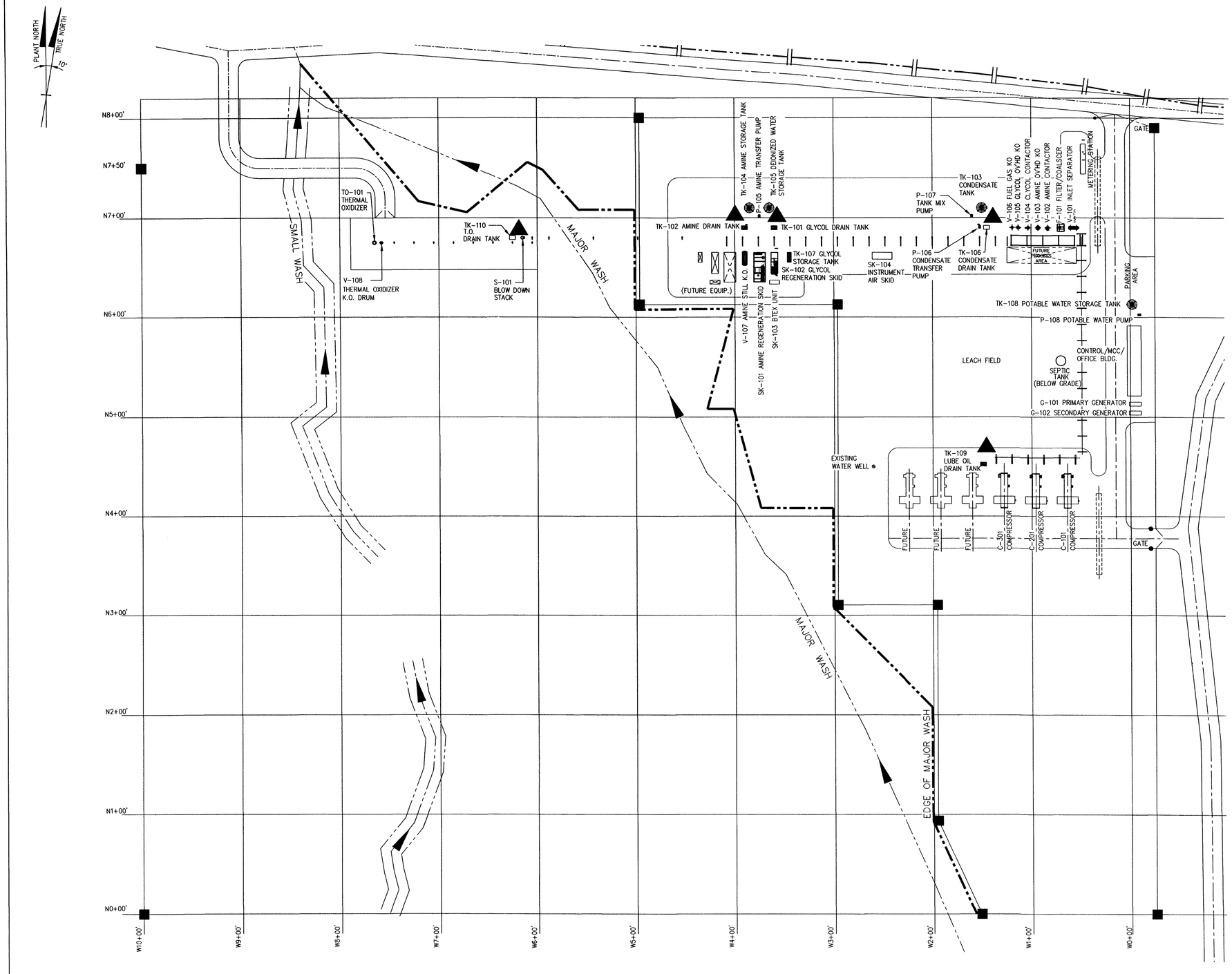
Access Roads

Black Hills Exploration and Production
Espinosa Canyon Amine Plant
Topographic Map Quadrangles
FIGURE 1
SEC. 13, T-30-N, R-4-W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO

REVISION	REV. BY	DATE

Daggett Enterprises, Inc.
Surveying and Oil Field Services
P. O. Box 15068 Farmington, NM 87401
Phone (505) 326-1772 Fax (505) 326-6019

DRAWN BY: BL	ROW#: MN249	CADFILE: MN249S01	DATE: 6/24/04



LEGEND:

BLACK HILLS PROPERTY FENCE
FENCE CORNER
INDICATES BELOW GROUND TANK

REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY
B	ISSUED FOR DESIGN	9/14/04	LKS		
A	ISSUED FOR APPROVAL	8/18/04	ROY		

NUMBER	REFERENCE

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

PEREGRINE	SIGNATURE	DATE
DRAWN	LKS	09/14/04
DESIGNED		
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME		

CLIENT PROJECT NO.

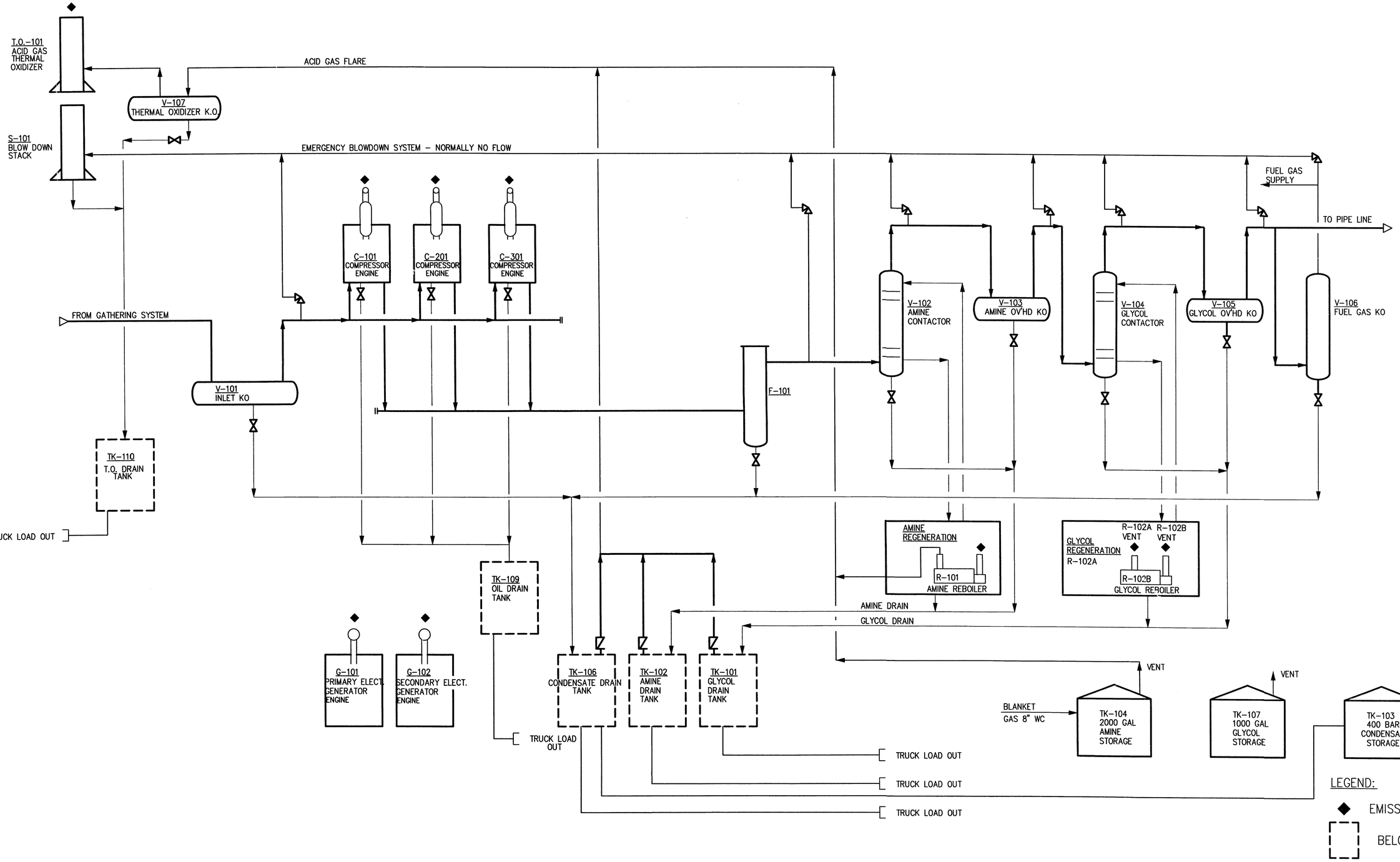
PROJECT NO. 200404103

SCALE: 1" : 50'-0"

BLACK HILLS EXPLORATION AND PRODUCTION, INC.
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION AND PRODUCTION ESPINOSA CANYON AMINE PLANT FIGURE 2

REVISION:	DRAWING NO.	SHEET NO.
B	ENV-1001	1 OF 1



REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY
A	ISSUED FOR APPROVAL				

NUMBER	REFERENCE

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

	SIGNATURE	DATE
McDonald		
DRAWN		
DESIGNED		
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME		

CLIENT PROJECT NO.

PROJECT NO. 200404103

SCALE: NONE

BLACK HILLS EXPLORATION
AND PRODUCTION, INC.
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION AND PRODUCTION ESPINOSA CANYON AMINE PLANT FIGURE 3

REVISION:	DRAWING NO.	SHEET NO.
A	ENV-2001	1 OF 1

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 10-18-04,

or cash received on _____ in the amount of $ 100.00

from Black Hills E+P

for Espinosa Canyon C.S. GW-356

(Facility Name) (DP No.)

Submitted by: _____, Date: 10-25-04

Submitted to ASD by: _____ Date: _____

Received in ASD by: _____ Date: _____

Filing Fee ✓ New Facility ✓ Renewal ___

Modification ___ Other _____

(specify)

Organization Code 521.07 Applicable FY 2001

To be deposited in the Water Quality Management Fund.

Full Payment ✓ or Annual Increment ___

[redacted]

Black Hills Exploration & Production
dba Mallon Oil Company
350 Indiana St
Suite 400
Golden, CO 80401
(720) 210-1300

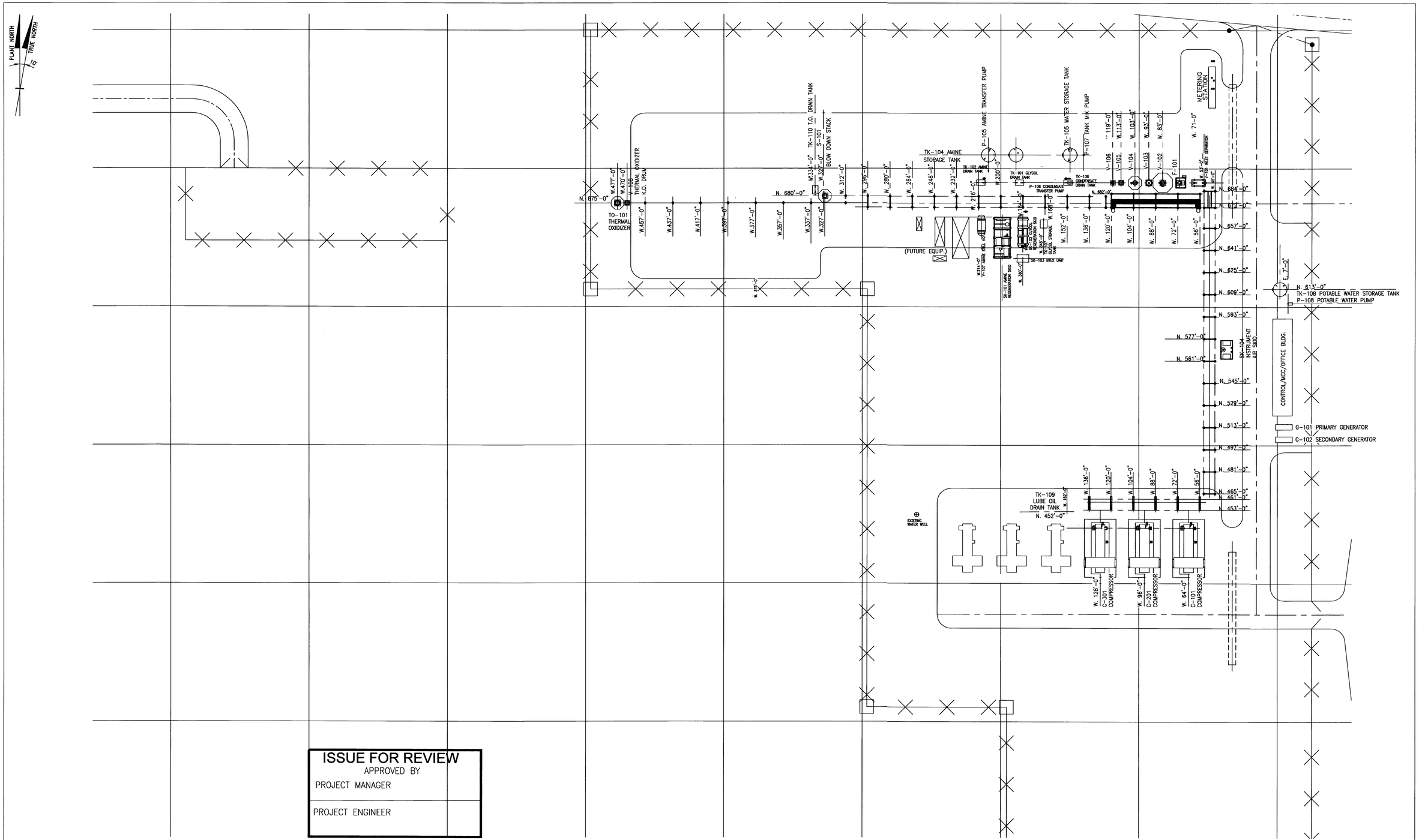
No. [redacted]

Check Date: 10/18/2004

WATER QUALITY MANAGEMENT FUND, **

	Gross Amount	Discount Amount	Net Amount Paid
Filing Fee for the discharge plan	$100.00	$0.00	$100.00
Detach at Perforation Before Depositing Check **Totals**	$100.00	$0.00	$100.00

GW-356



ISSUE FOR REVIEW

APPROVED BY

PROJECT MANAGER

PROJECT ENGINEER

REV	REVISION DESCRIPTION	DATE	CHANGED BY	CHECKED BY	APPROVED BY
A	ISSUE FOR REVIEW (BLACK HILLS REQUEST FOR ALTERNATIVE EQUIPMENT LOCATION)	3/21/05	NN		

NUMBER	REFERENCE

PEREGRINE GROUP
1726 COLE BLVD
BLDG 22, SUITE 200
GOLDEN, CO 80401
303-670-9388

PEREGRINE	SIGNATURE	DATE
DRAWN	LKS	09/14/04
DESIGNED		
QC REVIEW		
APPROVED		
CLIENT	SIGNATURE	DATE
REVIEW		
APPROVED		
CAD FILE NAME		

CLIENT PROJECT NO.

PROJECT NO. 200404103

SCALE: 1" :30'-0"

BLACK HILLS EXPLORATION AND PRODUCTION INC.
350 INDIANA STREET, SUITE 400
GOLDEN, CO 80401-5096

BLACK HILLS EXPLORATION ESPINOSA CANYON AMINE PLANT EQUIPMENT AND STRUCTURAL SUPPORT LOCATION PLAN

REVISION:	DRAWING NO.	SHEET NO.
A	EC-1004	3 OF 3