

State of Colorado  
Oil and Gas Conservation Commission



FOR OGCC USE ONLY

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

**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.

OGCC Employee:

Spill Complaint  
Inspection NOAV

Tracking No: **2608926**

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release ☒ Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): \_\_\_\_\_

OGCC Operator Number: <u>56565</u>	Contact Name and Telephone: <u>Ronnie Singleton</u>
Name of Operator: <u>Merit Energy</u>	No: <u>970-534-0031</u>
Address: <u>1221 40<sup>th</sup> St</u>	Fax: <u>e-mail: ronnie.singleton@meritenergy.com</u>
City: <u>Evans</u> State: <u>Co</u> Zip: <u>80620</u>	
API Number: <u>05-123-20012</u> County: <u>Weld</u>	
Facility Name: <u>Tank Battery</u> Facility Number: _____	
Well Name: <u>Rory</u> Well Number: <u>1</u>	
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>NESW Sec 24 - T4N R67W</u> Latitude: _____ Longitude: _____	

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): oil/brine spill,  
If yes, attach evaluation Y  
Site Conditions: Is location within a sensitive area (according to Rule 901e)? Yes, based on proximity to irrigation and AG land  
Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Pasture / Undeveloped  
Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: clay and sand  
Potential receptors (water wells within 1/4 mi, surface waters, etc.): Groundwater approx 7-8 feet BGL, South Platte River approx 500 ft east

**Description of Impact:** Majority of release was contained within berm, Some of the release overspray extended outside of berm to the west. Fluids soaked into the subsurface.

Impacted Media (check):	Extent of Impact:	How Determined:
Soils	<u>Within tank battery berm and to the west, vertically from surface to the water table</u>	<u>Visual observations during initial excavation</u>
Vegetation	<u>NA</u>	
Groundwater	<u>Oil on water surface, 7-8' BGL</u>	<u>Visual observation of excavation base.</u>
Surface Water	<u>NA</u>	

**REMEDIALATION WORKPLAN**

**Describe initial action taken (if previously provided, refer to that form or document):** See Form 19, Well was shut-in. Residual fluids within berm were removed with vac truck.

**Describe how source is to be removed:** Storage tank and water tank were moved. On August 24, commenced excavation within the berm area. The excavation was extended outside the original berm area. Majority of the soils from surface to water table were impacted within the berm and approximately 15 feet west of the tank battery berm. The primary excavation area included below the tank battery was approximately 75 feet by 30 feet. A second pit separated from the primary pit by a 1' high berm (3' wide) to the west was approx 65 by 30 feet.

**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.:**

Impacted soils were removed and disposed of at an offsite disposal landfill facility. Groundwater will be pumped from the pit to address visible sheen and free product on the groundwater. Water will be disposed of at an offsite disposal facility.

FORM  
27  
Rev 6/99State of Colorado  
Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
(303)894-2100 Fax: (303)894-2109

Tracking Number: \_\_\_\_\_

Name of Operator: \_\_\_\_\_

OGCC Operator No: \_\_\_\_\_

Received Date: \_\_\_\_\_

Well Name &amp; No: \_\_\_\_\_

**REMEDIAL WORKPLAN (Cont.)**Facility Name & No: Merit Rory #1 Tank battery

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

After pumping the pit for a week water samples were collected for lab analysis. Additional water samples will be collected from pit prior to backfilling. Temporary monitoring wells will be installed at appropriate locations. Wells will be sampled after site work is completed.

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 tank battery will be replaced and the appropriate repairs will be made.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing. At this time the only samples that have been completed are from the initial water samples from the pit and samples from the excavation base. These results are below regulatory action levels. Copies of this analytical are attached.

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

Overexcavation is necessary outside of the initial pit excavation. Subsequent samples of the lateral excavation will be collected. It is assumed that the lateral extension of the excavation to the east is limited by the presence of three gas lines buried in and east of the service road.

Field screening of the initial excavation indicates that residual impacts are present within the water table zone. To reduce or limit the potential for long term impact the excavation will be extended to remove a reasonable amount of impacted materials. The overburden materials will be set aside and reused as fill materials.

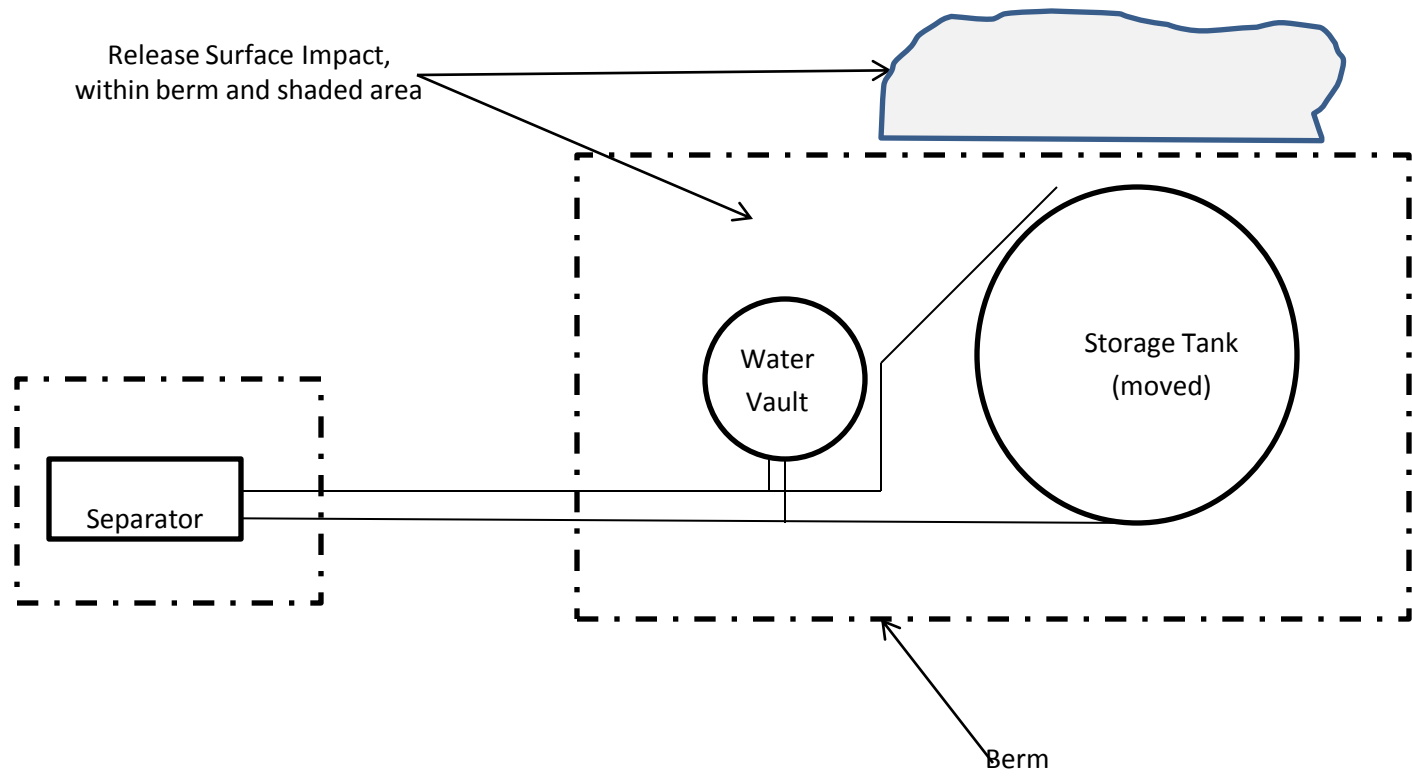
**IMPLEMENTATION**Date Site Investigation Began: Aug 23, 2010Date Site Investigation Completed: Approx 10/7

Date Remediation Plan Submitted: \_\_\_\_\_

Remediation Start Date: 8/25/2010Anticipated Completion Date: October 30, 2010Actual Completion Date: TBD

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

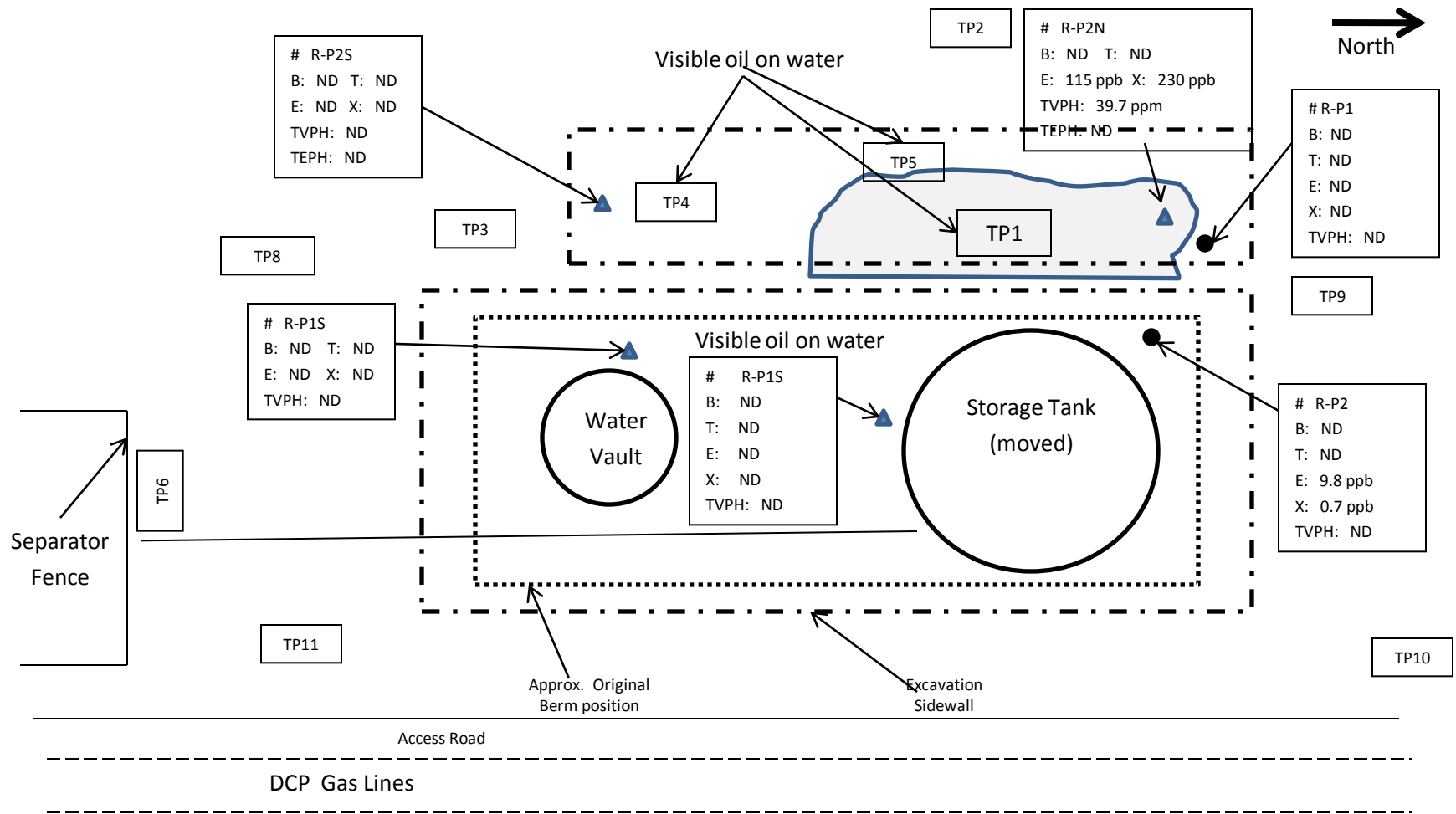
Print Name: John Mahoney (for Merit Energy)Signed: John MahoneyTitle: MEC Inc, PresidentDate: Sept 26, 2010OGCC Approved: Nancy Prince forTitle: John AxelssonDate: 1/25/2011



DCP Gas Lines

Access Road

RORY #1 TANK BATTERY SITE PLAN		
LEGEND	MERIT ENERGY RORY #1 TANK BATTERY NESW SEC 24 T4N R67W MILLIKEN, WELD COUNTY, CO	AUGUST 2010 Boundaries , distances, and illustrations are approximate.  NOT TO SCALE



## RORY #1 TANK BATTERY Initial Excavation PLAN

### LEGEND

TP3

: test pit #,  
impacts noted



: water sample, 1 week after pumping



: base soil samples

MERIT ENERGY  
RORY #1 TANK BATTERY  
NESW SEC 24 T4N R67W  
MILLIKEN, WELD COUNTY, CO

AUGUST 2010  
Boundaries , distances, and  
illustrations are approximate.

NOT TO SCALE

**WELD LABORATORIES, INC.**

1527 First Avenue • Greeley, Colorado 80631  
 Phone: (970) 353-8118 • Fax: (970) 353-1671  
 www.weldlabs.com

September 23, 2010

Mahoney Environmental Consulting  
 1601 10th Ave.  
 Greeley, CO 80631

Project: Merit Rory #1

Laboratory No.: E10245-5 (page 1 of 3)

**Method EPA 602/SW8020 A and EPA 624/SW8015**

Sample ID	Date Sampled	Date Analyzed	Benzene		Toluene		Ethylbenzene		o,p-Xylene		m-Xylene		MTBE		TVPH		Surrogate Recovery
			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		mg/L		
R-P1	09/03/10	09/06/10	U		U		U		U		U		U		U		107
R-P2	09/03/10	09/06/10	U		U		9.8		0.7		U		U		U		102

Reporting Limit: 0.4

QC Limits: 74-147

U=Compound analyzed for but not detected

J=Compound detected at a level below reporting limit.

Surrogate = 1,2,4-Trichlorobenzene

Project Manager

Date

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September 23, 2010

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Project: Merit Rory #1

Laboratory No.: E10245-5 (page 2 of 3)

## Method EPA 602/SW8020 A and EPA 624/SW8015

Sample ID	Date Sampled	Date Analyzed	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg	o,p-Xylene ug/kg	m-Xylene ug/kg	MTBE ug/kg	TVPH mg/kg	Surrogate Recovery %
R-P1N	09/03/10	09/06/10	U	U	U	U	U	U	U	104
R-P1S	09/03/10	09/07/10	U	U	U	U	U	U	U	91.5
R-P2N	09/03/10	09/07/10	U	U	115	121	109	U	39.7	116
R-P2S	09/03/10	09/07/10	U	U	U	U	U	U	U	102

Reporting Limit: 40

U=Compound analyzed for but not detected

J=Compound detected at a level below reporting limit.

Surrogate = 1,2,4-Trichlorobenzene

Project Manager

Date

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September 23, 2010

**Diesel Fuel (No. 2)****Total Extractable Hydrocarbons (Diesel C:11-C28)**

Method No. SW8015M

Date Sampled: 9/3/2010

Project: Merit Rory #1

Date Received: 9/3/2010

(page 3 of 3)

Date Prepared: 9/7/2010

Lab #	Sample ID	Analysis Date	Surr. % Recov.	Sample Result	RL	Units
E10245-5C	R-P1N	9/20/2010	117	U	16.8	mg/kg (dry wt.)
E10245-5D	R-P1S	9/20/2010	92.5	U	18.9	mg/kg (dry wt.)
E10245-5E	R-P2N	9/20/2010	98.3	U	20.4	mg/kg (dry wt.)
E10245-5F	R-P2S	9/21/2010	87.1	U	18.7	mg/kg (dry wt.)

Surrogate QC Limits: 46-141 (1,2,4-Trichlorobenzene Surrogate)

**Qualifiers:**

U=Compound analyzed for but not detected

S=Spike Recovery outside accepted recovery limits

J=Indicates an estimated value when compound is detected

**Definitions:**

RL=Reporting Limit

TVH=Total Volatile Hydrocarbons

TEH=Total Extractable Hydrocarbons

  
Project Manager

9/23/10  
Date

Sampling procedures can affect the value of analytical results – customers are advised to use appropriate sampling protocol to insure samples are truly representative of the bulk sample.