District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator BP America Production Company Telephone. (505)326-9200 e-mail address:
Address 200 Energy Ct, Farmington, NM 87401
Facility or well name SAMMONS GC E #1 API #: 30045 21081 U/L or Qtr/Qtr I Sec 7 T 29 N R 9 W
County San Juan Latitude Longitude NAD 1927 ☐ 1983 ☒
Surface Owner Federal ☐ State ☐ Private ☒ Indian ☐

Pit	Below-grade tank
Type: Drilling ☐ Production ☒ Disposal ☐	Volume: ____bbl Type of fluid:
Workover ☐ Emergency ☐	Construction material:
Lined ☐ Unlined ☒	Double-walled, with leak detection? Yes ☐ If not, explain why not
Liner type: Synthetic ☐ Thickness ____mil Clay ☐	
Pit Volume ____bbl	

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points) 20
Wellhead protection area (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) 0
Distance to surface water (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) 0 (0 points)
	Ranking Score (Total Points)	20

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks (2) Indicate disposal location (check the onsite box if your are burying in place) onsite ☒ offsite ☒ If offsite, name of facility BP's CROUCH MESA FACIL. (3) Attach a general description of remedial action taken including remediation start date and end date (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface ____ft and attach sample results
(5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments
See Attached Documentation

RCVD JUN13'07
OIL CONS. DIV.
DIST. 3

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Date 11/01/2005
Printed Name/Title Jeffrey C. Blagg, Agent Signature Jeffrey C. Blagg

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations

Approval
Printed Name/Title Deputy Oil & Gas Inspector, District #3 Signature Date: AUG 10 2007

3004521087

CLIENT AMOCO	BLAGG ENGINEERING, INC P O BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO 80827 C.O.C. NO:

FIELD REPORT: CLOSURE VERIFICATION

PAGE No 1 of 1

LOCATION: NAME SAMMONS GC E WELL # 1 PIT ABAN: ORIP

QUAD/UNIT I SEC 7 TWP 29N RNG 9W PM NM CNTY SJ ST NM

QTR/FOOTAGE 1780'S/900'E NESE CONTRACTOR: FLINT

DATE STARTED 1/9/01

DATE FINISHED

ENVIRONMENTAL SPECIALIST NV

EXCAVATION APPROX 70 FT x 50 FT x 8 FT DEEP CUBIC YARDAGE 800

DISPOSAL FACILITY CROUCH MESA REMEDIATION METHOD LANDFARMED

LAND USE RANGE LEASE FEE FORMATION PC

FIELD NOTES & REMARKS. PIT LOCATED APPROXIMATELY 105 FT N35E FROM WELLHEAD

DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE >1000' NEAREST SURFACE WATER >1000'

NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

CHECK ONE

✓ PIT ABANDONED

___ STEEL TANK INSTALLED

___ FIBERGLASS TANK INSTALLED

OVM CALIB. READ 52.5 ppm

TIME: 0900 am/pm 1/9/01

SOIL AND EXCAVATION DESCRIPTION:

SOIL MOSTLY MOD. TO DK. YELL. BROWN SAND WITH GRAVEL (NORTHEAST, SOUTHEAST, & SOUTHWEST SIDEWALLS), NON COHESIVE, SLIGHTLY MOIST TO MOIST, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED WITH THE EXCEPTION OF NORTHWEST SIDEWALL FROM APPROX 4' TO 7' BELOW GRADE, GROUNDWATER DEPTH ESTIMATED @ 7' BELOW GRADE,

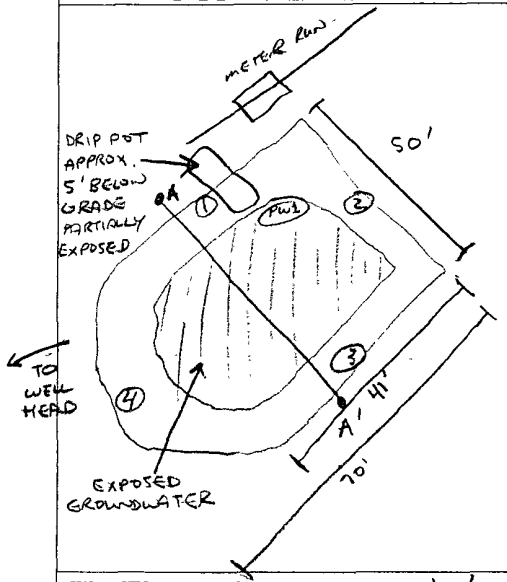
FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm

SCALE

0 FT

PIT PERIMETER



OVM RESULTS

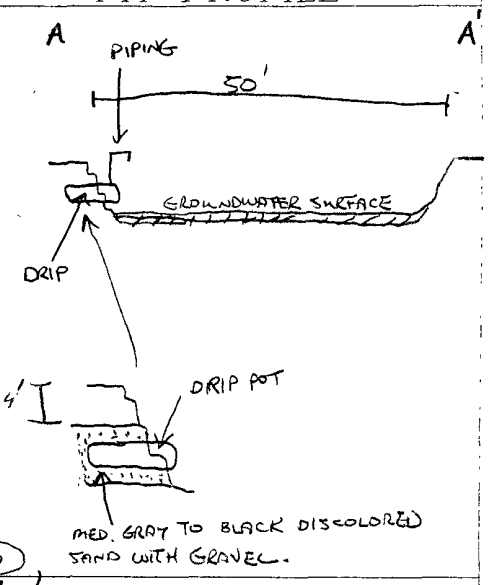
SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 4'	167.4
2 @ 4'	0.0
3 @ 3'	0.0
4 @ 3'	0.0
5 @	

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
AV1@GW(7')	BTEX	1050
"	API WATER	"
① @ 4'	TPH & BTEX	1130

~~BTEX PASSED TPH FAILED~~

PIT PROFILE



TRAVEL NOTES: CALLOUT 1/9/01 - MORN. ONSITE 1/9/01 - MORN.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / BP	Project #:	403410
Sample ID:	1 @ 4'	Date Reported:	01-10-01
Laboratory Number:	19070	Date Sampled:	01-09-01
Chain of Custody No:	8281	Date Received:	01-09-01
Sample Matrix:	Soil	Date Extracted:	01-10-01
Preservative:	Cool	Date Analyzed:	01-10-01
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**252**	**0.2**
Diesel Range (C10 - C28)	**92.0**	**0.1**
Total Petroleum Hydrocarbons	**344**	**0.1**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Sammons GC E #1 Drip Pit.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	403410
Sample ID:	1 @ 4'	Date Reported:	01-10-01
Laboratory Number:	19070	Date Sampled:	01-09-01
Chain of Custody:	8281	Date Received:	01-09-01
Sample Matrix:	Soil	Date Analyzed:	01-10-01
Preservative:	Cool	Date Extracted:	01-10-01
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**43.9**	**1.7**
Ethylbenzene	**274**	**1.5**
p,m-Xylene	**921**	**2.2**
***o*-Xylene**	**795**	**1.0**
Total BTEX	**2,030**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Sammons GC E #1 Drip Pit.**

Analyst

Review

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OFF: (505) 325-5667
FAX: (505) 327-1496

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *13-Feb-01*

Client:	Blagg Engineering	**Client Sample Info:**	Sammons GC E #1
Work Order:	0101008	**Client Sample ID:**	PW1 @ GW (7ft.)
Lab ID:	0101008-01A **Matrix:** AQUEOUS	**Collection Date:**	1/9/2001 10:50:00 AM
Project:	BP - Sammons GC E #1	**COC Record:**	10778

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	1.7	0.5		µg/L	1	1/9/2001
Toluene	0.6	0.5		µg/L	1	1/9/2001
Ethylbenzene	8.1	0.5		µg/L	1	1/9/2001
m,p-Xylene	600	20		µg/L	20	1/9/2001
o-Xylene	4.1	0.5		µg/L	1	1/9/2001
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **DC**
Fluoride	ND	0.518		mg/L	10.37	2/1/2001
Nitrogen, Nitrate-Nitrite (as N)	8.72	1.24		mg/L	10.37	2/1/2001
CALCIUM, DISSOLVED		**E215.1**				Analyst: **HR**
Calcium	140	12		mg/L	50	1/18/2001
IRON, DISSOLVED		**E236.1**				Analyst: **HR**
Iron	0.11	0.1		mg/L	1	2/9/2001
POTASSIUM, DISSOLVED		**E258.1**				Analyst: **HR**
Potassium	3.4	0.25		mg/L	1	1/17/2001
MAGNESIUM, DISSOLVED		**E242.1**				Analyst: **HR**
Magnesium	31	2.5		mg/L	10	1/18/2001
SODIUM, DISSOLVED		**E273.1**				Analyst: **HR**
Sodium	360	50		mg/L	200	1/17/2001
ALKALINITY, TOTAL		**M2320 B**				Analyst: **HR**
Alkalinity, Bicarbonate (As CaCO3)	320	5		mg/L CaCO3	1	1/11/2001
Alkalinity, Carbonate (As CaCO3)	ND	5		mg/L CaCO3	1	1/11/2001
Alkalinity, Hydroxide	ND	5		mg/L CaCO3	1	1/11/2001
Alkalinity, Total (As CaCO3)	320	5		mg/L CaCO3	1	1/11/2001
CHLORIDE		**E325.3**				Analyst: **HR**
Chloride	21	1		mg/L	1	1/10/2001
CONDUCTIVITY @ 25C		**E120.1**				Analyst: **HR**
Specific Conductance	1550	2		uS/cm	1	1/12/2001
HARDNESS, TOTAL		**M2340 B**				Analyst: **HR**
Hardness (As CaCO3)	490	1		mg/L	1	1/10/2001
PH		**E150.1**				Analyst: **HR**
pH	7.05	2		pH units	1	1/10/2001
SULFATE		**M4500-SO4 D**				Analyst: **HR**
Sulfate	980	5		mg/L	1	1/17/2001

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667
FAX: (505) 327-1496

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: *13-Feb-01*

Client:	Blagg Engineering	**Client Sample Info:**	Sammons GC E #1
Work Order:	0101008	**Client Sample ID:**	PW1 @ GW (7ft.)
Lab ID:	0101008-01A **Matrix:** AQUEOUS	**Collection Date:**	1/9/2001 10:50:00 AM
Project:	BP - Sammons GC E #1	**COC Record:**	10778

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		**E160.1**				Analyst: **HR**
Total Dissolved Solids (Residue, Filterable)	1800	40		mg/L	1	1/15/2001
TOTAL DISSOLVED SOLIDS		**CALC**				Analyst: **HR**
Total Dissolved Solids (Calculated)	1740	40		mg/L	1	1/10/2001

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

80827

District I
P O Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company **Telephone:** (505) 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: Well Name SAMMONS GC E #1

Location: Unit or Qtr/Qtr Sec I Sec 7 T 29N R 9W County SAN JUAN

Pit Type: Separator ___ Dehydrator ___ Other ABANDONED ORIP

Land Type: BLM ___, State ___, Fee ✓, Other ___

Pit Location: (Attach diagram)
Pit dimensions: length 70, width 50, depth 8
Reference: wellhead X, other ___
Footage from reference: 105'
Direction from reference: 35 Degrees ___ East ✓ North ___ of ___ West ___ South

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)	0
	RANKING SCORE (TOTAL POINTS):	20

B0827 ABAN. DRIP

Date Remediation Started: _____ **Date Completed:** _____

Remediation Method: (Check all appropriate sections)
Excavation ✓ Approx. cubic yards 800
Landfarmed ✓ Insitu Bioremediation ___
Other _____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility)
Onsite ___ Offsite BP's CROUCH MESA FACILITY

General Description Of Remedial Action:
Excavation. GROUNDWATER ENCOUNTERED.

Ground Water Encountered: No ___ Yes ✓ Depth 7'

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location see Attached Documents

Sample depth 4' (NORTH SIDEWALL) & (GW @ 7')

Sample date 1/9/01 Sample time 1130

Sample Results

Benzene(ppm) ND

Total BTEX(ppm) 2.030

Field headspace(ppm) 167.4

TPH 344 ppm

Ground Water Sample: Yes ✓ No ___ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE

SIGNATURE B J Shaw PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

CHAIN OF CUSTODY RECORD

0828

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	DRIP PIT SAMMONS GC E #1	

Sampler:	Client No.
NJV	403410

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX (8021)	TPH (8015)					Remarks
① @ 4'	1/9/01	1120	19070	SOIL	1	✓	✓					PRESERV. - COOL

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	1/9/01	1336	Allen L. Ajenson	1-9-01	1336
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 1/9/01

Page: 1 of 1

Purchase Order No.:	Project No.		
SEND INVOICE TO: Name	TERRY BURGE	REPORT RESULTS TO: Name	WELDON VELEZ / Title
Company	BURGE ENGINEERING, INC. / Dept.	Company	SAME
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	632-1199 / Telefax No. 632-3903

PROJECT LOCATION: SP - SAMMONS GC E #1

SAMPLER'S SIGNATURE: Weldon Velez

SAMPLE IDENTIFICATION	SAMPLE DATE	TIME	MATRIX	PRES.	Number of Containers	BTEX (8021)	BTEX WATER	LAB ID
PW 1 @ GW (7')	1/9/01	1050	WATER	HCL & COOL	2	✓		01010901-01A
PW 1 @ GW (7')	1/9/01	1050	WATER	COOL	1		✓	

Relinquished by: Weldon Velez	Date/Time 1/9/01 1440	Received by:	Date/Time 1/9/01 1440
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Method of Shipment:		Rush [X] 24-48 Hours [ ] 10 Working Days [ ] By Date [ ]	

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Special Instructions / Remarks: PLEASE CALL OK BTEX WATER RESULTS

Distribution White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	01-10-TPH QA/QC	Date Reported:	01-10-01
Laboratory Number:	19070	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-10-01
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	08-03-00	6.2648E-002	6.2586E-002	**0.10%**	**0 - 15%**
Diesel Range C10 - C28	08-03-00	2.0382E-002	2.0341E-002	**0.20%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**252**	**251**	**0.4%**	**0 - 30%**
Diesel Range C10 - C28	**92.0**	**91.8**	**0.2%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**252**	**250**	**501**	**100%**	**75 - 125%**
Diesel Range C10 - C28	**92.0**	**250**	**341**	**100%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **QA/QC for sample 19070.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	01-10-BTEX QA/QC	Date Reported:	01-10-01
Laboratory Number:	19070	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-10-01
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	3.8408E-002	3 8500E-002	0.2%	ND	0.2
Toluene	4 6896E-002	4.6980E-002	0.2%	ND	0.2
Ethylbenzene	6 9365E-002	6.9511E-002	0.2%	ND	0.2
p,m-Xylene	6.5075E-002	6 5238E-002	0.3%	ND	0.2
o-Xylene	5.0051E-002	5.0136E-002	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	1.8
Toluene	43.9	44.0	0.2%	0 - 30%	1.7
Ethylbenzene	274	275	0.4%	0 - 30%	1.5
p,m-Xylene	921	925	0.5%	0 - 30%	2.2
o-Xylene	795	803	1.0%	0 - 30%	1.0

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	50.0	50.0	100%	39 - 150
Toluene	43.9	50.0	93.0	99%	46 - 148
Ethylbenzene	274	50.0	318	98%	32 - 160
p,m-Xylene	921	100	1,000	98%	46 - 148
o-Xylene	795	50.0	829	98%	46 - 148

ND - Parameter not detected at the stated detection limit.

References

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for sample 19070.**

Analyst

Review

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On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Method Blank

Sample ID: **MB1** Batch ID: **GC-1_010109** Test Code: **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:

Client ID: **0101008** Run ID: **GC-1_010109A** SeqNo. **34306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									
Toluene	ND	0.5									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0101008-01AMS** Batch ID. **GC-1_010109** Test Code: **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:

Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **GC-1_010109A** SeqNo: **34307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	764.3	10	800	0	95.5%	88	112				
Ethylbenzene	758.5	10	800	8.16	93.8%	86	113				
m,p-Xylene	2071	20	1600	598.8	92.0%	85	108				
Methyl tert-Butyl Ether	751.9	20	800	0	94 0%	86	117				
o-Xylene	763.8	10	800	4.214	94.9%	92	110				
Toluene	778.9	10	800	1.02	97.2%	88	116				

Sample ID: **0101008-01AMSD** Batch ID: **GC-1_010109** Test Code: **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:

Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **GC-1_010109A** SeqNo: **34308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	781.7	10	800	0	97.7%	88	112	764.3	2.2%	6	
Ethylbenzene	778.2	10	800	8.16	96.3%	86	113	758.5	2.6%	6	
m,p-Xylene	2128	20	1600	598.8	95.5%	85	108	2071	2.7%	6	
Methyl tert-Butyl Ether	756 2	20	800	0	94.5%	86	117	751.9	0.6%	7	
o-Xylene	782	10	800	4.214	97.2%	92	110	763.8	2.4%	6	
Toluene	798.7	10	800	1.02	99.7%	88	116	778.9	2.5%	6	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS WATER** Batch ID: **GC-1_010109** Test Code: **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:

Client ID: **0101008** Run ID: **GC-1_010109A** SeqNo: **34305**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.46	0.5	40	0	98.6%	96	111				
Ethylbenzene	39.06	0.5	40	0	97.6%	96	111				
m,p-Xylene	77.58	1	80	0	97.0%	92	105				
Methyl tert-Butyl Ether	37.31	1	40	0	93.3%	93	113				
o-Xylene	39.3	0.5	40	0	98.2%	97	110				
Toluene	39.5	0.5	40	0	98.8%	97	109				

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV1 BTEX_0012** Batch ID: **GC-1_010109** Test Code **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:
Client ID: **0101008** Run ID: **GC-1_010109A** SeqNo: **34302**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.74	0.5	20	0	98.7%	85	115				
Ethylbenzene	19.8	0.5	20	0	99.0%	85	115				
m,p-Xylene	39.47	1	40	0	98.7%	85	115				
Methyl tert-Butyl Ether	18.4	1	20	0	92.0%	85	115				
o-Xylene	19.91	0.5	20	0	99.6%	85	115				
Toluene	19.8	0.5	20	0	99.0%	85	115				
1,4-Difluorobenzene	75.24	0	80	0	94.0%	70	130				
4-Bromochlorobenzene	80.66	0	80	0	100.8%	70	130				
Fluorobenzene	76.42	0	80	0	95.5%	70	130				

Sample ID: **CCV2 BTEX_0012** Batch ID: **GC-1_010109** Test Code **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:
Client ID: **0101008** Run ID: **GC-1_010109A** SeqNo: **34303**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.06	0.5	20	0	95.3%	85	115				
Ethylbenzene	19.08	0.5	20	0	95.4%	85	115				
m,p-Xylene	38.04	1	40	0	95.1%	85	115				
Methyl tert-Butyl Ether	18.45	1	20	0	92.3%	85	115				
o-Xylene	19.31	0.5	20	0	96.6%	85	115				
Toluene	19.09	0.5	20	0	95.5%	85	115				
1,4-Difluorobenzene	74.83	0	80	0	93 5%	70	130				
4-Bromochlorobenzene	80.02	0	80	0	100.0%	70	130				
Fluorobenzene	76.68	0	80	0	95.9%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV3 BTEX_0012** Batch ID: **GC-1_010109** Test Code: **SW8021B** Units: **µg/L** Analysis Date **1/9/2001** Prep Date:

Client ID: **0101008** Run ID: **GC-1_010109A** SeqNo. **34304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.16	0.5	40	0	97.9%	85	115				
Ethylbenzene	38.81	0.5	40	0	97.0%	85	115				
m,p-Xylene	77.3	1	80	0	96.6%	85	115				
Methyl tert-Butyl Ether	38.66	1	40	0	96.6%	85	115				
o-Xylene	39.41	0.5	40	0	98.5%	85	115				
Toluene	39.24	0.5	40	0	98.1%	85	115				
1,4-Difluorobenzene	75.14	0	80	0	93.9%	70	130				
4-Bromochlorobenzene	80.22	0	80	0	100.3%	70	130				
Fluorobenzene	75.96	0	80	0	95.0%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 08-Feb-01

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1
Test No: SW8021B

QC SUMMARY REPORT
SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0101004-01A	94 6	99.1	97.2
0101004-02A	94.3	99.8	97.1
0101004-03A	95	99.8	96.8
0101004-04A	95 1	99.6	97
0101004-05A	94 2	98.6	97.3
0101004-06A	95 1	99.2	97.2
0101004-07A	94 7	98.9	97.8
0101004-08A	94	98 8	97
0101004-09A	94 7	99 4	96.9
0101004-10A	90	93.3	99
0101004-11A	94.9	98.6	97.7
0101004-12A	94.2	98	96.5
0101004-13A	94.8	99 2	96.8
0101004-14A	95.2	98.9	96.6
0101008-01A	95.2	99.3	96.1
0101008-01AMS	93 7	100	94.7
0101008-01AMSD	93	99.6	95.2
CCV1 BTEX_00121	94	101	95.5
CCV2 BTEX_00121	93 5	100	95.8
CCV3 BTEX_00121	93 9	100	95
LCS WATER	93.8	100	94.7
MB1	94 4	99 5	96.6

Acronym		Surrogate	QC Limits
14FBZ	=	1,4-Difluorobenzene	70-130
4BCBZ	=	4-Bromochlorobenzene	70-130
FLBZ	=	Fluorobenzene	70-130

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Method Blank

Sample ID: **MBlank** Batch ID: **API_010110** Test Code: **M2320 B** Units: **mg/L CaCO3** Analysis Date **1/11/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110B** SeqNo: **34339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	3	5									J
Alkalinity, Carbonate (As CaCO3)	ND	5									
Alkalinity, Hydroxide	ND	5									
Alkalinity, Total (As CaCO3)	3	5									J

Sample ID: **MBlank** Batch ID: **API_010110** Test Code: **E120.1** Units: **uS/cm** Analysis Date **1/12/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110C** SeqNo: **34363**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	ND	2									

Sample ID: **MBlank** Batch ID: **API_010110** Test Code: **E325.3** Units: **mg/L** Analysis Date **1/10/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110D** SeqNo: **34367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1									

Sample ID: **MBlank** Batch ID: **API_010110** Test Code: **E160.1** Units: **mg/L** Analysis Date **1/15/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110F** SeqNo: **34388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	30	40									J

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Method Blank

Sample ID: **MBlank** Batch ID: **API_010110** Test Code: **M4500-SO4 D** Units. **mg/L** Analysis Date **1/17/2001** Prep Date:

Client ID: **0101008** Run ID: **WET CHEM_010110G** SeqNo: **34419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	5									

Qualifiers:
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On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **0101005-01AD** Batch ID: **API_010110** Test Code: **M2320 B** Units: **mg/L CaCO3** Analysis Date **1/11/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110B** SeqNo: **34342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	2147	5	0	0	0.0%	0	0	2106	1.9%	3	
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0 0%	0	0	0	0.0%	3	
Alkalinity, Hydroxide	ND	5	0	0	0 0%	0	0	0	0.0%	3	
Alkalinity, Total (As CaCO3)	2147	5	0	0	0.0%	0	0	2106	1.9%	3	

Sample ID: **0101007-05AD** Batch ID: **API_010110** Test Code: **E325.3** Units: **mg/L** Analysis Date **1/10/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110D** SeqNo: **34374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	71	1	0	0	0 0%	0	0	72	1.4%	8	

Sample ID: **0101013-01AD** Batch ID: **API_010110** Test Code: **E160.1** Units: **mg/L** Analysis Date **1/15/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110F** SeqNo: **34392**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4010	40	0	0	0.0%	0	0	4028	0.4%	8	

Sample ID: **0101013-01AD** Batch ID: **API_010110** Test Code: **M4500-SO4 D** Units: **mg/L** Analysis Date **1/17/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110G** SeqNo: **34424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	9	5	0	0	0.0%	0	0	7.4	19.5%	16	R

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On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS 3031** Batch ID: **API_010110** Test Code: **E150.1** Units: **pH units** Analysis Date **1/10/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110A** SeqNo. **34328**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	9.172	2	9.23	0	99.4%	80	120				

Sample ID: **LCS 3031** Batch ID: **API_010110** Test Code: **E150.1** Units: **pH units** Analysis Date **1/10/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110A** SeqNo: **34338**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	9.201	2	9.23	0	99.7%	80	120				

Sample ID: **LCS 3031** Batch ID: **API_010110** Test Code: **M2320 B** Units: **mg/L CaCO3** Analysis Date **1/11/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110B** SeqNo: **34340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	76.4	5	73	3	100.5%	96	104				

Sample ID: **LCS 3031** Batch ID: **API_010110** Test Code: **E120.1** Units: **uS/cm** Analysis Date **1/12/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110C** SeqNo: **34364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	439	2	442	0	99.3%	93	110				

Sample ID: **LCS 3031** Batch ID: **API_010110** Test Code: **E120.1** Units: **uS/cm** Analysis Date **1/12/2001** Prep Date:
Client ID: **0101008** Run ID: **WET CHEM_010110C** SeqNo: **34366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	438	2	442	0	99.1%	93	110				

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS 3031**	Batch ID: **API_010110**	Test Code **E325.3**	Units: **mg/L**		Analysis Date **1/10/2001**			Prep Date:		
Client ID:	**0101008**	Run ID: **WET CHEM_010110D**			SeqNo: **34368**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	73.1	1	73	0	100.1%	77	118				

Sample ID: **LCS 3031**	Batch ID: **API_010110**	Test Code: **E160.1**	Units: **mg/L**		Analysis Date **1/15/2001**			Prep Date:		
Client ID:	**0101008**	Run ID: **WET CHEM_010110F**			SeqNo: **34389**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	328	40	337	30	88.4%	80	114				

Sample ID: **LCS 3031**	Batch ID: **API_010110**	Test Code: **M4500-SO4 D**	Units: **mg/L**		Analysis Date **1/17/2001**			Prep Date:		
Client ID:	**0101008**	Run ID: **WET CHEM_010110G**			SeqNo: **34420**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	17.3	5	19.6	0	88.3%	76	119				

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Method Blank

Sample ID: **MBlank** Batch ID: **AA_010117** Test Code: **E273.1** Units: **mg/L** Analysis Date **1/17/2001** Prep Date:
Client ID: **0101008** Run ID: **AA_010117A** SeqNo: **34455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.25									

Sample ID: **MBlank** Batch ID: **AA_010117** Test Code: **E215.1** Units: **mg/L** Analysis Date **1/17/2001** Prep Date:
Client ID: **0101008** Run ID: **AA_010117B** SeqNo: **34469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	ND	0.25									

Sample ID: **MBlank** Batch ID: **AA_010117** Test Code: **E242.1** Units: **mg/L** Analysis Date **1/18/2001** Prep Date:
Client ID: **0101008** Run ID: **AA_010117C** SeqNo: **34483**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	ND	0.25									

Sample ID: **MBlank** Batch ID: **AA_010117** Test Code: **E258.1** Units: **mg/L** Analysis Date **1/17/2001** Prep Date:
Client ID: **0101008** Run ID: **AA_010117D** SeqNo: **34497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.25									

Sample ID: **MBlank** Batch ID: **AA_010117** Test Code: **E236.1** Units: **mg/L** Analysis Date **1/18/2001** Prep Date:
Client ID: **0101008** Run ID: **AA_010117E** SeqNo: **34511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Sample Matrix Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: **0101005-01AMS** Batch ID: **AA_010117** Test Code: **E258.1** Units: **mg/L** Analysis Date **1/17/2001** Prep Date:											
Client ID: **0101008** Run ID: **AA_010117D** SeqNo: **34507**											
Potassium	347	12	100	240	107.0%	76	166				
Sample ID: **0101007-06AMS** Batch ID: **AA_010117** Test Code: **E236.1** Units: **mg/L** Analysis Date **1/18/2001** Prep Date:											
Client ID: **0101008** Run ID: **AA_010117E** SeqNo: **34519**											
Iron	119.2	2	80	43	95.3%	69	132				
Sample ID: **0101008-01BMS** Batch ID: **AA_010117** Test Code: **E273.1** Units **mg/L** Analysis Date **1/17/2001** Prep Date:											
Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **AA_010117A** SeqNo: **34467**											
Sodium	1168	50	800	360	101.0%	88	113				
Sample ID: **0101008-01BMS** Batch ID: **AA_010117** Test Code: **E215.1** Units: **mg/L** Analysis Date **1/18/2001** Prep Date:											
Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **AA_010117B** SeqNo: **34481**											
Calcium	346	12	200	145	100.5%	81	119				
Sample ID: **0101008-01BMS** Batch ID: **AA_010117** Test Code: **E242.1** Units: **mg/L** Analysis Date **1/18/2001** Prep Date:											
Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **AA_010117C** SeqNo: **34495**											
Magnesium	74	2.5	40	31	107.5%	92	115				

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *08-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV1**	Batch ID: **AA_010117**	Test Code: **E273.1**	Units: **mg/L**		Analysis Date **1/17/2001**			Prep Date.		
Client ID: **0101008**	Run ID: **AA_010117A**				SeqNo: **34456**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	3.19	0.25	3.24	0	98.5%	90	110				

Sample ID: **CCV1**	Batch ID: **AA_010117**	Test Code: **E215.1**	Units: **mg/L**		Analysis Date **1/18/2001**			Prep Date:		
Client ID: **0101008**	Run ID: **AA_010117B**				SeqNo: **34470**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	2.86	0.25	3.02	0	94.7%	90	110				

Sample ID: **CCV1**	Batch ID: **AA_010117**	Test Code: **E242.1**	Units: **mg/L**		Analysis Date **1/18/2001**			Prep Date:		
Client ID: **0101008**	Run ID: **AA_010117C**				SeqNo: **34484**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	1.36	0 25	1.36	0	100.0%	90	110				

Sample ID: **CCV1**	Batch ID: **AA_010117**	Test Code: **E258.1**	Units: **mg/L**		Analysis Date **1/17/2001**			Prep Date:		
Client ID: **0101008**	Run ID: **AA_010117D**				SeqNo: **34498**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2.04	0.25	2.07	0	98.6%	90	110				

Sample ID: **CCV1**	Batch ID: **AA_010117**	Test Code: **E236.1**	Units: **mg/L**		Analysis Date **1/18/2001**			Prep Date:		
Client ID: **0101008**	Run ID: **AA_010117E**				SeqNo: **34512**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.01	0.1	2	0	100.5%	90	110				

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV2**	Batch ID: **AA_010117**	Test Code: **E273.1**	Units: **mg/L**	Analysis Date **1/17/2001**	Prep Date.
Client ID: **0101008**	Run ID: **AA_010117A**			SeqNo: **34468**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	3.2	0 25	3.24	0	98 8%	90	110				

Sample ID: **CCV2**	Batch ID: **AA_010117**	Test Code: **E215.1**	Units: **mg/L**	Analysis Date **1/18/2001**	Prep Date:
Client ID: **0101008**	Run ID: **AA_010117B**			SeqNo: **34482**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	2.82	0.25	3.02	0	93.4%	90	110				

Sample ID: **CCV2**	Batch ID: **AA_010117**	Test Code: **E242.1**	Units: **mg/L**	Analysis Date **1/18/2001**	Prep Date:
Client ID: **0101008**	Run ID: **AA_010117C**			SeqNo: **34496**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	1.42	0.25	1.36	0	104.4%	90	110				

Sample ID: **CCV2**	Batch ID: **AA_010117**	Test Code: **E258.1**	Units: **mg/L**	Analysis Date **1/17/2001**	Prep Date:
Client ID: **0101008**	Run ID: **AA_010117D**			SeqNo: **34510**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2.08	0.25	2.07	0	100.5%	90	110				

Sample ID: **CCV2**	Batch ID: **AA_010117**	Test Code: **E236.1**	Units: **mg/L**	Analysis Date **1/18/2001**	Prep Date:
Client ID: **0101008**	Run ID: **AA_010117E**			SeqNo: **34523**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2 04	0.1	2	0	102.0%	90	110				

Qualifiers:
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B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *13-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK_010201-2** Batch ID: **IC-761_01020** Test Code. **E300** Units: **mg/L** Analysis Date **2/1/2001** Prep Date.

Client ID: **0101008** Run ID: **IC-761_010201A** SeqNo: **34996**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.04									
Chloride	ND	0.06									
Fluoride	ND	0.05									
Nitrogen, Nitrate (as N)	ND	0.05									
Nitrogen, Nitrate-Nitrite (as N)	ND	0.12									
Nitrogen, Nitrite (as N)	ND	0.07									
Phosphorus, Dissolved Orthophosphat	ND	0.13									
Sulfate	ND	0.08									

Qualifiers:
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B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *13-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Sample Duplicate

Sample ID. **0101008-01BD** Batch ID. **IC-761_01020** Test Code: **E300** Units: **mg/L** Analysis Date **2/1/2001** Prep Date:

Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **IC-761_010201A** SeqNo: **35001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.415	0	0	0.0%	0	0	0	0.0%	15	
Chloride	23.92	0.622	0	0	0.0%	0	0	23.88	0.1%	15	
Fluoride	.394	0.518	0	0	0.0%	0	0	0.396	0.0%	15	J
Nitrogen, Nitrate (as N)	7.451	0.518	0	0	0.0%	0	0	7.198	3.5%	15	
Nitrogen, Nitrate-Nitrite (as N)	8.975	1.24	0	0	0.0%	0	0	8.722	2.9%	15	
Nitrogen, Nitrite (as N)	1.523	0.726	0	0	0.0%	0	0	1.524	0.0%	15	
Phosphorus, Dissolved Orthophosphat	ND	1.35	0	0	0.0%	0	0	0	0.0%	15	
Sulfate	1224	0.83	0	0	0.0%	0	0	1225	0.1%	15	E

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *13-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0101008-01BMS** Batch ID: **IC-761_01020** Test Code: **E300** Units: **mg/L** Analysis Date **2/1/2001** Prep Date:

Client ID: **PW1 @ GW (7ft.)** **0101008** Run ID: **IC-761_010201A** SeqNo: **35002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	20.84	0.415	21.09	0	98.8%	80	120				
Chloride	46.83	0.622	21.09	23.88	108.8%	80	120				
Fluoride	11.01	0.518	10 54	0.396	100.7%	80	120				
Nitrogen, Nitrate (as N)	28.95	0.518	21.09	7.198	103.2%	80	120				
Nitrogen, Nitrate-Nitrite (as N)	52.35	1.24	42.18	8.722	103.4%	80	120				
Nitrogen, Nitrite (as N)	23.39	0.726	21.09	1.524	103.7%	80	120				
Phosphorus, Dissolved Orthophosphat	20.43	1.35	21.09	0	96.9%	80	120				
Sulfate	1145	0.83	21.09	1225	-378 4%	80	120				ES

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Date: *13-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS_010201-2** Batch ID: **IC-761_01020** Test Code: **E300** Units: **mg/L** Analysis Date **2/1/2001** Prep Date.

Client ID: **0101008** Run ID: **IC-761_010201A** SeqNo: **34998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.159	0.04	1.216	0	95.3%	90	110				
Chloride	.596	0.06	0.608	0	98.0%	90	110				
Fluoride	.379	0.05	0.405	0	93.6%	90	110				
Nitrogen, Nitrate (as N)	1.936	0.05	2.026	0	95.6%	90	110				
Nitrogen, Nitrate-Nitrite (as N)	3.166	0.12	3.242	0	97.7%	90	110				
Nitrogen, Nitrite (as N)	1.23	0.07	1.216	0	101.2%	90	110				
Phosphorus, Dissolved Orthophosphat	3.984	0.13	4.052	0	98.3%	90	110				
Sulfate	1.956	0.08	2.026	0	96.5%	90	110				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *13-Feb-01*

CLIENT: Blagg Engineering
Work Order: 0101008
Project: BP - Sammons GC E #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV_010201-1** Batch ID: **IC-761_01020** Test Code: **E300** Units: **mg/L** Analysis Date **2/1/2001** Prep Date:

Client ID: **0101008** Run ID: **IC-761_010201A** SeqNo: **34997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.949	0.04	2.034	0	95.8%	90	110				
Chloride	1.936	0.06	2.034	0	95.2%	90	110				
Fluoride	.975	0.05	1.017	0	95.9%	90	110				
Nitrogen, Nitrate (as N)	1.945	0.05	2.034	0	95 6%	90	110				
Nitrogen, Nitrate-Nitrite (as N)	3.903	0.12	4.068	0	95.9%	90	110				
Nitrogen, Nitrite (as N)	1.958	0.07	2.034	0	96.3%	90	110				
Phosphorus, Dissolved Orthophosphat	1.966	0.13	2.034	0	96.7%	90	110				
Sulfate	1.955	0.08	2.034	0	96.1%	90	110				

Sample ID: **CCV_010201-2** Batch ID: **IC-761_01020** Test Code: **E300** Units: **mg/L** Analysis Date **2/1/2001** Prep Date:

Client ID. **0101008** Run ID: **IC-761_010201A** SeqNo: **35003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	2.023	0.04	2.034	0	99.5%	90	110				
Chloride	2.005	0.06	2.034	0	98.6%	90	110				
Fluoride	1.011	0.05	1.017	0	99.4%	90	110				
Nitrogen, Nitrate (as N)	2.013	0.05	2.034	0	99.0%	90	110				
Nitrogen, Nitrate-Nitrite (as N)	4.043	0.12	4.068	0	99.4%	90	110				
Nitrogen, Nitrite (as N)	2.03	0.07	2.034	0	99.8%	90	110				
Phosphorus, Dissolved Orthophosphat	2	0.13	2 034	0	98.3%	90	110				
Sulfate	2.015	0.08	2.034	0	99.1%	90	110				

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank