

WY0054224

**APPLICATION FOR PERMIT TO
SURFACE DISCHARGE PRODUCED
WATER FROM OIL AND GAS
PRODUCTION UNIT DISCHARGES**

**ANTICLINE
DISPOSAL
LLC**

RECEIVED

AUG 29 2014

WATER QUALITY DIVISION
WYOMING

RENEWAL/WY0054224

SUBMIT ONE HARD COPY AND ONE ELECTRONIC COPY (CD)

**WYOMING POLLUTANT DISCHARGE ELIMINATION SYSTEM
APPLICATION FOR PERMIT TO SURFACE DISCHARGE PRODUCED WATER FROM
OIL AND GAS PRODUCTION UNIT DISCHARGES**

Revised June 12, 2013

PLEASE PRINT OR TYPE (Submission of illegible materials will result in return of the application to the applicant)

1. The discharging facility will produce: **N/A**

Oil Oil and natural gas Natural gas

Check the box corresponding to the type of application being applied for:

New Permit

Permit Renewal.

Permit number: **WY0054224** Expiration Date: **Feb. 28, 2015**

Permit Modification.

Permit number _____ Expiration Date: _____

(For permit modification, please attach letter explaining modifications requested.)

2. **Company, Contact Name, mailing address, e-mail address, and telephone number** of the individual or company which owns the facility producing the discharge, and the person (consultant) responsible for permit submission.

<i>Company Contact Name</i> Jesse Eubank	<i>Consultant Contact Name</i> Jesse Eubank
<i>Company Name</i> Anticline Disposal, LLC.	<i>Company Name</i> Anticline Disposal, LLC.
<i>Mailing Address</i> P.O. Box 273	<i>Mailing Address</i> P.O. Box 273
<i>City, State, and Zip Code</i> Boulder, WY 82923	<i>City, State, and Zip Code</i> Boulder, WY 82923
<i>Telephone Number</i> 307-360-3390	<i>Telephone Number</i> 307-360-3390
<i>E-Mail Address</i> jeubank@anticlinedisposal.com	<i>E-Mail Address</i> jeubank@anticlinediposal.com

Status of applicant as owner, operator or both: Anticline Disposal, LLC, Operator-Jesse Eubank-Plant Manager

Status of applicant as federal, state, private or public: Land Private/Company Public

3. Name of the facility (lease, tank battery #, etc.) producing the discharge (this is the facility name that will appear on the WYPDES permit. It is not necessary to name every well contributing to this facility's discharge in this section)

Jensen Disposal Facility-New Fork River Discharge

Jensen Disposal Facility-Sand Draw Discharge

4. Name(s) and mailing address(es) of owner(s) of the surface rights on whose land the discharge occurs (in cases where the land is owned by the state or federal government but surface rights are leased to a private individual, provide lessee's name and address)

For Agency Use Only

Application Number

WY00 _____

RECEIVED

Date Received:

AUG 29 2014
(mo/day/yr)

**WATER QUALITY DIVISION
WYOMING**

<i>Landowner #1 Name New Fork River Discharge John Wayne & Mary Kay Jensen</i>	<i>Landowner #2 Name (Lessee) Sand Draw Discharge G & E Livestock, Inc./ John Erramouspe</i>
<i>Mailing Address 137 Highway #353</i>	<i>Mailing Address 1319 Edgar Street</i>
<i>City, State, and Zip Code Boulder, WY 82923</i>	<i>City, State, and Zip Code Rock Springs, WY 82901</i>
<i>307-537-5216</i>	<i>307-362-2586</i>
<i>Landowner #3 Name</i>	<i>Landowner #4 Name</i>
<i>Mailing Address</i>	<i>Mailing Address</i>
<i>City, State, and Zip Code</i>	<i>City, State, and Zip Code</i>

(additional spaces may be added as necessary)

5. Provide outfall information in Table 1 below.

TABLE 1. Outfall information

Discharge Point (Outfall) #	Immediate Receiving Stream	Mainstem* (Nearest Perennial Water)	Distance from outfall to main stem (stream miles) *	Quarter/Quarter	Section	Township	Range	Latitude (NAD 83, decimal degree format, accuracy to nearest 5 decimal places)	Longitude (NAD 83, decimal degree format, accuracy to nearest 5 decimal places)	County
001	New Fork River	NFR>Green River	14.5	SESE	11	31 North	109 West	42-40-14.3 42.67064	-109-47-41.8 -109.79494	Sublette
002	Sand Draw> Alkali Creek	Green River Basin	27.5	NENE	36	30	108W	42.5323818	-109.6569784	Sublette
003										
004										
005										

* The mainstem is the closest perennial water (class 2). Stream distance from the outfall to the mainstem should be measured in stream miles versus as "the crow flies".

6. Describe measures to prevent access to the skimming ponds by large grazing animals. N/A

7. Describe measures employed to deter/exclude migratory birds from the skimming ponds. N/A

8. Attach a description and clear, legible, detailed topographic map of the discharging facility extending one mile beyond the property boundaries of the source. Include the following: See Maps 1 & 2 and US Dept Interior Geological Survey(New Fork River) See Maps 1 & 2 (Sand Draw)

- a. A legend All
- b. Discharge points (outfalls)
- c. Immediate receiving streams
- d. Section, Township, and Range information
- e. Well locations
- f. Water flow lines

9. Attach a site diagram. Include the following: Plant Layout Attached

- a. Water flow lines
- b. Treater units
- c. Skimming tanks
- d. Skimming Ponds
- e. Stock tanks

If any of the above items in 8 or 9 are not applicable please indicate in the description and include a brief explanation as to why the items are not applicable)

10. Describe the control measures that will be implemented to achieve water quality standards and effluent limits. If proposing to utilize a treatment process, provide a description of the treatment process. **Include list of chemicals** used and provide a Material Safety Data Sheet (MSDS) for each chemical.

Conditionally exempt oilfield waste water is accepted into the existing evaporation ponds at the site. Anaerobic bioremediation takes place in the ponds. The water is then processed with aerobic bioremediation, coagulation, flocculation, flotation, and gravity sand filters to produce water that is acceptable for recycling to the oilfield for making fracturing fluids or drilling after surface conductor pipes have been cemented in place. The fracturing quality water will then be treated with further bioremediation, ultra filtration, reverse osmosis, and ion-exchange to remove various organic and inorganic constituents. The pipeline that conveys water to the discharge point in the New Fork River is polyethylene to prevent iron accumulation in the discharged water. Confidential treatment process flow diagrams are available upon request.

All chemicals are stored in containers with spill prevention/collection measures built into the storage areas. Chemicals used in the process include coagulants, polymers for flocculation, acid and caustic for pH adjustment or ion exchange regeneration, scale-inhibitors prior to reverse osmosis, and other cleaning chemicals for the process equipment and membranes. Chemicals used for bioremediation nutrition are Ferric Chloride, Phosphoric Acid, Sulfuric Acid, and Anhydrous Ammonia. MSDS attached

11. Describe the control measures that will be implemented to prevent significant damage to or erosion of the receiving water channel at the point of discharge.

(New Fork) The processed water is piped the entire distance from the treatment plant northwest to the outfall (Map1). The outfall is located on the accreting side of a river meander with a very low-angle grade between land and the New Fork River. At this location the river bottom is a natural deposit of 3" to 5" rounded cobbles resistant to erosion. The flexible polyethylene water discharge pipe is anchored on the river bed to remain submerged even during low-flow (winter) conditions. This submerged discharge will immediately reduce the discharge flow velocity and erosive energy.

(Sand Draw) The processed water will be piped the entire distance from the treatment plant southeast to the proposed outfall (Sand Draw Map1). The water outfall will be routed to the bottom of Sand Draw channel to minimize the gradient between the outfall and the channel, thereby reducing flow velocity and erosive energy. Naturally deposited coarse sand to fine gravel (with little or no organic soil) comprises the channel bottom of Sand Draw. The high permeability of the channel bed is expected to provide a high rate of infiltration with relatively low rates of runoff. If this naturally deposited material does not resist erosion, additional rip-rap will be placed beneath the outfall, or other engineered controls will be implemented to mitigate outfall erosion.

12. Provide the results of a water analyses for a sample collected from a location representative of the quality of water being proposed for discharge for the parameters listed below, in Table 2. [Energy Lab results attached](#)

The analyses must be conducted in accordance with approved EPA test procedures (40 CFR Part 136). Include a signed copy of your lab report that includes the following:

- a. detection limits
- b. results of each of the chemical parameters at the chemical state given below
- c. quarter/quarter, section, township and range of the sample collection location
- d. Time and date of sample collection
- e. Time and date of analysis for each parameter
- f. Detection limit for each parameter as achieved by the laboratory.

TABLE 2

PARAMETER	REQUIRED DETECTION LIMIT and Required Units	STANDARD OR LIMIT*	SAMPLE RESULTS (Also submit lab results with application)
Aluminum, Dissolved	50 ug/L	750 ug/L	
Arsenic, Total Recoverable	1 ug/L	150 ug/L	
Barium, Total Recoverable (<i>New Facilities</i>)	100 ug/L	2000 ug/L	
Boron, Dissolved (<i>New Facilities Only</i>)	100 ug/L	5000 ug/L	
Cadmium, Dissolved	5 ug/L	0.25 ug/L (hardness dep)	
Calcium, Dissolved	50 ug/L, report as mg/L		
Chloride – Technology Based	5 mg/L	2000 mg/L	
Chloride, For Class 2A and 2B Waters	5 mg/L	230 mg/L	
Chromium, Dissolved (III)	1ug/L	74.1 ug/L (hardness	
Copper, Dissolved	10 ug/L	9 ug/L (hardness	
Fluoride, Dissolved (<i>New Facilities Only</i>)	100 ug/L	4,000 ug/L	
Hardness (CaCO ₃) mg/L	10 mg/L as CaCO ₃	(for metals analyses)	
Iron, Dissolved	50 ug/L	1000 ug/L	
Iron, Dissolved, for Class 2A and 2AB waters	50 ug/L	300 ug/L	
Lead, Dissolved	2 ug/L	2.5 ug/L (hardness dep)	
Magnesium, Dissolved	100 ug/L, report as mg/L		
Manganese, Dissolved	50 ug/L	1462 ug/L (hardness dep)	
Manganese, Dissolved, for Class 2A and 2AB	50 ug/L	50 ug/L	
Mercury, Dissolved	1 ug/L	0.77 ug/L	
Molybdenum, Dissolved (<i>New Facilities Only</i>)	100 ug/L	300 ug/L	
Nickel, Dissolved	10 ug/L	52 ug/L (hardness dep)	
Oil and Grease	1 mg/L	10 mg/L	
pH	0.1 pH unit	6.5-9.0 s.u.	
Radium 226, Total Recoverable	0.2 pCi/L	5 or 60 pCi/L	
Radium 228, Total Recoverable**	0.2 pCi/L	5 pCi/L	
Selenium, Total Recoverable	5 ug/L	5 ug/L	
Silver, Dissolved	3 ug/L	3.4 ug/L (hardness dep)	
Sodium Adsorption Ratio	Calculated as unadjusted ratio		
Sodium, Dissolved	100 ug/L, report as mg/L		
Specific Conductance	5 micromhos/cm	7500 micromhos/cm	
Sulfates	10 mg/L	3000 mg/L	
Sulfide-Hydrogen Sulfide (S ²⁻ , HS ⁻)	0.1 mg/L	2 ug/L	
Total Dissolved Solids	5 mg/L	5000 mg/L	
Total Petroleum Hydrocarbons	1 mg/L		
Zinc, Dissolved	50 ug/L	118.1 ug/L (hardness dep)	

**The values listed in the Standard or Limit column are associated with water quality standards (Chapter 1 of Wyoming Water Quality Rules and Regulations) or technology-based effluent limits (Chapter 2 of Wyoming Water Quality Rules and Regulations).*

***This parameter is only required for those discharges located within one stream mile of a class 2 water.*

13. Which geologic formation is the origin of the produced water?

N/A This is a commercial treatment and disposal facility accepting and treating wastewater from multiple oil wells producing from multiple formations.

14. Were the above analyses collected from this facility (referenced in item 3)?

YES NO

If no, describe origin of samples including well name, location, depth, geologic formation, field, and date sample was analyzed:

15. **For new facilities**, provide the expected (estimated) flow rate from each outfall in barrels per day and million gallons per day, and provide the rationale behind the flow rate estimate. _____

Expected date of commencement of discharge. _____

For existing facilities, provide actual flow data from each outfall within the last six months [WY0054224 Six Months ending July 2014 = 355,296 BBL = 14,922,432 GAL](#)

Will discharge be continuous or intermittent?

If the discharge is to be intermittent the following information for each outfall shall be provided:

- (I) Number of times per year the discharge is to occur.
- (II) Anticipated duration of each discharge.
- (III) Anticipated flow of each discharge.
- (IV) Months in which discharge is expected to occur.

16. Are any of the required chemical constituents in the laboratory analysis present in concentrations above Wyoming Water Quality Standards or limits as identified in the third column in Table 2, page 5?

YES NO

If the answer to question # 16 is yes, answer 16a.–16.c below. If no, proceed to question 17.

a. Which constituents? _____

b. Has this constituent been addressed in the response to question 10? _____

c. Describe how the exceedance was addressed. _____

17. Will blending of fresh water with produced water be used as a treatment option?

YES NO

If the answer to question # 17 is yes, answer 17a.–17.c below. If no, proceed to question 18.

a. What is the anticipated blending rate of fresh water and produced water? _____
Be advised that permit will require water quantity and quality monitoring before and after blending occurs. Also, an automated shutdown system must be installed and maintained on site that terminates the discharge of produced water in the event of the shutdown of the fresh water supply.

b. Provide confirmation from the State Engineer’s office of fresh water use.

c. What is source of fresh water to be blended? No surface water source is allowed.

18. 40 CFR Part 435 Subpart E requires that the permittee document agricultural and wildlife uses of produced water. Provide documentation that the produced water will be used for agriculture or wildlife during periods of discharge. Agriculture and wildlife use includes irrigation, livestock watering, wildlife watering, and other agricultural uses. Agricultural and wildlife use documentation includes (but is not limited to) a certified letter from a landowner(s), a formal written statement from a state, federal or local resource management agency, or a formal written statement with supporting documentation from a

natural resources or environmental professional accompanied by the credentials of the natural resources or environmental professional. Agriculture and wildlife use documentation must be provided for each outfall included in the application. Agricultural and wildlife certification must be submitted for each outfall's discharge, and must have original signatures.

Facilities permitted prior to June 10, 2002 are exempt from the above requirement. The Wyoming Game and Fish Department has determined that discharges of produced water from WYPDES-permitted oil production units in Wyoming, existing as of June 10, 2002, are being used to enhance wildlife propagation and habitat.

- This facility was WYPDES or NPDES permitted prior to June 10, 2002
- Documentation of beneficial use is enclosed [As effluent water quality meets drinking water quality standards and exceeds General Permit Effluent Limits \(Table 2 & WET Summary attached\) protective of stock and wildlife, this water can be used beneficially for stock and wildlife watering.](#)

19. The applicant may submit any optional information the applicant wishes to have considered.

Authorized signatories for this application are the following:	
<i>For corporations:</i>	<i>A principal executive officer of at least the level of vice president, or the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the overall operation of the facility from which the discharge originates.</i>
<i>For partnerships:</i>	<i>A general partner.</i>
<i>For a sole proprietorship:</i>	<i>The proprietor.</i>
<i>For a municipal, state, federal or other public facility:</i>	<i>Either a principal executive officer or ranking elected official.</i>

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

Jesse Eubank

Printed Name of Person Signing


Signature of Applicant

307-360-3390

Telephone

VP/Plant Manager

Title

8-15-14
Date

N/A

Fax

Section 35-11-901 of Wyoming Statutes provides that:

*All permit applications must be signed in accordance with 40 CFR Part 122.22, "for" or "by" signatures are not acceptable.

Section 35-11-901 of Wyoming Statutes provides that:

Any person who knowingly makes any false statement, representation, or certification in any application ... shall upon conviction be fined not more than \$10,000 or imprisoned for not more than one year, or both.

Mail this application to:

WYPDES Permits Section
Department of Environmental Quality/WQD
122 West 25th Street, Herschler Building, 4W
Cheyenne, WY 82002

Wyoming Statute 35-11-312 was revised to require discharge permit fees be paid prior to permit issuance. Therefore, payment of permit fees must be accompanied with the application. Any application received without proper fee payment will be returned. For complete information related to permit fees, please visit our website at http://deq.state.wy.us/wqd/WYPDES_Permitting/index.asp.

Individual permits are issued for a period of five years. A check for \$500 per permit must be included with all applications for new permits and renewals for individual WYPDES permits.

I have enclosed a check for \$ 500⁰⁰

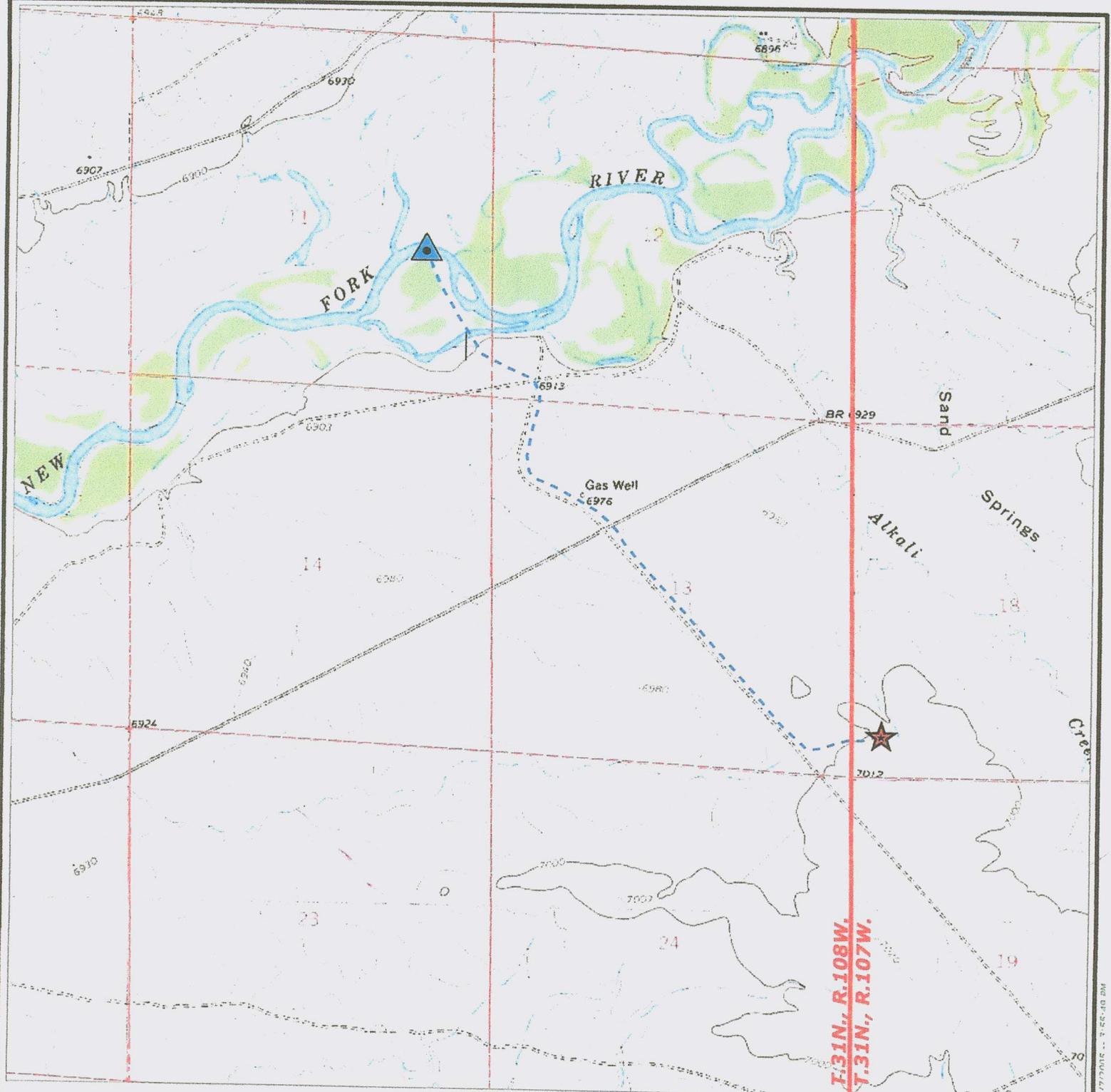
Check Number 4201001837

Please include unique footer information on each page of this application and on all supporting documentation using the following format:

Company Name/Year/Month/Day/NEW, MOD, RENEWAL/Permit # (if a modification or renewal) or Application # (from this particular company) for that particular day

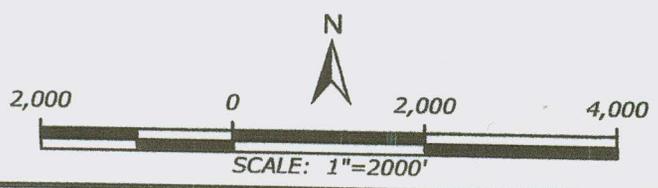
<u>For Agency Use Only</u>	
Date Check Received	<u>8-29-14</u>
Check Amount	<u>\$500 - #4201001837</u>
Permit Term	<u>5 yrs</u>
Approval	<u>ng</u>

Maps 1 And 2 New Fork River



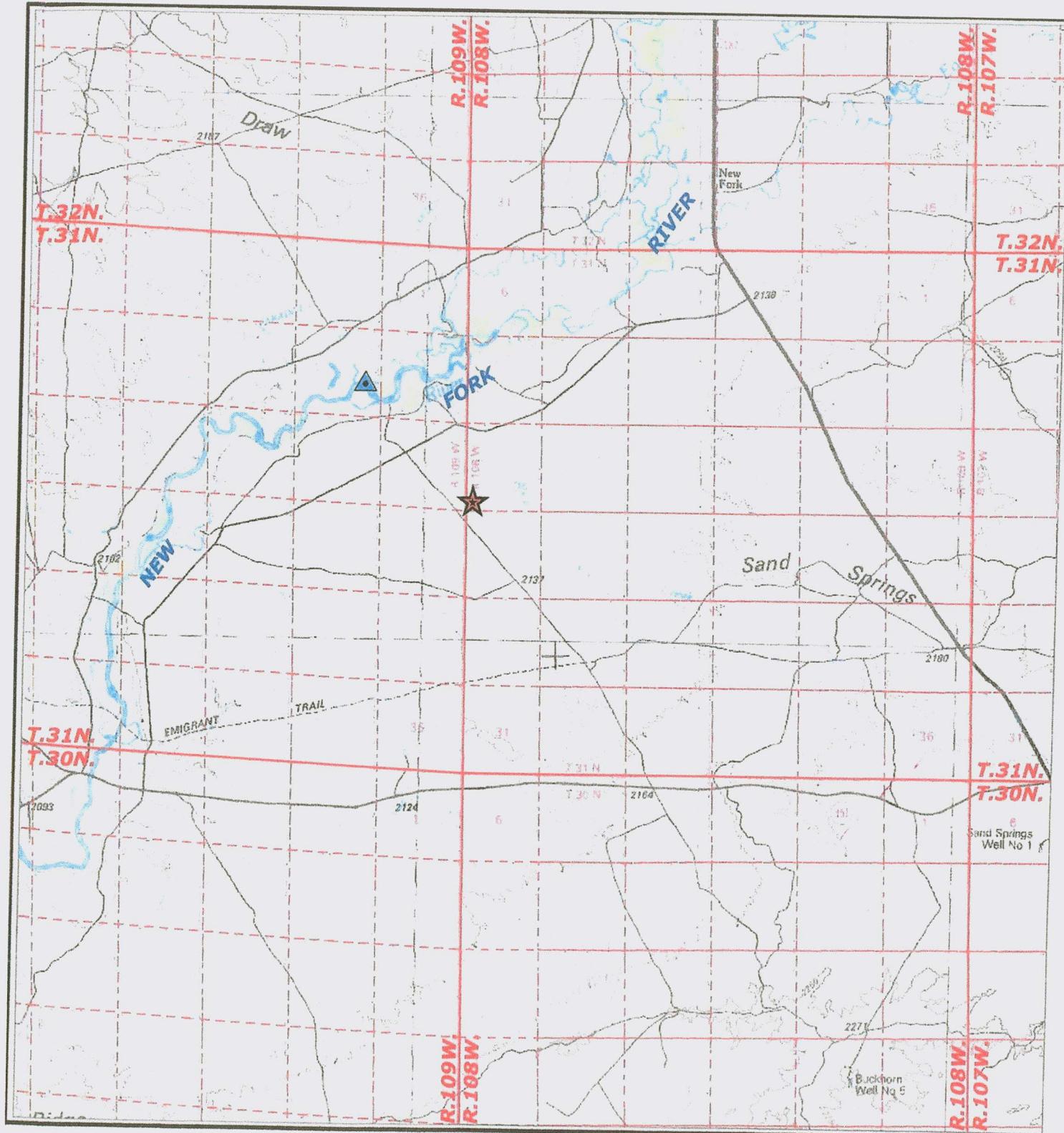
LEGEND

-  JENSEN DISPOSAL FACILITY
-  NEW FORK RIVER DISCHARGE POINT
-  PIPELINE



ANTICLINE DISPOSAL, LLC
MAP 2 - WATER MANAGEMENT FACILITY
NEW FORK RIVER
T.31N., R.108,109W.
SUBLETTE COUNTY, WYOMING
 GFNF R. GEORGE & ASSOCIATES, INC.

Map prepared by GFNF R. GEORGE & ASSOCIATES, INC. on 11/17/2009. T.31N., R.108,109W.



LEGEND

- ★ JENSEN DISPOSAL FACILITY
- ▲ NEW FORK RIVER DISCHARGE POINT

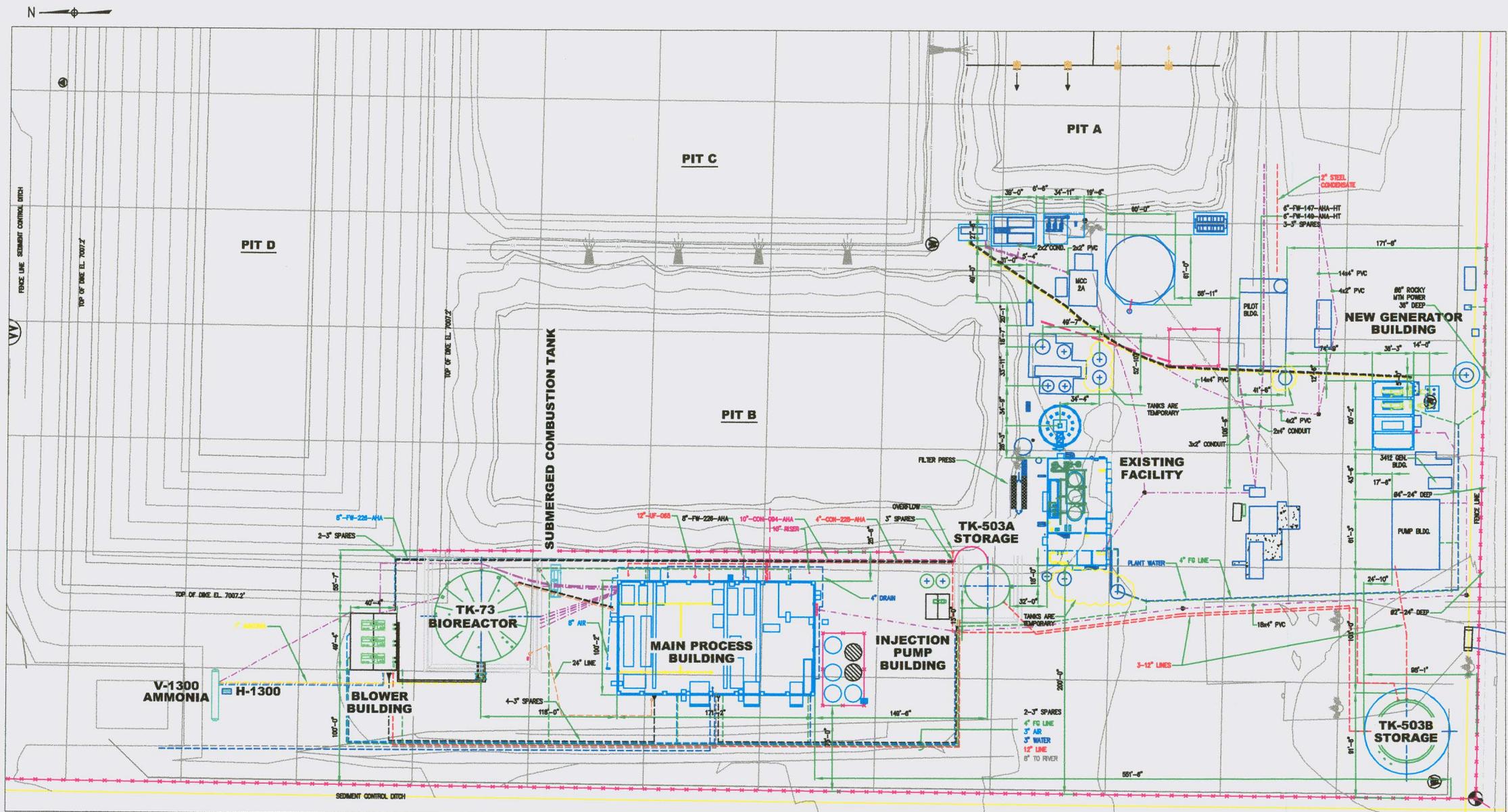
ANTICLINE DISPOSAL, LLC

MAP 1 - PROJECT LOCATION
 NEW FORK RIVER
 T.31N., R.108,109W.
 SUBLETTE COUNTY, WYOMING

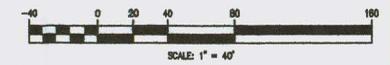
GENE R. GEORGE & ASSOCIATES, INC

Geological Survey

Plant Layout



CONFIDENTIAL TO ANTICLINE DISPOSAL, LLC



NOTES:

REFERENCE DRAWINGS			REVISIONS			DRAWING APPROVAL	
DWG. NO.	TITLE	REV.	BY	DATE	CHK	DATE	DATE
		0	AS BUILT				
			JC	07/10/08			

DATE	APPROVED BY
CLIENT	
PROJECT MGMT	
PROCESS	
MECHANICAL	
PIPING	
CHECK	

ANTICLINE DISPOSAL, INC.

WATER TREATMENT PLANT EQUIPMENT LOCATION

SHELLETTE COUNTY WICHITA, KS

DATE: 08/10/08 SCALE: 1"=40'-0" PROJ. NO.: 12172 DWG. NO.: 12172-1700-002

DRAWN BY: K. HINES ENGINEER: J. ALLEN (12172-1700-002.dwg)

12172-1700-002 0

