208-077

UNITED STATES MARINE CORPS
MARINE CORPS BASE
PSC BOX 20004
CAMP LEJEUNE, NC 28542-0004

IN REPLY REFER TO:
5090.10
BEMD
JAN 09 2009

Mr. Bruce Reed
North Carolina Department of Environment
and Natural Resources
Division of Waste Management
Underground Storage Tank Section
127 Cardinal Drive
Wilmington, North Carolina 28405-3845

Dear Mr. Reed:

Enclosed are the analytical results and supporting documents for the JP-5 release detected on November 19, 2008 at the Campbell Street Fuel Farm aboard Marine Corps Air Station, New River (NCDENR incident number 94045). The release was caused by three leaking rising-stem valves at the Transfer Pump Station. The leaks were addressed and stopped the very same day.

Two contamination areas were excavated as indicated in the location map for the Transfer Pump Station shown on enclosure (1). Excavation Area 1 measured approximately 3'x 3'and six (6) 55-gal drums with contaminated soil were removed. Excavation Area 2 measured approximately 5' x 10' and fifteen (15) 55-gal drums of contaminated soil were removed. Enclosure (2) provides color photographs of the excavation areas. The excavated soil was transferred to drying beds located on Marine Corps Base, Camp Lejeune. The contaminated soil will be disposed when a sufficient amount has accumulated. A disposal manifest will be provided to the Division of Waste Management, as soon as it becomes available.

One soil sample was collected at a depth of approximately 16 inches in Excavation Area 1 and three soil samples were collected at a depth of approximately 6-12 inches in Excavation Area 2 as indicated on the location map. The samples were analyzed for TPH-GRO and TPH-DRO. Enclosure (3) provides the analytical results which indicate contamination in excess of State action levels for Excavation Area 1. The analytical results for the three samples from Excavation Area 2 are below State action level. Both excavation areas were backfilled with clean topsoil.

The Transfer Pump Station consists of two concrete containment slabs with numerous valves, pumps and pipelines located on these containment pads. Marine Corps Air Station New River plans to remove and replace all components - to include the concrete containment slabs - in the near future. The remaining petroleum contamination at Excavation Area 1 will be addressed and remediated as part of this project. A Report Of Findings will be provided to NCDENR at that time. Eighteen thermal relief valves will be installed at the Transfer Pump Station by the end of March 2009 to alleviate the leaking valve problem.

If you have any questions or require further information, please contact Dr. Johanna Arnold, Environmental Quality Branch, Environmental Management Division, Installations and Environment Department, at (910) 451-9114.

Sincerely,

John R. Townson

JOHN R.TOWNSON
Director, Environmental Management
By direction of
the Commanding Officer

Enclosure: Campbell Street Fuel Farm - 2008 Release - Analytical Results and Supporting Documents

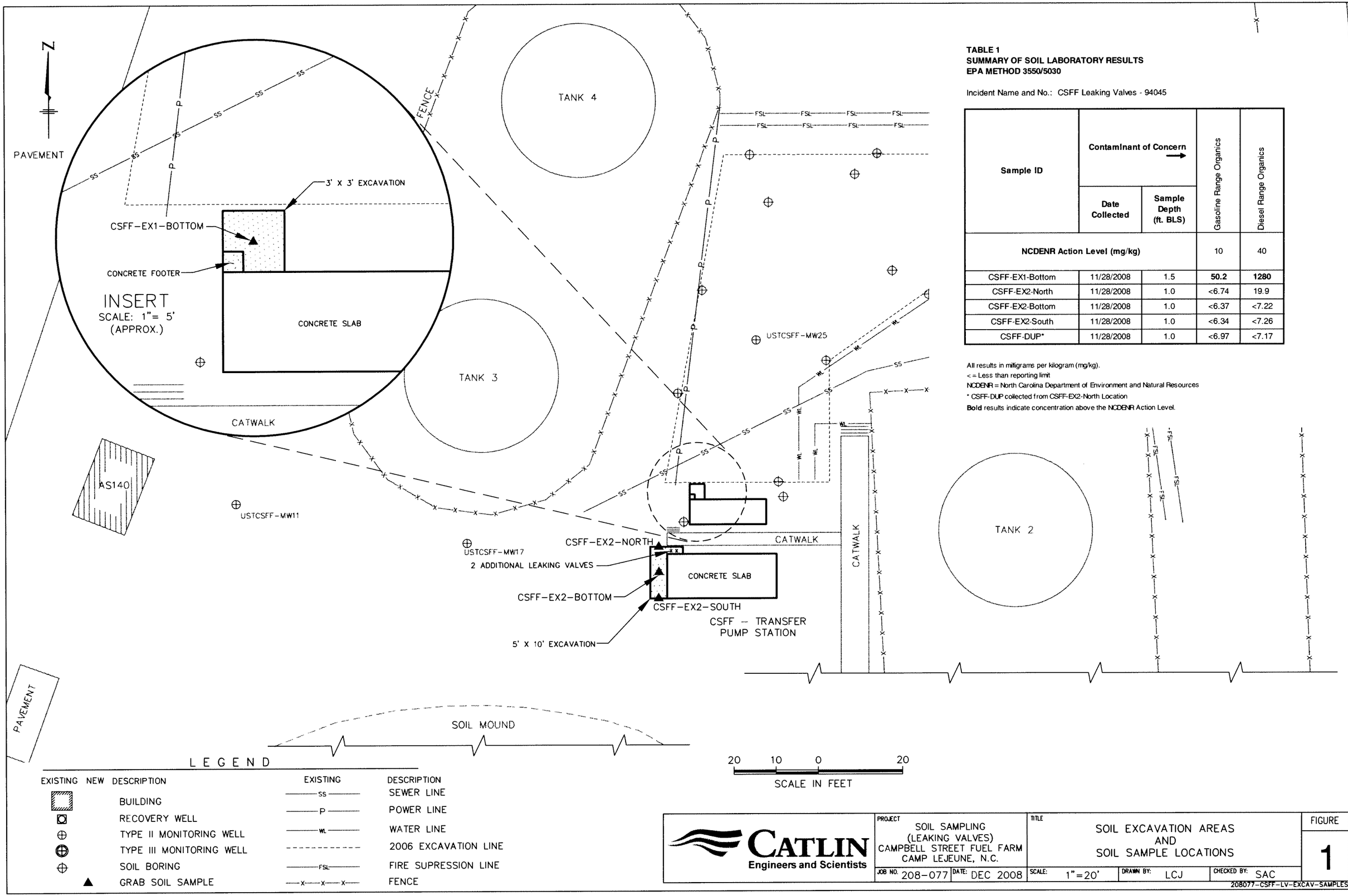
Copy to: (w/o encl)
MCAS New River EAD (Mr. Kirk Kropinack)
AROICC (Ms. Kerry Buchinger)
NAVFACENGCOM (Mr. Mel Acree Code OPCEV4)
Osage (Mr. Mike Cree)
Catlin (Mr. Mike E. Mason)

TABLE 1
SUMMARY OF SOIL LABORATORY RESULTS
EPA METHOD 3550/5030

Incident Name and No.: CSFF Leaking Valves - 94045

Sample ID	Contaminant of Concern →		Gasoline Range Organics	Diesel Range Organics
	Date Collected	Sample Depth (ft. BLS)		
NCDENR Action Level (mg/kg)			10	40
CSFF-EX1-Bottom	11/28/2008	1.5	**50.2**	**1280**
CSFF-EX2-North	11/28/2008	1.0	<6.74	19.9
CSFF-EX2-Bottom	11/28/2008	1.0	<6.37	<7.22
CSFF-EX2-South	11/28/2008	1.0	<6.34	<7.26
CSFF-DUP*	11/28/2008	1.0	<6.97	<7.17

All results in milligrams per kilogram (mg/kg).
< = Less than reporting limit
NCDENR = North Carolina Department of Environment and Natural Resources
* CSFF-DUP collected from CSFF-EX2-North Location
Bold results indicate concentration above the NCDENR Action Level.



LEGEND

EXISTING	NEW	DESCRIPTION
		BUILDING
		RECOVERY WELL
		TYPE II MONITORING WELL
		TYPE III MONITORING WELL
		SOIL BORING
		GRAB SOIL SAMPLE

EXISTING	DESCRIPTION
SS	SEWER LINE
P	POWER LINE
WL	WATER LINE
	2006 EXCAVATION LINE
FSL	FIRE SUPRESSION LINE
X X X	FENCE

CATLIN Engineers and Scientists

PROJECT	TITLE	FIGURE
SOIL SAMPLING (LEAKING VALVES) CAMPBELL STREET FUEL FARM CAMP LEJEUNE, N.C.	SOIL EXCAVATION AREAS AND SOIL SAMPLE LOCATIONS	1

JOB NO. 208-077 | DATE: DEC 2008 | SCALE: 1"=20' | DRAWN BY: LCJ | CHECKED BY: SAC

208077-CSFF-LV-EXCAV-SAMPLES

Mr. Shane Chasteen
Richard Catlin & Associates
P.O. Box 10279
Wilmington NC 28404-0279

Report Number: G128-2283

Client Project: CSFF Soil Sampling

Dear Mr. Chasteen:

Enclosed are the results of the analytical services performed under the referenced project. 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 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 the services performed during this project, please call SGS at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS Environmental Services, Inc.

Ashley Nifong 12/19/08

Project Manager Date
Ashley Nifong

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

P/D = Detected, but RPD is > 25/40% 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

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.

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX1-Bottom
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-1C
Lab Project ID: G128-2283

Date Collected: 11/28/2008 9:45
Date Received: 11/28/2008
Matrix: Soil
Solids 84.38
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**1280**	67.7	mg/Kg	10	12/03/08 10:13

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	44.2	110

Comments:

Batch Information

Analytical Batch: EP120308
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13091
Prep Method: 3541
Prep Date: 12/01/08
Initial Prep Wt/Vol: 34.99 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX2-North
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-2C
Lab Project ID: G128-2283

Date Collected: 11/28/2008 9:55
Date Received: 11/28/2008
Matrix: Soil
Solids 84.12
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**19.9**	6.89	mg/Kg	1	12/03/08 10:42

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	34	85.1

Comments:

Batch Information

Analytical Batch: EP120308
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13091
Prep Method: 3541
Prep Date: 12/01/08
Initial Prep Wt/Vol: 34.51 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX2-Bottom
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-3C
Lab Project ID: G128-2283

Date Collected: 11/28/2008 10:00
Date Received: 11/28/2008
Matrix: Soil
Solids 84.22
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.22	mg/Kg	1	12/02/08 19:58

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	32.2	80.5

Comments:

Batch Information

Analytical Batch: EP120208
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13091
Prep Method: 3541
Prep Date: 12/01/08
Initial Prep Wt/Vol: 32.89 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX2-South
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-4C
Lab Project ID: G128-2283

Date Collected: 11/28/2008 10:05
Date Received: 11/28/2008
Matrix: Soil
Solids 81.97
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.26	mg/Kg	1	12/02/08 20:26

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	27.8	69.4

Comments:

Batch Information

Analytical Batch: EP120208
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13091
Prep Method: 3541
Prep Date: 12/01/08
Initial Prep Wt/Vol: 33.61 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____
DRO.XLS

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-DUP
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-5B
Lab Project ID: G128-2283

Date Collected: 11/28/2008 10:10
Date Received: 11/28/2008
Matrix: Soil
Solids 85.28
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.17	mg/Kg	1	12/02/08 20:55

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	32.4	81.1

Comments:

Batch Information

Analytical Batch: EP120208
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13091
Prep Method: 3541
Prep Date: 12/01/08
Initial Prep Wt/Vol: 32.71 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX1-Bottom
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-1B
Lab Project ID: G128-2283
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 11/28/2008 9:45
Date Received: 11/28/2008
Matrix: Soil
Solids 84.38

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	**50.2**	7.00	mg/Kg	2	12/03/08 11:03

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	104	104		70-130

Comments:

Batch Information

Analytical Batch: VP120308
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5030
Initial Wt/Vol: 5.08 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: GRO

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX2-North
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-2B
Lab Project ID: G128-2283
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 11/28/2008 9:55
Date Received: 11/28/2008
Matrix: Soil
Solids 84.12

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.74	mg/Kg	1	12/03/08 07:31

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	99	98.6		70-130

Comments:

Batch Information

Analytical Batch: VP120308
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5030
Initial Wt/Vol: 5.29 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: GRO

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX2-Bottom
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-3B
Lab Project ID: G128-2283
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 11/28/2008 10:00
Date Received: 11/28/2008
Matrix: Soil
Solids 84.22

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.37	mg/Kg	1	12/03/08 09:43

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	96	96.1		70-130

Comments:

Batch Information

Analytical Batch: VP120308
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5030
Initial Wt/Vol: 5.59 g
Final Volume: 5 mL

Analyst: DVG

SGS Environmental Services, Inc.

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-EX2-South
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-4B
Lab Project ID: G128-2283
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 11/28/2008 10:05
Date Received: 11/28/2008
Matrix: Soil
Solids 81.97

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.34	mg/Kg	1	12/03/08 10:10

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94	93.6		70-130

Comments:

Batch Information

Analytical Batch: VP120308
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5030
Initial Wt/Vol: 5.77 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: GRO

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: CSFF-DUP
Client Project ID: CSFF Soil Sampling
Lab Sample ID: G128-2283-5B
Lab Project ID: G128-2283
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 11/28/2008 10:10
Date Received: 11/28/2008
Matrix: Soil
Solids 85.28

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.97	mg/Kg	1	12/03/08 10:36

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	93	92.9		70-130

Comments:

Batch Information

Analytical Batch: VP120308
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5030
Initial Wt/Vol: 5.05 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: GRO

SGS

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

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- Alaska
- Ohio
- New Jersey
- West Virginia
- Hawaii
- Maryland
- North Carolina

www.us.sgs.com

3283 12/1/8

090837

1

CLIENT: CATLIN

CONTACT: Shane Chasteen PHONE NO:( )

PROJECT: CSFF Soil Sampling SITE/PWSID#: 208-077

REPORTS TO: Shane Chasteen E-MAIL: FAX NO.:( )

INVOICE TO: Sheila @ CATLIN QUOTE # DOP 101 P.O. NUMBER 281126-4

SGS Reference: 0128 ~~2284~~

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2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Ice	Ice	REMARKS
							Analysis Required (3)	EPA 3550 (DRO)	EPA 5030 (GRO)	
	CSFF-EX1-Bottom	11/28/08	0945	Soil	2	G		✓	✓	* Report Low Runs
	CSFF-EX2-North	11/28/08	0955	Soil	2	G		✓	✓	
	CSFF-EX3-Bottom	11/28/08	1000	Soil	2	G		✓	✓	* Report in Summary EDD Format
	CSFF-EX3-South	11/28/08	1005	Soil	2	G		✓	✓	
	CSFF-DUP	11/28/08	1010	Soil	1	G		✓	✓	

5

Collected/Relinquished By:(1)	Date	Time	Received By:	Date	Time
Shane Chasteen	11/28/08	1410		11/28/08	14:10
Relinquished By: (2)	Date	Time	Received By:	Date	Time
Relinquished By: (3)	Date	Time	Received By:	Date	Time
Relinquished By: (4)	Date	Time	Received By:	Date	Time

4

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature °C: 5°C

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☑ STD

SGS Environmental Services, Inc.

N.C. Certification #481

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☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557
☐ 1270 Greenbrier Street **Charleston, WV 25311** Tel: (304) 346-0725 Fax: (304) 346-0761

White - Retained by Lab
Yellow - Returned with Report
Pink - Retained by Sampler