

THE WEST FIRM

A PROFESSIONAL LIMITED LIABILITY COMPANY

Attorneys And Counselors At Law

677 Broadway, 8th Floor
Albany, New York 12207-2996
Telephone (518) 641-0500
Facsimile (518) 615-1500

Thomas S. West*
Yvonne E. Hennessey*
Gregory A. Mountain*

*Also admitted in Pennsylvania

Cindy M. Monaco
Elizabeth Dailey McManus
Francis X. O'Connor, *Of Counsel**

†Also admitted in Massachusetts

Direct Dial: (518) 641-0501
Direct Facsimile: (518) 615-1501
E-Mail: twest@westfirmllaw.com
www.westfirmllaw.com

June 1, 2010

Via Electronic and First Class Mail

ALJ Edward Buhmaster
NYS Department of Environmental Conservation
Office of Hearings & Mediation Services
625 Broadway, 1st Floor
Albany, NY 12233-1550

Re: Chemung County Landfill Permit Modification
DEC Project No. 8-0728-00004/00013

Dear ALJ Buhmaster,

The purpose of this letter is to respond to your directive that New England Waste Services of New York, Inc. ("NEWSNY") provide to the parties certain information concerning wastes currently being accepted at the Chemung County landfill from operations associated with the development of shale wells in Pennsylvania.

Attachment 1 is a copy of the response from NEWSNY to the Department, dated today, responding to the Department's letter, dated April 27, 2010, requesting information concerning certain spill cleanup wastes that were received at the Chemung County landfill. Attachment 2 is a copy of the procedure that was submitted to the Department relative to the operation of the radioactivity detectors installed at the scales at the Chemung County landfill and the protocol that will be followed if radioactivity is detected at levels of 15 pCi per gram or greater.

This information is being submitted to you and the parties subject to a full reservation of rights that we do not believe that any issue relating to the wastes that are currently being accepted at the Chemung County landfill, including wastes containing NORM, is properly before you as part of the pending application to increase the tonnage of waste allowable at the facility. As discussed during the Issues Conference and in our conference call today, NEWSNY has requested summary dismissal of that issue pursuant to 6 NYCRR § 624.6 (c).

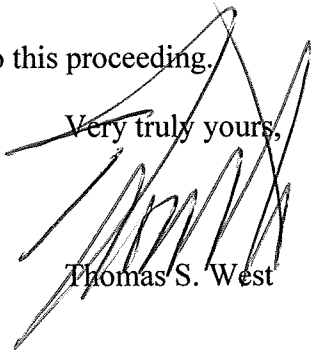
ALJ Edward Buhrmaster

June 1, 2010

Page 2 of 2

Thank you for your ongoing attention to this proceeding.

Very truly yours,


Thomas S. West

TSW/rsb

Attachments

cc: Service List (via electronic mail)

ATTACHMENT 1



Chemung Landfill, LLC

An Affiliate of **casella**
Waste Systems Inc.

Gary Maslanka, P.E.
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516

**RE: Chemung County Landfill
NYSDEC Permit No. 8-0728-00004/00013-0
Profile information for Special Waste Approvals 2060 and 2067**

Dear Mr. Maslanka:

Transmitted here within is the response to your letter dated April 27, 2010 requesting additional information regarding the acceptance of soils disposed in the Chemung County Landfill (Chemung). Note that the Talisman data for the soil indicates that the Radium level is less than 1 pCi/g. Also note that the Chesapeake brine water was spilled after the filtering process.

Attachment I: Response from Chesapeake Energy including MSDS

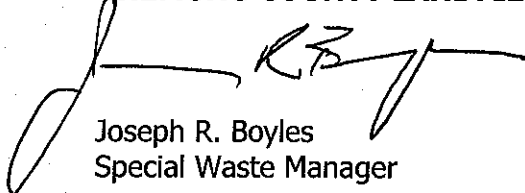
Attachment II: Response from Talisman

Attachment III: Scale Report detailing tonnages.

Should you have any questions please call me at 585.466.7271

Sincerely,

CHEMUNG COUNTY LANDFILL



Joseph R. Boyles
Special Waste Manager

Attachments

cc: Karen Flanders, Chemung; Carla Canjar, Chemung; Larry Shilling, Chemung

P.O. Box 2178
Elmira, NY 14903
Phone: (607) 737-2980
Fax: (607) 737-2967

ATTACHMENT I: Chesapeake Energy



Eric B. Gillespie
Regulatory Affairs Specialist
Phone: 304-353-5260
Cell: 304-380-1165
eric.gillespie@chk.com

May 28, 2010

VIA CERTIFIED MAIL

Mr. Joseph Boyles
Special Waste Manager/Casella-Western Region
6653 Herdman Road
Angelica, NY 14709

Re: Chemung County Landfill Permit Modification Application
Tonnage Rate Increase DEC ID # 8-0728-00004/00013
Town of Chemung, Chemung County
Special Waste Characterization Profiles #2060 and #2067

Dear Mr. Boyles:

In response to your letter of April 27, 2010, the soils disposed of at the landfill associated with waste profile #2067 are from a central wastewater/residual waste recycle/reuse operation. Chesapeake has reviewed its records and the Special Waste Characterization profile #2060 is not in our records.

- 1) A description of the liquid involved in the spills and details on how the spills occurred. For Profile #2067 please indicate if the liquid was spilled before or after being filtered with the 20 micron filter at the site of the spill.

Response: The liquid involved in the spill is a comingled filtered produced water and storm water from within the secondary containment. Soils were impacted when the comingled fluids breached over the top of the secondary containment due to heavy precipitation. The soil taken to the landfill was from the area impacted by the comingled fluid spill after any freestanding water was removed.

- 2) A copy of any Pennsylvania DEP spill reports that were generated as a result of the spills.

Response: PADEP was notified of the spill. To date Chesapeake has not received any spill report from the PADEP.

Mr. Joseph Boyles
May 28, 2010
Page 2

- 3) A copy of the most recent analytical data provided to the WWTP at which the liquids were most recently disposed.

Response: The fluids were recycled and were not disposed into a WWTP; therefore, no sampling of the fluids was required for disposal.

- 4) An estimation of the volume of liquid that was (a) involved in each spill, (b) recovered in each spill, and (c) absorbed by the soil in each spill.

Response: Chesapeake estimates that approximately < 5bbbls of comingled fluids were released. All visible free fluids readily visible were collected using a vacuum truck.

- 5) The amount of waste accepted for disposal from each spill.

Response: Chesapeake efforts to remediate the spill using excavation technology resulted in 100 tons of excavated material.

- 6) Radiological analysis of the liquid currently in the storage tanks of the wells that generated the liquid involved in the spills.

Response: Radiological analysis conducted now would not reflect the characteristics of the comingled fluids.

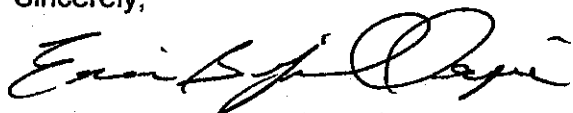
- 7) The result of any and all analytical analysis of samples taken from the waste before it was disposed of in the landfill.

Response: Enclosed is the special waste characterization profile information provided to the landfill as requested by the landfill for disposal of the soils.

- 8) Any other information or chemical analysis your company or the generator of the waste believes would improved the Department's understanding.

Response: As we are unaware of what specific information the NYDEC needs to make a decision, no other information can be provided beyond the contents of this submittal.

Sincerely,



Eric B. Gillespie

Enclosure



FOR STATE USE ONLY		
SITE NO.	APPLICATION NO. 2067	DATE RECEIVED
DEPARTMENT ACTION <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Disapproved		DATE

SPECIAL WASTE CHARACTERIZATION PROFILE

Disposal Facility Location (Choose One or More)	Disposal Option			
<table border="0"> <tr> <td> <input type="checkbox"/> Hyland Facility Associates 6653 Herdman Road Angelica, NY 14709 Ph: 585.466.7271 Fax: 585.466.3206 </td> <td> <input checked="" type="checkbox"/> Chemung County Landfill 1488 Cty Rte. 60 Lowman, NY 14861 Ph: 607.737.2980 Fax: 607.737.2967 </td> <td> <input type="checkbox"/> Ontario County Landfill 1879 Rt. 5&20 Stanley, NY 14561 Ph: 585.526.4420 Fax: 585.526.5459 </td> </tr> </table>	<input type="checkbox"/> Hyland Facility Associates 6653 Herdman Road Angelica, NY 14709 Ph: 585.466.7271 Fax: 585.466.3206	<input checked="" type="checkbox"/> Chemung County Landfill 1488 Cty Rte. 60 Lowman, NY 14861 Ph: 607.737.2980 Fax: 607.737.2967	<input type="checkbox"/> Ontario County Landfill 1879 Rt. 5&20 Stanley, NY 14561 Ph: 585.526.4420 Fax: 585.526.5459	<input checked="" type="checkbox"/> Waste <input checked="" type="checkbox"/> ADU ADC, Other (describe) RECLASSIFIED AS WASTE
<input type="checkbox"/> Hyland Facility Associates 6653 Herdman Road Angelica, NY 14709 Ph: 585.466.7271 Fax: 585.466.3206	<input checked="" type="checkbox"/> Chemung County Landfill 1488 Cty Rte. 60 Lowman, NY 14861 Ph: 607.737.2980 Fax: 607.737.2967	<input type="checkbox"/> Ontario County Landfill 1879 Rt. 5&20 Stanley, NY 14561 Ph: 585.526.4420 Fax: 585.526.5459		

1) Company Generating Waste <i>Chesapeake Energy</i>	Address of Facility Generating Waste (Street, City, State, Zip) <i>Otten Location</i>	County of Origin <i>Bradford, PA</i>
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2) Representative of Generator (same as generator's signature) <i>Colby KING</i>	Mailing Address of Representative <i>Box 73 B, Towanda, PA 16848</i>	Telephone No. <i>570-637-3566</i>	Fax No.
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3) Description of Facility/Process Generating Waste
Drill site

4) Description of waste (debris-containing, composition, uniform or mixture, etc.)
Brine Water Spill Removing contaminated soil

5) Is Waste Hazardous
 Yes No

6) Expected Annual Amount of Waste To Be Delivered _____ tons/year _____ cubic yards/year	Approximate Density of Waste _____ pounds/cubic yard
--	---

7) Expected Frequency of Delivery
 one-time
 daily weekly monthly other (specify, if known)

8) Hauler Name <i>M.R. Dint</i>	Address	NYSDEC Permit No. Exp. Date:	Telephone No.
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9) Method of Delivery. If other, specify.
 roll-off packer truck tractor trailer other *Dump truck*

10) Previous Disposal Location <i>NA</i>	Address	Phone	Contact Person
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Waste Characterization Data

11) Is the waste classified as a "listed" or "characteristic" hazardous waste as defined by USEPA, or State of origin, or State where disposed? (If yes, explain.)

NO

12) Describe all hazardous or nuisance properties associated with the waste.

None

13) Does the waste require any special handling or disposal procedures? If so, explain.

NO

14) Analytical Data Submitted (TCLP/Other).

Not required by Joe Boyles

Type of Samples (indicate No. of each type in space provided)

_____ grab _____ composite

New England Waste Services of N.Y., Inc. requires, at a minimum, the submittal of full TCLP (Metals-RCRA 8, VOC, SVOC, PCBs, Pesticides/Herbicides), pH, Reactivity, Ignitibility, and % solids testing results for any special waste submitted for landfill acceptance unless the applicant can provide an acceptable justification for submittal of less comprehensive data. The generator is responsible for proper waste characterization.

15) Justification for not submitting full TCLP data.

Frac tank overflow + cleanup in progress

GENERATOR CERTIFICATION

I hereby certify that (1) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (2) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed. I understand that, once the waste stream is approved by Casella based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Casella. I further understand that any deviation from the information contained herein will require immediate notification to the disposal facility and cessation of disposal.

Generator's Authorized Representative - Signature:

Colby King

Print name:

Colby King

Print Title:

Construction Foreman

Date:

4-9-10

DISPOSITION (to be completed by Casella Waste Systems, Inc.)

Received by:

Joseph Boyles

Date Received:

Date Logged In:

Approved by:

Joseph Boyles

Project Name:

Title:

JR. WASTE MANAGER

Submitted to Casella PC&E

Date:

Casella PC&E Approval

Date:

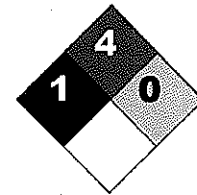
Submitted to NYSDEC

Date:

NYSDEC Approval

Date:

4/9/10



Material Safety Data Sheet

Material Name: Produced Water

Health	1
Flammability	4
Reactivity	0
PPE	

*** Section 1 - Chemical Product and Company Identification ***

Product name: Produced Water - Sweet
Synonyms: Salt Water, H₂O, Oily Water, Formation Water
Chemical Family: Water
Formula: Complex mixture

Supplier: Chesapeake Energy Corporation and its subsidiaries
6100 N. Western Avenue
Oklahoma City, OK 73118

Other Information: Phone: 405-848-8000 Fax: 405-753-5468
Emergency Phone Number: Chemtrec - 800-424-9300

*** Section 2 - Hazards Identification ***

Emergency Overview

May cause eye, skin, respiratory and gastrointestinal tract irritation.

Potential Health Effects: Eyes

May cause eye irritation.

Potential Health Effects: Skin

Contact may cause skin irritation.

Potential Health Effects: Ingestion

Ingestion may cause irritation of the digestive tract that may result in nausea, vomiting and diarrhea.

Potential Health Effects: Inhalation

Breathing the mist and vapors may be irritating to the respiratory tract.

HMIS Ratings: Health: 1 Fire: 4 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

Produced water is a mixture of varying amounts of water and oil produced from various exploration and production processes. Produced water may contain an upper layer of flammable liquid and vapor hydrocarbons. Produced water may include small amounts of natural gas condensate, and benzene may be present.

CAS #	Component	Percent
7732-18-5	Water	>68
Not Available	Dissolved Minerals	<32
71-43-2	Benzene	<1
8002-05-9	Petroleum distillates (naphtha)	<1

Normal composition ranges are shown. Exceptions may occur depending on the source of the produced water.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Flush eyes with clean, low-pressure water for at least 15 minutes, occasionally lifting the eyelids. If pain or redness persists after flushing, obtain medical attention. If eye is exposed to hot liquid, cover eyes with cloth and seek medical attention immediately.

First Aid: Skin

In case of hot liquid exposure, do not remove clothing or treat-wash only unburned area and seek medical attention immediately.

First Aid: Ingestion

Do not induce vomiting. Seek medical attention.

First Aid: Inhalation

Immediately remove person to area of fresh air. For respiratory distress, give oxygen, rescue breathing, or administer CPR if necessary. Obtain prompt medical attention.

Material Safety Data Sheet

Material Name: Produced Water

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

May react with strong oxidizing materials and a wide variety of chemicals. Forms explosive mixtures with air.

Hazardous Combustion Products

Not Determined.

Extinguishing Media

Dry chemical, foam, carbon dioxide, or water spray.

Fire Fighting Equipment/Instructions

Any fire would be associated with any natural gas condensate floating on the surface of the produced water.

Water may be ineffective on flames but should be used to keep fire exposed containers cool. Keep the surrounding areas cool by using water mists. Firefighters should wear self-contained breathing apparatus and full protective clothing.

NFPA Ratings: Health: 1 Fire: 4 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Personal Protection Equipment section. Contain liquid to prevent further contamination of soil and surface water.

Clean-Up Procedures

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment. Where feasible and appropriate, remove contaminated soil or flush with fresh water. Follow prescribed procedures for reporting and responding to larger releases. Advise authorities and the National Response Center (800-424-8802) if the release is to a watercourse.

Evacuation Procedures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible.

Special Procedures

Avoid excessive skin contact with the spilled material.

*** Section 7 - Handling and Storage ***

Handling Procedures

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Do not enter storage areas and confined spaces without adequate ventilation. Use appropriate respiratory protection if there is a potential to exceed component exposure limit(s).

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

Petroleum distillates (naphtha) (8002-05-9)

OSHA: 500 ppm TWA; 2000 mg/m³ TWA

NIOSH: 350 mg/m³ TWA

1800 mg/m³ Ceiling (15 min)

Material Safety Data Sheet

Material Name: Produced Water

Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 10 ppm TWA; 25 ppm ceiling; 50 ppm (10 min.)
NIOSH: 0.1 ppm TWA
1 ppm STEL

Engineering Controls

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Chemical goggles or face shield should be worn when handling product if the possibility of spray exists.

Personal Protective Equipment: Skin

Normal working clothes should be worn. Wash contaminated clothing prior to reuse.

Personal Protective Equipment: Respiratory

Respiratory protection is not required for normal use. At excessive concentrations, wear a NIOSH approved air purifying respirator with organic vapor cartridges.

Personal Protective Equipment: General

A source of clean water should be in the work area for flushing eyes and skin.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Clear or opaque	Odor:	Salty with a slight hydrocarbon odor.
Physical State:	Liquid	pH:	4.9-8.5
Vapor Pressure:	NA	Vapor Density:	1.2
Boiling Point:	212°F	Melting Point:	ND
Solubility (H2O):	Soluble	Specific Gravity:	>1 @ 0°C
Freezing Point:	<32°F	Evaporation Rate:	ND
VOC:	ND	Octanol/H2O Coeff.:	ND
Flash Point:	ND	Flash Point Method:	ND
		Lower Flammability Limit (LFL):	4.0
		Upper Flammability Limit (UFL):	46.0
		Burning Rate:	ND
		Auto Ignition:	NA

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal ambient and anticipated conditions of storage and handling.

Chemical Stability: Conditions to Avoid

Keep material away from heat, sparks, and open flames.

Incompatibility

Keep away from strong oxidizers.

Hazardous Decomposition

Not Determined.

Possibility of Hazardous Reactions

Will not occur.

Material Safety Data Sheet

Material Name: Produced Water

*** Section 11 - Toxicological Information ***

Acute Dose Effects

Component Analysis - LD50/LC50

Water (7732-18-5)

Oral LD50 Rat: >90 mL/kg

Petroleum distillates (naphtha) (8002-05-9)

Oral LD50 Rat: >4300 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Benzene (71-43-2)

Inhalation LC50 Rat: 13050-14380 ppm/4H; Oral LD50 Rat: 1800 mg/kg

Carcinogenicity

Component Carcinogenicity

Petroleum distillates (naphtha) (8002-05-9)

IARC: Monograph 45 [1989] (Group 3 (not classifiable))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen

OSHA: 10 ppm TWA; 25 ppm ceiling; 50 ppm (10 min.)

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Supplement 7 [1987], Monograph 29 [1982] (Group 1 (carcinogenic to humans))

*** Section 12 - Ecological Information ***

Ecotoxicity

Component Analysis - Ecotoxicity - Aquatic Toxicity

Petroleum distillates (naphtha) (8002-05-9)

Test & Species

96 Hr LC50 Salmo gairdneri 258 mg/L [static]

24 Hr EC50 Daphnia magna 36 mg/L

Conditions

Benzene (71-43-2)

Test & Species

96 Hr LC50 Pimephales promelas 12.6 mg/L [flow-through]

96 Hr LC50 Oncorhynchus mykiss 5.3 mg/L [flow-through]

96 Hr LC50 Lepomis macrochirus 22 mg/L [static]

96 Hr LC50 Poecilia reticulata 28.6 mg/L [static]

72 Hr EC50 Selenastrum 29 mg/L

capricornutum

48 Hr EC50 water flea 356 mg/L [Static]

48 Hr EC50 Daphnia magna 10 mg/L

Conditions

Material Safety Data Sheet

Material Name: Produced Water

*** Section 13 - Disposal Considerations ***

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of a "characteristic" hazardous waste. This product could also contain benzene at low concentrations and may exhibit the characteristic of "toxicity" (D018) as determined by the toxicity characteristic leaching procedure (TCLP). This material could become a hazardous waste if mixed with or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not Regulated

Additional Info.: This may not apply to all shipping situations. Consult 49CFR 172 for additional information.

*** Section 15 - Regulatory Information ***

US Federal Regulations

Component Analysis

This material may contain one or more of the following chemicals identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Benzene (71-43-2)

SARA 313: 0.1 % de minimis concentration

CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Petroleum distillates (naphtha)	8002-05-9	No	Yes	Yes	Yes	Yes	Yes
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Benzene	71-43-2	0.1 %

Additional Regulatory Information

Material Safety Data Sheet

Material Name: Produced Water

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Water	7732-18-5	Yes	DSL	EINECS
Petroleum distillates (naphtha)	8002-05-9	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS

*** Section 16 - Other Information ***

Other Information

The information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgement.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

Key/Legend

NA - Not Applicable
ND - Not Determined
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
TLV - Threshold Limit Value
PEL - Permissible Exposure Limit
RQ - Reportable Quantity
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer

Multi-Chem Group, LLC

Multi-Chem Analytical Laboratory
3401 W. Admiral Doyal Dr.
New Iberia, LA 70560



Water Analysis Report

Production Company: **CHESAPEAKE APPALACHIA (155)**
Well Name: **Otter Pad**
Sample Point: **Produced Water Tanks on left**
Sample Date: **1 /2 /2010**
Sales Rep: **James Davisson**
Lab Tech: **Daniel Mire**

Sample ID: **WA-35172**

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	1/4/2009	Cations		Anions	
Temperature (°F):	34		mg/L		mg/L
Sample Pressure (psig):		Calcium (Ca):	7360.00	Chloride (Cl):	38000.00
Specific Gravity (g/cm³):	1.0500	Magnesium (Mg):	219.60	Sulfate (SO₄):	1.00
pH:	7.39	Barium (Ba):	1546.00	Dissolved CO₂:	43.67
Turbidity (NTU):	-	Strontium (Sr):	-	Bicarbonate (HCO₃):	85.40
		Sodium (Na):	14553.00	Carbonate (CO₃):	-
		Potassium (K):	-	H₂S:	-
Calculated T.D.S. (mg/L)	61851	Iron (Fe):	20.16	Phosphate (PO₄):	-
Molar Conductivity (µS/cm):	93714	Manganese (Mn):	22.10	Silica (SiO₂):	-
Resistivity (Mohm):	0.1067	Lithium (Li):	-	Fluoride (F):	-
		Aluminum (Al):	-	Nitrate (NO₃):	-
		Ammonia NH₃ :	-	Lead (Pb):	-
				Zinc (Zn):	-
				Bromine (Br):	-
				Boron (B):	-

Test Conditions		Scale Values @ Test Conditions - Potential Amount of Scale in lb/1000bbl										
Temp °F	Gauge Press. psi	Calcium Carbonate CaCO₃		Gypsum CaSO₄ · 2H₂O		Calcium Sulfate CaSO₄		Strontium Sulfate SrSO₄		Barium Sulfate BaSO₄		Calculated CO₂ psi
		Sat Index	Scale	Sat Index	Scale	Sat Index	Scale	Sat Index	Scale	Sat Index	Scale	
34		2.21	0.09	0.00	-536.95	0.00	-783.83	-	-	18.26	0.99	0.07
80	0	4.86	0.20	0.00	-1.30	0.00	-863.88	-	-	5.61	0.78	0.03
100	0	5.73	0.21	0.00	-0.89	0.00	-783.21	-	-	3.53	0.65	0.04
120	0	6.30	0.21	0.00	-0.62	0.00	-663.57	-	-	2.28	0.50	0.05
140	0	6.68	0.21	0.00	-0.45	0.00	-530.34	-	-	1.51	0.29	0.05
160	0	6.88	0.20	0.00	-0.32	0.00	-403.15	-	-	1.02	0.02	0.06
180	0	6.93	0.19	0.00	-0.24	0.00	-293.63	-	-	0.70	-0.36	0.06
200	0	6.85	0.18	0.00	-0.18	0.00	-206.28	-	-	0.49	-0.88	0.06
220	2.51	6.63	0.17	0.00	-0.15	0.00	-145.00	-	-	0.34	-1.65	0.06
240	10.3	6.38	0.16	0.00	-0.12	0.01	-96.69	-	-	0.25	-2.66	0.07
260	20.76	6.07	0.15	0.00	-0.10	0.01	-63.10	-	-	0.18	-4.06	0.07
280	34.54	5.73	0.14	0.00	-0.09	0.01	-40.43	-	-	0.13	-5.98	0.07
300	52.34	5.36	0.13	0.00	-0.08	0.02	-25.51	-	-	0.10	-8.63	0.07

Conclusions:

Calcium Carbonate scale is indicated at all temperatures from 80°F to 300°F
Gypsum Scaling Index is negative from 80°F to 300°F
Calcium Sulfate Scaling Index is negative from 80°F to 300°F
Strontium Sulfate scaling was not evaluated
Barium Sulfate NO CONCLUSION

Notes:

Sample Taken from Freshwater Supply in Wysox PA, up leisure Dr. Taken out of truck load bleeder valve as truck loaded.
Sample was pulled before water entered tank on truck.

Multi-Chem Group, LLC

Multi-Chem Analytical Laboratory
 3401 W. Admiral Doyal Dr.
 New Iberia, LA 70560

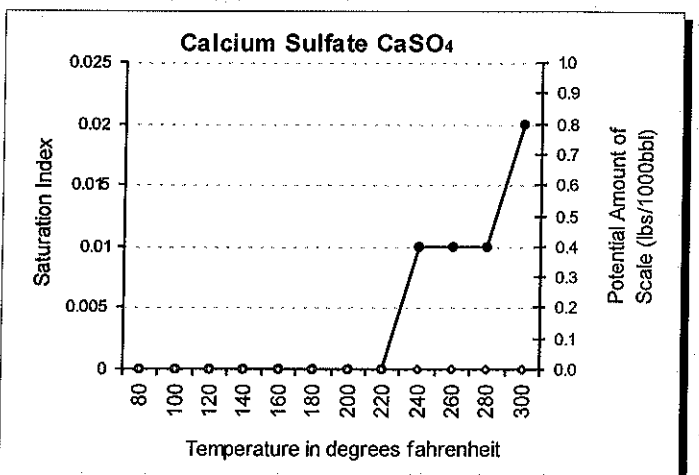
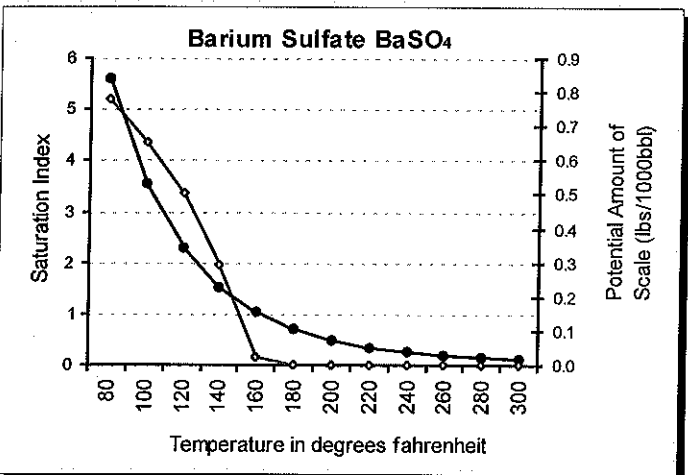
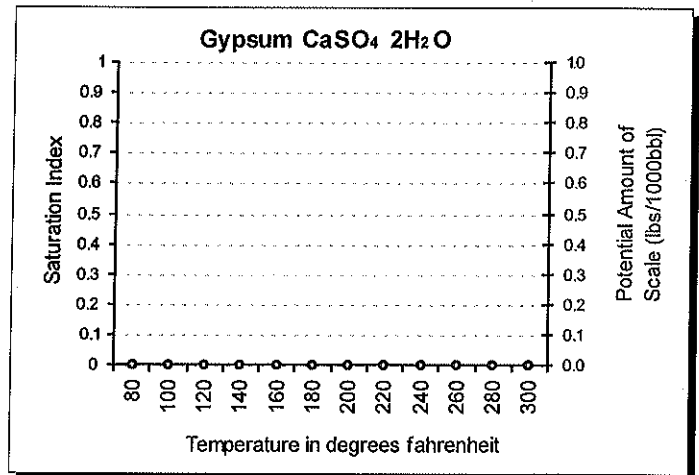
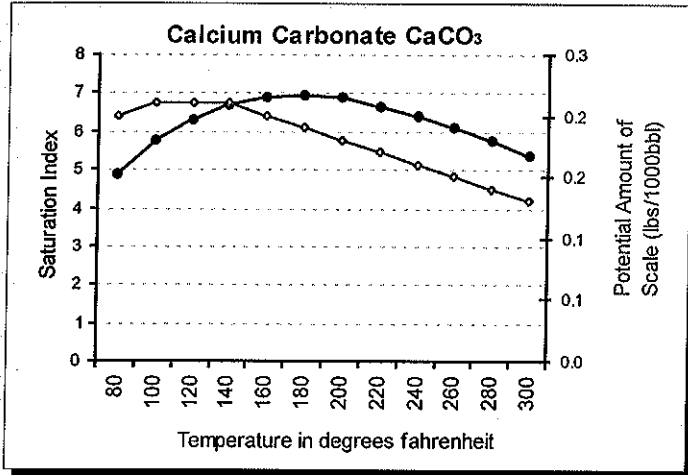


multi-chem

Scale Prediction Graphs

Well Name: Otter Pad

Sample ID: WA-35172



ATTACHMENT II: Talisman



"Jones, Ted"
<TJONES@talisman-energy.com>

06/01/2010 11:47 AM

To <joe.boyles@casella.com>

cc "Kessy, Rick" <RKessy@talismanusa.com>, "O'Driscoll, Jim" <JODriscoll@talismanusa.com>, "Normane, Todd" <TNORMANE@talismanusa.com>, "Scheuerman, Mark"

bcc

Subject Response to DEC's letter

<<Rad-White's Well.pdf>> <<White's NOV.pdf>> <<Conf Soil Samples - White's.pdf>> <<Spill Soil Samples - White's.pdf>>

Hi Joe,

This email is in response to the DEC letter dated April 27, 2010 requesting information for the White's Well soil disposed of at the Chemung County Landfill, Waste Profile #2060. Responses parallel the DEC numbered requests.

1. The spilled material was produced water from the White's natural gas well. Water is separated from the gas and stored in 500-barrel (21,000-gallon) frac tanks. The spill occurred due to a failed dump valve.
- 2) PADEP's inspection report / NOV are attached.
- 3) Water was not sampled for lab analysis at the time of the spill. Water residing in the producing formation is a function of mineralogy and carbonate geochemistry, fluids introduced, and natural formation water. The water produced would only be representative of a water discharge at that same given point in time. Analytical data regarding disposal of water at a WWTP is therefore not necessarily comparable to the solid waste disposed of at the landfill.
- 4) (a) Approximately 30 barrels of water was released (b) Approximately 140 barrels were recovered as the spill was immediately followed by heavy rains (c) Contact time with the soil was minimal and a de-minimus quantity of water was absorbed at surface. Soil on which the spilled water traveled was scraped up.
- 5) Casella to check records for volume disposed.
- 6) Per our response to Question #3 there were also no radiological lab analyses performed on the water produced at the time of the spill.
- 7) Lab results are attached for soil that was disposed of at Chemung.
- 8) Radiologicals were performed on an archived soil sample and are attached.

Best Regards

Talisman Energy USA Inc.

This e-mail has been scanned by MCI Managed Email Content Service, using Skeptic(tm) technology powered by MessageLabs. For more information on MCI's Managed Email Content Service, visit <http://www.mci.com>.



Rad-White's Well.pdf White's NOV.pdf Conf Soil Samples - White's.pdf Spill Soil Samples - White's.pdf

LAB ID: 08-00380

BENCHMARK ANALYTICS, INC
EASTERN DIVISION
2566 Pennsylvania Avenue
Sayre, PA 18840

Work Order: 10043812

PHONE (570) 888-0169
FAX (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley
COMPANY: Talisman Energy USA, Inc.
ADDRESS: 337 Daniel Zenker Dr
Horseheads, NY 14845

WO#: 10043812

PAGE: 1 of 1

PO#:

PWS ID#

PHONE: (607) 731-0145
FAX: (607) 562-4001

TEST REPORT

Production-White's Well

RECEIVED FOR LAB BY: TJC

DATE: 04/28/2010 12:08

Page 1 of 1

SAMPLE: Production Water Spill Soil

Lab ID: 10043812-001A Grab

SAMPLED BY: SG

Sample Time 04/27/2010 12:00

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	210.4	± 58.45	546.50	pCi/kg	EPA 903.0		04/30/10 14:20	05/14/10	BH-CV
Radium-228	394.5	± 292.7	646.20	pCi/kg	EPA 904.0		05/11/10 8:00	05/13/10	NLB-CV

REMARKS:

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted on the Analytical Report.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

Carri M. Davis

DATE: 5/18/2010

CHAIN OF CUSTODY

B

PAGE 1 OF 1

REPORT TO: Talisman / UEG

2566 Pa

geowetlands@aol.com

W/O#: 10043812

twollin@rallysolutions.ca

REFRIGERATE SAMPLES AFTER COLLECTION

CONTACT Steve Gridley

TRANSPORT TO LABORATORY IN COOLER WITH ICE

PHONE 607-731-0145

FAX#

BILL TO: Talisman

PO# Pro detectors

PROJECT DESCRIPTION White's Cell

SAMPLER SIGNATURE / AFFILIATION S. Gridley

CONTAINER SAMPLING POINT

NO.	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	1/21/12	5:00	C	S	N	None	Radiochemicals: TENORMS (Isotopes of naturally occurring radioactive materials) Ra 226 Ra 228			
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										

- RESULTS ARE BEING USED FOR:
- ND/DOH
 - NY/DEC
 - R/DEP
 - LANDFILL
 - PERSONAL OTHER

ARE SPECIAL DETECTION LIMITS NEEDED? YES NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED? YES NO

IF YES, PLEASE ATTACH REQUIREMENTS

An Incomplete chain of custody may delay the processing of your sample(s).

ANALYSIS TO BE PERFORMED (PER CONTAINER)

LAB USE ONLY

Please fill out all applicable areas completely

DELIVERED BY: [Signature]

DATE: 1/28/12

TIME: 12:07

RECEIVED BY: [Signature]

DATE: 1/28/12

TIME: 12:07

RELINQUISHED BY: [Signature]

DATE: 1/28/12

TIME: 12:07

RECEIVED BY: [Signature]

DATE: 1/28/12

TIME: 12:07

RELINQUISHED BY:

DATE: 1/28/12

TIME: 12:07

RECEIVED BY: [Signature]

DATE: 1/28/12

TIME: 12:07

TEMPERATURE UPON RECEIPT: 6.5 °C ARRIVAL ON ICE: [Signature]



Pennsylvania Department of Environmental Protection

208 West Third Street, Suite 101
Williamsport, PA 17701-6448
December 22, 2009

Northcentral Regional Office

Fax 570-327-3565

NOTICE OF VIOLATION

CERTIFIED MAIL NO. 7009 1410 0000 2456 5233

Mr. Scott Blauvelt
East Resources Inc.
301 Brush Creek Road
Warrendale Pa 15086-7529

Re: White 262-1H
Permit Nos. 37-117-20295
Jackson Township, Tioga County

Dear Mr. Scott Blauvelt:

On December 09, 2009, the Department conducted an inspection of your company's White 262 1H Well (Permit No. 37-117-20295), located in Jackson Township, Tioga County. Our inspection revealed the following violations of the Clean Streams Law, 35 P.S. § 691.1 et seq.; the Solid Waste Management Act, 35 P.S. § 6018.101 et seq.; the Oil and Gas Act, 58 P.S. § 601.101 et seq. and the rules and regulations promulgated under these statutes:

1. Pits and tanks for temporary containment.

The investigation revealed that polluttional substances, namely the release of produced fluids were not contained. This is a violation section 78.56(a) of the Department's regulations, 25 PA Code § 78.56(a), which provides:

"Except as provided in §§ 78.60(b) and 78.61(b) (relating to discharge requirements; and disposal of drill cuttings), the operator shall contain polluttional substances and wastes from the drilling, altering, completing, recompleting, servicing and plugging the well, including brines, drill cuttings, drilling muds, oils, stimulation fluids, well treatment and servicing fluids, plugging and drilling fluids other than gases in a pit, tank or series of pits and tanks."

2. Unpermitted disposal of residual waste.

The investigation revealed an unpermitted discharge of residual waste onto the ground at the site. Specifically, produced fluids were released onto the ground surface without containment. This is a violation of Section 301 of the Solid Waste Management Act, 35 P.S. § 6018.301, which provides:

"No person or municipality shall store, transport, process, or dispose of residual waste within this Commonwealth unless such storage, or transportation, is consistent with or such processing or disposal is authorized by the rules and regulations of the Department and no person or municipality shall own or operate a residual waste processing or disposal facility unless such person or municipality has first obtained a permit for such facility from the Department."

3. Potential Pollution.

The investigation revealed that you created a danger of pollution to the waters of the Commonwealth at this site. This is a violation of Section 402 of the Clean Streams Law, 35 P.S. §691.402, which provides, in part:

"Whenever the Department finds that any activity, not otherwise requiring a permit under this act, including but not limited to the impounding, handling, storage, transportation, processing or disposing of materials or substances, creates a danger of pollution of the waters of the Commonwealth or that regulation of the activity is necessary to avoid such pollution, the Department may, by rule or regulation, require that such activity be conducted only pursuant to a permit issued by the Department or may otherwise establish the conditions under which such activity shall be conducted, or the Department may issue an order to a person regulating a particular activity."



A violation of the Clean Streams Law or the rules and regulations promulgated thereunder is contrary to Section 602 and 611 of that Act, for which the Department could institute administrative, civil, and/or criminal proceedings. The Act provides for up to \$10,000 per day in civil penalties, up to \$10,000 per day in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation. Each day of continued violation constitutes a separate offense.

A violation of the Solid Waste Management Act or the rules or regulations promulgated thereunder is contrary to Sections 601 and 610 of that Act, for which the Department could institute administrative, civil, and/or criminal proceedings. The Act provides for up to \$25,000 per day in civil penalties, up to \$1,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation. Each day of continued violation constitutes a separate offense.

A violation of the Oil and Gas Act or the rules or regulations promulgated thereunder is contrary to Sections 505 and 509 of that Act, for which the Department could institute administrative, civil, and/or criminal proceedings. The Act provides for up to \$25,000 in civil penalties plus \$1,000 for each day of continued violation, up to \$300 in summary criminal penalties, and up to \$5,000 in misdemeanor criminal penalties for each violation. Each day of continued violation constitutes a separate offense.

Please provide a written response within 10 days receipt of this letter, as to when the above listed violations were or will be corrected, and what steps are being taken to prevent their recurrence.

This Notice of Violation is neither an order nor any other final action of the Department of Environmental Protection. It neither imposes nor waives any enforcement action available to the Department under any of its statutes. If the Department determines that additional enforcement action is appropriate, you will be notified of the action.

If you have any questions concerning the above, please contact me at 570-327-0514.

Sincerely,

Mark A. Barbier
Water Quality Specialist
Oil and Gas Management

cc: John Ryder
Marc Cooley
NCRO Files 117-20295





**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM**

DEP USE ONLY	Inspection Record # 1851106
Complaint Record #	Enforcement Record #

INSPECTION REPORT

DEP Office Address	Northcentral Regional Office	Phone: 570-327-3636	Permit or Reg. #	37-117-20295
	208 West Third Street, Suite 101	Fax: 570-327-3565	Project #	
	Williamsport, PA 17701-6448		Farm Name & Well #	White 262 1H
Oper Name Address	East Resources Inc.		County	Tioga
	301 Brush Creek Road		Municipality	Jackson TWP
	Warrendale PA 15086-7529		Latitude:	° ' " N
		DEP ID # 28854	Longitude:	° ' " W

- Inspection Code:**
- | | | |
|---|---|---|
| <input type="checkbox"/> BDREL – Bond Release | <input type="checkbox"/> DRALT – Drilling or Alteration | <input type="checkbox"/> RDSPR – Road Spreading |
| <input checked="" type="checkbox"/> CEI – Compliance Evaluation | <input type="checkbox"/> FLWUP - Following | <input type="checkbox"/> RESTR – Site Restoration |
| <input type="checkbox"/> COMPL – Complaint Inspection | <input type="checkbox"/> PLUG – Plugging | <input type="checkbox"/> RTNC - Routine |

Other: Permit Expired Alt/Meth. Annulus Open Cement Returns Recommend Bond Release

Location	Insp.	Violation	Driller's Log Information			Depth:		
Site ID Sign	X		Fresh Water Amt / Depth	Salt Water Amt / Depth	Coal Thickness / Depth	Formations Oil / Depth Gas / Depth		
Well Tag								
Distance Restrict								
E/S Plan on Site								
E/S Controls								
Encroachments								
Site Restoration								
			Drilling / Plugging					
Drilling-Plugging			Filling Material & Plugs			Casing & Tubing		
Notification				From	To	Size	Pulled	Left
B.O.P.								
Casing								
Monument								
Waste Mgmt.								
Top Hole Water								
Fluids Mgmt.	X							
Impoundment/pit								
Pollution Prevent.	X							
Residual Waste	X		Compliance Assistance	Code	Code	Inspection Results	Code VIOLS	

Remarks: Andy Klinger and I conducted a compliance evaluation in response to a reported 30bbls release of produced fluids reported by Don McCarty, Fortuna Energy Safety & Loss Compliance Specialist 12.08.2009 2:15pm. Call received by DEP Business Manager Richard Edwards. The Following information was recorded, "At approximately 1115 hours today a dump valve separator washed out during production, allowing 30 (thirty) barrels of produced water to escape from the well pad flowing south west toward a silt fence. It is believed approximately 10 barrels of water may have migrated off leased site. No apparent impact to any wetlands or surface waters. CONTINUED ON PAGE 2.

Sample No.	Location/Description	DEP Rep:	Date: 12/9/2009
	NOTE: COPY SENT TO OPERATOR	(signature) <i>Mark A. Barbier</i>	Time:
		(print name) Mark A. Barbier	

INSPECTION REPORT PAGE 2

Remarks (Continued): CONTINEUED FROM PAGE 1 - E&S plan indicates wetlands at 150 yards south east of well pad. production was shut down, pooled water and any residual ground surface water being vacuumed up 2 to 3 inches of surface being excavated at known spill area. This is being done at the advise of their consultant Steve Gridley of United Environmental. The contractor on site providing cleanup and remediation service Don Bishop Excavating. Mr. McCarty is to get back to me concerning the salinity concentrations of the water."

By not containing frac water and allowing it to be released to the ground, East resources Inc. is in violation of 25 Pa Code §78.56(a)(2), Section §6018.301 of the Solid Waste Management Act and Section §691.402 of the Clean Streams Law.

Spoke with Gary Calkins Fortuna Well Tender about dump valve mechanism. Gary indicated that the well currently produces 30bbbls a day. The estimate of the release was based on this figure.

We met on-site with Andy Bishop Contractor. Andy indicated that they re-rocked the affected area on the well pad itself (picture). It was difficult to determine the exact flow path due to snow since the release. Andy indicated that the runoff from the release was towards the wheelie tanks (2) and down the fill slope. The new rock was graded back towards the rock lined channel that runs the western border of the location. Andy indicated that they scraped top soil (approx. 60 X 15) into a pile (picture) at the toe of slope. This disturbed ground was receiving a considerable volume of seepage from the well pad fill slope. The pile of soil was temporarily impounding the surface runoff (picture). There were no visual signs that the fluids migrated to the silt fence or beyond.

Conductivity was measured in the pooled fluid at the base of the soil pile (picture) with an EXTECH ExStik II meter. The upper detection limit on Conductivity for this meter is 1999 µS/cm or 19.99mS/cm. The recorded value was "oL." = Over Limit.

The Conductivity was measured at the top of the scraped area with recorded value "oL". (picture)

The Conductivity was measured in a small seep on the fill slope approximately 10ft down with recorded value "oL".

The Conductivity was measured on the up gradient side of the wheelie tanks, between the release and the tanks, with a recorded value of 385.0 µS/cm.


(12.09.2009)- I indicated my findings to Steve Gridley in a telephone conversation. Steve agreed to direct the runoff and seeps and establish a sump near the existing soil pile. Steve agreed with the elevated conductance levels.

(12.10.2009 10:30 am)- Telephone conversation with Steve Gridley, Steve indicated that they had collected approx. 6000 gallons of fluids. Steve indicated that the conductance readings in the collected sump fluids were at background levels. I indicated that that the sump should remain in place with a level outlet installed for continued monitoring.

I made East Resources Inc. EH&S coordinator Doug Mehan aware of the incident in a 12.09.2009 telephone conversation.

The Department understands that East Resources Inc. is the Driller and Completions Operator and that Fortuna Energy is the Operator of the Facilities and Production.

Currently, East Resources Inc. is the Operator on the permit. The certified mail NOV is addressed to East Resources Inc. Fortuna Energy will be copied. Certified mail sent 12.22.2009. (7009 1410 0000 2456 5233)

PERMIT OR REGISTRATION NUMBER	DEF Rep:	
	(signature) 	Date: 12/9/2009
	(print name) Mark A. Barbier	Time:

LAB ID # 11216
LAB ID # 11827

Benchmark Analytics, Inc.
Eastern Division

2566 Pennsylvania Ave.
Sayre, PA 18840

Work Order: 09121998

Phone: (570) 888-0169
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley
COMPANY: United Environmental Group
ADDRESS: 1738 Parker Road
Elmira, NY 14905

WO#: 09121998

PAGE: 1 of 2

PO#:

PWS ID#

TEST REPORT

PHONE: (607) 731-0145
FAX:

NTSW-Total Analysis--White's Well

RECEIVED FOR LAB BY: WCB

DATE: 12/14/2009 12:18

Page 1 of 2

SAMPLE: CS-Pad

Lab ID: 09121998-001A

Composite

SAMPLED BY: SG

Sample Time: 12/09/2009 15:00

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Barium	304 mg/Kg-dry	L EPA 6010B	4.39	12/20/09 8:15	12/22/09	RMD-CV
Iron	22700 mg/Kg-dry	EPA 6010B	22.0	12/20/09 8:15	12/22/09	RMD-CV
Manganese	395 mg/Kg-dry	L EPA 6010B	2.20	12/20/09 8:15	12/22/09	RMD-CV
Sodium	1140 mg/Kg-dry	EPA 6010B	121	12/20/09 8:15	12/22/09	RMD-CV
Strontium	112 mg/Kg-dry	L EPA 6010B	2.20	12/20/09 8:15	12/22/09	RMD-CV
Bromine	6.90 mg/kg	HACH 8167	0.05	12/17/09 15:45	12/17/09	TLB-CV
Chloride	2070 mg/Kg-dry	EPA 300.0	54.3	12/17/09 14:54	12/18/09	HDP-CV
Bromide	25.5 mg/Kg-dry	EPA 300.0	10.5	12/21/09 15:02	12/22/09	HDP-CV
Percent Moisture	11.6 %	H SM2540G		12/17/09 16:40	12/18/09	DMB-CV

SAMPLE: CS-Slope

Lab ID: 09121998-002A

Composite

SAMPLED BY: SG

Sample Time: 12/10/2009 10:15

SLOQ

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Barium	92.2 mg/Kg-dry	EPA 6010B	4.59	12/20/09 8:15	12/22/09	RMD-CV
Iron	27700 mg/Kg-dry	EPA 6010B	23.0	12/20/09 8:15	12/22/09	RMD-CV
Manganese	387 mg/Kg-dry	L EPA 6010B	2.30	12/20/09 8:15	12/22/09	RMD-CV
Sodium	< 126 mg/Kg-dry	EPA 6010B	126	12/20/09 8:15	12/22/09	RMD-CV
Strontium	11.0 mg/Kg-dry	EPA 6010B	2.30	12/20/09 8:15	12/22/09	RMD-CV
Bromine	32.2 mg/kg	HACH 8167	0.05	12/17/09 15:48	12/17/09	TLB-CV
Chloride	< 57.0 mg/Kg-dry	EPA 300.0	57.0	12/17/09 14:54	12/18/09	HDP-CV
Bromide	< 11.4 mg/Kg-dry	EPA 300.0	11.4	12/21/09 15:02	12/22/09	HDP-CV
Percent Moisture	15.1 %	H SM2540G		12/17/09 16:40	12/18/09	DMB-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

H Holding times for preparation or analysis exceeded

L Value above calibration range but within annually verified linear range

MANAGER

DATE: 12/22/2009

LAB ID # 11216
LAB ID # 11827

Benchmark Analytics, Inc.
Eastern Division

2566 Pennsylvania Ave.
Sayre, PA 18840

Work Order: 09121998

Phone: (570) 888-0169
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley
COMPANY: United Environmental Group
ADDRESS: 1738 Parker Road
Elmira, NY 14905

WO#: 09121998

PAGE: 2 of 2

PO#:

PWS ID#

PHONE: (607) 731-0145
FAX:

TEST REPORT

NTSW-Total Analysis--White's Well

RECEIVED FOR LAB BY: WCB

DATE: 12/14/2009 12:18

Page 2 of 2

SAMPLE: **CS-Lower**
SAMPLED BY: SG

Lab ID: 09121998-003A Composite
Sample Time: 12/10/2009 10:30

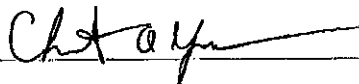
SLOG

<u>Test</u>	<u>Result</u>	<u>Method</u>	<u>SLOG</u>	<u>Analysis Start</u>	<u>Analysis End</u>	<u>Analyst *</u>
Barium	106 mg/Kg-dry	EPA 6010B	4.62	12/20/09 8:15	12/22/09	RMD-CV
Iron	26500 mg/Kg-dry	EPA 6010B	23.1	12/20/09 8:15	12/22/09	RMD-CV
Manganese	445 mg/Kg-dry	L EPA 6010B	2.31	12/20/09 8:15	12/22/09	RMD-CV
Sodium	< 127 mg/Kg-dry	EPA 6010B	127	12/20/09 8:15	12/22/09	RMD-CV
Strontium	13.6 mg/Kg-dry	EPA 6010B	2.31	12/20/09 8:15	12/22/09	RMD-CV
Bromine	18.4 mg/kg	HACH 8167	0.05	12/17/09 15:51	12/17/09	TLB-CV
Chloride	< 59.2 mg/Kg-dry	EPA 300.0	59.2	12/17/09 14:54	12/18/09	HDP-CV
Bromide	< 12.6 mg/Kg-dry	EPA 300.0	12.6	12/21/09 15:02	12/22/09	HDP-CV
Percent Moisture	22.8 %	H SM2540G		12/17/09 16:40	12/18/09	DMB-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.
* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA
H Holding times for preparation or analysis exceeded
L Value above calibration range but within annually verified linear range

MANAGER



DATE:

12/22/2009

CHAIN OF CUSTODY

REPORT TO: Fortuna

W/O#: 09121998

REFRIGERATE AFTER COLLECTION

SUITS ARE BEING USED FOR:

ARE SPECIAL DETECTION LIMITS NEEDED: YES / NO

IF YES, PLEASE ATTACH

IS A QC PACKAGE NEEDED? YES / NO

IF YES, PLEASE ATTACH REQUIREMENTS

CONTACT: Steve Buckley
 PH#: 607-731-0145
 FAX#:
 BILL TO: Fortuna
 PO#:

LABORATORY IN COOLER WITH ICE

DRINKING WATER
 GROUND WATER
 SURFACE WATER
 WASTE WATER
 DEIONIZED WATER

SLUDGE
 SOIL
 HAZARDOUS
 OTHER

DISTILLED WATER
 PERSONAL
 OTHER

HYDROCHLORIC ACID
 SULFURIC ACID
 NITRIC ACID
 SODIUM SULFITE
 SODIUM THIOSULFATE
 NONE

OH SODIUM HYDROXIDE
 AS ASCORBIC ACID
 AC ACETIC ACID
 NH₄ AMMONIUM CHLORIDE
 ZN ZINC ACETATE
 Hg MERCURIC CHLORIDE

PWS ID#:
 Location:
 Sample Point:

PROJECT DESCRIPTION: White's Well
 SAMPLER/SIGNATURE/AFFILIATION: Steve Buckley USEA
 Container: Clean Soil Samples
 Sample Point No./Type:

DATE SAMPLED
 TIME OF SAMPLING
 SAMPLE MATRIX
 SAMPLE TYPE - GRAB / COMPOSITE
 SAMPLER INITIALS

PRESERVATIVE
 Chlorine Residual Total
 Free

An incomplete chain of custody may delay the processing of your sample(s).
 ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT
 PRESERVATIVE ADDED ON RECEIPT

LAB USE ONLY
 Please fill out all applicable areas completely.

Container	Sample Point No./Type	DATE SAMPLED	TIME OF SAMPLING	SAMPLE MATRIX	SAMPLE TYPE - GRAB / COMPOSITE	SAMPLER INITIALS	PRESERVATIVE	ANALYSIS TO BE PERFORMED (PER CONTAINER)	COMPOSITED ON RECEIPT	PRESERVATIVE ADDED ON RECEIPT	LAB USE ONLY
1	CS- Pad	12/19/09	1500	C	GRAB	N		Metals: Ba, Fe Mn, Na, Sr Chloride			-001AB
2	CS- Slope	12/19/09	1530	C	GRAB	N					-002AB
3	CS- Lower	12/20/09	1530	C	GRAB	N		Bromine/Bromide 2,2-Dibromo-3-nitropropanoic acid			-003AB
4											
5											
6											
7											
8											
9											
10											
11											

DELIVERED BY: Steve Buckley

TEMPERATURE UPON RECEIPT: 3°C

ARRIVAL ONCE: YES

RELINQUISHED BY: Steve Buckley

DATE: 12/14/09
 TIME: 12:18

RECEIVED BY:

DATE: / /
 TIME:

RELINQUISHED BY:

DATE: / /
 TIME:

RECEIVED BY: Steve Buckley

DATE: 12/14/09
 TIME: 12:18

LAB ID # 11216
LAB ID # 11827

Benchmark Analytics, Inc.
Eastern Division

2566 Pennsylvania Ave.
Sayre, PA 18840

Work Order: 09122079

Phone: (570) 888-0169
Fax: (570) 888-0717

SEND DATA TO:

NAME: Steve Gridley
COMPANY: United Environmental Group
ADDRESS: 1738 Parker Road
Elmira, NY 14905

WO#: 09122079
PAGE: 1 of 1
PO#:
PWS ID#

TEST REPORT

PHONE: (607) 731-0145
FAX:

NTSW-Total Analysis--White's Well

RECEIVED FOR LAB BY: DLM2

DATE: 12/15/2009 17:20

Page 1 of 1

SAMPLE: Background Soil

Lab ID: 09122079-001A Composite

SAMPLED BY: SG

Sample Time: 12/15/2009 14:00

Test	Result	Method	SLOQ	Analysis Start	Analysis End	Analyst*
Barium	120 mg/Kg-dry	EPA 6010B	4.43	12/20/09 8:15	12/22/09	RMD-CV
Iron	30800 mg/Kg-dry	EPA 6010B	22.2	12/20/09 8:15	12/22/09	RMD-CV
Manganese	463 mg/Kg-dry L	EPA 6010B	2.22	12/20/09 8:15	12/22/09	RMD-CV
Sodium	< 122 mg/Kg-dry	EPA 6010B	122	12/20/09 8:15	12/22/09	RMD-CV
Strontium	15.0 mg/Kg-dry	EPA 6010B	2.22	12/20/09 8:15	12/22/09	RMD-CV
Bromine	16.1 mg/kg	HACH 8167	0.05	12/17/09 15:54	12/17/09	TLB-CV
Chloride	< 56.2 mg/Kg-dry	EPA 300.0	56.2	12/17/09 14:54	12/18/09	HDP-CV
Bromide	< 10.9 mg/Kg-dry	EPA 300.0	10.9	12/21/09 15:02	12/22/09	HDP-CV
Percent Moisture	15.3 %	SM2540G		12/17/09 16:40	12/18/09	DMB-CV

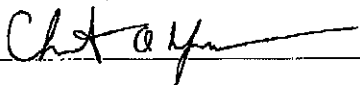
REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

MANAGER



DATE: 12/22/2009

CHAIN OF CUSTODY

REPORT TO: *for review*

251

WIO#: 09122079

PAGE 1 OF 1

REFRIGERATE SAMPLES
AFTER COLLECTION

CONTACT: *Steve Gindley*

TRANSPORT TO LABORATORY IN COOLER WITH ICE

PH#: *607-731-0143*

DE DRINKING WATER
GW GROUND WATER
SW SURFACE WATER
WW WASTE WATER
DE DEIONIZED WATER

ARE SPECIAL DETECTION LIMITS NEEDED: YES / **NO**

IS A QC PACKAGE NEEDED? YES / **NO**

PLEASE ATTACH REQUIREMENTS

BILL TO: *Fortuna*

LABORATORY IN COOLER WITH ICE

SL SLUDGE
SO SOIL
HZ HAZARDOUS
DI DISTILLED WATER

PERSONAL OTHER
LANDFILL
WATER

USED FOR: **BLDER**

PROJECT DESCRIPTION: *CHIMES Well*

DATE SAMPLED

OH SODIUM HYDROXIDE
AS ASCORBIC ACID
AC ACETIC ACID
NH₄ AMMONIUM CHLORIDE
Zn ZINC ACETATE
Hg MERCURIC CHLORIDE

PWS ID#
Location
Sample Point

SAMPLER SIGNATURE / AFFILIATION: *DEB*

TIME OF SAMPLING

ANALYSIS TO BE PERFORMED (PER CONTAINER)

COMPOSITED ON RECEIPT

PLEASE FILL OUT ALL APPLICABLE AREAS COMPLETELY

CONTAINER: *Chem soil samples*

SAMPLE MATRIX

Chlorine Residual
Total Free

PREPRESERVATIVE ADDED ON RECEIPT

LAB USE ONLY

1 Background Soil

DATE SAMPLED: *12/14/09*

SAMPLER INITIALS: *CS-D*

ANALYSIS TO BE PERFORMED: *As, Cd, Cr, Cu, Fe, Mn, Ni, Sr, Chloride*

LAB USE ONLY

2

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

3

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

4

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

5

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

6

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

7

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

8

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

9

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

10

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

11

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

LAB USE ONLY

DATE SAMPLED

SAMPLER INITIALS

ANALYSIS TO BE PERFORMED

LAB USE ONLY

DELIVERED BY: *Steve Gindley*

DATE: *12/15/09*

TIME: *7:15*

RECEIVED BY: *Debbie McCarty*

DATE: *12/15/09*

RELINQUISHED BY: *Steve Gindley*

DATE: *1/1/10*

TIME: *1/1/10*

RECEIVED BY: *Debbie McCarty*

DATE: *12/15/09*

RELINQUISHED BY: *Steve Gindley*

DATE: *1/1/10*

TIME: *1/1/10*

RECEIVED BY: *Debbie McCarty*

DATE: *12/15/09*

TEMPERATURE UPON RECEIPT: *4°C*

ARRIVAL ON ICE: *ON*

DATE: *12/15/09*



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PA 22-293 NJ PA010



34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

Certificate of Analysis

Project Name:	Completions	Workorder:	9828724
Purchase Order:		Workorder ID:	White's Well Pad

Mr. Steve Gridley
Fortuna
337 Daniel Zenker Drive
Horseheads, NY 14845

February 5, 2010

Dear Mr. Gridley,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, January 27, 2010

ALSI is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Denise Brooks (Project Coordinator) or Anna G Milliken (Laboratory Manager) at (717) 944-5541.

Please visit us at www.analyticalab.com for a listing of ALSI's NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALSI.

NOTE: ALSI has changed the report generation tool and while we have tried to retain the existing format, you will notice some changes in the laboratory report. Please feel free to contact ALSI in case you have any questions.

Analytical Laboratory Services, Inc.

CC: Twolling

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Anna G Milliken
Laboratory Manager



SAMPLE SUMMARY

Workorder: 9828724 White's Well Pad

Discard Date:

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9828724001	White's Well Prod. Water Spill	Solid	1/27/10 15:00	1/27/10 18:17	Steve Gridley

Workorder Comments:

Notes

- Samples collected by ALSI personnel are done so in accordance with the procedures set forth in the ALSI Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.

Standard Acronyms/Flags

- J, B Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
- U Indicates that the analyte was Not Detected (ND)
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected - indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference



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ANALYTICAL RESULTS

Workorder: 9828724 White's Well Pad

Lab ID: 9828724001 Date Collected: 1/27/2010 15:00 Matrix: Solid
Sample ID: White's Well Prod. Water Spill Date Received: 1/27/2010 18:17

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	ND		ug/kg	658	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Benzene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Bromochloromethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Bromodichloromethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Bromoform	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Bromomethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
2-Butanone	ND		ug/kg	658	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Carbon Disulfide	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Carbon Tetrachloride	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Chlorobenzene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Chlorodibromomethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Chloroethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Chloroform	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Chloromethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,2-Dibromo-3-chloropropane	ND		ug/kg	460	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,2-Dibromoethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,1-Dichloroethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,2-Dichloroethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,1-Dichloroethene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
cis-1,2-Dichloroethene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
trans-1,2-Dichloroethene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,2-Dichloropropane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
cis-1,3-Dichloropropene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
trans-1,3-Dichloropropene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Ethylbenzene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
2-Hexanone	ND		ug/kg	329	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	329	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Methylene Chloride	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Styrene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,1,2,2-Tetrachloroethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Tetrachloroethene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Toluene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Total Xylenes	ND		ug/kg	197	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,1,1-Trichloroethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
1,1,2-Trichloroethane	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Trichloroethene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Vinyl Chloride	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
o-Xylene	ND		ug/kg	65.8	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
mp-Xylene	ND		ug/kg	132	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	92.8		%	71-146	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
4-Bromofluorobenzene (S)	86		%	46-138	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Toluene-d8 (S)	86.1		%	54-141	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2
Dibromofluoromethane (S)	115		%	42-143	8260/5035	1/27/10	MES	1/29/10 09:14	MES	A2



ANALYTICAL RESULTS

Workorder: 9828724 White's Well Pad

Lab ID: 9828724001 Date Collected: 1/27/2010 15:00 Matrix: Solid
Sample ID: White's Well Prod. Water Spill Date Received: 1/27/2010 18:17

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
------------	---------	------	-------	-----	--------	-------------	----------	----	------

LIBRARY SEARCH - VOLATILES

No TIC's Detected Lib Search VOC 1/29/10 09:14 ECR A

PETROLEUM HC's

Total Petroleum Hydrocarbons (TPH)	ND		mg/kg	6.7	SW846 8015D	1/28/10	LEH	1/29/10 18:15	JJH	A1
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
o-Terphenyl (S)	73.7		%	34-135	SW846 8015D	1/28/10	LEH	1/29/10 18:15	JJH	A1

ALCOHOLS AND ACETATES

n-Butanol	ND		mg/kg	25.5	SW846 8015D			2/3/10 01:00	JJH	A
tert.- Butyl Alcohol	ND		mg/kg	25.5	SW846 8015D			2/3/10 01:00	JJH	A
Ethanol	ND		mg/kg	25.5	SW846 8015D			2/3/10 01:00	JJH	A
Methanol	ND		mg/kg	25.5	SW846 8015D			2/3/10 01:00	JJH	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
Amyl Alcohol (S)	1940		%	70-130	SW846 8015D			2/3/10 01:00	JJH	A

GLYCOLS

Ethylene Glycol	ND		mg/kg	61.2	SW846 8015D	1/29/10	CJW	1/30/10 01:07	JJH	A2
Propylene Glycol	ND		mg/kg	61.2	SW846 8015D	1/29/10	CJW	1/30/10 01:07	JJH	A2
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2-Butanone (S)	107		%	-	SW846 8015D	1/29/10	CJW	1/30/10 01:07	JJH	A2

ORGANICS

Formaldehyde	ND		mg/kg	23.6	SW846 8015D	2/4/10	CJW	2/4/10 21:00	JJH	A11
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
Amyl Alcohol (S)	106		%	70-130	SW846 8015D	2/4/10	CJW	2/4/10 21:00	JJH	A11

WET CHEMISTRY

Ammonia, Total (Moist Basis)	27.1		mg/kg	7.7	SM20-4500D	2/1/10	NJA	2/1/10 00:00	NJA	A8
Ammonia-nitrogen, Total	34.5		mg/kg	9.8	SM20-4500D	2/1/10	NJA	2/1/10 00:00	NJA	A8
Free Liquids	Negative				SW846 9095			1/29/10 07:25	SDL	A
Moisture	21.5		%	0.1	SM20-2540 G			1/29/10 00:25	LJF	B
pH	6.42	1.2	pH_Units		SW846 9045D			1/29/10 01:01	SAD	A
Phenolics	ND		mg/kg	0.6	SW846 9066	1/28/10	KLR	2/1/10 10:09	KLR	A
Phosphorus, Total	207		mg/kg	126	EPA 365.1	2/1/10	KRK	2/1/10 08:53	KEP	A6
Total Solids	78.5		%	0.1	SM20-2540 G			1/29/10 00:25	LJF	B

TCLP METALS

Arsenic, Total	0.027		mg/L	0.0090	SW846 6010C	1/31/10	MNP	2/1/10 09:03	SRT	A5
Barium, Total	0.78		mg/L	0.011	SW846 6010C	1/31/10	MNP	2/1/10 09:03	SRT	A5



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34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

ANALYTICAL RESULTS

Workorder: 9828724 White's Well Pad

Lab ID: 9828724001

Date Collected: 1/27/2010 15:00

Matrix: Solid

Sample ID: White's Well Prod. Water Spill

Date Received: 1/27/2010 18:17

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Cadmium, Total	ND		mg/L	0.0022	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Chromium, Total	ND		mg/L	0.0060	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Copper, Total	0.070		mg/L	0.011	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Lead, Total	0.0082		mg/L	0.0067	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	2/1/10 BLB	2/1/10 11:54	BLB	A7
Nickel, Total	ND		mg/L	0.022	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Selenium, Total	0.023		mg/L	0.022	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Silver, Total	ND		mg/L	0.0044	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5
Zinc, Total	0.067		mg/L	0.022	SW846 6010C	1/31/10 MNP	2/1/10 09:03	SRT	A5

TCLP LEACHATE

Extraction Fluid Used	1				SW846 1311		1/29/10 05:50	EL	A
Final pH	4.99		pH_Units		SW846 1311		1/29/10 05:50	EL	A
Preliminary pH after DI water	7.97		pH_Units		SW846 1311		1/29/10 05:50	EL	A
Preliminary pH after HCl	1.74		pH_Units		SW846 1311		1/29/10 05:50	EL	A

Sample Comments:

The glycol analysis on a soil and solid sample matrix is performed by a modification of method 8015. Data is to be used for screening purposes only.

The alcohol analysis on a soil and solid sample matrix is performed by a modification of method 8015. Data is to be used for screening purposes only.

The formaldehyde analysis on a soil and solid sample matrix is performed by a modification of method 8015. Data is to be used for screening purposes only.

Anna G Milliken

Laboratory Manager



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PA 22-293 NJ PA010



34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9828724 White's Well Pad

PARAMETER QUALIFIERS\FLAGS

- [1] The solid pH measured in water was 6.423 at 18.5 degrees C.
- [2] Analyte was analyzed past the 24 hour holding time.

ATTACHMENT III: Chemung Scale Report

CHEMUNG COUNTY LANDFILL
Category Waste Def DEC Report

Printed

Transactions from 01/01/2010 through 04/21/2010
 Third Party and Intercompany Customers
 Recycle and Disposal Waste
 Inbound and Outbound Tickets

<u>Class</u>	<u>Category</u>	<u>Waste</u>	<u>Ticket</u>	<u>Date</u>	<u>Time In</u>	<u>Time Out</u>	<u>Origin ID</u>	<u>Cell Location</u>	<u>Tons</u>	<u>Units</u>
N (NON APPLICABLE)										
IND (INDUSTRIAL)										
		2060 (SOIL CONT. W/BRINE)								
			107123	03/31/2010	14:07	16:13	BRADFORDP,MSW Landfill, Cell 4A		15.8900	0.00
			107125	03/31/2010	14:43	16:16	BRADFORDP,MSW Landfill, Cell 4A		18.3600	0.00
			107126	03/31/2010	14:45	16:21	BRADFORDP,MSW Landfill, Cell 4A		14.6000	0.00
			107127	03/31/2010	14:52	16:28	BRADFORDP,MSW Landfill, Cell 4A		14.5800	0.00
			107138	04/01/2010	07:39	08:07	BRADFORDP,MSW Landfill, Cell 4A		17.4300	0.00
		Totals for 2060 (SOIL CONT. W/BRINE)							80.8600	0.00
		Totals for IND (INDUSTRIAL)								
		5 Line Items and 5 Tickets								
		Totals for IND (INDUSTRIAL)							80.8600	0.00
		5 Line Items and 5 Tickets								
		Totals for N (NON APPLICABLE)							80.86	0.00
		5 Line Items and 5 Tickets								
		Report Grand Totals							80.8600	0.00
		5 Line Items and 5 Tickets								

CHEMUNG COUNTY LANDFILL
Category Waste Det DEC Report

Printed

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<u>Class</u>	<u>Category</u>	<u>Waste</u>	<u>Ticket</u>	<u>Date</u>	<u>Time In</u>	<u>Time Out</u>	<u>Origin ID</u>	<u>Cell Location</u>	<u>Tons</u>	<u>Units</u>
N (NON APPLICABLE)										
IND (INDUSTRIAL)										
		2067 (SOIL CONT. WITH BRINE)								
			107710	04/13/2010	07:05	07:16	BRADFORDP.MSW Landfill, Cell 4A		20.0000	0.00
			107712	04/13/2010	07:06	07:18	BRADFORDP.MSW Landfill, Cell 4A		24.4300	0.00
			107713	04/13/2010	07:04	07:21	BRADFORDP.MSW Landfill, Cell 4A		19.4300	0.00
			107714	04/13/2010	07:07	07:22	BRADFORDP.MSW Landfill, Cell 4A		18.9900	0.00
			107752	04/13/2010	11:03	11:16	BRADFORDP.MSW Landfill, Cell 4A		18.5000	0.00
		Totals for 2067 (SOIL CONT. WITH BRINE)							101.3500	0.00
		Totals for IND (INDUSTRIAL)								
		5 Line Items and 5 Tickets								
		Totals for IND (INDUSTRIAL)							101.3500	0.00
		5 Line Items and 5 Tickets								
		Totals for N (NON APPLICABLE)							101.35	0.00
		5 Line Items and 5 Tickets								
		Report Grand Totals							101.3500	0.00
		5 Line Items and 5 Tickets								

ATTACHMENT 2

4.3 Landfill Usage Rules

The general usage rules for the landfill consist of restrictions on types of materials and conditions on the vehicles delivering the waste.

All vehicles are weighed upon entering of the facility at the landfill scale. All waste hauling vehicles are required to have a Part 364 permit when hauling regulated waste.

All loads must be in a fully enclosed vehicle, or covered with a tarpaulin or net, which covers the entire load and is properly secured to prevent loss of material from the load. Waste will arrive in tractor-trailer combination trucks, roll off trucks, dump trucks, or in tow-behind trailers for non-commercial vehicles.

4.4 Traffic Flow and Verification Procedures

Vehicles turn on to the site access road from County Route 60 and proceed up the site access road to the landfill scale where vehicles will be weighed and recorded. Vehicles will be checked for waste type and a Part 364 hauler permit in the case of ash, sludge, or waste requiring special handling. Traffic will then move past the scale to the perimeter road where signs will direct the vehicle to the MSW landfill or C&D Landfill.

4.4.1 Radiation Monitoring

Each inbound load that enters the landfill shall be screened for radioactivity using a Ludlum Model 375 Waste Monitor, or equivalent, located at the scale/weigh station. This monitor is a “drive through” system that scans the waste hauling vehicles as they pass between 2 radiation detectors at slow speed or stop on the scale.

As a truck passes the detectors at the scale, the radiation monitoring system measures the radiation level emitted by the truck in kilo counts per second (kcps). The number of kcps over the normal "background" radiation level of the area is compared to the alarm setpoint. indicated on the digital read-out in the scale house. Backlit indicators warn of a low alarm level (yellow), a high alarm level (red), and low battery (yellow). A green status light is a indication of normal instrument operation. The system shall be calibrated at least annually.

In the event the alarm sounds, the scale house attendant will immediately notify the truck driver to stop. The scale house attendant shall record the reading on the Radiation Monitor Alarm Record. The driver will be instructed to pull off of the scale and park in the designated area away from the detectors. The driver will be instructed to walk near one of the detectors to determine if he had received a recent nuclear medicine procedure. If the alarm sounds due to the driver himself, the driver shall pull the truck back onto the scale and park it and then walk at least 75 feet away so that the monitor reading of the truck alone can be determined (or use an alternate driver). If the truck alone does not cause an alarm, it may pass through. There is no restriction on the driver if he is the source of the alarm due to a medical procedure.

If the truck is found to be the cause of the alarm, a member of the landfill staff will investigate by checking the type and origin of truck contents and by using a hand-held radiation detector to determine if the radiation source is an isolated spot or is diffused throughout the load, Immediately after the investigation, the staff member will notify the NYSDEC and the County via telephone if such officials desire such notification. A written record detailing the incident will be included in the facility's monthly operational report to the State. The site staff will work cooperatively with the regulatory agencies to determine the best course of action at the time of the alarm notification.

Calculation of Radiation Monitor Alarm Setpoint and Procedure to Reject or Accept NORM

The purpose of the Ludlum 375P-1000 radiation monitor at the Chemung County Landfill is to ensure that technologically-enhanced naturally-occurring radioactive materials (TENORM) are not accepted into the landfill. Non-concentrated and non-enhanced naturally-occurring radioactive materials (NORM) are acceptable for disposal. The calculations shown here are used to set the monitor alarm at a level sufficient to detect TENORM while allowing bulk materials not concentrated or enhanced with radioactivity to pass through. An assessment procedure is provided to guide the decision-making process in accepting or rejecting loads based on their radioactivity content.

Assumptions and parameters:

- Investigation level of radium-226 concentration in the load: to be determined. (15 pCi/g is used as the investigation level for the purposes of this calculation. A higher rejection level may be set in the range of 25 to 50 pCi/g upon completion of an environmental transport and risk assessment. Various fertilizers, sand blast media, and ceramics may have concentrations in the 15 to 50 pCi/g range without undergoing concentration or enhancement)
- Truck body thickness: 1/8" steel (0.32 cm)
- Gamma transmission through truck body: ≈ 0.84 (Ref: radprocalculator.com)
- Concentration to exposure rate conversion factor for radium in soil: 2.7 uR/hr per pCi/g for a detector scanning soil (derived from "Characterization of Surface Soils at a Former Uranium Mill", J.A. Johnson, et al, February, 2006) This assumes a uniform concentration in a volume of soil over an area larger than the surface to detector distance, i.e., the surface of the side of the truck is larger than the distance from the truck to the detector.
- Radiation Background: 8 uR/hr
- Instrument Calibration Factor: 1.17 uR/hr per kcps (determined by exposing both detectors exposed to a Cs-137 calibration source) Note: While the Cs-137 gamma energy, 662 keV, is slightly higher than the average Ra-226 gamma energy of approximately 500 keV, typical survey instrument calibration factors for radium are similar to those for Cs-137.

Alarm level to detect 15 pCi/g:

$$\left(\frac{15 \text{ pCi Ra-226}}{\text{g}} \times \frac{2.7 \text{ uR/hr}}{\text{pCi/g Ra-226}} \times \frac{0.84}{1} + 8 \text{ uR/hr} \right) \times \frac{\text{kcps}}{1.17 \text{ uR/hr}} = 36 \text{ kcps}$$

The above calculation was performed for various other concentrations as follows:

Radium Conc. (pCi/g)	Alarm Setting (kcps)
15	36
20	46
25	55
30	65
40	84
50	104

The procedure to be used by landfill management personnel to assess a load causing an alarm condition follows:

- Investigation level: 36 kcps on monitor (approx. 15 pCi/g radium distributed throughout load)
- Rejection level: 104 kcps on monitor (approx. 50 pCi/g radium distributed throughout load)

1. If the investigation level is exceeded, management will determine if the load is diffuse NORM via hand-held radiation detector readings, visual observation, and discussion with the generator.
2. If the monitor reading is greater than the investigation level and less than the rejection level and the load is determined to be non-concentrated and non-enhanced NORM, then the load may be accepted. This will allow acceptance of various fertilizers, sand blast media, and ceramics that may have concentrations in the 15 to 50 pCi/g range that has not undergone concentration or enhancement.
3. If the monitor reading is greater than the investigation level and if the hand-held reading or observations indicate a concentrated volume of radioactivity in part of the load, then the load shall be rejected.
4. If the monitor reading is greater than the rejection level, whether it is diffuse or concentrated, then the load shall be rejected.
5. If medical isotopes are suspected, then further assessment via half-life estimation or gamma spectroscopic analysis may be needed.

Radiation Monitor Alarm Record

The facility must complete this form if the radiation monitor alarms.

Initial Alarm: Date: _____ Time: _____

Hauler: _____ Truck No. _____ Trailer No.: _____

Driver: _____ Waste Origin (Facility): _____

Material Hauled: _____ Special Waste Number if Applicable: _____

Radiation Monitor Reading: _____ kcps (thousand counts per second)

Scale-house Attendant Name: _____

Notes: _____

ACTIONS: If the radiation monitor alarm sounds, perform the following steps:

1. Record the radiation reading and the other information shown above.
2. Instruct the driver to pull off of the scale and park the truck away from the detectors. Turn off the engine to avoid idling. Ensure that the alarm has ceased and the monitor is reading normal background.
3. Have the driver walk near a detector to determine if he has received a recent nuclear medicine procedure. If the driver is the source, re-measure the truck alone by using an alternate driver or have the original driver park on the scale and walk away from the truck and detectors. If the truck alone does not set off the alarm, it may pass through. There is no restriction on a driver who has had a medical procedure.
4. If the truck is determined to be the source, notify facility Operations & Management
5. Management will check the type and origin of the load and scan the truck with a hand-held radiation detector to determine if it is an isolate spot or is diffuse throughout the load. Ensure that all information is recorded on this form.
6. Management shall notify the NYSDEC and County immediately, if required and if the office is staffed, or at the earliest possible time that personnel are on duty.
NYSDEC Solid Waste: Ph (585) 226-5414
Chemung County Dept of Health: Ph (607) 737-2019; Fax: (607) 737-2059
7. Notify the Hauler's dispatch or representative.
8. The truck will remain parked until the situation is resolved.

Management Response: _____ **Responder:** _____

Observations: _____

Event Resolution: Date: _____ G.M. Acknowledgement: _____

Description: _____