



January 19, 2007

Mr. Andrew Smith
I&E/EMD/EQB
Building 12, McHugh Boulevard
MCB Camp Lejeune, NC 28542

**Re: Soil Sample Summary Letter for TT3548, Incident # 23694
MCB Camp Lejeune, North Carolina**

Dear Mr. Smith:

Recent review of site assessment work completed at the subject site discovered that results of a December 2005 soil sampling event were not reported. This letter summarizes those December 2005 results in support of the recent request for No Further Action.

The TT-3548 project site is located in the Tarawa Terrace II Housing Area of Marine Corps Base (MCB), Camp Lejeune, North Carolina. Site assessments of the site were required after a 550 gallon heating oil UST system was removed from the subsurface in August 2001. A Phase I Limited Site Assessment (LSA) and Soil Assessment (SAR) were conducted from 2002 to 2004, and additional soil and groundwater monitoring was completed in 2005 and 2006.

The 2004 SAR for the site indicated the presence of MADEP constituents at the base and sidewalls of the excavation in excess of the Residential MSCCs. Soil contamination was present at depths of greater than eight feet below land surface (BLS) and within the boundary of the excavation area. Excavation of impacted soils from a depth of six feet BLS to the water table was planned for the site in conjunction with a planned housing demolition set for 2009.

In December 2005, MCB Camp Lejeune resampled soils at the site in order to assess contaminant natural attenuation. Samples were taken from the same sample locations as in the 2004 SAR. Results of the 2005 sampling event are summarized in Table 1 below along with the 2004 SAR sampling results. The table shows that the western sidewall sample (USTTT3548-SB04), which previously exhibited MADEP constituents above standards in the 2004 results, no longer contained contaminant concentrations above the Residential MSCCs. Figure 1 shows the location of the soil samples. Note that the 2004 and 2005 sample locations are identical.

Housing demolition was unexpectedly moved up to 2006, and as a result, pre-excavation soil sampling was performed in April 2006. These results were reported in a May 2006 Soil Assessment Report Addendum by Catlin Engineers and Scientists. Results are also



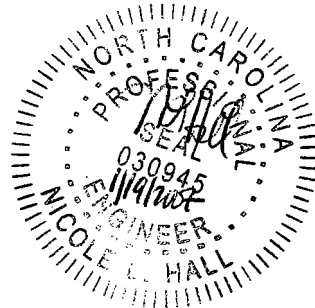
included in Table 1. Again, results showed that all but the western sidewall required additional excavation due to the presence of MADEP constituents above the residential standard.

Sovereign Consulting Inc. (Sovereign) conducted soil excavation activities in August 2006 per the Catlin SAR and SARA. Approximately 117.5 tons of contaminated soil were removed and properly disposed. The soil confirmation sample results are summarized in the attached table, as well as in Sovereign's Soil Excavation Summary Report (submitted in December 2006). Figure 2 shows the locations of the Sovereign confirmation soil samples.

As previously submitted, soil and groundwater contaminants have been remediated to below the STGW MSCCs and 2L standards, respectively. This site qualifies as a candidate for No Further Action. If you have further questions or require additional information, please do not hesitate to contact me.

Sincerely,
Sovereign Consulting Inc.

Nicole Hall, P.E.
Senior Engineer



Attachments

Copy to: Mr. Dave Cleland, NAVFAC
Mr. Chris Murray, Sovereign

TABLE 1
SUMMARY OF SOIL SAMPLING RESULTS
 Date: December 2005 and 2006

Analytical Method: MADEP Method VPH/EPH as compared to NCDENR MSCCs

Comment	Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₉ -C ₂₂ Aromatics
	Sample ID	Date Collected	Sample Depth (ft BGS)				
Catlin	USTTT3548-SB01(12-14)	4/14/2004		12	3,980	690	2,736
Osage	USTTT3548-SB01(12-14)	12/1/2005	12-14	<10	<20	<10	<20
Catlin	USTTT3548-SB09	4/7/2006		<10	4,750	690	2,180
Catlin	USTTT3548-SB02(9-11)	4/14/2004		13	3,970	720	2,935
Osage	USTTT3548-SB02(9-11)	12/1/2005	9-11	<20	2,930	380	800
Catlin	USTTT3548-SB10	4/7/2006		<10	1,483	280	640
Catlin	USTTT3548-SB03(9-11)	4/14/2004		29	5,630	1,100	3,255
Osage	USTTT3548-SB03(9-11)	12/1/2005	9-11	<10	641	130	218
Catlin	USTTT3548-SB11	4/7/2006		<10	4,231	730	1,425
Osage	USTTT3548-SB03(11-13)	12/1/2005	11-13	<10	<23	<10	<20
Catlin	USTTT3548-SB04(11-13)	4/14/2004		15	4,270	730	2,558
Osage	USTTT3548-SB04(11-13)	12/1/2005	11-13	<10	38	<10	<21
Catlin	USTTT3548-SB12	4/7/2006		<10	<20	<10	<20
Catlin	USTTT3548-SB05(9-11)	4/14/2004		<10	3,670	640	2,222
Osage	USTTT3548-SB05(9-11)	12/1/2005	9-11	<10	2,010	370	770
Catlin	USTTT3548-SB13	4/7/2006		<10	3,938	<500	1,131
Catlin	USTTT3548-SB06(9-11)	8/10/2004		<10	<20	<10	<20
Catlin	USTTT3548-SB14	4/7/2006	9-11	<10	<20	<10	<20
Catlin	USTTT3548-SB07(9-11)	8/10/2004		<10	<20	<10	<20
Catlin	USTTT3548-SB15	4/7/2006	9-11	<10	<20	<10	<20
Sovereign Post excavation	USTTT3548-5019	8/30/2006	12	<10	<20	<10	<20
Sovereign Post excavation	USTTT3548-5020	8/30/2006	12	<10	<20	<10	<20
Sovereign Post excavation	USTTT3548-5021	8/30/2006	14'2"	<10	<20	<10	<20
Sovereign Post excavation	USTTT3548-5022	8/30/2006	12'5"	<10	<20	<10	<20
Sovereign Post excavation	USTTT3548-5023	8/30/2006	13'4"	<10	<20	<10	<20
Sovereign Post excavation	USTTT3548-5024	8/30/2006	13'8"	<10	<20	<10	<20
Soil to groundwater MSCC (mg/kg)				72	3,300	##	34
Residential MSCC (mg/kg)				939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)				24,528	245,280	#	12,264

- All results reported in mg/kg (mg/kg = milligrams per kilogram)
- MSCC = Maximum Soil Contaminant Concentration
- # = Health Based Level >100%
- ## = Considered immobile
- **BOLD** = detected concentration
- **BOLD** and **SHADED** = detected concentration above applicable Residential standard

Former TT3546 Entrance

Sidewalk

⊕ USTTT3548-SB07 (SB15)

USTTT3548-SB01 (SB09)

Initial Excavation

USTTT3548-SB05 (SB13)

USTTT3548-MW01

USTTT3548-SB06 (SB14)

USTTT3548-SB02 (SB10)

USTTT3548-SB04 (SB12)

USTTT3548-SB03 (SB11)

Sidewalk

Former TT3548 Entrance

Chosin Circle

Former TT3546/3548 House

TABLE I

SUMMARY OF SOIL SAMPLING RESULTS

Date: December 2005 and 2006

Analytical Method: MADEP Method VPH/EPH as compared to NCDENR MSCCs

Comment	Contaminant of Concern: →			C ₉ -C ₁₀ Aliphatics	C ₉ -C ₁₀ Aliphatics	C ₉ -C ₁₀ Aliphatics	C ₉ -C ₁₀ Aromatics
	Sample ID	Date Collected	Sample Depth (ft BGS)				
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Soil to groundwater MSCC (mg/kg)				72	3,300	##	34
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LEGEND



SHALLOW MONITORING WELL



SOIL SAMPLE LOCATION



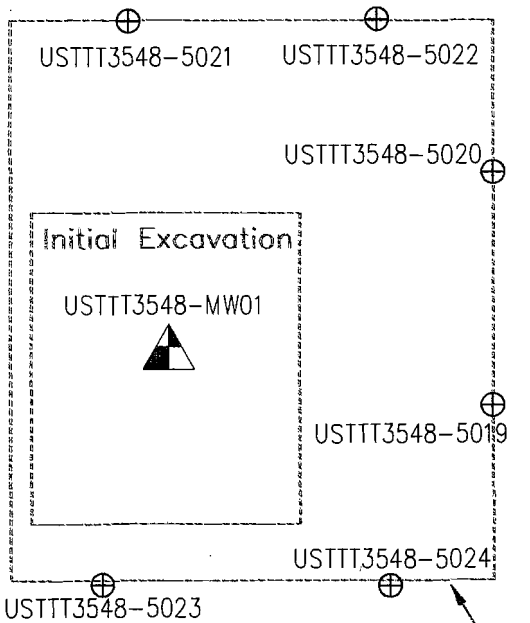
FIGURE	1
DATE	1/11/2008
REVISION	1
DRAWN BY	CRM
FILE	TT_3548_Base_Map

SITE MAP WITH SAMPLE LOCATIONS
TT3548 SITE MAP WITH
SAR and DECEMBER 2005 SAMPLES
MCB CAMP LEJEUNE, NC

Former TT3546 Entrance

Sidewalk

Former TT3546/3548 House



Chosin Circle

Sidewalk

Summer 2006 Excavation Limits

Former TT3548 Entrance

Analytical Method: MADEP Method VPH/EPH as compared to NCDENR MSCCs

Sample ID	Date Collected	Sample Depth (ft BGS)	Contaminant of Concern →			
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Soil to Groundwater MSCC (mg/kg)			72	3,300	##	34
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Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264

LEGEND



SHALLOW MONITORING WELL



SOIL SAMPLE LOCATION



FIGURE	2	SITE MAP WITH SAMPLE LOCATIONS
DATE	1/08/2006	
REVISION	1	
DRAWN BY	CRM	
FILE	TT_3548_Base_Map	
TT3548 AUGUST 2006 CONFIRMATION SAMPLE SUMMARY		
MCB CAMP LEJEUNE, NC		