

CIVIL/SANITARY/ENVIRONMENTAL ENGINEERS

SOLID WASTE MANAGEMENT

**Municipal  
Services**

SITE PLANNING/SUBDIVISIONS

**Engineering  
Company, P.A.**

SUBSURFACE UTILITY ENGINEERING (SUE)

May 16, 2013

Ms. Christine Ritter  
 Solid Waste Section  
 Division of Waste Management  
 North Carolina Department of Environment and Natural Resources  
 217 West Jones Street  
 Raleigh, NC 27603

Re: ***Request to Replace Background Well MW-1***  
 Wayne County Active C&D and Closed MSWLF (Dudley)  
 Permit No. 96-01  
 MESCO Project No. G12016.0

Dear Ms. Ritter:

On behalf of Wayne County, Municipal Engineering Services Company, P.A. (MESCO) is requesting Solid Waste Section (SWS) approval for replacement of the upgradient background well MW-1. MW-1 has historically consistently yielded non-contaminated results, as expected in an upgradient background well, but is located off of Wayne County owned property. We request that MW-1 be replaced by MW-1R at an on-site location as shown on **Figure 1**.

MW-1 will be sealed with grout in accordance with 15A NCAC 2C.0113 (d) entitled "Abandonment of Wells".

Proposed MW-1R will be installed per the requirements of 15A NCAC 02C. Proposed MW-1R will be screened to transect the top of the water table with a maximum 15 foot screen, not penetrate any confining layers, and maintain 5 feet separation between ground and sand pack. MW-1R is proposed to be terminated at an approximate elevation of 140 feet amsl or 25 feet below ground which is comparable to MW-1.

Following installation and abandonment the required documentation (well abandonment and well construction records) will be submitted in electronic format to the SWS. Once MW-1R is installed and surveyed the SAP will be updated reflecting the well replacement prior to the next semi-annual monitoring event scheduled for August 2013.

If you need any additional information please contact us at (919) 772-5393 or by email at [jpfohl@mesco.com](mailto:jpfohl@mesco.com).

Sincerely,

**MUNICIPAL ENGINEERING SERVICES CO., P.A.**

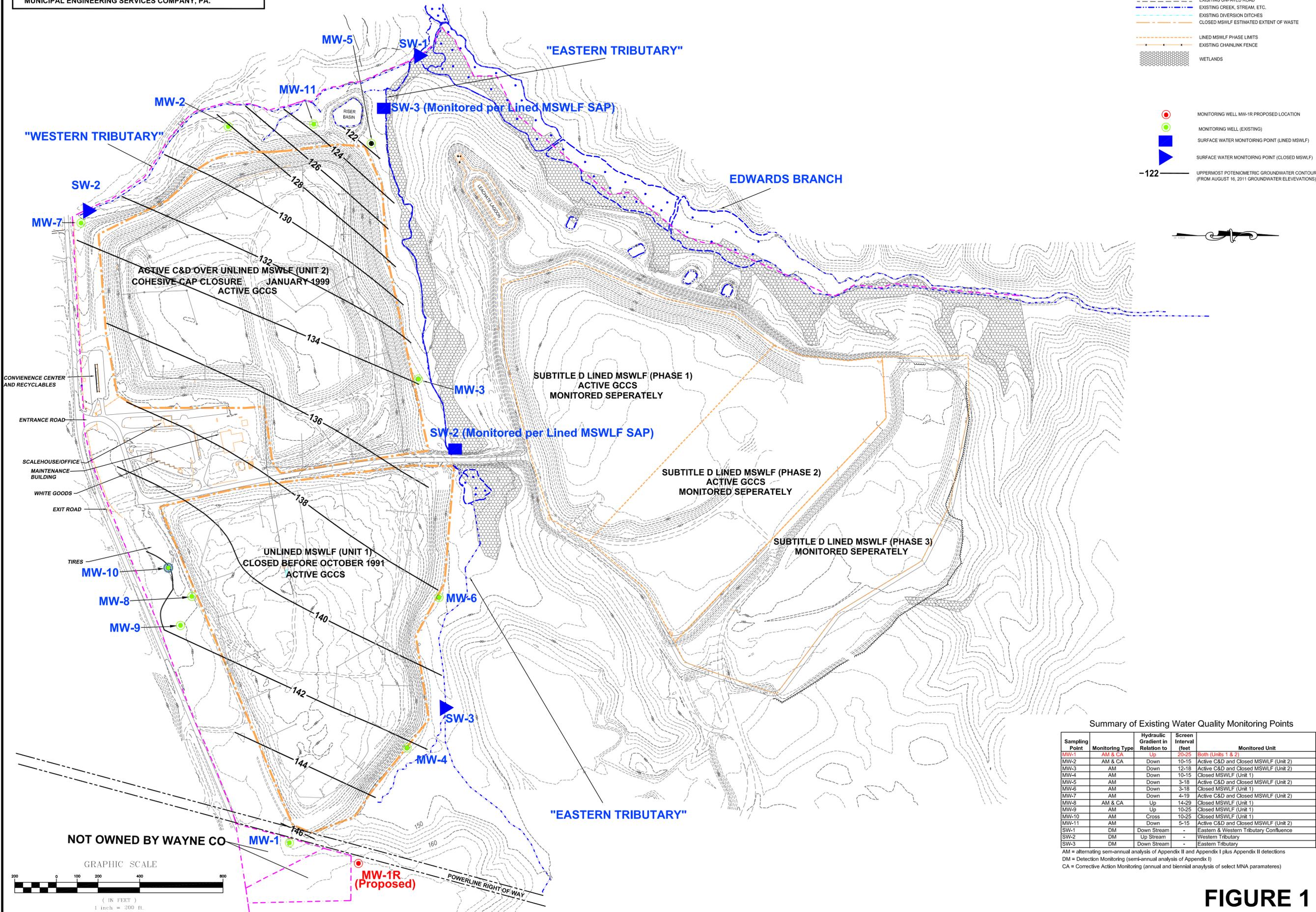
Jonathan Pfohl  
 Environmental Specialist

Enclosures

TOPOGRAPHY IS FROM AERIAL PHOTOGRAPHY FLOWN AND A TOPOGRAPHIC MAP WAS PROVIDED BY DARREL S. MILLER, PLS ON 8/17/2007 AND SUPPLEMENTED WITH FIELD SURVEYS BY MUNICIPAL ENGINEERING SERVICES COMPANY, PA.

# BACKGROUND WELL MW-1 PROPOSED TO BE REPLACED BY MW-1R

- LEGEND**
- - - - - EXISTING TOPOGRAPHIC CONTOURS
  - - - - - PROPERTY LINE
  - - - - - EXISTING UNPAVED ROAD
  - - - - - EXISTING CREEK, STREAM, ETC.
  - - - - - EXISTING DIVERSION DITCHES
  - - - - - CLOSED MSWLF ESTIMATED EXTENT OF WASTE
  - - - - - LINED MSWLF PHASE LIMITS
  - - - - - EXISTING CHAINLINK FENCE
  - WETLANDS
- 
- MONITORING WELL MW-1R PROPOSED LOCATION
  - MONITORING WELL (EXISTING)
  - SURFACE WATER MONITORING POINT (LINED MSWLF)
  - SURFACE WATER MONITORING POINT (CLOSED MSWLF)
  - 122- UPPERMOST POTENTIOMETRIC GROUNDWATER CONTOUR (FROM AUGUST 16, 2011 GROUNDWATER ELEVATIONS)



**Engineering Company, P.A.**  
 P.O. BOX 349 BOONE, N.C. 28607  
 (828) 262-1767  
 LICENSE NUMBER: C-0281

**Municipal Services**  
 P.O. BOX 97 GARNER, N.C. 27529  
 (919) 775-5993

**ACTIVE C&D AND CLOSED MSW LANDFILL FACILITY (DUDLEY)**  
**WAYNE COUNTY**  
**NORTH CAROLINA**

SITE MAP WITH MONITORING LOCATIONS  
 BACKGROUND WELL MW-1 REPLACEMENT

Summary of Existing Water Quality Monitoring Points

Sampling Point	Monitoring Type	Hydraulic Gradient Relation to	Screen Interval (feet)	Monitored Unit
MW-1	AM & CA	Up	20-25	Both (Units 1 & 2)
MW-2	AM & CA	Down	10-15	Active C&D and Closed MSWLF (Unit 2)
MW-3	AM	Down	12-18	Active C&D and Closed MSWLF (Unit 2)
MW-4	AM	Down	10-15	Closed MSWLF (Unit 1)
MW-5	AM	Down	3-18	Active C&D and Closed MSWLF (Unit 2)
MW-6	AM	Down	3-18	Closed MSWLF (Unit 1)
MW-7	AM	Down	4-19	Active C&D and Closed MSWLF (Unit 2)
MW-8	AM & CA	Up	14-29	Closed MSWLF (Unit 1)
MW-9	AM	Up	10-25	Closed MSWLF (Unit 1)
MW-10	AM	Cross	10-25	Closed MSWLF (Unit 1)
MW-11	AM	Down	5-15	Active C&D and Closed MSWLF (Unit 2)
SW-1	DM	Down Stream	-	Eastem & Western Tributary Confluence
SW-2	DM	Up Stream	-	Western Tributary
SW-3	DM	Down Stream	-	Eastern Tributary

AM = alternating semi-annual analysis of Appendix II and Appendix I plus Appendix II detections  
 DM = Detection Monitoring (semi-annual analysis of Appendix I)  
 CA = Corrective Action Monitoring (annual and biennial analysis of select MNA parameters)

**FIGURE 1**

SCALE:	1" = 200'
DATE:	5/15/13
DRWN BY:	J. PFOHL
CHKD BY:	J. PFOHL
PROJECT NUMBER	G11050.0
DRAWING NO.	FIGURE 1
SHEET NO.	1 OF 1