

**State of Colorado
Oil and Gas Conservation Commission**

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



#7800

FOR OGCC USE ONLY

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☒ Other (describe): removal of 1/2 buried tank

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

OGCC Operator Number: <u>10275A</u>	Contact Name and Telephone:
Name of Operator: <u>Augustus Energy Partners, LLC</u>	<u>Loni Davis</u>
Address: <u>P. O. Box 250</u>	No: <u>970-332-3585</u>
City: <u>Wray,</u> State: <u>CO</u> Zip: <u>80758</u>	Fax: <u>970-332-3587</u>
API Number: <u>05-125-11214</u>	County: <u>Yuma</u>
Facility Name: _____	Facility Number: _____
Well Name: <u>Zuege</u>	Well Number: <u>17-02</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>NWNE/4, Sec 17-T2S-R44W 6th pm</u> Latitude: <u>39.88721</u> Longitude: <u>-102.32375</u>	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901a)? ☐ Y ☒ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Dry land Farm Ground, Irrigated, Grass

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: 10: Colby Silt Loams 3-6% Slopes, 11: Colby Silt Loams 6-15% Slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): 1 Possible Surface waters, 1 possible water well

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>None</u>	<u>Soil Analysis</u>
<input checked="" type="checkbox"/> Vegetation	<u>None</u>	<u>Soil Analysis</u>
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

After removal of the 1/2 Buried produced water tank, we sampled the soil under the tank and the background area. Per the soil analysis the EC, PH and SAR levels fell within the COGCC Table 910-1 guidelines. Sample of analyses are attached for your review. Additional Well: Zuege 17-01 API # 125-11215

Describe how source is to be removed:

NA

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

NA

FORM
27
Rev 6/99

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REMEDIAL WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

OGCC Employee: Axelsson

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

NA

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

The area where tank was pulled was backfilled with at least 3' of clean fill dirt (see attached soil analysis). The area will be strawed and re-seeded and monitored for re-growth, erosion and weed control.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☒ Y ☐ N If yes, describe:

Yes, will monitor location for re-growth to determine if any future soil remediation will be needed.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

NA

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>05/11/13</u>	Date Site Investigation Completed: <u>05/30/13</u>	Date Remediation Plan Submitted: <u>05/30/13</u>
Remediation Start Date: <u>06/11/13</u>	Anticipated Completion Date: <u>06/11/13</u>	Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Loni J. Davis

Signed: Loni J. Davis

Title: Operations Accounting and Regulatory Specialist

Date: 05/30/13

OGCC Approved: ACE for John Axelsson Title: EPS NE Colo Date: 6/5/2013

North
↑

Zuege 17-01, 17-02 2S44W



SOIL ANALYSIS REPORT



CLIENT:	ENVIRO-AG ENGINEERING INC
6224	3404 AIRWAY BLVD AMARILLO, TX 79118

6921 S. Bell
Amarillo, TX 79109
800.557.7509
806.677.0093
Fax 806.677.0329

LAB NO:	44495 - 44496
INVOICE NO:	126430
DATE RECEIVED:	05/15/2013
DATE REPORTED:	05/24/2013

SOIL ANALYSIS RESULTS FOR AUGUSTUS ENERGY

FIELD IDENTIFICATION: ZUEGE 17-2

METHOD USED:			2:1 Water-Soil		2:1 Water-Soil																
Lab Number	Sample ID	Sample Depth	Soil pH	Buffer pH	Sol. Salts mmho/cm	Excess Lime	% Organic Matter			Phosphorus ppm P	Potassium ppm K	Sulfur ppm lb. S/A		Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Iron ppm Fe	Manganese ppm Mn	Copper ppm Cu	Boron ppm B
44495	TANK	48 - 60	8.5		1.63	Hi															
44496	BACKGRONUND	48 - 60	8.5		0.16	No															

METHOD USED:			Sat. Paste																	
Lab Number	Sample ID	Sample Depth	Saturation % Sat	Electrical Conductivity mmho/cm	Calcium mg/L Ca	Magnesium mg/L Mg	Sodium mg/L Na	Sodium Adsorption Ratio												
44495	TANK	48 - 60	58	0.78	26	11	21	0.9												
44496	BACKGRONUND	48 - 60	51	1.00	20	8	23	1.1												

FERTILIZER RECOMMENDATIONS:

POUNDS ACTUAL NUTRIENT PER ACRE

Lab Number	Sample ID	Crop To Be Grown	Yield Goal	Lime, ECC Tons/A to raise pH to:			N	P ₂ O ₅	K ₂ O	Zn	S	Mn	Cu	MgO	B	Ca	Cl
				6.0	6.5	7.0											
44495	TANK																
44496	BACKGRONUND																

Cation Exchange Capacity

CEC	%H	%K	%Ca	%Mg	%Na

Additional Well: Zuege 17-01

Analyses are representative of the samples submitted

Samples are retained 30 days after report of analysis

Explanations of soil analysis terms are available upon request

Reviewed and
Approved By:

Todd Whatley
Laboratory Manager

Todd D. Whatley

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SOIL ANALYSIS REPORT



**Servi-Tech
Laboratories**

www.servitechlabs.com

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800.557.7509
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Fax 806.677.0329

CLIENT:
6224
ENVIRO-AG ENGINEERING INC
3404 AIRWAY BLVD
AMARILLO, TX 79118

LAB NO: 44487
INVOICE NO: 126430
DATE RECEIVED: 05/15/2013
DATE REPORTED: 05/30/2013

SOIL ANALYSIS RESULTS FOR AUGUSTUS ENERGY

FIELD IDENTIFICATION: ROW MAX XXXX FILL DIRT

METHOD USED:			2:1 Water-Soil		2:1 Water-Soil																
Lab Number	Sample ID	Sample Depth	Soil pH	Buffer pH	Sol. Salts mmho/cm	Excess Lime	% Organic Matter			Phosphorus ppm P	Potassium ppm K	Sulfur ppm	S/A	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Iron ppm Fe	Manganese ppm Mn	Copper ppm Cu	Boron ppm B
44487	FILL DIRT	48 - 60	8.1		0.15	Lo															
METHOD USED:			Sal. Paste																		
Lab Number	Sample ID	Sample Depth	Saturation % Sat	Electrical Conductivity mmho/cm	Calcium mg/L Ca	Magnesium mg/L Mg	Sodium mg/L Na	Sodium Adsorption Ratio													
44487	FILL DIRT	48 - 60	37	0.28	21	11	3	0.1													

FERTILIZER RECOMMENDATIONS:

POUNDS ACTUAL NUTRIENT PER ACRE

Lab Number	Sample ID	Crop To Be Grown	Yield Goal	Lime, ECC Tons/A to raise pH to:			N	P ₂ O ₅	K ₂ O	Zn	S	Mn	Cu	MgO	B	Ca	Cl	Cation Exchange Capacity					
				6.0	6.5	7.0																	
44487	FILL DIRT																						

Analyses are representative of the samples submitted. Samples are retained 30 days after report of analysis. Explanations of soil analysis terms are available upon request.

Reviewed and
Approved By:

Todd Whatley
Laboratory Manager

Todd D. Whatley

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