



07/09/12

Technical Report for

XTO Energy

FRU 297-8B

1106-06

Accutest Job Number: D36015

Sampling Date: 06/28/12

Report to:

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Total number of pages in report: 23



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

XTO Energy

Job No: D36015

FRU 297-8B

Project No: 1106-06

Sample Number	Collected			Received	Matrix		Client Sample ID
	Date	Time	By		Code	Type	
D36015-1	06/28/12	10:45	DS	06/29/12	SO	Soil	CUT 1 ARSENIC 1
D36015-2	06/28/12	10:50	DS	06/29/12	SO	Soil	CUT 1 ARSENIC 2
D36015-3	06/28/12	10:55	DS	06/29/12	SO	Soil	CUT 1 ARSENIC 3
D36015-4	06/28/12	11:00	DS	06/29/12	SO	Soil	CUT 1 ARSENIC 4
D36015-5	06/28/12	11:10	DS	06/29/12	SO	Soil	CUT 1&2 ARSENIC 1
D36015-6	06/28/12	11:15	DS	06/29/12	SO	Soil	CUT 1&2 ARSENIC 2
D36015-7	06/28/12	11:20	DS	06/29/12	SO	Soil	CUT 1&2 ARSENIC 3
D36015-8	06/28/12	11:25	DS	06/29/12	SO	Soil	CUT 1&2 ARSENIC 4
D36015-9	06/28/12	11:30	DS	06/29/12	SO	Soil	CUT 1&2 ARSENIC 5

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: XTO Energy

Job No D36015

Site: FRU 297-8B

Report Date 7/9/2012 10:00:01 AM

On 06/29/2012, 9 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.0 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D36015 was assigned to the project. The lab sample IDs, client sample IDs, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6020A

Matrix SO

Batch ID: MP7802

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D36008-1MS, D36008-1MSD, D36008-1SDL were used as the QC samples for the metals analysis.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN15670

- The data for SM19 2540B M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CUT 1 ARSENIC 1	Date Sampled:	06/28/12
Lab Sample ID:	D36015-1	Date Received:	06/29/12
Matrix:	SO - Soil	Percent Solids:	94.7
Project:	FRU 297-8B		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.8	0.10	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582
(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT 1 ARSENIC 2	Date Sampled:	06/28/12
Lab Sample ID:	D36015-2	Date Received:	06/29/12
Matrix:	SO - Soil	Percent Solids:	99.1
Project:	FRU 297-8B		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.3	0.099	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582
(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT 1 ARSENIC 3	Date Sampled:	06/28/12
Lab Sample ID:	D36015-3	Date Received:	06/29/12
Matrix:	SO - Soil	Percent Solids:	99.0
Project:	FRU 297-8B		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	12.3	0.096	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

- (1) Instrument QC Batch: MA2582
(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT 1 ARSENIC 4	Date Sampled:	06/28/12
Lab Sample ID:	D36015-4	Date Received:	06/29/12
Matrix:	SO - Soil	Percent Solids:	93.2
Project:	FRU 297-8B		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.8	0.11	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582
(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT 1&2 ARSENIC 1	Date Sampled:	06/28/12
Lab Sample ID:	D36015-5	Date Received:	06/29/12
Matrix:	SO - Soil	Percent Solids:	93.6
Project:	FRU 297-8B		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.8	0.10	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582
(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT 1&2 ARSENIC 2	Date Sampled:	06/28/12
Lab Sample ID:	D36015-6	Date Received:	06/29/12
Matrix:	SO - Soil	Percent Solids:	93.9
Project:	FRU 297-8B		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	7.7	0.10	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

- (1) Instrument QC Batch: MA2582
(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID: CUT 1&2 ARSENIC 3

Lab Sample ID: D36015-7

Matrix: SO - Soil

Project: FRU 297-8B

Date Sampled: 06/28/12

Date Received: 06/29/12

Percent Solids: 88.2

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.8	0.11	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582

(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID: CUT 1&2 ARSENIC 4

Lab Sample ID: D36015-8

Matrix: SO - Soil

Project: FRU 297-8B

Date Sampled: 06/28/12

Date Received: 06/29/12

Percent Solids: 88.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.9	0.11	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582

(2) Prep QC Batch: MP7802

RL = Reporting Limit

Report of Analysis

Client Sample ID: CUT 1&2 ARSENIC 5

Lab Sample ID: D36015-9

Matrix: SO - Soil

Project: FRU 297-8B

Date Sampled: 06/28/12

Date Received: 06/29/12

Percent Solids: 94.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.9	0.10	mg/kg	5	07/02/12	07/07/12 JB	SW846 6020A ¹	SW846 3050B ²

(1) Instrument QC Batch: MA2582

(2) Prep QC Batch: MP7802

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

PAGE 1 OF 1

4035 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.accutest.com

FED-EX Tracking #	Batch Order Control #
Accutest Quote #	Accutest Job # D36015

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)												Matrix Codes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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bottles		H3		H3O2		H3O4		H3O6		H3O8		H3O10		H3O12		H3O14		H3O16		H3O18		H3O20		H3O22		H3O24		H3O26		H3O28		H3O30		H3O32		H3O34		H3O36		H3O38		H3O40		H3O42		H3O44		H3O46		H3O48		H3O50		H3O52		H3O54		H3O56		H3O58		H3O60		H3O62		H3O64		H3O66		H3O68		H3O70		H3O72		H3O74		H3O76		H3O78		H3O80		H3O82		H3O84		H3O86		H3O88		H3O90		H3O92		H3O94		H3O96		H3O98		H3O100		H3O102		H3O104		H3O106		H3O108		H3O110		H3O112		H3O114		H3O116		H3O118		H3O120		H3O122		H3O124		H3O126		H3O128		H3O130		H3O132		H3O134		H3O136		H3O138		H3O140		H3O142		H3O144		H3O146		H3O148		H3O150		H3O152		H3O154		H3O156		H3O158		H3O160		H3O162		H3O164		H3O166		H3O168		H3O170		H3O172		H3O174		H3O176		H3O178		H3O180		H3O182		H3O184		H3O186		H3O188		H3O190		H3O192		H3O194		H3O196		H3O198		H3O200		H3O202		H3O204		H3O206		H3O208		H3O210		H3O212		H3O214		H3O216		H3O218		H3O220		H3O222		H3O224		H3O226		H3O228		H3O230		H3O232		H3O234		H3O236		H3O238		H3O240		H3O242		H3O244		H3O246		H3O248		H3O250		H3O252		H3O254		H3O256		H3O258		H3O260		H3O262		H3O264		H3O266		H3O268		H3O270		H3O272		H3O274		H3O276		H3O278		H3O280		H3O282		H3O284		H3O286		H3O288		H3O290		H3O292		H3O294		H3O296		H3O298		H3O300		H3O302		H3O304		H3O306		H3O308		H3O310		H3O312		H3O314		H3O316		H3O318		H3O320		H3O322		H3O324		H3O326		H3O328		H3O330		H3O332		H3O334		H3O336		H3O338		H3O340		H3O342		H3O344		H3O346		H3O348		H3O350		H3O352		H3O354		H3O356		H3O358		H3O360		H3O362		H3O364		H3O366		H3O368		H3O370		H3O372		H3O374		H3O376		H3O378		H3O380		H3O382		H3O384		H3O386		H3O388		H3O390		H3O392		H3O394		H3O396		H3O398		H3O400		H3O402		H3O404		H3O406		H3O408		H3O410		H3O412		H3O414		H3O416		H3O418		H3O420		H3O422		H3O424		H3O426		H3O428		H3O430		H3O432		H3O434		H3O436		H3O438		H3O440		H3O442		H3O444		H3O446		H3O448		H3O450		H3O452		H3O454		H3O456		H3O458		H3O460		H3O462		H3O464		H3O466		H3O468		H3O470		H3O472		H3O474		H3O476		H3O478		H3O480		H3O482		H3O484		H3O486		H3O488		H3O490		H3O492		H3O494		H3O496		H3O498		H3O500		H3O502		H3O504		H3O506		H3O508		H3O510		H3O512		H3O514		H3O516		H3O518		H3O520		H3O522		H3O524		H3O526		H3O528		H3O530		H3O532		H3O534		H3O536		H3O538		H3O540		H3O542		H3O544		H3O546		H3O548		H3O550		H3O552		H3O554		H3O556		H3O558		H3O560		H3O562		H3O564		H3O566		H3O568		H3O570		H3O572		H3O574		H3O576		H3O578		H3O580		H3O582		H3O584		H3O586		H3O588		H3O590		H3O592		H3O594		H3O596		H3O598		H3O600		H3O602		H3O604		H3O606		H3O608		H3O610		H3O612		H3O614		H3O616		H3O618		H3O620		H3O622		H3O624		H3O626		H3O628		H3O630		H3O632		H3O634		H3O636		H3O638		H3O640		H3O642		H3O644		H3O646		H3O648		H3O650		H3O652		H3O654		H3O656		H3O658		H3O660		H3O662		H3O664		H3O666		H3O668		H3O670		H3O672		H3O674		H3O676		H3O678		H3O680		H3O682		H3O684		H3O686		H3O688		H3O690		H3O692		H3O694		H3O696		H3O698		H3O700		H3O702		H3O704		H3O706		H3O708		H3O710		H3O712		H3O714		H3O716		H3O718		H3O720		H3O722		H3O724		H3O726		H3O728		H3O730		H3O732		H3O734		H3O736		H3O738		H3O740		H3O742		H3O744		H3O746		H3O748		H3O750		H3O752		H3O754		H3O756		H3O758		H3O760		H3O762		H3O764		H3O766		H3O768		H3O770		H3O772		H3O774		H3O776		H3O778		H3O780		H3O782		H3O784		H3O786		H3O788		H3O790		H3O792		H3O794		H3O796		H3O798		H3O800		H3O802		H3O804		H3O806		H3O808		H3O810		H3O812		H3O814		H3O816		H3O818		H3O820		H3O822		H3O824		H3O826		H3O828		H3O830		H3O832		H3O834		H3O836		H3O838		H3O840		H3O842		H3O844		H3O846		H3O848		H3O850		H3O852		H3O854		H3O856		H3O858		H3O860		H3O862		H3O864		H3O866		H3O868		H3O870		H3O872		H3O874		H3O876		H3O878		H3O880		H3O882		H3O884		H3O886		H3O888		H3O890		H3O892		H3O894		H3O896		H3O898		H3O900		H3O902		H3O904		H3O906		H3O908		H3O910		H3O912		H3O914		H3O916		H3O918		H3O920		H3O922		H3O924		H3O926		H3O928		H3O930		H3O932		H3O934		H3O936		H3O938		H3O940		H3O942		H3O944		H3O946		H3O948		H3O950		H3O952		H3O954		H3O956		H3O958		H3O960		H3O962		H3O964		H3O966		H3O968		H3O970		H3O972		H3O974		H3O976		H3O978		H3O980		H3O982		H3O984		H3O986		H3O988		H3O990		H3O992		H3O994		H3O996		H3O998		H3O1000		H3O1002		H3O1004		H3O1006		H3O1008		H3O1010		H3O1012		H3O1014		H3O1016		H3O1018		H3O1020		H3O1022		H3O1024		H3O1026		H3O1028		H3O1030		H3O1032		H3O1034		H3O1036		H3O1038		H3O1040		H3O1042		H3O1044		H3O1046		H3O1048		H3O1050		H3O1052		H3O1054		H3O1056		H3O1058		H3O1060		H3O1062		H3O1064		H3O1066		H3O1068		H3O1070		H3O1072		H3O1074		H3O1076		H3O1078		H3O1080		H3O1082		H3O1084		H3O1086		H3O1088		H3O1090		H3O1092		H3O1094		H3O1096		H3O1098		H3O1100		H3O1102		H3O1104		H3O1106		H3O1108		H3O1110		H3O1112		H3O1114		H3O1116		H3O1118		H3O1120		H3O1122		H3O1124		H3O1126		H3O1128		H3O1130		H3O1132		H3O1134		H3O1136		H3O1138		H3O1140		H3O1142		H3O1144		H3O1146		H3O1148		H3O1150		H3O1152		H3O1154		H3O1156		H3O1158		H3O1160		H3O1162		H3O1164		H3O1166		H3O1168		H3O1170		H3O1172		H3O1174		H3O1176		H3O1178		H3O1180		H3O1182		H3O1184		H3O1186		H3O1188		H3O1190		H3O1192		H3O1194		H3O1196		H3O1198		H3O1200		H3O1202		H3O1204		H3O1206		H3O1208		H3O1210		H3O1212		H3O1214		H3O1216		H3O1218		H3O1220		H3O1222		H3O1224		H3O1226		H3O1228		H3O1230		H3O1232		H3O1234		H3O1236		H3O1238		H3O1240		H3O1242		H3O1244		H3O1246		H3O1248		H3O1250		H3O1252		H3O1254		H3O1256		H3O1258		H3O1260		H3O1262		H3O1264		H3O1266		H3O1268		H3O1270		H3O1272		H3O1274		H3O1276		H3O1278		H3O1280		H3O1282		H3O1284		H3O1286		H3O1288		H3O1290		H3O1292		H3O1294		H3O1296		H3O1298		H3O1300		H3O1302		H3O1304		H3O1306		H3O1308		H3O1310		H3O1312		H3O1314		H3O1316		H3O1318		H3O1320		H3O1322		H3O1324		H3O1326		H3O1328		H3O1330		H3O1332		H3O1334		H3O1336		H3O1338		H3O1340		H3O1342		H3O1344		H3O1346		H3O1348		H3O1350		H3O1352		H3O1354		H3O1356		H3O1358		H3O1360		H3O1362		H3O1364		H3O1366		H3O1368		H3O1370		H3O1372		H3O1374		H3O1376		H3O1378		H3O1380		H3O1382		H3O1384		H3O1386		H3O1388		H3O1390		H3O1392		H3O1394		H3O1396		H3O1398		H3O1400		H3O1402		H3O1404		H3O1406		H3O1408		H3O1410		H3O1412		H3O1414		H3O1416		H3O1418		H3O1420		H3O1422		H3O1424		H3O1426		H3O1428		H3O1430		H3O1432		H3O1434		H3O1436		H3O1438		H3O1440		H3O1442		H3O1444		H3O1446		H3O1448		H3O1450		H3O1452		H3O1454		H3O1456		H3O1458		H3O1460		H3O1462		H3O1464		H3O1466		H3O1468		H3O1470		H3O1472		H3O1474		H3O1476		H3O1478		H3O1480		H3O1482		H3O1484		H3O1486		H3O1488		H3O1490		H3O1492		H3O1494		H3O1496		H3O1498		H3O1500		H3O1502		H3O1504		H3O1506		H3O1508		H3O1510		H3O1512		H3O1514		H3O1516		H3O1518		H3O1520		H3O1522		H3O1524		H3O1526		H3O1528		H3O1530		H3O1532		H3O1534		H3O1536		H3O1538		H3O1540		H3O1542		H3O1544		H3O1546		H3O1548		H3O1550		H3O1552		H3O1554		H3O1556		H3O1558		H3O1560		H3O1562		H3O1564		H3O1566		H3O1568		H3O1570		H3O1572			

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D36015

Client: KRW

Immediate Client Services Action Required: No

Date / Time Received: 6/29/2012 1:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO

Airbill #'s: CO

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www.accutest.com

Metals Analysis

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D36015
Account: XTOKRWR - XTO Energy
Project: FRU 297-8B

QC Batch ID: MP7802
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 07/02/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.22	.31		
Antimony	0.20	.0018	.0075		
Arsenic	0.10	.042	.06	0.0029	<0.10
Barium	1.0	.0065	.037		
Beryllium	0.10	.016	.09		
Boron	20	1.2	1.2		
Cadmium	0.050	.014	.021		
Calcium	200	7.9	8		
Chromium	1.0	.033	.19		
Cobalt	0.10	.0012	.015		
Copper	1.0	.017	.065		
Iron	20	.8	5		
Lead	0.25	.0011	.024		
Magnesium	50	.44	.85		
Manganese	0.50	.0043	.02		
Molybdenum	0.50	.018	.018		
Nickel	1.0	.0049	.011		
Phosphorus	30	1.4	3.6		
Potassium	100	9.8	10		
Selenium	0.20	.029	.14		
Silver	0.050	.0009	.0065		
Sodium	250	1.5	2.3		
Strontium	10	.036	.036		
Thallium	0.10	.00095	.0095		
Tin	5.0	.023	.34		
Titanium	1.0	.044	.1		
Uranium	0.25	.00085	.001		
Vanadium	2.0	.12	.21		
Zinc	5.0	.033	.35		

Associated samples MP7802: D36015-1, D36015-2, D36015-3, D36015-4, D36015-5, D36015-6, D36015-7, D36015-8, D36015-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D36015
Account: XTOKRWR - XTO Energy
Project: FRU 297-8B

QC Batch ID: MP7802
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 07/02/12

Metal	D36008-1 Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	3.7	105	103	98.4	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP7802: D36015-1, D36015-2, D36015-3, D36015-4, D36015-5, D36015-6, D36015-7, D36015-8, D36015-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D36015
Account: XTOKRWR - XTO Energy
Project: FRU 297-8B

QC Batch ID: MP7802
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 07/02/12

Metal	D36008-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	3.7	107	103	100.3	1.9	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP7802: D36015-1, D36015-2, D36015-3, D36015-4, D36015-5, D36015-6, D36015-7, D36015-8, D36015-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D36015
Account: XTOKRWR - XTO Energy
Project: FRU 297-8B

QC Batch ID: MP7802
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 07/02/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	112	100	112.0	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP7802: D36015-1, D36015-2, D36015-3, D36015-4, D36015-5, D36015-6, D36015-7, D36015-8, D36015-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D36015
 Account: XTOKRWR - XTO Energy
 Project: FRU 297-8B

QC Batch ID: MP7802
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: ug/l

Prep Date: 07/02/12

Metal	D36008-1			QC	
	Original	SDL 5:25	%DIF	Limits	
Aluminum					
Antimony					
Arsenic	36.0	35.3	2.0	0-10	
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP7802: D36015-1, D36015-2, D36015-3, D36015-4, D36015-5, D36015-6, D36015-7, D36015-8, D36015-9

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested