CATLIN
Engineers and Scientists

Post Office Box 10279
Wilmington, North Carolina 28404-0279

Telephone: (910) 452-5861
Fax: (910) 452-7563

www.catlinusa.com

January 26, 2010

NAVFAC Mid-Atlantic
Marine Corps North Carolina IPT
Environmental Business Line
Code: OPNCEV
Attn: Mr. David Borton, P.G.
6506 Hampton Boulevard
Building C, Room 314
Norfolk, VA 23508-1278

Re: **FINAL - Report of Findings for a Groundwater Assessment at a Proposed Wet Detention Pond**
Marine Corps Base, Camp Lejeune, North Carolina
Navy Contract No. TMS Envirocon, Inc.
CATLIN Project No. 209112.02

Dear Mr. Borton:

CATLIN Engineers and Scientists (CATLIN) has performed an assessment of the groundwater conditions in the vicinity of the proposed Wet Detention Stormwater Pond located within Tarawa Terrace Phase 6 in order to determine the potential risk for contaminated groundwater infiltrating into the pond. We understand that the pond is approximately 550 to 600 feet long with a width of 250 to 300 feet at the widest portion. The approximate site vicinity is presented on the attached Figure 1 and the proposed boundary of the pond is illustrated on an attached figure.

Please find below a summary of the sampling activities, results and CATLIN's recommendations.

Temporary Monitoring Well Installation

CATLIN personnel and equipment mobilized to the site on December 31, 2009. Boring advancement for installation of one (1) temporary monitoring well was conducted at the site by Direct Push Technology (DPT) using an AMS PowerProbe™ 9600D (PowerProbe). Due to limited accessibility, two (2) temporary monitoring wells were installed utilizing hand auger boring techniques. Soil samples were continuously collected for visual/manual classification utilizing the Unified Soil Classification System (USCS). After classifying soil

samples, the cuttings were containerized in a Department of Transportation (DOT) approved 55-gallon drum.

Following boring termination, a 5 or 10 foot long piece of one-inch diameter Poly Vinyl Chloride (PVC) well screen (0.010-inch slot) was placed in the bore hole with a one to five foot long piece of one-inch diameter PVC riser extending to ground surface or approximately 3 feet above the ground surface. The annular space was filled with medium sand pack from the bottom of the well to approximately one foot above the well screen and then bentonite chips to within one foot of the ground surface. The bentonite chips were poured from the surface while simultaneously pouring water to facilitate hydration. The depth to groundwater (DTW) immediately following well construction was noted in the field to range from 0.5 to 8.5 feet BLS.

A qualified driller registered in the State of North Carolina and a project level geologist installed the boring for temporary monitoring well construction. The temporary well TT2969-TW01 was designed and constructed in accordance with accepted standards and practices. The well was installed, sampled and abandoned under applicable licensing and documentation requirements.

Upon collection of the groundwater samples (discussed below), the well materials were removed from the borehole and each monitoring well was abandoned. Bentonite chips and water were poured into the borehole simultaneously to facilitate bentonite hydration. The well construction and abandonment information is provided on copies of the attached Well Construction Record and Well Abandonment Record that were submitted along with a letter dated December 15, 2009 to the North Carolina Department of Environment and Natural Resources (NCDENR). The temporary well locations are illustrated on Figure 2.

Groundwater Sampling

CATLIN personnel returned to the site to conduct groundwater sampling activities at the three referenced temporary monitoring wells on January 4, 2010. Approximately 2.5 to 3.0 gallons of purge water were removed from the well utilizing new polyethylene tubing and a low-flow peristaltic pump. Purge water was containerized in a DOT approved 55-gallon drum. A groundwater sample was then pumped directly into new, appropriately labeled glassware provide by the laboratory and placed on ice in an insulated cooler. The groundwater sample was transported to SGS North America, Inc (SGS, NC Certification #481) and submitted for Risk Based analysis per EPA Methods 602 and 625 and MADEP EPH/VPH following chain-of-custody protocol (see attached following the SGS laboratory report).

Laboratory Results

The laboratory analytical reports for the groundwater samples collected from the three temporary monitoring wells are attached. All laboratory result were below the laboratory quantitation limits for all analyses which is also below the current (January 2010) NCAC T15A:02L Groundwater Quality Standard (2L GWQS).

Recommendations

Based on the groundwater laboratory results from the three temporary monitoring wells, no detectable concentration of groundwater contamination is present within these locations of the proposed pond. Please note that no regulatory factor is known that required this evaluation. At this time, groundwater contamination is not known to be present within the limits of the proposed pond. However, additional underground storage tanks (USTs) are currently being addressed in close proximity to the pond. In the event that contamination is observed at any of these UST sites then the contamination should be further evaluated for the impact to the proposed pond.

CATLIN Engineers and Scientists appreciate the opportunity to continue to provide services to NAVFAC Mid-Atlantic and the MCB on your environmental projects.

Sincerely,

Michael E. Mason, P.E.
Program Manager

Jeffery K. Becken, P.E.
Project Manager

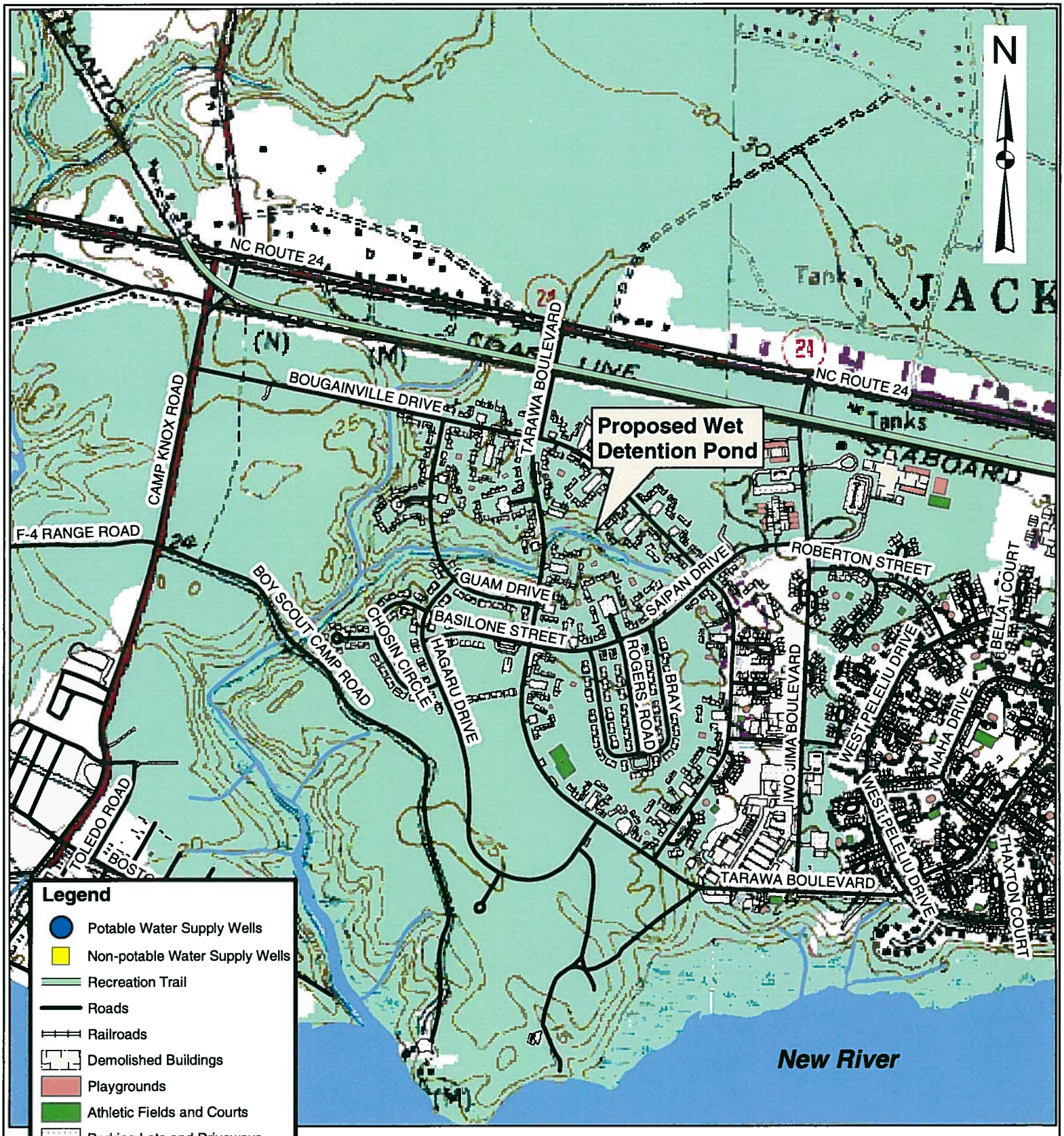
NORTH CAROLINA PROFESSIONAL SEAL 027952 ENGINEER JEFFERY K. BECKEN 1/26/10

Attachments

cc: Mr. Rob Finley – TMS Envirocon, Inc. (one copy via email)
Ms. Susan Tsimpinos - NAVFAC Mid-Atlantic Contracts (correspondence only)
Commanding Officer - Attn: Director I&E/EMD/EQB (two copies)

209112.02_TT SW Pond_LtrRpt.doc

FIGURES



Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

CATLIN
Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0585

PROJECT: WET DETENTION POND REPORT OF FINDINGS MARINE CORPS BASE CAMP LEJEUNE, NC

TITLE: **USGS TOPOGRAPHIC SITE VICINITY MAP**

FIGURE 1

JOB NO.	DATE	SCALE	DRAWN BY	CHECKED BY
209-112	JAN 2010	AS SHOWN	SAC	MEM

REPORT OF FINDINGS
WET DETENTION POND
MARINE CORPS BASE
CAMP LEJEUNE, NC

NAVFAC
Naval Facilities Engineering Command
ATLANTIC DIVISION

LEGEND

- Temporary Well Location
- Former Buildings and Structures
- Slabs
- Driveways
- Parking Lots
- Woods
- Surface Water

NOTES

1. Data layers provided by MCB Camp Lejeune GIS office.
2. Temporary well locations surveyed with a Trimble GeoXT mapping-grade GPS.

CATLIN
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P.O. Box 10279
Wilmington, NC 28404-0279
(910) 452-5861
NC Engineering License No.: C-0585

SITE MAP WITH GROUNDWATER SAMPLE LOCATIONS

FIGURE 2

Job No.:	Date:	Scale:	Drawn By:	Checked By:
209-112	JAN 2010	AS SHOWN	SAC	MEM

N

60 30 0 60 Feet

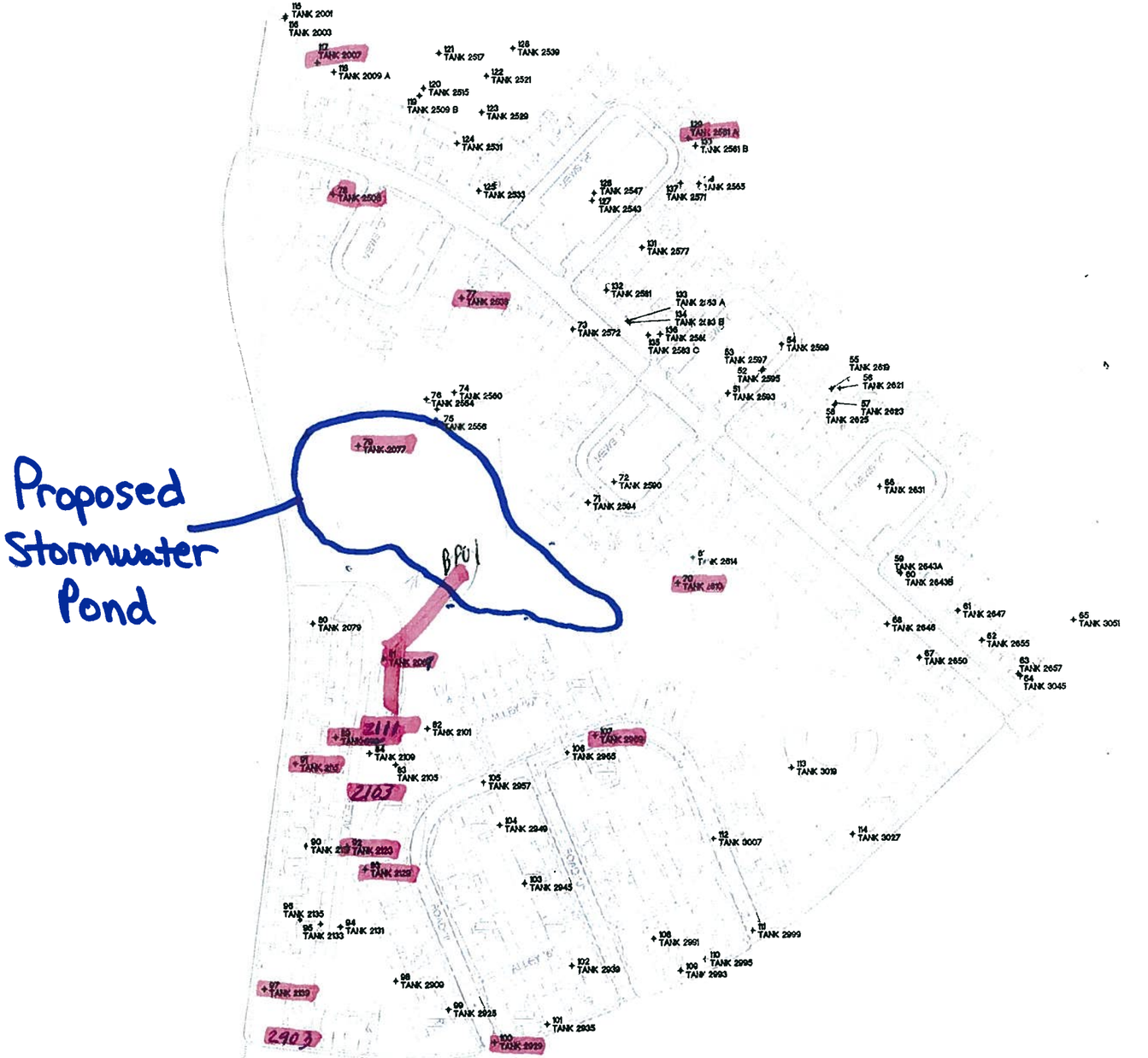
TT-POND-01
TT-POND-02
TT-POND-03

FORMER TT2029
FORMER TT2031
FORMER TT2552
FORMER TT2554
FORMER TT2556
FORMER TT2558
FORMER TT2560
FORMER TT2562
FORMER TT2564
FORMER TT2566
FORMER TT2572
FORMER TT2071
FORMER TT2075
FORMER TT2077
FORMER TT2580
FORMER TT2582
FORMER TT2586
FORMER TT2588
FORMER TT2590
FORMER TT2592
FORMER TT2594
FORMER TT2598
FORMER TT2600
FORMER TT2606
FORMER TT2608
FORMER TT2610
FORMER TT2612
FORMER TT2616
FORMER TT2079
FORMER TT2081
FORMER TT2083
FORMER TT2085
FORMER TT2087
FORMER TT2089
FORMER TT2091
FORMER TT2093
FORMER TT2095

BOUGAINVILLE
TARAWA BOULEVARD

ATTACHMENT 1

FIGURE WITH PROPOSED POND LOCATION



LITTLEJOHN ENGINEERING ASSOCIATES

ENGINEERING · PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING
ENVIRONMENTAL SERVICES
1935 TWENTY-FIRST AVENUE SOUTH
NASHVILLE, TENNESSEE 37212
PHONE 615-385-0441 FAX 615-385-4235

TARAWA TERRACE PH. 6
CAMP LEJEUNE
CAMP LEJEUNE, NORTH CAROLINA

ACTUS
LEND LEASE
1201 WEST END AVE.
7TH FLOOR
NASHVILLE, TN 37203

DATE	REVISIONS
03-25-09	21235

C1.0
TANK LOCATIONS

ATTACHMENT 2

BORING LOGS, WELL CONSTRUCTION RECORDS AND WELL ABANDONMENT RECORDS

WELL LOG

CATLIN Engineers and Scientists
209-112 Wilmington, NC
SHEET 1 OF 1

PROJECT NO.: 209-112	STATE: NC	COUNTY: Onslow	LOCATION: Jacksonville
PROJECT NAME: TT-2089/TT-Pond/TT-Drainage		LOGGED BY: Steve Tyler	WELL ID: TT-POND-01
		DRILLER: William J. Miller	
NORTHING: 3846667.3	EASTING: 282224.2	CREW: NA	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: Tarrawa Terrace		T.O.C. ELEV.:
DRILL MACHINE: Power Probe	METHOD: Direct Push	0 HOUR DTW: 8.5	TOTAL DEPTH: 12.0
START DATE: 12/31/09	FINISH DATE: 12/31/09	24 HOUR DTW: NM	WELL DEPTH: 12.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	MOIS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	WELL DETAIL
									0.0	LAND SURFACE	3.0 / 0.0
										(SM) - Olive gray, SILTY f. SAND to SANDY SILT. Grades to light brown and gray with depth.	1" Sch. 40 PVC; 1.0; 2.0
									6.5		
										(SC) - Light gray, CLAYEY f. SAND to SANDY CLAY.	1" Slot 010 Sch 40 PVC
									9.0		
										(SM) - Light gray to light brown, SILTY f. SAND to SANDY SILT.	
									12.0		12.0 / 12.0
										Boring Terminated at Depth 12.0 ft	

Bentonite Pellets #2 Medium Sand

CATLIN BORING LOG 209-112 TT-2089-POND-DRAINAGE.GPJ CATLIN.GDT 1/15/10

WELL LOG

CATLIN Engineers and Scientists
209-112 Wilmington, NC
SHEET 1 OF 1

PROJECT NO.: 209-112	STATE: NC	COUNTY: Onslow	LOCATION: Jacksonville
PROJECT NAME: TT-2089/TT-Pond/TT-Drainage		LOGGED BY: Steve Tyler	WELL ID: TT-POND-02
		DRILLER: William J. Miller	
NORTHING: 3846618.3	EASTING: 282291.7	CREW: NA	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: Tarrawa Terrace		T.O.C. ELEV.:
DRILL MACHINE: Power Probe	METHOD: Direct Push	0 HOUR DTW: 0.5	TOTAL DEPTH: 6.0
START DATE: 12/31/09	FINISH DATE: 12/31/09	24 HOUR DTW: NM	WELL DEPTH: 6.0

DEPTH	BLOW COUNT 6in / 6in / 6in / 6in	OVA (ppm)	LAB.	MOIS	LOG	SOIL AND ROCK DESCRIPTION	WELL DETAIL
0.0						LAND SURFACE	0.0
						(SM) - Dark gray, organic rich, SILTY f. SAND to SANDY SILT.	0.0 1" Sch 40 PVC 0.5 1.0
1.5						(SM) - Light gray, SILTY SAND.	1" Slot 010 Sch 40 PVC
6.0						Boring Terminated at Depth 6.0 ft	6.0 6.0

Bentonite Pellets #2 Medium Sand

CATLIN BORING LOG 209-112 TT-2089-POND-DRAINAGE.GPJ CATLIN.GDT 1/15/10

WELL LOG

CATLIN Engineers and Scientists
209-112 Wilmington, NC
SHEET 1 OF 1

PROJECT NO.: 209-112	STATE: NC	COUNTY: Onslow	LOCATION: Jacksonville
PROJECT NAME: TT-2089/TT-Pond/TT-Drainage		LOGGED BY: Steve Tyler	WELL ID: TT-POND-03
		DRILLER: William J. Miller	
NORTHING: 3846586.0	EASTING: 2823345.7	CREW: NA	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: Tarrawa Terrace		T.O.C. ELEV.:
DRILL MACHINE: Power Probe	METHOD: Direct Push	0 HOUR DTW: 1.0	TOTAL DEPTH: 8.0
START DATE: 12/31/09	FINISH DATE: 12/31/09	24 HOUR DTW: NM	WELL DEPTH: 8.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	MOIS	LOG	SOIL AND ROCK DESCRIPTION	WELL DETAIL
									0.0 LAND SURFACE	2.0 / 0.0
									(SM) - Dark gray, organic rich SILTY f. SAND to f. SANDY SILT. 1.5	1" Sch. 40 PVC; 1.0
									(SM) - Same as above, but light gray in color. 5.0	3.0
									(SC) - Light gray, CLAYEY f. SAND to SANDY CLAY. 6.5	1" Slot 010 Sch. 40 PVC
									(SM) - Light gray, SILTY SAND to SANDY SILT. 8.0	8.0 / 8.0
									Boring Terminated at Depth 8.0 ft	

Bentonite Pellets #2 Medium Sand

CATLIN BORING LOG 209-112 TT-2089-POND-DRAINAGE.GPJ CATLIN.GDT 1/15/10

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

1. WELL CONTRACTOR:

William J. Miller
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID #(if applicable): TT-POND-01
STATE WELL PERMIT #(if applicable): N/A
DWQ or OTHER PERMIT # (if applicable): N/A
WELL USE (Check Applicable Box): Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use): _____
DATE DRILLED: 12/31/2009
TIME COMPLETED: **AM** ☐ **PM** ☐

3. WELL LOCATION:

CITY: Jacksonville COUNTY: Onslow
Tarawa Terrace Housing Area,
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

LATITUDE: 34.73888554
LONGITUDE: 77.37876719
May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4. FACILITY - is the name of the business where the well is located.

FACILITY ID #(if applicable)
NAME OF FACILITY: N/A
STREET ADDRESS: Tarawa Terrace Housing Area

Jacksonville | NC |
City or Town | State | Zip Code

CONTACT PERSON: Mr. Nick Schultz
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004
Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code
(910)- 451-5068
Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 12
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 8.5 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.0 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

e. YIELD (gpm): N/A **METHOD OF TEST:** N/A
f. DISINFECTION: Type N/A **Amount:** N/A
g. WATER ZONES (depth):
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From 3.0	To 2	ft.	1"	Sch. 40	PVC
From ____	To ____	ft.	"		
From ____	To ____	ft.	"		

7. GROUT:

	Depth		Material	Method
From ____	To ____	Ft.		
From 0	To 1	Ft.		
From ____	To ____	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 2	To 12	Ft.	1 in.	Slot .010 in.	PVC
From ____	To ____	Ft.	____ in.	____ in.	
From ____	To ____	Ft.	____ in.	____ in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 1	To 12	Ft.	#2 Medium	Torpedo Sand
From ____	To ____	Ft.		
From ____	To ____	Ft.		

10. DRILLING LOG

From	To	Formation Description
		SEE ATTACHED

11. REMARKS:

TEMPORARY TYPE II Abandoned subsequent to sampling.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE: 1-15-2010

William J. Miller
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days, Attn: Information Management, 1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-1b Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

1. WELL CONTRACTOR:

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Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID #(if applicable): TT-POND-02
STATE WELL PERMIT #(if applicable): N/A
DWQ or OTHER PERMIT # (if applicable): N/A
WELL USE (Check Applicable Box): Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use): _____
DATE DRILLED: 12/31/2009
TIME COMPLETED: **AM** ☐ **PM** ☐

3. WELL LOCATION:

CITY: Jacksonville COUNTY: Onslow
Tarawa Terrace Housing Area,
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

LATITUDE: 34.73845913
LONGITUDE: 77.37801818
May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4. FACILITY - is the name of the business where the well is located.

FACILITY ID #(if applicable)
NAME OF FACILITY: N/A
STREET ADDRESS: Tarawa Terrace Housing Area

Jacksonville | NC
City or Town | State | Zip Code

CONTACT PERSON: Mr. Nick Schultz
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004
Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code
(910)- 451-5068
Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 6
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: .5 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0.0 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

e. YIELD (gpm): N/A **METHOD OF TEST:** N/A
f. DISINFECTION: Type N/A **Amount:** N/A
g. WATER ZONES (depth):
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From 0.0	To 1	ft.	1"	Sch. 40	PVC
From ____	To ____	ft.	"		
From ____	To ____	ft.	"		

7. GROUT:

	Depth		Material	Method
From ____	To ____	Ft.		
From 0	To 0.5	Ft.		
From ____	To ____	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 1	To 6	Ft.	1 in.	Slot .010 in.	PVC
From ____	To ____	Ft.	____ in.	____ in.	
From ____	To ____	Ft.	____ in.	____ in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 0.5	To 6	Ft.	#2 Medium	Torpedo Sand
From ____	To ____	Ft.		
From ____	To ____	Ft.		

10. DRILLING LOG

From	To	Formation Description
		SEE ATTACHED

11. REMARKS:

TEMPORARY TYPE II Abandoned subsequent to sampling.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE: 1-15-2010

William J. Miller
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days, Attn: Information Management, 1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-1b Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

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Well Contractor (Individual) Name

CATLIN Engineers and Scientists
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Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID #(if applicable): TT-POND-03
STATE WELL PERMIT #(if applicable): N/A
DWQ or OTHER PERMIT # (if applicable): N/A
WELL USE (Check Applicable Box): Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use): _____
DATE DRILLED: 12/31/2009
TIME COMPLETED: AM ☐ PM ☐

3. WELL LOCATION:

CITY: Jacksonville COUNTY: Onslow
Tarawa Terrace Housing Area,
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

LATITUDE: 34.73817937
LONGITUDE: 77.37742038
May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

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FACILITY ID #(if applicable)
NAME OF FACILITY: N/A
STREET ADDRESS: Tarawa Terrace Housing Area

Jacksonville | NC
City or Town | State | Zip Code

CONTACT PERSON: Mr. Nick Schultz
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004
Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code
(910)- 451-5068
Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 8
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 1.0 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2.0 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

e. YIELD (gpm): N/A **METHOD OF TEST:** N/A
f. DISINFECTION: Type N/A **Amount:** N/A
g. WATER ZONES (depth):
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

6. CASING:

	Depth			Diameter	Thickness/ Weight	Material
From	2.0	To 3	ft.	1"	Sch. 40	PVC
From		To	ft.	"		
From		To	ft.	"		

7. GROUT:

	Depth			Material	Method
From		To	Ft.		
From	0	To 1	Ft.		
From		To	Ft.		

8. SCREEN:

	Depth			Diameter	Slot Size	Material
From	3	To 8	Ft.	1 in.	Slot .010 in.	PVC
From		To	Ft.	in.	in.	
From		To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth			Size	Material
From	1	To 8	Ft.	#2 Medium	Torpedo Sand
From		To	Ft.		
From		To	Ft.		

10. DRILLING LOG

From	To	Formation Description
		SEE ATTACHED

11. REMARKS:

TEMPORARY TYPE II Abandoned subsequent to sampling.

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William J. Miller
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Modified from Form GW-1b Rev. 7/05

WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

CATLIN PROJECT NO.: 209-112

1. WELL CONTRACTOR:

William J. Miller
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS: 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID # (if applicable): TT-POND-01
STATE WELL PERMIT # (if applicable): N.A.
COUNTY WELL PERMIT # (if applicable): N.A.
DWQ or OTHER PERMIT # (if applicable):
WELL USE (Check Applicable Box): Monitoring ☒ Residential ☐
Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐
Recovery ☐ Injection ☐ Irrigation ☐
Other (list use): _____

3. WELL LOCATION:

COUNTY: Onslow QUADRANGLE:
NEAREST TOWN: Jacksonville
Tarawa Terrace Housing Area,
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

LATITUDE: 34.73888554
LONGITUDE: 77.37876719
May be in degrees, minutes, seconds, or in a decimal

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4a. FACILITY - The name of the business where the well is located. Complete 4a and 4b (If a residential well, skip 4a; complete 4b, well owner information only)

FACILITY ID #(if applicable) Not Applicable
NAME OF FACILITY:
STREET ADDRESS: Tarawa Terrace Housing Area
Jacksonville | North Carolina
City or Town | State | Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME: Mr. Nick Schultz
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004

Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code

(910) 451-5068
Area code - Phone number

5. WELL DETAILS:

a. Total Depth: 12 ft. Diameter: 1 in.
b. Water Level (Below Measuring Point): _____ ft.
Measuring point is 3.0 ft. above land surface

6. CASING:

	Length		Diameter	
a. Casing Depth (if known):	2	ft.	1	in.
b. Casing Removed:	5	ft.	1	in.

7. DISINFECTION: N/A
(Amount of 70% calcium hypochlorite used)

8. SEALING MATERIAL:

Neat Cement
Cement _____ lb.
Water _____ gal.

Sand Cement
Cement _____ lb.
Water _____ gal.

Bentonite
Bentonite 5 lb.
Type: Slurry __ Pellets X
Water _____ gal.

Other
Type material _____
Amount _____

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Pulled well screen and casing, backfilled hole with bentonite pellets.

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 1/4/2010

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

1-15-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR **DATE**

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL **DATE**
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113)

William J. Miller
PRINTED NAME OF PERSON ABANDONING THE WELL

Submit a copy to the owner and the original to the Division of Water Quality within 30 days.
Attn: Information Management,1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-30 Rev. 5/06

WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

CATLIN PROJECT NO. 209-112

1. WELL CONTRACTOR:

William J. Miller
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID # (if applicable): TT-POND-02
STATE WELL PERMIT # (if applicable): N.A.
COUNTY WELL PERMIT # (if applicable): N.A.
DWQ or OTHER PERMIT # (if applicable):
WELL USE (Check Applicable Box): Monitoring ☒ Residential ☐
Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐
Recovery ☐ Injection ☐ Irrigation ☐
Other (list use):

3. WELL LOCATION:

COUNTY: Onslow QUADRANGLE:
NEAREST TOWN: Jacksonville
Tarawa Terrace Housing Area,
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other:

LATITUDE: 34.73845913
LONGITUDE: 77.37801818
May be in degrees, minutes, seconds, or in a decimal

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4a. FACILITY - The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a, complete 4b, well owner information only)

FACILITY ID #(if applicable) Not Applicable

NAME OF FACILITY:

STREET ADDRESS: Tarawa Terrace Housing Area

Jacksonville | North Carolina
City or Town | State | Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME: Mr. Nick Schultz

STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004

Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code

(910) 451-5068
Area code - Phone number

5. WELL DETAILS:

a. Total Depth: 6 ft. Diameter: 1 in.
b. Water Level (Below Measuring Point): ____ ft.
Measuring point is 0.0 ft. above land surface

6. CASING:

	Length		Diameter	
a. Casing Depth (if known):	1	ft.	1	in.
b. Casing Removed:	1	ft.	1	in.

7. DISINFECTION: N/A
(Amount of 70% calcium hypochlorite used)

8. SEALING MATERIAL:

Neat Cement
Cement ____ lb.
Water ____ gal.

Sand Cement
Cement ____ lb.
Water ____ gal.

Bentonite
Bentonite 5 lb.
Type: Slurry __ Pellets X
Water ____ gal.

Other
Type material ____
Amount ____

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Pulled well screen and casing, backfilled hole with bentonite pellets.

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 1/4/2010

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 1-15-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR **DATE**

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL **DATE**
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113)

William J. Miller
PRINTED NAME OF PERSON ABANDONING THE WELL

Submit a copy to the owner and the original to the Division of Water Quality within 30 days.
Attn: Information Management,1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-30 Rev. 5/06

WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

CATLIN PROJECT NO. 209-112

1. WELL CONTRACTOR:

William J. Miller
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID # (if applicable): TT-POND-03
STATE WELL PERMIT # (if applicable): N.A.
COUNTY WELL PERMIT # (if applicable): N.A.
DWQ or OTHER PERMIT # (if applicable):
WELL USE (Check Applicable Box): Monitoring ☒ Residential ☐
Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐
Recovery ☐ Injection ☐ Irrigation ☐
Other (list use): _____

3. WELL LOCATION:

COUNTY: Onslow QUADRANGLE:
NEAREST TOWN: Jacksonville
Tarawa Terrace Housing Area,
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

LATITUDE: 34.73817937
LONGITUDE: 77.37742038
May be in degrees, minutes, seconds, or in a decimal

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4a. FACILITY - The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only)

FACILITY ID #(if applicable) Not Applicable
NAME OF FACILITY:
STREET ADDRESS: Tarawa Terrace Housing Area
Jacksonville | North Carolina
City or Town | State | Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME: Mr. Nick Schultz
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004

Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code

(910) 451-5068
Area code - Phone number

5. WELL DETAILS:

a. Total Depth: 8 ft. Diameter: 1 in.
b. Water Level (Below Measuring Point): _____ ft.
Measuring point is 2.0 ft. above land surface

6. CASING:

	Length		Diameter	
a. Casing Depth (if known):	3	ft.	1	in.
b. Casing Removed:	5	ft.	1	in.

7. DISINFECTION: N/A
(Amount of 70% calcium hypochlorite used)

8. SEALING MATERIAL:

Neat Cement
Cement _____ lb.
Water _____ gal.

Sand Cement
Cement _____ lb.
Water _____ gal.

Bentonite
Bentonite 5 lb.
Type: Slurry __ Pellets X
Water _____ gal.

Other
Type material _____
Amount _____

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Pulled well screen and casing, backfilled hole with bentonite pellets.

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 1/4/2010

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

_____ 1-15-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR **DATE**

_____
SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL **DATE**
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113)

William J. Miller
PRINTED NAME OF PERSON ABANDONING THE WELL

Submit a copy to the owner and the original to the Division of Water Quality within 30 days.
Attn: Information Management,1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-30 Rev. 5/06

ATTACHMENT 3

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

SGS

Jeff Becken
Richard Catlin & Associates
P.O. Box 10280
Wilmington, NC 28404-0280

Report Number: G128-2484

Client Project: TT-POND

Dear Jeff Becken,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Barbara Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America, Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America, Inc.

Barbara Hager Jan. 8. 2010

Project Manager
Barbara Hager

Date

Case Narrative
Catlin
SGS Project: **G128-2484**
Project Name: **TT-Pond**

SGS North America; Inc.

January 8th, 2010

- Three water samples were accepted into the laboratory on January 4th, 2010 at 1645 for analyses as indicated on the chain of custody. The samples were received in good condition, with a temperature of 6.6°C. These samples were received on ice with temperature coming down.
- All extractions and analyses were completed within holding time limits, with the following quality control exceptions.

8270D Analysis

- The reported %RPD for 2,4-Dinitrophenol in the LCS/LCSD associated with batch 15833 is outside the method's QC. The individual recoveries meet the acceptance criteria. This compound has been "#" flagged in the data.

Craig R Tronzo Date 1/8/10
Craig R Tronzo
Data Validation/QC

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

UJ = Target analytes with recoveries that are 10% < %R < LCL; # of MEs are allowable and compounds are not detected in the sample.

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:
1) Metals and mercury samples are digested with a hot block; see the standard operating procedure document for details.
2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.021808.4

Results for Volatiles
by GC 602

Client Sample ID: TT-POND-01
Client Project ID: TT-POND
Lab Sample ID: G128-2484-1A
Lab Project ID: G128-2484

Analyzed By: DVO
Date Collected: 1/4/2010 12:00
Date Received: 1/4/2010
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	1/7/2010	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	1/7/2010	
Ethylbenzene	BQL	1.00	0.19	1	1/7/2010	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	1/7/2010	
Toluene	BQL	1.00	0.313	1	1/7/2010	
m/p-Xylene	BQL	2.00	0.481	1	1/7/2010	
o-Xylene	BQL	2.00	0.405	1	1/7/2010	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.8	96.9

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: _____
GC-VOA_WA.XLS

Results for Volatiles
by GC 602

Client Sample ID: TT-POND-02
Client Project ID: TT-POND
Lab Sample ID: G128-2484-2A
Lab Project ID: G128-2484

Analyzed By: DVO
Date Collected: 1/4/2010 12:45
Date Received: 1/4/2010
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	1/7/2010	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	1/7/2010	
Ethylbenzene	BQL	1.00	0.19	1	1/7/2010	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	1/7/2010	
Toluene	BQL	1.00	0.313	1	1/7/2010	
m/p-Xylene	BQL	2.00	0.481	1	1/7/2010	
o-Xylene	BQL	2.00	0.405	1	1/7/2010	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.3	95.8

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: _____

Results for Volatiles
by GC 602

Client Sample ID: TT-POND-03
Client Project ID: TT-POND
Lab Sample ID: G128-2484-3A
Lab Project ID: G128-2484

Analyzed By: DVO
Date Collected: 1/4/2010 12:15
Date Received: 1/4/2010
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	1/7/2010	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	1/7/2010	
Ethylbenzene	BQL	1.00	0.19	1	1/7/2010	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	1/7/2010	
Toluene	BQL	1.00	0.313	1	1/7/2010	
m/p-Xylene	BQL	2.00	0.481	1	1/7/2010	
o-Xylene	BQL	2.00	0.405	1	1/7/2010	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.4	95.9

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: _____
GC-VOA_WA.XLS

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT-POND-01
Client Project ID: TT-POND
Lab Sample ID: G128-2484-1J
Lab Project ID: G128-2484

Initial/Final Amt: 928 mL / 5 mL

Analyzed By: DCS
Date Collected: 1/4/2010 12:00
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.39	1.19	1	1/7/2010	
Acenaphthylene	BQL	5.39	1.13	1	1/7/2010	
Anthracene	BQL	5.39	1.29	1	1/7/2010	
Benzo[a]anthracene	BQL	5.39	1.20	1	1/7/2010	
Benzo[a]pyrene	BQL	5.39	1.05	1	1/7/2010	
Benzo[b]fluoranthene	BQL	5.39	1.01	1	1/7/2010	
Benzo[g,h,i]perylene	BQL	5.39	1.21	1	1/7/2010	
Benzo[k]fluoranthene	BQL	5.39	1.49	1	1/7/2010	
Bis(2-chloroethoxy)methane	BQL	5.39	1.24	1	1/7/2010	
Bis(2-chloroethyl)ether	BQL	5.39	1.20	1	1/7/2010	
Bis(2-chloroisopropyl)ether	BQL	5.39	1.14	1	1/7/2010	
Bis(2-ethylhexyl)phthalate	BQL	5.39	1.37	1	1/7/2010	
4-bromophenyl phenyl ether	BQL	5.39	1.19	1	1/7/2010	
Butylbenzylphthalate	BQL	5.39	1.20	1	1/7/2010	
2-Chloronaphthalene	BQL	5.39	0.921	1	1/7/2010	
2-Chlorophenol	BQL	5.39	1.09	1	1/7/2010	
4-Chloro-3-methylphenol	BQL	5.39	1.10	1	1/7/2010	
4-Chlorophenyl phenyl ether	BQL	5.39	1.23	1	1/7/2010	
Chrysene	BQL	5.39	0.598	1	1/7/2010	
Dibenzo[a,h]anthracene	BQL	5.39	1.24	1	1/7/2010	
Di-n-Butylphthalate	BQL	5.39	0.889	1	1/7/2010	
3,3'-Dichlorobenzidine	BQL	10.8	1.36	1	1/7/2010	
2,4-Dichlorophenol	BQL	5.39	0.992	1	1/7/2010	
Diethylphthalate	BQL	5.39	1.47	1	1/7/2010	
Dimethylphthalate	BQL	5.39	1.29	1	1/7/2010	
2,4-Dimethylphenol	BQL	5.39	0.736	1	1/7/2010	
Di-n-octylphthalate	BQL	5.39	1.15	1	1/7/2010	
4,6-Dinitro-2-methylphenol	BQL	26.9	1.15	1	1/7/2010	
2,4-Dinitrophenol	BQL	26.9	0.788	1	1/7/2010	#
2,4-Dinitrotoluene	BQL	5.39	1.30	1	1/7/2010	
2,6-Dinitrotoluene	BQL	5.39	1.43	1	1/7/2010	
Diphenylamine *	BQL	5.39	1.44	1	1/7/2010	
Fluoranthene	BQL	5.39	1.49	1	1/7/2010	
Fluorene	BQL	5.39	1.38	1	1/7/2010	
Hexachlorobenzene	BQL	5.39	1.77	1	1/7/2010	
Hexachlorobutadiene	BQL	5.39	0.669	1	1/7/2010	
Hexachlorocyclopentadiene	BQL	10.8	0.522	1	1/7/2010	
Hexachloroethane	BQL	5.39	0.796	1	1/7/2010	
Indeno(1,2,3-c,d)pyrene	BQL	5.39	2.46	1	1/7/2010	
Isophorone	BQL	5.39	1.04	1	1/7/2010	
Naphthalene	BQL	5.39	0.845	1	1/7/2010	
Nitrobenzene	BQL	5.39	1.08	1	1/7/2010	
2-Nitrophenol	BQL	5.39	0.967	1	1/7/2010	
4-Nitrophenol	BQL	26.9	0.765	1	1/7/2010	
N-Nitrosodi-n-propylamine	BQL	5.39	0.824	1	1/7/2010	
Pentachlorophenol	BQL	26.9	0.657	1	1/7/2010	
Phenanthrene	BQL	5.39	1.29	1	1/7/2010	

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT-POND-01
Client Project ID: TT-POND
Lab Sample ID: G128-2484-1J
Lab Project ID: G128-2484

Initial/Final Amt: 928 mL / 5 mL

Analyzed By: DCS
Date Collected: 1/4/2010 12:00
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.39	0.980	1	1/7/2010	
Pyrene	BQL	5.39	1.25	1	1/7/2010	
1,2,4-Trichlorobenzene	BQL	5.39	0.834	1	1/7/2010	
2,4,6-Trichlorophenol	BQL	5.39	0.995	1	1/7/2010	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.8	98
2-Fluorophenol	10	9.1	91
Nitrobenzene-d5	10	10.3	103
Phenol-d6	10	9.6	96
2,4,6-Tribromophenol	10	10.1	101
4-Terphenyl-d14	10	11.8	118

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

SGS North America, Inc.

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: TT-POND-01
Client Project ID: TT-POND
Lab Sample ID: G128-2484-1J
Lab Project ID: G128-2484
Sample Wt/Vol: 928 ML
Dilution: 1

Analyzed By: DCS
Date Collected: 1/4/2010 12:00
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Date Analyzed: 1/7/2010
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result ug/L
	No TICs present.				

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: _____

SGS North America, Inc.

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT-POND-02
Client Project ID: TT-POND
Lab Sample ID: G128-2484-2J
Lab Project ID: G128-2484

Initial/Final Amt: 869 mL / 5 mL

Analyzed By: DCS
Date Collected: 1/4/2010 12:45
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.75	1.27	1	1/7/2010	
Acenaphthylene	BQL	5.75	1.21	1	1/7/2010	
Anthracene	BQL	5.75	1.38	1	1/7/2010	
Benzo[a]anthracene	BQL	5.75	1.28	1	1/7/2010	
Benzo[a]pyrene	BQL	5.75	1.12	1	1/7/2010	
Benzo[b]fluoranthene	BQL	5.75	1.08	1	1/7/2010	
Benzo[g,h,i]perylene	BQL	5.75	1.29	1	1/7/2010	
Benzo[k]fluoranthene	BQL	5.75	1.59	1	1/7/2010	
Bis(2-chloroethoxy)methane	BQL	5.75	1.32	1	1/7/2010	
Bis(2-chloroethyl)ether	BQL	5.75	1.28	1	1/7/2010	
Bis(2-chloroisopropyl)ether	BQL	5.75	1.22	1	1/7/2010	
Bis(2-ethylhexyl)phthalate	BQL	5.75	1.46	1	1/7/2010	
4-bromophenyl phenyl ether	BQL	5.75	1.27	1	1/7/2010	
Butylbenzylphthalate	BQL	5.75	1.28	1	1/7/2010	
2-Chloronaphthalene	BQL	5.75	0.984	1	1/7/2010	
2-Chlorophenol	BQL	5.75	1.16	1	1/7/2010	
4-Chloro-3-methylphenol	BQL	5.75	1.17	1	1/7/2010	
4-Chlorophenyl phenyl ether	BQL	5.75	1.31	1	1/7/2010	
Chrysene	BQL	5.75	0.639	1	1/7/2010	
Dibenzo[a,h]anthracene	BQL	5.75	1.32	1	1/7/2010	
Di-n-Butylphthalate	BQL	5.75	0.949	1	1/7/2010	
3,3'-Dichlorobenzidine	BQL	11.5	1.45	1	1/7/2010	
2,4-Dichlorophenol	BQL	5.75	1.06	1	1/7/2010	
Diethylphthalate	BQL	5.75	1.57	1	1/7/2010	
Dimethylphthalate	BQL	5.75	1.38	1	1/7/2010	
2,4-Dimethylphenol	BQL	5.75	0.786	1	1/7/2010	
Di-n-octylphthalate	BQL	5.75	1.23	1	1/7/2010	
4,6-Dinitro-2-methylphenol	BQL	28.8	1.23	1	1/7/2010	
2,4-Dinitrophenol	BQL	28.8	0.841	1	1/7/2010	#
2,4-Dinitrotoluene	BQL	5.75	1.39	1	1/7/2010	
2,6-Dinitrotoluene	BQL	5.75	1.53	1	1/7/2010	
Diphenylamine *	BQL	5.75	1.54	1	1/7/2010	
Fluoranthene	BQL	5.75	1.59	1	1/7/2010	
Fluorene	BQL	5.75	1.47	1	1/7/2010	
Hexachlorobenzene	BQL	5.75	1.89	1	1/7/2010	
Hexachlorobutadiene	BQL	5.75	0.715	1	1/7/2010	
Hexachlorocyclopentadiene	BQL	11.5	0.557	1	1/7/2010	
Hexachloroethane	BQL	5.75	0.850	1	1/7/2010	
Indeno(1,2,3-c,d)pyrene	BQL	5.75	2.63	1	1/7/2010	
Isophorone	BQL	5.75	1.11	1	1/7/2010	
Naphthalene	BQL	5.75	0.902	1	1/7/2010	
Nitrobenzene	BQL	5.75	1.15	1	1/7/2010	
2-Nitrophenol	BQL	5.75	1.03	1	1/7/2010	
4-Nitrophenol	BQL	28.8	0.817	1	1/7/2010	
N-Nitrosodi-n-propylamine	BQL	5.75	0.880	1	1/7/2010	
Pentachlorophenol	BQL	28.8	0.702	1	1/7/2010	
Phenanthrene	BQL	5.75	1.38	1	1/7/2010	

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT-POND-02
Client Project ID: TT-POND
Lab Sample ID: G128-2484-2J
Lab Project ID: G128-2484

Initial/Final Amt: 869 mL / 5 mL

Analyzed By: DCS
Date Collected: 1/4/2010 12:45
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.75	1.05	1	1/7/2010	
Pyrene	BQL	5.75	1.33	1	1/7/2010	
1,2,4-Trichlorobenzene	BQL	5.75	0.891	1	1/7/2010	
2,4,6-Trichlorophenol	BQL	5.75	1.06	1	1/7/2010	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.5	105
2-Fluorophenol	10	9.6	96
Nitrobenzene-d5	10	11	110
Phenol-d6	10	10.2	102
2,4,6-Tribromophenol	10	10.2	102
4-Terphenyl-d14	10	12.6	126

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

SGS North America, Inc.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: TT-POND-02
Client Project ID: TT-POND
Lab Sample ID: G128-2484-2J
Lab Project ID: G128-2484
Sample Wt/Vol: 869 ML
Dilution: 1

Analyzed By: DCS
Date Collected: 1/4/2010 12:45
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Date Analyzed: 1/7/2010
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result ug/L
1	Alcohol, Unknown	4.34			6.77

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: _____

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT-POND-03
Client Project ID: TT-POND
Lab Sample ID: G128-2484-3J
Lab Project ID: G128-2484

Initial/Final Amt: 960 mL / 5 mL

Analyzed By: DCS
Date Collected: 1/4/2010 12:15
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.21	1.15	1	1/7/2010	
Acenaphthylene	BQL	5.21	1.09	1	1/7/2010	
Anthracene	BQL	5.21	1.25	1	1/7/2010	
Benzo[a]anthracene	BQL	5.21	1.16	1	1/7/2010	
Benzo[a]pyrene	BQL	5.21	1.02	1	1/7/2010	
Benzo[b]fluoranthene	BQL	5.21	0.976	1	1/7/2010	
Benzo[g,h,i]perylene	BQL	5.21	1.17	1	1/7/2010	
Benzo[k]fluoranthene	BQL	5.21	1.44	1	1/7/2010	
Bis(2-chloroethoxy)methane	BQL	5.21	1.20	1	1/7/2010	
Bis(2-chloroethyl)ether	BQL	5.21	1.16	1	1/7/2010	
Bis(2-chloroisopropyl)ether	BQL	5.21	1.10	1	1/7/2010	
Bis(2-ethylhexyl)phthalate	BQL	5.21	1.32	1	1/7/2010	
4-bromophenyl phenyl ether	BQL	5.21	1.15	1	1/7/2010	
Butylbenzylphthalate	BQL	5.21	1.16	1	1/7/2010	
2-Chloronaphthalene	BQL	5.21	0.891	1	1/7/2010	
2-Chlorophenol	BQL	5.21	1.05	1	1/7/2010	
4-Chloro-3-methylphenol	BQL	5.21	1.06	1	1/7/2010	
4-Chlorophenyl phenyl ether	BQL	5.21	1.19	1	1/7/2010	
Chrysene	BQL	5.21	0.578	1	1/7/2010	
Dibenzo[a,h]anthracene	BQL	5.21	1.20	1	1/7/2010	
Di-n-Butylphthalate	BQL	5.21	0.859	1	1/7/2010	
3,3'-Dichlorobenzidine	BQL	10.4	1.31	1	1/7/2010	
2,4-Dichlorophenol	BQL	5.21	0.959	1	1/7/2010	
Diethylphthalate	BQL	5.21	1.42	1	1/7/2010	
Dimethylphthalate	BQL	5.21	1.25	1	1/7/2010	
2,4-Dimethylphenol	BQL	5.21	0.711	1	1/7/2010	
Di-n-octylphthalate	BQL	5.21	1.11	1	1/7/2010	
4,6-Dinitro-2-methylphenol	BQL	26.0	1.11	1	1/7/2010	
2,4-Dinitrophenol	BQL	26.0	0.761	1	1/7/2010	#
2,4-Dinitrotoluene	BQL	5.21	1.26	1	1/7/2010	
2,6-Dinitrotoluene	BQL	5.21	1.39	1	1/7/2010	
Diphenylamine *	BQL	5.21	1.40	1	1/7/2010	
Fluoranthene	BQL	5.21	1.44	1	1/7/2010	
Fluorene	BQL	5.21	1.33	1	1/7/2010	
Hexachlorobenzene	BQL	5.21	1.71	1	1/7/2010	
Hexachlorobutadiene	BQL	5.21	0.647	1	1/7/2010	
Hexachlorocyclopentadiene	BQL	10.4	0.504	1	1/7/2010	
Hexachloroethane	BQL	5.21	0.770	1	1/7/2010	
Indeno(1,2,3-c,d)pyrene	BQL	5.21	2.38	1	1/7/2010	
Isophorone	BQL	5.21	1.01	1	1/7/2010	
Naphthalene	BQL	5.21	0.817	1	1/7/2010	
Nitrobenzene	BQL	5.21	1.04	1	1/7/2010	
2-Nitrophenol	BQL	5.21	0.934	1	1/7/2010	
4-Nitrophenol	BQL	26.0	0.740	1	1/7/2010	
N-Nitrosodi-n-propylamine	BQL	5.21	0.797	1	1/7/2010	
Pentachlorophenol	BQL	26.0	0.635	1	1/7/2010	
Phenanthrene	BQL	5.21	1.25	1	1/7/2010	

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT-POND-03
Client Project ID: TT-POND
Lab Sample ID: G128-2484-3J
Lab Project ID: G128-2484

Initial/Final Amt: 960 mL / 5 mL

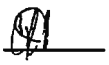
Analyzed By: DCS
Date Collected: 1/4/2010 12:15
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.21	0.947	1	1/7/2010	
Pyrene	BQL	5.21	1.21	1	1/7/2010	
1,2,4-Trichlorobenzene	BQL	5.21	0.806	1	1/7/2010	
2,4,6-Trichlorophenol	BQL	5.21	0.961	1	1/7/2010	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.6	96
2-Fluorophenol	10	8.8	88
Nitrobenzene-d5	10	9.8	98
Phenol-d6	10	9.3	93
2,4,6-Tribromophenol	10	9.4	94
4-Terphenyl-d14	10	11.7	117

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: TT-POND-03
Client Project ID: TT-POND
Lab Sample ID: G128-2484-3J
Lab Project ID: G128-2484
Sample Wt/Vol: 960 ML
Dilution: 1

Analyzed By: DCS
Date Collected: 1/4/2010 12:15
Date Received: 1/4/2010
Date Extracted: 1/5/2010
Date Analyzed: 1/7/2010
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result ug/L
	No TICs present.				

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: TT-POND

Sample Information	
Sample Identification	TT-POND-01
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	01/04/10 12:00
Date Received	01/04/10
Date Extracted	01/07/10 16:06 - 01/07/10 16:06
Date Analyzed	01/07/10 16:06 - 01/07/10 16:06
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C_5-C_8 Aliphatics**	BQL	100	
C_9-C_{12} Aliphatics**	BQL	100	
C_9-C_{10} Aromatics**	BQL	100	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	89.4		70	130
Surrogate % Recovery - FID	102		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2484-1e	Lab Info: g128-2484-1e
FID Info: VP010710/018F0101.D	PID Info: VP010710/018R0101.D

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: TT-POND

Sample Information	
Sample Identification	TT-POND-02
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	01/04/10 12:45
Date Received	01/04/10
Date Extracted	01/07/10 16:33 - 01/07/10 16:33
Date Analyzed	01/07/10 16:33 - 01/07/10 16:33
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C_5-C_8 Aliphatics**	BQL	100	
C_9-C_{12} Aliphatics**	BQL	100	
C_9-C_{10} Aromatics**	BQL	100	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	88.0		70	130
Surrogate % Recovery - FID	103		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2484-2e	Lab Info: g128-2484-2e
FID Info: VP010710/019F0101.D	PID Info: VP010710/019R0101.D

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: TT-POND

Sample Information	
Sample Identification	TT-POND-03
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	01/04/10 12:15
Date Received	01/04/10
Date Extracted	01/07/10 16:59 - 01/07/10 16:59
Date Analyzed	01/07/10 16:59 - 01/07/10 16:59
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C_5-C_8 Aliphatics**	BQL	100	
C_9-C_{12} Aliphatics**	BQL	100	
C_9-C_{10} Aromatics**	BQL	100	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	87.1		70	130
Surrogate % Recovery - FID	98.9		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2484-3e	Lab Info: g128-2484-3e
FID Info: VP010710/020F0101.D	PID Info: VP010710/020R0101.D

Reviewed By: _____

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 12/04/09 PID Initial Calibration Date: 12/04/09

Calibration Ranges and Limits

Range	MDL (µg/L)	MDL (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	2.02	0.175	6.42	0.557	100	10
C_9-C_{12} Aliphatics	1.51	0.118	4.80	0.375	100	10
C_9-C_{10} Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_5-C_8 Aliphatics	10	0.8	15.00	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C_9-C_{12} Aliphatics	10	0.8	0.99	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C_9-C_{10} Aromatics	10	0.8	22.39	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 01/07/10 Filename: VP010710/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C_5-C_8 Aliphatics	200	16	1.9	±25%
C_9-C_{12} Aliphatics	200	16	-15.1	±25%
C_9-C_{10} Aromatics	200	16	4.2	±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 12/04/09 PID Initial Calibration Date: 12/04/09

Calibration Ranges and Limits

Range	MDL (µg/L)	MDL (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	2.02	0.175	6.42	0.557	100	10
C_9-C_{12} Aliphatics	1.51	0.118	4.80	0.375	100	10
C_9-C_{10} Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_5-C_8 Aliphatics	10	0.8	15.00	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C_9-C_{12} Aliphatics	10	0.8	0.99	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C_9-C_{10} Aromatics	10	0.8	22.39	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 01/07/10 Filename: VP010710/025F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C_5-C_8 Aliphatics	200	16	5.1	±25%
C_9-C_{12} Aliphatics	200	16	-11.2	±25%
C_9-C_{10} Aromatics	200	16	14.6	±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: TT-POND

Sample Information	
Sample Identification	TT-POND-01
Sample Matrix	Water
Date Collected	01/04/10 12:00
Date Received	01/04/10
Date Extracted	01/05/10
Date Analyzed	01/08/10 04:08 - 01/08/10 04:37
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	927
Final Volume (mL)	5

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	BQL	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	85.8		40	140
Aromatic (ortho-terphenyl)	90.0		40	140
Fractionation 1 (2-bromonaphthalene)	79.4		40	140
Fractionation 2 (2-fluorobiphenyl)	93.5		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2484-1L	Lab Info: g128-2484-1L
Aliphatic: EP010710/027F2501.D	Aromatic: EP010710/028F2601.D

Reviewed By: _____

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: TT-POND

Sample Information	
Sample Identification	TT-POND-02
Sample Matrix	Water
Date Collected	01/04/10 12:45
Date Received	01/04/10
Date Extracted	01/05/10
Date Analyzed	01/08/10 05:05 - 01/08/10 05:32
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	886
Final Volume (mL)	5

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	BQL	100	

Surrogates	Percent Recovery	Flags	Limits Lower	Limits Upper
Aliphatic (tricosane)	90.0		40	140
Aromatic (ortho-terphenyl)	89.4		40	140
Fractionation 1 (2-bromonaphthalene)	95.2		40	140
Fractionation 2 (2-fluorobiphenyl)	102		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info:	g128-2484-2L	Lab Info:	g128-2484-2L
Aliphatic:	EP010710/029F2701.D	Aromatic:	EP010710/030F2801.D

Reviewed By: _____

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: TT-POND

Sample Information	
Sample Identification	TT-POND-03
Sample Matrix	Water
Date Collected	01/04/10 12:15
Date Received	01/04/10
Date Extracted	01/05/10
Date Analyzed	01/08/10 06:00 - 01/08/10 06:28
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	953
Final Volume (mL)	5

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	BQL	100	

Surrogates	Percent Recovery	Flags	Limits Lower	Limits Upper
Aliphatic (tricosane)	82.7		40	140
Aromatic (ortho-terphenyl)	93.4		40	140
Fractionation 1 (2-bromonaphthalene)	94.6		40	140
Fractionation 2 (2-fluorobiphenyl)	101		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info:	g128-2484-3L	Lab Info:	g128-2484-3L
Aliphatic:	EP010710/031F2901.D	Aromatic:	EP010710/032F3001.D

Reviewed By: 

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/06/09

Calibration Ranges and Limits

Range	MDL (02/15/08) (µg/L)	MDL (02/11/08) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	200	33.3	12.22	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C_{19}-C_{36} Aliphatics	200	33.3	8.95	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C_{11}-C_{22} Aromatics	200	33.3	3.21	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 01/07/10, 01/08/10

Filenames: ep010710/019f1701.d, ep010710/020f1801.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	14.8	≤±25%
C19-C36 Aliphatics	100	16.7	15.4	≤±25%
C11-C22 Aromatics	100	16.7	20.1	≤±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/06/09

Calibration Ranges and Limits

Range	MDL (02/15/08) (µg/L)	MDL (02/11/08) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	200	33.3	12.22	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C_{19}-C_{36} Aliphatics	200	33.3	8.95	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C_{11}-C_{22} Aromatics	200	33.3	3.21	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 01/08/10
01/08/10

Filenames: ep010810/001f0101.d
ep010810/002f0201.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	18.2	≤±25%
C19-C36 Aliphatics	100	16.7	19.3	≤±25%
C11-C22 Aromatics	100	16.7	22.8	≤±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

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(1)

CLIENT: CATLIN Eng. & Sci

CONTACT: JEFF BECKLEY PHONE NO:(910) 452-5861

PROJECT: TT-POMD SITE/PWSID# :

REPORTS TO: JEFF BECKLEY FAX NO.:( )

INVOICE TO: SHEILA SMITH QUOTE #: DOD RATES

P.O. NUMBER: 100104-5

SGS Reference: ST 1/13/10

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	HCL	N/A	HCL	N/A						REMARKS
							(3) Analysis Required	EPA 602 + XYL	EPA 625 BNA + TICS	MADEP EPH	MADEP VPH						
	TT-POMD-01	1-4-10	1200	GW	9			✓	✓	–	–						
	TT-POMD-02	"	1245					✓	–	–	–						○ EDD SUMMARY FORMAT
	TT-POMD-03	"	1215					–	✓	–	✓						○ PDF REPORT
																	LOG RUNS

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	1-4-10	16:45	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 6.6 on ice coming down to temp

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH 5 DAY Date Needed ☐ STD