APPENDIX A

FIELD LOGS

PARSONS

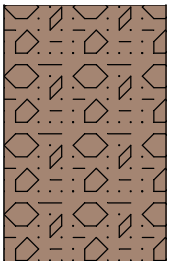
10235 South Jordan Gateway, Suite 300
South Jordan, UT 84095

GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG001**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **9 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635559 FT E: 0754966

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Silty Sand with Gravel, loose, dry, light brown to light grayish brown	0'-0.5' 35BG001-01 -020911
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG001-02 -020911

NOTES:

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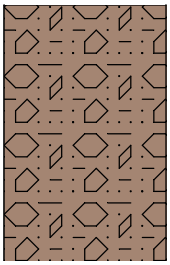
South Jordan, UT 84095

GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG002**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **9 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635711 FT E: 0754830

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Silty Sand with Gravel, loose, dry, light brown to light grayish brown	0'-0.5' 35BG002-01 -020911
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG002-02 -020911

NOTES:

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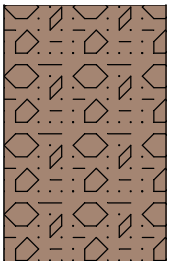
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG003**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **9 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635872 FT E: 0754668

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Sand with Silt and Gravel, loose, dry, light brown	0'-0.5' 35BG003-01 -020911
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG003-02 -020911

NOTES:

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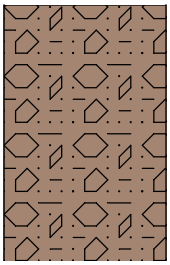
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG004**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **9 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636048 FT E: 0754497

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Sand and Silt with 25% Gravel, loose, dry, light brown	0'-0.5' 35BG004-01 -020911
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG004-02 -020911

NOTES:

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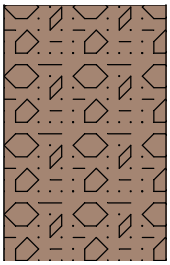
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG005**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **9 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636193 FT E: 0754405

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Sand and Silt with Gravel, loose, dry, light brown	0'-0.5' 35BG005-01 -020911
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG005-02 -020911

NOTES:

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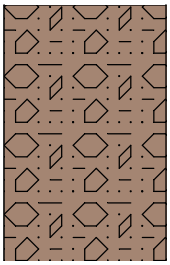
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG006**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **8 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636553 FT E: 0756321

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Silty Sand and Gravel, loose, dry, light brown to light grayish brown	0'-0.5' 35BG006-01 -020811
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG006-02 -020811

NOTES:

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG007**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **8 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636429 FT E: 0756208

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Silty Sand and Gravel, loose, dry, light brown to light grayish brown	0'-0.5' 35BG007-01 -020811
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG007-02 -020811

NOTES:

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG008**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **8 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636577 FT E: 0756125

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Silty Sand and Gravel, loose, dry, light brown to light grayish brown	0'-0.5' 35BG008-01 -020811
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG008-02 -020811

NOTES:

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BG009**
TOTAL DEPTH: **6.5 ft**
BOREHOLE ORIENTATION: **vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG-35**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **8 Feb 2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636633 FT E: 0755977

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0			Silty Sand and Gravel, loose, dry, light brown to light grayish brown	0'-0.5' 35BG009-01 -020811
5			TD = 6.5 ft bgs	5.5'-6.5' 35BG009-02 -020811

NOTES: 2 boreholes required

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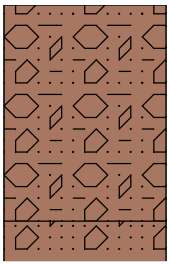
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB001**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-27-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636339 FT E: 754736.06

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB001-01- 012711
-5		GM	Sand and Gravel 5.5'-6.5' 10% Clay Slightly moist, loose Light Reddish Brown	5.5'-6.5' 35BSB001-02- 012711
			TD = 6.5 ft bgs	

NOTES: TD = 6.5' bgs

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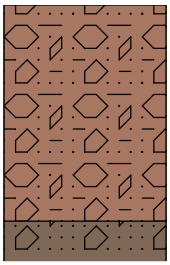
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB002**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636340.3 FT E: 754784.88

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB002-01- 012711
-5		GM	Sand and Gravel 5.5'-6.5' 10% Clay Lots of decomposing gravel Slightly Moist, loose Light Brown	5.5'-6.5' 35BSB002-02- 012611
			TD = 6.5 ft bgs	

NOTES: TD = 6.5' bgs

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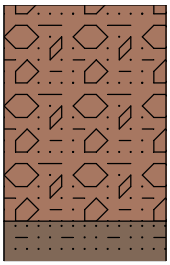
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB003**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636351 FT E: 754856.5

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB003-01- 012611
-5		SW	Silty Sand 5.5'-6.5' 10% Clay Trace gravel Slightly moist, loose Light Brown	5.5'-6.5' 35BSB003-02- 012611
			TD = 6.5 ft bg	

NOTES: TD = 6.5' bgs

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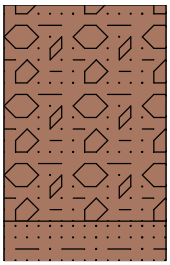
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB004**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-27-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636290 FT E: 754739.19

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.0' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB004-01- 012711
-5		SC	Sand and Clay 5.0'-6.0' <5% Gravel, decomposing granite Slightly moist - dry Light Reddish Brown	5.5'-6.5' 35BSB004-02- 012711
			TD = 6.5 ft bgs	

NOTES: TD = 6.5' bgs

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB005**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-27-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636295.8 FT E: 754776.75

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB005-01- 012711
-5		CL	Clay 5.5'-7.0', hard	5.5'-6.5' 35BSB005-02- 012711
		SW	Sand 7.0'-20.5' Trace gravel Sand is med. - fine grained Slightly moist, loose Light Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35BSB005-03- 012711

NOTES: TD = 20.5' bgs

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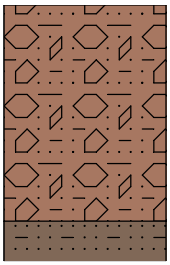
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB006**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636280.5 FT E: 754911.56

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB006-01- 012611
5		SM	Silty Sand 5.5'-6.5' Trace clay, Trace gravel Slightly moist, loose Light Brown	5.5'-6.5' 35BSB006-02- 012611
			TD = 6.5 ft bgs	

NOTES: TD = 6.5' bgs

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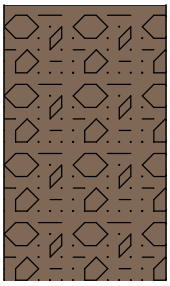
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB007**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-20-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636211.5 FT E: 754757.06

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 20 % Gravel, pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Dry Light Brown	0'-0.5' 35BSB007-01- 012011
-5			TD = 7 ft bgs	5.5'-6.5' 35BSB007-02- 012011

NOTES: TD = 7' bgs

PARSONS

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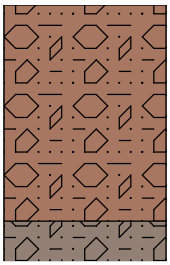
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB008**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636218.8 FT E: 754944.56

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB008-01- 012611
5		GM	Same as above 5.5'-6.5' Dry, loose Light Grayish Brown	5.5'-6.5' 35BSB008-02- 012611
			TD = 6.5 ft bgs	

NOTES: TD = 6.5' bgs

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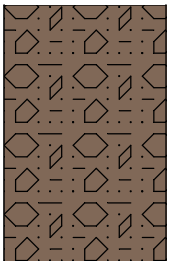
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB009**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636210.3 FT E: 754998.88

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-6.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Dry Light Brown	0'-0.5' 35BSB009-01- 012611
-5			TD = 6.5 ft bgs	5.5'-6.5' 35BSB009-02- 012611

NOTES: TD = 6.5' bgs

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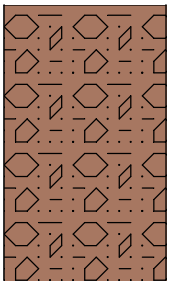
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB010**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-20-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636163 FT E: 754797.63

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB010-01- 012011
-5			TD = 7 ft bgs	5.5'-6.5' 35BSB010-02- 012011

NOTES: TD = 7' bgs

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB011**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-24-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636163 FT E: 754854.75

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.0' Gravel is pea size to cobbles, subang-subrnd Bedding sand fine to coarse Dry, loose Light Brown	0-0.5' 35BSB011-01-012011
-5		SC	Sandy Clay 5.0'-5.5'	5.5'-6.5' 35BSB011-02-011811
		GM	Silty Sand and Gravel 5.5'-20.5' increasing larger gravel from 10'-12' Light Gray	
-10				
		GM		
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35BSB011-03-012411

NOTES: TD = 20.5' bgs

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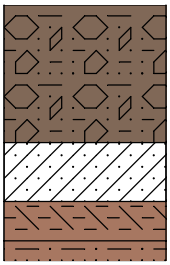
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB012**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-24-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636159.5 FT E: 754924.88

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-3.5' Very hard drilling Dry Light Brown	0'-0.5' 35BSB012-01-011911
		SC CL	Silty Clay with Sand 3.5'-5.0' Fine Sand Dry, hard White	5.5'-6.5' 35BSB012-02-012411
-5		SM-SC	Cemented clay and silt 5.0'-6.0' Weakly cemented, dry layers of clay Light Reddish Brown - White	
			Silty Sand with Clay 6.0'-6.5' Sand is fine grained Light Reddish Brown	
			TD = 6.5 ft bgs	

NOTES: TD = 6.5' bgs

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB013**
TOTAL DEPTH: **21'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-24-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636151.3 FT E: 754977.81

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-6.5' 30% Gravel Sand and gravel increasing from 2.0'-6.0' Hard Light Brown	0'-0.5' 35BSB013-01- 012411
-5				5.5'-6.5' 35BSB013-02- 012411
		SW	Sandy Silt 6.5'-21' Gray	
-10				
-15				
-20			TD = 21 ft bgs	19'-21' 35BSB013-03- 012411

NOTES: TD = 21' bgs

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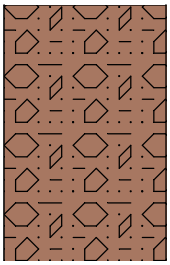
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB014**
TOTAL DEPTH: **6.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-24-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636158 FT E: 755031.56

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-6.0' Sand is fine - med. grained Dry, hard Light Reddish Brown	0'-0.5' 35BSB014-01- 012411
-5			TD = 6.5 ft bgs	5.5'-6.5' 35BSB014-02- 012411

NOTES: TD = 6.5' bgs

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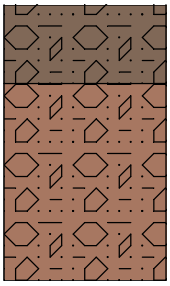
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB015**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-19-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636157.3 FT E: 755100.88

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-2.0' Sand is fine - med. grained Dry, med. - hard Light Brown	0'-0.5' 35BSB015-01- 011911
		GM	Same as above 2.0'-7.0' Increasing sands Light Reddish Brown	
-5			TD = 7 ft bgs	5.5'-6.5' 35BSB015-02- 011911

NOTES: TD = 7' bgs

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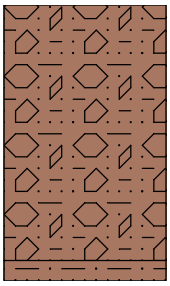
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB016**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc.**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-19-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636099.3 FT E: 754918.81

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		SW	Silty Sand and Gravel 0.0'-6.5' Gravel is pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse 25% Recovery Light Reddish Brown	0'-0.5' 35BSB016-01- 011911
-5		SC	Sandy Silt and Clay 6.5'-7.0'	5.5'-6.5' 35BSB016-02- 011911
			TD = 7 ft bgs	

NOTES: TD = 7' bgs

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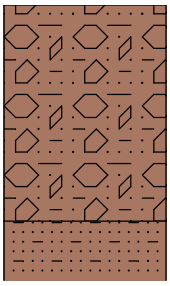
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB017**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-19-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636099.8 FT E: 754973.81

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-5.5' Gravel is pea size to cobbles, subang-subrnd Bedding sand, fine to coarse Light Reddish Brown	0'-0.5' 35BSB017-01- 011911
5		SW	Sand with some Silt 5.5'-7.0' Sand is fine - med. grained Light Reddish Brown	5.5'-6.5' 35BSB017-02- 011911
			TD = 7 ft bgs	

NOTES: TD = 7' bgs

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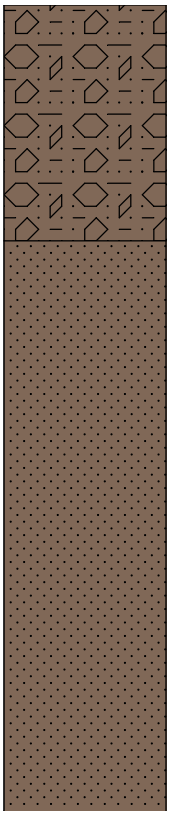
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB018**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-25-2011, 01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636098.8 FT E: 755104.25

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-6.0' 20% Gravel Sand is med. - coarse grained Slightly moist Light Brown	0'-0.5' 35BSB018-01- 012511
-5				5.5'-6.5' 35BSB018-02- 012511
		SW	Sand 6.0'-21.0' Sand is med. - coarse grained Slightly moist, loose Light Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35BSB018-03- 012611

NOTES: TD = 20.5' bgs

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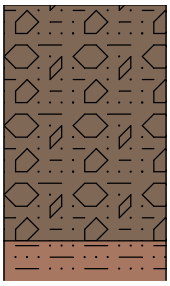
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB019**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30020**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-19-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636051.3 FT E: 755040.56

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-6.0' Sand is med. grained Dry Light Brown	0'-0.5' 35BSB019-01- 011911
5		SC	Clayey Sand 6.0'-7.0' 30% Clay Slightly moist, slightly plastic Light Reddish Brown	5.5'-6.5' 35BSB019-02- 011911
			TD = 7 ft bgs	

NOTES: TD = 7' bgs

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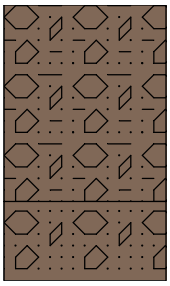
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35BSB020**
TOTAL DEPTH: **7'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35B**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-26-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636055 FT E: 755095.88

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 5.0'-7.0' 10% Gravel Sand is med. grained Slightly moist, loose Light Brown	0'-0.5' 35BSB020-01- 012611
-5		GM	Sand with Gravel 5.0'-7.0' 10% Gravel Sand is med. grained Slightly moist, loose Light Brown	5.5'-6.5' 35BSB020-02- 012611
			TD = 7 ft bgs	

NOTES: TD = 7' bgs

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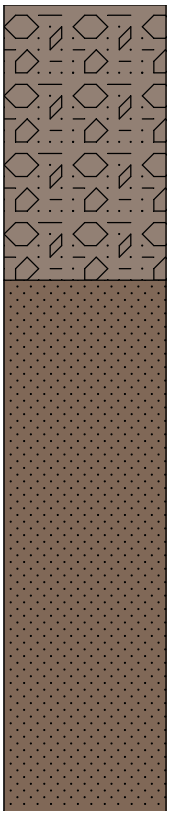
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB001**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-31-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635955 FT E: 755794.69

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	
-5				5.5'-6.5' 35CSB001-01-013111
		SW	Sand 7.0'-20.5' Trace gravel Sand is med. grained Slightly moist, loose Light Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB001-02-013111

NOTES: TD = 20.5' bgs

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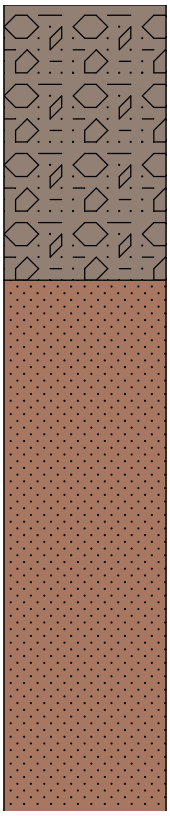
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB002**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994.30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **01-31-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635944.3 FT E: 755853.38

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to 2.5" cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	5.5'-6.5' 35CSB002-01- 013111
-5		SW	Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB002-02- 013111

NOTES: TD = 20.5' bgs

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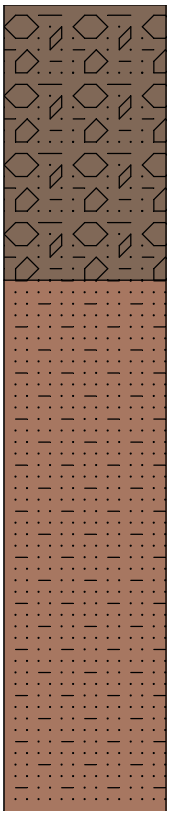
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB003**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-01-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635951.3 FT E: 755878.44

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' Gravel is pea size to cobbles, subang-subrnd Sand is fine grained Slightly moist, loose Light Brown	
-5				5.5'-6.5' 35CSB003-01- 020111
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB003-02- 020111

NOTES: TD = 20.5' bgs

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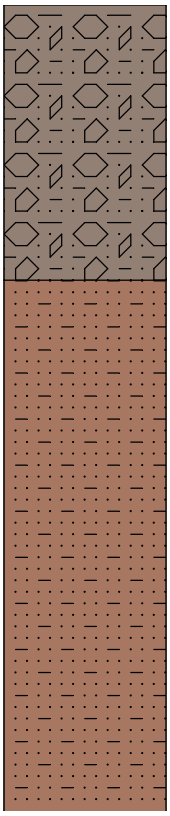
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB004**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Grounds RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-01-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635927.8 FT E: 755858.06

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	
-5				5.5'-6.5' 35CSB004-01-020111
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB004-02-020111

NOTES: TD = 20.5' bgs

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB005**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-01-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635931.5 FT E: 755887.81

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	5.5'-6.5' 35CSB005-01- 020111
-5		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB005-02- 020111

NOTES: TD = 20.5' bgs

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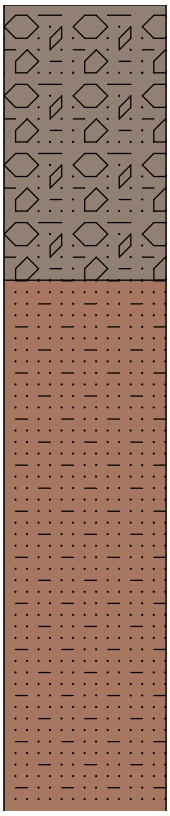
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB006**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-02-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635837.8 FT E: 755852.63

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	
-5				5.5'-6.5' 35CSB006-01- 020211
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB006-02- 020211

NOTES: TD = 20.5' bgs

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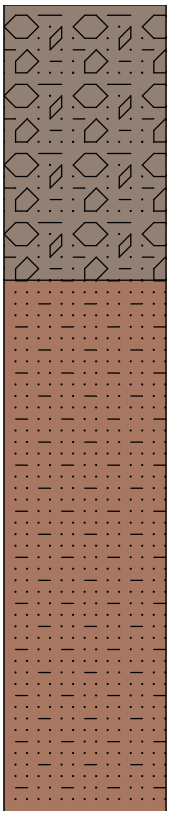
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB007**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-02-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635834.5 FT E: 755877.63

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	
-5				5.5'-6.5' 35CSB007-01-020111
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB007-02-020111

NOTES: TD = 20.5' bgs

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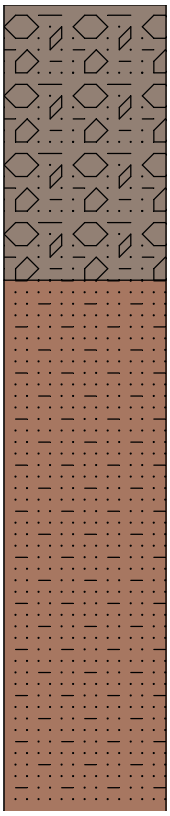
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB008**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-01-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N:3635828.5 FT E:755912.56

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	
-5				5.5'-6.5' 35CSB008-01- 020111
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB008-02- 020111

NOTES: TD = 20.5' bgs

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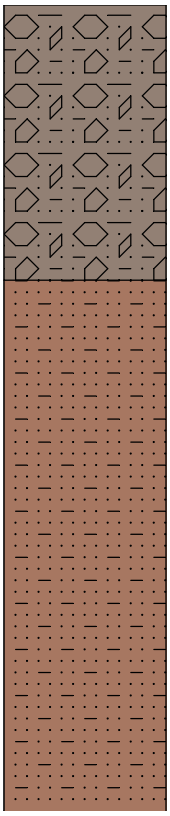
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB009**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-03-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635832.3 FT E: 755943.38

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	
-5				5.5'-6.5' 35CSB009-01- 0203111
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB009-02- 0203111

NOTES: TD = 20.5' bgs

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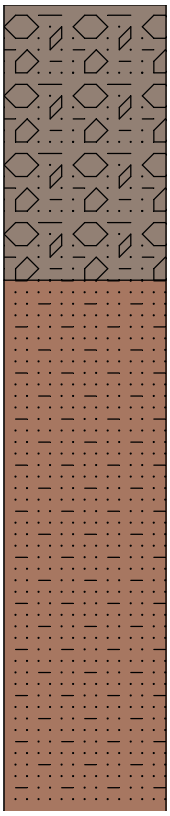
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB010**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-07-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635976.3 FT E: 756138.13

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	0'-0.5' 35CSB010-01- 020711
-5				5.5'-6.5' 35CSB010-02- 0207111
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB010-03- 020711

NOTES: TD = 20.5'

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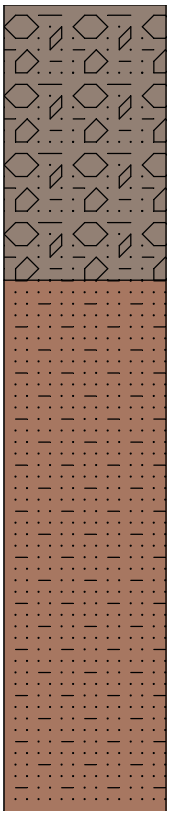
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB011**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-07-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635957.5 FT E: 756045.81

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	0'-0.5' 35CSB011-01- 020711
-5				5.5'-6.5' 35CSB011-02- 020711
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB011-03- 020711

NOTES: TD = 20.5' bgs

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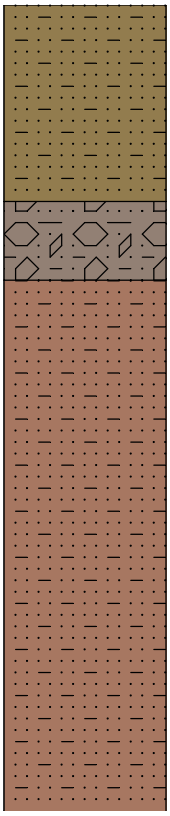
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB012**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-07-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635953.5 FT E: 756011.44

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		SW	Sandy Silt 0.0'-5.0' Dry, loose Light Yellowish Brown	0'-0.5' 35CSB012-01- 020711
-5		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	5.5'-6.5' 35CSB012-02- 020711
-10		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB012-03- 020711

NOTES: TD = 20.5' bgs

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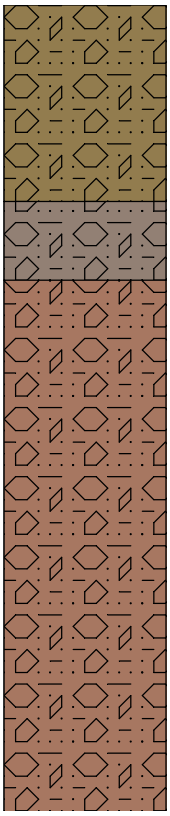
GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB013**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-08-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3636228 FT E: 756088.88

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		SW-SM	Sandy Silt and Gravel 0.0'-5.0' 25% Gravel Dry, loose Light Yellowish Brown	0'-0.5' 35CSB013-01- 020811
-5		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	5.5'-6.5' 35CSB013-02- 020811
		SM	Silty Sand 7.0'-20.5' Trace gravel Sand is fine - med. grained Slightly moist, loose Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB013-03- 020811

NOTES: TD = 20.5' bgs

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GEOLOGIC BOREHOLE LOG

BOREHOLE NO: **35CSB014**
TOTAL DEPTH: **20.5'**
BOREHOLE ORIENTATION: **Vertical**

PROJECT INFORMATION	BOREHOLE INFORMATION
PROJECT: **Yuma Proving Ground RFI**	BOREHOLE DIAMETER: **4"**
SITE LOCATION: **YPG @ SWMU 35C**	DRILLER: **Chuck Riley**
JOB NO.: **745994. 30040**	DRILLING METHOD: **HSA**
DRILLING CO.: **Geomechanics Southwest, Inc**	RIG TYPE: **CME 75**
PROJECT MANAGER: **Ed Staes**	DATES DRILLED: **02-03-2011**
SITE MANAGER: **Rebecca McDonald**	LOGGED BY: **Rebecca McDonald**

State Plane Coordinates: FT N: 3635834.5 FT E: 755818.94

DEPTH (FT)	Graphic Log	ASTM Soil Class	GEOLOGIC DESCRIPTION	DEPTH AND SAMPLE ID
0		GM	Silty Sand and Gravel 0.0'-7.0' 25% Gravel, pea size to cobbles, subang-subrnd Bedding Sand, fine to coarse Dry, loose Light Grayish Brown	5.5'-6.5' 35CSB014-01- 020311
-5		SM-SC	Silty Sand and Clay 7.0'-20.5' Trace Gravel 20% Clay Slightly moist, Light Reddish Brown	
-10				
-15				
-20			TD = 20.5 ft bgs	19.5'-20.5' 35CSB014-02- 020311

NOTES: TD = 20.5' bgs

APPENDIX B

SITE PHOTOGRAPHS

APPENDIX B – SOIL BORINGS

Photograph B-1
Soil Boring- 35BSB017 – UXO clearance for drilling location.

Photograph B-2
Soil Boring- 35BSB013 – Setting up drill rig.

Photograph B-3

Soil Boring- 35BSB003 – Drilling soil boring using a hollow stem auger (HSA).

Photograph B-4
Soil Boring- 35BSB011 – Decontaminating equipment.

Photograph B-5
Soil Boring- 35CSB004 – Setting up drill rig.

Photograph B-6

Soil Boring- 35CSB009 – Drilling soil boring using a hollow stem auger (HSA).

Photograph B-7
Soil Boring- 35CSB009 – Backfilling borehole with bentonite pellets.

Photograph B-8

Soil Boring- 35CSB009 – Complete backfilling soil boring with bentonite pellets.

APPENDIX C

ANALYTICAL DATA AND QUALITY CONTROL TABLES

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APPENDIX C
DATA QUALITY ASSESSMENT

The purpose of this section is to assess the analytical data quality for the soil samples collected in support of the YPG-35 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). Site-specific quality control (QC) issues are discussed here in terms of precision, accuracy, representation, comparability, and completeness. Data, including data validation flags, are presented in Table C.1. Table C.2 contains explanatory information for Table C.1. QC data are presented beginning with Table C.3.

C.1 PRECISION

Precision is controlled through the use of field duplicates and matrix spike duplicates.

C.1.1 Field Duplicates

In accordance with Section A.3.5 of the QAPP (Appendix A of Parsons, 2010), field duplicates are required at a rate of one per 20 samples of the same matrix. Field duplicate frequency was measured program-wide and not per individual site. One hundred and six soil samples were collected at this site during the RFI. Seven field duplicates were collected associated with these samples. However, a total of 13 field duplicates were collected in association with 203 normal field samples collected program-wide at the inactive landfills and Muggins Mountain OB/OD sites. Therefore, overall field duplicate frequency was met for the RFI. Table C.3 presents the results of the seven field duplicate samples (35BSB004, 35BSB011, 35BSB017, 35CSB002, 35CSB006, 35CSB013, and 35CSS031) collected at this site.

The field duplicate acceptance limit is defined as 35 Relative Percent Difference (RPD) for soil samples. If excessive exceedances of the RPD limit are identified, required action is to evaluate the sampling program to determine if field sampling protocols are being followed and implement corrective action if required.

One hundred and sixty-two distinct analytes were tested for in the seven field duplicates, generating 1,009 duplicate pair results. Soil test panels included: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. The RPD is

evaluated when the concentration in the sample (parent or field duplicate) is greater than or equal to 5 times the Reporting Limit (RL). When concentrations in the parent or field duplicate sample are between the RL and 5 times the RL, these are evaluated by calculating the difference between the parent and field duplicate concentrations (parent - field duplicate). This difference then must be less than 2 times the RL to be in control. Parent and field duplicate concentrations less than the RL are not evaluated. Precision limits were exceeded for eight results in four duplicate pairs (barium, 2 calcium, 2 copper, diethyl phthalate, manganese, and nitroglycerin), resulting in 99.2-percent compliance. Corrective action consisted of evaluating the results to determine if the sampling program required adjustment. Based on a review of the results, it was determined unlikely these exceedances were caused by the sampling program, because of the excellent agreement of the 150 other result pairs which were detected in significant (greater than the RL) concentration in the same sample pair.

Precision was well controlled with respect to field duplicates, since 99.2-percent of duplicate results met established criteria.

C.1.2 Matrix Spike Duplicates

In accordance with the QAPP (Parsons, 2010), the frequency requirement for matrix spike duplicates is set at one per 20 samples of the same matrix. Because this frequency is not site-specific, and because matrix effects are not generally expected on a site-specific basis, matrix spike duplicates were evaluated on a program basis. Anomalies resulting in data flagged “J” or “UJ” are considered minor, and by definition these anomalies result in ‘flagged’ usable data. Matrix spike and matrix spike duplicate results associated with YPG-35 are presented on Table C.4.

A program-wide evaluation of matrix spike duplicate precision was conducted for the inactive landfill and Muggins Mountain OB/OD sites. In all, 24 matrix spike and matrix spike duplicate pairs were collected, generating 2,406 result pairs. Of the 2,406 spike duplicate pair results 29 (1.2-percent) were outside control limits (precision was only required to be evaluated when there was a detection in the parent sample). Based on the program-wide evaluation of the spike duplicate precision, it was determined that spike precision was well controlled during the RFIs, since only 1.2-percent of matrix spike duplicate pair results were qualified for RPD

exceedances. As shown on Table C.4, 13 of 1035 (1.3-percent) results were qualified for matrix spike duplicate precision at YPG-35, which is well within tolerable limits for the purpose of evaluating data usability.

C.2 ACCURACY

Field control of accuracy is monitored by matrix spikes. In accordance with the QAPP (Appendix A of Parsons, 2010), matrix spikes are required at a frequency of one per 20 samples of the same matrix. Matrix spikes were evaluated on a program-wide basis and not per individual site. Of the 203 normal field samples, 24 matrix spike and matrix spike duplicate pairs were collected, meeting the overall frequency requirement for matrix spikes. There were ten spike pairs collected in association with the YPG-35 samples. Data flagged as a result of matrix spike recovery issues for YPG-35 during the data evaluation and validation process are summarized in Section C.5 below. Anomalies resulting in data flagged “J” or “UJ” are considered minor, and by definition these anomalies result in usable data. One pentaerythritol tetranitrate (PETN) result, flagged “R” for matrix spike recovery, was determined to be unusable at YPG-35. No other results were flagged “R” due to matrix spike recoveries at YPG-35.

A program-wide matrix spike recovery issue with antimony was identified when reviewing the data. Antimony results displayed a matrix effect in soils that biased the concentrations low. Low antimony recoveries have been well documented as an issue with the preparation and analytical method in some soils. The laboratory control samples (or laboratory fortified blanks) were in control, indicating the analysis and sample preparations were in control with respect to antimony. Although a low bias was identified, the data required only ‘J’ or ‘UJ’ flagging and are still considered usable results.

Accuracy was determined to be in control with respect to matrix spike and matrix spike duplicate results since only one out of 1035 results was ‘rejected’ (‘R’-flagged) and no wide-spread matrix effects were identified, except the antimony issue discussed above.

C.3 REPRESENTATION

Representation is controlled through the Data Quality Objective (DQO) process, and is detailed in the RFI Work Plan (Appendix A of Parsons, 2010). QC guidelines as established in

the work plan and associated Standard Operating Procedures (SOPs), and QAPP (Parsons, 2010), describe management of sampling procedures, use of appropriate sample containers, adherence to holding times, use of proper preservation, and sampling of equipment blanks. Table A.3.2 of the QAPP (Parsons, 2010) describes requirements for containers, preservation, and holding times. Containers and preservation were used in accordance with Table A.3.2. Holding times and equipment blanks were assessed for each analytical result and are discussed here.

C.3.1 Holding Time

Holding times were exceeded for 0.36-percent of (56 of 15,505) results, as summarized in Section 2.2.2.5 below. Exceedances between one and two times holding time result in "J" or "UJ" flagging and are considered minor. Data in this condition are defined as usable. All holding time exceedances at this site were minor. Therefore, holding times were adequately controlled at this site, since 99.6-percent of results met established criteria.

C.3.2 Field Blanks

Equipment blanks were not required at YPG-35. All equipment which came into contact with the samples was disposable.

C.4 ANALYTICAL COMPLETENESS

A total of 5.5-percent (852 of 15,505) of analytical results for normal and field duplicate samples were flagged for QC issues; however, one of the 15,505 results was rejected. All other results met QC criteria. Completeness is defined in the QAPP (Appendix A of Parsons, 2010) as the percent of usable data. The completeness goal is 95-percent. A total of 15,504 out of 15,505 analytical results were usable, resulting in 99.99-percent analytical completeness and meeting the goal for this site.

C.5 SUMMARY OF QUALIFIED RESULTS

Results were considered qualified in terms of data usability if they were flagged "U", "UJ", "J", "NJ" or "R" during data validation as outline on Tables A.5.15 and A.5.16 of the QAPP (Appendix A of Parsons, 2010). Flags are defined in Table C.2. Results may be qualified "U" simply because no analyte was detected. Results may be qualified "J" simply because the

detected value is between the MDL (method detection limit) and RL (practical quantitation limit [PQL]), (i.e., is a trace value). Flags are also applied due to QC exceedances. This summary does not consider routine flagging of non-detects and trace results. Qualified results were classified as minor if flagged "U", "UJ", or "J", and major if flagged "R" or "NJ". All results are presented in Table C.1.

C.5.1 Minor Data Quality Issues

A total of 852 results were flagged due to minor QC issues. Note that the sum of results below equals more than 852, since some results were flagged for more than one QC issue; however, a total of 852 results were affected. These issues are presented below:

- 2 mercury results were flagged "U" due to method blank contamination.
- 17 chloromethane results were flagged "UJ" due to calibration issues.
- 1 sodium result was flagged "U" due to calibration blank contamination.
- 28 results (1 2,4,6-trinitrotoluene, 12,4-dinitrophenol, 1 2,4-dinitrotoluene, 1 3-nitroaniline, 1 4-nitroaniline, 8 antimony, 1 cobalt, 2 copper, 1 di-n-butyl phthalate, 2 potassium, 2 sodium, 3 thallium, 1 vanadium, and 3 zinc) were flagged "UJ" or "J" due to matrix spike recoveries.
- 9 results (1 2,4,6-trinitrotoluene, 1 2,4-dinitrotoluene, 1 barium, 1 calcium, 2 copper, 1 di-n-butyl phthalate, 1 manganese, and 1 zinc) were flagged "J" due to matrix spike duplicate precision.
- 31 results (13 3-nitroaniline and 18 acenaphthylene) results were flagged "UJ" due to laboratory control samples recoveries.
- 3 results (2,4-dinitrophenol, 3-nitroaniline, and 4-nitroaniline) were flagged "UJ" due to laboratory control sample duplicate precision.
- 56 nitroguanidine results were flagged "UJ" or "J" due to holding time exceedances.
- 714 results (33 aluminum, 18 barium, 33 beryllium, 40 calcium, 63 chromium, total, 34 cobalt, 52 copper, 58 iron, 93 lead, 93 magnesium, 18 manganese, 16 nickel, 29 potassium, 12 sodium, 69 vanadium, and 53 zinc) were flagged "J" due to inductively coupled plasma (ICP) serial dilution issues.
- 2 2-amino-4,6-dinitrotoluene results were flagged "J" due to second column confirmation analysis did not meet %RPD criteria.

C.5.2 Major Data Quality Issues

One pentaerythritol tetranitrate (PETN) result was flagged "R" for matrix spike recovery and precision, which was determined to be unusable at YPG-35. No other results were flagged "R" at YPG-35.

C.6 DATA QUALITY CONCLUSIONS

Several minor QC anomalies occurred at YPG-35 that did not significantly impact data usability. Precision, accuracy, representation, and completeness were all substantially under control. One result was flagged "R" and determined to be unusable; however, all other result met QC criteria and were determined to be usable. Overall, the data are suitable for decision-making purposes related to this project such as site characterization, human and ecological risk assessment, and in the determination of corrective action measures.

TABLES

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane (Ethylene Dibromide)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
35BSB001	0-0.5	N	27-Jan-11										<0.0222 U				<0.0179 U		
35BSB001	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0226 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0182 U	<0.0022 U	<0.0022 U
35BSB002	0-0.5	N	27-Jan-11										<0.0221 U				<0.0178 U		
35BSB002	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0226 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0182 U	<0.0023 U	<0.0023 U
35BSB003	0-0.5	N	26-Jan-11										<0.022 U				<0.0177 U		
35BSB003	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0226 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0182 U	<0.0023 U	<0.0023 U
35BSB004	0-0.5	N	27-Jan-11										<0.0222 U				<0.0178 U		
35BSB004	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.023 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0185 U	<0.0022 U	<0.0022 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0229 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0184 U	<0.0023 U	<0.0023 U
35BSB005	0-0.5	N	27-Jan-11										<0.0223 U				<0.018 U		
35BSB005	19.5-20.5	N	27-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0229 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0184 U	<0.0023 U	<0.0023 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0224 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.018 U	<0.0025 U	<0.0025 U
35BSB006	0-0.5	N	26-Jan-11										<0.022 U				<0.0177 U		
35BSB006	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0226 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0182 U	<0.0022 U	<0.0022 U
35BSB007	0-0.5	N	20-Jan-11										<0.0222 U				<0.0178 U		
35BSB007	5.5-6.5	N	20-Jan-11	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0221 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0178 U	<0.0018 U	<0.0018 U
35BSB008	0-0.5	N	26-Jan-11										<0.0221 U				<0.0178 U		
35BSB008	5.5-6.5	N	26-Jan-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0224 U	<0.002 U	<0.002 U	<0.002 U	<0.018 U	<0.002 U	<0.002 U
35BSB009	0-0.5	N	26-Jan-11										<0.0221 U				<0.0178 U		
35BSB009	5.5-6.5	N	26-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0222 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0178 U	<0.0021 U	<0.0021 U
35BSB010	0-0.5	N	20-Jan-11										<0.0222 U				<0.0179 U		
35BSB010	5.5-6.5	N	20-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0221 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0178 U	<0.0021 U	<0.0021 U
35BSB011	0-0.5	N	20-Jan-11										<0.0222 U				<0.0178 U		
35BSB011	19.5-20.5	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0225 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0225 U	<0.002 U	<0.002 U	<0.002 U	<0.0181 U	<0.002 U	<0.002 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0222 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0178 U	<0.0024 U	<0.0024 U
35BSB012	0-0.5	N	19-Jan-11										<0.0224 U				<0.018 U		
35BSB012	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0224 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.018 U	<0.0022 U	<0.0022 U
35BSB013	0-0.5	N	24-Jan-11										<0.022 U				<0.0177 U		
35BSB013	19-21	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0224 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.018 U	<0.0021 U	<0.0021 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0223 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0179 U	<0.0022 U	<0.0022 U
35BSB014	0-0.5	N	24-Jan-11										<0.0221 U				<0.0178 U		
35BSB014	5.5-6.5	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.022 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0177 U	<0.0021 U	<0.0021 U
35BSB015	0-0.5	N	19-Jan-11										<0.0221 U				<0.0178 U		
35BSB015	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0222 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0179 U	<0.0021 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane (Ethylene Dibromide)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
35BSB016	0-0.5	N	19-Jan-11										<0.022 U				<0.0177 U		
35BSB016	5.5-6.5	N	19-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0221 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0178 U	<0.0023 U	<0.0023 U
35BSB017	0-0.5	N	19-Jan-11										<0.0221 U				<0.0178 U		
35BSB017	0-0.5	FD	19-Jan-11										<0.0218 U				<0.0176 U		
35BSB017	5.5-6.5	N	19-Jan-11	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0223 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0179 U	<0.0019 U	<0.0019 U
35BSB018	0-0.5	N	25-Jan-11										<0.0221 U				<0.0178 U		
35BSB018	19.5-20.5	N	26-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0225 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0221 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0178 U	<0.0022 U	<0.0022 U
35BSB019	0-0.5	N	19-Jan-11										<0.0219 U				<0.0176 U		
35BSB019	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0225 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35BSB020	0-0.5	N	26-Jan-11										<0.0218 U				<0.0175 U		
35BSB020	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0221 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0178 U	<0.0022 U	<0.0022 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0224 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.018 U	<0.0024 U	<0.0024 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0221 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0178 U	<0.0021 U	<0.0021 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0223 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0179 U	<0.0022 U	<0.0022 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0223 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0179 U	<0.0021 U	<0.0021 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0223 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0179 U	<0.0019 U	<0.0019 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0224 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.018 U	<0.0022 U	<0.0022 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0225 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0223 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.018 U	<0.0022 U	<0.0022 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0226 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0223 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.018 U	<0.0023 U	<0.0023 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0222 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0179 U	<0.0021 U	<0.0021 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0224 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0181 U	<0.0023 U	<0.0023 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0224 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.018 U	<0.0026 U	<0.0026 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0222 U	<0.002 U	<0.002 U	<0.002 U	<0.0179 U	<0.002 U	<0.002 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0224 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0181 U	<0.0022 U	<0.0022 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0226 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0182 U	<0.0022 U	<0.0022 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0223 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.018 U	<0.0024 U	<0.0024 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0177 U	<0.0022 U	<0.0022 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0225 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0181 U	<0.0023 U	<0.0023 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0225 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35CSB010	0-0.5	N	07-Feb-11										<0.0222 U				<0.0179 U		
35CSB010	19.5-20.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0224 U	<0.002 U	<0.002 U	<0.002 U	<0.018 U	<0.002 U	<0.002 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0223 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0179 U	<0.0021 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane (Ethylene Dibromide)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
35CSB011	0-0.5	N	07-Feb-11										<0.0222 U				<0.0179 U		
35CSB011	19.5-20.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0223 U	<0.002 U	<0.002 U	<0.002 U	<0.0179 U	<0.002 U	<0.002 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0222 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0179 U	<0.0022 U	<0.0022 U
35CSB012	0-0.5	N	07-Feb-11										<0.0223 U				<0.0179 U		
35CSB012	19.5-20.5	N	07-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0223 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.018 U	<0.0021 U	<0.0021 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.022 U	<0.002 U	<0.002 U	<0.002 U	<0.0177 U	<0.002 U	<0.002 U
35CSB013	0-0.5	N	08-Feb-11										<0.0223 U				<0.0179 U		
35CSB013	0-0.5	FD	08-Feb-11										<0.0221 U				<0.0178 U		
35CSB013	19.5-20.5	N	08-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0225 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0181 U	<0.0021 U	<0.0021 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0223 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0179 U	<0.0023 U	<0.0023 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0221 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0178 U	<0.0023 U	<0.0023 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0228 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0184 U	<0.0022 U	<0.0022 U
35CSS001	0-0.5	N	25-Jan-11										<0.0222 U				<0.0179 U		
35CSS002	0-0.5	N	25-Jan-11										<0.0222 U				<0.0178 U		
35CSS003	0-0.5	N	25-Jan-11										<0.0219 U				<0.0176 U		
35CSS004	0-0.5	N	25-Jan-11										<0.022 U				<0.0177 U		
35CSS005	0-0.5	N	25-Jan-11										<0.0222 U				<0.0179 U		
35CSS006	0-0.5	N	10-Feb-11										<0.0223 U				<0.0179 U		
35CSS007	0-0.5	N	02-Feb-11										<0.022 U				<0.0177 U		
35CSS008	0-0.5	N	02-Feb-11										<0.0221 U				<0.0178 U		
35CSS009	0-0.5	N	10-Feb-11										<0.0224 U				<0.018 U		
35CSS010	0-0.5	N	10-Feb-11										<0.0223 U				<0.018 U		
35CSS011	0-0.5	N	10-Feb-11										<0.0223 U				<0.0179 U		
35CSS013	0-0.5	N	12-Jan-11										<0.0221 U				<0.0178 U		
35CSS014	0-0.5	N	12-Jan-11										<0.022 U				<0.0177 U		
35CSS015	0-0.5	N	12-Jan-11										<0.0223 U				<0.018 U		
35CSS016	0-0.5	N	12-Jan-11										<0.0222 U				<0.0179 U		
35CSS017	0-0.5	N	12-Jan-11										<0.0223 U				<0.0179 U		
35CSS018	0-0.5	N	12-Jan-11										<0.0222 U				<0.0179 U		
35CSS019	0-0.5	N	12-Jan-11										<0.0221 U				<0.0178 U		
35CSS020	0-0.5	N	12-Jan-11										<0.0221 U				<0.0178 U		
35CSS021	0-0.5	N	12-Jan-11										<0.0225 U				<0.0181 U		
35CSS022	0-0.5	N	12-Jan-11										<0.0221 U				<0.0177 U		
35CSS023	0-0.5	N	11-Jan-11										<0.022 U				<0.0177 U		
35CSS024	0-0.5	N	11-Jan-11										<0.0221 U				<0.0178 U		

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane (Ethylene Dibromide)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
35CSS025	0-0.5	N	11-Jan-11										<0.0218 U				<0.0175 U		
35CSS026	0-0.5	N	11-Jan-11										<0.0219 U				<0.0176 U		
35CSS027	0-0.5	N	11-Jan-11										<0.0218 U				<0.0175 U		
35CSS028	0-0.5	N	11-Jan-11										<0.0222 U				<0.0178 U		
35CSS029	0-0.5	N	11-Jan-11										<0.0221 U				<0.0178 U		
35CSS030	0-0.5	N	11-Jan-11										<0.0221 U				<0.0178 U		
35CSS031	0-0.5	N	11-Jan-11										<0.0218 U				<0.0176 U		
35CSS031	0-0.5	FD	11-Jan-11										<0.0217 U				<0.0175 U		

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,3,5-Trimethylbenzene (Mesitylene)	1,3,5-Trinitrobenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,3-Dinitrobenzene	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trinitrotoluene	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-Dinitrotoluene	2-Chloronaphthalene
35BSB001	0-0.5	N	27-Jan-11		<0.0099 U	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0523 U	<0.019 U	<0.0536 U	<0.0424 U	<0.179 U	<0.047 U	<0.0197 U	<0.012 U	<0.0181 U
35BSB001	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0098 U	<0.019 U	<0.0022 U	<0.0041 U	<0.0107 U	<0.0022 U	<0.0404 U	<0.0531 U	<0.019 U	<0.0545 U	<0.0431 U	<0.182 U	<0.0477 U	<0.02 U	<0.012 U	<0.0184 U
35BSB002	0-0.5	N	27-Jan-11		<0.0099 U	<0.0186 U		<0.0042 U	<0.0104 U		<0.0396 U	<0.052 U	<0.019 U	<0.0533 U	<0.0422 U	<0.178 U	<0.0467 U	<0.0196 U	<0.012 U	<0.018 U
35BSB002	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0099 U	<0.019 U	<0.0023 U	<0.0042 U	<0.0107 U	<0.0023 U	<0.0405 U	<0.0532 U	<0.019 U	<0.0545 U	<0.0431 U	<0.182 U	<0.0478 U	<0.02 U	<0.012 U	<0.0184 U
35BSB003	0-0.5	N	26-Jan-11		<0.0098 U	<0.0185 U		<0.0041 U	<0.0104 U		<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35BSB003	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0099 U	<0.019 U	<0.0023 U	<0.0042 U	<0.0107 U	<0.0023 U	<0.0405 U	<0.0533 U	<0.019 U	<0.0546 U	<0.0432 U	<0.182 U	<0.0478 U	<0.0201 U	<0.012 U	<0.0184 U
35BSB004	0-0.5	N	27-Jan-11		<0.0099 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	<0.0468 U	<0.0196 U	<0.012 U	<0.018 U
35BSB004	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0099 U	<0.0194 U	<0.0022 U	<0.0042 U	<0.0109 U	<0.0022 U	<0.0413 U	<0.0543 U	<0.019 U	<0.0556 U	<0.044 U	<0.185 U	<0.0487 U	<0.0204 U	<0.012 U	<0.0188 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0023 U	<0.0098 U	<0.0192 U	<0.0023 U	<0.0041 U	<0.0108 U	<0.0023 U	<0.0409 U	<0.0538 U	<0.019 U	<0.0552 U	<0.0437 U	<0.184 U	<0.0483 U	<0.0203 U	<0.012 U	<0.0186 U
35BSB005	0-0.5	N	27-Jan-11		<0.0098 U	<0.0188 U		<0.0041 U	<0.0106 U		<0.04 U	<0.0526 U	<0.019 U	<0.0539 U	<0.0427 U	<0.18 U	<0.0472 U	<0.0198 U	<0.012 U	<0.0182 U
35BSB005	19.5-20.5	N	27-Jan-11	<0.0023 U	<0.01 U	<0.0192 U	<0.0023 U	<0.0042 U	<0.0108 U	<0.0023 U	<0.041 U	<0.0538 U	<0.019 U	<0.0552 U	<0.0437 U	<0.184 U	<0.0483 U	<0.0203 U	<0.012 U	<0.0186 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0025 U	<0.0099 U	<0.0189 U	<0.0025 U	<0.0042 U	<0.0106 U	<0.0025 U	<0.0402 U	<0.0528 U	<0.019 U	<0.0541 U	<0.0428 U	<0.18 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0182 U
35BSB006	0-0.5	N	26-Jan-11		<0.0099 U	<0.0185 U		<0.0042 U	<0.0104 U		<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35BSB006	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.01 U	<0.019 U	<0.0022 U	<0.0042 U	<0.0107 U	<0.0022 U	<0.0405 U	<0.0532 U	<0.019 U	<0.0545 U	<0.0431 U	<0.182 U	<0.0478 U	<0.02 U	<0.012 U	<0.0184 U
35BSB007	0-0.5	N	20-Jan-11		<0.01 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	0.14 J	0.1 J	<0.012 U	<0.018 U
35BSB007	5.5-6.5	N	20-Jan-11	<0.0018 U	<0.0099 U	<0.0186 U	<0.0018 U	<0.0042 U	<0.0105 U	<0.0018 U	<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	0.13 J	0.085 J	<0.012 U	<0.018 U
35BSB008	0-0.5	N	26-Jan-11		<0.0099 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	<0.0467 U	<0.0196 U	<0.012 U	<0.018 U
35BSB008	5.5-6.5	N	26-Jan-11	<0.002 U	<0.0098 U	<0.0188 U	<0.002 U	<0.0041 U	<0.0106 U	<0.002 U	<0.0401 U	<0.0527 U	<0.019 U	<0.054 U	<0.0427 U	<0.18 U	<0.0473 U	<0.0198 U	<0.012 U	<0.0182 U
35BSB009	0-0.5	N	26-Jan-11		<0.0099 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0423 U	<0.178 U	<0.0468 U	<0.0196 U	<0.012 U	<0.018 U
35BSB009	5.5-6.5	N	26-Jan-11	<0.0021 U	<0.0099 U	<0.0187 U	<0.0021 U	<0.0042 U	<0.0105 U	<0.0021 U	<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	<0.0469 U	<0.0197 U	<0.012 U	<0.018 U
35BSB010	0-0.5	N	20-Jan-11		<0.0097 U	<0.0187 U		<0.0041 U	<0.0105 U		<0.0398 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0425 U	<0.179 U	0.19 J	0.12 J	<0.012 U	<0.0181 U
35BSB010	5.5-6.5	N	20-Jan-11	<0.0021 U	<0.0096 U	<0.0186 U	<0.0021 U	<0.004 U	<0.0104 U	<0.0021 U	<0.0396 U	<0.052 U	<0.019 U	<0.0533 U	<0.0422 U	<0.178 U	0.15 J	0.093 J	<0.012 U	<0.018 U
35BSB011	0-0.5	N	20-Jan-11		<0.01 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	0.083 J	0.066 J	<0.012 U	<0.018 U
35BSB011	19.5-20.5	N	24-Jan-11	<0.0021 U	<0.0099 U	<0.0189 U	<0.0021 U	<0.0042 U	<0.0106 U	<0.0021 U	<0.0403 U	<0.053 U	<0.019 U	<0.0543 U	<0.043 U	<0.181 U	<0.0476 U	<0.0199 U	<0.012 U	<0.0183 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.002 U	<0.0099 U	<0.0189 U	<0.002 U	<0.0042 U	<0.0106 U	<0.002 U	<0.0403 U	<0.0529 U	<0.019 U	<0.0543 U	<0.0429 U	<0.181 U	<0.0475 U	<0.0199 U	<0.012 U	<0.0183 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0024 U	<0.0098 U	<0.0186 U	<0.0024 U	<0.0041 U	<0.0105 U	<0.0024 U	<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	0.081 J	0.075 J	0.32 J	<0.018 U
35BSB012	0-0.5	N	19-Jan-11		<0.01 U	<0.0188 U		<0.0042 U	<0.0106 U		<0.0401 U	<0.0527 U	<0.019 U	<0.054 U	<0.0427 U	<0.18 U	0.073 J	0.059 J	<0.012 U	<0.0182 U
35BSB012	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0099 U	<0.0188 U	<0.0022 U	<0.0042 U	<0.0106 U	<0.0022 U	<0.0401 U	<0.0528 U	<0.019 U	<0.0541 U	<0.0428 U	<0.18 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0182 U
35BSB013	0-0.5	N	24-Jan-11		<0.01 U	<0.0185 U		<0.0042 U	<0.0104 U		<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35BSB013	19-21	N	24-Jan-11	<0.0021 U	<0.0099 U	<0.0188 U	<0.0021 U	<0.0042 U	<0.0106 U	<0.0021 U	<0.0401 U	<0.0527 U	<0.019 U	<0.054 U	<0.0427 U	<0.18 U	<0.0473 U	<0.0198 U	<0.012 U	<0.0182 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0099 U	<0.0187 U	<0.0022 U	<0.0042 U	<0.0105 U	<0.0022 U	<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0426 U	<0.179 U	<0.0471 U	<0.0198 U	<0.012 U	<0.0181 U
35BSB014	0-0.5	N	24-Jan-11		<0.0099 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	<0.0468 U	<0.0196 U	<0.012 U	<0.018 U
35BSB014	5.5-6.5	N	24-Jan-11	<0.0021 U	<0.0098 U	<0.0185 U	<0.0021 U	<0.0041 U	<0.0104 U	<0.0021 U	<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35BSB015	0-0.5	N	19-Jan-11		<0.0097 U	<0.0186 U		<0.0041 U	<0.0104 U		<0.0395 U	<0.052 U	<0.019 U	<0.0533 U	<0.0421 U	<0.178 U	0.15 J	0.078 J	<0.012 U	<0.018 U
35BSB015	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0099 U	<0.0187 U	<0.0021 U	<0.0042 U	<0.0105 U	<0.0021 U	<0.0398 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0424 U	<0.179 U	0.1 J	0.066 J	<0.012 U	<0.0181 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,3,5-Trimethylbenzene (Mesitylene)	1,3,5-Trinitrobenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,3-Dinitrobenzene	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trinitrotoluene	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-Dinitrotoluene	2-Chloronaphthalene
35BSB016	0-0.5	N	19-Jan-11		<0.01 U	<0.0185 U		<0.0042 U	<0.0104 U		<0.0394 U	<0.0517 U	<0.019 U	<0.053 U	<0.042 U	<0.177 U	0.12 J	0.082 J	0.041 J	<0.0179 U
35BSB016	5.5-6.5	N	19-Jan-11	<0.0023 U	<0.0099 U	<0.0186 U	<0.0023 U	<0.0042 U	<0.0105 U	<0.0023 U	<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	0.078 J	0.059 J	<0.012 U	<0.018 U
35BSB017	0-0.5	N	19-Jan-11		<0.0099 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 UJ	0.048 J	0.041 J	<0.012 U	<0.018 U
35BSB017	0-0.5	FD	19-Jan-11		<0.0098 U	<0.0183 U		<0.0041 U	<0.0103 U		<0.0391 U	<0.0514 U	<0.019 U	<0.0527 U	<0.0416 U	<0.176 U	0.087 J	0.092 J	0.3 J	<0.0178 U
35BSB017	5.5-6.5	N	19-Jan-11	<0.0019 U	<0.0099 U	<0.0187 U	<0.0019 U	<0.0042 U	<0.0105 U	<0.0019 U	<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0426 U	<0.179 U	0.13 J	0.093 J	<0.012 U	<0.0181 U
35BSB018	0-0.5	N	25-Jan-11		<0.01 U	<0.0186 U		<0.0042 U	<0.0104 U		<0.0396 U	<0.052 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	0.028 J	<0.0196 U	<0.012 U	<0.018 U
35BSB018	19.5-20.5	N	26-Jan-11	<0.0021 U	<0.0099 U	<0.0189 U	<0.0021 U	<0.0042 U	<0.0106 U	<0.0021 U	<0.0402 U	<0.0529 U	<0.019 U	<0.0542 U	<0.0429 U	<0.181 U	<0.0475 U	<0.0199 U	<0.012 U	<0.0183 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0022 U	<0.0099 U	<0.0186 U	<0.0022 U	<0.0042 U	<0.0104 U	<0.0022 U	<0.0396 U	<0.052 U	<0.019 U	<0.0533 U	<0.0422 U	<0.178 U	<0.0467 U	<0.0196 U	<0.012 U	<0.018 U
35BSB019	0-0.5	N	19-Jan-11		<0.0099 U	<0.0184 U		<0.0042 U	<0.0104 U		<0.0392 U	<0.0516 U	<0.019 U	<0.0529 U	<0.0418 U	<0.176 U	0.13 J	0.095 J	<0.012 U	<0.0178 U
35BSB019	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0096 U	<0.0189 U	<0.0021 U	<0.004 U	<0.0106 U	<0.0021 U	<0.0403 U	<0.053 U	<0.019 U	<0.0543 U	<0.043 U	<0.181 U	0.14 J	0.096 J	<0.012 U	<0.0183 U
35BSB020	0-0.5	N	26-Jan-11		<0.0099 U	<0.0183 U		<0.0042 U	<0.0103 U		<0.0391 U	<0.0514 U	<0.019 U	<0.0526 U	<0.0416 U	<0.175 U	<0.0461 U	<0.0193 U	<0.012 U	<0.0177 U
35BSB020	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0099 U	<0.0186 U	<0.0022 U	<0.0042 U	<0.0104 U	<0.0022 U	<0.0395 U	<0.052 U	<0.019 U	<0.0533 U	<0.0421 U	<0.178 U	<0.0466 U	<0.0196 U	<0.012 U	<0.018 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0024 U	<0.0099 U	<0.0189 U	<0.0024 U	<0.0042 U	<0.0106 U	<0.0024 U	<0.0402 U	<0.0528 U	<0.019 U	<0.0541 U	<0.0428 U	<0.18 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0183 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0021 U	0.095 J	<0.0186 U	<0.0021 U	0.013 J	<0.0105 U	<0.0021 U	<0.0396 U	<0.0521 U	0.046 J	<0.0534 U	<0.0422 U	<0.178 U	0.057 J	0.024 J	<0.012 U	<0.018 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0022 U	<0.0099 U	<0.0187 U	<0.0022 U	<0.0042 U	<0.0105 U	<0.0022 U	<0.0399 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0425 U	<0.179 U	<0.047 U	<0.0197 U	<0.012 U	<0.0181 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.01 U	<0.0187 U	<0.0021 U	<0.0042 U	<0.0105 U	<0.0021 U	<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0426 U	<0.179 U	<0.0471 U	<0.0198 U	<0.012 U	<0.0181 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0019 U	<0.0098 U	<0.0187 U	<0.0019 U	<0.0041 U	<0.0105 U	<0.0019 U	<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0426 U	<0.179 U	<0.0471 U	<0.0198 U	<0.012 U	<0.0181 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.01 U	<0.0189 U	<0.0022 U	<0.0042 U	<0.0106 U	<0.0022 U	<0.0402 U	<0.0528 U	<0.019 U	<0.0541 U	<0.0428 U	<0.18 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0183 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0097 U	<0.0189 U	<0.0021 U	<0.0041 U	<0.0106 U	<0.0021 U	<0.0403 U	<0.053 U	<0.019 U	<0.0543 U	<0.043 U	<0.181 U	<0.0476 U	<0.02 U	<0.012 U	<0.0183 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0097 U	<0.0188 U	<0.0022 U	<0.0041 U	<0.0106 U	<0.0022 U	<0.04 U	<0.0526 U	<0.019 U	<0.0539 U	<0.0426 U	<0.18 U	<0.0472 U	<0.0198 U	<0.012 U	<0.0182 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0099 U	<0.019 U	<0.0021 U	<0.0042 U	<0.0107 U	<0.0021 U	<0.0404 U	<0.0531 U	<0.019 U	<0.0544 U	<0.0431 U	<0.181 U	<0.0477 U	<0.02 U	<0.012 U	<0.0184 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0023 U	<0.0097 U	<0.0188 U	<0.0023 U	<0.0041 U	<0.0106 U	<0.0023 U	<0.04 U	<0.0526 U	<0.019 U	<0.0539 U	<0.0426 U	<0.18 U	<0.0472 U	<0.0198 U	<0.012 U	<0.0182 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0099 U	<0.0187 U	<0.0021 U	<0.0042 U	<0.0105 U	<0.0021 U	<0.0398 U	<0.0523 U	<0.019 U	<0.0537 U	<0.0424 U	<0.179 U	<0.047 U	<0.0197 U	<0.012 U	<0.0181 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0023 U	<0.0098 U	<0.0189 U	<0.0023 U	<0.0041 U	<0.0106 U	<0.0023 U	<0.0402 U	<0.0528 U	<0.019 U	<0.0542 U	<0.0428 U	<0.181 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0183 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0026 U	<0.0099 U	<0.0188 U	<0.0026 U	<0.0042 U	<0.0106 U	<0.0026 U	<0.0401 U	<0.0527 U	<0.019 U	<0.0541 U	<0.0428 U	<0.18 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0182 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.002 U	<0.0098 U	<0.0187 U	<0.002 U	<0.0041 U	<0.0105 U	<0.002 U	<0.0398 U	<0.0523 U	<0.019 U	<0.0537 U	<0.0424 U	<0.179 U	<0.047 U	<0.0197 U	<0.012 U	<0.0181 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0097 U	<0.0189 U	<0.0022 U	<0.0041 U	<0.0106 U	<0.0022 U	<0.0402 U	<0.0528 U	<0.019 U	<0.0542 U	<0.0428 U	<0.181 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0183 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0022 U	0.011 J	<0.019 U	<0.0022 U	<0.0042 U	<0.0107 U	<0.0022 U	<0.0404 U	<0.0531 U	<0.019 U	<0.0545 U	<0.0431 U	<0.182 U	0.019 J	<0.02 U	<0.012 U	<0.0184 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0024 U	<0.0098 U	<0.0188 U	<0.0024 U	<0.0041 U	<0.0106 U	<0.0024 U	<0.04 U	<0.0526 U	<0.019 U	<0.0539 U	<0.0427 U	<0.18 U	<0.0472 U	<0.0198 U	<0.012 U	<0.0182 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0022 U	0.016 J	<0.0185 U	<0.0022 U	<0.0042 U	<0.0104 U	<0.0022 U	<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0099 U	<0.0189 U	<0.0023 U	<0.0042 U	<0.0106 U	<0.0023 U	<0.0403 U	<0.053 U	<0.019 U	<0.0543 U	<0.0429 U	<0.181 U	<0.0475 U	<0.0199 U	<0.012 U	<0.0183 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.0021 U	<0.01 U	<0.0189 U	<0.0021 U	<0.0042 U	<0.0106 U	<0.0021 U	<0.0403 U	<0.0529 U	<0.02 U	<0.0543 U	<0.0429 U	<0.181 U	<0.0475 U	<0.0199 U	<0.013 U	<0.0183 U
35CSB010	0-0.5	N	07-Feb-11		<0.01 U	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0523 U	<0.019 U	<0.0536 U	<0.0424 U	<0.179 U	<0.0469 U	<0.0197 U	<0.012 U	<0.0181 U
35CSB010	19.5-20.5	N	07-Feb-11	<0.002 U	<0.0096 U	<0.0188 U	<0.002 U	<0.004 U	<0.0106 U	<0.002 U	<0.0401 U	<0.0527 U	<0.019 U	<0.0541 U	<0.0428 U	<0.18 U	<0.0474 U	<0.0199 U	<0.012 U	<0.0182 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0021 U	<0.0098 U	<0.0187 U	<0.0021 U	<0.0041 U	<0.0105 U	<0.0021 U	<0.0399 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0425 U	<0.179 U	<0.047 U	<0.0197 U	<0.012 U	<0.0181 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,3,5-Trimethylbenzene (Mesitylene)	1,3,5-Trinitrobenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,3-Dinitrobenzene	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trinitrotoluene	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-Dinitrotoluene	2-Chloronaphthalene
35CSB011	0-0.5	N	07-Feb-11		0.085 J	<0.0187 U		0.025 J	<0.0105 U		<0.0398 U	<0.0524 U	0.045 J	<0.0537 U	<0.0425 U	<0.179 U	1.4	0.045 J	<0.012 U	<0.0181 U
35CSB011	19.5-20.5	N	07-Feb-11	<0.002 U	<0.0097 U	<0.0187 U	<0.002 U	<0.0041 U	<0.0105 U	<0.002 U	<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0425 U	<0.179 U	<0.0471 U	<0.0197 U	<0.012 U	<0.0181 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0022 U	<0.0098 U	<0.0187 U	<0.0022 U	<0.0041 U	<0.0105 U	<0.0022 U	<0.0398 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0424 U	<0.179 U	0.16 J	0.016 J	<0.012 U	<0.0181 U
35CSB012	0-0.5	N	07-Feb-11		<0.0096 U	<0.0187 U		<0.004 U	<0.0105 U		<0.0399 U	<0.0524 U	<0.019 U	<0.0538 U	<0.0425 U	<0.179 U	0.57	0.032 J	<0.012 U	<0.0181 U
35CSB012	19.5-20.5	N	07-Feb-11	<0.0021 U	<0.0099 U	<0.0188 U	<0.0021 U	<0.0042 U	<0.0106 U	<0.0021 U	<0.04 U	<0.0525 U	<0.019 U	<0.0539 U	<0.0426 U	<0.18 U	<0.0472 U	<0.0198 U	<0.012 U	<0.0182 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.002 U	<0.0098 U	<0.0185 U	<0.002 U	<0.0041 U	<0.0104 U	<0.002 U	<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35CSB013	0-0.5	N	08-Feb-11		<0.01 U	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0425 U	<0.179 U	<0.047 U	<0.0197 U	<0.012 U	<0.0181 U
35CSB013	0-0.5	FD	08-Feb-11		<0.0095 U	<0.0186 U		<0.004 U	<0.0104 U		<0.0395 U	<0.052 U	<0.018 U	<0.0533 U	<0.0422 U	<0.178 U	<0.0467 U	<0.0196 U	<0.012 U	<0.018 U
35CSB013	19.5-20.5	N	08-Feb-11	<0.0021 U	<0.0099 U	<0.0189 U	<0.0021 U	<0.0042 U	<0.0106 U	<0.0021 U	<0.0402 U	<0.0529 U	<0.019 U	<0.0542 U	<0.0429 U	<0.181 U	<0.0475 U	<0.0199 U	<0.012 U	<0.0183 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0023 U	<0.0097 U	<0.0187 U	<0.0023 U	<0.0041 U	<0.0105 U	<0.0023 U	<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0425 U	<0.179 U	<0.0471 U	<0.0198 U	<0.012 U	<0.0181 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.01 U	<0.0186 U	<0.0023 U	<0.0042 U	<0.0105 U	<0.0023 U	<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	<0.0468 U	<0.0196 U	<0.012 U	<0.018 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0022 U	0.051 J	<0.0192 U	<0.0022 U	0.0055 J	<0.0108 U	<0.0022 U	<0.0409 U	<0.0537 U	<0.019 U	<0.0551 U	<0.0435 U	<0.184 U	0.033 J	<0.0202 U	<0.012 U	<0.0186 U
35CSS001	0-0.5	N	25-Jan-11		0.058 J	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0523 U	<0.019 U	<0.0536 U	<0.0424 U	<0.179 U	0.21 J	<0.0197 U	<0.012 U	<0.0181 U
35CSS002	0-0.5	N	25-Jan-11		<0.0098 U	<0.0186 U		<0.0041 U	<0.0105 U		<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	0.36	<0.0196 U	<0.012 U	<0.018 U
35CSS003	0-0.5	N	25-Jan-11		<0.0099 U	<0.0184 U		<0.0042 U	<0.0103 U		<0.0392 U	<0.0515 U	0.26	<0.0528 U	<0.0418 U	<0.176 U	0.277 J	<0.0194 U	<0.012 U	<0.0178 U
35CSS004	0-0.5	N	25-Jan-11		<0.0098 U	<0.0185 U		<0.0041 U	<0.0104 U		<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	0.029 J	<0.0195 U	<0.012 U	<0.0179 U
35CSS005	0-0.5	N	25-Jan-11		0.015 J	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0524 U	<0.019 U	<0.0537 U	<0.0425 U	<0.179 U	0.065 J	<0.0197 U	<0.012 U	<0.0181 U
35CSS006	0-0.5	N	10-Feb-11		0.011 J	<0.0187 U		<0.0042 U	<0.0105 U		<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0425 U	<0.179 U	0.0084 J	<0.0197 U	<0.012 U	<0.0181 U
35CSS007	0-0.5	N	02-Feb-11		0.099 J	<0.0185 U		0.012 J	<0.0104 U		<0.0394 U	<0.0518 U	<0.019 U	<0.0531 U	<0.042 U	<0.177 U	0.36	0.035 J	0.035 J	<0.0179 U
35CSS008	0-0.5	N	02-Feb-11		<0.01 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0396 U	<0.0521 U	0.027 J	<0.0534 U	<0.0422 U	<0.178 U	2.4	0.14 J	<0.012 U	<0.018 U
35CSS009	0-0.5	N	10-Feb-11		0.11 J	<0.0188 U		<0.0042 U	<0.0106 U		<0.04 U	<0.0526 U	0.026 J	<0.0539 U	<0.0427 U	<0.18 U	0.29	<0.0198 U	<0.012 U	<0.0182 U
35CSS010	0-0.5	N	10-Feb-11		<0.0098 U	<0.0188 U		<0.0041 U	<0.0106 U		<0.04 U	<0.0526 U	<0.019 U	<0.0539 U	<0.0426 U	<0.18 U	1.3	0.069 J	<0.012 U	<0.0182 U
35CSS011	0-0.5	N	10-Feb-11		<0.0099 U	<0.0187 U		<0.0042 U	<0.0105 U		<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0426 U	<0.179 U	0.027 J	<0.0198 U	<0.012 U	<0.0181 U
35CSS013	0-0.5	N	12-Jan-11		<0.0094 U	<0.0186 U		<0.0039 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.018 U	<0.0534 U	<0.0423 U	<0.178 U	0.456	<0.0196 U	0.14 J	<0.018 U
35CSS014	0-0.5	N	12-Jan-11		<0.01 U	<0.0185 U		<0.0042 U	<0.0104 U		<0.0393 U	<0.0517 U	<0.019 U	<0.053 U	<0.0419 U	<0.177 U	0.35	0.016 J	<0.012 U	<0.0179 U
35CSS015	0-0.5	N	12-Jan-11		<0.0098 U	<0.0188 U		<0.0041 U	<0.0106 U		<0.04 U	<0.0526 U	<0.019 U	<0.0539 U	<0.0426 U	<0.18 U	0.024 J	<0.0198 U	<0.012 U	<0.0182 U
35CSS016	0-0.5	N	12-Jan-11		<0.0099 U	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0523 U	0.027 J	<0.0536 U	<0.0424 U	<0.179 U	0.59	0.051 J	0.074 J	<0.0181 U
35CSS017	0-0.5	N	12-Jan-11		<0.0099 U	<0.0188 U		<0.0042 U	<0.0105 U		<0.0399 U	<0.0525 U	<0.019 U	<0.0538 U	<0.0426 U	<0.179 U	<0.0471 U	<0.0198 U	<0.012 U	<0.0181 U
35CSS018	0-0.5	N	12-Jan-11		<0.01 U	<0.0187 U		<0.0042 U	<0.0105 U		<0.0398 U	<0.0523 U	<0.02 U	<0.0536 U	<0.0424 U	<0.179 U	<0.0469 U	<0.0197 U	<0.013 U	<0.0181 U
35CSS019	0-0.5	N	12-Jan-11		<0.01 U	<0.0186 U		<0.0042 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.019 U	<0.0534 U	<0.0422 U	<0.178 U	<0.0468 U	<0.0196 U	<0.012 U	<0.018 U
35CSS020	0-0.5	N	12-Jan-11		<0.0095 U	<0.0186 U		<0.004 U	<0.0105 U		<0.0396 U	<0.0521 U	<0.018 U	<0.0534 U	<0.0423 U	<0.178 U	0.88	0.068 J	<0.012 U	<0.018 U
35CSS021	0-0.5	N	12-Jan-11		0.086 J	<0.0189 U		0.0055 J	<0.0107 U		<0.0404 U	<0.0531 U	<0.019 U	<0.0544 U	<0.043 U	<0.181 U	0.016 J	<0.02 U	<0.012 U	<0.0183 U
35CSS022	0-0.5	N	12-Jan-11		0.64	<0.0185 U		<0.0042 U	<0.0104 U		<0.0395 U	<0.0519 U	0.049 J	<0.0532 U	<0.0421 U	<0.177 U	0.094 J	<0.0195 U	0.043 J	<0.0179 U
35CSS023	0-0.5	N	11-Jan-11		<0.01 U	<0.0185 U		<0.0042 U	<0.0104 U		<0.0394 U	<0.0519 U	0.39	<0.0532 U	<0.042 U	<0.177 U	<0.0465 U	<0.0195 U	<0.012 U	<0.0179 U
35CSS024	0-0.5	N	11-Jan-11		<0.0096 U	<0.0186 U		<0.004 U	<0.0104 U		<0.0395 U	<0.052 U	<0.019 U	<0.0533 U	<0.0422 U	<0.178 U	<0.0467 U	<0.0196 U	<0.012 U	<0.018 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	1,3,5-Trimethylbenzene (Mesitylene)	1,3,5-Trinitrobenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,3-Dinitrobenzene	1,4-Dichlorobenzene	2,2-Dichloropropane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trinitrotoluene	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Amino-4,6-Dinitrotoluene	2-Chloronaphthalene
35CSS025	0-0.5	N	11-Jan-11		<0.0098 U	<0.0183 U		<0.0041 U	<0.0103 U		<0.039 U	<0.0512 U	<0.019 U	<0.0525 U	<0.0416 U	<0.175 U	<0.046 U	<0.0193 U	<0.012 U	<0.0177 U
35CSS026	0-0.5	N	11-Jan-11		<0.01 U	<0.0184 U		<0.0042 U	<0.0104 U		<0.0392 U	<0.0516 U	0.15 J	<0.0529 U	<0.0418 U	<0.176 U	1.27	<0.0194 U	<0.012 U	<0.0178 U
35CSS027	0-0.5	N	11-Jan-11		<0.0098 U	<0.0183 U		<0.0041 U	<0.0103 U		<0.0391 U	<0.0513 U	<0.019 U	<0.0526 U	<0.0416 U	<0.175 U	0.753	<0.0193 U	<0.012 U	<0.0177 U
35CSS028	0-0.5	N	11-Jan-11		<0.0097 U	<0.0186 U		<0.0041 U	<0.0105 U		<0.0397 U	<0.0522 U	<0.019 U	<0.0535 U	<0.0423 U	<0.178 U	0.96	0.063 J	<0.012 U	<0.018 U
35CSS029	0-0.5	N	11-Jan-11		<0.01 U	<0.0186 U		<0.0042 U	<0.0104 U		<0.0396 U	<0.052 U	<0.02 U	<0.0533 U	<0.0422 U	<0.178 U	0.026 J	<0.0196 U	0.34	<0.018 U
35CSS030	0-0.5	N	11-Jan-11		<0.0098 U	<0.0186 U		<0.0041 U	<0.0104 U		<0.0396 U	<0.052 U	0.4	<0.0533 U	<0.0422 U	<0.178 U	2.9	0.23 J	<0.012 U	<0.018 U
35CSS031	0-0.5	N	11-Jan-11		<0.0098 U	<0.0184 U		<0.0041 U	<0.0103 U		<0.0391 U	<0.0514 U	0.73 J	<0.0527 U	<0.0417 U	<0.176 UJ	1.1 J	<0.0194 U	<0.012 U	<0.0178 U
35CSS031	0-0.5	FD	11-Jan-11		<0.0098 U	<0.0183 U		<0.0041 U	<0.0103 U		<0.0389 U	<0.0512 U	0.52	<0.0525 U	<0.0415 U	<0.175 U	1.56	<0.0193 U	<0.012 U	<0.0177 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	2-Chlorophenol	2-Chlorotoluene	2-Hexanone	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	2-Nitrotoluene	3-Nitroaniline	3-Nitrotoluene	4,6-Dinitro-2-Methylphenol	4-Amino-2,6-Dinitrotoluene	4-Bromophenyl Phenyl Ether	4-Chloro-3-Methylphenol	4-Chlorophenyl Phenyl Ether	4-Chlorotoluene
35BSB001	0-0.5	N	27-Jan-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0375 U	<0.0152 U	<0.013 U	<0.0407 U	<0.015 U	<0.0327 U	<0.0099 U	<0.0294 U	<0.0263 U	<0.0371 U	
35BSB001	5.5-6.5	N	27-Jan-11	<0.026 U	<0.0022 U	<0.0054 U	<0.0182 U	<0.0104 U	<0.038 U	<0.0155 U	<0.013 U	<0.0413 U	<0.015 U	<0.0332 U	<0.0098 U	<0.0298 U	<0.0267 U	<0.0376 U	<0.0022 U
35BSB002	0-0.5	N	27-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0372 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0325 U	<0.0099 U	<0.0292 U	<0.0261 U	<0.0368 U	
35BSB002	5.5-6.5	N	26-Jan-11	<0.0261 U	<0.0023 U	<0.0058 U	<0.0182 U	<0.0104 U	<0.0381 U	<0.0155 U	<0.013 U	<0.0414 U	<0.015 U	<0.0333 U	<0.0099 U	<0.0299 U	<0.0267 U	<0.0377 U	<0.0023 U
35BSB003	0-0.5	N	26-Jan-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.015 U	<0.0324 U	<0.0098 U	<0.0291 U	<0.026 U	<0.0367 U	
35BSB003	5.5-6.5	N	26-Jan-11	<0.0261 U	<0.0023 U	<0.0057 U	<0.0182 U	<0.0104 U	<0.0381 U	<0.0155 U	<0.013 U	<0.0414 U	<0.015 U	<0.0333 U	<0.0099 U	<0.0299 U	<0.0267 U	<0.0377 U	<0.0023 U
35BSB004	0-0.5	N	27-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0262 U	<0.037 U	
35BSB004	5.5-6.5	N	27-Jan-11	<0.0266 U	<0.0022 U	<0.0055 U	<0.0185 U	<0.0106 U	<0.0389 U	<0.0158 U	<0.013 U	<0.0422 U	<0.015 U	<0.0339 U	<0.0099 U	<0.0305 U	<0.0272 U	<0.0384 U	<0.0022 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0264 U	<0.0023 U	<0.0058 U	<0.0184 U	<0.0105 U	<0.0386 U	<0.0157 U	<0.013 U	<0.0419 U	<0.015 U	<0.0337 U	<0.0098 U	<0.0302 U	<0.027 U	<0.0381 U	<0.0023 U
35BSB005	0-0.5	N	27-Jan-11	<0.0258 U			<0.018 U	<0.0103 U	<0.0377 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	<0.0098 U	<0.0296 U	<0.0264 U	<0.0373 U	
35BSB005	19.5-20.5	N	27-Jan-11	<0.0264 U	<0.0023 U	<0.0057 U	<0.0184 U	<0.0105 U	<0.0386 U	<0.0157 U	<0.013 U	<0.0419 U	<0.016 U	<0.0337 U	<0.01 U	<0.0302 U	<0.027 U	<0.0381 U	<0.0023 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0259 U	<0.0025 U	<0.0062 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.0411 U	<0.015 U	<0.033 U	<0.0099 U	<0.0297 U	<0.0265 U	<0.0374 U	<0.0025 U
35BSB006	0-0.5	N	26-Jan-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.015 U	<0.0324 U	<0.0099 U	<0.0291 U	<0.026 U	<0.0367 U	
35BSB006	5.5-6.5	N	26-Jan-11	<0.0261 U	<0.0022 U	<0.0055 U	<0.0182 U	<0.0104 U	<0.0381 U	<0.0155 U	<0.013 U	<0.0414 U	<0.016 U	<0.0333 U	<0.01 U	<0.0299 U	<0.0267 U	<0.0377 U	<0.0022 U
35BSB007	0-0.5	N	20-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.016 U	<0.0326 U	<0.01 U	<0.0293 U	<0.0262 U	<0.037 U	
35BSB007	5.5-6.5	N	20-Jan-11	<0.0255 U	<0.0018 U	<0.0045 U	0.0769 J	0.0181 J	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0261 U	<0.0369 U	<0.0018 U
35BSB008	0-0.5	N	26-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0292 U	<0.0261 U	<0.0369 U	
35BSB008	5.5-6.5	N	26-Jan-11	<0.0258 U	<0.002 U	<0.005 U	<0.018 U	<0.0103 U	<0.0377 U	<0.0154 U	<0.013 U	<0.041 U	<0.015 U	<0.0329 U	<0.0098 U	<0.0296 U	<0.0264 U	<0.0373 U	<0.002 U
35BSB009	0-0.5	N	26-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0406 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0262 U	<0.0369 U	
35BSB009	5.5-6.5	N	26-Jan-11	<0.0256 U	<0.0021 U	<0.0054 U	<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.015 U	<0.0327 U	<0.0099 U	<0.0293 U	<0.0262 U	<0.037 U	<0.0021 U
35BSB010	0-0.5	N	20-Jan-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 U	<0.015 U	<0.0328 U	<0.0097 U	<0.0294 U	<0.0263 U	<0.0371 U	
35BSB010	5.5-6.5	N	20-Jan-11	<0.0255 U	<0.0021 U	<0.0052 U	<0.0178 U	<0.0101 U	<0.0372 U	<0.0152 U	<0.012 U	<0.0405 U	<0.015 U	<0.0325 U	<0.0096 U	<0.0292 U	<0.0261 U	<0.0368 U	<0.0021 U
35BSB011	0-0.5	N	20-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.016 U	<0.0326 U	<0.01 U	<0.0293 U	<0.0262 U	<0.037 U	
35BSB011	19.5-20.5	N	24-Jan-11	<0.026 U	<0.0021 U	<0.0052 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0412 U	<0.015 U	<0.0331 U	<0.0099 U	<0.0298 U	<0.0266 U	<0.0375 U	<0.0021 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.026 U	<0.002 U	<0.005 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0412 U	<0.015 U	<0.0331 U	<0.0099 U	<0.0297 U	<0.0266 U	<0.0375 U	<0.002 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0256 U	<0.0024 U	<0.006 U	<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.015 U	<0.0326 U	<0.0098 U	<0.0293 U	<0.0262 U	<0.037 U	<0.0024 U
35BSB012	0-0.5	N	19-Jan-11	<0.0258 U			<0.018 U	<0.0103 U	<0.0377 U	<0.0154 U	<0.013 U	<0.041 U	<0.016 U	<0.033 U	<0.01 U	<0.0296 U	<0.0264 U	<0.0373 U	
35BSB012	5.5-6.5	N	24-Jan-11	<0.0259 U	<0.0022 U	<0.0056 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.0411 U	<0.015 U	<0.033 U	<0.0099 U	<0.0296 U	<0.0265 U	<0.0374 U	<0.0022 U
35BSB013	0-0.5	N	24-Jan-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.016 U	<0.0324 U	<0.01 U	<0.0291 U	<0.026 U	<0.0367 U	
35BSB013	19-21	N	24-Jan-11	<0.0258 U	<0.0021 U	<0.0051 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.041 U	<0.015 U	<0.033 U	<0.0099 U	<0.0296 U	<0.0265 U	<0.0373 U	<0.0021 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0257 U	<0.0022 U	<0.0056 U	<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0099 U	<0.0295 U	<0.0264 U	<0.0372 U	<0.0022 U
35BSB014	0-0.5	N	24-Jan-11	<0.0255 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0261 U	<0.0369 U	
35BSB014	5.5-6.5	N	24-Jan-11	<0.0254 U	<0.0021 U	<0.0053 U	<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.015 U	<0.0324 U	<0.0098 U	<0.0291 U	<0.026 U	<0.0367 U	<0.0021 U
35BSB015	0-0.5	N	19-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0372 U	<0.0152 U	<0.013 U	<0.0404 U	<0.015 U	<0.0325 U	<0.0097 U	<0.0292 U	<0.0261 U	<0.0368 U	
35BSB015	5.5-6.5	N	19-Jan-11	<0.0257 U	<0.0021 U	<0.0052 U	<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 U	<0.015 U	<0.0327 U	<0.0099 U	<0.0294 U	<0.0263 U	<0.0371 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	2-Chlorophenol	2-Chlorotoluene	2-Hexanone	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	2-Nitrotoluene	3-Nitroaniline	3-Nitrotoluene	4,6-Dinitro-2-Methylphenol	4-Amino-2,6-Dinitrotoluene	4-Bromophenyl Phenyl Ether	4-Chloro-3-Methylphenol	4-Chlorophenyl Phenyl Ether	4-Chlorotoluene
35BSB016	0-0.5	N	19-Jan-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.016 U	<0.0324 U	<0.01 U	<0.0291 U	<0.026 U	<0.0367 U	
35BSB016	5.5-6.5	N	19-Jan-11	<0.0255 U	<0.0023 U	<0.0058 U	<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0262 U	<0.0369 U	<0.0023 U
35BSB017	0-0.5	N	19-Jan-11	<0.0255 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0261 U	<0.0369 U	
35BSB017	0-0.5	FD	19-Jan-11	<0.0252 U			<0.0176 U	<0.01 U	<0.0368 U	<0.015 U	<0.013 U	<0.04 U	<0.015 U	<0.0321 U	<0.0098 U	<0.0289 U	<0.0258 U	<0.0364 U	
35BSB017	5.5-6.5	N	19-Jan-11	<0.0257 U	<0.0019 U	<0.0048 U	<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0099 U	<0.0295 U	<0.0263 U	<0.0372 U	<0.0019 U
35BSB018	0-0.5	N	25-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.016 U	<0.0326 U	<0.01 U	<0.0292 U	<0.0261 U	<0.0369 U	
35BSB018	19.5-20.5	N	26-Jan-11	<0.0259 U	<0.0021 U	<0.0053 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0411 U	<0.015 U	<0.0331 U	<0.0099 U	<0.0297 U	<0.0265 U	<0.0375 U	<0.0021 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0255 U	<0.0022 U	<0.0055 U	<0.0178 U	<0.0101 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0325 U	<0.0099 U	<0.0292 U	<0.0261 U	<0.0369 U	<0.0022 U
35BSB019	0-0.5	N	19-Jan-11	<0.0253 U			<0.0176 U	<0.0101 U	<0.0369 U	<0.015 U	<0.013 U	<0.0401 U	<0.015 U	<0.0323 U	<0.0099 U	<0.029 U	<0.0259 U	<0.0365 U	
35BSB019	5.5-6.5	N	19-Jan-11	<0.026 U	<0.0021 U	<0.0051 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.012 U	<0.0412 U	<0.015 U	<0.0331 U	<0.0096 U	<0.0298 U	<0.0266 U	<0.0375 U	<0.0021 U
35BSB020	0-0.5	N	26-Jan-11	<0.0252 U			<0.0175 U	<0.01 U	<0.0368 U	<0.015 U	<0.013 U	<0.04 U	<0.015 U	<0.0321 U	<0.0099 U	<0.0288 U	<0.0258 U	<0.0364 U	
35BSB020	5.5-6.5	N	26-Jan-11	<0.0255 U	<0.0022 U	<0.0055 U	<0.0178 U	<0.0101 U	<0.0372 U	<0.0151 U	<0.013 U	<0.0404 U	<0.015 U	<0.0325 U	<0.0099 U	<0.0292 U	<0.0261 U	<0.0368 U	<0.0022 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0259 U	<0.0024 U	<0.0059 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.0411 U	<0.015 U	<0.033 U	<0.0099 U	<0.0297 U	<0.0265 U	<0.0374 U	<0.0024 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0255 U	<0.0021 U	<0.0053 U	<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0099 U	<0.0293 U	<0.0261 U	<0.0369 U	<0.0021 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0257 U	<0.0022 U	<0.0054 U	<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0099 U	<0.0294 U	<0.0263 U	<0.0371 U	<0.0022 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0257 U	<0.0021 U	<0.0053 U	<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.016 U	<0.0328 U	<0.01 U	<0.0295 U	<0.0263 U	<0.0372 U	<0.0021 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0257 U	<0.0019 U	<0.0049 U	<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0098 U	<0.0295 U	<0.0263 U	<0.0372 U	<0.0019 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0259 U	<0.0022 U	<0.0055 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.0411 U	<0.016 U	<0.033 U	<0.01 U	<0.0297 U	<0.0265 U	<0.0374 U	<0.0022 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.026 U	<0.0021 U	<0.0053 U	<0.0181 U	<0.0103 U	<0.038 U	<0.0155 U	<0.013 U	<0.0412 U	<0.015 U	<0.0332 U	<0.0097 U	<0.0298 U	<0.0266 U	<0.0376 U	<0.0021 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0258 U	<0.0022 U	<0.0054 U	<0.018 U	<0.0103 U	<0.0377 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	<0.0097 U	<0.0295 U	<0.0264 U	<0.0373 U	<0.0022 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.026 U	<0.0021 U	<0.0053 U	<0.0181 U	<0.0104 U	<0.038 U	<0.0155 U	<0.013 U	<0.0413 U	<0.015 U	<0.0332 U	<0.0099 U	<0.0298 U	<0.0267 U	<0.0376 U	<0.0021 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0258 U	<0.0023 U	<0.0057 U	<0.018 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	<0.0097 U	<0.0295 U	<0.0264 U	<0.0372 U	<0.0023 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0257 U	<0.0021 U	<0.0053 U	<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 U	<0.015 U	<0.0327 U	<0.0099 U	<0.0294 U	<0.0263 U	<0.0371 U	<0.0021 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0259 U	<0.0023 U	<0.0059 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0411 UJ	<0.015 U	<0.0331 U	<0.0098 U	<0.0297 U	<0.0265 U	<0.0374 U	<0.0023 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0259 U	<0.0026 U	<0.0064 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.041 UJ	<0.015 U	<0.033 U	<0.0099 U	<0.0296 U	<0.0265 U	<0.0374 U	<0.0026 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.0257 U	<0.002 U	<0.0051 U	<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 UJ	<0.015 U	<0.0327 U	<0.0098 U	<0.0294 U	<0.0263 U	<0.0371 U	<0.002 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0259 U	<0.0022 U	<0.0055 U	<0.0181 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.013 U	<0.0411 UJ	<0.015 U	<0.0331 U	<0.0097 U	<0.0297 U	<0.0265 U	<0.0374 U	<0.0022 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0261 U	<0.0022 U	<0.0056 U	<0.0182 U	<0.0104 U	<0.0381 U	<0.0155 U	<0.013 U	<0.0413 UJ	<0.015 U	<0.0332 U	<0.0099 U	<0.0299 U	<0.0267 U	<0.0377 U	<0.0022 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0258 U	<0.0024 U	<0.0061 U	<0.018 U	<0.0103 U	<0.0377 U	<0.0153 U	<0.013 U	<0.0409 UJ	<0.015 U	<0.0329 U	<0.0098 U	<0.0296 U	<0.0264 U	<0.0373 U	<0.0024 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0254 U	<0.0022 U	<0.0056 U	<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 UJ	<0.016 U	<0.0324 U	<0.01 U	<0.0291 U	<0.026 U	<0.0367 U	<0.0022 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.026 U	<0.0023 U	<0.0057 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0412 UJ	<0.015 U	<0.0331 U	<0.0099 U	<0.0297 U	<0.0266 U	<0.0375 U	<0.0023 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.026 U	<0.0021 U	<0.0053 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0412 UJ	<0.016 U	<0.0331 U	<0.01 U	<0.0297 U	<0.0266 U	<0.0375 U	<0.0021 U
35CSB010	0-0.5	N	07-Feb-11	<0.0256 U			<0.0179 U	<0.0102 U	<0.0375 U	<0.0152 U	<0.013 U	<0.0407 U	<0.016 U	<0.0327 U	<0.01 U	<0.0294 U	<0.0262 U	<0.037 U	
35CSB010	19.5-20.5	N	07-Feb-11	<0.0259 U	<0.002 U	<0.0049 U	<0.018 U	<0.0103 U	<0.0378 U	<0.0154 U	<0.012 U	<0.041 U	<0.015 U	<0.033 U	<0.0096 U	<0.0296 U	<0.0265 U	<0.0374 U	<0.002 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0257 U	<0.0021 U	<0.0052 U	<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0098 U	<0.0294 U	<0.0263 U	<0.0371 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	2-Chlorophenol	2-Chlorotoluene	2-Hexanone	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	2-Nitrotoluene	3-Nitroaniline	3-Nitrotoluene	4,6-Dinitro-2-Methylphenol	4-Amino-2,6-Dinitrotoluene	4-Bromophenyl Phenyl Ether	4-Chloro-3-Methylphenol	4-Chlorophenyl Phenyl Ether	4-Chlorotoluene
35CSB011	0-0.5	N	07-Feb-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 U	<0.016 U	<0.0328 U	<0.01 U	<0.0294 U	<0.0263 U	<0.0371 U	
35CSB011	19.5-20.5	N	07-Feb-11	<0.0257 U	<0.002 U	<0.0051 U	<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0097 U	<0.0295 U	<0.0263 U	<0.0372 U	<0.002 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0257 U	<0.0022 U	<0.0054 U	<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 U	<0.015 U	<0.0327 U	<0.0098 U	<0.0294 U	<0.0263 U	<0.0371 U	<0.0022 U
35CSB012	0-0.5	N	07-Feb-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.012 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0096 U	<0.0295 U	<0.0263 U	<0.0372 U	
35CSB012	19.5-20.5	N	07-Feb-11	<0.0258 U	<0.0021 U	<0.0053 U	<0.018 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	<0.0099 U	<0.0295 U	<0.0264 U	<0.0372 U	<0.0021 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.0254 U	<0.002 U	<0.0051 U	<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.015 U	<0.0324 U	<0.0098 U	<0.0291 U	<0.026 U	<0.0367 U	<0.002 U
35CSB013	0-0.5	N	08-Feb-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0408 U	<0.016 U	<0.0328 U	<0.01 U	<0.0294 U	<0.0263 U	<0.0371 U	
35CSB013	0-0.5	FD	08-Feb-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0372 U	<0.0152 U	<0.012 U	<0.0405 U	<0.015 U	<0.0325 U	<0.0095 U	<0.0292 U	<0.0261 U	<0.0368 U	
35CSB013	19.5-20.5	N	08-Feb-11	<0.0259 U	<0.0021 U	<0.0052 U	<0.0181 U	<0.0103 U	<0.0379 U	<0.0154 U	<0.013 U	<0.0412 U	<0.015 U	<0.0331 U	<0.0099 U	<0.0297 U	<0.0266 U	<0.0375 U	<0.0021 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0257 U	<0.0023 U	<0.0057 U	<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0097 U	<0.0295 U	<0.0263 U	<0.0372 U	<0.0023 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.0255 U	<0.0023 U	<0.0057 U	<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 UJ	<0.016 U	<0.0326 U	<0.01 U	<0.0293 U	<0.0262 U	<0.0369 U	<0.0023 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0263 U	<0.0022 U	<0.0054 U	<0.0184 U	<0.0105 U	<0.0385 U	<0.0157 U	<0.013 U	<0.0418 UJ	<0.016 U	<0.0336 U	<0.01 U	<0.0302 U	<0.027 U	<0.0381 U	<0.0022 U
35CSS001	0-0.5	N	25-Jan-11	<0.0256 U			<0.0179 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0407 U	<0.015 U	<0.0327 U	<0.0099 U	<0.0294 U	<0.0262 U	<0.037 U	
35CSS002	0-0.5	N	25-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.015 U	<0.0326 U	<0.0098 U	<0.0293 U	<0.0262 U	<0.037 U	
35CSS003	0-0.5	N	25-Jan-11	<0.0253 U			<0.0176 U	<0.0101 U	<0.0369 U	<0.015 U	0.079 J	<0.0401 U	<0.015 U	<0.0322 U	<0.0099 U	<0.029 U	<0.0259 U	<0.0365 U	
35CSS004	0-0.5	N	25-Jan-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.015 U	<0.0324 U	<0.0098 U	<0.0291 U	<0.026 U	<0.0367 U	
35CSS005	0-0.5	N	25-Jan-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0375 U	<0.0153 U	<0.013 U	<0.0407 U	<0.015 U	<0.0328 U	<0.0099 U	<0.0294 U	<0.0263 U	<0.0371 U	
35CSS006	0-0.5	N	10-Feb-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.016 U	<0.0328 U	<0.01 U	<0.0295 U	<0.0263 U	<0.0372 U	
35CSS007	0-0.5	N	02-Feb-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 UJ	<0.016 U	<0.0324 U	<0.01 U	<0.0291 U	<0.026 U	<0.0367 U	
35CSS008	0-0.5	N	02-Feb-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 UJ	<0.016 U	<0.0326 U	<0.01 U	<0.0293 U	<0.0262 U	<0.0369 U	
35CSS009	0-0.5	N	10-Feb-11	<0.0258 U			<0.018 U	<0.0103 U	<0.0377 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	0.08 J	<0.0296 U	<0.0264 U	<0.0373 U	
35CSS010	0-0.5	N	10-Feb-11	<0.0258 U			<0.018 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	0.013 J	<0.0295 U	<0.0264 U	<0.0372 U	
35CSS011	0-0.5	N	10-Feb-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0099 U	<0.0295 U	<0.0263 U	<0.0372 U	
35CSS013	0-0.5	N	12-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.012 U	<0.0406 U	<0.015 U	<0.0326 U	<0.0094 U	<0.0293 U	<0.0262 U	<0.0369 U	
35CSS014	0-0.5	N	12-Jan-11	<0.0253 U			<0.0177 U	<0.0101 U	<0.037 U	<0.0151 U	<0.013 U	<0.0402 U	<0.016 U	<0.0323 U	<0.01 U	<0.029 U	<0.0259 U	<0.0366 U	
35CSS015	0-0.5	N	12-Jan-11	<0.0258 U			<0.018 U	<0.0103 U	<0.0377 U	<0.0153 U	<0.013 U	<0.0409 U	<0.015 U	<0.0329 U	<0.0098 U	<0.0295 U	<0.0264 U	<0.0373 U	
35CSS016	0-0.5	N	12-Jan-11	<0.0256 U			<0.0179 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0407 U	<0.015 U	<0.0327 U	<0.0099 U	<0.0294 U	<0.0262 U	<0.037 U	
35CSS017	0-0.5	N	12-Jan-11	<0.0257 U			<0.0179 U	<0.0102 U	<0.0376 U	<0.0153 U	<0.013 U	<0.0408 U	<0.015 U	<0.0328 U	<0.0099 U	<0.0295 U	<0.0264 U	<0.0372 U	
35CSS018	0-0.5	N	12-Jan-11	<0.0256 U			<0.0179 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0407 U	<0.016 U	<0.0327 U	<0.01 U	<0.0294 U	<0.0262 U	<0.037 U	
35CSS019	0-0.5	N	12-Jan-11	<0.0255 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.016 U	<0.0326 U	<0.01 U	<0.0293 U	<0.0262 U	<0.0369 U	
35CSS020	0-0.5	N	12-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0373 U	<0.0152 U	<0.012 U	<0.0405 U	<0.015 U	<0.0326 U	<0.0095 U	<0.0293 U	<0.0262 U	<0.0369 U	
35CSS021	0-0.5	N	12-Jan-11	<0.026 U			<0.0181 U	<0.0103 U	<0.038 U	<0.0155 U	<0.013 U	<0.0413 U	<0.015 U	<0.0332 U	<0.0099 U	<0.0298 U	<0.0266 U	<0.0376 U	
35CSS022	0-0.5	N	12-Jan-11	<0.0255 U			<0.0177 U	<0.0101 U	<0.0372 U	<0.0151 U	<0.013 U	<0.0404 U	<0.015 U	<0.0325 U	0.083 J	<0.0292 U	<0.0261 U	<0.0368 U	
35CSS023	0-0.5	N	11-Jan-11	<0.0254 U			<0.0177 U	<0.0101 U	<0.0371 U	<0.0151 U	<0.013 U	<0.0403 U	<0.016 U	<0.0324 U	<0.01 U	<0.0291 U	<0.026 U	<0.0367 U	
35CSS024	0-0.5	N	11-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0372 U	<0.0152 U	<0.012 U	<0.0405 U	<0.015 U	<0.0325 U	<0.0096 U	<0.0292 U	<0.0261 U	<0.0368 U	

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	2-Chlorophenol	2-Chlorotoluene	2-Hexanone	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	2-Nitrotoluene	3-Nitroaniline	3-Nitrotoluene	4,6-Dinitro-2-Methylphenol	4-Amino-2,6-Dinitrotoluene	4-Bromophenyl Phenyl Ether	4-Chloro-3-Methylphenol	4-Chlorophenyl Phenyl Ether	4-Chlorotoluene
35CSS025	0-0.5	N	11-Jan-11	<0.0251 U			<0.0175 U	<0.00999 U	<0.0367 U	<0.0149 U	<0.013 U	<0.0399 U	<0.015 U	<0.0321 U	<0.0098 U	<0.0288 U	<0.0257 U	<0.0363 U	
35CSS026	0-0.5	N	11-Jan-11	<0.0253 U			<0.0176 U	<0.0101 U	<0.0369 U	<0.015 U	<0.013 U	<0.0401 U	<0.016 U	<0.0323 U	<0.01 U	<0.029 U	<0.0259 U	<0.0365 U	
35CSS027	0-0.5	N	11-Jan-11	<0.0252 U			<0.0175 U	<0.01 U	<0.0368 U	<0.015 U	<0.013 U	<0.0399 U	<0.015 U	<0.0321 U	<0.0098 U	<0.0288 U	<0.0258 U	<0.0364 U	
35CSS028	0-0.5	N	11-Jan-11	<0.0256 U			<0.0178 U	<0.0102 U	<0.0374 U	<0.0152 U	<0.013 U	<0.0406 U	<0.015 U	<0.0326 U	<0.0097 U	<0.0293 U	<0.0262 U	<0.037 U	
35CSS029	0-0.5	N	11-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0373 U	<0.0152 U	<0.013 U	<0.0405 U	<0.016 U	<0.0325 U	<0.01 U	<0.0292 U	<0.0261 U	<0.0369 U	
35CSS030	0-0.5	N	11-Jan-11	<0.0255 U			<0.0178 U	<0.0101 U	<0.0372 U	<0.0152 U	<0.013 U	<0.0405 U	<0.015 U	<0.0325 U	<0.0098 U	<0.0292 U	<0.0261 U	<0.0368 U	
35CSS031	0-0.5	N	11-Jan-11	<0.0252 U			<0.0176 U	<0.01 U	<0.0368 U	<0.015 U	<0.013 U	<0.04 UJ	<0.015 U	<0.0322 U	<0.0098 U	<0.0289 U	<0.0258 U	<0.0364 U	
35CSS031	0-0.5	FD	11-Jan-11	<0.0251 U			<0.0175 U	<0.00998 U	<0.0367 U	<0.0149 U	<0.013 U	<0.0398 U	<0.015 U	<0.032 U	<0.0098 U	<0.0288 U	<0.0257 U	<0.0363 U	

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	4-Nitroaniline	4-Nitrophenol	4-Nitrotoluene	Acenaphthene	Acenaphthylene	Acetone	Aluminum	Anthracene	Antimony	Arsenic	Barium	Benzene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzyl Alcohol
35BSB001	0-0.5	N	27-Jan-11	<0.0622 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		9110	<0.0117 U	<0.12 U	4.42	120 J		<0.0142 U	<0.0192 U	<0.0104 U	<0.00921 U	<0.0152 U	<0.0387 U
35BSB001	5.5-6.5	N	27-Jan-11	<0.0632 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U	<0.0054 U	7590	<0.0119 U	<0.12 U	5.55	132 J	<0.0022 U	<0.0145 U	<0.0195 U	<0.0106 U	<0.00935 U	<0.0155 U	<0.0393 U
35BSB002	0-0.5	N	27-Jan-11	<0.0618 U	<0.114 U	<0.018 U	<0.0188 U	<0.0111 U		6780	<0.0116 U	<0.12 U	3.25	126 J		<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0384 U
35BSB002	5.5-6.5	N	26-Jan-11	<0.0633 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U	<0.0058 U	8660	<0.0119 U	<0.12 U	8.65	205 J	<0.0023 U	<0.0145 U	<0.0195 U	<0.0106 U	<0.00937 U	<0.0155 U	<0.0393 U
35BSB003	0-0.5	N	26-Jan-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		7660	<0.0116 U	<0.12 U	2.82	121 J		<0.0141 U	<0.019 U	<0.0103 U	<0.00913 U	<0.0151 U	<0.0383 U
35BSB003	5.5-6.5	N	26-Jan-11	<0.0633 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U	<0.0057 U	7630	<0.0119 U	<0.12 U	4.71	140 J	<0.0023 U	<0.0145 U	<0.0195 U	<0.0106 U	<0.00938 U	<0.0155 U	<0.0394 U
35BSB004	0-0.5	N	27-Jan-11	<0.0621 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		6700	<0.0117 U	<0.12 U	2.82	143 J		<0.0142 U	<0.0191 U	<0.0104 U	<0.00919 U	<0.0152 U	<0.0386 U
35BSB004	5.5-6.5	N	27-Jan-11	<0.0645 U	<0.119 U	<0.018 U	<0.0196 U	<0.0116 U	<0.0055 U	7590	<0.0122 U	<0.12 UJ	6.76	241 J	<0.0022 U	<0.0148 U	<0.0199 U	<0.0108 U	<0.00955 U	<0.0158 U	<0.0401 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.064 U	<0.118 U	<0.018 U	<0.0194 U	<0.0115 U	<0.0058 U	8470	<0.0121 U	<0.12 U	6.99	278 J	<0.0023 U	<0.0147 U	<0.0197 U	<0.0107 U	<0.00948 U	<0.0157 U	<0.0398 U
35BSB005	0-0.5	N	27-Jan-11	<0.0626 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U		9010	<0.0118 U	<0.12 U	4.02	140 J		<0.0143 U	<0.0193 U	<0.0105 U	<0.00926 U	<0.0153 U	<0.0389 U
35BSB005	19.5-20.5	N	27-Jan-11	<0.064 U	<0.118 U	<0.018 U	<0.0194 U	<0.0115 U	<0.0057 U	4760	<0.0121 U	<0.12 U	3.11	141 J	<0.0023 U	<0.0147 U	<0.0197 U	<0.0107 U	<0.00948 U	<0.0157 U	<0.0398 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0628 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0062 U	8620	<0.0118 U	<0.12 U	5.53	191 J	<0.0025 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.0093 U	<0.0154 U	<0.039 U
35BSB006	0-0.5	N	26-Jan-11	<0.0617 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		6090	<0.0116 U	<0.12 U	3.35	193 J		<0.0141 U	<0.019 U	<0.0103 U	<0.00913 U	<0.0151 U	<0.0383 U
35BSB006	5.5-6.5	N	26-Jan-11	<0.0633 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U	<0.0055 U	7540	<0.0119 U	<0.12 U	5.23	168 J	<0.0022 U	<0.0145 U	<0.0195 U	<0.0106 U	<0.00937 U	<0.0155 U	<0.0393 U
35BSB007	0-0.5	N	20-Jan-11	<0.0621 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		9030 J	<0.0117 U	<0.6 U	8.5	317		<0.0142 U	<0.0191 U	<0.0104 U	<0.00919 U	<0.0152 U	<0.0386 U
35BSB007	5.5-6.5	N	20-Jan-11	<0.0619 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U	<0.0045 U	9060 J	<0.0117 U	<0.12 U	3.68	561	<0.0018 U	<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35BSB008	0-0.5	N	26-Jan-11	<0.0619 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		7110	<0.0117 U	<0.12 U	3.06	108 J		<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0385 U
35BSB008	5.5-6.5	N	26-Jan-11	<0.0626 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U	<0.005 U	7110	<0.0118 U	<0.12 U	3.51	93.9 J	<0.002 U	<0.0143 U	<0.0193 U	<0.0105 U	<0.00927 U	<0.0154 U	<0.0389 U
35BSB009	0-0.5	N	26-Jan-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		9310	<0.0117 U	<0.12 U	3.56	136 J		<0.0142 U	<0.0191 U	<0.0104 U	<0.00918 U	<0.0152 U	<0.0385 U
35BSB009	5.5-6.5	N	26-Jan-11	<0.0621 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0054 U	7690	<0.0117 U	<0.12 U	3.88	157 J	<0.0021 U	<0.0142 U	<0.0192 U	<0.0104 U	<0.0092 U	<0.0152 U	<0.0386 U
35BSB010	0-0.5	N	20-Jan-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		8370 J	<0.0117 U	<0.12 U	4.59	156		<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35BSB010	5.5-6.5	N	20-Jan-11	<0.0618 U	<0.114 U	<0.017 U	<0.0188 U	<0.0111 U	<0.0052 U	7910 J	<0.0116 U	<0.12 U	3.16	142	<0.0021 U	<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0385 U
35BSB011	0-0.5	N	20-Jan-11	<0.0621 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		7890 J	<0.0117 U	<0.12 U	2.67	127		<0.0142 U	<0.0191 U	<0.0104 U	<0.00919 U	<0.0152 U	<0.0386 U
35BSB011	19.5-20.5	N	24-Jan-11	<0.063 U	<0.117 U	<0.018 U	<0.0191 U	<0.0114 UJ	<0.0052 U	5830	<0.0119 U	<0.12 UJ	3.73	114 J	<0.0021 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00933 U	<0.0154 U	<0.0392 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.0629 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 UJ	<0.005 U	5430	<0.0119 U	<0.12 U	3.29	94.4	<0.002 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00932 U	<0.0154 U	<0.0391 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0621 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U	<0.006 U	9050 J	<0.0117 U	<0.12 U	3.7	103	<0.0024 U	<0.0142 U	<0.0191 U	<0.0104 U	<0.00919 U	<0.0152 U	<0.0386 U
35BSB012	0-0.5	N	19-Jan-11	<0.0627 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U		11900 J	<0.0118 U	<0.12 U	3.37	148		<0.0143 U	<0.0193 U	<0.0105 U	<0.00928 U	<0.0154 U	<0.039 U
35BSB012	5.5-6.5	N	24-Jan-11	<0.0628 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 UJ	<0.0056 U	7540	<0.0118 U	<0.12 UJ	4.91	152	<0.0022 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00929 U	<0.0154 U	<0.039 U
35BSB013	0-0.5	N	24-Jan-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 UJ		10800	<0.0116 U	<0.12 U	4.52	119		<0.0141 U	<0.019 U	<0.0103 U	<0.00913 U	<0.0151 U	<0.0383 U
35BSB013	19-21	N	24-Jan-11	<0.0627 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 UJ	<0.0051 U	3500	<0.0118 U	<0.12 U	2.18	85.4	<0.0021 U	<0.0143 U	<0.0193 U	<0.0105 U	<0.00928 U	<0.0154 U	<0.039 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0624 U	<0.116 U	<0.018 U	<0.019 U	<0.0112 UJ	<0.0056 U	7040	<0.0118 U	<0.12 U	4.83	252	<0.0022 U	<0.0143 U	<0.0193 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35BSB014	0-0.5	N	24-Jan-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 UJ		9040	<0.0117 U	<0.12 U	3.84	131		<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35BSB014	5.5-6.5	N	24-Jan-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 UJ	<0.0053 U	7740	<0.0116 U	<0.12 U	3.61	129	<0.0021 U	<0.0141 U	<0.019 U	<0.0103 U	<0.00912 U	<0.0151 U	<0.0383 U
35BSB015	0-0.5	N	19-Jan-11	<0.0618 U	<0.114 U	<0.018 U	<0.0188 U	<0.0111 U		8010 J	<0.0116 U	<0.12 U	4.09	148		<0.0142 U	<0.0191 U	<0.0103 U	<0.00915 U	<0.0152 U	<0.0384 U
35BSB015	5.5-6.5	N	19-Jan-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0052 U	9050 J	<0.0117 U	<0.12 U	4.12	162	<0.0021 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	4-Nitroaniline	4-Nitrophenol	4-Nitrotoluene	Acenaphthene	Acenaphthylene	Acetone	Aluminum	Anthracene	Antimony	Arsenic	Barium	Benzene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzyl Alcohol
35BSB016	0-0.5	N	19-Jan-11	<0.0615 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		6210 J	<0.0116 U	<0.12 U	2.63	111		<0.0141 U	<0.019 U	<0.0103 U	<0.00911 U	<0.0151 U	<0.0383 U
35BSB016	5.5-6.5	N	19-Jan-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U	<0.0058 U	8330 J	<0.0117 U	<0.12 U	3.87	121	<0.0023 U	<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35BSB017	0-0.5	N	19-Jan-11	<0.0619 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		6840 J	<0.0117 U	<0.12 UJ	2.37	114		<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35BSB017	0-0.5	FD	19-Jan-11	<0.0611 U	<0.113 U	<0.018 U	<0.0185 U	<0.011 U		7670 J	<0.0115 U	<0.12 U	2.85	126		<0.014 U	<0.0188 U	<0.0102 U	<0.00904 U	<0.015 U	<0.038 U
35BSB017	5.5-6.5	N	19-Jan-11	<0.0624 U	<0.116 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0048 U	4110 J	<0.0118 U	<0.12 U	3.6	358	<0.0019 U	<0.0143 U	<0.0193 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35BSB018	0-0.5	N	25-Jan-11	<0.0619 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 UJ		7740	<0.0117 U	<0.12 U	3.45	143		<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0385 U
35BSB018	19.5-20.5	N	26-Jan-11	<0.0629 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 UJ	<0.0053 U	3190	<0.0118 U	<0.12 U	1.47 J	46.9	<0.0021 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00931 U	<0.0154 U	<0.0391 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0619 U	<0.114 U	<0.018 U	<0.0188 U	<0.0111 UJ	<0.0055 U	7910	<0.0117 U	<0.12 U	3.61	83.4	<0.0022 U	<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0385 U
35BSB019	0-0.5	N	19-Jan-11	<0.0613 U	<0.113 U	<0.018 U	<0.0186 U	<0.011 U		8320 J	<0.0115 U	<0.12 U	4.05	165		<0.014 U	<0.0189 U	<0.0103 U	<0.00908 U	<0.015 U	<0.0381 U
35BSB019	5.5-6.5	N	19-Jan-11	<0.063 U	<0.117 U	<0.017 U	<0.0191 U	<0.0114 U	<0.0051 U	7630 J	<0.0119 U	<0.12 U	4.09	155	<0.0021 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00933 U	<0.0154 U	<0.0392 U
35BSB020	0-0.5	N	26-Jan-11	<0.0611 U	<0.113 U	<0.018 U	<0.0185 U	<0.011 UJ		8930	<0.0115 U	<0.12 U	4.13	176		<0.014 U	<0.0188 U	<0.0102 U	<0.00904 U	<0.015 U	<0.038 U
35BSB020	5.5-6.5	N	26-Jan-11	<0.0618 U	<0.114 U	<0.018 U	<0.0188 U	<0.0111 UJ	<0.0055 U	7560	<0.0116 U	<0.12 U	5.77	316	<0.0022 U	<0.0141 U	<0.0191 U	<0.0103 U	<0.00915 U	<0.0151 U	<0.0384 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0628 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0059 U	2690	<0.0118 U	<0.12 U	2.11	181	<0.0024 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.0093 U	<0.0154 U	<0.0391 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0619 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U	<0.0053 U	8200	<0.0117 U	<0.12 U	5.7	262	<0.0021 U	<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0054 U	3930	<0.0117 U	<0.12 U	1.88	102	<0.0022 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00923 U	<0.0153 U	<0.0387 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0624 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0053 U	7450	<0.0118 U	<0.12 UJ	4.36	141	<0.0021 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0624 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0049 U	7790	<0.0118 U	<0.12 U	4.66	164	<0.0019 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0628 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0055 U	3480	<0.0118 U	<0.12 U	2	61	<0.0022 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.0093 U	<0.0154 U	<0.0391 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.063 U	<0.117 U	<0.018 U	<0.0191 U	<0.0114 U	<0.0053 U	9500	<0.0119 U	<0.12 U	4.56	189	<0.0021 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00933 U	<0.0155 U	<0.0392 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0625 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U	<0.0054 U	4050	<0.0118 U	<0.12 U	2.24	94.2	<0.0022 U	<0.0143 U	<0.0193 U	<0.0105 U	<0.00926 U	<0.0153 U	<0.0389 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.0632 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U	<0.0053 U	8380	<0.0119 U	<0.12 U	6.8	136	<0.0021 U	<0.0145 U	<0.0195 U	<0.0106 U	<0.00935 U	<0.0155 U	<0.0393 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0625 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U	<0.0057 U	3030	<0.0118 U	<0.12 U	1.76	27.4	<0.0023 U	<0.0143 U	<0.0193 U	<0.0105 U	<0.00925 U	<0.0153 U	<0.0389 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0622 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0053 U	9570	<0.0117 U	<0.12 U	4.18	124	<0.0021 U	<0.0142 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0628 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0059 U	3700	<0.0118 U	<0.12 UJ	1.97	139	<0.0023 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.0093 U	<0.0154 U	<0.0391 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0627 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U	<0.0064 U	3510	<0.0118 U	<0.12 U	1.95	222	<0.0026 U	<0.0144 U	<0.0193 U	<0.0105 U	<0.00929 U	<0.0154 U	<0.039 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.0622 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0051 U	7810	<0.0117 U	<0.12 U	4.17	98.3	<0.002 U	<0.0142 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0628 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0055 U	3230	<0.0118 U	<0.12 U	3.4	87.2	<0.0022 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.0093 U	<0.0154 U	<0.0391 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0632 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U	<0.0056 U	6520	<0.0119 U	<0.12 U	4.74	165	<0.0022 U	<0.0145 U	<0.0195 U	<0.0106 U	<0.00936 U	<0.0155 U	<0.0393 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0626 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U	<0.0061 U	3600	<0.0118 U	<0.12 U	3.34	79.6	<0.0024 U	<0.0143 U	<0.0193 U	<0.0105 U	<0.00926 U	<0.0153 U	<0.0389 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U	<0.0056 U	9230	<0.0116 U	<0.12 U	3.29	127	<0.0022 U	<0.0141 U	<0.019 U	<0.0103 U	<0.00912 U	<0.0151 U	<0.0383 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.063 U	<0.117 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0057 U	3790	<0.0119 U	<0.12 U	3.19	83.6	<0.0023 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00932 U	<0.0154 U	<0.0392 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.0629 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0053 U	8930	<0.0119 U	<0.12 U	2.75	155	<0.0021 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00932 U	<0.0154 U	<0.0391 U
35CSB010	0-0.5	N	07-Feb-11	<0.0622 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		16900 J	<0.0117 U	<0.24 U	2.56 J	124		<0.0142 U	<0.0192 U	<0.0104 U	<0.00921 U	<0.0152 U	<0.0387 U
35CSB010	19.5-20.5	N	07-Feb-11	<0.0627 U	<0.116 U	<0.017 U	<0.019 U	<0.0113 U	<0.0049 U	11300 J	<0.0118 U	<0.24 U	2 J	159	<0.002 U	<0.0144 U	<0.0193 U	<0.0105 U	<0.00929 U	<0.0154 U	<0.039 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0052 U	10200 J	<0.0117 U	<0.12 U	3.21	258	<0.0021 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	4-Nitroaniline	4-Nitrophenol	4-Nitrotoluene	Acenaphthene	Acenaphthylene	Acetone	Aluminum	Anthracene	Antimony	Arsenic	Barium	Benzene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzyl Alcohol
35CSB011	0-0.5	N	07-Feb-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		18900 J	<0.0117 U	<0.24 U	4.4	249		<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35CSB011	19.5-20.5	N	07-Feb-11	<0.0624 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0051 U	10400 J	<0.0117 U	<0.24 U	2.63 J	117	<0.002 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0054 U	13000 J	<0.0117 U	<0.24 U	4.38	277	<0.0022 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35CSB012	0-0.5	N	07-Feb-11	<0.0624 U	<0.115 U	<0.017 U	<0.0189 U	<0.0112 U		18600 J	<0.0117 U	<0.24 U	4.46	279		<0.0143 U	<0.0192 U	<0.0104 U	<0.00923 U	<0.0153 U	<0.0388 U
35CSB012	19.5-20.5	N	07-Feb-11	<0.0625 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U	<0.0053 U	4720 J	<0.0118 U	<0.12 U	1.7	280	<0.0021 U	<0.0143 U	<0.0193 U	<0.0104 U	<0.00925 U	<0.0153 U	<0.0389 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U	<0.0051 U	12100 J	<0.0116 U	<0.24 U	2.96 J	177	<0.002 U	<0.0141 U	<0.019 U	<0.0103 U	<0.00913 U	<0.0151 U	<0.0383 U
35CSB013	0-0.5	N	08-Feb-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		13200 J	<0.0117 U	<0.12 UJ	4.06	220		<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35CSB013	0-0.5	FD	08-Feb-11	<0.0618 U	<0.114 U	<0.017 U	<0.0188 U	<0.0111 U		13600 J	<0.0116 U	<0.12 U	4.01	231		<0.0142 U	<0.0191 U	<0.0103 U	<0.00915 U	<0.0152 U	<0.0384 U
35CSB013	19.5-20.5	N	08-Feb-11	<0.0629 U	<0.116 U	<0.018 U	<0.0191 U	<0.0113 U	<0.0052 U	4520 J	<0.0118 U	0.19 J	2.58	103	<0.0021 U	<0.0144 U	<0.0194 U	<0.0105 U	<0.00931 U	<0.0154 U	<0.0391 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0624 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U	<0.0057 U	10900 J	<0.0117 U	<0.24 U	3.79	188	<0.0023 U	<0.0143 U	<0.0192 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U	<0.0057 U	3450	<0.0117 U	<0.12 U	2.89	120	<0.0023 U	<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0639 U	<0.118 U	<0.018 U	<0.0194 U	<0.0115 U	<0.0054 U	7500	<0.012 U	<0.12 U	6.63	172	<0.0022 U	<0.0146 U	<0.0197 U	<0.0107 U	<0.00946 U	<0.0157 U	<0.0397 U
35CSS001	0-0.5	N	25-Jan-11	<0.0621 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 UJ		11400	<0.0117 U	<0.12 U	3.63	191		<0.0142 U	<0.0192 U	<0.0104 U	<0.0092 U	<0.0152 U	<0.0386 U
35CSS002	0-0.5	N	25-Jan-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 UJ		10100	<0.0117 U	<0.12 U	4.25	204		<0.0142 U	<0.0191 U	<0.0104 U	<0.00918 U	<0.0152 U	<0.0386 U
35CSS003	0-0.5	N	25-Jan-11	<0.0613 U	<0.113 U	<0.018 U	<0.0186 U	<0.011 UJ		8520	<0.0115 U	<0.12 U	2.95	154		<0.014 U	<0.0189 U	<0.0103 U	<0.00908 U	<0.015 U	<0.0381 U
35CSS004	0-0.5	N	25-Jan-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 UJ		11700	<0.0116 U	<0.12 U	5.3	233		<0.0141 U	<0.019 U	<0.0103 U	<0.00912 U	<0.0151 U	<0.0383 U
35CSS005	0-0.5	N	25-Jan-11	<0.0623 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 UJ		12900	<0.0117 U	0.24 J	4.12	161		<0.0143 U	<0.0192 U	<0.0104 U	<0.00922 U	<0.0153 U	<0.0387 U
35CSS006	0-0.5	N	10-Feb-11	<0.0624 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		21400 J	<0.0117 U	<0.24 U	3.06 J	167		<0.0143 U	<0.0192 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSS007	0-0.5	N	02-Feb-11	<0.0616 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		11200	<0.0116 U	<0.12 U	4.55	283		<0.0141 U	<0.019 U	<0.0103 U	<0.00911 U	<0.0151 U	<0.0383 U
35CSS008	0-0.5	N	02-Feb-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		8150	<0.0117 U	<0.12 U	5.9	170		<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35CSS009	0-0.5	N	10-Feb-11	<0.0626 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U		17000 J	<0.0118 U	0.15 J	2.97	149		<0.0143 U	<0.0193 U	<0.0105 U	<0.00927 U	<0.0153 U	<0.0389 U
35CSS010	0-0.5	N	10-Feb-11	<0.0625 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U		14800 J	<0.0118 U	<0.24 U	4.88	230		<0.0143 U	<0.0193 U	<0.0104 U	<0.00925 U	<0.0153 U	<0.0389 U
35CSS011	0-0.5	N	10-Feb-11	<0.0624 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		16200 J	<0.0118 U	<0.24 U	3.63	236		<0.0143 U	<0.0192 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSS013	0-0.5	N	12-Jan-11	<0.062 U	<0.115 U	<0.017 U	<0.0188 U	<0.0112 U		7600	<0.0117 U	<0.12 U	3.79	107		<0.0142 U	<0.0191 U	<0.0104 U	<0.00918 U	<0.0152 U	<0.0385 U
35CSS014	0-0.5	N	12-Jan-11	<0.0615 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		9270	<0.0116 U	<0.12 U	4.84	161		<0.0141 U	<0.019 U	<0.0103 U	<0.0091 U	<0.0151 U	<0.0382 U
35CSS015	0-0.5	N	12-Jan-11	<0.0625 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U		9150	<0.0118 U	<0.12 U	5.43	198		<0.0143 U	<0.0193 U	<0.0105 U	<0.00926 U	<0.0153 U	<0.0389 U
35CSS016	0-0.5	N	12-Jan-11	<0.0622 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		8130	<0.0117 U	<0.12 U	2.87	117		<0.0142 U	<0.0192 U	<0.0104 U	<0.0092 U	<0.0152 U	<0.0386 U
35CSS017	0-0.5	N	12-Jan-11	<0.0624 U	<0.116 U	<0.018 U	<0.019 U	<0.0113 U		11400	<0.0118 U	<0.12 U	4.11	114		<0.0143 U	<0.0193 U	<0.0104 U	<0.00924 U	<0.0153 U	<0.0388 U
35CSS018	0-0.5	N	12-Jan-11	<0.0622 U	<0.115 U	<0.018 U	<0.0189 U	<0.0112 U		9990	<0.0117 U	<0.12 U	3.79	138		<0.0142 U	<0.0192 U	<0.0104 U	<0.00921 U	<0.0152 U	<0.0387 U
35CSS019	0-0.5	N	12-Jan-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		12200	<0.0117 U	<0.12 U	5.28	154		<0.0142 U	<0.0191 U	<0.0104 U	<0.00917 U	<0.0152 U	<0.0385 U
35CSS020	0-0.5	N	12-Jan-11	<0.062 U	<0.115 U	<0.017 U	<0.0188 U	<0.0112 U		10300	<0.0117 U	<0.12 U	3.45	85.6		<0.0142 U	<0.0191 U	<0.0104 U	<0.00918 U	<0.0152 U	<0.0385 U
35CSS021	0-0.5	N	12-Jan-11	<0.0631 U	<0.117 U	<0.018 U	<0.0192 U	<0.0114 U		10900	<0.0119 U	<0.12 U	4.24	144		<0.0144 U	<0.0195 U	<0.0105 U	<0.00934 U	<0.0155 U	<0.0392 U
35CSS022	0-0.5	N	12-Jan-11	<0.0618 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		11800	<0.0116 U	<0.12 U	7.06	213		<0.0141 U	<0.019 U	<0.0103 U	<0.00914 U	<0.0151 U	<0.0384 U
35CSS023	0-0.5	N	11-Jan-11	<0.0617 U	<0.114 U	<0.018 U	<0.0187 U	<0.0111 U		6620	<0.0116 U	<0.12 U	2.66	103		<0.0141 U	<0.019 U	<0.0103 U	<0.00913 U	<0.0151 U	<0.0383 U
35CSS024	0-0.5	N	11-Jan-11	<0.0618 U	<0.114 U	<0.017 U	<0.0188 U	<0.0111 U		7040	<0.0116 U	<0.12 U	3.05	107		<0.0142 U	<0.0191 U	<0.0103 U	<0.00915 U	<0.0152 U	<0.0384 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	4-Nitroaniline	4-Nitrophenol	4-Nitrotoluene	Acenaphthene	Acenaphthylene	Acetone	Aluminum	Anthracene	Antimony	Arsenic	Barium	Benzene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzyl Alcohol
35CSS025	0-0.5	N	11-Jan-11	<0.0609 U	<0.113 U	<0.018 U	<0.0185 U	<0.011 U		6980	<0.0115 U	<0.12 U	2.48	112		<0.014 U	<0.0188 U	<0.0102 U	<0.00902 U	<0.0149 U	<0.0379 U
35CSS026	0-0.5	N	11-Jan-11	<0.0613 U	<0.113 U	<0.018 U	<0.0186 U	<0.0111 U		6610	<0.0115 U	<0.12 U	2.4	125		<0.014 U	<0.0189 U	<0.0103 U	<0.00908 U	<0.015 U	<0.0381 U
35CSS027	0-0.5	N	11-Jan-11	<0.0611 U	<0.113 U	<0.018 U	<0.0185 U	<0.011 U		6650	<0.0115 U	<0.12 U	3.08	142		<0.014 U	<0.0188 U	<0.0102 U	<0.00904 U	<0.015 U	<0.038 U
35CSS028	0-0.5	N	11-Jan-11	<0.062 U	<0.115 U	<0.018 U	<0.0188 U	<0.0112 U		7190	<0.0117 U	<0.12 U	2.91	129		<0.0142 U	<0.0191 U	<0.0104 U	<0.00918 U	<0.0152 U	<0.0386 U
35CSS029	0-0.5	N	11-Jan-11	<0.0619 U	<0.115 U	<0.018 U	<0.0188 U	<0.0111 U		7760	<0.0117 U	<0.12 U	3.08	223		<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0385 U
35CSS030	0-0.5	N	11-Jan-11	<0.0618 U	<0.114 U	<0.018 U	<0.0188 U	<0.0111 U		6480	<0.0116 U	<0.12 U	2.73	118		<0.0142 U	<0.0191 U	<0.0103 U	<0.00916 U	<0.0152 U	<0.0385 U
35CSS031	0-0.5	N	11-Jan-11	<0.0611 UJ	<0.113 U	<0.018 U	<0.0186 U	<0.011 U		5290	<0.0115 U	<0.12 UJ	2.59	88.2		<0.014 U	<0.0189 U	<0.0102 U	<0.00905 U	<0.015 U	<0.038 U
35CSS031	0-0.5	FD	11-Jan-11	<0.0609 U	<0.113 U	<0.018 U	<0.0185 U	<0.011 U		4660	<0.0115 U	<0.12 U	2.57	92.4		<0.0139 U	<0.0188 U	<0.0102 U	<0.00901 U	<0.0149 U	<0.0378 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Benzyl Butyl Phthalate	Beryllium	bis(2-Chloroethoxy) Methane	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	bis(2-Chloroisopropyl) Ether	bis(2-Ethylhexyl) Phthalate	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Cadmium	Calcium	Carbazole	Carbon Disulfide
35BSB001	0-0.5	N	27-Jan-11	<0.00703 U	0.47 J	<0.0184 U	<0.0251 U	<0.0172 U	<0.0128 U						0.65	28200	<0.0239 U	
35BSB001	5.5-6.5	N	27-Jan-11	<0.00714 U	0.37 J	<0.0187 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.092 J	10400	<0.0243 U	<0.0022 U
35BSB002	0-0.5	N	27-Jan-11	<0.00699 U	0.32 J	<0.0183 U	<0.025 U	<0.0171 U	<0.0127 U						0.3	16200	<0.0238 U	
35BSB002	5.5-6.5	N	26-Jan-11	<0.00715 U	0.47 J	<0.0187 U	<0.0256 U	<0.0175 U	0.0254 J	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.073 J	10200	<0.0243 U	<0.0023 U
35BSB003	0-0.5	N	26-Jan-11	<0.00697 U	0.35 J	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U						0.29	17300	<0.0237 U	
35BSB003	5.5-6.5	N	26-Jan-11	<0.00716 U	0.36 J	<0.0187 U	<0.0256 U	<0.0175 U	<0.0131 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.1 J	13200	<0.0244 U	<0.0023 U
35BSB004	0-0.5	N	27-Jan-11	<0.00701 U	0.33 J	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						1.05	20300	<0.0239 U	
35BSB004	5.5-6.5	N	27-Jan-11	<0.00729 U	0.4 J	<0.0191 U	<0.0261 U	<0.0178 U	<0.0133 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.11 J	27000	<0.0248 U	<0.0022 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.00723 U	0.44 J	<0.0189 U	<0.0259 U	<0.0177 U	<0.0132 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.12 J	24100	<0.0246 U	<0.0023 U
35BSB005	0-0.5	N	27-Jan-11	<0.00707 U	0.45 J	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U						0.75	36500	<0.0241 U	
35BSB005	19.5-20.5	N	27-Jan-11	<0.00723 U	0.3 J	<0.0189 U	<0.0259 U	<0.0177 U	<0.0132 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.055 J	14700	<0.0246 U	<0.0023 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.00709 U	0.33 J	<0.0186 U	<0.0254 U	<0.0173 U	<0.0129 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	0.087 J	10000	<0.0242 U	<0.0025 U
35BSB006	0-0.5	N	26-Jan-11	<0.00697 U	0.29 J	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U						0.61	18500	<0.0237 U	
35BSB006	5.5-6.5	N	26-Jan-11	<0.00715 U	0.31 J	<0.0187 U	<0.0256 U	<0.0175 U	<0.013 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.09 J	23500	<0.0243 U	<0.0022 U
35BSB007	0-0.5	N	20-Jan-11	<0.00701 U	0.39 J	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						2.54	35900 J	<0.0239 U	
35BSB007	5.5-6.5	N	20-Jan-11	<0.007 U	0.32	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	1.64	33500 J	<0.0238 U	<0.0018 U
35BSB008	0-0.5	N	26-Jan-11	<0.00699 U	0.34 J	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.21	17000	<0.0238 U	
35BSB008	5.5-6.5	N	26-Jan-11	<0.00708 U	0.3 J	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.1 J	31300	<0.0241 U	<0.002 U
35BSB009	0-0.5	N	26-Jan-11	<0.007 U	0.45 J	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						0.15 J	26500	<0.0238 U	
35BSB009	5.5-6.5	N	26-Jan-11	<0.00702 U	0.36 J	<0.0184 U	<0.0251 U	<0.0171 U	0.0284 J	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.13 J	35900	<0.0239 U	<0.0021 U
35BSB010	0-0.5	N	20-Jan-11	<0.00704 U	0.36	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U						0.18 J	42300 J	<0.024 U	
35BSB010	5.5-6.5	N	20-Jan-11	<0.00699 U	0.3	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.18 J	25100 J	<0.0238 U	<0.0021 U
35BSB011	0-0.5	N	20-Jan-11	<0.00701 U	0.32	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						0.053 J	24200 J	<0.0239 U	
35BSB011	19.5-20.5	N	24-Jan-11	<0.00712 U	0.38	<0.0186 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.15 J	49800	<0.0242 U	<0.0021 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.00711 U	0.35	<0.0186 U	<0.0254 U	<0.0174 U	<0.013 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.14 J	46400	<0.0242 U	<0.002 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.00701 U	0.37	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0099 U	13000 J	<0.0239 U	<0.0024 U
35BSB012	0-0.5	N	19-Jan-11	<0.00708 U	0.53	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U						0.039 J	36300 J	<0.0241 U	
35BSB012	5.5-6.5	N	24-Jan-11	<0.00709 U	0.39 J	<0.0185 U	<0.0254 U	<0.0173 U	<0.0129 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.1 J	42900 J	<0.0241 U	<0.0022 U
35BSB013	0-0.5	N	24-Jan-11	<0.00697 U	0.54 J	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U						0.21	37800	<0.0237 U	
35BSB013	19-21	N	24-Jan-11	<0.00708 U	0.28 J	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.1 J	45700	<0.0241 U	<0.0021 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.00705 U	0.35 J	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.1 J	38200	<0.024 U	<0.0022 U
35BSB014	0-0.5	N	24-Jan-11	<0.007 U	0.46 J	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.16 J	26100	<0.0238 U	
35BSB014	5.5-6.5	N	24-Jan-11	<0.00696 U	0.4 J	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.065 J	15700	<0.0237 U	<0.0021 U
35BSB015	0-0.5	N	19-Jan-11	<0.00698 U	0.34	<0.0183 U	<0.025 U	<0.0171 U	<0.0127 U						<0.0099 U	34200 J	<0.0238 U	
35BSB015	5.5-6.5	N	19-Jan-11	<0.00703 U	0.31	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	39900 J	<0.024 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

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ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Benzyl Butyl Phthalate	Beryllium	bis(2-Chloroethoxy) Methane	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	bis(2-Chloroisopropyl) Ether	bis(2-Ethylhexyl) Phthalate	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Cadmium	Calcium	Carbazole	Carbon Disulfide
35BSB016	0-0.5	N	19-Jan-11	<0.00695 U	0.27	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U						<0.0098 U	24700 J	<0.0237 U	
35BSB016	5.5-6.5	N	19-Jan-11	<0.007 U	0.31	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0099 U	18400 J	<0.0238 U	<0.0023 U
35BSB017	0-0.5	N	19-Jan-11	<0.007 U	0.32	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.014 J	23800 J	<0.0238 U	
35BSB017	0-0.5	FD	19-Jan-11	<0.0069 U	0.36	<0.018 U	<0.0247 U	<0.0169 U	<0.0126 U						0.033 J	48000 J	<0.0235 U	
35BSB017	5.5-6.5	N	19-Jan-11	<0.00705 U	0.22	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	0.019 J	27400 J	<0.024 U	<0.0019 U
35BSB018	0-0.5	N	25-Jan-11	<0.00699 U	0.39 J	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.15 J	30100	<0.0238 U	
35BSB018	19.5-20.5	N	26-Jan-11	<0.00711 U	0.2 J	<0.0186 U	<0.0254 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.065 J	12600	<0.0242 U	<0.0021 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.00699 U	0.34 J	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.084 J	13600	<0.0238 U	<0.0022 U
35BSB019	0-0.5	N	19-Jan-11	<0.00693 U	0.33	<0.0181 U	<0.0248 U	<0.0169 U	<0.0126 U						<0.0098 U	27700 J	<0.0236 U	
35BSB019	5.5-6.5	N	19-Jan-11	<0.00712 U	0.33	<0.0186 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.01 U	49200 J	<0.0242 U	<0.0021 U
35BSB020	0-0.5	N	26-Jan-11	<0.0069 U	0.43 J	<0.018 U	<0.0247 U	<0.0169 U	<0.0126 U						0.12 J	31300	<0.0235 U	
35BSB020	5.5-6.5	N	26-Jan-11	<0.00698 U	0.37 J	<0.0183 U	<0.025 U	<0.017 U	<0.0127 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.098 J	44000	<0.0238 U	<0.0022 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0071 U	0.2 J	<0.0186 U	<0.0254 U	<0.0173 U	0.0171 J	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	0.085 J	15400 J	<0.0242 U	<0.0024 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.007 U	0.56	<0.0183 U	<0.025 U	<0.0171 U	0.0146 J	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.075 J	35600 J	<0.0238 U	<0.0021 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.00704 U	0.21	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.037 J	13400 J	<0.024 U	<0.0022 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.00705 U	0.5	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.1 J	31900 J	<0.024 U	<0.0021 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.00705 U	0.54	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	0.09 J	23900 J	<0.024 U	<0.0019 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0071 U	0.19 J	<0.0186 U	<0.0254 U	<0.0173 U	<0.0129 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.04 J	13300 J	<0.0242 U	<0.0022 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.00712 U	0.53	<0.0186 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.01 U	37400 J	<0.0243 U	<0.0021 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.00707 U	0.21	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.078 J	28000 J	<0.0241 U	<0.0022 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.00714 U	0.5	<0.0187 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.01 U	33600 J	<0.0243 U	<0.0021 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.00706 U	0.17 J	<0.0185 U	<0.0253 U	<0.0172 U	<0.0129 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.062 J	17000 J	<0.024 U	<0.0023 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.00703 U	0.51	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.016 J	29900 J	<0.0239 U	<0.0021 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0071 U	0.2 J	<0.0186 U	<0.0254 U	<0.0173 U	<0.013 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.048 J	17800 J	<0.0242 U	<0.0023 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.00709 U	0.21	<0.0185 U	<0.0254 U	<0.0173 U	<0.0129 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	0.039 J	15600 J	<0.0241 U	<0.0026 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.00703 U	0.45	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.019 J	32400 J	<0.0239 U	<0.002 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0071 U	0.21	<0.0186 U	<0.0254 U	<0.0173 U	<0.013 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.067 J	16000 J	<0.0242 U	<0.0022 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.00714 U	0.39	<0.0187 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.043 J	44100 J	<0.0243 U	<0.0022 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.00707 U	0.22	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	0.086 J	19400 J	<0.0241 U	<0.0024 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.00696 U	0.52	<0.0182 U	<0.0249 U	<0.017 U	0.0165 J	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	17200 J	<0.0237 U	<0.0022 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.00711 U	0.24	<0.0186 U	<0.0255 U	<0.0174 U	<0.013 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.06 J	21700 J	<0.0242 U	<0.0023 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.00711 U	0.49	<0.0186 U	<0.0254 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.025 J	20300 J	<0.0242 U	<0.0021 U
35CSB010	0-0.5	N	07-Feb-11	<0.00703 U	0.61	<0.0184 U	<0.0251 U	<0.0172 U	<0.0128 U						0.16 J	32700	<0.0239 U	
35CSB010	19.5-20.5	N	07-Feb-11	<0.00709 U	0.28 J	<0.0185 U	<0.0254 U	<0.0173 U	<0.0129 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.063 J	13900	<0.0241 U	<0.002 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.00704 U	0.34	<0.0184 U	<0.0252 U	<0.0172 U	0.0193 J	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.072 J	29700	<0.024 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Benzyl Butyl Phthalate	Beryllium	bis(2-Chloroethoxy) Methane	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	bis(2-Chloroisopropyl) Ether	bis(2-Ethylhexyl) Phthalate	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Cadmium	Calcium	Carbazole	Carbon Disulfide
35CSB011	0-0.5	N	07-Feb-11	<0.00704 U	0.78	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U						0.24 J	44000	<0.024 U	
35CSB011	19.5-20.5	N	07-Feb-11	<0.00705 U	0.34 J	<0.0184 U	<0.0252 U	<0.0172 U	0.0361 J	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.056 J	11700	<0.024 U	<0.002 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.00703 U	0.4 J	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.086 J	35000	<0.024 U	<0.0022 U
35CSB012	0-0.5	N	07-Feb-11	<0.00705 U	0.77	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U						0.33 J	54400	<0.024 U	
35CSB012	19.5-20.5	N	07-Feb-11	<0.00706 U	0.16 J	<0.0185 U	<0.0253 U	<0.0172 U	<0.0129 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.047 J	11300	<0.024 U	<0.0021 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.00696 U	0.32 J	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.05 J	24100	<0.0237 U	<0.002 U
35CSB013	0-0.5	N	08-Feb-11	<0.00704 U	0.52	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U						0.14 J	28400	<0.024 U	
35CSB013	0-0.5	FD	08-Feb-11	<0.00699 U	0.52	<0.0183 U	<0.025 U	<0.0171 U	<0.0127 U						0.12 J	25000	<0.0238 U	
35CSB013	19.5-20.5	N	08-Feb-11	<0.00711 U	0.23	<0.0186 U	<0.0254 U	<0.0174 U	<0.013 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	0.071 J	25800	<0.0242 U	<0.0021 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.00705 U	0.37 J	<0.0184 U	<0.0252 U	<0.0172 U	0.0307 J	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.06 J	34000	<0.024 U	<0.0023 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.007 U	0.2	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	0.065 J	18500 J	<0.0238 U	<0.0023 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.00722 U	0.43	<0.0189 U	<0.0258 U	<0.0176 U	<0.0132 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	0.035 J	52800 J	<0.0246 U	<0.0022 U
35CSS001	0-0.5	N	25-Jan-11	<0.00702 U	0.56 J	<0.0184 U	<0.0251 U	<0.0172 U	<0.0128 U						0.53	22200	<0.0239 U	
35CSS002	0-0.5	N	25-Jan-11	<0.00701 U	0.48 J	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						0.54	29000	<0.0239 U	
35CSS003	0-0.5	N	25-Jan-11	<0.00693 U	0.34 J	<0.0181 U	<0.0248 U	<0.0169 U	<0.0126 U						1.07	20500	<0.0236 U	
35CSS004	0-0.5	N	25-Jan-11	<0.00696 U	0.54 J	<0.0182 U	<0.0249 U	<0.017 U	0.049 J						0.51	27200	<0.0237 U	
35CSS005	0-0.5	N	25-Jan-11	<0.00704 U	0.67 J	<0.0184 U	<0.0252 U	<0.0172 U	<0.0128 U						0.31	28900	<0.024 U	
35CSS006	0-0.5	N	10-Feb-11	<0.00705 U	0.84	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U						0.16 J	32300	<0.024 U	
35CSS007	0-0.5	N	02-Feb-11	<0.00695 U	0.56	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U						0.24	35000 J	<0.0237 U	
35CSS008	0-0.5	N	02-Feb-11	<0.007 U	0.37	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.58	27700 J	<0.0238 U	
35CSS009	0-0.5	N	10-Feb-11	<0.00707 U	0.68	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U						0.32	37700	<0.0241 U	
35CSS010	0-0.5	N	10-Feb-11	<0.00706 U	0.63	<0.0185 U	<0.0253 U	<0.0172 U	<0.0129 U						0.48	37000	<0.024 U	
35CSS011	0-0.5	N	10-Feb-11	<0.00705 U	0.66	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U						0.25 J	43000	<0.024 U	
35CSS013	0-0.5	N	12-Jan-11	<0.007 U	<0.0028 U	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						0.16 J	31800	<0.0238 U	
35CSS014	0-0.5	N	12-Jan-11	<0.00694 U	<0.0028 U	<0.0182 U	<0.0248 U	<0.017 U	<0.0127 U						0.32	28700	<0.0236 U	
35CSS015	0-0.5	N	12-Jan-11	<0.00707 U	<0.0028 U	<0.0185 U	<0.0253 U	<0.0173 U	<0.0129 U						0.17 J	27000	<0.0241 U	
35CSS016	0-0.5	N	12-Jan-11	<0.00702 U	<0.0028 U	<0.0184 U	<0.0251 U	<0.0172 U	<0.0128 U						0.36	11500	<0.0239 U	
35CSS017	0-0.5	N	12-Jan-11	<0.00705 U	0.18 J	<0.0184 U	<0.0252 U	<0.0172 U	<0.0129 U						0.064 J	21000	<0.024 U	
35CSS018	0-0.5	N	12-Jan-11	<0.00703 U	<0.0028 U	<0.0184 U	<0.0251 U	<0.0172 U	<0.0128 U						0.033 J	21400	<0.0239 U	
35CSS019	0-0.5	N	12-Jan-11	<0.007 U	0.17 J	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.051 J	23000	<0.0238 U	
35CSS020	0-0.5	N	12-Jan-11	<0.007 U	0.043 J	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						0.11 J	21000	<0.0238 U	
35CSS021	0-0.5	N	12-Jan-11	<0.00713 U	0.02 J	<0.0186 U	<0.0255 U	<0.0174 U	<0.013 U						0.22	30100	<0.0243 U	
35CSS022	0-0.5	N	12-Jan-11	<0.00698 U	0.1 J	<0.0182 U	<0.025 U	<0.017 U	<0.0127 U						0.46	18900	<0.0238 U	
35CSS023	0-0.5	N	11-Jan-11	<0.00697 U	<0.0028 U	<0.0182 U	<0.0249 U	<0.017 U	<0.0127 U						0.034 J	9630	<0.0237 U	
35CSS024	0-0.5	N	11-Jan-11	<0.00699 U	<0.0028 U	<0.0183 U	<0.025 U	<0.0171 U	<0.0127 U						0.028 J	8040	<0.0238 U	

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Benzyl Butyl Phthalate	Beryllium	bis(2-Chloroethoxy) Methane	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	bis(2-Chloroisopropyl) Ether	bis(2-Ethylhexyl) Phthalate	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Cadmium	Calcium	Carbazole	Carbon Disulfide
35CSS025	0-0.5	N	11-Jan-11	<0.00689 U	<0.0028 U	<0.018 U	<0.0246 U	<0.0168 U	<0.0126 U						0.073 J	14400	<0.0234 U	
35CSS026	0-0.5	N	11-Jan-11	<0.00693 U	<0.0028 U	<0.0181 U	<0.0248 U	<0.0169 U	<0.0126 U						<0.0098 U	13500	<0.0236 U	
35CSS027	0-0.5	N	11-Jan-11	<0.0069 U	<0.0028 U	<0.018 U	<0.0247 U	<0.0168 U	<0.0126 U						0.35	22500	<0.0235 U	
35CSS028	0-0.5	N	11-Jan-11	<0.00701 U	<0.0028 U	<0.0183 U	<0.0251 U	<0.0171 U	<0.0128 U						0.25	26100	<0.0239 U	
35CSS029	0-0.5	N	11-Jan-11	<0.00699 U	<0.0028 U	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						2.56	20900	<0.0238 U	
35CSS030	0-0.5	N	11-Jan-11	<0.00699 U	<0.0028 U	<0.0183 U	<0.025 U	<0.0171 U	<0.0128 U						0.21	20800	<0.0238 U	
35CSS031	0-0.5	N	11-Jan-11	<0.00691 U	<0.0028 U	<0.0181 U	<0.0247 U	<0.0169 U	0.13 J						0.22	17000	<0.0235 U	
35CSS031	0-0.5	FD	11-Jan-11	<0.00688 U	<0.0028 U	<0.018 U	<0.0246 U	<0.0168 U	<0.0125 U						0.36	25600	<0.0234 U	

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Chromium, Total	Chrysene	cis-1,2-Dichloroethylene	cis-1,3-Dichloropropene	Cobalt	Copper	Dibenz(a,h)anthracene	Dibenzofuran	Dibromochloromethane	Dibromomethane
35BSB001	0-0.5	N	27-Jan-11						9.88 J	<0.0112 U			4.89 J	16.1 J	<0.00915 U	<0.0115 U		
35BSB001	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 UJ	7.15 J	<0.0114 U	<0.0022 U	<0.0022 U	4.12 J	27.9 J	<0.00929 U	<0.0117 U	<0.0022 U	<0.0022 U
35BSB002	0-0.5	N	27-Jan-11						8.44 J	<0.0111 U			4.23 J	14.3 J	<0.0091 U	<0.0114 U		
35BSB002	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 UJ	12.5 J	<0.0114 U	<0.0023 U	<0.0023 U	5.59 J	34.8 J	<0.0093 U	<0.0117 U	<0.0023 U	<0.0023 U
35BSB003	0-0.5	N	26-Jan-11						9.89 J	<0.0111 U			4.36 J	12.7 J	<0.00907 U	<0.0114 U		
35BSB003	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 UJ	8.48 J	<0.0114 U	<0.0023 U	<0.0023 U	4.53 J	20.8 J	<0.00932 U	<0.0117 U	<0.0023 U	<0.0023 U
35BSB004	0-0.5	N	27-Jan-11						9.74 J	<0.0112 U			3.96 J	26 J	<0.00913 U	<0.0115 U		
35BSB004	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	8.68 J	<0.0116 U	<0.0022 U	<0.0022 U	3.85 J	22.5 J	<0.00949 U	<0.0119 U	<0.0022 U	<0.0022 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 UJ	9.44 J	<0.0115 U	<0.0023 U	<0.0023 U	4.21 J	24.6 J	<0.00942 U	<0.0118 U	<0.0023 U	<0.0023 U
35BSB005	0-0.5	N	27-Jan-11						10.3 J	<0.0113 U			4.85 J	14.7 J	<0.0092 U	<0.0116 U		
35BSB005	19.5-20.5	N	27-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 UJ	5.67 J	<0.0115 U	<0.0023 U	<0.0023 U	2.6 J	16.7 J	<0.00942 U	<0.0118 U	<0.0023 U	<0.0023 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 UJ	9 J	<0.0113 U	<0.0025 U	<0.0025 U	3.91 J	17.1 J	<0.00924 U	<0.0116 U	<0.0025 U	<0.0025 U
35BSB006	0-0.5	N	26-Jan-11						9.56 J	<0.0111 U			3.72 J	13.6 J	<0.00907 U	<0.0114 U		
35BSB006	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 UJ	10.5 J	<0.0114 U	<0.0022 U	<0.0022 U	4.04 J	34 J	<0.00931 U	<0.0117 U	<0.0022 U	<0.0022 U
35BSB007	0-0.5	N	20-Jan-11						31.7 J	<0.0112 U			6.15 J	43.2 J	<0.00913 U	<0.0115 U		
35BSB007	5.5-6.5	N	20-Jan-11	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	14.3 J	<0.0112 U	<0.0018 U	<0.0018 U	4.79 J	29.8 J	<0.00911 U	<0.0115 U	<0.0018 U	<0.0018 U
35BSB008	0-0.5	N	26-Jan-11						9.47 J	<0.0112 U			4.3 J	12 J	<0.0091 U	<0.0115 U		
35BSB008	5.5-6.5	N	26-Jan-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 UJ	9.06 J	<0.0113 U	<0.002 U	<0.002 U	3.9 J	22.5 J	<0.00921 U	<0.0116 U	<0.002 U	<0.002 U
35BSB009	0-0.5	N	26-Jan-11						11.3 J	<0.0112 U			4.79 J	13.7 J	<0.00912 U	<0.0115 U		
35BSB009	5.5-6.5	N	26-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 UJ	9.88 J	<0.0112 U	<0.0021 U	<0.0021 U	3.9 J	21.9 J	<0.00913 U	<0.0115 U	<0.0021 U	<0.0021 U
35BSB010	0-0.5	N	20-Jan-11						10.4 J	<0.0112 U			4.32 J	11.8 J	<0.00916 U	<0.0115 U		
35BSB010	5.5-6.5	N	20-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	10.1 J	<0.0111 U	<0.0021 U	<0.0021 U	4.29 J	14.4 J	<0.0091 U	<0.0114 U	<0.0021 U	<0.0021 U
35BSB011	0-0.5	N	20-Jan-11						10.9 J	<0.0112 U			4.64 J	14.5 J	<0.00913 U	<0.0115 U		
35BSB011	19.5-20.5	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 UJ	5.75	<0.0114 U	<0.0021 U	<0.0021 U	3.12	12.6 J	<0.00927 U	<0.0117 U	<0.0021 U	<0.0021 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	5.44	<0.0113 U	<0.002 U	<0.002 U	2.97	12.5 J	<0.00926 U	<0.0116 U	<0.002 U	<0.002 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	12.3 J	<0.0112 U	<0.0024 U	<0.0024 U	4.96 J	13.2 J	<0.00913 U	<0.0115 U	<0.0024 U	<0.0024 U
35BSB012	0-0.5	N	19-Jan-11						11.5 J	<0.0113 U			5.64 J	13.4 J	<0.00922 U	<0.0116 U		
35BSB012	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 UJ	10.2	<0.0113 U	<0.0022 U	<0.0022 U	3.7	18.1 J	<0.00923 U	<0.0116 U	<0.0022 U	<0.0022 U
35BSB013	0-0.5	N	24-Jan-11						10.3	<0.0111 U			4.94	13.4 J	<0.00907 U	<0.0114 U		
35BSB013	19-21	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 UJ	3.52	<0.0113 U	<0.0021 U	<0.0021 U	1.94	9.6 J	<0.00922 U	<0.0116 U	<0.0021 U	<0.0021 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 UJ	9.05	<0.0112 U	<0.0022 U	<0.0022 U	3.65	13.2 J	<0.00918 U	<0.0116 U	<0.0022 U	<0.0022 U
35BSB014	0-0.5	N	24-Jan-11						10.6	<0.0112 U			5.03	12.9 J	<0.00911 U	<0.0115 U		
35BSB014	5.5-6.5	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 UJ	8.6	<0.0111 U	<0.0021 U	<0.0021 U	3.91	31.1 J	<0.00906 U	<0.0114 U	<0.0021 U	<0.0021 U
35BSB015	0-0.5	N	19-Jan-11						10.2 J	<0.0111 U			5.34 J	11.6 J	<0.00909 U	<0.0114 U		
35BSB015	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	13.4 J	<0.0112 U	<0.0021 U	<0.0021 U	5.9 J	15.1 J	<0.00916 U	<0.0115 U	<0.0021 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Chromium, Total	Chrysene	cis-1,2-Dichloroethylene	cis-1,3-Dichloropropene	Cobalt	Copper	Dibenz(a,h)anthracene	Dibenzofuran	Dibromochloromethane	Dibromomethane
35BSB016	0-0.5	N	19-Jan-11						9.01 J	<0.0111 U			3.92 J	10.1 J	<0.00905 U	<0.0114 U		
35BSB016	5.5-6.5	N	19-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	11 J	<0.0112 U	<0.0023 U	<0.0023 U	4.37 J	16.2 J	<0.00911 U	<0.0115 U	<0.0023 U	<0.0023 U
35BSB017	0-0.5	N	19-Jan-11						8.78 J	<0.0112 U			3.86 J	9.66 J	<0.00911 U	<0.0115 U		
35BSB017	0-0.5	FD	19-Jan-11						9.81 J	<0.011 U			4.25 J	10.3 J	<0.00898 U	<0.0113 U		
35BSB017	5.5-6.5	N	19-Jan-11	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	5.78 J	<0.0112 U	<0.0019 U	<0.0019 U	2.64 J	4.03 J	<0.00918 U	<0.0116 U	<0.0019 U	<0.0019 U
35BSB018	0-0.5	N	25-Jan-11						9.8	<0.0112 U			4.15	10.8 J	<0.0091 U	<0.0115 U		
35BSB018	19.5-20.5	N	26-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 UJ	3.59	<0.0113 U	<0.0021 U	<0.0021 U	2.17	8.41 J	<0.00925 U	<0.0116 U	<0.0021 U	<0.0021 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 UJ	12.6	<0.0111 U	<0.0022 U	<0.0022 U	4.5	14.4 J	<0.0091 U	<0.0114 U	<0.0022 U	<0.0022 U
35BSB019	0-0.5	N	19-Jan-11						10.4 J	<0.011 U			4.67 J	11.1 J	<0.00902 U	<0.0113 U		
35BSB019	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	8.97 J	<0.0114 U	<0.0021 U	<0.0021 U	3.86 J	8.22 J	<0.00927 U	<0.0117 U	<0.0021 U	<0.0021 U
35BSB020	0-0.5	N	26-Jan-11						10.2	0.0223 J			4.28	12.8 J	<0.00898 U	<0.0113 U		
35BSB020	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 UJ	10.2	<0.0111 U	<0.0022 U	<0.0022 U	3.67	44.7 J	<0.00909 U	<0.0114 U	<0.0022 U	<0.0022 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	2.81 J	<0.0113 U	<0.0024 U	<0.0024 U	1.81	8.32	<0.00924 U	<0.0116 U	<0.0024 U	<0.0024 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	9.97 J	<0.0112 U	<0.0021 U	<0.0021 U	4.68	44.2	<0.00911 U	<0.0115 U	<0.0021 U	<0.0021 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	3.43 J	<0.0112 U	<0.0022 U	<0.0022 U	1.99	15.4	<0.00917 U	<0.0115 U	<0.0022 U	<0.0022 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	12.7 J	<0.0112 U	<0.0021 U	<0.0021 U	5.01	21.7	<0.00918 U	<0.0115 U	<0.0021 U	<0.0021 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	14.5 J	<0.0112 U	<0.0019 U	<0.0019 U	5.48	39.7	<0.00918 U	<0.0115 U	<0.0019 U	<0.0019 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	3.45 J	<0.0113 U	<0.0022 U	<0.0022 U	1.93	10	<0.00924 U	<0.0116 U	<0.0022 U	<0.0022 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	10.8 J	<0.0114 U	<0.0021 U	<0.0021 U	4.57	27.7	<0.00927 U	<0.0117 U	<0.0021 U	<0.0021 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	3.42 J	<0.0113 U	<0.0022 U	<0.0022 U	1.94	15.8	<0.0092 U	<0.0116 U	<0.0022 U	<0.0022 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	9.27 J	<0.0114 U	<0.0021 U	<0.0021 U	3.92	14.8	<0.00929 U	<0.0117 U	<0.0021 U	<0.0021 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	2.63 J	<0.0113 U	<0.0023 U	<0.0023 U	1.75	14.3	<0.00919 U	<0.0116 U	<0.0023 U	<0.0023 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	12.2 J	<0.0112 U	<0.0021 U	<0.0021 U	4.69	18.4	<0.00915 U	<0.0115 U	<0.0021 U	<0.0021 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	3.56	<0.0113 U	<0.0023 U	<0.0023 U	1.88	6.76	<0.00924 U	<0.0116 U	<0.0023 U	<0.0023 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	3.55	<0.0113 U	<0.0026 U	<0.0026 U	1.73	6.67	<0.00923 U	<0.0116 U	<0.0026 U	<0.0026 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	13 J	<0.0112 U	<0.002 U	<0.002 U	3.81	18.6	<0.00916 U	<0.0115 U	<0.002 U	<0.002 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	3.31	<0.0113 U	<0.0022 U	<0.0022 U	1.8	12.1	<0.00924 U	<0.0116 U	<0.0022 U	<0.0022 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	7.16	<0.0114 U	<0.0022 U	<0.0022 U	3.19	15.9	<0.0093 U	<0.0117 U	<0.0022 U	<0.0022 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	3.08	<0.0113 U	<0.0024 U	<0.0024 U	1.81	6.69	<0.0092 U	<0.0116 U	<0.0024 U	<0.0024 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	13.7	<0.0111 U	<0.0022 U	<0.0022 U	4.99	26.3	<0.00906 U	<0.0114 U	<0.0022 U	<0.0022 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	3.79	<0.0113 U	<0.0023 U	<0.0023 U	1.84	17.8	<0.00926 U	<0.0117 U	<0.0023 U	<0.0023 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	11.3	<0.0113 U	<0.0021 U	<0.0021 U	4.63	20.6	<0.00926 U	<0.0116 U	<0.0021 U	<0.0021 U
35CSB010	0-0.5	N	07-Feb-11						16.4 J	<0.0112 U			7.17	17.1	<0.00915 U	<0.0115 U		
35CSB010	19.5-20.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	18.7 J	<0.0113 U	<0.002 U	<0.002 U	6.08	30.6	<0.00923 U	<0.0116 U	<0.002 U	<0.002 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	12.6 J	<0.0112 U	<0.0021 U	<0.0021 U	5.3	45.6	<0.00916 U	<0.0115 U	<0.0021 U	<0.0021 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Chromium, Total	Chrysene	cis-1,2-Dichloroethylene	cis-1,3-Dichloropropene	Cobalt	Copper	Dibenz(a,h)anthracene	Dibenzofuran	Dibromochloromethane	Dibromomethane
35CSB011	0-0.5	N	07-Feb-11						14.2 J	<0.0112 U			6.88	22.8	<0.00916 U	<0.0115 U		
35CSB011	19.5-20.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	11.6 J	<0.0112 U	<0.002 U	<0.002 U	5.84	35.4	<0.00918 U	<0.0115 U	<0.002 U	<0.002 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	16.2 J	<0.0112 U	<0.0022 U	<0.0022 U	6.62	63.4	<0.00916 U	<0.0115 U	<0.0022 U	<0.0022 U
35CSB012	0-0.5	N	07-Feb-11						14.1 J	<0.0112 U			6.78	29	<0.00917 U	<0.0115 U		
35CSB012	19.5-20.5	N	07-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	5.45 J	<0.0113 U	<0.0021 U	<0.0021 U	2.35	23.4	<0.00919 U	<0.0116 U	<0.0021 U	<0.0021 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	17 J	<0.0111 U	<0.002 U	<0.002 U	6.73	39.9	<0.00907 U	<0.0114 U	<0.002 U	<0.002 U
35CSB013	0-0.5	N	08-Feb-11						13 J	<0.0112 U			5.8	14.7	<0.00916 U	<0.0115 U		
35CSB013	0-0.5	FD	08-Feb-11						13.6 J	<0.0111 U			6.66	15.7	<0.00909 U	<0.0114 U		
35CSB013	19.5-20.5	N	08-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	4.18 J	<0.0113 U	<0.0021 U	<0.0021 U	2.09	11.6	<0.00925 U	<0.0116 U	<0.0021 U	<0.0021 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	13.2 J	<0.0112 U	<0.0023 U	<0.0023 U	5.59	41.2	<0.00918 U	<0.0115 U	<0.0023 U	<0.0023 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	3.27	<0.0112 U	<0.0023 U	<0.0023 U	1.77	9.97	<0.00911 U	<0.0115 U	<0.0023 U	<0.0023 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	8.17	<0.0115 U	<0.0022 U	<0.0022 U	3.32	14.1	<0.00939 U	<0.0118 U	<0.0022 U	<0.0022 U
35CSS001	0-0.5	N	25-Jan-11						14.2	<0.0112 U			6.04	30.8 J	<0.00914 U	<0.0115 U		
35CSS002	0-0.5	N	25-Jan-11						15.2	<0.0112 U			4.87	44 J	<0.00912 U	<0.0115 U		
35CSS003	0-0.5	N	25-Jan-11						12	<0.011 U			4.53	124 J	<0.00902 U	<0.0113 U		
35CSS004	0-0.5	N	25-Jan-11						14.9	<0.0111 U			5.82	49.2 J	<0.00906 U	<0.0114 U		
35CSS005	0-0.5	N	25-Jan-11						12.7	<0.0112 U			6.07	39.6 J	<0.00916 U	<0.0115 U		
35CSS006	0-0.5	N	10-Feb-11						13.9 J	<0.0112 U			7.76	25.2	<0.00918 U	<0.0115 U		
35CSS007	0-0.5	N	02-Feb-11						9.12	<0.0111 U			4.56	23.3	<0.00905 U	<0.0114 U		
35CSS008	0-0.5	N	02-Feb-11						9.46	<0.0112 U			4.09	142	<0.00911 U	<0.0115 U		
35CSS009	0-0.5	N	10-Feb-11						13.6 J	<0.0113 U			6.78	42.8	<0.0092 U	<0.0116 U		
35CSS010	0-0.5	N	10-Feb-11						18.3 J	<0.0113 U			5.92	62.6	<0.00919 U	<0.0116 U		
35CSS011	0-0.5	N	10-Feb-11						13.6 J	<0.0112 U			6.14	28	<0.00918 U	<0.0115 U		
35CSS013	0-0.5	N	12-Jan-11						7.94	<0.0112 U			3.58	28.5	<0.00912 U	<0.0115 U		
35CSS014	0-0.5	N	12-Jan-11						11.7	<0.0111 U			4.32	38.8	<0.00904 U	<0.0114 U		
35CSS015	0-0.5	N	12-Jan-11						9.31	<0.0113 U			4.58	22.5	<0.0092 U	<0.0116 U		
35CSS016	0-0.5	N	12-Jan-11						9.32	<0.0112 U			4.46	22.9	<0.00914 U	<0.0115 U		
35CSS017	0-0.5	N	12-Jan-11						11.3	<0.0113 U			5.21	12.9	<0.00918 U	<0.0116 U		
35CSS018	0-0.5	N	12-Jan-11						10.8	<0.0112 U			4.87	11.2	<0.00914 U	<0.0115 U		
35CSS019	0-0.5	N	12-Jan-11						11.8	<0.0112 U			5.64	14.4	<0.00911 U	<0.0115 U		
35CSS020	0-0.5	N	12-Jan-11						10.7	<0.0112 U			5.36	23.3	<0.00912 U	<0.0115 U		
35CSS021	0-0.5	N	12-Jan-11						12.1	<0.0114 U			5.12	19.8	<0.00928 U	<0.0117 U		
35CSS022	0-0.5	N	12-Jan-11						14.2	<0.0111 U			5.85	52.7	<0.00908 U	<0.0114 U		
35CSS023	0-0.5	N	11-Jan-11						8.51	<0.0111 U			4.26	14.5	<0.00907 U	<0.0114 U		
35CSS024	0-0.5	N	11-Jan-11						8.28	<0.0111 U			6.38	14	<0.00909 U	<0.0114 U		

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Chromium, Total	Chrysene	cis-1,2-Dichloroethylene	cis-1,3-Dichloropropene	Cobalt	Copper	Dibenz(a,h)anthracene	Dibenzofuran	Dibromochloromethane	Dibromomethane
35CSS025	0-0.5	N	11-Jan-11						8.78	<0.011 U			4.11	14.8	<0.00896 U	<0.0113 U		
35CSS026	0-0.5	N	11-Jan-11						7.52	<0.0111 U			4.84	13.3	<0.00902 U	<0.0113 U		
35CSS027	0-0.5	N	11-Jan-11						9.33	<0.011 U			4.24	76.3	<0.00898 U	<0.0113 U		
35CSS028	0-0.5	N	11-Jan-11						9.79	<0.0112 U			4.08	23.9	<0.00912 U	<0.0115 U		
35CSS029	0-0.5	N	11-Jan-11						13.1	<0.0111 U			4.07	76.3	<0.0091 U	<0.0115 U		
35CSS030	0-0.5	N	11-Jan-11						8.34	<0.0111 U			3.95	25.8	<0.0091 U	<0.0114 U		
35CSS031	0-0.5	N	11-Jan-11						6.02	<0.011 U			2.83 J	14 J	<0.00899 U	<0.0113 U		
35CSS031	0-0.5	FD	11-Jan-11						6.32	<0.011 U			2.59	22.2	<0.00895 U	<0.0113 U		

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Dichlorodifluoromethane	Diethyl Phthalate	Dimethyl Phthalate	Di-n-Butyl Phthalate	Di-n-Octyl Phthalate	Ethylbenzene	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Indeno(1,2,3-c,d)pyrene	Iron	Isophorone
35BSB001	0-0.5	N	27-Jan-11		<0.0308 U	<0.00738 U	<0.00805 U	<0.0109 U		<0.00737 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	<0.012 U	<0.0133 U	12500	<0.0109 U
35BSB001	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0313 U	<0.0075 U	<0.00817 U	<0.0111 U	<0.0022 U	<0.00749 U	<0.0104 U	<0.0405 U	<0.0223 U	<0.0502 U	<0.012 U	<0.0135 U	12800	<0.0111 U
35BSB002	0-0.5	N	27-Jan-11		0.0956 J	<0.00734 U	0.03 J	<0.0108 U		<0.00733 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0133 U	11600	<0.0108 U
35BSB002	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0313 U	<0.00751 U	0.00836 J	<0.0111 U	<0.0023 U	<0.0075 U	<0.0104 U	<0.0406 U	<0.0223 U	<0.0503 U	<0.012 U	<0.0136 U	13900	<0.0111 U
35BSB003	0-0.5	N	26-Jan-11		<0.0305 U	<0.00732 U	<0.00798 U	<0.0108 U		<0.00731 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	<0.012 U	<0.0132 U	12200	<0.0108 U
35BSB003	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0314 U	<0.00752 U	<0.00819 U	<0.0111 U	<0.0023 U	<0.00751 U	<0.0104 U	<0.0406 U	<0.0223 U	<0.0504 U	<0.012 U	<0.0136 U	12800	<0.0111 U
35BSB004	0-0.5	N	27-Jan-11		<0.0307 U	<0.00737 U	<0.00803 U	<0.0109 U		<0.00735 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0494 U	<0.012 U	<0.0133 U	11100	<0.0109 U
35BSB004	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.032 U	<0.00766 U	<0.00835 U	<0.0113 U	<0.0022 U	<0.00765 U	<0.0106 U	<0.0414 U	<0.0227 U	<0.0513 U	<0.012 U	<0.0138 U	12100	<0.0113 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0023 U	<0.0317 U	<0.0076 U	<0.00828 U	<0.0112 U	<0.0023 U	<0.00759 U	<0.0105 U	<0.0411 U	<0.0226 U	<0.0509 U	<0.012 U	<0.0137 U	12800	<0.0112 U
35BSB005	0-0.5	N	27-Jan-11		<0.031 U	<0.00742 U	<0.0081 U	<0.011 U		<0.00741 U	<0.0103 U	<0.0401 U	<0.022 U	<0.0498 U	<0.012 U	<0.0134 U	12700	<0.011 U
35BSB005	19.5-20.5	N	27-Jan-11	<0.0023 U	<0.0317 U	<0.0076 U	<0.00828 U	<0.0112 U	<0.0023 U	<0.00759 U	<0.0105 U	<0.0411 U	<0.0226 U	<0.0509 U	<0.012 U	<0.0137 U	7330	<0.0112 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0025 U	<0.0311 U	<0.00745 U	<0.00812 U	<0.011 U	<0.0025 U	<0.00744 U	<0.0103 U	<0.0403 U	<0.0221 U	<0.0499 U	<0.012 U	<0.0135 U	15000	<0.011 U
35BSB006	0-0.5	N	26-Jan-11		<0.0305 U	<0.00732 U	<0.00798 U	<0.0108 U		<0.00731 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	<0.012 U	<0.0132 U	11100	<0.0108 U
35BSB006	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0313 U	<0.00751 U	<0.00819 U	<0.0111 U	<0.0022 U	<0.0075 U	<0.0104 U	<0.0406 U	<0.0223 U	<0.0503 U	<0.012 U	<0.0136 U	13800	<0.0111 U
35BSB007	0-0.5	N	20-Jan-11		<0.0307 U	<0.00736 U	<0.00803 U	<0.0109 U		<0.00735 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0494 U	<0.012 U	<0.0133 U	77800 J	<0.0109 U
35BSB007	5.5-6.5	N	20-Jan-11	<0.0018 U	<0.0307 U	<0.00735 U	<0.00801 U	<0.0109 U	<0.0018 U	<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	15100 J	<0.0109 U
35BSB008	0-0.5	N	26-Jan-11		<0.0306 U	<0.00735 U	<0.00801 U	<0.0109 U		<0.00734 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0133 U	11300	<0.0109 U
35BSB008	5.5-6.5	N	26-Jan-11	<0.002 U	<0.031 U	<0.00743 U	<0.0081 U	<0.011 U	<0.002 U	<0.00742 U	<0.0103 U	<0.0402 U	<0.0221 U	<0.0498 U	<0.012 U	<0.0134 U	12000	<0.011 U
35BSB009	0-0.5	N	26-Jan-11		<0.0307 U	<0.00736 U	<0.00802 U	<0.0109 U		<0.00735 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	12600	<0.0109 U
35BSB009	5.5-6.5	N	26-Jan-11	<0.0021 U	<0.0308 U	<0.00737 U	<0.00804 U	<0.0109 U	<0.0021 U	<0.00736 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0494 U	<0.012 U	<0.0133 U	12800	<0.0109 U
35BSB010	0-0.5	N	20-Jan-11		<0.0308 U	<0.00739 U	<0.00806 U	<0.0109 U		<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	<0.012 U	<0.0133 U	12700 J	<0.0109 U
35BSB010	5.5-6.5	N	20-Jan-11	<0.0021 U	<0.0306 U	<0.00734 U	<0.008 U	<0.0108 U	<0.0021 U	<0.00733 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0133 U	13200 J	<0.0108 U
35BSB011	0-0.5	N	20-Jan-11		<0.0307 U	<0.00736 U	<0.00803 U	<0.0109 U		<0.00735 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0494 U	<0.012 U	<0.0133 U	13400 J	<0.0109 U
35BSB011	19.5-20.5	N	24-Jan-11	<0.0021 U	<0.0312 U	<0.00748 U	<0.00815 U	<0.011 U	<0.0021 U	<0.00747 U	<0.0103 U	<0.0404 U	<0.0222 U	<0.0501 U	<0.012 U	<0.0135 U	8050	<0.011 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.002 U	<0.0312 U	<0.00747 U	<0.00814 U	<0.011 U	<0.002 U	<0.00746 U	<0.0103 U	<0.0404 U	<0.0222 U	<0.0501 U	<0.012 U	<0.0135 U	7610	<0.011 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0024 U	<0.0307 U	<0.00736 U	<0.00803 U	<0.0109 U	<0.0024 U	<0.00735 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0494 U	<0.012 U	<0.0133 U	15800 J	<0.0109 U
35BSB012	0-0.5	N	19-Jan-11		<0.031 U	<0.00744 U	<0.00811 U	<0.011 U		<0.00743 U	<0.0103 U	<0.0402 U	<0.0221 U	<0.0498 U	<0.012 U	<0.0134 U	15000 J	<0.011 U
35BSB012	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0311 U	<0.00745 U	<0.00812 U	<0.011 U	<0.0022 U	<0.00744 U	<0.0103 U	<0.0402 U	<0.0221 U	<0.0499 U	<0.012 U	<0.0134 U	10900	<0.011 U
35BSB013	0-0.5	N	24-Jan-11		<0.0305 U	<0.00732 U	<0.00798 U	<0.0108 U		<0.00731 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	<0.012 U	<0.0132 U	13200	<0.0108 U
35BSB013	19-21	N	24-Jan-11	<0.0021 U	<0.031 U	<0.00744 U	<0.00811 U	<0.011 U	<0.0021 U	<0.00743 U	<0.0103 U	<0.0402 U	<0.0221 U	<0.0499 U	<0.012 U	<0.0134 U	5390	<0.011 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0309 U	<0.00741 U	<0.00808 U	<0.0109 U	<0.0022 U	<0.0074 U	<0.0102 U	<0.04 U	<0.022 U	<0.0497 U	<0.012 U	<0.0134 U	11000	<0.0109 U
35BSB014	0-0.5	N	24-Jan-11		<0.0307 U	<0.00735 U	<0.00802 U	<0.0109 U		<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	13000	<0.0109 U
35BSB014	5.5-6.5	N	24-Jan-11	<0.0021 U	<0.0305 U	<0.00731 U	<0.00797 U	<0.0108 U	<0.0021 U	<0.0073 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	<0.012 U	<0.0132 U	12600	<0.0108 U
35BSB015	0-0.5	N	19-Jan-11		<0.0306 U	<0.00734 U	<0.008 U	<0.0108 U		<0.00733 U	<0.0101 U	<0.0396 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0132 U	13700 J	<0.0108 U
35BSB015	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0308 U	<0.00739 U	<0.00805 U	<0.0109 U	<0.0021 U	<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	<0.012 U	<0.0133 U	15000 J	<0.0109 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Dichlorodifluoromethane	Diethyl Phthalate	Dimethyl Phthalate	Di-n-Butyl Phthalate	Di-n-Octyl Phthalate	Ethylbenzene	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Indeno(1,2,3-c,d)pyrene	Iron	Isophorone
35BSB016	0-0.5	N	19-Jan-11		<0.0305 U	<0.0073 U	<0.00796 U	<0.0108 U		<0.00729 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.0489 U	<0.012 U	<0.0132 U	10900 J	<0.0108 U
35BSB016	5.5-6.5	N	19-Jan-11	<0.0023 U	<0.0307 U	<0.00735 U	<0.00802 U	<0.0109 U	<0.0023 U	<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	14200 J	<0.0109 U
35BSB017	0-0.5	N	19-Jan-11		<0.0307 U	<0.00735 U	<0.00802 U	<0.0109 U		<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	10100 J	<0.0109 U
35BSB017	0-0.5	FD	19-Jan-11		<0.0302 U	<0.00725 U	<0.0079 U	<0.0107 U		<0.00724 U	<0.01 U	<0.0392 U	<0.0215 U	<0.0486 U	<0.012 U	<0.0131 U	11500 J	<0.0107 U
35BSB017	5.5-6.5	N	19-Jan-11	<0.0019 U	<0.0309 U	<0.00741 U	<0.00808 U	<0.0109 U	<0.0019 U	<0.0074 U	<0.0102 U	<0.04 U	<0.022 U	<0.0497 U	<0.012 U	<0.0134 U	6660 J	<0.0109 U
35BSB018	0-0.5	N	25-Jan-11		<0.0306 U	<0.00734 U	<0.00801 U	<0.0109 U		<0.00733 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0133 U	11800	<0.0109 U
35BSB018	19.5-20.5	N	26-Jan-11	<0.0021 U	<0.0311 U	<0.00746 U	<0.00814 U	<0.011 U	<0.0021 U	<0.00745 U	<0.0103 U	<0.0403 U	<0.0222 U	<0.05 U	<0.012 U	<0.0135 U	5460	<0.011 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0022 U	<0.0306 U	<0.00734 U	<0.008 U	<0.0108 U	<0.0022 U	<0.00733 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0133 U	14100	<0.0108 U
35BSB019	0-0.5	N	19-Jan-11		<0.0304 U	<0.00728 U	<0.00793 U	<0.0108 U		<0.00727 U	<0.0101 U	<0.0393 U	<0.0216 U	<0.0488 U	<0.012 U	<0.0131 U	13800 J	<0.0108 U
35BSB019	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0312 U	<0.00748 U	<0.00815 U	<0.011 U	<0.0021 U	<0.00747 U	<0.0103 U	<0.0404 U	<0.0222 U	<0.0501 U	<0.012 U	<0.0135 U	12700 J	<0.011 U
35BSB020	0-0.5	N	26-Jan-11		<0.0302 U	<0.00725 U	<0.0079 U	<0.0107 U		<0.00724 U	<0.01 U	<0.0392 U	<0.0215 U	<0.0486 U	<0.012 U	<0.0131 U	12700	<0.0107 U
35BSB020	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0306 U	<0.00733 U	<0.00799 U	<0.0108 U	<0.0022 U	<0.00732 U	<0.0101 U	<0.0396 U	<0.0218 U	<0.0491 U	<0.012 U	<0.0132 U	11700	<0.0108 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0024 U	<0.0311 U	<0.00745 U	<0.00813 U	<0.011 U	<0.0024 U	<0.00744 U	<0.0103 U	<0.0403 U	<0.0221 U	<0.05 U	<0.012 U	<0.0135 U	4470 J	<0.011 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0307 U	<0.00735 U	<0.00801 U	<0.0109 U	<0.0021 U	<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	0.38	<0.0133 U	15500 J	<0.0109 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0022 U	<0.0309 U	<0.0074 U	<0.00806 U	<0.0109 U	<0.0022 U	<0.00739 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	<0.012 U	<0.0134 U	6390 J	<0.0109 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0309 U	<0.00741 U	<0.00807 U	<0.0109 U	<0.0021 U	<0.0074 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	0.026 J	<0.0134 U	14100 J	<0.0109 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0019 U	<0.0309 U	<0.00741 U	<0.00807 U	<0.0109 U	<0.0019 U	<0.0074 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	0.023 J	<0.0134 U	15100 J	<0.0109 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0311 U	<0.00745 U	<0.00813 U	<0.011 U	<0.0022 U	<0.00744 U	<0.0103 U	<0.0403 U	<0.0221 U	<0.05 U	<0.012 U	<0.0135 U	5440 J	<0.011 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0312 U	<0.00748 U	0.0108 J	<0.0111 U	<0.0021 U	<0.00747 U	<0.0103 U	<0.0404 U	<0.0222 U	<0.0501 U	0.24	<0.0135 U	14500 J	<0.0111 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.031 U	<0.00742 U	<0.00809 U	<0.011 U	<0.0022 U	<0.00741 U	<0.0103 U	<0.0401 U	<0.022 U	<0.0498 U	<0.012 U	<0.0134 U	5500 J	<0.011 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0313 U	<0.0075 U	<0.00817 U	<0.0111 U	<0.0021 U	<0.00749 U	<0.0104 U	<0.0405 U	<0.0223 U	<0.0502 U	0.21 J	<0.0135 U	14200 J	<0.0111 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0023 U	<0.0309 U	<0.00742 U	<0.00809 U	<0.011 U	<0.0023 U	<0.00741 U	<0.0102 U	<0.0401 U	<0.022 U	<0.0497 U	<0.012 U	<0.0134 U	4770 J	<0.011 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0308 U	<0.00739 U	<0.00805 U	<0.0109 U	<0.0021 U	<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	0.035 J	<0.0133 U	16000 J	<0.0109 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0023 U	<0.0311 U	<0.00746 U	<0.00813 U	<0.011 U	<0.0023 U	<0.00745 U	<0.0103 U	<0.0403 U	<0.0221 U	<0.05 U	<0.012 U	<0.0135 U	5310 J	<0.011 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0026 U	<0.0311 U	<0.00744 U	<0.00812 U	<0.011 U	<0.0026 U	<0.00743 U	<0.0103 U	<0.0402 U	<0.0221 U	<0.0499 U	<0.012 U	<0.0134 U	5540 J	<0.011 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.002 U	<0.0308 U	<0.00739 U	<0.00805 U	<0.0109 U	<0.002 U	<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	0.015 J	<0.0133 U	12800 J	<0.0109 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0311 U	<0.00746 U	<0.00813 U	<0.011 U	<0.0022 U	<0.00745 U	<0.0103 U	<0.0403 U	<0.0221 U	<0.05 U	<0.012 U	<0.0135 U	5180 J	<0.011 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0313 U	<0.0075 U	<0.00818 U	<0.0111 U	<0.0022 U	<0.00749 U	<0.0104 U	<0.0405 U	<0.0223 U	<0.0503 U	0.1 J	<0.0135 U	10500 J	<0.0111 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0024 U	<0.031 U	<0.00743 U	<0.0081 U	<0.011 U	<0.0024 U	<0.00742 U	<0.0103 U	<0.0401 U	<0.022 U	<0.0498 U	<0.012 U	<0.0134 U	5000 J	<0.011 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0305 U	<0.00731 U	0.0134 J	<0.0108 U	<0.0022 U	<0.0073 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	0.03 J	<0.0132 U	16200 J	<0.0108 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0312 U	<0.00747 U	<0.00815 U	<0.011 U	<0.0023 U	<0.00746 U	<0.0103 U	<0.0404 U	<0.0222 U	<0.0501 U	<0.012 U	<0.0135 U	5930 J	<0.011 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.0021 U	<0.0312 U	<0.00747 U	<0.00814 U	<0.011 U	<0.0021 U	<0.00746 U	<0.0103 U	<0.0404 U	<0.0222 U	<0.0501 U	0.023 J	<0.0135 U	15600 J	<0.011 U
35CSB010	0-0.5	N	07-Feb-11		<0.0308 U	<0.00738 U	0.0163 J	<0.0109 U		<0.00737 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	<0.012 U	<0.0133 U	21000	<0.0109 U
35CSB010	19.5-20.5	N	07-Feb-11	<0.002 U	<0.0311 U	<0.00744 U	<0.00812 U	<0.011 U	<0.002 U	<0.00743 U	<0.0103 U	<0.0402 U	<0.0221 U	<0.0499 U	<0.012 U	<0.0134 U	21700	<0.011 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0021 U	<0.0308 U	<0.00739 U	<0.00806 U	<0.0109 U	<0.0021 U	<0.00738 U	<0.0102 U	<0.04 U	<0.0219 U	<0.0496 U	<0.012 U	<0.0134 U	18500	<0.0109 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Dichlorodifluoromethane	Diethyl Phthalate	Dimethyl Phthalate	Di-n-Butyl Phthalate	Di-n-Octyl Phthalate	Ethylbenzene	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Indeno(1,2,3-c,d)pyrene	Iron	Isophorone
35CSB011	0-0.5	N	07-Feb-11		<0.0308 U	<0.00739 U	0.685	<0.0109 U		<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	6.7	<0.0133 U	19800	<0.0109 U
35CSB011	19.5-20.5	N	07-Feb-11	<0.002 U	<0.0309 U	<0.0074 U	<0.00807 U	<0.0109 U	<0.002 U	<0.00739 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	<0.012 U	<0.0134 U	20300	<0.0109 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0022 U	<0.0308 U	<0.00739 U	0.0938 J	<0.0109 U	<0.0022 U	<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	0.13 J	<0.0133 U	22300	<0.0109 U
35CSB012	0-0.5	N	07-Feb-11		<0.0309 U	<0.0074 U	0.146 J	<0.0109 U		<0.00739 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	0.027 J	<0.0134 U	19900	<0.0109 U
35CSB012	19.5-20.5	N	07-Feb-11	<0.0021 U	<0.0309 U	<0.00742 U	<0.00809 U	<0.011 U	<0.0021 U	<0.00741 U	<0.0102 U	<0.0401 U	<0.022 U	<0.0497 U	<0.012 U	<0.0134 U	7820	<0.011 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.002 U	<0.0305 U	<0.00732 U	<0.00798 U	<0.0108 U	<0.002 U	<0.00731 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	<0.012 U	<0.0132 U	22100	<0.0108 U
35CSB013	0-0.5	N	08-Feb-11		<0.0308 U	<0.00739 U	<0.00806 U	<0.0109 U		<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0496 U	<0.012 U	<0.0134 U	17600	<0.0109 U
35CSB013	0-0.5	FD	08-Feb-11		<0.0306 U	<0.00734 U	<0.008 U	<0.0108 U		<0.00733 U	<0.0101 U	<0.0396 U	<0.0218 U	<0.0492 U	<0.011 U	<0.0132 U	18000	<0.0108 U
35CSB013	19.5-20.5	N	08-Feb-11	<0.0021 U	<0.0311 U	<0.00746 U	<0.00814 U	<0.011 U	<0.0021 U	<0.00745 U	<0.0103 U	<0.0403 U	<0.0222 U	<0.05 U	<0.012 U	<0.0135 U	5640	<0.011 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0023 U	<0.0309 U	<0.0074 U	<0.00807 U	<0.0109 U	<0.0023 U	<0.00739 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	<0.012 U	<0.0134 U	20100	<0.0109 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0307 U	<0.00735 U	<0.00802 U	<0.0109 U	<0.0023 U	<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	5000 J	<0.0109 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0022 U	<0.0316 U	<0.00758 U	<0.00826 U	<0.0112 U	<0.0022 U	<0.00757 U	<0.0105 U	<0.041 U	<0.0225 U	<0.0508 U	0.05 J	<0.0137 U	10300 J	<0.0112 U
35CSS001	0-0.5	N	25-Jan-11		<0.0308 U	<0.00738 U	0.0238 J	<0.0109 U		<0.00737 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0494 U	0.14 J	<0.0133 U	15700	<0.0109 U
35CSS002	0-0.5	N	25-Jan-11		<0.0307 U	<0.00736 U	0.00862 J	<0.0109 U		<0.00735 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0493 U	0.044 J	<0.0133 U	13800	<0.0109 U
35CSS003	0-0.5	N	25-Jan-11		0.661	<0.00727 U	0.322 J	<0.0107 U		<0.00726 U	<0.0101 U	<0.0393 U	<0.0216 U	<0.0488 U	0.83	<0.0131 U	13000	<0.0107 U
35CSS004	0-0.5	N	25-Jan-11		0.192 J	<0.00731 U	0.0324 J	<0.0108 U		<0.0073 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	0.8	<0.0132 U	16200	<0.0108 U
35CSS005	0-0.5	N	25-Jan-11		<0.0308 U	<0.00739 U	0.0208 J	<0.0109 U		<0.00738 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	0.23 J	<0.0133 U	17800	<0.0109 U
35CSS006	0-0.5	N	10-Feb-11		<0.0309 U	<0.0074 U	<0.00807 U	<0.0109 U		<0.00739 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	0.06 J	<0.0134 U	23600	<0.0109 U
35CSS007	0-0.5	N	02-Feb-11		0.366	<0.0073 U	0.0547 J	<0.0108 U		<0.00729 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	1.4	<0.0132 U	12300 J	<0.0108 U
35CSS008	0-0.5	N	02-Feb-11		5.27	<0.00735 U	1.57	<0.0109 U		<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	0.18 J	<0.0133 U	15900 J	<0.0109 U
35CSS009	0-0.5	N	10-Feb-11		0.206 J	<0.00743 U	0.431	<0.011 U		<0.00742 U	<0.0103 U	<0.0401 U	<0.022 U	<0.0498 U	1	<0.0134 U	20200	<0.011 U
35CSS010	0-0.5	N	10-Feb-11		0.155 J	<0.00742 U	0.555	<0.011 U		<0.00741 U	<0.0102 U	<0.0401 U	<0.022 U	<0.0497 U	0.39	<0.0134 U	21200	<0.011 U
35CSS011	0-0.5	N	10-Feb-11		0.242 J	<0.00741 U	0.0085 J	<0.0109 U		<0.0074 U	<0.0102 U	<0.04 U	<0.022 U	<0.0496 U	0.14 J	<0.0134 U	20300	<0.0109 U
35CSS013	0-0.5	N	12-Jan-11		0.172 J	<0.00736 U	0.639	<0.0109 U		<0.00735 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	0.11 J	<0.0133 U	11800 J	<0.0109 U
35CSS014	0-0.5	N	12-Jan-11		7.1	<0.00729 U	0.146 J	<0.0108 U		<0.00728 U	<0.0101 U	<0.0394 U	<0.0217 U	<0.0489 U	0.14 J	<0.0132 U	19300 J	<0.0108 U
35CSS015	0-0.5	N	12-Jan-11		0.0792 J	<0.00742 U	<0.00809 U	<0.011 U		<0.00741 U	<0.0103 U	<0.0401 U	<0.022 U	<0.0498 U	0.05 J	<0.0134 U	13300 J	<0.011 U
35CSS016	0-0.5	N	12-Jan-11		0.0876 J	<0.00738 U	0.44	<0.0109 U		<0.00737 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0494 U	<0.012 U	<0.0133 U	12200 J	<0.0109 U
35CSS017	0-0.5	N	12-Jan-11		<0.0309 U	<0.00741 U	<0.00808 U	<0.0109 U		<0.0074 U	<0.0102 U	<0.04 U	<0.022 U	<0.0497 U	<0.012 U	<0.0134 U	14300 J	<0.0109 U
35CSS018	0-0.5	N	12-Jan-11		<0.0308 U	<0.00738 U	<0.00804 U	<0.0109 U		<0.00737 U	<0.0102 U	<0.0399 U	<0.0219 U	<0.0495 U	<0.012 U	<0.0133 U	13900 J	<0.0109 U
35CSS019	0-0.5	N	12-Jan-11		<0.0307 U	<0.00735 U	<0.00802 U	<0.0109 U		<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.012 U	<0.0133 U	15600 J	<0.0109 U
35CSS020	0-0.5	N	12-Jan-11		0.207 J	<0.00736 U	0.523	<0.0109 U		<0.00734 U	<0.0102 U	<0.0397 U	<0.0218 U	<0.0493 U	<0.011 U	<0.0133 U	14300 J	<0.0109 U
35CSS021	0-0.5	N	12-Jan-11		0.426	<0.00749 U	<0.00816 U	<0.0111 U		<0.00748 U	<0.0103 U	<0.0405 U	<0.0222 U	<0.0502 U	0.12 J	<0.0135 U	17800 J	<0.0111 U
35CSS022	0-0.5	N	12-Jan-11		<0.0306 U	<0.00733 U	0.027 J	<0.0108 U		<0.00732 U	<0.0101 U	<0.0396 U	<0.0218 U	<0.0491 U	0.04 J	<0.0132 U	16800 J	<0.0108 U
35CSS023	0-0.5	N	11-Jan-11		<0.0305 U	<0.00732 U	<0.00798 U	<0.0108 U		<0.00731 U	<0.0101 U	<0.0395 U	<0.0217 U	<0.049 U	0.21 J	<0.0132 U	12000 J	<0.0108 U
35CSS024	0-0.5	N	11-Jan-11		<0.0306 U	<0.00734 U	<0.008 U	<0.0108 U		<0.00733 U	<0.0101 U	<0.0396 U	<0.0218 U	<0.0492 U	<0.012 U	<0.0132 U	14300 J	<0.0108 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Dichlorodifluoromethane	Diethyl Phthalate	Dimethyl Phthalate	Di-n-Butyl Phthalate	Di-n-Octyl Phthalate	Ethylbenzene	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Indeno(1,2,3-c,d)pyrene	Iron	Isophorone
35CSS025	0-0.5	N	11-Jan-11		<0.0302 U	<0.00723 U	<0.00789 U	<0.0107 U		<0.00722 U	<0.00999 U	<0.0391 U	<0.0215 U	<0.0485 U	<0.012 U	<0.0131 U	11600	<0.0107 U
35CSS026	0-0.5	N	11-Jan-11		<0.0304 U	<0.00728 U	2.22	<0.0108 U		<0.00727 U	<0.0101 U	<0.0393 U	<0.0216 U	<0.0488 U	0.091 J	<0.0131 U	12400	<0.0108 U
35CSS027	0-0.5	N	11-Jan-11		<0.0302 U	<0.00725 U	1.15	<0.0107 U		<0.00724 U	<0.01 U	<0.0391 U	<0.0215 U	<0.0486 U	0.17 J	<0.0131 U	12500 J	<0.0107 U
35CSS028	0-0.5	N	11-Jan-11		<0.0307 U	<0.00736 U	0.253 J	<0.0109 U		<0.00735 U	<0.0102 U	<0.0398 U	<0.0219 U	<0.0493 U	<0.012 U	<0.0133 U	11800 J	<0.0109 U
35CSS029	0-0.5	N	11-Jan-11		0.038 J	<0.00734 U	0.151 J	<0.0108 U		<0.00733 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	0.2 J	<0.0133 U	13500 J	<0.0108 U
35CSS030	0-0.5	N	11-Jan-11		<0.0306 U	<0.00734 U	0.0499 J	<0.0108 U		<0.00733 U	<0.0101 U	<0.0397 U	<0.0218 U	<0.0492 U	0.12 J	<0.0133 U	12300 J	<0.0108 U
35CSS031	0-0.5	N	11-Jan-11		17.4	<0.00726 U	1.32 J	<0.0107 U		<0.00725 U	<0.01 U	<0.0392 U	<0.0215 U	<0.0486 U	0.22 J	<0.0131 U	9870 J	<0.0107 U
35CSS031	0-0.5	FD	11-Jan-11		0.676	<0.00722 U	0.865	<0.0107 U		<0.00721 U	<0.00998 U	<0.039 U	<0.0214 U	<0.0484 U	0.28	<0.013 U	8530 J	<0.0107 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Isopropylbenzene (Cumene)	Lead	m,p-Xylene (Sum Of Isomers)	Magnesium	Manganese	Mercury	Methyl Ethyl Ketone (2-Butanone)	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	Methylene Chloride	Molybdenum	Naphthalene	n-Butylbenzene	Nickel	Nitrobenzene	Nitroglycerin	N-Nitrosodimethylamine	N-Nitrosodi-n-Propylamine
35BSB001	0-0.5	N	27-Jan-11		7.58 J		6230 J	294 J	0.048				0.52 J	<0.0111 U		10.1	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35BSB001	5.5-6.5	N	27-Jan-11	<0.0022 U	7.34 J	<0.0022 U	4100 J	238 J	<0.017 U	<0.0054 U	<0.0054 U	<0.0022 U	0.57 J	<0.0113 U	<0.0022 U	6.65	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35BSB002	0-0.5	N	27-Jan-11		9.3 J		4230 J	213 J	<0.0034 U				0.51 J	<0.011 U		7.69	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB002	5.5-6.5	N	26-Jan-11	<0.0023 U	8.05 J	<0.0023 U	4210 J	266 J	<0.0035 U	<0.0058 U	<0.0058 U	<0.0023 U	0.55 J	<0.0113 U	<0.0023 U	8.04	<0.017 U	<0.015 U	<0.0175 U	<0.0172 U
35BSB003	0-0.5	N	26-Jan-11		9.74 J		5770 J	257 J	0.008 J				0.49 J	<0.011 U		9.68	<0.017 U	<0.015 U	<0.017 U	<0.0167 U
35BSB003	5.5-6.5	N	26-Jan-11	<0.0023 U	6.67 J	<0.0023 U	4350 J	246 J	<0.0034 U	<0.0057 U	<0.0057 U	<0.0023 U	0.6 J	<0.0113 U	<0.0023 U	8.59	<0.017 U	<0.015 U	<0.0175 U	<0.0172 U
35BSB004	0-0.5	N	27-Jan-11		26.6 J		4560 J	236 J	<0.0034 U				0.46 J	<0.0111 U		8.47	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB004	5.5-6.5	N	27-Jan-11	<0.0022 U	7.49 J	<0.0022 U	4190 J	203 J	<0.0036 U	<0.0055 U	<0.0055 U	<0.0022 U	0.59 J	<0.0115 U	<0.0022 U	7.49	<0.017 U	<0.015 U	<0.0178 U	<0.0175 U
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0023 U	7.93 J	<0.0023 U	4500 J	220 J	<0.0036 U	<0.0058 U	<0.0058 U	<0.0023 U	0.55 J	<0.0114 U	<0.0023 U	8.19	<0.017 U	<0.015 U	<0.0177 U	<0.0174 U
35BSB005	0-0.5	N	27-Jan-11		6.64 J		7800 J	309 J	<0.0035 U				0.52 J	<0.0112 U		10.3	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35BSB005	19.5-20.5	N	27-Jan-11	<0.0023 U	5.78 J	<0.0023 U	2450 J	150 J	<0.0035 U	<0.0057 U	<0.0057 U	<0.0023 U	0.41 J	<0.0114 U	<0.0023 U	4.66	<0.018 U	<0.015 U	<0.0177 U	<0.0174 U
35BSB005	5.5-6.5	N	27-Jan-11	<0.0025 U	6.3 J	<0.0025 U	4780 J	241 J	0.0073 J	<0.0062 U	<0.0062 U	<0.0025 U	0.41 J	<0.0112 U	<0.0025 U	7.8	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35BSB006	0-0.5	N	26-Jan-11		32.2 J		3990 J	221 J	0.0056 J				0.55 J	<0.011 U		7.64	<0.017 U	<0.015 U	<0.017 U	<0.0167 U
35BSB006	5.5-6.5	N	26-Jan-11	<0.0022 U	5.28 J	<0.0022 U	4310 J	206 J	<0.0035 U	<0.0055 U	<0.0055 U	<0.0022 U	0.63 J	<0.0113 U	<0.0022 U	7.78	<0.018 U	<0.015 U	<0.0175 U	<0.0172 U
35BSB007	0-0.5	N	20-Jan-11		300 J		5920 J	628	<0.0035 U				1.99 J	<0.0111 U		15.6 J	<0.018 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB007	5.5-6.5	N	20-Jan-11	<0.0018 U	32.5 J	<0.0018 U	5310 J	200	<0.0035 U	<0.0045 U	<0.0045 U	<0.0018 U	0.53 J	<0.0111 U	<0.0018 U	10.8 J	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB008	0-0.5	N	26-Jan-11		7.83 J		4610 J	252 J	0.0077 J				0.4 J	<0.0111 U		8.74	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB008	5.5-6.5	N	26-Jan-11	<0.002 U	4.98 J	<0.002 U	3970 J	188 J	<0.0035 U	<0.005 U	<0.005 U	<0.002 U	0.5 J	<0.0112 U	<0.002 U	6.94	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35BSB009	0-0.5	N	26-Jan-11		7.53 J		5230 J	253 J	<0.012 U				0.48 J	<0.0111 U		10	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB009	5.5-6.5	N	26-Jan-11	<0.0021 U	5.65 J	<0.0021 U	4470 J	211 J	<0.0035 U	<0.0054 U	<0.0054 U	<0.0021 U	0.56 J	<0.0111 U	<0.0021 U	8.06	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB010	0-0.5	N	20-Jan-11		7.5 J		5160 J	220	<0.0035 U				0.5 J	<0.0111 U		8.91 J	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35BSB010	5.5-6.5	N	20-Jan-11	<0.0021 U	7.53 J	<0.0021 U	4740 J	228	<0.0034 U	<0.0052 U	<0.0052 U	<0.0021 U	0.78 J	<0.011 U	<0.0021 U	8.35 J	<0.017 U	<0.014 U	<0.0171 U	<0.0168 U
35BSB011	0-0.5	N	20-Jan-11		13.4 J		4880 J	255	<0.0034 U				0.61 J	<0.0111 U		9.2 J	<0.018 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB011	19.5-20.5	N	24-Jan-11	<0.0021 U	5.58	<0.0021 U	2910	282	<0.0036 U	<0.0052 U	<0.0052 U	<0.0021 U	0.46 J	<0.0113 U	<0.0021 U	5.46	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35BSB011	19.5-20.5	FD	24-Jan-11	<0.002 U	5.72	<0.002 U	2770	267	<0.0036 U	<0.005 U	<0.005 U	<0.002 U	0.39 J	<0.0112 U	<0.002 U	5.24	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35BSB011	5.5-6.5	N	18-Jan-11	<0.0024 U	7.99 J	<0.0024 U	5090 J	246	<0.0035 U	<0.006 U	<0.006 U	<0.0024 U	0.82 J	<0.0111 U	<0.0024 U	10 J	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB012	0-0.5	N	19-Jan-11		9 J		7570 J	309	<0.0035 U				0.56 J	<0.0112 U		11.8 J	<0.018 U	<0.015 U	<0.0173 U	<0.017 U
35BSB012	5.5-6.5	N	24-Jan-11	<0.0022 U	6.57	<0.0022 U	4200	192	<0.0035 U	<0.0056 U	<0.0056 U	<0.0022 U	0.69 J	<0.0112 U	<0.0022 U	7.25	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35BSB013	0-0.5	N	24-Jan-11		8.32		6400	289	<0.0035 U				0.55 J	<0.011 U		10.8	<0.018 U	<0.015 U	<0.017 U	<0.0167 U
35BSB013	19-21	N	24-Jan-11	<0.0021 U	4.13	<0.0021 U	1840	155	<0.0035 U	<0.0051 U	<0.0051 U	<0.0021 U	0.21 J	<0.0112 U	<0.0021 U	3.15	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35BSB013	5.5-6.5	N	24-Jan-11	<0.0022 U	7.97	<0.0022 U	3830	227	<0.0034 U	<0.0056 U	<0.0056 U	<0.0022 U	0.56 J	<0.0111 U	<0.0022 U	6.55	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35BSB014	0-0.5	N	24-Jan-11		8.26		5860	282	0.0038 J				0.47 J	<0.0111 U		10.6	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB014	5.5-6.5	N	24-Jan-11	<0.0021 U	6.84	<0.0021 U	4120	215	<0.0034 U	<0.0053 U	<0.0053 U	<0.0021 U	0.6 J	<0.011 U	<0.0021 U	7.27	<0.017 U	<0.015 U	<0.017 U	<0.0167 U
35BSB015	0-0.5	N	19-Jan-11		6.34 J		5390 J	246	<0.0035 U				0.53 J	<0.011 U		9.58 J	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB015	5.5-6.5	N	19-Jan-11	<0.0021 U	5.84 J	<0.0021 U	6030 J	227	<0.0035 U	<0.0052 U	<0.0052 U	<0.0021 U	0.95 J	<0.0111 U	<0.0021 U	13.2 J	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Isopropylbenzene (Cumene)	Lead	m,p-Xylene (Sum Of Isomers)	Magnesium	Manganese	Mercury	Methyl Ethyl Ketone (2-Butanone)	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	Methylene Chloride	Molybdenum	Naphthalene	n-Butylbenzene	Nickel	Nitrobenzene	Nitroglycerin	N-Nitrosodimethylamine	N-Nitrosodi-n-Propylamine
35BSB016	0-0.5	N	19-Jan-11		7.02 J		4800 J	233	<0.0033 U				0.46 J	<0.011 U		7.8 J	<0.018 U	<0.015 U	<0.017 U	<0.0167 U
35BSB016	5.5-6.5	N	19-Jan-11	<0.0023 U	9.53 J	<0.0023 U	4840 J	248	<0.0035 U	<0.0058 U	<0.0058 U	<0.0023 U	0.85 J	<0.0111 U	<0.0023 U	8.23 J	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB017	0-0.5	N	19-Jan-11		5.71 J		4880 J	224	0.0045 J				0.37 J	<0.0111 U		7.92 J	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB017	0-0.5	FD	19-Jan-11		6.29 J		5580 J	247	<0.0034 U				0.58 J	<0.0109 U		8.82 J	<0.017 U	<0.015 U	<0.0169 U	<0.0166 U
35BSB017	5.5-6.5	N	19-Jan-11	<0.0019 U	4.42 J	<0.0019 U	2420 J	247	<0.0035 U	<0.0048 U	<0.0048 U	<0.0019 U	0.37 J	<0.0111 U	<0.0019 U	4.53 J	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35BSB018	0-0.5	N	25-Jan-11		7.47		4680	254	<0.0034 U				0.49 J	<0.0111 U		8.53	<0.018 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB018	19.5-20.5	N	26-Jan-11	<0.0021 U	4.09	<0.0021 U	1730	193	<0.0035 U	<0.0053 U	<0.0053 U	<0.0021 U	0.16 J	<0.0112 U	<0.0021 U	3.7	<0.017 U	<0.015 U	<0.0174 U	<0.017 U
35BSB018	5.5-6.5	N	25-Jan-11	<0.0022 U	5.44	<0.0022 U	4530	200	<0.0035 U	<0.0055 U	<0.0055 U	<0.0022 U	0.5 J	<0.011 U	<0.0022 U	8.81	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35BSB019	0-0.5	N	19-Jan-11		6.44 J		5210 J	243	<0.0034 U				0.46 J	<0.0109 U		9.55 J	<0.017 U	<0.015 U	<0.0169 U	<0.0166 U
35BSB019	5.5-6.5	N	19-Jan-11	<0.0021 U	6.7 J	<0.0021 U	4840 J	211	<0.0035 U	<0.0051 U	<0.0051 U	<0.0021 U	0.52 J	<0.0113 U	<0.0021 U	7.13 J	<0.017 U	<0.014 U	<0.0174 U	<0.0171 U
35BSB020	0-0.5	N	26-Jan-11		6.67		4890	236	<0.0034 U				0.45 J	<0.0109 U		9.5	<0.017 U	<0.015 U	<0.0169 U	<0.0166 U
35BSB020	5.5-6.5	N	26-Jan-11	<0.0022 U	5.82	<0.0022 U	4500	184	<0.0034 U	<0.0055 U	<0.0055 U	<0.0022 U	0.57 J	<0.011 U	<0.0022 U	7.32	<0.017 U	<0.015 U	<0.017 U	<0.0167 U
35CSB001	19.5-20.5	N	31-Jan-11	<0.0024 U	3.68 J	<0.0024 U	1630 J	186	<0.0035 U	<0.0059 U	<0.0059 U	<0.0024 U	0.33 J	<0.0112 U	<0.0024 U	3.56	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSB001	5.5-6.5	N	31-Jan-11	<0.0021 U	4.88 J	<0.0021 U	5550 J	254	<0.0034 U	<0.0053 U	<0.0053 U	<0.0021 U	0.36 J	<0.0111 U	<0.0021 U	7.51	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35CSB002	19.5-50.5	N	31-Jan-11	<0.0022 U	3.26 J	<0.0022 U	2060 J	167	<0.0035 U	<0.0054 U	<0.0054 U	<0.0022 U	0.23 J	<0.0111 U	<0.0022 U	3.72	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB002	5.5-6.5	N	31-Jan-11	<0.0021 U	4.61 J	<0.0021 U	4970 J	214 J	<0.0035 U	<0.0053 U	<0.0053 U	<0.0021 U	0.6 J	<0.0111 U	<0.0021 U	9.82	<0.018 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0019 U	4.78 J	<0.0019 U	5280 J	220	<0.0035 U	<0.0049 U	<0.0049 U	<0.0019 U	0.56 J	<0.0111 U	<0.0019 U	11.4	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB003	19.5-20.5	N	01-Feb-11	<0.0022 U	3.42 J	<0.0022 U	1890 J	152	<0.0035 U	<0.0055 U	<0.0055 U	<0.0022 U	0.32 J	<0.0112 U	<0.0022 U	3.56	<0.018 U	<0.015 U	<0.0173 U	<0.017 U
35CSB003	5.5-6.5	N	01-Feb-11	<0.0021 U	4.43 J	<0.0021 U	5530 J	208	<0.0035 U	<0.0053 U	<0.0053 U	<0.0021 U	0.44 J	<0.0113 U	<0.0021 U	8.9	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35CSB004	19.5-20.5	N	01-Feb-11	<0.0022 U	3.64 J	<0.0022 U	2100 J	161	<0.0035 U	<0.0054 U	<0.0054 U	<0.0022 U	0.22 J	<0.0112 U	<0.0022 U	3.77	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSB004	5.5-6.5	N	01-Feb-11	<0.0021 U	4.58 J	<0.0021 U	4910 J	207	<0.0035 U	<0.0053 U	<0.0053 U	<0.0021 U	0.37 J	<0.0113 U	<0.0021 U	7.43	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35CSB005	19.5-20.5	N	01-Feb-11	<0.0023 U	3.14 J	<0.0023 U	1620 J	143	<0.0034 U	<0.0057 U	<0.0057 U	<0.0023 U	0.17 J	<0.0112 U	<0.0023 U	3.11	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB005	5.5-6.5	N	01-Feb-11	<0.0021 U	3.73 J	<0.0021 U	5290 J	205	<0.0034 U	<0.0053 U	<0.0053 U	<0.0021 U	0.39 J	<0.0111 U	<0.0021 U	9.07	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB006	19.5-20.5	N	02-Feb-11	<0.0023 U	3.81 J	<0.0023 U	2060 J	152	<0.0035 U	<0.0059 U	<0.0059 U	<0.0023 U	0.27 J	<0.0112 U	<0.0023 U	3.55	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0026 U	4.06 J	<0.0026 U	2030 J	149	<0.0034 U	<0.0064 U	<0.0064 U	<0.0026 U	0.28 J	<0.0112 U	<0.0026 U	3.53	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSB006	5.5-6.5	N	02-Feb-11	<0.002 U	4.98 J	<0.002 U	4650 J	235	<0.0035 U	<0.0051 U	<0.0051 U	<0.002 U	1.29	<0.0111 U	<0.002 U	7.45	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB007	19.5-20.5	N	01-Feb-11	<0.0022 U	3.58 J	<0.0022 U	1850 J	154	<0.0034 U	<0.0055 U	<0.0055 U	<0.0022 U	0.31 J	<0.0112 U	<0.0022 U	3.67	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSB007	5.5-6.5	N	01-Feb-11	<0.0022 U	4.01 J	<0.0022 U	4050 J	168	<0.0035 U	<0.0056 U	<0.0056 U	<0.0022 U	0.25 J	<0.0113 U	<0.0022 U	5.99	<0.017 U	0.055 J	<0.0174 U	<0.0171 U
35CSB008	19.5-20.5	N	01-Feb-11	<0.0024 U	3.51 J	<0.0024 U	2010 J	150	<0.0035 U	<0.0061 U	<0.0061 U	<0.0024 U	0.16 J	<0.0112 U	<0.0024 U	3.47	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSB008	5.5-6.5	N	01-Feb-11	<0.0022 U	7.16 J	<0.0022 U	5370 J	223	<0.0035 U	<0.0056 U	<0.0056 U	<0.0022 U	0.56 J	<0.011 U	<0.0022 U	9.95	<0.018 U	0.073 J	<0.017 U	<0.0167 U
35CSB009	19.5-20.5	N	03-Feb-11	<0.0023 U	3.06 J	<0.0023 U	2630 J	143	<0.0034 U	<0.0057 U	<0.0057 U	<0.0023 U	0.089 J	<0.0112 U	<0.0023 U	3.43	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35CSB009	5.5-6.5	N	03-Feb-11	<0.0021 U	4.77 J	<0.0021 U	5160 J	219	<0.0035 U	<0.0053 U	<0.0053 U	<0.0021 U	0.22 J	<0.0112 U	<0.0021 U	8.21	<0.018 U	<0.015 U	<0.0174 U	<0.0171 U
35CSB010	0-0.5	N	07-Feb-11		11.1 J		9010 J	392	0.0076 J				0.35 J	<0.0111 U		15.2	<0.018 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB010	19.5-20.5	N	07-Feb-11	<0.002 U	4.91 J	<0.002 U	6070 J	331	<0.0035 U	<0.0049 U	<0.0049 U	<0.002 U	1.03 J	<0.0112 U	<0.002 U	11.7	<0.017 U	<0.014 U	<0.0173 U	<0.017 U
35CSB010	5.5-6.5	N	07-Feb-11	<0.0021 U	5.12 J	<0.0021 U	5870 J	237	<0.0035 U	<0.0052 U	<0.0052 U	<0.0021 U	0.6 J	<0.0111 U	<0.0021 U	11.5	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Isopropylbenzene (Cumene)	Lead	m,p-Xylene (Sum Of Isomers)	Magnesium	Manganese	Mercury	Methyl Ethyl Ketone (2-Butanone)	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	Methylene Chloride	Molybdenum	Naphthalene	n-Butylbenzene	Nickel	Nitrobenzene	Nitroglycerin	N-Nitrosodimethylamine	N-Nitrosodi-n-Propylamine
35CSB011	0-0.5	N	07-Feb-11		12.6 J		9620 J	403	<0.0035 U				0.51 J	<0.0111 U		15.5	<0.018 U	0.13 J	<0.0172 U	<0.0169 U
35CSB011	19.5-20.5	N	07-Feb-11	<0.002 U	5.59 J	<0.002 U	5500 J	292	<0.0034 U	<0.0051 U	<0.0051 U	<0.002 U	1.15 J	<0.0111 U	<0.002 U	9.58	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB011	5.5-6.5	N	07-Feb-11	<0.0022 U	8.21 J	<0.0022 U	7420 J	291	0.0087 J	<0.0054 U	<0.0054 U	<0.0022 U	0.83 J	<0.0111 U	<0.0022 U	13.2	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB012	0-0.5	N	07-Feb-11		13.4 J		9380 J	403	0.025				0.56 J	<0.0111 U		15.2	<0.017 U	<0.014 U	<0.0172 U	<0.0169 U
35CSB012	19.5-20.5	N	07-Feb-11	<0.0021 U	3.31 J	<0.0021 U	2370 J	128	<0.0035 U	<0.0053 U	<0.0053 U	<0.0021 U	0.19 J	<0.0112 U	<0.0021 U	5.06	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB012	5.5-6.5	N	07-Feb-11	<0.002 U	5.85 J	<0.002 U	7030 J	287	<0.0033 U	<0.0051 U	<0.0051 U	<0.002 U	0.56 J	<0.011 U	<0.002 U	13.6	<0.017 U	<0.015 U	<0.017 U	<0.0167 U
35CSB013	0-0.5	N	08-Feb-11		8.76 J		7600 J	332	<0.0035 U				0.59 J	<0.0111 U		12.4	<0.018 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB013	0-0.5	FD	08-Feb-11		8.5 J		7680 J	330	<0.0035 U				0.56 J	<0.011 U		12.7	<0.017 U	<0.014 U	<0.0171 U	<0.0168 U
35CSB013	19.5-20.5	N	08-Feb-11	<0.0021 U	3.83 J	<0.0021 U	1980 J	218	<0.0035 U	<0.0052 U	<0.0052 U	<0.0021 U	0.21 J	<0.0112 U	<0.0021 U	3.67	<0.017 U	<0.015 U	<0.0174 U	<0.0171 U
35CSB013	5.5-6.5	N	08-Feb-11	<0.0023 U	5.31 J	<0.0023 U	6670 J	293	<0.0035 U	<0.0057 U	<0.0057 U	<0.0023 U	0.63 J	<0.0111 U	<0.0023 U	9.86	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSB014	19.5-20.5	N	03-Feb-11	<0.0023 U	3.49 J	<0.0023 U	1920 J	146	<0.0034 U	<0.0057 U	<0.0057 U	<0.0023 U	0.32 J	<0.0111 U	<0.0023 U	3.52	<0.018 U	<0.015 U	<0.0171 U	<0.0168 U
35CSB014	5.5-6.5	N	03-Feb-11	<0.0022 U	5.39 J	<0.0022 U	4480 J	175	<0.0036 U	<0.0054 U	<0.0054 U	<0.0022 U	0.58 J	<0.0114 U	<0.0022 U	6.64	<0.018 U	0.14 J	<0.0176 U	<0.0173 U
35CSS001	0-0.5	N	25-Jan-11		170		6430	355	0.0039 J				1.07 J	<0.0111 U		19.9	<0.017 U	<0.015 U	<0.0172 U	<0.0168 U
35CSS002	0-0.5	N	25-Jan-11		18.8		6210	283	<0.0035 U				0.81 J	<0.0111 U		11.5	<0.017 U	<0.015 U	<0.0171 U	<0.0168 U
35CSS003	0-0.5	N	25-Jan-11		16.9		4820	241	<0.0034 U				0.55 J	<0.0109 U		11.3	<0.017 U	0.2 J	<0.0169 U	<0.0166 U
35CSS004	0-0.5	N	25-Jan-11		13.2		7060	282	<0.0035 U				0.64 J	<0.011 U		13.9	<0.017 U	0.66	<0.017 U	<0.0167 U
35CSS005	0-0.5	N	25-Jan-11		11.2		6970	348	<0.0035 U				0.56 J	<0.0111 U		13.7	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSS006	0-0.5	N	10-Feb-11		50.2 J		10300 J	498	<0.0035 U				0.73 J	<0.0111 U		16.4	<0.018 U	<0.015 U	<0.0172 U	<0.0169 U
35CSS007	0-0.5	N	02-Feb-11		21.1 J		6970 J	278	<0.0035 U				0.22 J	<0.011 U		10.2	<0.018 U	0.079 J	<0.017 U	<0.0167 U
35CSS008	0-0.5	N	02-Feb-11		38.7 J		4480 J	242	<0.0035 U				0.52 J	<0.0111 U		9.83	<0.018 U	4.3	<0.0171 U	<0.0168 U
35CSS009	0-0.5	N	10-Feb-11		13.6 J		8590 J	384	0.0071 J				0.74 J	<0.0112 U		15.4	<0.017 U	0.3 J	<0.0173 U	<0.017 U
35CSS010	0-0.5	N	10-Feb-11		19.9 J		7670 J	346	0.0043 J				0.61 J	<0.0112 U		16.2	<0.017 U	0.36 J	<0.0172 U	<0.0169 U
35CSS011	0-0.5	N	10-Feb-11		11.3 J		8540 J	367	0.0076 J				0.46 J	<0.0111 U		13.6	<0.017 U	0.12 J	<0.0172 U	<0.0169 U
35CSS013	0-0.5	N	12-Jan-11		10.5 J		4350 J	226	<0.0029 U				0.51 J	<0.0111 U		7.93	<0.017 U	0.12 J	<0.0171 U	<0.0168 U
35CSS014	0-0.5	N	12-Jan-11		20.6 J		5790 J	308	0.0049 J				0.65 J	<0.011 U		11.3	<0.018 U	2.1	<0.017 U	<0.0167 U
35CSS015	0-0.5	N	12-Jan-11		9.27 J		6110 J	245	<0.0035 U				0.38 J	<0.0112 U		10	<0.017 U	<0.015 U	<0.0173 U	<0.017 U
35CSS016	0-0.5	N	12-Jan-11		10.8 J		5200 J	289	<0.0035 U				0.24 J	<0.0111 U		9.64	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSS017	0-0.5	N	12-Jan-11		9.83 J		8090 J	303	<0.0034 U				0.29 J	<0.0111 U		11.8	<0.017 U	<0.015 U	<0.0172 U	<0.0169 U
35CSS018	0-0.5	N	12-Jan-11		8.81 J		7050 J	295	<0.0035 U				0.28 J	<0.0111 U		10.7	<0.018 U	<0.015 U	<0.0172 U	<0.0169 U
35CSS019	0-0.5	N	12-Jan-11		9.77 J		7130 J	321	0.0038 J				0.42 J	<0.0111 U		12.3	<0.018 U	<0.015 U	<0.0171 U	<0.0168 U
35CSS020	0-0.5	N	12-Jan-11		10.9 J		6110 J	306	<0.0035 U				0.3 J	<0.0111 U		11.6	<0.017 U	<0.014 U	<0.0171 U	<0.0168 U
35CSS021	0-0.5	N	12-Jan-11		13.8 J		7680 J	345	<0.0035 U				0.39 J	<0.0113 U		11.7	<0.017 U	0.2 J	<0.0174 U	<0.0171 U
35CSS022	0-0.5	N	12-Jan-11		17.3 J		6410 J	284	<0.0034 U				0.36 J	<0.011 U		12.7	<0.017 U	0.088 J	<0.017 U	<0.0167 U
35CSS023	0-0.5	N	11-Jan-11		7.89 J		4480 J	262	<0.0034 U				0.52 J	<0.011 U		8.19	<0.018 U	<0.015 U	<0.017 U	<0.0167 U
35CSS024	0-0.5	N	11-Jan-11		9.35 J		4370 J	302	<0.0034 U				0.39 J	<0.011 U		8.46	<0.017 U	<0.014 U	<0.0171 U	<0.0168 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Isopropylbenzene (Cumene)	Lead	m,p-Xylene (Sum Of Isomers)	Magnesium	Manganese	Mercury	Methyl Ethyl Ketone (2-Butanone)	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	Methylene Chloride	Molybdenum	Naphthalene	n-Butylbenzene	Nickel	Nitrobenzene	Nitroglycerin	N-Nitrosodimethylamine	N-Nitrosodi-n-Propylamine
35CSS025	0-0.5	N	11-Jan-11		9.33		5210	326	<0.0034 U				0.31 J	<0.0109 U		8.2	<0.017 U	<0.015 U	<0.0168 U	<0.0165 U
35CSS026	0-0.5	N	11-Jan-11		8		3910	354	<0.0035 U				0.36 J	<0.011 U		7.83	<0.018 U	<0.015 U	<0.0169 U	<0.0166 U
35CSS027	0-0.5	N	11-Jan-11		17.1 J		3700 J	233	<0.0034 U				0.54 J	<0.0109 U		10	<0.017 U	<0.015 U	<0.0168 U	<0.0166 U
35CSS028	0-0.5	N	11-Jan-11		27.4 J		5060 J	228	<0.0034 U				0.17 J	<0.0111 U		8.86	<0.017 U	1.3	<0.0171 U	<0.0168 U
35CSS029	0-0.5	N	11-Jan-11		45.4 J		4600 J	242	0.0082 J				0.71 J	<0.011 U		9.41	<0.018 U	0.41 J	<0.0171 U	<0.0168 U
35CSS030	0-0.5	N	11-Jan-11		16.1 J		3930 J	224	0.01 J				0.44 J	<0.011 U		8.13	<0.017 U	1	<0.0171 U	<0.0168 U
35CSS031	0-0.5	N	11-Jan-11		8.37 J		3620 J	202	<0.0029 U				0.41 J	<0.0109 U		5.26	<0.017 U	0.39 J	<0.0169 U	<0.0166 U
35CSS031	0-0.5	FD	11-Jan-11		9.73 J		3240 J	301	0.0041 J				0.31 J	<0.0109 U		5.3	<0.017 U	4.2	<0.0168 U	<0.0165 U

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	N-Nitrosodiphenylamine	n-Propylbenzene	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	o-Xylene (1,2-Dimethylbenzene)	p-Cymene (p-Isopropyltoluene)	Pentachlorophenol	Pentaerythritol Tetranitrate	Perchlorate	Phenanthrene	Phenol	Potassium	Pyrene	sec-Butylbenzene	Selenium	Silver	Sodium
35BSB001	0-0.5	N	27-Jan-11	<0.0106 U		<0.012 U			<0.0273 U	<0.025 U	0.27	<0.0135 U	<0.0162 U	3160	<0.0468 U		<0.19 U	<0.035 U	1650
35BSB001	5.5-6.5	N	27-Jan-11	<0.0108 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0277 U	<0.024 U	0.0058	<0.0137 U	<0.0164 U	2630	<0.0475 U	<0.0022 U	<0.2 U	<0.036 U	827
35BSB002	0-0.5	N	27-Jan-11	<0.0105 U		<0.012 U			<0.0271 U	<0.025 U	0.0033 J	<0.0135 U	<0.0161 U	2870	<0.0465 U		<0.19 U	<0.035 U	94.6
35BSB002	5.5-6.5	N	26-Jan-11	<0.0108 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0277 U	<0.025 U	0.0041 J	<0.0138 U	<0.0164 U	2920	<0.0475 U	<0.0023 U	<0.2 U	<0.036 U	528
35BSB003	0-0.5	N	26-Jan-11	<0.0105 U		<0.012 U			<0.027 U	<0.024 U	0.0054	<0.0134 U	<0.016 U	3120	<0.0463 U		<0.19 U	<0.035 U	112
35BSB003	5.5-6.5	N	26-Jan-11	<0.0108 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0278 U	<0.025 U	0.0063	<0.0138 U	<0.0165 U	3050	<0.0476 U	<0.0023 U	<0.2 U	<0.036 U	458
35BSB004	0-0.5	N	27-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	0.00066 J	<0.0135 U	<0.0161 U	2740	<0.0466 U		<0.19 U	<0.035 U	91.4
35BSB004	5.5-6.5	N	27-Jan-11	<0.011 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0283 U	<0.025 U	0.0089	<0.014 U	<0.0168 U	2460	<0.0485 U	<0.0022 U	<0.2 U	<0.037 U	1010
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0109 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0281 U	<0.024 U	0.0064	<0.0139 U	<0.0166 U	2630	<0.0481 U	<0.0023 U	<0.2 U	<0.036 U	1140
35BSB005	0-0.5	N	27-Jan-11	<0.0107 U		<0.012 U			<0.0274 U	<0.024 U	0.17	<0.0136 U	<0.0163 U	3850	<0.047 U		<0.19 U	<0.035 U	1840
35BSB005	19.5-20.5	N	27-Jan-11	<0.0109 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0281 U	<0.025 U	0.0045 J	<0.0139 U	<0.0166 U	1420	<0.0481 U	<0.0023 U	<0.2 U	<0.036 U	1360
35BSB005	5.5-6.5	N	27-Jan-11	<0.0107 U	<0.0025 U	<0.012 U	<0.0025 U	<0.0025 U	<0.0275 U	<0.025 U	0.0045 J	<0.0137 U	<0.0163 U	3760	<0.0472 U	<0.0025 U	<0.2 U	<0.036 U	710
35BSB006	0-0.5	N	26-Jan-11	<0.0105 U		<0.012 U			<0.027 U	<0.025 U	<0.00026 U	<0.0134 U	<0.016 U	2390	<0.0463 U		<0.19 U	<0.035 U	99.9
35BSB006	5.5-6.5	N	26-Jan-11	<0.0108 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0277 U	<0.025 U	0.0012 J	<0.0138 U	<0.0164 U	3180	<0.0476 U	<0.0022 U	<0.2 U	<0.036 U	467
35BSB007	0-0.5	N	20-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	0.00044 J	<0.0135 U	<0.0161 U	3080	<0.0466 U		<0.97 U	<0.18 U	277
35BSB007	5.5-6.5	N	20-Jan-11	<0.0106 U	<0.0018 U	<0.012 U	<0.0018 U	<0.0018 U	<0.0271 U	<0.025 U	0.0035 J	<0.0135 U	<0.0161 U	3620	<0.0466 U	<0.0018 U	<0.19 U	<0.035 U	397
35BSB008	0-0.5	N	26-Jan-11	<0.0106 U		<0.012 U			<0.0271 U	<0.025 U	<0.00025 U	<0.0135 U	<0.0161 U	2430	<0.0465 U		<0.19 U	<0.035 U	103
35BSB008	5.5-6.5	N	26-Jan-11	<0.0107 U	<0.002 U	<0.012 U	<0.002 U	<0.002 U	<0.0275 U	<0.024 U	0.0041 J	<0.0136 U	<0.0163 U	3120	<0.0471 U	<0.002 U	<0.2 U	<0.035 U	854
35BSB009	0-0.5	N	26-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	0.00041 J	<0.0135 U	<0.0161 U	3210	<0.0466 U		<0.19 U	<0.035 U	97.4
35BSB009	5.5-6.5	N	26-Jan-11	<0.0106 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0272 U	<0.025 U	0.011	<0.0135 U	<0.0161 U	3300	<0.0467 U	<0.0021 U	<0.19 U	<0.035 U	765
35BSB010	0-0.5	N	20-Jan-11	<0.0106 U		<0.012 U			<0.0273 U	<0.024 U	0.00051 J	<0.0135 U	<0.0162 U	3740	<0.0468 U		<0.19 U	<0.035 U	120
35BSB010	5.5-6.5	N	20-Jan-11	<0.0105 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0271 U	<0.024 U	0.0019 J	<0.0135 U	<0.0161 U	3590	<0.0465 U	<0.0021 U	<0.19 U	<0.035 U	240
35BSB011	0-0.5	N	20-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	<0.00026 U	<0.0135 U	<0.0161 U	3580	<0.0466 U		<0.19 U	<0.035 U	83
35BSB011	19.5-20.5	N	24-Jan-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0276 U	<0.025 U	0.0034 J	<0.0137 U	<0.0164 U	1310 J	<0.0474 U	<0.0021 U	<0.2 U	<0.036 U	1310 J
35BSB011	19.5-20.5	FD	24-Jan-11	<0.0107 U	<0.002 U	<0.012 U	<0.002 U	<0.002 U	<0.0276 U	<0.025 U	0.0034 J	<0.0137 U	<0.0163 U	1310	<0.0473 U	<0.002 U	<0.2 U	<0.036 U	1230
35BSB011	5.5-6.5	N	18-Jan-11	<0.0106 U	<0.0024 U	<0.012 U	<0.0024 U	<0.0024 U	<0.0272 U	<0.024 U	0.0058	<0.0135 U	<0.0161 U	3920	<0.0466 U	<0.0024 U	<0.19 U	<0.035 U	535
35BSB012	0-0.5	N	19-Jan-11	<0.0107 U		<0.012 U			<0.0275 U	<0.025 U	0.0006 J	<0.0136 U	<0.0163 U	4410	<0.0471 U		<0.19 U	<0.035 U	638
35BSB012	5.5-6.5	N	24-Jan-11	<0.0107 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0275 U	<0.025 U	0.024	<0.0137 U	<0.0163 U	2380	<0.0472 U	<0.0022 U	<0.2 U	<0.036 U	1500
35BSB013	0-0.5	N	24-Jan-11	<0.0105 U		<0.012 U			<0.027 U	<0.025 U	<0.00025 U	<0.0134 U	<0.016 U	2960	<0.0463 U		<0.19 U	<0.035 U	133
35BSB013	19-21	N	24-Jan-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0275 U	<0.025 U	0.0037 J	<0.0136 U	<0.0163 U	921	<0.0471 U	<0.0021 U	<0.2 U	<0.036 U	1570
35BSB013	5.5-6.5	N	24-Jan-11	<0.0106 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0274 U	<0.025 U	0.0085	<0.0136 U	<0.0162 U	2650	<0.0469 U	<0.0022 U	<0.2 U	<0.036 U	1110
35BSB014	0-0.5	N	24-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	<0.00026 U	<0.0135 U	<0.0161 U	2900	<0.0466 U		<0.19 U	<0.035 U	192
35BSB014	5.5-6.5	N	24-Jan-11	<0.0105 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.027 U	<0.024 U	0.01	<0.0134 U	<0.016 U	2940	<0.0463 U	<0.0021 U	<0.19 U	<0.035 U	676
35BSB015	0-0.5	N	19-Jan-11	<0.0105 U		<0.012 U			<0.0271 U	<0.024 U	0.2	<0.0134 U	<0.0161 U	3720	<0.0465 U		<0.19 U	<0.035 U	4170
35BSB015	5.5-6.5	N	19-Jan-11	<0.0106 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0273 U	<0.025 U	0.022	<0.0135 U	<0.0162 U	4090	<0.0468 U	<0.0021 U	<0.2 U	<0.036 U	576

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	N-Nitrosodiphenylamine	n-Propylbenzene	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	o-Xylene (1,2-Dimethylbenzene)	p-Cymene (p-Isopropyltoluene)	Pentachlorophenol	Pentaerythritol Tetranitrate	Perchlorate	Phenanthrene	Phenol	Potassium	Pyrene	sec-Butylbenzene	Selenium	Silver	Sodium
35BSB016	0-0.5	N	19-Jan-11	<0.0105 U		<0.012 U			<0.027 U	<0.025 U	0.00044 J	<0.0134 U	<0.016 U	2720	<0.0463 U		<0.19 U	<0.035 U	85.1
35BSB016	5.5-6.5	N	19-Jan-11	<0.0106 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0272 U	<0.025 U	0.0014 J	<0.0135 U	<0.0161 U	3910	<0.0466 U	<0.0023 U	<0.2 U	<0.035 U	181
35BSB017	0-0.5	N	19-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	0.00037 J	<0.0135 U	<0.0161 U	2630	<0.0466 U		<0.19 U	<0.035 U	90.4
35BSB017	0-0.5	FD	19-Jan-11	<0.0104 U		<0.012 U			<0.0268 U	<0.024 U	0.00039 J	<0.0133 U	<0.0159 U	3120	<0.0459 U		<0.19 U	<0.035 U	118
35BSB017	5.5-6.5	N	19-Jan-11	<0.0106 U	<0.0019 U	<0.012 U	<0.0019 U	<0.0019 U	<0.0274 U	<0.025 U	0.0021 J	<0.0136 U	<0.0162 U	1210	<0.0469 U	<0.0019 U	<0.2 U	<0.036 U	891
35BSB018	0-0.5	N	25-Jan-11	<0.0105 U		<0.012 U			<0.0271 U	<0.025 U	0.00037 J	<0.0135 U	<0.0161 U	3060	<0.0465 U		<0.19 U	<0.035 U	103
35BSB018	19.5-20.5	N	26-Jan-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0276 U	<0.025 U	0.00029 J	<0.0137 U	<0.0163 U	911	<0.0473 U	<0.0021 U	<0.2 U	<0.036 U	801
35BSB018	5.5-6.5	N	25-Jan-11	<0.0105 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0271 U	<0.025 U	0.013	<0.0135 U	<0.0161 U	3680	<0.0465 U	<0.0022 U	<0.2 U	<0.036 U	691
35BSB019	0-0.5	N	19-Jan-11	<0.0105 U		<0.012 U			<0.0269 U	<0.025 U	0.00078 J	<0.0133 U	<0.0159 U	3670	<0.0461 U		<0.19 U	<0.035 U	129
35BSB019	5.5-6.5	N	19-Jan-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0276 U	<0.024 U	0.01	<0.0137 U	<0.0164 U	3400	<0.0474 U	<0.0021 U	<0.2 U	<0.036 U	793
35BSB020	0-0.5	N	26-Jan-11	<0.0104 U		<0.012 U			<0.0268 U	<0.025 U	0.00043 J	<0.0133 U	<0.0159 U	3070	<0.0459 U		<0.19 U	<0.035 U	109
35BSB020	5.5-6.5	N	26-Jan-11	<0.0105 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0271 U	<0.025 U	0.034	<0.0134 U	<0.016 U	2820	<0.0464 U	<0.0022 U	<0.19 U	<0.035 U	542
35CSB001	19.5-20.5	N	31-Jan-11	<0.0107 U	<0.0024 U	<0.012 U	<0.0024 U	<0.0024 U	<0.0275 U	<0.025 U	0.00067 J	<0.0137 U	<0.0163 U	969 J	<0.0472 U	<0.0024 U	0.2 J	<0.035 U	937 J
35CSB001	5.5-6.5	N	31-Jan-11	<0.0106 U	<0.0021 U	0.042 J	<0.0021 U	<0.0021 U	<0.0271 U	<0.025 U	0.066	<0.0135 U	<0.0161 U	4920 J	<0.0466 U	<0.0021 U	<0.2 U	0.098 J	1510 J
35CSB002	19.5-50.5	N	31-Jan-11	<0.0106 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0273 U	<0.025 U	0.003 J	<0.0136 U	<0.0162 U	1480 J	<0.0468 U	<0.0022 U	<0.19 U	<0.035 U	936 J
35CSB002	5.5-6.5	N	31-Jan-11	<0.0106 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0274 U	<0.025 U	0.055	<0.0136 U	<0.0162 U	4250 J	<0.0469 U	<0.0021 U	0.33 J	0.055 J	1220 J
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0106 U	<0.0019 U	<0.012 U	<0.0019 U	<0.0019 U	<0.0274 U	<0.024 U	0.052	<0.0136 U	<0.0162 U	4840 J	<0.0469 U	<0.0019 U	0.27 J	0.057 J	1230 J
35CSB003	19.5-20.5	N	01-Feb-11	<0.0107 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0275 U	<0.025 U	0.0018 J	<0.0137 U	<0.0163 U	1140 J	<0.0472 U	<0.0022 U	<0.2 U	<0.036 U	958 J
35CSB003	5.5-6.5	N	01-Feb-11	<0.0107 U	<0.0021 U	0.046 J	<0.0021 U	<0.0021 U	<0.0276 U	<0.024 U	0.15	<0.0137 U	<0.0164 U	4750 J	<0.0474 U	<0.0021 U	<0.2 U	<0.036 U	1400 J
35CSB004	19.5-20.5	N	01-Feb-11	<0.0107 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0274 U	<0.024 U	0.002 J	<0.0136 U	<0.0162 U	1230 J	<0.047 U	<0.0022 U	<0.2 U	<0.036 U	1010 J
35CSB004	5.5-6.5	N	01-Feb-11	<0.0108 U	<0.0021 U	0.029 J	<0.0021 U	<0.0021 U	<0.0277 U	<0.025 U	0.11	<0.0137 U	<0.0164 U	4140 J	<0.0475 U	<0.0021 U	<0.2 U	<0.036 U	1450 J
35CSB005	19.5-20.5	N	01-Feb-11	<0.0107 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0274 U	<0.024 U	0.0015 J	<0.0136 U	<0.0162 U	854 J	<0.047 U	<0.0023 U	<0.2 U	<0.036 U	817 J
35CSB005	5.5-6.5	N	01-Feb-11	<0.0106 U	<0.0021 U	0.032 J	<0.0021 U	<0.0021 U	<0.0273 U	<0.025 U	0.1	<0.0135 U	<0.0162 U	4730 J	<0.0468 U	<0.0021 U	<0.2 U	<0.036 U	1240 J
35CSB006	19.5-20.5	N	02-Feb-11	<0.0107 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0275 U	<0.024 U	0.0068	<0.0137 U	<0.0163 U	1040 J	<0.0472 U	<0.0023 U	<0.2 U	<0.036 U	1080
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0107 U	<0.0026 U	<0.012 U	<0.0026 U	<0.0026 U	<0.0275 U	<0.025 U	0.011	<0.0136 U	<0.0163 U	1020	<0.0471 U	<0.0026 U	<0.2 U	<0.036 U	1080
35CSB006	5.5-6.5	N	02-Feb-11	<0.0106 U	<0.002 U	<0.012 U	<0.002 U	<0.002 U	<0.0273 U	<0.024 U	0.12	<0.0135 U	<0.0162 U	3650 J	<0.0468 U	<0.002 U	<0.2 U	<0.036 U	1720 J
35CSB007	19.5-20.5	N	01-Feb-11	<0.0107 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0275 U	<0.024 U	0.015	<0.0137 U	<0.0163 U	970 J	<0.0472 U	<0.0022 U	<0.19 U	<0.035 U	1130
35CSB007	5.5-6.5	N	01-Feb-11	<0.0108 U	<0.0022 U	0.024 J	<0.0022 U	<0.0022 U	<0.0277 U	<0.025 U	1.3	<0.0137 U	<0.0164 U	2840	<0.0475 U	<0.0022 U	<0.2 U	<0.036 U	1770
35CSB008	19.5-20.5	N	01-Feb-11	<0.0107 U	<0.0024 U	<0.012 U	<0.0024 U	<0.0024 U	<0.0274 U	<0.024 U	0.0049 J	<0.0136 U	<0.0163 U	1020	<0.047 U	<0.0024 U	<0.2 U	<0.036 U	1230
35CSB008	5.5-6.5	N	01-Feb-11	<0.0105 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.027 U	<0.025 U	0.26	<0.0134 U	<0.016 U	4990	<0.0463 U	<0.0022 U	<0.19 U	<0.035 U	964
35CSB009	19.5-20.5	N	03-Feb-11	<0.0107 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0276 U	<0.025 U	0.0055	<0.0137 U	<0.0164 U	1150	<0.0473 U	<0.0023 U	<0.2 U	<0.036 U	963
35CSB009	5.5-6.5	N	03-Feb-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0276 U	<0.025 U	0.56	<0.0137 U	<0.0164 U	4740	<0.0473 U	<0.0021 U	<0.2 U	<0.036 U	1120
35CSB010	0-0.5	N	07-Feb-11	<0.0106 U		<0.012 U			<0.0273 U	<0.025 U	0.0032 J	<0.0135 U	<0.0162 U	5950 J	<0.0467 U		0.97 J	<0.071 U	1200
35CSB010	19.5-20.5	N	07-Feb-11	<0.0107 U	<0.002 U	<0.012 U	<0.002 U	<0.002 U	<0.0275 U	<0.024 U	0.0083	<0.0136 U	<0.0163 U	5690 J	<0.0471 U	<0.002 U	<0.39 U	<0.071 U	972
35CSB010	5.5-6.5	N	07-Feb-11	<0.0106 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0273 U	<0.024 U	0.039	<0.0136 U	<0.0162 U	5090 J	<0.0468 U	<0.0021 U	1.51 J	<0.035 U	1200

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	N-Nitrosodiphenylamine	n-Propylbenzene	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	o-Xylene (1,2-Dimethylbenzene)	p-Cymene (p-Isopropyltoluene)	Pentachlorophenol	Pentaerythritol Tetranitrate	Perchlorate	Phenanthrene	Phenol	Potassium	Pyrene	sec-Butylbenzene	Selenium	Silver	Sodium
35CSB011	0-0.5	N	07-Feb-11	<0.0106 U		0.15 J			<0.0273 U	<0.025 U	0.97	<0.0135 U	<0.0162 U	6150 J	<0.0468 U		0.56 J	<0.071 U	2570
35CSB011	19.5-20.5	N	07-Feb-11	<0.0106 U	<0.002 U	<0.012 U	<0.002 U	<0.002 U	<0.0273 U	<0.024 U	0.0032 J	<0.0136 U	<0.0162 U	4810 J	<0.0469 U	<0.002 U	1.09 J	<0.07 U	896
35CSB011	5.5-6.5	N	07-Feb-11	<0.0106 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.0273 U	<0.024 U	0.0099	<0.0135 U	<0.0162 U	5770 J	<0.0468 U	<0.0022 U	0.52 J	<0.07 U	710
35CSB012	0-0.5	N	07-Feb-11	<0.0106 U		0.038 J			<0.0273 U	<0.024 U	0.02	<0.0136 U	<0.0162 U	6110 J	<0.0469 U		<0.39 U	<0.071 U	1370
35CSB012	19.5-20.5	N	07-Feb-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0274 U	<0.025 U	0.0011 J	<0.0136 U	<0.0162 U	1820 J	<0.047 U	<0.0021 U	<0.19 U	<0.035 U	622
35CSB012	5.5-6.5	N	07-Feb-11	<0.0105 U	<0.002 U	<0.012 U	<0.002 U	<0.002 U	<0.027 U	<0.024 U	0.03	<0.0134 U	<0.016 U	6150 J	<0.0463 U	<0.002 U	0.71 J	<0.07 U	1190
35CSB013	0-0.5	N	08-Feb-11	<0.0106 U		<0.012 U			<0.0273 U	<0.025 U	0.00043 J	<0.0136 U	<0.0162 U	4370 J	<0.0468 U		0.28 J	<0.035 U	<138 U
35CSB013	0-0.5	FD	08-Feb-11	<0.0105 U		<0.011 U			<0.0271 U	<0.024 U	<0.00027 U	<0.0135 U	<0.0161 U	4340 J	<0.0465 U		0.47 J	<0.035 U	136
35CSB013	19.5-20.5	N	08-Feb-11	<0.0107 U	<0.0021 U	<0.012 U	<0.0021 U	<0.0021 U	<0.0276 U	<0.025 U	0.0011 J	<0.0137 U	<0.0163 U	1170 J	<0.0473 U	<0.0021 U	<0.2 U	<0.036 U	700
35CSB013	5.5-6.5	N	08-Feb-11	<0.0106 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0273 U	<0.024 U	0.023	<0.0136 U	<0.0162 U	4940 J	<0.0469 U	<0.0023 U	0.4 J	<0.071 U	565
35CSB014	19.5-20.5	N	03-Feb-11	<0.0106 U	<0.0023 U	<0.012 U	<0.0023 U	<0.0023 U	<0.0272 U	<0.025 U	0.075	<0.0135 U	<0.0161 U	1070	<0.0466 U	<0.0023 U	<0.2 U	<0.036 U	1340
35CSB014	5.5-6.5	N	03-Feb-11	<0.0109 U	<0.0022 U	<0.012 U	<0.0022 U	<0.0022 U	<0.028 U	<0.025 U	1.9	<0.0139 U	<0.0166 U	2790	<0.048 U	<0.0022 U	<0.2 U	<0.036 U	2560
35CSS001	0-0.5	N	25-Jan-11	<0.0106 U		2			<0.0272 U	<0.025 U	0.0054	<0.0135 U	<0.0161 U	4140	<0.0467 U		<0.19 U	<0.035 U	424
35CSS002	0-0.5	N	25-Jan-11	<0.0106 U		0.075 J			<0.0272 U	<0.024 U	0.63	<0.0135 U	<0.0161 U	3970	<0.0466 U		<0.19 U	<0.035 U	3490
35CSS003	0-0.5	N	25-Jan-11	<0.0104 U		0.27			<0.0269 U	<0.025 U	0.013	<0.0133 U	<0.0159 U	3440	<0.0461 U		<0.19 U	<0.035 U	147
35CSS004	0-0.5	N	25-Jan-11	<0.0105 U		0.59			<0.027 U	<0.024 U	0.44	<0.0134 U	<0.016 U	5160	<0.0463 U		<0.19 U	<0.035 U	1070
35CSS005	0-0.5	N	25-Jan-11	<0.0106 U		0.18 J			<0.0273 U	<0.025 U	0.0079	<0.0135 U	<0.0162 U	4770	<0.0468 U		<0.19 U	<0.035 U	768
35CSS006	0-0.5	N	10-Feb-11	<0.0106 U		0.069 J			<0.0273 U	<0.025 U	0.017	<0.0136 U	<0.0162 U	6880 J	<0.0469 U		0.8 J	<0.071 U	872
35CSS007	0-0.5	N	02-Feb-11	<0.0105 U		0.53			<0.027 U	<0.025 U	1.1	<0.0134 U	<0.016 U	4090	<0.0463 U		<0.19 U	<0.035 U	1950
35CSS008	0-0.5	N	02-Feb-11	<0.0106 U		0.3			<0.0272 U	<0.025 U	0.0042 J	<0.0135 U	<0.0161 U	3230	<0.0466 U		<0.19 U	<0.035 U	266
35CSS009	0-0.5	N	10-Feb-11	<0.0107 U		0.35			<0.0274 U	<0.025 U	1.3	<0.0136 U	<0.0163 U	5390 J	<0.047 U		<0.19 U	<0.035 U	1020
35CSS010	0-0.5	N	10-Feb-11	<0.0107 U		0.26			<0.0274 U	<0.024 U	0.0075	<0.0136 U	<0.0162 U	5170 J	<0.047 U		<0.39 U	0.25 J	289
35CSS011	0-0.5	N	10-Feb-11	<0.0106 U		0.084 J			<0.0274 U	<0.025 U	0.19	<0.0136 U	<0.0162 U	5720 J	<0.0469 U		0.7 J	<0.07 U	1530
35CSS013	0-0.5	N	12-Jan-11	<0.0106 U		<0.011 U			<0.0272 U	<0.024 U	0.076	<0.0135 U	<0.0161 U	3070	<0.0466 U		0.29 J	<0.035 U	157
35CSS014	0-0.5	N	12-Jan-11	<0.0105 U		0.66			<0.0269 U	<0.025 U	0.58	<0.0134 U	<0.016 U	3600	<0.0462 U		0.59 J	<0.035 U	1430
35CSS015	0-0.5	N	12-Jan-11	<0.0107 U		0.063 J			<0.0274 U	<0.024 U	0.55	<0.0136 U	<0.0162 U	3380	<0.047 U		0.79 J	<0.035 U	2400
35CSS016	0-0.5	N	12-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	0.072	<0.0135 U	<0.0161 U	2700	<0.0467 U		<0.19 U	<0.035 U	96.1
35CSS017	0-0.5	N	12-Jan-11	<0.0106 U		<0.012 U			<0.0274 U	<0.025 U	<0.00026 U	<0.0136 U	<0.0162 U	3030	<0.0469 U		0.51 J	<0.035 U	242
35CSS018	0-0.5	N	12-Jan-11	<0.0106 U		<0.012 U			<0.0273 U	<0.025 U	<0.00026 U	<0.0135 U	<0.0161 U	2870	<0.0467 U		0.51 J	<0.035 U	128
35CSS019	0-0.5	N	12-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.025 U	0.0003 J	<0.0135 U	<0.0161 U	3290	<0.0466 U		0.6 J	<0.036 U	145
35CSS020	0-0.5	N	12-Jan-11	<0.0106 U		<0.011 U			<0.0272 U	<0.024 U	0.00035 J	<0.0135 U	<0.0161 U	3590	<0.0466 U		0.52 J	<0.036 U	709
35CSS021	0-0.5	N	12-Jan-11	<0.0108 U		0.066 J			<0.0277 U	<0.025 U	160	<0.0137 U	<0.0164 U	4280	<0.0474 U		0.64 J	<0.036 U	6800
35CSS022	0-0.5	N	12-Jan-11	<0.0105 U		0.036 J			<0.0271 U	<0.025 U	0.0085	<0.0134 U	<0.016 U	4860	<0.0464 U		0.55 J	<0.035 U	633
35CSS023	0-0.5	N	11-Jan-11	<0.0105 U		<0.012 U			<0.027 U	<0.025 U	0.00037 J	<0.0134 U	<0.016 U	2590	<0.0463 U		0.38 J	<0.035 U	82.7
35CSS024	0-0.5	N	11-Jan-11	<0.0105 U		<0.012 U			<0.0271 U	<0.024 U	0.0014 J	<0.0135 U	<0.0161 U	2810	<0.0465 U		0.43 J	<0.035 U	81.5

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	N-Nitrosodiphenylamine	n-Propylbenzene	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	o-Xylene (1,2-Dimethylbenzene)	p-Cymene (p-Isopropyltoluene)	Pentachlorophenol	Pentaerythritol Tetranitrate	Perchlorate	Phenanthrene	Phenol	Potassium	Pyrene	sec-Butylbenzene	Selenium	Silver	Sodium
35CSS025	0-0.5	N	11-Jan-11	<0.0104 U		<0.012 U			<0.0267 U	<0.024 U	<0.00025 U	<0.0133 U	<0.0158 U	2550	<0.0458 U		0.45 J	<0.035 U	92.2
35CSS026	0-0.5	N	11-Jan-11	<0.0105 U		<0.012 U			<0.0269 U	<0.025 U	0.0024 J	<0.0133 U	<0.0159 U	2880	<0.0461 U		0.4 J	<0.035 U	64.9
35CSS027	0-0.5	N	11-Jan-11	<0.0104 U		<0.012 U			<0.0268 U	<0.024 U	0.001 J	<0.0133 U	<0.0159 U	2870	<0.0459 U		0.38 J	<0.035 U	89.7
35CSS028	0-0.5	N	11-Jan-11	<0.0106 U		<0.012 U			<0.0272 U	<0.024 U	0.003 J	<0.0135 U	<0.0161 U	2910	<0.0466 U		0.37 J	0.055 J	133
35CSS029	0-0.5	N	11-Jan-11	<0.0105 U		0.057 J			<0.0271 U	<0.025 U	0.015	<0.0135 U	<0.0161 U	3420	<0.0465 U		0.47 J	<0.035 U	109
35CSS030	0-0.5	N	11-Jan-11	<0.0105 U		0.022 J			<0.0271 U	<0.024 U	0.055	<0.0135 U	<0.0161 U	3110	<0.0465 U		0.27 J	<0.035 U	82.3
35CSS031	0-0.5	N	11-Jan-11	<0.0104 U		<0.012 U			<0.0268 U	0 R	0.43	<0.0133 U	<0.0159 U	2010	<0.046 U		0.47 J	<0.035 U	98 J
35CSS031	0-0.5	FD	11-Jan-11	<0.0104 U		<0.012 U			<0.0267 U	<0.024 U	0.34	<0.0132 U	<0.0158 U	2000	<0.0457 U		0.22 J	<0.035 U	87.3

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Styrene	t-Butylbenzene	tert-Butyl Methyl Ether	Tetrachloroethylene (PCE)	Tetryl	Thallium	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethylene (TCE)	Trichlorofluoromethane	Vanadium	Vinyl Chloride	Zinc
35BSB001	0-0.5	N	27-Jan-11					<0.0099 U	<0.1 U						17.8 J		43.5 J
35BSB001	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0098 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	16.1 J	<0.0022 U	41.8 J
35BSB002	0-0.5	N	27-Jan-11					<0.0099 U	<0.1 U						16.2 J		40.3 J
35BSB002	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0099 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	17.5 J	<0.0023 U	47.7 J
35BSB003	0-0.5	N	26-Jan-11					<0.0098 U	<0.1 U						17.6 J		42.3 J
35BSB003	5.5-6.5	N	26-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0099 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	17.6 J	<0.0023 U	40.4 J
35BSB004	0-0.5	N	27-Jan-11					<0.0099 U	<0.1 U						16.3 J		63.7 J
35BSB004	5.5-6.5	N	27-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	18.6 J	<0.0022 U	42 J
35BSB004	5.5-6.5	FD	27-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0098 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	20.1 J	<0.0023 U	45.3 J
35BSB005	0-0.5	N	27-Jan-11					<0.0098 U	<0.1 U						18.9 J		50.4 J
35BSB005	19.5-20.5	N	27-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.01 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	13.7 J	<0.0023 U	26.5 J
35BSB005	5.5-6.5	N	27-Jan-11	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0099 U	<0.1 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	<0.0025 U	15.6 J	<0.0025 U	45 J
35BSB006	0-0.5	N	26-Jan-11					<0.0099 U	<0.1 U						16.8 J		39.1 J
35BSB006	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.01 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	22 J	<0.0022 U	50 J
35BSB007	0-0.5	N	20-Jan-11					<0.01 U	<0.5 U						<0.25 UJ		231
35BSB007	5.5-6.5	N	20-Jan-11	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0099 U	<0.1 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	<0.0018 U	15.2 J	<0.0018 U	52.8
35BSB008	0-0.5	N	26-Jan-11					<0.0099 U	<0.099 U						16.5 J		36.4 J
35BSB008	5.5-6.5	N	26-Jan-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0098 U	<0.1 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	15.4 J	<0.002 U	39.7 J
35BSB009	0-0.5	N	26-Jan-11					<0.0099 U	<0.099 U						17.2 J		38.7 J
35BSB009	5.5-6.5	N	26-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	15.5 J	<0.0021 U	42.3 J
35BSB010	0-0.5	N	20-Jan-11					<0.0097 U	<0.1 U						17.9 J		37
35BSB010	5.5-6.5	N	20-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0096 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	14.7 J	<0.0021 U	38.8
35BSB011	0-0.5	N	20-Jan-11					0.047 J	<0.1 U						16.5 J		40.8
35BSB011	19.5-20.5	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	0.17 J	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	18.1	<0.0021 U	25.8 J
35BSB011	19.5-20.5	FD	24-Jan-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0099 U	0.29 J	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	17.3	<0.002 U	25.3 J
35BSB011	5.5-6.5	N	18-Jan-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0098 U	<0.1 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	15.7 J	<0.0024 U	44.3
35BSB012	0-0.5	N	19-Jan-11					<0.01 U	0.24 J						18 J		42.6
35BSB012	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	21.2	<0.0022 U	35.5 J
35BSB013	0-0.5	N	24-Jan-11					<0.01 U	0.16 J						19.3		44 J
35BSB013	19-21	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	0.13 J	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	16.5	<0.0021 U	17.3 J
35BSB013	5.5-6.5	N	24-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	23.6	<0.0022 U	33.3 J
35BSB014	0-0.5	N	24-Jan-11					<0.0099 U	<0.1 U						18.9		39.6 J
35BSB014	5.5-6.5	N	24-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0098 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	16.6	<0.0021 U	46 J
35BSB015	0-0.5	N	19-Jan-11					<0.0097 U	<0.1 U						17.9 J		95.2
35BSB015	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	24 J	<0.0021 U	40.2

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Styrene	t-Butylbenzene	tert-Butyl Methyl Ether	Tetrachloroethylene (PCE)	Tetryl	Thallium	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethylene (TCE)	Trichlorofluoromethane	Vanadium	Vinyl Chloride	Zinc
35BSB016	0-0.5	N	19-Jan-11					<0.01 U	<0.1 U						15.5 J		32.8
35BSB016	5.5-6.5	N	19-Jan-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0099 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	16.4 J	<0.0023 U	48.9
35BSB017	0-0.5	N	19-Jan-11					<0.0099 U	<0.1 U						15.3 J		31.1
35BSB017	0-0.5	FD	19-Jan-11					<0.0098 U	<0.1 U						16.8 J		34.9
35BSB017	5.5-6.5	N	19-Jan-11	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0099 U	<0.1 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	22.3 J	<0.0019 U	15.8
35BSB018	0-0.5	N	25-Jan-11					<0.01 U	<0.1 U						17.3		40.4 J
35BSB018	19.5-20.5	N	26-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	12.7	<0.0021 U	16.2 J
35BSB018	5.5-6.5	N	25-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	15.8	<0.0022 U	42.3 J
35BSB019	0-0.5	N	19-Jan-11					<0.0099 U	<0.1 U						17.5 J		38
35BSB019	5.5-6.5	N	19-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0096 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	16.8 J	<0.0021 U	38.1
35BSB020	0-0.5	N	26-Jan-11					<0.0099 U	<0.1 U						17.4		37.2 J
35BSB020	5.5-6.5	N	26-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	19.1	<0.0022 U	52.4 J
35CSB001	19.5-20.5	N	31-Jan-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0099 U	<0.1 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	10.6	<0.0024 U	15
35CSB001	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	27.8	<0.0021 U	56.7
35CSB002	19.5-50.5	N	31-Jan-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	11.8	<0.0022 U	20.6
35CSB002	5.5-6.5	N	31-Jan-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.01 U	<0.1 UJ	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	21.2	<0.0021 U	43.7
35CSB002	5.5-6.5	FD	31-Jan-11	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0098 U	<0.1 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	23.4	<0.0019 U	57
35CSB003	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.01 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	10.5	<0.0022 U	16.2
35CSB003	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0097 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	22.9	<0.0021 U	46.1
35CSB004	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0097 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	12.5	<0.0022 U	19.6
35CSB004	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	20.5	<0.0021 U	39.2
35CSB005	19.5-20.5	N	01-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0097 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	10.7	<0.0023 U	17.2
35CSB005	5.5-6.5	N	01-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	22.7	<0.0021 U	42.5
35CSB006	19.5-20.5	N	02-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0098 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	11.9	<0.0023 U	14.7
35CSB006	19.5-20.5	FD	02-Feb-11	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0099 U	<0.1 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	<0.0026 U	12.7	<0.0026 U	15.2
35CSB006	5.5-6.5	N	02-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0098 U	<0.1 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	19.8	<0.002 U	36.5
35CSB007	19.5-20.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0097 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	12.4	<0.0022 U	16.8
35CSB007	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0099 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	18.2	<0.0022 U	31.8
35CSB008	19.5-20.5	N	01-Feb-11	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0098 U	<0.1 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	<0.0024 U	11.7	<0.0024 U	14.5
35CSB008	5.5-6.5	N	01-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.01 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	21.2	<0.0022 U	47.1
35CSB009	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0099 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	17.8	<0.0023 U	20.9
35CSB009	5.5-6.5	N	03-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.01 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	17.2	<0.0021 U	43.7
35CSB010	0-0.5	N	07-Feb-11					<0.01 U	<0.2 U						28.1 J		52.6 J
35CSB010	19.5-20.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0096 U	<0.2 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	25.1 J	<0.002 U	53.8 J
35CSB010	5.5-6.5	N	07-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0098 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	25.1 J	<0.0021 U	52.7 J

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Styrene	t-Butylbenzene	tert-Butyl Methyl Ether	Tetrachloroethylene (PCE)	Tetryl	Thallium	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethylene (TCE)	Trichlorofluoromethane	Vanadium	Vinyl Chloride	Zinc
35CSB011	0-0.5	N	07-Feb-11					<0.01 U	<0.2 U						28.4 J		58.1 J
35CSB011	19.5-20.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0097 U	<0.2 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	29.8 J	<0.002 U	51.2 J
35CSB011	5.5-6.5	N	07-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0098 U	<0.2 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	32.2 J	<0.0022 U	74.2 J
35CSB012	0-0.5	N	07-Feb-11					<0.0096 U	<0.2 U						26.9 J		55.1 J
35CSB012	19.5-20.5	N	07-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	13.8 J	<0.0021 U	26.1 J
35CSB012	5.5-6.5	N	07-Feb-11	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.0098 U	<0.2 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	28.4 J	<0.002 U	62.2 J
35CSB013	0-0.5	N	08-Feb-11					<0.01 U	<0.1 UJ						25.4 J		44.5 J
35CSB013	0-0.5	FD	08-Feb-11					<0.0095 U	<0.1 U						26.6 J		45.1 J
35CSB013	19.5-20.5	N	08-Feb-11	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0099 U	<0.1 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	<0.0021 U	15.6 J	<0.0021 U	16.7 J
35CSB013	5.5-6.5	N	08-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0097 U	<0.2 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	26.4 J	<0.0023 U	56 J
35CSB014	19.5-20.5	N	03-Feb-11	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.01 U	<0.1 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	<0.0023 U	10.6	<0.0023 U	15.5
35CSB014	5.5-6.5	N	03-Feb-11	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.01 U	<0.1 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	<0.0022 U	21.1	<0.0022 U	31.3
35CSS001	0-0.5	N	25-Jan-11					<0.0099 U	<0.1 U						17.7		79.1 J
35CSS002	0-0.5	N	25-Jan-11					<0.0098 U	<0.1 U						19.5		57.3 J
35CSS003	0-0.5	N	25-Jan-11					<0.0099 U	<0.1 U						17		100 J
35CSS004	0-0.5	N	25-Jan-11					<0.0098 U	<0.1 U						23.4		62.2 J
35CSS005	0-0.5	N	25-Jan-11					<0.0099 U	0.47 J						14.8		50.2 J
35CSS006	0-0.5	N	10-Feb-11					<0.01 U	<0.2 U						25.3 J		58.9 J
35CSS007	0-0.5	N	02-Feb-11					<0.01 U	<0.1 U						20.8		42.5
35CSS008	0-0.5	N	02-Feb-11					1.1	<0.1 U						14.4		76
35CSS009	0-0.5	N	10-Feb-11					5.1	<0.1 U						21.8 J		62.6 J
35CSS010	0-0.5	N	10-Feb-11					<0.0098 U	<0.2 U						23.1 J		85.9 J
35CSS011	0-0.5	N	10-Feb-11					<0.0099 U	<0.2 U						25.8 J		53.1 J
35CSS013	0-0.5	N	12-Jan-11					<0.0094 U	<0.1 U						8.5 J		45.8
35CSS014	0-0.5	N	12-Jan-11					<0.01 U	<0.1 U						13.4 J		65
35CSS015	0-0.5	N	12-Jan-11					<0.0098 U	<0.1 U						16.7 J		66.2
35CSS016	0-0.5	N	12-Jan-11					<0.0099 U	<0.1 U						17.1 J		77.7
35CSS017	0-0.5	N	12-Jan-11					<0.0099 U	<0.1 U						17.6 J		42.7
35CSS018	0-0.5	N	12-Jan-11					<0.01 U	<0.1 U						16.7 J		39.7
35CSS019	0-0.5	N	12-Jan-11					<0.01 U	<0.1 U						18.2 J		45.8
35CSS020	0-0.5	N	12-Jan-11					<0.0095 U	<0.1 U						15.4 J		44.6
35CSS021	0-0.5	N	12-Jan-11					<0.0099 U	<0.1 U						14.2 J		46
35CSS022	0-0.5	N	12-Jan-11					<0.0099 U	<0.1 U						22.2 J		69.5
35CSS023	0-0.5	N	11-Jan-11					<0.01 U	<0.1 U						16.3 J		36.7
35CSS024	0-0.5	N	11-Jan-11					<0.0096 U	<0.099 U						17.2 J		35.4

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.1
ANALYTICAL DATA
YPG-35
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

LOCID	DEPTH	SACODE	LOGDATE	Styrene	t-Butylbenzene	tert-Butyl Methyl Ether	Tetrachloroethylene (PCE)	Tetryl	Thallium	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethylene (TCE)	Trichlorofluoromethane	Vanadium	Vinyl Chloride	Zinc
35CSS025	0-0.5	N	11-Jan-11					<0.0098 U	<0.099 U						14.4		34.3
35CSS026	0-0.5	N	11-Jan-11					<0.01 U	<0.1 U						11		32.8
35CSS027	0-0.5	N	11-Jan-11					<0.0098 U	<0.1 U						10.5 J		124
35CSS028	0-0.5	N	11-Jan-11					<0.0097 U	<0.1 U						12.4 J		46.8
35CSS029	0-0.5	N	11-Jan-11					<0.01 U	<0.1 U						13.8 J		168
35CSS030	0-0.5	N	11-Jan-11					<0.0098 U	<0.1 U						13.2 J		109
35CSS031	0-0.5	N	11-Jan-11					<0.0098 U	<0.1 UJ						12.9 J		34.2
35CSS031	0-0.5	FD	11-Jan-11					<0.0098 U	<0.099 U						10 J		31.7

Note: Results are in units of mg/kg. See Table C.2 for flag definitions. Sample Type N = Normal; FD = Field Duplicate.

TABLE C.2
USEPA FLAGS FOR ANALYTICAL DATA

U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Flag	Description
U	The analyte was not detected above the associated value. [a/]
J	The analyte was detected. The associated value is considered approximate, but usable for decision making purposes.
UJ	The analyte was not detected above the associated value; however, the associated value is considered approximate.
NJ	The analyte was detected at the associated value; however, based on professional judgment the value is considered to be a false positive.
R	The data is unusable for all purposes.

[a/] Associated value is the method detection limit (MDL) unless qualified 'U' based on laboratory/field blank contamination during the data validation. In this case, the value is the result reported by the laboratory.

TABLE C.3

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	1,2-Dichloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	2-Chlorotoluene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	trans-1,2-Dichloroethene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	cis-1,2-Dichloroethylene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,1-Dichloroethene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,4-Dichlorobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,3,5-Trinitrobenzene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	2,4,6-Trinitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Nitroguanidine	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	cis-1,3-Dichloropropene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,2-Dichlorobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	trans-1,3-Dichloropropene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,1-Dichloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Dibromomethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,2-Dibromo-3-Chloropropane	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Dibromochloromethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	p-Cymene (p-Isopropyltoluene)	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Carbon Tetrachloride	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Chloromethane	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Chloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Phenanthrene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	1,3-Dichlorobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Isopropylbenzene (Cumene)	1/27/2011	0	0	0.0055	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	Phenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Pyrene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	1,2,4-Trichlorobenzene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,4,5-Trichlorophenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,4,6-Trichlorophenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Tetrachloroethylene (PCE)	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,1,2,2-Tetrachloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	n-Propylbenzene	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	1,1-Dichloropropene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Methyl Ethyl Ketone (2-Butanone)	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Chlorobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	2-Hexanone	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Hexachlorobutadiene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Dichlorodifluoromethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Trichlorofluoromethane	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	1,2-Dibromoethane (Ethylene Dibromide)	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Ethylbenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	2,2-Dichloropropane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,3-Dichloropropane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,2-Dichloropropane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Methylene Chloride	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	2,6-Dinitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	4-Chlorotoluene	1/27/2011	0	0	0.0055	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	Tetryl	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Pentaerythritol Tetranitrate	1/27/2011	0	0	0.5	MG/KG	NA
35BSB004-02-012711	Nitroglycerin	1/27/2011	0	0	0.5	MG/KG	NA
35BSB004-02-012711	Nitrobenzene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	4-Nitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	3-Nitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Copper	1/27/2011	22.5	24.6	0.42	MG/KG	8.92
35BSB004-02-012711	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Chromium, Total	1/27/2011	8.68	9.44	0.42	MG/KG	8.39
35BSB004-02-012711	2,4-Dinitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	1,3-Dinitrobenzene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	4-Amino-2,6-Dinitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	2-Amino-4,6-Dinitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Perchlorate	1/27/2011	0.0089	0.0064	0.0052	MG/KG	<5xRL (0.0025)
35BSB004-02-012711	Potassium	1/27/2011	2460	2630	8.38	MG/KG	6.68
35BSB004-02-012711	Magnesium	1/27/2011	4190	4500	4.19	MG/KG	7.13
35BSB004-02-012711	Manganese	1/27/2011	203	220	0.63	MG/KG	8.04
35BSB004-02-012711	Molybdenum	1/27/2011	0.59	0.55	1.26	MG/KG	<5xRL (0.04)
35BSB004-02-012711	2-Nitrotoluene	1/27/2011	0	0	0.25	MG/KG	NA
35BSB004-02-012711	Acetone	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Carbon Disulfide	1/27/2011	0	0	0.0055	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	Toluene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Benzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	t-Butylbenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	sec-Butylbenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	n-Butylbenzene	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Bromomethane	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Bromochloromethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Iron	1/27/2011	12100	12800	4.19	MG/KG	5.62
35BSB004-02-012711	Bromodichloromethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Naphthalene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Mercury	1/27/2011	0	0	0.013	MG/KG	NA
35BSB004-02-012711	Silver	1/27/2011	0	0	0.42	MG/KG	NA
35BSB004-02-012711	Aluminum	1/27/2011	7590	8470	8.38	MG/KG	10.96
35BSB004-02-012711	Arsenic	1/27/2011	6.76	6.99	1.68	MG/KG	<5xRL (0.23)
35BSB004-02-012711	Barium	1/27/2011	241	278	0.42	MG/KG	14.26
35BSB004-02-012711	Beryllium	1/27/2011	0.4	0.44	0.21	MG/KG	<5xRL (0.04)
35BSB004-02-012711	Calcium	1/27/2011	27000	24100	31.4	MG/KG	11.35
35BSB004-02-012711	Cadmium	1/27/2011	0.11	0.12	0.21	MG/KG	<5xRL (0.01)
35BSB004-02-012711	Cobalt	1/27/2011	3.85	4.21	0.42	MG/KG	8.93
35BSB004-02-012711	Bromobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	bis(2-Ethylhexyl) Phthalate	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Carbazole	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Vanadium	1/27/2011	18.6	20.1	0.84	MG/KG	7.75

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	Zinc	1/27/2011	42	45.3	0.84	MG/KG	7.56
35BSB004-02-012711	Acenaphthene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Acenaphthylene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Anthracene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	bis(2-Chloroethoxy) Methane	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Selenium	1/27/2011	0	0	1.68	MG/KG	NA
35BSB004-02-012711	bis(2-Chloroisopropyl) Ether	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Antimony	1/27/2011	0	0	2.51	MG/KG	NA
35BSB004-02-012711	4-Bromophenyl Phenyl Ether	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzo(a)anthracene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzo(a)pyrene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzo(b)fluoranthene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzo(g,h,i)perylene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzo(k)fluoranthene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzyl Alcohol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	4-Chloro-3-Methylphenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Pentachlorophenol	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	1,1,2-Trichloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	o-Xylene (1,2-Dimethylbenzene)	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	m,p-Xylene (Sum Of Isomers)	1/27/2011	0	0	0.011	MG/KG	NA
35BSB004-02-012711	Vinyl Chloride	1/27/2011	0	0	0.0055	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	1,3,5-Trimethylbenzene (Mesitylene)	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,2,4-Trimethylbenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,2,3-Trichloropropane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Chloroform	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Trichloroethylene (TCE)	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Thallium	1/27/2011	0	0	0.84	MG/KG	NA
35BSB004-02-012711	1,2,3-Trichlorobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	1,1,1-Trichloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	1,1,1,2-Tetrachloroethane	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	tert-Butyl Methyl Ether	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Bromoform	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Styrene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	Sodium	1/27/2011	1010	1140	41.9	MG/KG	12.09
35BSB004-02-012711	Nickel	1/27/2011	7.49	8.19	1.68	MG/KG	<5xRL (0.7)
35BSB004-02-012711	Lead	1/27/2011	7.49	7.93	0.63	MG/KG	5.71
35BSB004-02-012711	1,2,4-Trichlorobenzene	1/27/2011	0	0	0.0055	MG/KG	NA
35BSB004-02-012711	2-Methylnaphthalene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,4-Dinitrotoluene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,6-Dinitrotoluene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Fluorene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Fluoranthene	1/27/2011	0	0	0.346	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	Chrysene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Hexachlorobenzene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Benzyl Butyl Phthalate	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Indeno(1,2,3-c,d)pyrene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Isophorone	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,4-Dinitrophenol	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	2-Methylphenol (o-Cresol)	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Hexachlorobutadiene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Naphthalene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	N-Nitrosodimethylamine	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	N-Nitrosodiphenylamine	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	N-Nitrosodi-n-Propylamine	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2-Nitroaniline	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	3-Nitroaniline	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	4-Nitroaniline	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	Nitrobenzene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2-Nitrophenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	4-Nitrophenol	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	Cresols, m & p	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	1,4-Dichlorobenzene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2-Chlorophenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2-Chloronaphthalene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	4-Chlorophenyl Phenyl Ether	1/27/2011	0	0	0.346	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB004-02-012711	Dibenz(a,h)anthracene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Dibenzofuran	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Hexachloroethane	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	1,3-Dichlorobenzene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,4-Dichlorophenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Diethyl Phthalate	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	2,4-Dimethylphenol	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Dimethyl Phthalate	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	4,6-Dinitro-2-Methylphenol	1/27/2011	0	0	1.73	MG/KG	NA
35BSB004-02-012711	Di-n-Octyl Phthalate	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	Di-n-Butyl Phthalate	1/27/2011	0	0	0.346	MG/KG	NA
35BSB004-02-012711	1,2-Dichlorobenzene	1/27/2011	0	0	0.346	MG/KG	NA
35BSB011-03-012411	2,4-Dinitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	Bromodichloromethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Bromobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Bromochloromethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Bromomethane	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	2,6-Dinitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	1,3-Dinitrobenzene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	4-Amino-2,6-Dinitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	2-Amino-4,6-Dinitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	Perchlorate	1/24/2011	0.0034	0.0034	0.0051	MG/KG	<5xRL (0)
35BSB011-03-012411	o-Xylene (1,2-Dimethylbenzene)	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	n-Butylbenzene	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	2-Nitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	4-Nitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	Nitrobenzene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	Nitroglycerin	1/24/2011	0	0	0.5	MG/KG	NA
35BSB011-03-012411	Pentaerythritol Tetranitrate	1/24/2011	0	0	0.5	MG/KG	NA
35BSB011-03-012411	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	3-Nitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	2,4-Dimethylphenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Tetryl	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	m,p-Xylene (Sum Of Isomers)	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	1,3,5-Trinitrobenzene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	2,4,6-Trinitrotoluene	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	Acetone	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	Magnesium	1/24/2011	2910	2770	4.16	MG/KG	4.93
35BSB011-03-012411	Aluminum	1/24/2011	5830	5430	8.32	MG/KG	7.1
35BSB011-03-012411	Arsenic	1/24/2011	3.73	3.29	1.66	MG/KG	<5xRL (0.44)
35BSB011-03-012411	Barium	1/24/2011	114	94.4	0.42	MG/KG	18.81
35BSB011-03-012411	Beryllium	1/24/2011	0.38	0.35	0.21	MG/KG	<5xRL (0.03)
35BSB011-03-012411	Calcium	1/24/2011	49800	46400	31.2	MG/KG	7.07
35BSB011-03-012411	Cadmium	1/24/2011	0.15	0.14	0.21	MG/KG	<5xRL (0.01)

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	Cobalt	1/24/2011	3.12	2.97	0.42	MG/KG	4.93
35BSB011-03-012411	Chromium, Total	1/24/2011	5.75	5.44	0.42	MG/KG	5.54
35BSB011-03-012411	Copper	1/24/2011	12.6	12.5	0.42	MG/KG	0.8
35BSB011-03-012411	4,6-Dinitro-2-Methylphenol	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	Potassium	1/24/2011	1310	1310	8.32	MG/KG	0
35BSB011-03-012411	2,4,6-Trichlorophenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Manganese	1/24/2011	282	267	0.62	MG/KG	5.46
35BSB011-03-012411	Molybdenum	1/24/2011	0.46	0.39	1.25	MG/KG	<5xRL (0.07)
35BSB011-03-012411	Sodium	1/24/2011	1310	1230	41.6	MG/KG	6.3
35BSB011-03-012411	Nickel	1/24/2011	5.46	5.24	1.66	MG/KG	<5xRL (0.22)
35BSB011-03-012411	Lead	1/24/2011	5.58	5.72	0.62	MG/KG	2.48
35BSB011-03-012411	Antimony	1/24/2011	0	0	2.5	MG/KG	NA
35BSB011-03-012411	Selenium	1/24/2011	0	0	1.66	MG/KG	NA
35BSB011-03-012411	Thallium	1/24/2011	0.17	0.29	0.83	MG/KG	<5xRL (0.12)
35BSB011-03-012411	Vanadium	1/24/2011	18.1	17.3	0.83	MG/KG	4.52
35BSB011-03-012411	Iron	1/24/2011	8050	7610	4.16	MG/KG	5.62
35BSB011-03-012411	4-Nitroaniline	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	Indeno(1,2,3-c,d)pyrene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Isophorone	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Cresols, m & p	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2-Methylphenol (o-Cresol)	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2-Methylnaphthalene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Naphthalene	1/24/2011	0	0	0.338	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	N-Nitrosodimethylamine	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	N-Nitrosodiphenylamine	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	N-Nitrosodi-n-Propylamine	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Silver	1/24/2011	0	0	0.42	MG/KG	NA
35BSB011-03-012411	3-Nitroaniline	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	Mercury	1/24/2011	0	0	0.012	MG/KG	NA
35BSB011-03-012411	Nitrobenzene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2-Nitrophenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	4-Nitrophenol	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	Pentachlorophenol	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	Phenanthrene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Phenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Pyrene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	1,2,4-Trichlorobenzene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2,4,5-Trichlorophenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Acenaphthylene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2-Nitroaniline	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	Hexachlorobutadiene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Zinc	1/24/2011	25.8	25.3	0.83	MG/KG	1.96
35BSB011-03-012411	Carbazole	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Dimethyl Phthalate	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	sec-Butylbenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Di-n-Butyl Phthalate	1/24/2011	0	0	0.338	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	Di-n-Octyl Phthalate	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2,4-Dinitrophenol	1/24/2011	0	0	1.69	MG/KG	NA
35BSB011-03-012411	2,4-Dinitrotoluene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2,6-Dinitrotoluene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2,4-Dichlorophenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Fluoranthene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	1,4-Dichlorobenzene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Hexachlorobenzene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Hexachloroethane	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	1,1,2-Trichloroethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2,3-Trichlorobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2,4-Trichlorobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Trichloroethylene (TCE)	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Chloroform	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2,3-Trichloropropane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2,4-Trimethylbenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,3,5-Trimethylbenzene (Mesitylene)	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Fluorene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Benzo(g,h,i)perylene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Vinyl Chloride	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Anthracene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Benzyl Butyl Phthalate	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	bis(2-Chloroethoxy) Methane	1/24/2011	0	0	0.338	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	bis(2-Chloroisopropyl) Ether	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	bis(2-Ethylhexyl) Phthalate	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	4-Bromophenyl Phenyl Ether	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Benzo(a)anthracene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Diethyl Phthalate	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Benzo(b)fluoranthene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Acenaphthene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Benzo(k)fluoranthene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	4-Chloro-3-Methylphenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Chrysene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2-Chlorophenol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	2-Chloronaphthalene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	4-Chlorophenyl Phenyl Ether	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Dibenz(a,h)anthracene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Dibenzofuran	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	1,2-Dichlorobenzene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	1,3-Dichlorobenzene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Benzo(a)pyrene	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	Naphthalene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,3-Dichloropropane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	2,2-Dichloropropane	1/24/2011	0	0	0.0052	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	Ethylbenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2-Dibromoethane (Ethylene Dibromide)	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	Trichlorofluoromethane	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	Dichlorodifluoromethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Hexachlorobutadiene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	2-Hexanone	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	Isopropylbenzene (Cumene)	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2-Dichloropropane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	Methylene Chloride	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	1,1,2,2-Tetrachloroethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Tetrachloroethylene (PCE)	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Styrene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Bromoform	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	tert-Butyl Methyl Ether	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,1,1,2-Tetrachloroethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,1,1-Trichloroethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Benzyl Alcohol	1/24/2011	0	0	0.338	MG/KG	NA
35BSB011-03-012411	t-Butylbenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Nitroguanidine	1/24/2011	0	0	0.25	MG/KG	NA
35BSB011-03-012411	Methyl Ethyl Ketone (2-Butanone)	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	Chloromethane	1/24/2011	0	0	0.01	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	n-Propylbenzene	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	trans-1,3-Dichloropropene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Toluene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Carbon Disulfide	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Chlorobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	2-Chlorotoluene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Chloroethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Benzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Carbon Tetrachloride	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	p-Cymene (p-Isopropyltoluene)	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	Dibromochloromethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	trans-1,2-Dichloroethene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	cis-1,3-Dichloropropene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	4-Chlorotoluene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,1-Dichloropropene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2-Dibromo-3-Chloropropane	1/24/2011	0	0	0.01	MG/KG	NA
35BSB011-03-012411	cis-1,2-Dichloroethylene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,1-Dichloroethene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,4-Dichlorobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,3-Dichlorobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2-Dichlorobenzene	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,2-Dichloroethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB011-03-012411	1,1-Dichloroethane	1/24/2011	0	0	0.0052	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB011-03-012411	Dibromomethane	1/24/2011	0	0	0.0052	MG/KG	NA
35BSB017-01-011911	1,3-Dichlorobenzene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	1,3,5-Trinitrobenzene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	2,4,6-Trinitrotoluene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	4,6-Dinitro-2-Methylphenol	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	Dimethyl Phthalate	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2,4-Dimethylphenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Diethyl Phthalate	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	1,2-Dichlorobenzene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	1,4-Dichlorobenzene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Tetryl	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	Dibenz(a,h)anthracene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Dibenzofuran	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2,4-Dichlorophenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	Pentaerythritol Tetranitrate	1/19/2011	0	0	0.5	MG/KG	NA
35BSB017-01-011911	Nitroglycerin	1/19/2011	0	0	0.5	MG/KG	NA
35BSB017-01-011911	Nitrobenzene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	4-Nitrotoluene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	3-Nitrotoluene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	2-Nitrotoluene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	1/19/2011	0	0	0.25	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB017-01-011911	2,6-Dinitrotoluene	1/19/2011	0.041	0.092	0.25	MG/KG	<5xRL (0.051)
35BSB017-01-011911	2,4-Dinitrotoluene	1/19/2011	0.048	0.087	0.25	MG/KG	<5xRL (0.039)
35BSB017-01-011911	1,3-Dinitrobenzene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	2-Amino-4,6-Dinitrotoluene	1/19/2011	0	0.3	0.25	MG/KG	<5xRL (0.3)
35BSB017-01-011911	4-Chlorophenyl Phenyl Ether	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Benzo(g,h,i)perylene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	4-Amino-2,6-Dinitrotoluene	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	bis(2-Chloroethoxy) Methane	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Benzo(b)fluoranthene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Iron	1/19/2011	10100	11500	4.04	MG/KG	12.96
35BSB017-01-011911	Benzo(k)fluoranthene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Perchlorate	1/19/2011	0.00037	0.00039	0.0049	MG/KG	<5xRL (0.00002)
35BSB017-01-011911	4-Chloro-3-Methylphenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Carbazole	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Chrysene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Benzo(a)pyrene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Benzo(a)anthracene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	4-Bromophenyl Phenyl Ether	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	bis(2-Ethylhexyl) Phthalate	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Benzyl Alcohol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2-Chloronaphthalene	1/19/2011	0	0	0.332	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB017-01-011911	Benzyl Butyl Phthalate	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Anthracene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Acenaphthylene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Acenaphthene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Sodium	1/19/2011	90.4	118	40.4	MG/KG	<5xRL (27.6)
35BSB017-01-011911	Zinc	1/19/2011	31.1	34.9	0.81	MG/KG	11.52
35BSB017-01-011911	Vanadium	1/19/2011	15.3	16.8	0.81	MG/KG	9.35
35BSB017-01-011911	Thallium	1/19/2011	0	0	0.81	MG/KG	NA
35BSB017-01-011911	Selenium	1/19/2011	0	0	1.61	MG/KG	NA
35BSB017-01-011911	Antimony	1/19/2011	0	0	2.42	MG/KG	NA
35BSB017-01-011911	Lead	1/19/2011	5.71	6.29	0.61	MG/KG	9.67
35BSB017-01-011911	2-Chlorophenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	bis(2-Chloroisopropyl) Ether	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Isophorone	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Di-n-Octyl Phthalate	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Beryllium	1/19/2011	0.32	0.36	0.2	MG/KG	<5xRL (0.04)
35BSB017-01-011911	Barium	1/19/2011	114	126	0.4	MG/KG	10
35BSB017-01-011911	Arsenic	1/19/2011	2.37	2.85	1.61	MG/KG	<5xRL (0.48)
35BSB017-01-011911	Aluminum	1/19/2011	6840	7670	8.07	MG/KG	11.44
35BSB017-01-011911	Silver	1/19/2011	0	0	0.4	MG/KG	NA
35BSB017-01-011911	Mercury	1/19/2011	0.0045	0	0.01	MG/KG	<5xRL (0.0045)
35BSB017-01-011911	N-Nitrosodiphenylamine	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	N-Nitrosodimethylamine	1/19/2011	0	0	0.332	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB017-01-011911	Naphthalene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Nitroguanidine	1/19/2011	0	0	0.25	MG/KG	NA
35BSB017-01-011911	2-Methylnaphthalene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Cadmium	1/19/2011	0.014	0.033	0.2	MG/KG	<5xRL (0.019)
35BSB017-01-011911	Cresols, m & p	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Cobalt	1/19/2011	3.86	4.25	0.4	MG/KG	9.62
35BSB017-01-011911	Indeno(1,2,3-c,d)pyrene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Hexachloroethane	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Hexachlorobenzene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Nickel	1/19/2011	7.92	8.82	1.61	MG/KG	10.75
35BSB017-01-011911	Hexachlorobutadiene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Magnesium	1/19/2011	4880	5580	4.04	MG/KG	13.38
35BSB017-01-011911	Fluoranthene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Fluorene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2,6-Dinitrotoluene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2,4-Dinitrotoluene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2,4-Dinitrophenol	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	Di-n-Butyl Phthalate	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2-Methylphenol (o-Cresol)	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Pentachlorophenol	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	2,4,6-Trichlorophenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	2,4,5-Trichlorophenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	1,2,4-Trichlorobenzene	1/19/2011	0	0	0.332	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35BSB017-01-011911	Pyrene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Calcium	1/19/2011	23800	48000	30.3	MG/KG	**67.41**
35BSB017-01-011911	Phenanthrene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	4-Nitrophenol	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	2-Nitrophenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Nitrobenzene	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	3-Nitroaniline	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	Molybdenum	1/19/2011	0.37	0.58	1.21	MG/KG	<5xRL (0.21)
35BSB017-01-011911	Chromium, Total	1/19/2011	8.78	9.81	0.4	MG/KG	11.08
35BSB017-01-011911	Manganese	1/19/2011	224	247	0.61	MG/KG	9.77
35BSB017-01-011911	2-Nitroaniline	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	Potassium	1/19/2011	2630	3120	8.07	MG/KG	17.04
35BSB017-01-011911	N-Nitrosodi-n-Propylamine	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	4-Nitroaniline	1/19/2011	0	0	1.66	MG/KG	NA
35BSB017-01-011911	Phenol	1/19/2011	0	0	0.332	MG/KG	NA
35BSB017-01-011911	Copper	1/19/2011	9.66	10.3	0.4	MG/KG	6.41
35CSB002-01-013111	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	1,3-Dichloropropane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,4-Dichlorobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	2,2-Dichloropropane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Methyl Ethyl Ketone (2-Butanone)	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	2-Chlorotoluene	1/31/2011	0	0	0.0053	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	4-Chlorotoluene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Bromobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	2-Hexanone	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	Naphthalene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Acetone	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	Dibromomethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Dichlorodifluoromethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Ethylbenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Hexachlorobutadiene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Isopropylbenzene (Cumene)	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	m,p-Xylene (Sum Of Isomers)	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	cis-1,3-Dichloropropene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Methylene Chloride	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	cis-1,2-Dichloroethylene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	n-Butylbenzene	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	n-Propylbenzene	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	o-Xylene (1,2-Dimethylbenzene)	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	p-Cymene (p-Isopropyltoluene)	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	sec-Butylbenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Styrene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	t-Butylbenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Tetrachloroethylene (PCE)	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	tert-Butyl Methyl Ether	1/31/2011	0	0	0.0053	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	Carbon Disulfide	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Trichlorofluoromethane	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	Trichloroethylene (TCE)	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	trans-1,3-Dichloropropene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	trans-1,2-Dichloroethene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Benzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Bromochloromethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Bromodichloromethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Dibromochloromethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Bromomethane	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	Vinyl Chloride	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Carbon Tetrachloride	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Chlorobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Chloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Chloroform	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Chloromethane	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	Toluene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2-Dibromoethane (Ethylene Dibromide)	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	1,3-Dichlorobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Bromoform	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	2-Chlorophenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	bis(2-Ethylhexyl) Phthalate	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	4-Bromophenyl Phenyl Ether	1/31/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	Benzo(a)anthracene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Benzo(a)pyrene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Benzo(b)fluoranthene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Benzo(g,h,i)perylene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Benzo(k)fluoranthene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Benzyl Alcohol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Nitrobenzene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	Nitroglycerin	1/31/2011	0	0	0.5	MG/KG	NA
35CSB002-01-013111	Pentaerythritol Tetranitrate	1/31/2011	0	0	0.5	MG/KG	NA
35CSB002-01-013111	Dibenz(a,h)anthracene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	4-Nitroaniline	1/31/2011	0	0	1.67	MG/KG	NA
35CSB002-01-013111	2-Chloronaphthalene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	bis(2-Chloroethoxy) Methane	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Chrysene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Carbazole	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	4-Chloro-3-Methylphenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2,4,6-Trichlorophenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2,4,5-Trichlorophenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,2,4-Trichlorobenzene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Pyrene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Phenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Phenanthrene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Pentachlorophenol	1/31/2011	0	0	1.67	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	4-Nitrophenol	1/31/2011	0	0	1.67	MG/KG	NA
35CSB002-01-013111	2-Nitrophenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Nitrobenzene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	4-Chlorophenyl Phenyl Ether	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Molybdenum	1/31/2011	0.6	0.56	1.22	MG/KG	<5xRL (0.04)
35CSB002-01-013111	Mercury	1/31/2011	0	0	0.012	MG/KG	NA
35CSB002-01-013111	Silver	1/31/2011	0.055	0.057	0.41	MG/KG	<5xRL (0.002)
35CSB002-01-013111	Aluminum	1/31/2011	7450	7790	8.1	MG/KG	4.46
35CSB002-01-013111	Arsenic	1/31/2011	4.36	4.66	1.62	MG/KG	<5xRL (0.3)
35CSB002-01-013111	Barium	1/31/2011	141	164	0.41	MG/KG	15.08
35CSB002-01-013111	Beryllium	1/31/2011	0.5	0.54	0.2	MG/KG	<5xRL (0.04)
35CSB002-01-013111	Calcium	1/31/2011	31900	23900	30.4	MG/KG	28.67
35CSB002-01-013111	Cadmium	1/31/2011	0.1	0.09	0.2	MG/KG	<5xRL (0.01)
35CSB002-01-013111	Cobalt	1/31/2011	5.01	5.48	0.41	MG/KG	8.96
35CSB002-01-013111	Chromium, Total	1/31/2011	12.7	14.5	0.41	MG/KG	13.24
35CSB002-01-013111	Copper	1/31/2011	21.7	39.7	0.41	MG/KG	**58.63**
35CSB002-01-013111	Iron	1/31/2011	14100	15100	4.05	MG/KG	6.85
35CSB002-01-013111	Potassium	1/31/2011	4250	4840	8.1	MG/KG	12.98
35CSB002-01-013111	bis(2-Chloroisopropyl) Ether	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,2-Dichloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Zinc	1/31/2011	43.7	57	0.81	MG/KG	26.42
35CSB002-01-013111	Benzyl Butyl Phthalate	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Anthracene	1/31/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	Acenaphthylene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Acenaphthene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Magnesium	1/31/2011	4970	5280	4.05	MG/KG	6.05
35CSB002-01-013111	Vanadium	1/31/2011	21.2	23.4	0.81	MG/KG	9.87
35CSB002-01-013111	Manganese	1/31/2011	214	220	0.61	MG/KG	2.76
35CSB002-01-013111	Selenium	1/31/2011	0.33	0.27	1.62	MG/KG	<5xRL (0.06)
35CSB002-01-013111	Antimony	1/31/2011	0	0	2.43	MG/KG	NA
35CSB002-01-013111	Lead	1/31/2011	4.61	4.78	0.61	MG/KG	3.62
35CSB002-01-013111	Nickel	1/31/2011	9.82	11.4	1.62	MG/KG	14.89
35CSB002-01-013111	Sodium	1/31/2011	1220	1230	40.5	MG/KG	0.82
35CSB002-01-013111	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,3,5-Trimethylbenzene (Mesitylene)	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,1,2,2-Tetrachloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Tetryl	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	Perchlorate	1/31/2011	0.055	0.052	0.005	MG/KG	5.61
35CSB002-01-013111	2-Amino-4,6-Dinitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	4-Amino-2,6-Dinitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	1,3-Dinitrobenzene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	2,4-Dinitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	2,6-Dinitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	1/31/2011	0	0	0.25	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	2-Nitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	3-Nitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	4-Nitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	1,3,5-Trinitrobenzene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	1/31/2011	0.026	0.023	0.25	MG/KG	<5xRL (0.003)
35CSB002-01-013111	1,1,1,2-Tetrachloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	Nitroguanidine	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	1,1,2-Trichloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,1-Dichloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,1-Dichloroethene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,1-Dichloropropene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2,3-Trichlorobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2,3-Trichloropropane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2,4-Trichlorobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2,4-Trimethylbenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2-Dibromo-3-Chloropropane	1/31/2011	0	0	0.011	MG/KG	NA
35CSB002-01-013111	3-Nitroaniline	1/31/2011	0	0	1.67	MG/KG	NA
35CSB002-01-013111	Thallium	1/31/2011	0	0	0.81	MG/KG	NA
35CSB002-01-013111	1,2-Dichlorobenzene	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	1,2-Dichloropropane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	2,4,6-Trinitrotoluene	1/31/2011	0	0	0.25	MG/KG	NA
35CSB002-01-013111	Naphthalene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Fluorene	1/31/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	Fluoranthene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Hexachlorobutadiene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Hexachloroethane	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Isophorone	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Cresols, m & p	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2,6-Dinitrotoluene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2-Methylnaphthalene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Hexachlorobenzene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2-Nitroaniline	1/31/2011	0	0	1.67	MG/KG	NA
35CSB002-01-013111	Dibenzofuran	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,1,1-Trichloroethane	1/31/2011	0	0	0.0053	MG/KG	NA
35CSB002-01-013111	N-Nitrosodimethylamine	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	N-Nitrosodiphenylamine	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	N-Nitrosodi-n-Propylamine	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2-Methylphenol (o-Cresol)	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2,4-Dimethylphenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,2-Dichlorobenzene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,3-Dichlorobenzene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	1,4-Dichlorobenzene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2,4-Dichlorophenol	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Indeno(1,2,3-c,d)pyrene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Diethyl Phthalate	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Dimethyl Phthalate	1/31/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB002-01-013111	4,6-Dinitro-2-Methylphenol	1/31/2011	0	0	1.67	MG/KG	NA
35CSB002-01-013111	Di-n-Butyl Phthalate	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	2,4-Dinitrophenol	1/31/2011	0	0	1.67	MG/KG	NA
35CSB002-01-013111	2,4-Dinitrotoluene	1/31/2011	0	0	0.334	MG/KG	NA
35CSB002-01-013111	Di-n-Octyl Phthalate	1/31/2011	0	0	0.334	MG/KG	NA
35CSB006-02-020211	2,4-Dinitrotoluene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Indeno(1,2,3-c,d)pyrene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Hexachloroethane	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Hexachlorobenzene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Hexachlorobutadiene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	4,6-Dinitro-2-Methylphenol	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	Fluoranthene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Fluorene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2,4-Dimethylphenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Di-n-Octyl Phthalate	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Di-n-Butyl Phthalate	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Diethyl Phthalate	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2,4-Dinitrophenol	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	2,4-Dichlorophenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	4-Nitrophenol	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	Dimethyl Phthalate	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Isophorone	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2,6-Dinitrotoluene	2/2/2011	0	0	0.337	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

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US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	4-Nitroaniline	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	2,4,5-Trichlorophenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	1,2,4-Trichlorobenzene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Pyrene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Phenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Aluminum	2/2/2011	3700	3510	8.16	MG/KG	5.27
35CSB006-02-020211	1,4-Dichlorobenzene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Phenanthrene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Nitrobenzene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2-Nitrophenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Cresols, m & p	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	3-Nitroaniline	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	2-Nitroaniline	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	N-Nitrosodi-n-Propylamine	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	N-Nitrosodiphenylamine	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	N-Nitrosodimethylamine	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Naphthalene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2-Methylnaphthalene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2-Methylphenol (o-Cresol)	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Pentachlorophenol	2/2/2011	0	0	1.68	MG/KG	NA
35CSB006-02-020211	Thallium	2/2/2011	0	0	0.82	MG/KG	NA
35CSB006-02-020211	bis(2-Chloroethoxy) Methane	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzyl Butyl Phthalate	2/2/2011	0	0	0.337	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

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US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	Anthracene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Acenaphthylene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Acenaphthene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Magnesium	2/2/2011	2060	2030	4.08	MG/KG	1.47
35CSB006-02-020211	Calcium	2/2/2011	17800	15600	30.6	MG/KG	13.17
35CSB006-02-020211	Iron	2/2/2011	5310	5540	4.08	MG/KG	4.24
35CSB006-02-020211	Vanadium	2/2/2011	11.9	12.7	0.82	MG/KG	6.5
35CSB006-02-020211	bis(2-Ethylhexyl) Phthalate	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Selenium	2/2/2011	0	0	1.63	MG/KG	NA
35CSB006-02-020211	Antimony	2/2/2011	0	0	2.45	MG/KG	NA
35CSB006-02-020211	Toluene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Lead	2/2/2011	3.81	4.06	0.61	MG/KG	6.35
35CSB006-02-020211	Nickel	2/2/2011	3.55	3.53	1.63	MG/KG	<5xRL (0.02)
35CSB006-02-020211	Sodium	2/2/2011	1080	1080	40.8	MG/KG	0
35CSB006-02-020211	Molybdenum	2/2/2011	0.27	0.28	1.22	MG/KG	<5xRL (0.01)
35CSB006-02-020211	Zinc	2/2/2011	14.7	15.2	0.82	MG/KG	3.34
35CSB006-02-020211	2,4,6-Trichlorophenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	1,2-Dichlorobenzene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Dibenzofuran	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Dibenz(a,h)anthracene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	4-Chlorophenyl Phenyl Ether	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2-Chloronaphthalene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	2-Chlorophenol	2/2/2011	0	0	0.337	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	Chrysene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	4-Chloro-3-Methylphenol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	bis(2-Chloroisopropyl) Ether	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzyl Alcohol	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzo(k)fluoranthene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzo(g,h,i)perylene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzo(b)fluoranthene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzo(a)pyrene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Benzo(a)anthracene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	4-Bromophenyl Phenyl Ether	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	1,3-Dichlorobenzene	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Carbazole	2/2/2011	0	0	0.337	MG/KG	NA
35CSB006-02-020211	Carbon Disulfide	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Chromium, Total	2/2/2011	3.56	3.55	0.41	MG/KG	0.28
35CSB006-02-020211	Dibromomethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Dibromochloromethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	cis-1,3-Dichloropropene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	cis-1,2-Dichloroethylene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Chloromethane	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Chloroform	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Chloroethane	2/2/2011	0	0	0.0059	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	Ethylbenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Carbon Tetrachloride	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Hexachlorobutadiene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Bromomethane	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Bromoform	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Bromodichloromethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Bromochloromethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Bromobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Benzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Acetone	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Chlorobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	p-Cymene (p-Isopropyltoluene)	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Copper	2/2/2011	6.76	6.67	0.41	MG/KG	1.34
35CSB006-02-020211	Potassium	2/2/2011	1040	1020	8.16	MG/KG	1.94
35CSB006-02-020211	Manganese	2/2/2011	152	149	0.61	MG/KG	1.99
35CSB006-02-020211	Trichlorofluoromethane	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Trichloroethylene (TCE)	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	trans-1,2-Dichloroethene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Tetrachloroethylene (PCE)	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	t-Butylbenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Dichlorodifluoromethane	2/2/2011	0	0	0.0059	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	sec-Butylbenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	2-Chlorotoluene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	o-Xylene (1,2-Dimethylbenzene)	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	n-Propylbenzene	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	n-Butylbenzene	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Naphthalene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Methylene Chloride	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	tert-Butyl Methyl Ether	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	m,p-Xylene (Sum Of Isomers)	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Isopropylbenzene (Cumene)	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Styrene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	2-Nitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	Nitroguanidine	2/2/2011	0	0	0.26	MG/KG	NA
35CSB006-02-020211	2,4,6-Trinitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	1,3,5-Trinitrobenzene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	Tetryl	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	Pentaerythritol Tetranitrate	2/2/2011	0	0	0.49	MG/KG	NA
35CSB006-02-020211	Nitroglycerin	2/2/2011	0	0	0.49	MG/KG	NA
35CSB006-02-020211	Nitrobenzene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	4-Chlorotoluene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	3-Nitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	1,1,2,2-Tetrachloroethane	2/2/2011	0	0	0.0059	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	2,6-Dinitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	2,4-Dinitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	1,3-Dinitrobenzene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	4-Amino-2,6-Dinitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	2-Amino-4,6-Dinitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	Perchlorate	2/2/2011	0.0068	0.011	0.0051	MG/KG	<5xRL (0.0042)
35CSB006-02-020211	Vinyl Chloride	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	4-Nitrotoluene	2/2/2011	0	0	0.24	MG/KG	NA
35CSB006-02-020211	1,2-Dibromoethane (Ethylene Dibromide)	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	1,2,4-Trimethylbenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Methyl Ethyl Ketone (2-Butanone)	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	2,2-Dichloropropane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,4-Dichlorobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,3-Dichloropropane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,3-Dichlorobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,3,5-Trimethylbenzene (Mesitylene)	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,2-Dichloropropane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,1,1,2-Tetrachloroethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,2-Dichlorobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,1,1-Trichloroethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,2-Dibromo-3-Chloropropane	2/2/2011	0	0	0.012	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB006-02-020211	1,2,4-Trichlorobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	trans-1,3-Dichloropropene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,2,3-Trichlorobenzene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,1-Dichloropropene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,1-Dichloroethene	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,1-Dichloroethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	1,1,2-Trichloroethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	2-Hexanone	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	1,2-Dichloroethane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Cobalt	2/2/2011	1.88	1.73	0.41	MG/KG	<5xRL (0.15)
35CSB006-02-020211	Cadmium	2/2/2011	0.048	0.039	0.2	MG/KG	<5xRL (0.009)
35CSB006-02-020211	Beryllium	2/2/2011	0.2	0.21	0.2	MG/KG	<5xRL (0.01)
35CSB006-02-020211	Barium	2/2/2011	139	222	0.41	MG/KG	**45.98**
35CSB006-02-020211	1,2,3-Trichloropropane	2/2/2011	0	0	0.0059	MG/KG	NA
35CSB006-02-020211	Mercury	2/2/2011	0	0	0.012	MG/KG	NA
35CSB006-02-020211	Silver	2/2/2011	0	0	0.41	MG/KG	NA
35CSB006-02-020211	Arsenic	2/2/2011	1.97	1.95	1.63	MG/KG	<5xRL (0.02)
35CSB013-01-020811	bis(2-Ethylhexyl) Phthalate	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	4-Bromophenyl Phenyl Ether	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Benzo(a)anthracene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Benzo(a)pyrene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Benzo(b)fluoranthene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	bis(2-Chloroisopropyl) Ether	2/8/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB013-01-020811	Benzo(k)fluoranthene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Acenaphthylene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Benzyl Alcohol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	4-Chloro-3-Methylphenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Carbazole	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Chrysene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Benzo(g,h,i)perylene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	bis(2-Chloroethoxy) Methane	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2-Chlorophenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Anthracene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	1,2-Dichlorobenzene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Acenaphthene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Zinc	2/8/2011	44.5	45.1	0.81	MG/KG	1.34
35CSB013-01-020811	2,4-Dimethylphenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Vanadium	2/8/2011	25.4	26.6	0.81	MG/KG	4.62
35CSB013-01-020811	Thallium	2/8/2011	0	0	0.81	MG/KG	NA
35CSB013-01-020811	Selenium	2/8/2011	0.28	0.47	1.62	MG/KG	<5xRL (0.19)
35CSB013-01-020811	Antimony	2/8/2011	0	0	2.43	MG/KG	NA
35CSB013-01-020811	Benzyl Butyl Phthalate	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	Nitroguanidine	2/8/2011	0	0	0.25	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB013-01-020811	Perchlorate	2/8/2011	0.00043	0	0.005	MG/KG	<5xRL (0.00043)
35CSB013-01-020811	2-Amino-4,6-Dinitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	1,3-Dinitrobenzene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	2,6-Dinitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	2-Nitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	3-Nitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	4-Nitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	Nitrobenzene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	Dibenz(a,h)anthracene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Pentaerythritol Tetranitrate	2/8/2011	0	0	0.5	MG/KG	NA
35CSB013-01-020811	2-Chloronaphthalene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Tetryl	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	1,3,5-Trinitrobenzene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	2,4,6-Trinitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	Diethyl Phthalate	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2,4-Dichlorophenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	1,4-Dichlorobenzene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	1,3-Dichlorobenzene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2,4-Dinitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	Dibenzofuran	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Lead	2/8/2011	8.76	8.5	0.61	MG/KG	3.01

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB013-01-020811	4-Chlorophenyl Phenyl Ether	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Nitroglycerin	2/8/2011	0	0	0.5	MG/KG	NA
35CSB013-01-020811	3-Nitroaniline	2/8/2011	0	0	1.67	MG/KG	NA
35CSB013-01-020811	Hexachlorobenzene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Hexachloroethane	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Indeno(1,2,3-c,d)pyrene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Isophorone	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Cresols, m & p	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2-Methylphenol (o-Cresol)	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2-Methylnaphthalene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Naphthalene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	N-Nitrosodimethylamine	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	N-Nitrosodiphenylamine	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Hexachlorobutadiene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2-Nitroaniline	2/8/2011	0	0	1.67	MG/KG	NA
35CSB013-01-020811	Pentachlorophenol	2/8/2011	0	0	1.67	MG/KG	NA
35CSB013-01-020811	4-Nitroaniline	2/8/2011	0	0	1.67	MG/KG	NA
35CSB013-01-020811	Nitrobenzene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2,4,6-Trichlorophenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2,4,5-Trichlorophenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	1,2,4-Trichlorobenzene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Pyrene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Phenol	2/8/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB013-01-020811	Phenanthrene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	4-Nitrophenol	2/8/2011	0	0	1.67	MG/KG	NA
35CSB013-01-020811	Nickel	2/8/2011	12.4	12.7	1.62	MG/KG	2.39
35CSB013-01-020811	4-Amino-2,6-Dinitrotoluene	2/8/2011	0	0	0.25	MG/KG	NA
35CSB013-01-020811	N-Nitrosodi-n-Propylamine	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Calcium	2/8/2011	28400	25000	30.3	MG/KG	12.73
35CSB013-01-020811	2-Nitrophenol	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Molybdenum	2/8/2011	0.59	0.56	1.21	MG/KG	<5xRL (0.03)
35CSB013-01-020811	Magnesium	2/8/2011	7600	7680	4.05	MG/KG	1.05
35CSB013-01-020811	Potassium	2/8/2011	4370	4340	8.09	MG/KG	0.69
35CSB013-01-020811	Iron	2/8/2011	17600	18000	4.05	MG/KG	2.25
35CSB013-01-020811	Copper	2/8/2011	14.7	15.7	0.4	MG/KG	6.58
35CSB013-01-020811	Chromium, Total	2/8/2011	13	13.6	0.4	MG/KG	4.51
35CSB013-01-020811	Fluoranthene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Cadmium	2/8/2011	0.14	0.12	0.2	MG/KG	<5xRL (0.02)
35CSB013-01-020811	Manganese	2/8/2011	332	330	0.61	MG/KG	0.6
35CSB013-01-020811	Sodium	2/8/2011	138	136	40.5	MG/KG	<5xRL (2)
35CSB013-01-020811	Beryllium	2/8/2011	0.52	0.52	0.2	MG/KG	<5xRL (0)
35CSB013-01-020811	Barium	2/8/2011	220	231	0.4	MG/KG	4.88
35CSB013-01-020811	Di-n-Butyl Phthalate	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2,6-Dinitrotoluene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Cobalt	2/8/2011	5.8	6.66	0.4	MG/KG	13.8
35CSB013-01-020811	Fluorene	2/8/2011	0	0	0.334	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSB013-01-020811	Arsenic	2/8/2011	4.06	4.01	1.62	MG/KG	<5xRL (0.05)
35CSB013-01-020811	Di-n-Octyl Phthalate	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	2,4-Dinitrotoluene	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	4,6-Dinitro-2-Methylphenol	2/8/2011	0	0	1.67	MG/KG	NA
35CSB013-01-020811	Dimethyl Phthalate	2/8/2011	0	0	0.334	MG/KG	NA
35CSB013-01-020811	Mercury	2/8/2011	0	0	0.012	MG/KG	NA
35CSB013-01-020811	Silver	2/8/2011	0	0	0.4	MG/KG	NA
35CSB013-01-020811	Aluminum	2/8/2011	13200	13600	8.09	MG/KG	2.99
35CSB013-01-020811	2,4-Dinitrophenol	2/8/2011	0	0	1.67	MG/KG	NA
35CSS031-01-011111	Di-n-Butyl Phthalate	1/11/2011	1.32	0.865	0.328	MG/KG	<5xRL (0.455)
35CSS031-01-011111	2,4-Dimethylphenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	4,6-Dinitro-2-Methylphenol	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	Dimethyl Phthalate	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2,4-Dichlorophenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	1,4-Dichlorobenzene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	1,3-Dichlorobenzene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Dibenzofuran	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Dibenz(a,h)anthracene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	1,2-Dichlorobenzene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Di-n-Octyl Phthalate	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2,4-Dinitrophenol	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	2,4-Dinitrotoluene	1/11/2011	1.1	1.56	0.328	MG/KG	<5xRL (0.46)
35CSS031-01-011111	2,6-Dinitrotoluene	1/11/2011	0	0	0.328	MG/KG	NA

TABLE C.3 (CONTINUED)
RFI FIELD DUPLICATE RESULTS FOR SOIL
YPG-35
US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSS031-01-011111	Fluorene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Fluoranthene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Hexachlorobutadiene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Hexachlorobenzene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Hexachloroethane	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Indeno(1,2,3-c,d)pyrene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Cresols, m & p	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	bis(2-Ethylhexyl) Phthalate	1/11/2011	0.13	0	0.328	MG/KG	<5xRL (0.13)
35CSS031-01-011111	2-Methylphenol (o-Cresol)	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2-Methylnaphthalene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Isophorone	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	bis(2-Chloroisopropyl) Ether	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Antimony	1/11/2011	0	0	2.41	MG/KG	NA
35CSS031-01-011111	Selenium	1/11/2011	0.47	0.22	1.61	MG/KG	<5xRL (0.25)
35CSS031-01-011111	Iron	1/11/2011	9870	8530	4.02	MG/KG	14.57
35CSS031-01-011111	Naphthalene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Thallium	1/11/2011	0	0	0.8	MG/KG	NA
35CSS031-01-011111	Vanadium	1/11/2011	12.9	10	0.8	MG/KG	25.33
35CSS031-01-011111	Zinc	1/11/2011	34.2	31.7	0.8	MG/KG	7.59
35CSS031-01-011111	Acenaphthene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Acenaphthylene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Anthracene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Benzyl Butyl Phthalate	1/11/2011	0	0	0.328	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSS031-01-011111	Benzo(a)anthracene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	4-Chlorophenyl Phenyl Ether	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	4-Bromophenyl Phenyl Ether	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Benzo(a)pyrene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Benzo(b)fluoranthene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Benzo(g,h,i)perylene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Benzo(k)fluoranthene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Benzyl Alcohol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	4-Chloro-3-Methylphenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Carbazole	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Chrysene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2-Chlorophenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2-Chloronaphthalene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	bis(2-Chloroethoxy) Methane	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Nitrobenzene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	Chromium, Total	1/11/2011	6.02	6.32	0.4	MG/KG	4.86
35CSS031-01-011111	Manganese	1/11/2011	202	301	0.6	MG/KG	**39.36**
35CSS031-01-011111	Molybdenum	1/11/2011	0.41	0.31	1.21	MG/KG	<5xRL (0.1)
35CSS031-01-011111	Sodium	1/11/2011	98	87.3	40.2	MG/KG	<5xRL (10.7)
35CSS031-01-011111	Nickel	1/11/2011	5.26	5.3	1.61	MG/KG	<5xRL (0.04)
35CSS031-01-011111	Mercury	1/11/2011	0	0.0041	0.01	MG/KG	<5xRL (0.0041)

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSS031-01-011111	2,4,6-Trinitrotoluene	1/11/2011	0.73	0.52	0.24	MG/KG	<5xRL (0.21)
35CSS031-01-011111	1,3,5-Trinitrobenzene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	Tetryl	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	1/11/2011	0.22	0.28	0.24	MG/KG	<5xRL (0.06)
35CSS031-01-011111	Potassium	1/11/2011	2010	2000	8.05	MG/KG	0.5
35CSS031-01-011111	Nitroglycerin	1/11/2011	0.39	4.2	0.49	MG/KG	**166.01**
35CSS031-01-011111	Copper	1/11/2011	14	22.2	0.4	MG/KG	**45.3**
35CSS031-01-011111	4-Nitrotoluene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	3-Nitrotoluene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	2-Nitrotoluene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	2,6-Dinitrotoluene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	2,4-Dinitrotoluene	1/11/2011	0	0.17	0.24	MG/KG	<5xRL (0.17)
35CSS031-01-011111	1,3-Dinitrobenzene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	4-Amino-2,6-Dinitrotoluene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	2-Amino-4,6-Dinitrotoluene	1/11/2011	0	0	0.24	MG/KG	NA
35CSS031-01-011111	Perchlorate	1/11/2011	0.43	0.34	0.25	MG/KG	<5xRL (0.09)
35CSS031-01-011111	Lead	1/11/2011	8.37	9.73	0.6	MG/KG	15.03
35CSS031-01-011111	Pentaerythritol Tetranitrate	1/11/2011	0	0	0.49	MG/KG	NA
35CSS031-01-011111	1,2,4-Trichlorobenzene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	N-Nitrosodiphenylamine	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	N-Nitrosodi-n-Propylamine	1/11/2011	0	0	0.328	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSS031-01-011111	2-Nitroaniline	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	3-Nitroaniline	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	4-Nitroaniline	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	Nitrobenzene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2-Nitrophenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	4-Nitrophenol	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	Pentachlorophenol	1/11/2011	0	0	1.64	MG/KG	NA
35CSS031-01-011111	Phenanthrene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Magnesium	1/11/2011	3620	3240	4.02	MG/KG	11.08
35CSS031-01-011111	Pyrene	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	N-Nitrosodimethylamine	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2,4,5-Trichlorophenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	2,4,6-Trichlorophenol	1/11/2011	0	0	0.328	MG/KG	NA
35CSS031-01-011111	Diethyl Phthalate	1/11/2011	17.4	0.676	1.64	MG/KG	**185.04**
35CSS031-01-011111	Silver	1/11/2011	0	0	0.4	MG/KG	NA
35CSS031-01-011111	Aluminum	1/11/2011	5290	4660	8.05	MG/KG	12.66
35CSS031-01-011111	Arsenic	1/11/2011	2.59	2.57	1.61	MG/KG	<5xRL (0.02)
35CSS031-01-011111	Barium	1/11/2011	88.2	92.4	0.4	MG/KG	4.65
35CSS031-01-011111	Beryllium	1/11/2011	0	0	0.2	MG/KG	NA
35CSS031-01-011111	Calcium	1/11/2011	17000	25600	30.2	MG/KG	**40.38**
35CSS031-01-011111	Cadmium	1/11/2011	0.22	0.36	0.2	MG/KG	<5xRL (0.14)
35CSS031-01-011111	Cobalt	1/11/2011	2.83	2.59	0.4	MG/KG	8.86
35CSS031-01-011111	Phenol	1/11/2011	0	0	0.328	MG/KG	NA

TABLE C.3 (CONTINUED)

RFI FIELD DUPLICATE RESULTS FOR SOIL

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

SAMPLE ID	ANALYTE	LOGDATE	RESULT 1[a/]	RESULT 2	RL[b/]	UNITS	RPD[c/]
35CSS031-01-021711	Nitroguanidine	2/17/2011	0	0	0.24	MG/KG	NA

a/ Entries are shown when RESULT 1 is a detection.
b/ MDL is method detection limit.
c/ RPD is relative percent difference. RPD is calculated when RESULT 1 or 2 is >= 5 times the RL. The control limit is 35%. For detections >RL but < 5 times the RL, <5xRL is displayed and the difference between RESULT 1 and RESULT 2 (shown in parentheses [R1-R2]) must be within 2 times the RL. For non-detect results, no RPD is calculated and 'NA' is displayed. Bold RPDs are above the control limit.

TABLE C.4

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RESULTS
RCRA FACILITY INVESTIGATION - INACTIVE LANDFILLS AND MUGGINS MOUNTAIN OB/OD FACILITY

YPG-35

US ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB011	1/24/2011	Acetone	Soil	U	93	93	20-160	0.00	30
SW8260B	35BSB004	1/27/2011	Acetone	Soil	U	95	94	20-160	3.77	30
SW8260B	35CSB006	2/2/2011	Acetone	Soil	U	98	108	20-160	26.42	30
SW8260B	35CSB002	1/31/2011	Acetone	Soil	U	98	100	20-160	1.20	30
SW8260B	35BSB011	1/24/2011	Benzene	Soil	U	98	98	75-125	0.00	30
SW8260B	35BSB004	1/27/2011	Benzene	Soil	U	89	88	75-125	3.61	30
SW8260B	35CSB002	1/31/2011	Benzene	Soil	U	93	93	75-125	2.78	30
SW8260B	35CSB006	2/2/2011	Benzene	Soil	U	92	92	75-125	17.89	30
SW8260B	35CSB002	1/31/2011	Bromobenzene	Soil	U	96	97	65-120	2.47	30
SW8260B	35BSB011	1/24/2011	Bromobenzene	Soil	U	103	104	65-120	0.88	30
SW8260B	35BSB004	1/27/2011	Bromobenzene	Soil	U	93	89	65-120	0.78	30
SW8260B	35CSB006	2/2/2011	Bromobenzene	Soil	U	95	97	65-120	18.64	30
SW8260B	35BSB011	1/24/2011	Bromochloromethane	Soil	U	92	91	70-125	0.20	30
SW8260B	35CSB002	1/31/2011	Bromochloromethane	Soil	U	96	99	70-125	0.41	30
SW8260B	35BSB004	1/27/2011	Bromochloromethane	Soil	U	91	90	70-125	3.93	30
SW8260B	35CSB006	2/2/2011	Bromochloromethane	Soil	U	98	100	70-125	20.00	30
SW8260B	35CSB006	2/2/2011	Bromodichloromethane	Soil	U	96	97	70-130	19.38	30
SW8260B	35BSB004	1/27/2011	Bromodichloromethane	Soil	U	97	97	70-130	5.14	30
SW8260B	35CSB002	1/31/2011	Bromodichloromethane	Soil	U	96	98	70-130	0.82	30
SW8260B	35BSB011	1/24/2011	Bromodichloromethane	Soil	U	99	98	70-130	0.56	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35CSB002	1/31/2011	Bromoform (tribromomethane)	Soil	U	99	101	55-135	1.19	30
SW8260B	35BSB011	1/24/2011	Bromoform (tribromomethane)	Soil	U	107	107	55-135	0.00	30
SW8260B	35CSB006	2/2/2011	Bromoform (tribromomethane)	Soil	U	98	103	55-135	22.83	30
SW8260B	35BSB004	1/27/2011	Bromoform (tribromomethane)	Soil	U	99	98	55-135	3.60	30
SW8260B	35CSB002	1/31/2011	Bromomethane (methyl bromide)	Soil	U	103	100	30-160	6.45	30
SW8260B	35CSB006	2/2/2011	Bromomethane (methyl bromide)	Soil	U	105	103	30-160	15.05	30
SW8260B	35BSB011	1/24/2011	Bromomethane (methyl bromide)	Soil	U	110	110	30-160	0.50	30
SW8260B	35BSB004	1/27/2011	Bromomethane (methyl bromide)	Soil	U	91	91	30-160	4.90	30
SW8260B	35CSB002	1/31/2011	n-Butylbenzene	Soil	U	105	106	65-140	2.07	30
SW8260B	35CSB006	2/2/2011	n-Butylbenzene	Soil	U	104	104	65-140	17.81	30
SW8260B	35BSB004	1/27/2011	n-Butylbenzene	Soil	U	86	78	65-140	5.64	30
SW8260B	35BSB011	1/24/2011	n-Butylbenzene	Soil	U	105	107	65-140	1.72	30
SW8260B	35CSB006	2/2/2011	sec-Butylbenzene	Soil	U	100	99	65-130	17.17	30
SW8260B	35CSB002	1/31/2011	sec-Butylbenzene	Soil	U	99	99	65-130	3.61	30
SW8260B	35BSB011	1/24/2011	sec-Butylbenzene	Soil	U	103	105	65-130	2.46	30
SW8260B	35BSB004	1/27/2011	sec-Butylbenzene	Soil	U	90	88	65-130	2.39	30
SW8260B	35CSB002	1/31/2011	tert-Butylbenzene	Soil	U	98	98	65-130	3.43	30
SW8260B	35BSB004	1/27/2011	tert-Butylbenzene	Soil	U	91	89	65-130	2.57	30
SW8260B	35CSB006	2/2/2011	tert-Butylbenzene	Soil	U	99	99	65-130	17.16	30
SW8260B	35BSB011	1/24/2011	tert-Butylbenzene	Soil	U	104	105	65-130	0.88	30
SW8260B	35CSB002	1/31/2011	Carbon disulfide	Soil	U	96	98	45-160	1.02	30
SW8260B	35BSB004	1/27/2011	Carbon disulfide	Soil	U	92	91	45-160	3.50	30
SW8260B	35BSB011	1/24/2011	Carbon disulfide	Soil	U	97	101	45-160	3.87	30
SW8260B	35CSB006	2/2/2011	Carbon disulfide	Soil	U	100	98	45-160	15.36	30
SW8260B	35CSB006	2/2/2011	Carbon tetrachloride	Soil	U	107	107	65-135	17.00	30
SW8260B	35CSB002	1/31/2011	Carbon tetrachloride	Soil	U	105	104	65-135	3.97	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB011	1/24/2011	Carbon tetrachloride	Soil	U	113	113	65-135	0.00	30
SW8260B	35BSB004	1/27/2011	Carbon tetrachloride	Soil	U	99	98	65-135	3.77	30
SW8260B	35BSB011	1/24/2011	Chlorobenzene	Soil	U	102	101	75-125	0.72	30
SW8260B	35BSB004	1/27/2011	Chlorobenzene	Soil	U	95	95	75-125	4.31	30
SW8260B	35CSB002	1/31/2011	Chlorobenzene	Soil	U	97	99	75-125	2.02	30
SW8260B	35CSB006	2/2/2011	Chlorobenzene	Soil	U	97	98	75-125	18.36	30
SW8260B	35CSB006	2/2/2011	Chloroethane	Soil	U	110	107	40-155	15.15	30
SW8260B	35BSB004	1/27/2011	Chloroethane	Soil	U	98	97	40-155	3.66	30
SW8260B	35BSB011	1/24/2011	Chloroethane	Soil	U	112	113	40-155	0.81	30
SW8260B	35CSB002	1/31/2011	Chloroethane	Soil	U	107	104	40-155	6.19	30
SW8260B	35BSB004	1/27/2011	Chloroform	Soil	U	96	95	70-125	3.55	30
SW8260B	35CSB002	1/31/2011	Chloroform	Soil	U	104	106	70-125	1.13	30
SW8260B	35CSB006	2/2/2011	Chloroform	Soil	U	106	107	70-125	18.90	30
SW8260B	35BSB011	1/24/2011	Chloroform	Soil	U	104	104	70-125	0.18	30
SW8260B	35CSB006	2/2/2011	Chloromethane	Soil	U	98	98	50-130	17.15	30
SW8260B	35CSB002	1/31/2011	Chloromethane	Soil	U	91	93	50-130	1.73	30
SW8260B	35BSB011	1/24/2011	Chloromethane	Soil	UJ	84	87	50-130	2.57	30
SW8260B	35BSB004	1/27/2011	Chloromethane	Soil	U	91	91	50-130	4.66	30
SW8260B	35BSB004	1/27/2011	2-Chlorotoluene	Soil	U	101	85	70-130	12.08	30
SW8260B	35BSB011	1/24/2011	2-Chlorotoluene	Soil	U	97	96	70-130	0.76	30
SW8260B	35CSB006	2/2/2011	2-Chlorotoluene	Soil	U	96	96	70-130	17.66	30
SW8260B	35CSB002	1/31/2011	2-Chlorotoluene	Soil	U	94	94	70-130	3.81	30
SW8260B	35BSB011	1/24/2011	4-Chlorotoluene	Soil	U	105	107	75-125	1.89	30
SW8260B	35CSB006	2/2/2011	4-Chlorotoluene	Soil	U	97	97	75-125	17.76	30
SW8260B	35BSB004	1/27/2011	4-Chlorotoluene	Soil	U	75	87	75-125	19.69	30
SW8260B	35CSB002	1/31/2011	4-Chlorotoluene	Soil	U	98	98	75-125	2.83	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35CSB006	2/2/2011	p-Cymene (p-Isopropyltoluene)	Soil	U	101	100	75-135	17.15	30
SW8260B	35CSB002	1/31/2011	p-Cymene (p-Isopropyltoluene)	Soil	U	101	101	75-135	2.95	30
SW8260B	35BSB011	1/24/2011	p-Cymene (p-Isopropyltoluene)	Soil	U	105	107	75-135	2.07	30
SW8260B	35BSB004	1/27/2011	p-Cymene (p-Isopropyltoluene)	Soil	U	89	87	75-135	2.83	30
SW8260B	35BSB011	1/24/2011	Dibromochloromethane	Soil	U	101	99	65-130	1.10	30
SW8260B	35CSB006	2/2/2011	Dibromochloromethane	Soil	U	96	99	65-130	21.18	30
SW8260B	35BSB004	1/27/2011	Dibromochloromethane	Soil	U	98	99	65-130	5.41	30
SW8260B	35CSB002	1/31/2011	Dibromochloromethane	Soil	U	97	101	65-130	0.80	30
SW8260B	35BSB004	1/27/2011	1,2-Dibromo-3-chloropropane	Soil	U	95	96	40-135	5.19	30
SW8260B	35CSB006	2/2/2011	1,2-Dibromo-3-chloropropane	Soil	U	90	101	40-135	29.01	30
SW8260B	35BSB011	1/24/2011	1,2-Dibromo-3-chloropropane	Soil	U	104	103	40-135	0.71	30
SW8260B	35CSB002	1/31/2011	1,2-Dibromo-3-chloropropane	Soil	U	96	101	40-135	1.41	30
SW8260B	35CSB006	2/2/2011	1,2-Dibromoethane	Soil	U	89	94	70-125	23.36	30
SW8260B	35BSB011	1/24/2011	1,2-Dibromoethane	Soil	U	95	95	70-125	0.19	30
SW8260B	35BSB004	1/27/2011	1,2-Dibromoethane	Soil	U	95	93	70-125	2.65	30
SW8260B	35CSB002	1/31/2011	1,2-Dibromoethane	Soil	U	92	95	70-125	0.85	30
SW8260B	35BSB011	1/24/2011	Dibromomethane (Methylene bromide)	Soil	U	98	97	75-130	1.50	30
SW8260B	35CSB002	1/31/2011	Dibromomethane (Methylene bromide)	Soil	U	96	100	75-130	0.61	30
SW8260B	35BSB004	1/27/2011	Dibromomethane (Methylene bromide)	Soil	U	96	97	75-130	5.16	30
SW8260B	35CSB006	2/2/2011	Dibromomethane (Methylene bromide)	Soil	U	95	100	75-130	21.96	30
SW8260B	35BSB011	1/24/2011	1,2-Dichlorobenzene	Soil	U	100	101	75-120	0.18	30
SW8260B	35CSB006	2/2/2011	1,2-Dichlorobenzene	Soil	U	93	96	75-120	20.74	30
SW8260B	35BSB004	1/27/2011	1,2-Dichlorobenzene	Soil	U	92	88	75-120	0.79	30
SW8260B	35CSB002	1/31/2011	1,2-Dichlorobenzene	Soil	U	96	97	75-120	1.86	30
SW8260B	35CSB002	1/31/2011	1,3-Dichlorobenzene	Soil	U	96	97	70-125	2.05	30
SW8260B	35BSB004	1/27/2011	1,3-Dichlorobenzene	Soil	U	91	86	70-125	0.60	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB011	1/24/2011	1,3-Dichlorobenzene	Soil	U	103	103	70-125	0.71	30
SW8260B	35CSB006	2/2/2011	1,3-Dichlorobenzene	Soil	U	96	96	70-125	18.12	30
SW8260B	35BSB004	1/27/2011	1,4-Dichlorobenzene	Soil	U	90	86	70-125	0.20	30
SW8260B	35CSB002	1/31/2011	1,4-Dichlorobenzene	Soil	U	96	99	70-125	0.41	30
SW8260B	35BSB011	1/24/2011	1,4-Dichlorobenzene	Soil	U	103	104	70-125	1.24	30
SW8260B	35CSB006	2/2/2011	1,4-Dichlorobenzene	Soil	U	96	97	70-125	19.04	30
SW8260B	35BSB011	1/24/2011	Dichlorodifluoromethane	Soil	U	112	114	35-135	1.79	30
SW8260B	35CSB006	2/2/2011	Dichlorodifluoromethane	Soil	U	114	111	35-135	14.34	30
SW8260B	35CSB002	1/31/2011	Dichlorodifluoromethane	Soil	U	109	106	35-135	6.27	30
SW8260B	35BSB004	1/27/2011	Dichlorodifluoromethane	Soil	U	86	86	35-135	5.16	30
SW8260B	35CSB002	1/31/2011	1,1-Dichloroethane	Soil	U	104	105	75-125	2.10	30
SW8260B	35CSB006	2/2/2011	1,1-Dichloroethane	Soil	U	105	106	75-125	18.24	30
SW8260B	35BSB011	1/24/2011	1,1-Dichloroethane	Soil	U	103	104	75-125	0.71	30
SW8260B	35BSB004	1/27/2011	1,1-Dichloroethane	Soil	U	95	94	75-125	3.75	30
SW8260B	35CSB006	2/2/2011	1,2-Dichloroethane	Soil	U	98	100	70-135	19.92	30
SW8260B	35BSB004	1/27/2011	1,2-Dichloroethane	Soil	U	96	97	70-135	4.97	30
SW8260B	35BSB011	1/24/2011	1,2-Dichloroethane	Soil	U	97	97	70-135	0.57	30
SW8260B	35CSB002	1/31/2011	1,2-Dichloroethane	Soil	U	97	99	70-135	1.21	30
SW8260B	35BSB004	1/27/2011	1,1-Dichloroethylene	Soil	U	86	84	65-135	2.09	30
SW8260B	35CSB002	1/31/2011	1,1-Dichloroethylene	Soil	U	107	107	65-135	2.41	30
SW8260B	35BSB011	1/24/2011	1,1-Dichloroethylene	Soil	U	109	109	65-135	0.17	30
SW8260B	35CSB006	2/2/2011	1,1-Dichloroethylene	Soil	U	109	110	65-135	17.97	30
SW8260B	35CSB002	1/31/2011	cis-1,2-Dichloroethylene	Soil	U	96	98	65-125	1.02	30
SW8260B	35BSB004	1/27/2011	cis-1,2-Dichloroethylene	Soil	U	86	87	65-125	5.33	30
SW8260B	35CSB006	2/2/2011	cis-1,2-Dichloroethylene	Soil	U	95	97	65-125	19.20	30
SW8260B	35BSB011	1/24/2011	cis-1,2-Dichloroethylene	Soil	U	97	97	65-125	0.57	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB004	1/27/2011	trans-1,2-Dichloroethylene	Soil	U	87	86	65-135	3.68	30
SW8260B	35CSB002	1/31/2011	trans-1,2-Dichloroethylene	Soil	U	99	100	65-135	1.79	30
SW8260B	35BSB011	1/24/2011	trans-1,2-Dichloroethylene	Soil	U	102	101	65-135	0.54	30
SW8260B	35CSB006	2/2/2011	trans-1,2-Dichloroethylene	Soil	U	101	101	65-135	17.45	30
SW8260B	35CSB006	2/2/2011	1,2-Dichloropropane	Soil	U	96	98	70-120	19.68	30
SW8260B	35BSB004	1/27/2011	1,2-Dichloropropane	Soil	U	95	96	70-120	5.19	30
SW8260B	35BSB011	1/24/2011	1,2-Dichloropropane	Soil	U	100	99	70-120	0.73	30
SW8260B	35CSB002	1/31/2011	1,2-Dichloropropane	Soil	U	97	98	70-120	1.63	30
SW8260B	35CSB002	1/31/2011	1,3-Dichloropropane	Soil	U	93	96	75-125	0.42	30
SW8260B	35CSB006	2/2/2011	1,3-Dichloropropane	Soil	U	91	95	75-125	21.56	30
SW8260B	35BSB011	1/24/2011	1,3-Dichloropropane	Soil	U	95	94	75-125	0.77	30
SW8260B	35BSB004	1/27/2011	1,3-Dichloropropane	Soil	U	95	95	75-125	4.10	30
SW8260B	35CSB006	2/2/2011	2,2-Dichloropropane	Soil	U	104	105	65-135	17.76	30
SW8260B	35BSB004	1/27/2011	2,2-Dichloropropane	Soil	U	89	86	65-135	0.81	30
SW8260B	35BSB011	1/24/2011	2,2-Dichloropropane	Soil	U	106	106	65-135	0.52	30
SW8260B	35CSB002	1/31/2011	2,2-Dichloropropane	Soil	U	102	104	65-135	1.74	30
SW8260B	35CSB002	1/31/2011	1,1-Dichloropropene	Soil	U	103	103	70-135	3.66	30
SW8260B	35BSB004	1/27/2011	1,1-Dichloropropene	Soil	U	89	87	70-135	2.82	30
SW8260B	35CSB006	2/2/2011	1,1-Dichloropropene	Soil	U	102	103	70-135	17.81	30
SW8260B	35BSB011	1/24/2011	1,1-Dichloropropene	Soil	U	108	109	70-135	0.67	30
SW8260B	35CSB002	1/31/2011	cis-1,3-Dichloropropene	Soil	U	97	99	70-125	1.21	30
SW8260B	35BSB004	1/27/2011	cis-1,3-Dichloropropene	Soil	U	97	97	70-125	4.40	30
SW8260B	35BSB011	1/24/2011	cis-1,3-Dichloropropene	Soil	U	101	101	70-125	0.54	30
SW8260B	35CSB006	2/2/2011	cis-1,3-Dichloropropene	Soil	U	96	98	70-125	19.65	30
SW8260B	35BSB011	1/24/2011	trans-1,3-Dichloropropene	Soil	U	102	101	65-125	0.36	30
SW8260B	35CSB002	1/31/2011	trans-1,3-Dichloropropene	Soil	U	98	101	65-125	0.00	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB004	1/27/2011	trans-1,3-Dichloropropene	Soil	U	99	100	65-125	4.82	30
SW8260B	35CSB006	2/2/2011	trans-1,3-Dichloropropene	Soil	U	97	100	65-125	20.39	30
SW8260B	35CSB006	2/2/2011	Ethylbenzene	Soil	U	97	97	75-125	17.82	30
SW8260B	35BSB011	1/24/2011	Ethylbenzene	Soil	U	100	101	75-125	1.27	30
SW8260B	35BSB004	1/27/2011	Ethylbenzene	Soil	U	93	90	75-125	1.75	30
SW8260B	35CSB002	1/31/2011	Ethylbenzene	Soil	U	97	98	75-125	2.25	30
SW8260B	35BSB004	1/27/2011	Hexachlorobutadiene	Soil	U	69	71	55-140	8.63	30
SW8260B	35BSB011	1/24/2011	Hexachlorobutadiene	Soil	U	87	91	55-140	4.12	30
SW8260B	35CSB002	1/31/2011	Hexachlorobutadiene	Soil	U	96	99	55-140	1.02	30
SW8260B	35CSB006	2/2/2011	Hexachlorobutadiene	Soil	U	90	95	55-140	23.12	30
SW8260B	35CSB002	1/31/2011	2-Hexanone	Soil	U	105	107	45-145	1.87	30
SW8260B	35CSB006	2/2/2011	2-Hexanone	Soil	U	101	113	45-145	27.79	30
SW8260B	35BSB011	1/24/2011	2-Hexanone	Soil	U	94	93	45-145	1.18	30
SW8260B	35BSB004	1/27/2011	2-Hexanone	Soil	U	108	109	45-145	5.56	30
SW8260B	35BSB011	1/24/2011	Cumene (isopropylbenzene)	Soil	U	108	109	75-130	1.02	30
SW8260B	35CSB002	1/31/2011	Cumene (isopropylbenzene)	Soil	U	100	100	75-130	3.56	30
SW8260B	35BSB004	1/27/2011	Cumene (isopropylbenzene)	Soil	U	94	90	75-130	0.19	30
SW8260B	35CSB006	2/2/2011	Cumene (isopropylbenzene)	Soil	U	102	101	75-130	16.84	30
SW8260B	35CSB006	2/2/2011	Methylene chloride	Soil	U	98	101	55-140	19.61	30
SW8260B	35BSB011	1/24/2011	Methylene chloride	Soil	U	93	92	55-140	0.20	30
SW8260B	35BSB004	1/27/2011	Methylene chloride	Soil	U	88	86	55-140	3.27	30
SW8260B	35CSB002	1/31/2011	Methylene chloride	Soil	U	93	97	55-140	0.83	30
SW8260B	35BSB004	1/27/2011	Methyl ethyl ketone (2-Butanone)	Soil	U	98	99	30-160	5.05	30
SW8260B	35CSB006	2/2/2011	Methyl ethyl ketone (2-Butanone)	Soil	U	100	110	30-160	26.81	30
SW8260B	35BSB011	1/24/2011	Methyl ethyl ketone (2-Butanone)	Soil	U	90	89	30-160	0.41	30
SW8260B	35CSB002	1/31/2011	Methyl ethyl ketone (2-Butanone)	Soil	U	102	104	30-160	1.54	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB004	1/27/2011	Methyl isobutyl ketone (4-Methyl-2-pentanone)	Soil	U	106	108	45-145	6.64	30
SW8260B	35BSB011	1/24/2011	Methyl isobutyl ketone (4-Methyl-2-pentanone)	Soil	U	93	92	45-145	1.19	30
SW8260B	35CSB002	1/31/2011	Methyl isobutyl ketone (4-Methyl-2-pentanone)	Soil	U	103	104	45-145	1.92	30
SW8260B	35CSB006	2/2/2011	Methyl isobutyl ketone (4-Methyl-2-pentanone)	Soil	U	100	109	45-145	25.39	30
SW8260B	35BSB011	1/24/2011	Naphthalene	Soil	U	102	102	40-125	0.18	30
SW8260B	35BSB004	1/27/2011	Naphthalene	Soil	U	89	90	40-125	5.74	30
SW8260B	35CSB006	2/2/2011	Naphthalene	Soil	U	79	92	40-125	32.73	30
SW8260B	35CSB002	1/31/2011	Naphthalene	Soil	U	91	96	40-125	2.13	30
SW8260B	35BSB004	1/27/2011	tert-Butyl Methyl Ether	Soil	U	93	93	75-125	4.21	30
SW8260B	35CSB006	2/2/2011	tert-Butyl Methyl Ether	Soil	U	90	96	75-125	23.34	30
SW8260B	35CSB002	1/31/2011	tert-Butyl Methyl Ether	Soil	U	93	98	75-125	2.08	30
SW8260B	35BSB011	1/24/2011	tert-Butyl Methyl Ether	Soil	U	93	93	75-125	0.20	30
SW8260B	35CSB002	1/31/2011	n-Propylbenzene	Soil	U	99	99	65-135	2.81	30
SW8260B	35BSB011	1/24/2011	n-Propylbenzene	Soil	U	104	105	65-135	0.88	30
SW8260B	35CSB006	2/2/2011	n-Propylbenzene	Soil	U	100	99	65-135	16.82	30
SW8260B	35BSB004	1/27/2011	n-Propylbenzene	Soil	U	91	88	65-135	1.20	30
SW8260B	35CSB006	2/2/2011	Styrene	Soil	U	97	100	75-125	19.98	30
SW8260B	35BSB011	1/24/2011	Styrene	Soil	U	103	103	75-125	0.00	30
SW8260B	35BSB004	1/27/2011	Styrene	Soil	U	103	102	75-125	3.63	30
SW8260B	35CSB002	1/31/2011	Styrene	Soil	U	99	102	75-125	0.79	30
SW8260B	35BSB011	1/24/2011	1,1,1,2-Tetrachloroethane	Soil	U	101	101	75-125	0.18	30
SW8260B	35BSB004	1/27/2011	1,1,1,2-Tetrachloroethane	Soil	U	95	94	75-125	3.19	30
SW8260B	35CSB006	2/2/2011	1,1,1,2-Tetrachloroethane	Soil	U	96	98	75-125	19.06	30
SW8260B	35CSB002	1/31/2011	1,1,1,2-Tetrachloroethane	Soil	U	98	100	75-125	1.01	30
SW8260B	35BSB004	1/27/2011	1,1,2,2-Tetrachloroethane	Soil	U	97	94	55-130	1.86	30
SW8260B	35BSB011	1/24/2011	1,1,2,2-Tetrachloroethane	Soil	U	97	97	55-130	0.00	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35CSB006	2/2/2011	1,1,2,2-Tetrachloroethane	Soil	U	91	97	55-130	23.88	30
SW8260B	35CSB002	1/31/2011	1,1,2,2-Tetrachloroethane	Soil	U	94	96	55-130	0.42	30
SW8260B	35CSB002	1/31/2011	Tetrachloroethylene (PCE)	Soil	U	101	100	65-140	4.13	30
SW8260B	35BSB011	1/24/2011	Tetrachloroethylene (PCE)	Soil	U	112	111	65-140	0.49	30
SW8260B	35CSB006	2/2/2011	Tetrachloroethylene (PCE)	Soil	U	101	100	65-140	16.33	30
SW8260B	35BSB004	1/27/2011	Tetrachloroethylene (PCE)	Soil	U	85	84	65-140	2.94	30
SW8260B	35CSB006	2/2/2011	Toluene	Soil	U	91	91	70-125	17.56	30
SW8260B	35BSB011	1/24/2011	Toluene	Soil	U	98	98	70-125	0.00	30
SW8260B	35CSB002	1/31/2011	Toluene	Soil	U	92	92	70-125	3.03	30
SW8260B	35BSB004	1/27/2011	Toluene	Soil	U	89	88	70-125	4.02	30
SW8260B	35BSB011	1/24/2011	1,2,3-Trichlorobenzene	Soil	U	101	102	60-135	1.44	30
SW8260B	35CSB002	1/31/2011	1,2,3-Trichlorobenzene	Soil	U	104	107	60-135	0.56	30
SW8260B	35BSB004	1/27/2011	1,2,3-Trichlorobenzene	Soil	U	84	82	60-135	2.79	30
SW8260B	35CSB006	2/2/2011	1,2,3-Trichlorobenzene	Soil	U	92	103	60-135	28.43	30
SW8260B	35BSB004	1/27/2011	1,2,4-Trichlorobenzene	Soil	U	89	83	65-130	1.87	30
SW8260B	35CSB002	1/31/2011	1,2,4-Trichlorobenzene	Soil	U	109	112	65-130	0.72	30
SW8260B	35CSB006	2/2/2011	1,2,4-Trichlorobenzene	Soil	U	98	107	65-130	25.85	30
SW8260B	35BSB011	1/24/2011	1,2,4-Trichlorobenzene	Soil	U	108	109	65-130	1.19	30
SW8260B	35CSB006	2/2/2011	1,1,1-Trichloroethane	Soil	U	109	108	70-135	17.09	30
SW8260B	35BSB004	1/27/2011	1,1,1-Trichloroethane	Soil	U	96	94	70-135	2.24	30
SW8260B	35CSB002	1/31/2011	1,1,1-Trichloroethane	Soil	U	105	107	70-135	1.31	30
SW8260B	35BSB011	1/24/2011	1,1,1-Trichloroethane	Soil	U	107	108	70-135	1.36	30
SW8260B	35CSB006	2/2/2011	1,1,2-Trichloroethane	Soil	U	93	97	60-125	22.07	30
SW8260B	35BSB011	1/24/2011	1,1,2-Trichloroethane	Soil	U	98	98	60-125	0.56	30
SW8260B	35CSB002	1/31/2011	1,1,2-Trichloroethane	Soil	U	96	98	60-125	0.41	30
SW8260B	35BSB004	1/27/2011	1,1,2-Trichloroethane	Soil	U	96	96	60-125	4.63	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35BSB004	1/27/2011	Trichloroethylene (TCE)	Soil	U	90	91	75-125	5.49	30
SW8260B	35BSB011	1/24/2011	Trichloroethylene (TCE)	Soil	U	106	105	75-125	0.87	30
SW8260B	35CSB006	2/2/2011	Trichloroethylene (TCE)	Soil	U	100	99	75-125	16.54	30
SW8260B	35CSB002	1/31/2011	Trichloroethylene (TCE)	Soil	U	99	99	75-125	3.22	30
SW8260B	35CSB006	2/2/2011	Trichlorofluoromethane	Soil	U	115	112	25-185	14.75	30
SW8260B	35CSB002	1/31/2011	Trichlorofluoromethane	Soil	U	111	106	25-185	7.14	30
SW8260B	35BSB011	1/24/2011	Trichlorofluoromethane	Soil	U	118	119	25-185	0.77	30
SW8260B	35BSB004	1/27/2011	Trichlorofluoromethane	Soil	U	87	89	25-185	6.24	30
SW8260B	35BSB004	1/27/2011	1,2,3-Trichloropropane	Soil	U	94	92	65-130	2.68	30
SW8260B	35CSB002	1/31/2011	1,2,3-Trichloropropane	Soil	U	95	97	65-130	0.83	30
SW8260B	35CSB006	2/2/2011	1,2,3-Trichloropropane	Soil	U	94	102	65-130	25.87	30
SW8260B	35BSB011	1/24/2011	1,2,3-Trichloropropane	Soil	U	102	101	65-130	1.08	30
SW8260B	35CSB002	1/31/2011	1,2,4-Trimethylbenzene	Soil	U	99	99	65-135	3.02	30
SW8260B	35BSB004	1/27/2011	1,2,4-Trimethylbenzene	Soil	U	91	88	65-135	0.59	30
SW8260B	35BSB011	1/24/2011	1,2,4-Trimethylbenzene	Soil	U	103	104	65-135	0.88	30
SW8260B	35CSB006	2/2/2011	1,2,4-Trimethylbenzene	Soil	U	98	99	65-135	18.18	30
SW8260B	35CSB002	1/31/2011	1,3,5-Trimethylbenzene	Soil	U	95	95	65-135	2.72	30
SW8260B	35BSB011	1/24/2011	1,3,5-Trimethylbenzene	Soil	U	100	101	65-135	1.27	30
SW8260B	35BSB004	1/27/2011	1,3,5-Trimethylbenzene	Soil	U	91	88	65-135	1.00	30
SW8260B	35CSB006	2/2/2011	1,3,5-Trimethylbenzene	Soil	U	96	96	65-135	17.60	30
SW8260B	35CSB006	2/2/2011	Vinyl chloride	Soil	U	119	116	60-125	14.87	30
SW8260B	35BSB011	1/24/2011	Vinyl chloride	Soil	U	111	111	60-125	0.49	30
SW8260B	35CSB002	1/31/2011	Vinyl chloride	Soil	U	112	109	60-125	6.64	30
SW8260B	35BSB004	1/27/2011	Vinyl chloride	Soil	U	92	91	60-125	4.08	30
SW8260B	35CSB002	1/31/2011	o-Xylene	Soil	U	95	96	75-125	1.66	30
SW8260B	35BSB004	1/27/2011	o-Xylene	Soil	U	95	94	75-125	3.76	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8260B	35CSB006	2/2/2011	o-Xylene	Soil	U	94	95	75-125	18.97	30
SW8260B	35BSB011	1/24/2011	o-Xylene	Soil	U	98	98	75-125	0.00	30
SW8260B	35CSB002	1/31/2011	m,p-Xylene (Sum Of Isomers)	Soil	U	97	98	75-125	2.45	30
SW8260B	35CSB006	2/2/2011	m,p-Xylene (Sum Of Isomers)	Soil	U	96	96	75-125	17.72	30
SW8260B	35BSB004	1/27/2011	m,p-Xylene (Sum Of Isomers)	Soil	U	93	92	75-125	3.85	30
SW8260B	35BSB011	1/24/2011	m,p-Xylene (Sum Of Isomers)	Soil	U	101	101	75-125	0.00	30
SW8270C	35BSB017	1/19/2011	Acenaphthene	Soil	U	83	88	45-110	6.27	30
SW8270C	35CSS031	1/11/2011	Acenaphthene	Soil	U	91	82	45-110	10.78	30
SW8270C	35CSB013	2/8/2011	Acenaphthene	Soil	U	96	80	45-110	19.42	30
SW8270C	35CSB002	1/31/2011	Acenaphthene	Soil	U	86	94	45-110	10.32	30
SW8270C	35BSB004	1/27/2011	Acenaphthene	Soil	U	90	91	45-110	0.95	30
SW8270C	35CSB006	2/2/2011	Acenaphthene	Soil	U	95	97	45-110	0.62	30
SW8270C	35BSB011	1/24/2011	Acenaphthene	Soil	U	91	97	45-110	4.03	30
SW8270C	35BSB004	1/27/2011	Acenaphthylene	Soil	U	97	96	45-105	0.60	30
SW8270C	35BSB011	1/24/2011	Acenaphthylene	Soil	UJ	97	103	45-105	4.66	30
SW8270C	35BSB017	1/19/2011	Acenaphthylene	Soil	U	84	88	45-105	5.20	30
SW8270C	35CSB013	2/8/2011	Acenaphthylene	Soil	U	105	87	45-105	19.60	30
SW8270C	35CSB002	1/31/2011	Acenaphthylene	Soil	U	92	100	45-105	9.02	30
SW8270C	35CSB006	2/2/2011	Acenaphthylene	Soil	U	102	106	45-105	2.85	30
SW8270C	35CSS031	1/11/2011	Acenaphthylene	Soil	U	104	94	45-105	10.65	30
SW8270C	35BSB011	1/24/2011	Anthracene	Soil	U	92	98	55-105	4.59	30
SW8270C	35CSB013	2/8/2011	Anthracene	Soil	U	101	84	55-105	19.35	30
SW8270C	35CSS031	1/11/2011	Anthracene	Soil	U	93	84	55-105	11.21	30
SW8270C	35CSB006	2/2/2011	Anthracene	Soil	U	97	100	55-105	2.11	30
SW8270C	35BSB004	1/27/2011	Anthracene	Soil	U	93	93	55-105	0.62	30
SW8270C	35CSB002	1/31/2011	Anthracene	Soil	U	89	95	55-105	7.17	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35BSB017	1/19/2011	Anthracene	Soil	U	82	88	55-105	7.38	30
SW8270C	35BSB004	1/27/2011	Benzo[a]anthracene	Soil	U	90	92	50-110	2.53	30
SW8270C	35CSS031	1/11/2011	Benzo[a]anthracene	Soil	U	95	87	50-110	9.21	30
SW8270C	35CSB002	1/31/2011	Benzo[a]anthracene	Soil	U	91	95	50-110	4.83	30
SW8270C	35BSB011	1/24/2011	Benzo[a]anthracene	Soil	U	92	99	50-110	6.10	30
SW8270C	35CSB013	2/8/2011	Benzo[a]anthracene	Soil	U	98	81	50-110	20.37	30
SW8270C	35CSB006	2/2/2011	Benzo[a]anthracene	Soil	U	97	102	50-110	4.19	30
SW8270C	35BSB017	1/19/2011	Benzo[a]anthracene	Soil	U	78	83	50-110	6.69	30
SW8270C	35CSS031	1/11/2011	Benzo[a]pyrene	Soil	U	94	84	50-110	11.76	30
SW8270C	35BSB004	1/27/2011	Benzo[a]pyrene	Soil	U	94	90	50-110	4.36	30
SW8270C	35CSB006	2/2/2011	Benzo[a]pyrene	Soil	U	100	104	50-110	2.33	30
SW8270C	35BSB011	1/24/2011	Benzo[a]pyrene	Soil	U	93	95	50-110	0.62	30
SW8270C	35CSB002	1/31/2011	Benzo[a]pyrene	Soil	U	91	95	50-110	5.49	30
SW8270C	35BSB017	1/19/2011	Benzo[a]pyrene	Soil	U	83	90	50-110	7.97	30
SW8270C	35CSB013	2/8/2011	Benzo[a]pyrene	Soil	U	97	80	50-110	20.57	30
SW8270C	35CSS031	1/11/2011	Benzo[b]fluoranthene	Soil	U	93	83	45-115	12.29	30
SW8270C	35BSB011	1/24/2011	Benzo[b]fluoranthene	Soil	U	89	92	45-115	1.61	30
SW8270C	35BSB004	1/27/2011	Benzo[b]fluoranthene	Soil	U	107	88	45-115	19.41	30
SW8270C	35CSB002	1/31/2011	Benzo[b]fluoranthene	Soil	U	92	94	45-115	3.23	30
SW8270C	35CSB006	2/2/2011	Benzo[b]fluoranthene	Soil	U	98	102	45-115	2.97	30
SW8270C	35BSB017	1/19/2011	Benzo[b]fluoranthene	Soil	U	84	86	45-115	2.83	30
SW8270C	35CSB013	2/8/2011	Benzo[b]fluoranthene	Soil	U	101	74	45-115	31.97	30
SW8270C	35BSB004	1/27/2011	Benzo[g,h,i]perylene	Soil	U	95	94	40-125	1.21	30
SW8270C	35CSS031	1/11/2011	Benzo[g,h,i]perylene	Soil	U	101	89	40-125	12.95	30
SW8270C	35CSB002	1/31/2011	Benzo[g,h,i]perylene	Soil	U	93	98	40-125	6.57	30
SW8270C	35BSB017	1/19/2011	Benzo[g,h,i]perylene	Soil	U	113	123	40-125	9.16	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35BSB011	1/24/2011	Benzo[g,h,i]perylene	Soil	U	111	120	40-125	5.80	30
SW8270C	35CSB013	2/8/2011	Benzo[g,h,i]perylene	Soil	U	98	78	40-125	24.49	30
SW8270C	35CSB006	2/2/2011	Benzo[g,h,i]perylene	Soil	U	88	97	40-125	8.03	30
SW8270C	35BSB017	1/19/2011	Benzo[k]fluoranthene	Soil	U	80	87	45-125	8.60	30
SW8270C	35BSB004	1/27/2011	Benzo[k]fluoranthene	Soil	U	88	95	45-125	6.59	30
SW8270C	35CSS031	1/11/2011	Benzo[k]fluoranthene	Soil	U	78	74	45-125	5.51	30
SW8270C	35BSB011	1/24/2011	Benzo[k]fluoranthene	Soil	U	92	90	45-125	3.51	30
SW8270C	35CSB002	1/31/2011	Benzo[k]fluoranthene	Soil	U	84	91	45-125	8.90	30
SW8270C	35CSB006	2/2/2011	Benzo[k]fluoranthene	Soil	U	102	99	45-125	4.72	30
SW8270C	35CSB013	2/8/2011	Benzo[k]fluoranthene	Soil	U	89	78	45-125	13.57	30
SW8270C	35CSS031	1/11/2011	Benzyl alcohol	Soil	U	84	79	20-125	7.73	30
SW8270C	35CSB002	1/31/2011	Benzyl alcohol	Soil	U	74	81	20-125	10.77	30
SW8270C	35CSB013	2/8/2011	Benzyl alcohol	Soil	U	91	77	20-125	17.41	30
SW8270C	35BSB017	1/19/2011	Benzyl alcohol	Soil	U	72	71	20-125	0.42	30
SW8270C	35BSB004	1/27/2011	Benzyl alcohol	Soil	U	82	84	20-125	2.42	30
SW8270C	35CSB006	2/2/2011	Benzyl alcohol	Soil	U	92	93	20-125	0.64	30
SW8270C	35BSB011	1/24/2011	Benzyl alcohol	Soil	U	84	85	20-125	0.69	30
SW8270C	35CSB006	2/2/2011	Butyl benzyl phthalate	Soil	U	99	107	50-125	6.34	30
SW8270C	35CSB013	2/8/2011	Butyl benzyl phthalate	Soil	U	102	89	50-125	14.95	30
SW8270C	35BSB011	1/24/2011	Butyl benzyl phthalate	Soil	U	98	100	50-125	0.88	30
SW8270C	35CSB002	1/31/2011	Butyl benzyl phthalate	Soil	U	91	93	50-125	3.59	30
SW8270C	35BSB004	1/27/2011	Butyl benzyl phthalate	Soil	U	103	100	50-125	3.41	30
SW8270C	35CSS031	1/11/2011	Butyl benzyl phthalate	Soil	U	106	98	50-125	8.52	30
SW8270C	35BSB017	1/19/2011	Butyl benzyl phthalate	Soil	U	78	79	50-125	1.52	30
SW8270C	35BSB011	1/24/2011	bis(2-Chloroethoxy) methane	Soil	U	85	88	45-110	2.36	30
SW8270C	35CSB006	2/2/2011	bis(2-Chloroethoxy) methane	Soil	U	92	96	45-110	2.52	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35BSB017	1/19/2011	bis(2-Chloroethoxy) methane	Soil	U	80	84	45-110	5.11	30
SW8270C	35BSB004	1/27/2011	bis(2-Chloroethoxy) methane	Soil	U	87	89	45-110	2.28	30
SW8270C	35CSB013	2/8/2011	bis(2-Chloroethoxy) methane	Soil	U	92	79	45-110	16.03	30
SW8270C	35CSB002	1/31/2011	bis(2-Chloroethoxy) methane	Soil	U	79	85	45-110	9.49	30
SW8270C	35CSS031	1/11/2011	bis(2-Chloroethoxy) methane	Soil	U	90	80	45-110	12.43	30
SW8270C	35BSB004	1/27/2011	bis(2-Chloroethyl)ether	Soil	U	84	86	45-105	3.05	30
SW8270C	35BSB011	1/24/2011	bis(2-Chloroethyl)ether	Soil	U	80	83	45-105	2.87	30
SW8270C	35CSB006	2/2/2011	bis(2-Chloroethyl)ether	Soil	U	91	93	45-105	0.32	30
SW8270C	35CSB013	2/8/2011	bis(2-Chloroethyl)ether	Soil	U	88	75	45-105	18.32	30
SW8270C	35CSB002	1/31/2011	bis(2-Chloroethyl)ether	Soil	U	77	84	45-105	10.76	30
SW8270C	35CSS031	1/11/2011	bis(2-Chloroethyl)ether	Soil	U	88	80	45-105	10.41	30
SW8270C	35BSB017	1/19/2011	bis(2-Chloroethyl)ether	Soil	U	77	79	45-105	2.70	30
SW8270C	35BSB011	1/24/2011	bis(2-Chloroisopropyl) Ether	Soil	U	80	83	20-115	1.07	30
SW8270C	35CSB013	2/8/2011	bis(2-Chloroisopropyl) Ether	Soil	U	90	78	20-115	14.95	30
SW8270C	35CSB002	1/31/2011	bis(2-Chloroisopropyl) Ether	Soil	U	76	83	20-115	10.17	30
SW8270C	35CSB006	2/2/2011	bis(2-Chloroisopropyl) Ether	Soil	U	92	95	20-115	1.59	30
SW8270C	35BSB004	1/27/2011	bis(2-Chloroisopropyl) Ether	Soil	U	84	86	20-115	1.69	30
SW8270C	35BSB017	1/19/2011	bis(2-Chloroisopropyl) Ether	Soil	U	81	81	20-115	0.74	30
SW8270C	35CSS031	1/11/2011	bis(2-Chloroisopropyl) Ether	Soil	U	84	77	20-115	9.67	30
SW8270C	35BSB011	1/24/2011	bis(2-ethylhexyl)phthalate	Soil	U	95	97	45-125	1.21	30
SW8270C	35BSB004	1/27/2011	bis(2-ethylhexyl)phthalate	Soil	U	108	102	45-125	5.76	30
SW8270C	35CSS031	1/11/2011	bis(2-ethylhexyl)phthalate	Soil	J	102	94	45-125	7.67	30
SW8270C	35BSB017	1/19/2011	bis(2-ethylhexyl)phthalate	Soil	U	78	82	45-125	5.24	30
SW8270C	35CSB013	2/8/2011	bis(2-ethylhexyl)phthalate	Soil	U	109	93	45-125	16.89	30
SW8270C	35CSB002	1/31/2011	bis(2-ethylhexyl)phthalate	Soil	U	91	94	45-125	4.20	30
SW8270C	35CSB006	2/2/2011	bis(2-ethylhexyl)phthalate	Soil	U	103	106	45-125	1.99	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSS031	1/11/2011	4-Bromophenyl phenyl ether	Soil	U	98	88	45-115	11.27	30
SW8270C	35BSB004	1/27/2011	4-Bromophenyl phenyl ether	Soil	U	95	95	45-115	0.30	30
SW8270C	35CSB002	1/31/2011	4-Bromophenyl phenyl ether	Soil	U	93	99	45-115	7.18	30
SW8270C	35BSB017	1/19/2011	4-Bromophenyl phenyl ether	Soil	U	83	91	45-115	9.66	30
SW8270C	35CSB006	2/2/2011	4-Bromophenyl phenyl ether	Soil	U	95	100	45-115	3.96	30
SW8270C	35CSB013	2/8/2011	4-Bromophenyl phenyl ether	Soil	U	94	78	45-115	19.06	30
SW8270C	35BSB011	1/24/2011	4-Bromophenyl phenyl ether	Soil	U	96	104	45-115	6.40	30
SW8270C	35CSB002	1/31/2011	Carbazole	Soil	U	76	81	45-115	6.84	30
SW8270C	35CSB013	2/8/2011	Carbazole	Soil	U	93	76	45-115	20.81	30
SW8270C	35BSB004	1/27/2011	Carbazole	Soil	U	81	81	45-115	0.35	30
SW8270C	35BSB011	1/24/2011	Carbazole	Soil	U	78	83	45-115	5.05	30
SW8270C	35CSS031	1/11/2011	Carbazole	Soil	U	72	56	45-115	24.94	30
SW8270C	35BSB017	1/19/2011	Carbazole	Soil	U	73	79	45-115	8.25	30
SW8270C	35CSB006	2/2/2011	Carbazole	Soil	U	86	89	45-115	3.06	30
SW8270C	35CSB006	2/2/2011	4-Chloro-3-methylphenol	Soil	U	84	86	45-115	1.04	30
SW8270C	35BSB004	1/27/2011	4-Chloro-3-methylphenol	Soil	U	81	80	45-115	1.07	30
SW8270C	35BSB017	1/19/2011	4-Chloro-3-methylphenol	Soil	U	68	66	45-115	2.25	30
SW8270C	35BSB011	1/24/2011	4-Chloro-3-methylphenol	Soil	U	78	82	45-115	3.65	30
SW8270C	35CSB013	2/8/2011	4-Chloro-3-methylphenol	Soil	U	83	68	45-115	20.99	30
SW8270C	35CSS031	1/11/2011	4-Chloro-3-methylphenol	Soil	U	75	70	45-115	7.50	30
SW8270C	35CSB002	1/31/2011	4-Chloro-3-methylphenol	Soil	U	67	73	45-115	10.66	30
SW8270C	35BSB017	1/19/2011	2-Chloronaphthalene	Soil	U	80	85	45-105	6.87	30
SW8270C	35BSB011	1/24/2011	2-Chloronaphthalene	Soil	U	84	91	45-105	6.67	30
SW8270C	35BSB004	1/27/2011	2-Chloronaphthalene	Soil	U	83	84	45-105	1.04	30
SW8270C	35CSB006	2/2/2011	2-Chloronaphthalene	Soil	U	87	90	45-105	2.69	30
SW8270C	35CSS031	1/11/2011	2-Chloronaphthalene	Soil	U	86	76	45-105	12.94	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB002	1/31/2011	2-Chloronaphthalene	Soil	U	82	89	45-105	9.12	30
SW8270C	35CSB013	2/8/2011	2-Chloronaphthalene	Soil	U	87	75	45-105	16.64	30
SW8270C	35CSS031	1/11/2011	2-Chlorophenol	Soil	U	76	69	45-105	9.96	30
SW8270C	35CSB006	2/2/2011	2-Chlorophenol	Soil	U	80	81	45-105	0.37	30
SW8270C	35BSB004	1/27/2011	2-Chlorophenol	Soil	U	76	79	45-105	2.60	30
SW8270C	35BSB017	1/19/2011	2-Chlorophenol	Soil	U	65	66	45-105	1.37	30
SW8270C	35CSB013	2/8/2011	2-Chlorophenol	Soil	U	78	68	45-105	15.57	30
SW8270C	35CSB002	1/31/2011	2-Chlorophenol	Soil	U	70	78	45-105	12.15	30
SW8270C	35BSB011	1/24/2011	2-Chlorophenol	Soil	U	77	78	45-105	0.38	30
SW8270C	35CSB006	2/2/2011	4-Chlorophenyl phenyl ether	Soil	U	95	97	45-110	0.94	30
SW8270C	35CSB002	1/31/2011	4-Chlorophenyl phenyl ether	Soil	U	85	91	45-110	7.56	30
SW8270C	35BSB011	1/24/2011	4-Chlorophenyl phenyl ether	Soil	U	90	97	45-110	5.97	30
SW8270C	35BSB017	1/19/2011	4-Chlorophenyl phenyl ether	Soil	U	84	86	45-110	3.21	30
SW8270C	35BSB004	1/27/2011	4-Chlorophenyl phenyl ether	Soil	U	95	92	45-110	3.73	30
SW8270C	35CSS031	1/11/2011	4-Chlorophenyl phenyl ether	Soil	U	90	83	45-110	8.73	30
SW8270C	35CSB013	2/8/2011	4-Chlorophenyl phenyl ether	Soil	U	95	80	45-110	17.93	30
SW8270C	35CSB002	1/31/2011	Chrysene	Soil	U	90	93	55-110	4.89	30
SW8270C	35CSB006	2/2/2011	Chrysene	Soil	U	97	97	55-110	0.61	30
SW8270C	35CSS031	1/11/2011	Chrysene	Soil	U	97	81	55-110	18.49	30
SW8270C	35BSB004	1/27/2011	Chrysene	Soil	U	95	95	55-110	0.00	30
SW8270C	35BSB011	1/24/2011	Chrysene	Soil	U	94	99	55-110	3.32	30
SW8270C	35CSB013	2/8/2011	Chrysene	Soil	U	102	81	55-110	23.74	30
SW8270C	35BSB017	1/19/2011	Chrysene	Soil	U	86	92	55-110	8.08	30
SW8270C	35BSB011	1/24/2011	Cresols, m & p	Soil	U	74	77	40-105	2.32	30
SW8270C	35CSB002	1/31/2011	Cresols, m & p	Soil	U	65	74	40-105	14.59	30
SW8270C	35BSB004	1/27/2011	Cresols, m & p	Soil	U	74	74	40-105	0.00	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB006	2/2/2011	Cresols, m & p	Soil	U	84	83	40-105	1.78	30
SW8270C	35BSB017	1/19/2011	Cresols, m & p	Soil	U	64	64	40-105	0.00	30
SW8270C	35CSB013	2/8/2011	Cresols, m & p	Soil	U	86	72	40-105	19.01	30
SW8270C	35CSS031	1/11/2011	Cresols, m & p	Soil	U	74	69	40-105	8.00	30
SW8270C	35CSS031	1/11/2011	Dibenz[a,h]anthracene	Soil	U	99	93	40-125	7.18	30
SW8270C	35BSB017	1/19/2011	Dibenz[a,h]anthracene	Soil	U	94	108	40-125	14.79	30
SW8270C	35CSB013	2/8/2011	Dibenz[a,h]anthracene	Soil	U	97	79	40-125	21.32	30
SW8270C	35CSB006	2/2/2011	Dibenz[a,h]anthracene	Soil	U	89	97	40-125	7.64	30
SW8270C	35BSB004	1/27/2011	Dibenz[a,h]anthracene	Soil	U	92	92	40-125	0.31	30
SW8270C	35CSB002	1/31/2011	Dibenz[a,h]anthracene	Soil	U	94	98	40-125	5.29	30
SW8270C	35BSB011	1/24/2011	Dibenz[a,h]anthracene	Soil	U	104	112	40-125	5.39	30
SW8270C	35CSB002	1/31/2011	Dibenzofuran	Soil	U	78	85	50-105	9.17	30
SW8270C	35BSB017	1/19/2011	Dibenzofuran	Soil	U	78	80	50-105	3.79	30
SW8270C	35CSS031	1/11/2011	Dibenzofuran	Soil	U	83	74	50-105	12.31	30
SW8270C	35CSB013	2/8/2011	Dibenzofuran	Soil	U	89	75	50-105	18.25	30
SW8270C	35BSB011	1/24/2011	Dibenzofuran	Soil	U	85	89	50-105	3.36	30
SW8270C	35BSB004	1/27/2011	Dibenzofuran	Soil	U	85	84	50-105	1.02	30
SW8270C	35CSB006	2/2/2011	Dibenzofuran	Soil	U	87	89	50-105	1.02	30
SW8270C	35BSB017	1/19/2011	1,2-Dichlorobenzene	Soil	U	77	79	45-100	3.45	30
SW8270C	35BSB011	1/24/2011	1,2-Dichlorobenzene	Soil	U	80	83	45-100	2.15	30
SW8270C	35BSB004	1/27/2011	1,2-Dichlorobenzene	Soil	U	80	84	45-100	4.21	30
SW8270C	35CSS031	1/11/2011	1,2-Dichlorobenzene	Soil	U	80	72	45-100	11.11	30
SW8270C	35CSB013	2/8/2011	1,2-Dichlorobenzene	Soil	U	80	68	45-100	17.67	30
SW8270C	35CSB006	2/2/2011	1,2-Dichlorobenzene	Soil	U	83	86	45-100	1.41	30
SW8270C	35CSB002	1/31/2011	1,2-Dichlorobenzene	Soil	U	76	84	45-100	11.99	30
SW8270C	35BSB004	1/27/2011	1,3-Dichlorobenzene	Soil	U	77	82	40-100	5.07	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB013	2/8/2011	1,3-Dichlorobenzene	Soil	U	78	65	40-100	18.87	30
SW8270C	35BSB011	1/24/2011	1,3-Dichlorobenzene	Soil	U	78	80	40-100	1.11	30
SW8270C	35CSB002	1/31/2011	1,3-Dichlorobenzene	Soil	U	73	82	40-100	12.72	30
SW8270C	35BSB017	1/19/2011	1,3-Dichlorobenzene	Soil	U	76	76	40-100	1.57	30
SW8270C	35CSS031	1/11/2011	1,3-Dichlorobenzene	Soil	U	79	71	40-100	10.40	30
SW8270C	35CSB006	2/2/2011	1,3-Dichlorobenzene	Soil	U	79	82	40-100	2.59	30
SW8270C	35CSS031	1/11/2011	1,4-Dichlorobenzene	Soil	U	79	71	35-105	11.62	30
SW8270C	35CSB013	2/8/2011	1,4-Dichlorobenzene	Soil	U	78	67	35-105	16.84	30
SW8270C	35BSB011	1/24/2011	1,4-Dichlorobenzene	Soil	U	78	80	35-105	1.48	30
SW8270C	35BSB004	1/27/2011	1,4-Dichlorobenzene	Soil	U	77	82	35-105	6.13	30
SW8270C	35CSB006	2/2/2011	1,4-Dichlorobenzene	Soil	U	80	83	35-105	2.55	30
SW8270C	35BSB017	1/19/2011	1,4-Dichlorobenzene	Soil	U	76	77	35-105	1.56	30
SW8270C	35CSB002	1/31/2011	1,4-Dichlorobenzene	Soil	U	74	83	35-105	12.98	30
SW8270C	35BSB011	1/24/2011	2,4-Dichlorophenol	Soil	U	76	81	45-110	4.46	30
SW8270C	35CSB013	2/8/2011	2,4-Dichlorophenol	Soil	U	80	69	45-110	16.50	30
SW8270C	35BSB017	1/19/2011	2,4-Dichlorophenol	Soil	U	65	67	45-110	2.71	30
SW8270C	35CSB006	2/2/2011	2,4-Dichlorophenol	Soil	U	82	83	45-110	0.00	30
SW8270C	35CSS031	1/11/2011	2,4-Dichlorophenol	Soil	U	74	67	45-110	11.51	30
SW8270C	35CSB002	1/31/2011	2,4-Dichlorophenol	Soil	U	68	75	45-110	10.83	30
SW8270C	35BSB004	1/27/2011	2,4-Dichlorophenol	Soil	U	77	79	45-110	1.84	30
SW8270C	35CSB006	2/2/2011	Diethyl phthalate	Soil	U	96	100	50-115	2.43	30
SW8270C	35CSB002	1/31/2011	Diethyl phthalate	Soil	U	80	87	50-115	10.00	30
SW8270C	35CSB013	2/8/2011	Diethyl phthalate	Soil	U	94	80	50-115	16.49	30
SW8270C	35BSB011	1/24/2011	Diethyl phthalate	Soil	U	91	98	50-115	5.56	30
SW8270C	35BSB004	1/27/2011	Diethyl phthalate	Soil	U	98	94	50-115	4.18	30
SW8270C	35CSS031	1/11/2011	Diethyl phthalate	Soil		-403	-428	50-115	20.79	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery		Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35BSB017	1/19/2011	Diethyl phthalate	Soil	U	83		81	50-115	1.82	30
SW8270C	35CSS031	1/11/2011	2,4-Dimethylphenol	Soil	U	78		69	30-105	13.06	30
SW8270C	35CSB006	2/2/2011	2,4-Dimethylphenol	Soil	U	72		79	30-105	7.09	30
SW8270C	35CSB013	2/8/2011	2,4-Dimethylphenol	Soil	U	74		63	30-105	17.54	30
SW8270C	35BSB004	1/27/2011	2,4-Dimethylphenol	Soil	U	59		59	30-105	0.00	30
SW8270C	35BSB011	1/24/2011	2,4-Dimethylphenol	Soil	U	60		68	30-105	10.96	30
SW8270C	35CSB002	1/31/2011	2,4-Dimethylphenol	Soil	U	66		73	30-105	10.75	30
SW8270C	35BSB017	1/19/2011	2,4-Dimethylphenol	Soil	U	66		65	30-105	0.46	30
SW8270C	35CSB006	2/2/2011	Dimethyl phthalate	Soil	U	96		100	50-110	2.42	30
SW8270C	35BSB004	1/27/2011	Dimethyl phthalate	Soil	U	96		95	50-110	1.50	30
SW8270C	35CSB002	1/31/2011	Dimethyl phthalate	Soil	U	81		90	50-110	11.56	30
SW8270C	35CSB013	2/8/2011	Dimethyl phthalate	Soil	U	95		80	50-110	18.37	30
SW8270C	35BSB011	1/24/2011	Dimethyl phthalate	Soil	U	93		98	50-110	3.66	30
SW8270C	35BSB017	1/19/2011	Dimethyl phthalate	Soil	U	83		84	50-110	2.14	30
SW8270C	35CSS031	1/11/2011	Dimethyl phthalate	Soil	U	90		83	50-110	8.00	30
SW8270C	35CSB002	1/31/2011	Di-n-Butyl Phthalate	Soil	U	85		89	55-110	5.15	30
SW8270C	35BSB011	1/24/2011	Di-n-Butyl Phthalate	Soil	U	89		95	55-110	5.10	30
SW8270C	35BSB017	1/19/2011	Di-n-Butyl Phthalate	Soil	U	81		87	55-110	8.20	30
SW8270C	35BSB004	1/27/2011	Di-n-Butyl Phthalate	Soil	U	95		91	55-110	5.26	30
SW8270C	35CSS031	1/11/2011	Di-n-Butyl Phthalate	Soil	J	60	*	142	55-110	**57.69**	30
SW8270C	35CSB006	2/2/2011	Di-n-Butyl Phthalate	Soil	U	95		97	55-110	0.62	30
SW8270C	35CSB013	2/8/2011	Di-n-Butyl Phthalate	Soil	U	99		84	55-110	18.60	30
SW8270C	35CSB006	2/2/2011	4,6-Dinitro-2-methylphenol	Soil	U	81		86	30-135	4.98	30
SW8270C	35BSB017	1/19/2011	4,6-Dinitro-2-methylphenol	Soil	U	39		39	30-135	0.76	30
SW8270C	35CSS031	1/11/2011	4,6-Dinitro-2-methylphenol	Soil	U	49		52	30-135	4.73	30
SW8270C	35BSB011	1/24/2011	4,6-Dinitro-2-methylphenol	Soil	U	89		95	30-135	5.05	30

Method	Location	Date	Analyte	Matrix	Flag		Matrix Spike % Recovery		Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB013	2/8/2011	4,6-Dinitro-2-methylphenol	Soil	U		67		50	30-135	30.18	30
SW8270C	35CSB002	1/31/2011	4,6-Dinitro-2-methylphenol	Soil	U		86		90	30-135	6.12	30
SW8270C	35BSB004	1/27/2011	4,6-Dinitro-2-methylphenol	Soil	U		89		88	30-135	1.63	30
SW8270C	35CSS031	1/11/2011	2,4-Dinitrophenol	Soil	UJ		20		29	15-130	34.69	30
SW8270C	35CSB002	1/31/2011	2,4-Dinitrophenol	Soil	U		77		81	15-130	6.45	30
SW8270C	35BSB017	1/19/2011	2,4-Dinitrophenol	Soil	UJ	*	12	*	9	15-130	20.43	30
SW8270C	35CSB006	2/2/2011	2,4-Dinitrophenol	Soil	U		68		75	15-130	7.90	30
SW8270C	35BSB011	1/24/2011	2,4-Dinitrophenol	Soil	U		84		95	15-130	10.46	30
SW8270C	35BSB004	1/27/2011	2,4-Dinitrophenol	Soil	U		86		88	15-130	1.99	30
SW8270C	35CSB013	2/8/2011	2,4-Dinitrophenol	Soil	U		34		23	15-130	39.92	30
SW8270C	35BSB011	1/24/2011	2,4-Dinitrotoluene	Soil	U		90		96	50-115	5.03	30
SW8270C	35CSB002	1/31/2011	2,4-Dinitrotoluene	Soil	U		80		86	50-115	8.26	30
SW8270C	35CSS031	1/11/2011	2,4-Dinitrotoluene	Soil	J	*	48	*	176	50-115	**87.67**	30
SW8270C	35CSB013	2/8/2011	2,4-Dinitrotoluene	Soil	U		93		78	50-115	18.88	30
SW8270C	35CSB006	2/2/2011	2,4-Dinitrotoluene	Soil	U		91		94	50-115	2.25	30
SW8270C	35BSB004	1/27/2011	2,4-Dinitrotoluene	Soil	U		97		92	50-115	4.88	30
SW8270C	35BSB017	1/19/2011	2,4-Dinitrotoluene	Soil	U		78		77	50-115	0.39	30
SW8270C	35CSB002	1/31/2011	2,6-Dinitrotoluene	Soil	U		83		91	50-110	10.31	30
SW8270C	35CSB013	2/8/2011	2,6-Dinitrotoluene	Soil	U		93		78	50-110	18.95	30
SW8270C	35CSB006	2/2/2011	2,6-Dinitrotoluene	Soil	U		94		96	50-110	1.25	30
SW8270C	35BSB011	1/24/2011	2,6-Dinitrotoluene	Soil	U		92		96	50-110	2.17	30
SW8270C	35BSB017	1/19/2011	2,6-Dinitrotoluene	Soil	U		77		81	50-110	4.55	30
SW8270C	35BSB004	1/27/2011	2,6-Dinitrotoluene	Soil	U		97		94	50-110	3.02	30
SW8270C	35CSS031	1/11/2011	2,6-Dinitrotoluene	Soil	U		86		90	50-110	3.75	30
SW8270C	35CSB006	2/2/2011	di-n-Octyl phthalate	Soil	U		99		98	40-130	2.12	30
SW8270C	35CSB002	1/31/2011	di-n-Octyl phthalate	Soil	U		89		92	40-130	4.31	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSS031	1/11/2011	di-n-Octyl phthalate	Soil	U	108	99	40-130	9.86	30
SW8270C	35BSB017	1/19/2011	di-n-Octyl phthalate	Soil	U	76	81	40-130	6.90	30
SW8270C	35BSB011	1/24/2011	di-n-Octyl phthalate	Soil	U	88	91	40-130	2.28	30
SW8270C	35BSB004	1/27/2011	di-n-Octyl phthalate	Soil	U	98	96	40-130	2.67	30
SW8270C	35CSB013	2/8/2011	di-n-Octyl phthalate	Soil	U	104	88	40-130	18.35	30
SW8270C	35BSB011	1/24/2011	Fluoranthene	Soil	U	86	90	55-115	3.00	30
SW8270C	35BSB004	1/27/2011	Fluoranthene	Soil	U	90	89	55-115	1.61	30
SW8270C	35CSB002	1/31/2011	Fluoranthene	Soil	U	84	88	55-115	5.22	30
SW8270C	35CSB006	2/2/2011	Fluoranthene	Soil	U	96	97	55-115	0.00	30
SW8270C	35CSB013	2/8/2011	Fluoranthene	Soil	U	101	81	55-115	22.88	30
SW8270C	35BSB017	1/19/2011	Fluoranthene	Soil	U	82	90	55-115	10.45	30
SW8270C	35CSS031	1/11/2011	Fluoranthene	Soil	U	87	78	55-115	11.64	30
SW8270C	35CSB006	2/2/2011	Fluorene	Soil	U	95	97	50-110	0.93	30
SW8270C	35CSB002	1/31/2011	Fluorene	Soil	U	85	90	50-110	6.85	30
SW8270C	35CSS031	1/11/2011	Fluorene	Soil	U	85	80	50-110	6.52	30
SW8270C	35BSB004	1/27/2011	Fluorene	Soil	U	92	91	50-110	1.88	30
SW8270C	35BSB011	1/24/2011	Fluorene	Soil	U	91	95	50-110	3.44	30
SW8270C	35CSB013	2/8/2011	Fluorene	Soil	U	97	81	50-110	18.12	30
SW8270C	35BSB017	1/19/2011	Fluorene	Soil	U	83	84	50-110	2.50	30
SW8270C	35CSB013	2/8/2011	Hexachlorobenzene	Soil	U	85	74	45-120	15.38	30
SW8270C	35CSB002	1/31/2011	Hexachlorobenzene	Soil	U	86	94	45-120	9.62	30
SW8270C	35CSS031	1/11/2011	Hexachlorobenzene	Soil	U	92	81	45-120	13.52	30
SW8270C	35CSB006	2/2/2011	Hexachlorobenzene	Soil	U	88	90	45-120	0.67	30
SW8270C	35BSB004	1/27/2011	Hexachlorobenzene	Soil	U	89	90	45-120	1.29	30
SW8270C	35BSB017	1/19/2011	Hexachlorobenzene	Soil	U	77	83	45-120	7.82	30
SW8270C	35BSB011	1/24/2011	Hexachlorobenzene	Soil	U	92	100	45-120	6.71	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB006	2/2/2011	Hexachlorobutadiene	Soil	U	84	86	40-115	1.05	30
SW8270C	35BSB017	1/19/2011	Hexachlorobutadiene	Soil	U	81	85	40-115	6.13	30
SW8270C	35CSS031	1/11/2011	Hexachlorobutadiene	Soil	U	90	78	40-115	14.34	30
SW8270C	35CSB013	2/8/2011	Hexachlorobutadiene	Soil	U	79	68	40-115	16.70	30
SW8270C	35CSB002	1/31/2011	Hexachlorobutadiene	Soil	U	79	88	40-115	12.57	30
SW8270C	35BSB011	1/24/2011	Hexachlorobutadiene	Soil	U	84	89	40-115	4.73	30
SW8270C	35BSB004	1/27/2011	Hexachlorobutadiene	Soil	U	84	88	40-115	4.37	30
SW8270C	35CSB006	2/2/2011	Hexachloroethane	Soil	U	79	82	35-110	2.21	30
SW8270C	35BSB004	1/27/2011	Hexachloroethane	Soil	U	78	81	35-110	4.35	30
SW8270C	35BSB011	1/24/2011	Hexachloroethane	Soil	U	76	80	35-110	2.99	30
SW8270C	35CSS031	1/11/2011	Hexachloroethane	Soil	U	80	72	35-110	11.44	30
SW8270C	35CSB002	1/31/2011	Hexachloroethane	Soil	U	74	82	35-110	12.26	30
SW8270C	35BSB017	1/19/2011	Hexachloroethane	Soil	U	76	78	35-110	3.12	30
SW8270C	35CSB013	2/8/2011	Hexachloroethane	Soil	U	79	67	35-110	17.59	30
SW8270C	35CSB006	2/2/2011	Indeno[1,2,3-cd]pyrene	Soil	U	94	98	40-120	2.79	30
SW8270C	35CSB013	2/8/2011	Indeno[1,2,3-cd]pyrene	Soil	U	116	91	40-120	25.94	30
SW8270C	35BSB017	1/19/2011	Indeno[1,2,3-cd]pyrene	Soil	U	116	143	40-120	21.55	30
SW8270C	35CSB002	1/31/2011	Indeno[1,2,3-cd]pyrene	Soil	U	102	104	40-120	3.19	30
SW8270C	35BSB011	1/24/2011	Indeno[1,2,3-cd]pyrene	Soil	U	109	129	40-120	14.93	30
SW8270C	35BSB004	1/27/2011	Indeno[1,2,3-cd]pyrene	Soil	U	84	92	40-120	8.18	30
SW8270C	35CSS031	1/11/2011	Indeno[1,2,3-cd]pyrene	Soil	U	110	93	40-120	17.21	30
SW8270C	35BSB011	1/24/2011	Isophorone	Soil	U	81	86	45-110	4.20	30
SW8270C	35CSB006	2/2/2011	Isophorone	Soil	U	91	94	45-110	1.61	30
SW8270C	35BSB017	1/19/2011	Isophorone	Soil	U	74	77	45-110	4.37	30
SW8270C	35CSS031	1/11/2011	Isophorone	Soil	U	88	79	45-110	11.13	30
SW8270C	35CSB013	2/8/2011	Isophorone	Soil	U	87	75	45-110	16.57	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35BSB004	1/27/2011	Isophorone	Soil	U	85	86	45-110	1.34	30
SW8270C	35CSB002	1/31/2011	Isophorone	Soil	U	71	79	45-110	11.90	30
SW8270C	35CSB006	2/2/2011	2-Methylnaphthalene	Soil	U	87	90	45-105	2.01	30
SW8270C	35CSB013	2/8/2011	2-Methylnaphthalene	Soil	U	87	74	45-105	17.38	30
SW8270C	35BSB011	1/24/2011	2-Methylnaphthalene	Soil	U	84	86	45-105	1.72	30
SW8270C	35CSS031	1/11/2011	2-Methylnaphthalene	Soil	U	85	76	45-105	11.59	30
SW8270C	35BSB004	1/27/2011	2-Methylnaphthalene	Soil	U	84	85	45-105	0.68	30
SW8270C	35BSB017	1/19/2011	2-Methylnaphthalene	Soil	U	78	79	45-105	1.15	30
SW8270C	35CSB002	1/31/2011	2-Methylnaphthalene	Soil	U	77	83	45-105	9.35	30
SW8270C	35BSB011	1/24/2011	2-Methylphenol	Soil	U	76	78	40-105	0.75	30
SW8270C	35BSB004	1/27/2011	2-Methylphenol	Soil	U	76	75	40-105	1.52	30
SW8270C	35CSB006	2/2/2011	2-Methylphenol	Soil	U	80	81	40-105	0.00	30
SW8270C	35CSB013	2/8/2011	2-Methylphenol	Soil	U	81	67	40-105	19.35	30
SW8270C	35CSS031	1/11/2011	2-Methylphenol	Soil	U	73	68	40-105	6.81	30
SW8270C	35CSB002	1/31/2011	2-Methylphenol	Soil	U	67	74	40-105	11.06	30
SW8270C	35BSB017	1/19/2011	2-Methylphenol	Soil	U	65	64	40-105	0.46	30
SW8270C	35BSB011	1/24/2011	Naphthalene	Soil	U	88	92	40-105	3.25	30
SW8270C	35CSB013	2/8/2011	Naphthalene	Soil	U	89	78	40-105	14.29	30
SW8270C	35CSB006	2/2/2011	Naphthalene	Soil	U	90	95	40-105	3.86	30
SW8270C	35BSB017	1/19/2011	Naphthalene	Soil	U	83	87	40-105	5.25	30
SW8270C	35CSS031	1/11/2011	Naphthalene	Soil	U	90	81	40-105	11.23	30
SW8270C	35CSB002	1/31/2011	Naphthalene	Soil	U	82	89	40-105	9.09	30
SW8270C	35BSB004	1/27/2011	Naphthalene	Soil	U	86	90	40-105	3.59	30
SW8270C	35BSB017	1/19/2011	2-Nitroaniline	Soil	U	72	73	45-120	1.66	30
SW8270C	35CSB013	2/8/2011	2-Nitroaniline	Soil	U	92	75	45-120	21.03	30
SW8270C	35BSB004	1/27/2011	2-Nitroaniline	Soil	U	88	86	45-120	2.64	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery		Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB002	1/31/2011	2-Nitroaniline	Soil	U	78		85	45-120	9.87	30
SW8270C	35CSS031	1/11/2011	2-Nitroaniline	Soil	U	76		64	45-120	18.10	30
SW8270C	35BSB011	1/24/2011	2-Nitroaniline	Soil	U	84		90	45-120	5.33	30
SW8270C	35CSB006	2/2/2011	2-Nitroaniline	Soil	U	92		92	45-120	1.29	30
SW8270C	35CSB013	2/8/2011	3-Nitroaniline	Soil	U	78		63	25-110	22.60	30
SW8270C	35BSB011	1/24/2011	3-Nitroaniline	Soil	U	52		62	25-110	16.88	30
SW8270C	35BSB017	1/19/2011	3-Nitroaniline	Soil	U	54		54	25-110	0.55	30
SW8270C	35CSB006	2/2/2011	3-Nitroaniline	Soil	UJ	75		48	25-110	44.23	30
SW8270C	35CSS031	1/11/2011	3-Nitroaniline	Soil	UJ	34	*	11	25-110	101.59	30
SW8270C	35CSB002	1/31/2011	3-Nitroaniline	Soil	U	48		45	25-110	5.79	30
SW8270C	35BSB004	1/27/2011	3-Nitroaniline	Soil	U	64		63	25-110	2.27	30
SW8270C	35CSB002	1/31/2011	4-Nitroaniline	Soil	U	68		66	35-115	1.33	30
SW8270C	35CSS031	1/11/2011	4-Nitroaniline	Soil	UJ	36	*	14	35-115	85.20	30
SW8270C	35BSB011	1/24/2011	4-Nitroaniline	Soil	U	63		70	35-115	8.24	30
SW8270C	35CSB006	2/2/2011	4-Nitroaniline	Soil	U	86		84	35-115	4.17	30
SW8270C	35BSB017	1/19/2011	4-Nitroaniline	Soil	U	59		62	35-115	6.36	30
SW8270C	35BSB004	1/27/2011	4-Nitroaniline	Soil	U	73		79	35-115	7.52	30
SW8270C	35CSB013	2/8/2011	4-Nitroaniline	Soil	U	82		67	35-115	22.57	30
SW8270C	35CSB013	2/8/2011	Nitrobenzene	Soil	U	85		73	40-115	15.85	30
SW8270C	35BSB017	1/19/2011	Nitrobenzene	Soil	U	79		82	40-115	3.35	30
SW8270C	35CSB002	1/31/2011	Nitrobenzene	Soil	U	75		84	40-115	11.68	30
SW8270C	35BSB011	1/24/2011	Nitrobenzene	Soil	U	80		85	40-115	4.23	30
SW8270C	35CSS031	1/11/2011	Nitrobenzene	Soil	U	85		78	40-115	8.86	30
SW8270C	35BSB004	1/27/2011	Nitrobenzene	Soil	U	82		86	40-115	4.43	30
SW8270C	35CSB006	2/2/2011	Nitrobenzene	Soil	U	86		90	40-115	3.05	30
SW8270C	35CSS031	1/11/2011	2-Nitrophenol	Soil	U	78		71	40-110	10.44	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB013	2/8/2011	2-Nitrophenol	Soil	U	78	67	40-110	16.46	30
SW8270C	35CSB006	2/2/2011	2-Nitrophenol	Soil	U	80	85	40-110	4.70	30
SW8270C	35CSB002	1/31/2011	2-Nitrophenol	Soil	U	79	87	40-110	10.11	30
SW8270C	35BSB004	1/27/2011	2-Nitrophenol	Soil	U	84	85	40-110	1.70	30
SW8270C	35BSB017	1/19/2011	2-Nitrophenol	Soil	U	68	70	40-110	3.04	30
SW8270C	35BSB011	1/24/2011	2-Nitrophenol	Soil	U	84	88	40-110	3.40	30
SW8270C	35CSB006	2/2/2011	4-Nitrophenol	Soil	U	66	71	15-140	6.06	30
SW8270C	35BSB004	1/27/2011	4-Nitrophenol	Soil	U	71	71	15-140	0.41	30
SW8270C	35CSS031	1/11/2011	4-Nitrophenol	Soil	U	67	56	15-140	18.45	30
SW8270C	35BSB011	1/24/2011	4-Nitrophenol	Soil	U	71	76	15-140	4.74	30
SW8270C	35CSB002	1/31/2011	4-Nitrophenol	Soil	U	62	71	15-140	13.93	30
SW8270C	35CSB013	2/8/2011	4-Nitrophenol	Soil	U	83	65	15-140	25.35	30
SW8270C	35BSB017	1/19/2011	4-Nitrophenol	Soil	U	64	65	15-140	1.85	30
SW8270C	35CSB013	2/8/2011	N-Nitrosodimethylamine	Soil	U	81	66	20-115	21.50	30
SW8270C	35BSB011	1/24/2011	N-Nitrosodimethylamine	Soil	U	75	79	20-115	4.17	30
SW8270C	35CSB002	1/31/2011	N-Nitrosodimethylamine	Soil	U	71	83	20-115	16.28	30
SW8270C	35CSS031	1/11/2011	N-Nitrosodimethylamine	Soil	U	82	72	20-115	13.59	30
SW8270C	35CSB006	2/2/2011	N-Nitrosodimethylamine	Soil	U	87	90	20-115	2.35	30
SW8270C	35BSB004	1/27/2011	N-Nitrosodimethylamine	Soil	U	76	84	20-115	9.01	30
SW8270C	35BSB017	1/19/2011	N-Nitrosodimethylamine	Soil	U	82	80	20-115	2.22	30
SW8270C	35BSB017	1/19/2011	N-Nitrosodi-n-propylamine	Soil	U	77	79	40-115	3.09	30
SW8270C	35CSB002	1/31/2011	N-Nitrosodi-n-propylamine	Soil	U	76	83	40-115	9.81	30
SW8270C	35CSB013	2/8/2011	N-Nitrosodi-n-propylamine	Soil	U	92	78	40-115	17.61	30
SW8270C	35BSB011	1/24/2011	N-Nitrosodi-n-propylamine	Soil	U	84	87	40-115	1.70	30
SW8270C	35CSS031	1/11/2011	N-Nitrosodi-n-propylamine	Soil	U	88	82	40-115	7.41	30
SW8270C	35BSB004	1/27/2011	N-Nitrosodi-n-propylamine	Soil	U	88	89	40-115	0.98	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB006	2/2/2011	N-Nitrosodi-n-propylamine	Soil	U	94	96	40-115	0.94	30
SW8270C	35CSB002	1/31/2011	N-Nitrosodiphenylamine	Soil	U	92	98	50-115	7.38	30
SW8270C	35CSS031	1/11/2011	N-Nitrosodiphenylamine	Soil	U	97	84	50-115	15.23	30
SW8270C	35BSB011	1/24/2011	N-Nitrosodiphenylamine	Soil	U	94	104	50-115	7.52	30
SW8270C	35CSB013	2/8/2011	N-Nitrosodiphenylamine	Soil	U	102	85	50-115	19.48	30
SW8270C	35BSB004	1/27/2011	N-Nitrosodiphenylamine	Soil	U	95	95	50-115	0.31	30
SW8270C	35CSB006	2/2/2011	N-Nitrosodiphenylamine	Soil	U	99	104	50-115	2.99	30
SW8270C	35BSB017	1/19/2011	N-Nitrosodiphenylamine	Soil	U	84	92	50-115	9.39	30
SW8270C	35BSB011	1/24/2011	Pentachlorophenol	Soil	U	75	83	25-120	8.15	30
SW8270C	35CSB006	2/2/2011	Pentachlorophenol	Soil	U	75	82	25-120	7.97	30
SW8270C	35BSB017	1/19/2011	Pentachlorophenol	Soil	U	58	59	25-120	2.05	30
SW8270C	35CSB013	2/8/2011	Pentachlorophenol	Soil	U	69	56	25-120	22.01	30
SW8270C	35BSB004	1/27/2011	Pentachlorophenol	Soil	U	78	76	25-120	2.97	30
SW8270C	35CSB002	1/31/2011	Pentachlorophenol	Soil	U	75	78	25-120	5.49	30
SW8270C	35CSS031	1/11/2011	Pentachlorophenol	Soil	U	72	67	25-120	8.66	30
SW8270C	35CSB002	1/31/2011	Phenanthrene	Soil	U	88	92	50-110	5.62	30
SW8270C	35BSB004	1/27/2011	Phenanthrene	Soil	U	92	94	50-110	1.23	30
SW8270C	35CSB013	2/8/2011	Phenanthrene	Soil	U	102	81	50-110	23.90	30
SW8270C	35CSS031	1/11/2011	Phenanthrene	Soil	U	94	85	50-110	10.74	30
SW8270C	35BSB017	1/19/2011	Phenanthrene	Soil	U	82	91	50-110	10.71	30
SW8270C	35CSB006	2/2/2011	Phenanthrene	Soil	U	98	99	50-110	0.90	30
SW8270C	35BSB011	1/24/2011	Phenanthrene	Soil	U	89	96	50-110	5.68	30
SW8270C	35BSB011	1/24/2011	Phenol	Soil	U	72	75	40-100	2.37	30
SW8270C	35BSB017	1/19/2011	Phenol	Soil	U	62	62	40-100	0.48	30
SW8270C	35BSB004	1/27/2011	Phenol	Soil	U	72	74	40-100	3.15	30
SW8270C	35CSB013	2/8/2011	Phenol	Soil	U	83	72	40-100	16.22	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB006	2/2/2011	Phenol	Soil	U	85	86	40-100	0.35	30
SW8270C	35CSS031	1/11/2011	Phenol	Soil	U	73	66	40-100	10.85	30
SW8270C	35CSB002	1/31/2011	Phenol	Soil	U	69	73	40-100	6.78	30
SW8270C	35CSB006	2/2/2011	Pyrene	Soil	U	96	107	45-125	9.08	30
SW8270C	35CSS031	1/11/2011	Pyrene	Soil	U	103	94	45-125	9.79	30
SW8270C	35CSB002	1/31/2011	Pyrene	Soil	U	94	97	45-125	4.07	30
SW8270C	35CSB013	2/8/2011	Pyrene	Soil	U	96	85	45-125	13.20	30
SW8270C	35BSB017	1/19/2011	Pyrene	Soil	U	80	82	45-125	2.22	30
SW8270C	35BSB004	1/27/2011	Pyrene	Soil	U	98	96	45-125	2.37	30
SW8270C	35BSB011	1/24/2011	Pyrene	Soil	U	101	101	45-125	1.44	30
SW8270C	35BSB011	1/24/2011	1,2,4-Trichlorobenzene	Soil	U	82	86	45-110	3.12	30
SW8270C	35CSS031	1/11/2011	1,2,4-Trichlorobenzene	Soil	U	84	75	45-110	12.12	30
SW8270C	35BSB017	1/19/2011	1,2,4-Trichlorobenzene	Soil	U	79	81	45-110	3.36	30
SW8270C	35BSB004	1/27/2011	1,2,4-Trichlorobenzene	Soil	U	82	84	45-110	2.42	30
SW8270C	35CSB013	2/8/2011	1,2,4-Trichlorobenzene	Soil	U	82	69	45-110	17.75	30
SW8270C	35CSB006	2/2/2011	1,2,4-Trichlorobenzene	Soil	U	84	87	45-110	2.08	30
SW8270C	35CSB002	1/31/2011	1,2,4-Trichlorobenzene	Soil	U	78	85	45-110	10.26	30
SW8270C	35CSB002	1/31/2011	2,4,5-Trichlorophenol	Soil	U	75	80	50-110	8.09	30
SW8270C	35BSB017	1/19/2011	2,4,5-Trichlorophenol	Soil	U	72	73	50-110	2.07	30
SW8270C	35CSB006	2/2/2011	2,4,5-Trichlorophenol	Soil	U	82	85	50-110	2.50	30
SW8270C	35BSB004	1/27/2011	2,4,5-Trichlorophenol	Soil	U	77	80	50-110	4.04	30
SW8270C	35BSB011	1/24/2011	2,4,5-Trichlorophenol	Soil	U	77	86	50-110	10.00	30
SW8270C	35CSS031	1/11/2011	2,4,5-Trichlorophenol	Soil	U	75	70	50-110	8.26	30
SW8270C	35CSB013	2/8/2011	2,4,5-Trichlorophenol	Soil	U	80	67	50-110	19.43	30
SW8270C	35BSB011	1/24/2011	2,4,6-Trichlorophenol	Soil	U	82	83	45-110	0.71	30
SW8270C	35CSS031	1/11/2011	2,4,6-Trichlorophenol	Soil	U	79	71	45-110	10.82	30

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8270C	35CSB002	1/31/2011	2,4,6-Trichlorophenol	Soil	U	72	84	45-110	16.15	30
SW8270C	35CSB006	2/2/2011	2,4,6-Trichlorophenol	Soil	U	79	81	45-110	1.11	30
SW8270C	35CSB013	2/8/2011	2,4,6-Trichlorophenol	Soil	U	75	63	45-110	19.52	30
SW8270C	35BSB017	1/19/2011	2,4,6-Trichlorophenol	Soil	U	64	65	45-110	2.33	30
SW8270C	35BSB004	1/27/2011	2,4,6-Trichlorophenol	Soil	U	82	76	45-110	8.38	30
SW8330	35BSB017	1/19/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	99	99	80-125	0.41	20
SW8330	35CSB013	2/8/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	94	94	80-125	1.52	20
SW8330	35CSS013	1/12/2011	2-Amino-4,6-Dinitrotoluene	Soil	J	112	93	80-125	13.19	20
SW8330	35BSB004	1/27/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	96	98	80-125	0.42	20
SW8330	35CSS031	1/11/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	264	347	80-125	30.46	20
SW8330	35CSB006	2/2/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	101	102	80-125	1.77	20
SW8330	35BSB011	1/24/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	94	92	80-125	1.72	20
SW8330	35CSB002	1/31/2011	2-Amino-4,6-Dinitrotoluene	Soil	U	102	101	80-125	1.98	20
SW8330	35CSB013	2/8/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	97	97	80-125	1.47	20
SW8330	35CSS031	1/11/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	99	105	80-125	9.50	20
SW8330	35CSB002	1/31/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	98	98	80-125	2.05	20
SW8330	35BSB004	1/27/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	98	100	80-125	0.81	20
SW8330	35BSB011	1/24/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	97	95	80-125	1.67	20
SW8330	35BSB017	1/19/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	99	100	80-125	0.00	20
SW8330	35CSS013	1/12/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	101	100	80-125	0.20	20
SW8330	35CSB006	2/2/2011	4-Amino-2,6-Dinitrotoluene	Soil	U	103	103	80-125	0.97	20
SW8330	35CSS031	1/11/2011	1,3-Dinitrobenzene	Soil	U	107	107	80-125	3.99	20
SW8330	35BSB017	1/19/2011	1,3-Dinitrobenzene	Soil	U	100	100	80-125	0.61	20
SW8330	35CSS013	1/12/2011	1,3-Dinitrobenzene	Soil	U	104	104	80-125	1.17	20
SW8330	35BSB011	1/24/2011	1,3-Dinitrobenzene	Soil	U	97	95	80-125	1.67	20
SW8330	35CSB002	1/31/2011	1,3-Dinitrobenzene	Soil	U	106	106	80-125	1.33	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8330	35CSB013	2/8/2011	1,3-Dinitrobenzene	Soil	U	96	96	80-125	1.69	20
SW8330	35CSB006	2/2/2011	1,3-Dinitrobenzene	Soil	U	104	104	80-125	1.35	20
SW8330	35BSB004	1/27/2011	1,3-Dinitrobenzene	Soil	U	99	99	80-125	0.61	20
SW8330	35CSB013	2/8/2011	2,4-Dinitrotoluene	Soil	U	92	93	80-125	1.98	20
SW8330	35CSB002	1/31/2011	2,4-Dinitrotoluene	Soil	U	105	105	80-125	1.14	20
SW8330	35CSS031	1/11/2011	2,4-Dinitrotoluene	Soil	U	137	105	80-125	22.71	20
SW8330	35CSB006	2/2/2011	2,4-Dinitrotoluene	Soil	U	103	104	80-125	1.94	20
SW8330	35BSB004	1/27/2011	2,4-Dinitrotoluene	Soil	U	95	97	80-125	0.42	20
SW8330	35BSB017	1/19/2011	2,4-Dinitrotoluene	Soil	J	97	100	80-125	1.87	20
SW8330	35CSS013	1/12/2011	2,4-Dinitrotoluene	Soil	J	* 173	* 277	80-125	**41.57**	20
SW8330	35BSB011	1/24/2011	2,4-Dinitrotoluene	Soil	U	93	91	80-125	2.18	20
SW8330	35CSB002	1/31/2011	2,6-Dinitrotoluene	Soil	U	107	107	80-120	0.94	20
SW8330	35BSB017	1/19/2011	2,6-Dinitrotoluene	Soil	J	97	98	80-120	0.38	20
SW8330	35CSS031	1/11/2011	2,6-Dinitrotoluene	Soil	U	107	112	80-120	7.60	20
SW8330	35CSS013	1/12/2011	2,6-Dinitrotoluene	Soil	U	109	113	80-120	5.46	20
SW8330	35BSB011	1/24/2011	2,6-Dinitrotoluene	Soil	U	93	91	80-120	2.17	20
SW8330	35BSB004	1/27/2011	2,6-Dinitrotoluene	Soil	U	96	97	80-120	0.21	20
SW8330	35CSB006	2/2/2011	2,6-Dinitrotoluene	Soil	U	102	104	80-120	2.53	20
SW8330	35CSB013	2/8/2011	2,6-Dinitrotoluene	Soil	U	93	93	80-120	1.31	20
SW8330	35BSB017	1/19/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	U	94	94	70-135	1.08	20
SW8330	35CSB013	2/8/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	U	89	89	70-135	1.60	20
SW8330	35CSB006	2/2/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	U	94	95	70-135	1.69	20
SW8330	35CSB002	1/31/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	J	99	98	70-135	1.55	20
SW8330	35CSS013	1/12/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	J	90	106	70-135	14.50	20
SW8330	35BSB011	1/24/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	U	92	91	70-135	1.31	20
SW8330	35CSS031	1/11/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	J	70	81	70-135	11.80	20

Method	Location	Date	Analyte	Matrix	Flag		Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW8330	35BSB004	1/27/2011	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Soil	U		94	95	70-135	0.85	20
SW8330	35BSB004	1/27/2011	Nitrobenzene	Soil	U		100	100	75-125	0.40	20
SW8330	35CSB013	2/8/2011	Nitrobenzene	Soil	U		94	95	75-125	2.79	20
SW8330	35BSB017	1/19/2011	Nitrobenzene	Soil	U		97	100	75-125	1.85	20
SW8330	35CSB006	2/2/2011	Nitrobenzene	Soil	U		104	104	75-125	1.15	20
SW8330	35CSB002	1/31/2011	Nitrobenzene	Soil	U		102	101	75-125	2.97	20
SW8330	35CSS013	1/12/2011	Nitrobenzene	Soil	U		109	107	75-125	0.56	20
SW8330	35CSS031	1/11/2011	Nitrobenzene	Soil	U		126	151	75-125	21.48	20
SW8330	35BSB011	1/24/2011	Nitrobenzene	Soil	U		98	96	75-125	2.28	20
UW29	35BSB004	1/27/2011	Nitroguanidine	Soil	UJ		103	103	70-135	0.00	20
UW29	35CSB002	1/31/2011	Nitroguanidine	Soil	UJ		97	102	70-135	3.05	20
M8330	35CSB013	2/8/2011	Nitroguanidine	Soil	U		104	102	70-135	1.94	20
UW29	35BSB017	1/19/2011	Nitroguanidine	Soil	UJ		104	106	70-135	2.93	20
UW29	35BSB011	1/24/2011	Nitroguanidine	Soil	J		105	107	70-135	2.90	20
UW29	35CSB006	2/2/2011	Nitroguanidine	Soil	U		104	104	70-135	0.99	20
UW29	35CSS031	2/17/2011	Nitroguanidine	Soil	U		115	103	70-135	7.34	20
SW8330	35BSB011	1/24/2011	Nitroglycerin	Soil	U		91	89	70-135	2.46	20
SW8330	35CSS031	1/11/2011	Nitroglycerin	Soil	J	*	165	98	70-135	**36.90**	20
SW8330	35CSB013	2/8/2011	Nitroglycerin	Soil	U		90	90	70-135	2.49	20
SW8330	35BSB017	1/19/2011	Nitroglycerin	Soil	U		95	95	70-135	0.11	20
SW8330	35CSB002	1/31/2011	Nitroglycerin	Soil	U		103	102	70-135	1.96	20
SW8330	35CSS013	1/12/2011	Nitroglycerin	Soil	J	*	672	98	70-135	**143.66**	20
SW8330	35CSB006	2/2/2011	Nitroglycerin	Soil	U		100	97	70-135	1.01	20
SW8330	35BSB004	1/27/2011	Nitroglycerin	Soil	U		93	94	70-135	0.32	20
SW8330	35CSB006	2/2/2011	2-Nitrotoluene	Soil	U		104	103	80-125	0.77	20
SW8330	35CSB002	1/31/2011	2-Nitrotoluene	Soil	U		99	101	80-125	0.00	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8330	35CSS031	1/11/2011	2-Nitrotoluene	Soil	U	123	125	80-125	5.89	20
SW8330	35BSB017	1/19/2011	2-Nitrotoluene	Soil	U	92	95	80-125	1.95	20
SW8330	35CSS013	1/12/2011	2-Nitrotoluene	Soil	U	104	104	80-125	1.56	20
SW8330	35CSB013	2/8/2011	2-Nitrotoluene	Soil	U	89	90	80-125	2.51	20
SW8330	35BSB011	1/24/2011	2-Nitrotoluene	Soil	U	91	89	80-125	2.90	20
SW8330	35BSB004	1/27/2011	2-Nitrotoluene	Soil	U	94	95	80-125	0.21	20
SW8330	35CSS031	1/11/2011	3-Nitrotoluene	Soil	U	103	105	75-120	5.85	20
SW8330	35CSS013	1/12/2011	3-Nitrotoluene	Soil	U	103	101	75-120	0.20	20
SW8330	35BSB017	1/19/2011	3-Nitrotoluene	Soil	U	92	93	75-120	0.88	20
SW8330	35BSB011	1/24/2011	3-Nitrotoluene	Soil	U	90	88	75-120	2.92	20
SW8330	35BSB004	1/27/2011	3-Nitrotoluene	Soil	U	93	94	75-120	0.22	20
SW8330	35CSB013	2/8/2011	3-Nitrotoluene	Soil	U	88	88	75-120	1.61	20
SW8330	35CSB006	2/2/2011	3-Nitrotoluene	Soil	U	103	103	75-120	1.16	20
SW8330	35CSB002	1/31/2011	3-Nitrotoluene	Soil	U	100	101	75-120	0.80	20
SW8330	35CSS031	1/11/2011	4-Nitrotoluene	Soil	U	103	103	75-125	3.74	20
SW8330	35BSB004	1/27/2011	4-Nitrotoluene	Soil	U	93	95	75-125	0.21	20
SW8330	35CSS013	1/12/2011	4-Nitrotoluene	Soil	U	104	103	75-125	1.17	20
SW8330	35CSB006	2/2/2011	4-Nitrotoluene	Soil	U	103	104	75-125	1.74	20
SW8330	35CSB002	1/31/2011	4-Nitrotoluene	Soil	U	102	102	75-125	0.39	20
SW8330	35CSB013	2/8/2011	4-Nitrotoluene	Soil	U	89	89	75-125	2.06	20
SW8330	35BSB011	1/24/2011	4-Nitrotoluene	Soil	U	90	89	75-125	2.24	20
SW8330	35BSB017	1/19/2011	4-Nitrotoluene	Soil	U	92	94	75-125	1.09	20
SW8330	35CSB006	2/2/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U	101	102	75-125	1.78	20
SW8330	35CSB002	1/31/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U	103	104	75-125	0.19	20
SW8330	35BSB004	1/27/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U	96	97	75-125	0.00	20
SW8330	35CSS013	1/12/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U	100	107	75-125	8.39	20

Method	Location	Date	Analyte	Matrix	Flag		Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8330	35CSS031	1/11/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U		109	105	75-125	0.76	20
SW8330	35CSB013	2/8/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U		97	97	75-125	2.10	20
SW8330	35BSB011	1/24/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U		99	97	75-125	2.25	20
SW8330	35BSB017	1/19/2011	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	Soil	U		97	97	75-125	0.63	20
SW8330	35BSB011	1/24/2011	Pentaerythritol Tetranitrate	Soil	U		88	87	70-135	1.83	20
SW8330	35CSS013	1/12/2011	Pentaerythritol Tetranitrate	Soil	U		113	107	70-135	3.67	20
SW8330	35CSB013	2/8/2011	Pentaerythritol Tetranitrate	Soil	U		89	89	70-135	1.71	20
SW8330	35BSB004	1/27/2011	Pentaerythritol Tetranitrate	Soil	U		91	93	70-135	0.44	20
SW8330	35CSS031	1/11/2011	Pentaerythritol Tetranitrate	Soil	R	*	0	117	70-135	**200.00**	20
SW8330	35CSB006	2/2/2011	Pentaerythritol Tetranitrate	Soil	U		100	102	70-135	3.66	20
SW8330	35CSB002	1/31/2011	Pentaerythritol Tetranitrate	Soil	U		101	100	70-135	2.00	20
SW8330	35BSB017	1/19/2011	Pentaerythritol Tetranitrate	Soil	U		93	93	70-135	0.33	20
SW8330	35CSB013	2/8/2011	Tetryl	Soil	U		80	79	10-150	0.76	20
SW8330	35BSB011	1/24/2011	Tetryl	Soil	U		80	79	10-150	1.77	20
SW8330	35CSB002	1/31/2011	Tetryl	Soil	U		96	96	10-150	1.88	20
SW8330	35CSS013	1/12/2011	Tetryl	Soil	U		145	126	10-150	12.86	20
SW8330	35CSB006	2/2/2011	Tetryl	Soil	U		94	93	10-150	0.43	20
SW8330	35CSS031	1/11/2011	Tetryl	Soil	U		428	653	10-150	45.23	20
SW8330	35BSB017	1/19/2011	Tetryl	Soil	U		89	91	10-150	1.35	20
SW8330	35BSB004	1/27/2011	Tetryl	Soil	U		81	84	10-150	1.71	20
SW8330	35CSB006	2/2/2011	1,3,5-Trinitrobenzene	Soil	U		103	102	75-125	0.19	20
SW8330	35BSB017	1/19/2011	1,3,5-Trinitrobenzene	Soil	U		99	100	75-125	0.61	20
SW8330	35CSB013	2/8/2011	1,3,5-Trinitrobenzene	Soil	U		97	97	75-125	1.47	20
SW8330	35CSB002	1/31/2011	1,3,5-Trinitrobenzene	Soil	U		104	104	75-125	1.74	20
SW8330	35BSB004	1/27/2011	1,3,5-Trinitrobenzene	Soil	U		97	98	75-125	0.21	20
SW8330	35CSS031	1/11/2011	1,3,5-Trinitrobenzene	Soil	U		123	125	75-125	5.23	20

Method	Location	Date	Analyte	Matrix	Flag		Matrix Spike % Recovery		Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW8330	35CSS013	1/12/2011	1,3,5-Trinitrobenzene	Soil	U		107		106	75-125	0.76	20
SW8330	35BSB011	1/24/2011	1,3,5-Trinitrobenzene	Soil	U		97		95	75-125	1.87	20
SW8330	35BSB011	1/24/2011	2,4,6-Trinitrotoluene	Soil	U		82		81	55-140	2.21	20
SW8330	35CSB002	1/31/2011	2,4,6-Trinitrotoluene	Soil	U		91		90	55-140	2.22	20
SW8330	35CSB006	2/2/2011	2,4,6-Trinitrotoluene	Soil	U		89		89	55-140	0.90	20
SW8330	35CSS031	1/11/2011	2,4,6-Trinitrotoluene	Soil	J	*	-6	*	28	55-140	**21.40**	20
SW8330	35CSB013	2/8/2011	2,4,6-Trinitrotoluene	Soil	U		79		80	55-140	2.05	20
SW8330	35BSB017	1/19/2011	2,4,6-Trinitrotoluene	Soil	U		88		88	55-140	0.46	20
SW8330	35BSB004	1/27/2011	2,4,6-Trinitrotoluene	Soil	U		85		86	55-140	0.24	20
SW8330	35CSS013	1/12/2011	2,4,6-Trinitrotoluene	Soil	U		107		103	55-140	1.74	20
SW6010B	35BSB017	1/19/2011	Aluminum	Soil	J		1194		1308	80-120	2.46	20
SW6010B	35BSB012	1/24/2011	Aluminum	Soil			651		1047	80-120	8.73	20
SW6010B	35BSB004	1/27/2011	Aluminum	Soil			1200		1043	80-120	3.32	20
SW6010B	35BSB011	1/24/2011	Aluminum	Soil			1594		1748	80-120	3.44	20
SW6010B	35CSB006	2/2/2011	Aluminum	Soil			593		740	80-120	5.93	20
SW6010B	35CSS031	1/11/2011	Aluminum	Soil			507		472	80-120	1.12	20
SW6010B	35CSB013	2/8/2011	Aluminum	Soil	J		1384		1483	80-120	1.24	20
SW6010B	35CSB002	1/31/2011	Aluminum	Soil			518		306	80-120	5.19	20
SW6010B	35BSB012	1/24/2011	Antimony	Soil	UJ	*	23	*	23	80-120	2.36	20
SW6010B	35CSS031	1/11/2011	Antimony	Soil	UJ	*	28	*	26	80-120	5.49	20
SW6010B	35BSB017	1/19/2011	Antimony	Soil	UJ	*	14	*	13	80-120	2.20	20
SW6010B	35CSB013	2/8/2011	Antimony	Soil	UJ	*	16	*	15	80-120	3.24	20
SW6010B	35BSB011	1/24/2011	Antimony	Soil	UJ	*	23	*	23	80-120	0.64	20
SW6010B	35BSB004	1/27/2011	Antimony	Soil	UJ	*	24	*	23	80-120	5.91	20
SW6010B	35CSB002	1/31/2011	Antimony	Soil	UJ	*	0	*	0	80-120	#Error	20
SW6010B	35CSB006	2/2/2011	Antimony	Soil	UJ	*	26	*	27	80-120	5.42	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35CSS031	1/11/2011	Arsenic	Soil		93	89	80-120	3.83	20
SW6010B	35CSB002	1/31/2011	Arsenic	Soil		94	89	80-120	4.37	20
SW6010B	35CSB013	2/8/2011	Arsenic	Soil		96	96	80-120	0.00	20
SW6010B	35BSB004	1/27/2011	Arsenic	Soil		99	100	80-120	0.36	20
SW6010B	35BSB011	1/24/2011	Arsenic	Soil		93	95	80-120	2.15	20
SW6010B	35BSB012	1/24/2011	Arsenic	Soil		104	101	80-120	2.33	20
SW6010B	35BSB017	1/19/2011	Arsenic	Soil		91	93	80-120	1.43	20
SW6010B	35CSB006	2/2/2011	Arsenic	Soil		88	90	80-120	1.98	20
SW6010B	35BSB017	1/19/2011	Barium	Soil		188	173	80-120	1.99	20
SW6010B	35BSB011	1/24/2011	Barium	Soil	J	-53	77	80-120	**23.18**	20
SW6010B	35BSB012	1/24/2011	Barium	Soil		59	127	80-120	8.19	20
SW6010B	35CSB002	1/31/2011	Barium	Soil		133	163	80-120	3.51	20
SW6010B	35CSB006	2/2/2011	Barium	Soil		123	49	80-120	9.58	20
SW6010B	35BSB004	1/27/2011	Barium	Soil	J	48	110	80-120	5.05	20
SW6010B	35CSS031	1/11/2011	Barium	Soil		98	113	80-120	2.74	20
SW6010B	35CSB013	2/8/2011	Barium	Soil		84	129	80-120	3.73	20
SW6010B	35CSS031	1/11/2011	Beryllium	Soil	U	83	81	80-120	1.82	20
SW6010B	35BSB011	1/24/2011	Beryllium	Soil		91	96	80-120	5.05	20
SW6010B	35CSB013	2/8/2011	Beryllium	Soil		93	93	80-120	0.52	20
SW6010B	35CSB006	2/2/2011	Beryllium	Soil	J	87	88	80-120	1.11	20
SW6010B	35BSB004	1/27/2011	Beryllium	Soil	J	97	95	80-120	1.47	20
SW6010B	35BSB017	1/19/2011	Beryllium	Soil		88	90	80-120	2.74	20
SW6010B	35CSB002	1/31/2011	Beryllium	Soil		88	88	80-120	0.54	20
SW6010B	35BSB012	1/24/2011	Beryllium	Soil	J	96	97	80-120	0.99	20
SW6010B	35BSB017	1/19/2011	Cadmium	Soil	J	84	86	80-120	2.92	20
SW6010B	35BSB004	1/27/2011	Cadmium	Soil	J	91	89	80-120	2.11	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35BSB011	1/24/2011	Cadmium	Soil	J	88	92	80-120	4.26	20
SW6010B	35CSB006	2/2/2011	Cadmium	Soil	J	81	82	80-120	0.60	20
SW6010B	35CSS031	1/11/2011	Cadmium	Soil		86	81	80-120	5.85	20
SW6010B	35CSB002	1/31/2011	Cadmium	Soil	J	85	84	80-120	1.16	20
SW6010B	35BSB012	1/24/2011	Cadmium	Soil	J	89	91	80-120	2.16	20
SW6010B	35CSB013	2/8/2011	Cadmium	Soil	J	89	89	80-120	0.00	20
SW6010B	35BSB012	1/24/2011	Calcium	Soil	J	10032	0	80-120	**38.57**	20
SW6010B	35CSB002	1/31/2011	Calcium	Soil	J	-3011	-2764	80-120	1.92	20
SW6010B	35CSS031	1/11/2011	Calcium	Soil		0	1293	80-120	14.21	20
SW6010B	35BSB011	1/24/2011	Calcium	Soil		-2215	-1252	80-120	4.33	20
SW6010B	35BSB017	1/19/2011	Calcium	Soil	J	2825	1635	80-120	8.48	20
SW6010B	35CSB006	2/2/2011	Calcium	Soil	J	-981	-883	80-120	1.26	20
SW6010B	35BSB004	1/27/2011	Calcium	Soil		-2248	-287	80-120	16.84	20
SW6010B	35CSB013	2/8/2011	Calcium	Soil		49	643	80-120	4.12	20
SW6010B	35BSB004	1/27/2011	Chromium, Total	Soil	J	96	92	80-120	2.82	20
SW6010B	35CSS031	1/11/2011	Chromium, Total	Soil		88	84	80-120	3.42	20
SW6010B	35CSB006	2/2/2011	Chromium, Total	Soil		87	96	80-120	7.64	20
SW6010B	35BSB011	1/24/2011	Chromium, Total	Soil		90	100	80-120	8.22	20
SW6010B	35BSB012	1/24/2011	Chromium, Total	Soil		92	98	80-120	4.73	20
SW6010B	35CSB013	2/8/2011	Chromium, Total	Soil	J	97	99	80-120	1.22	20
SW6010B	35CSB002	1/31/2011	Chromium, Total	Soil	J	88	81	80-120	4.68	20
SW6010B	35BSB017	1/19/2011	Chromium, Total	Soil	J	93	98	80-120	3.92	20
SW6010B	35CSS031	1/11/2011	Cobalt	Soil	J	83	* 79	80-120	4.17	20
SW6010B	35BSB017	1/19/2011	Cobalt	Soil	J	86	88	80-120	1.86	20
SW6010B	35BSB011	1/24/2011	Cobalt	Soil		86	91	80-120	4.65	20
SW6010B	35CSB013	2/8/2011	Cobalt	Soil		91	93	80-120	1.23	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery		Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35BSB004	1/27/2011	Cobalt	Soil	J	91		91	80-120	0.00	20
SW6010B	35CSB002	1/31/2011	Cobalt	Soil		89		86	80-120	2.64	20
SW6010B	35CSB006	2/2/2011	Cobalt	Soil		82		85	80-120	3.16	20
SW6010B	35BSB012	1/24/2011	Cobalt	Soil		88		92	80-120	3.17	20
SW6010B	35BSB012	1/24/2011	Copper	Soil	J	80		99	80-120	10.73	20
SW6010B	35CSS031	1/11/2011	Copper	Soil	J	94	*	135	80-120	**21.86**	20
SW6010B	35CSB002	1/31/2011	Copper	Soil		92		87	80-120	2.76	20
SW6010B	35CSB013	2/8/2011	Copper	Soil		109		107	80-120	0.82	20
SW6010B	35CSB006	2/2/2011	Copper	Soil		94		108	80-120	10.26	20
SW6010B	35BSB011	1/24/2011	Copper	Soil	J	88		93	80-120	3.51	20
SW6010B	35BSB004	1/27/2011	Copper	Soil	J	99	*	235	80-120	**49.26**	20
SW6010B	35BSB017	1/19/2011	Copper	Soil	J	91		94	80-120	1.76	20
SW6010B	35BSB004	1/27/2011	Iron	Soil		478		239	80-120	3.89	20
SW6010B	35BSB017	1/19/2011	Iron	Soil	J	942		1041	80-120	1.65	20
SW6010B	35CSB013	2/8/2011	Iron	Soil		396		494	80-120	1.08	20
SW6010B	35BSB011	1/24/2011	Iron	Soil		188		385	80-120	4.74	20
SW6010B	35CSB002	1/31/2011	Iron	Soil	J	296		-49	80-120	4.88	20
SW6010B	35CSB006	2/2/2011	Iron	Soil	J	230		525	80-120	9.87	20
SW6010B	35BSB012	1/24/2011	Iron	Soil		-196		343	80-120	9.95	20
SW6010B	35CSS031	1/11/2011	Iron	Soil	J	164		-134	80-120	6.06	20
SW6010B	35BSB017	1/19/2011	Lead	Soil	J	88		91	80-120	2.95	20
SW6010B	35BSB004	1/27/2011	Lead	Soil	J	97		91	80-120	4.43	20
SW6010B	35BSB012	1/24/2011	Lead	Soil		90		99	80-120	6.98	20
SW6010B	35CSB006	2/2/2011	Lead	Soil	J	81		83	80-120	1.46	20
SW6010B	35CSS031	1/11/2011	Lead	Soil	J	90		87	80-120	2.30	20
SW6010B	35CSB002	1/31/2011	Lead	Soil	J	90		85	80-120	4.03	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35BSB011	1/24/2011	Lead	Soil		86	93	80-120	5.79	20
SW6010B	35CSB013	2/8/2011	Lead	Soil	J	92	93	80-120	0.36	20
SW6010B	35CSS031	1/11/2011	Magnesium	Soil	J	124	134	80-120	0.52	20
SW6010B	35BSB017	1/19/2011	Magnesium	Soil	J	461	496	80-120	1.20	20
SW6010B	35BSB012	1/24/2011	Magnesium	Soil		83	259	80-120	7.91	20
SW6010B	35CSB013	2/8/2011	Magnesium	Soil	J	341	386	80-120	1.08	20
SW6010B	35BSB011	1/24/2011	Magnesium	Soil		385	448	80-120	3.44	20
SW6010B	35CSB006	2/2/2011	Magnesium	Soil	J	181	314	80-120	10.53	20
SW6010B	35CSB002	1/31/2011	Magnesium	Soil	J	197	39	80-120	6.14	20
SW6010B	35BSB004	1/27/2011	Magnesium	Soil	J	234	215	80-120	0.86	20
SW6010B	35CSS031	1/11/2011	Manganese	Soil		60	25	80-120	3.33	20
SW6010B	35BSB017	1/19/2011	Manganese	Soil		238	307	80-120	5.02	20
SW6010B	35CSB006	2/2/2011	Manganese	Soil		0	93	80-120	11.76	20
SW6010B	35BSB012	1/24/2011	Manganese	Soil		0	93	80-120	9.43	20
SW6010B	35CSB002	1/31/2011	Manganese	Soil	J	365	49	80-120	**25.00**	20
SW6010B	35CSB013	2/8/2011	Manganese	Soil		138	218	80-120	4.35	20
SW6010B	35BSB004	1/27/2011	Manganese	Soil	J	100	201	80-120	8.96	20
SW6010B	35BSB011	1/24/2011	Manganese	Soil		-43	106	80-120	10.75	20
SW7471A	35BSB017	1/19/2011	Mercury	Soil	J	109	105	80-120	3.64	20
SW7471A	35BSB012	1/24/2011	Mercury	Soil	U	91	95	80-120	3.51	20
SW7471A	35CSB002	1/31/2011	Mercury	Soil	U	95	92	80-120	3.51	20
SW7471A	35CSS031	1/11/2011	Mercury	Soil	U	103	91	80-120	12.24	20
SW7471A	35BSB004	1/27/2011	Mercury	Soil	U	99	99	80-120	0.00	20
SW7471A	35BSB011	1/24/2011	Mercury	Soil	U	96	100	80-120	3.28	20
SW7471A	35CSB013	2/8/2011	Mercury	Soil	U	112	109	80-120	2.99	20
SW7471A	35CSB006	2/2/2011	Mercury	Soil	U	105	105	80-120	0.00	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike	% Recovery	Spike Duplicate	% Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35CSB006	2/2/2011	Molybdenum	Soil	J	*	79		81	80-120	2.42	20
SW6010B	35BSB011	1/24/2011	Molybdenum	Soil	J	*	79		84	80-120	5.19	20
SW6010B	35BSB017	1/19/2011	Molybdenum	Soil	J	*	72	*	73	80-120	1.99	20
SW6010B	35CSS031	1/11/2011	Molybdenum	Soil	J		80	*	76	80-120	4.97	20
SW6010B	35BSB012	1/24/2011	Molybdenum	Soil	J		89		90	80-120	1.06	20
SW6010B	35CSB002	1/31/2011	Molybdenum	Soil	J		82		82	80-120	0.00	20
SW6010B	35BSB004	1/27/2011	Molybdenum	Soil	J		88		87	80-120	1.59	20
SW6010B	35CSB013	2/8/2011	Molybdenum	Soil	J	*	75	*	74	80-120	0.64	20
SW6010B	35BSB004	1/27/2011	Nickel	Soil			91		89	80-120	1.14	20
SW6010B	35BSB012	1/24/2011	Nickel	Soil			85		91	80-120	4.76	20
SW6010B	35BSB017	1/19/2011	Nickel	Soil	J		89		90	80-120	1.16	20
SW6010B	35BSB011	1/24/2011	Nickel	Soil			85		89	80-120	3.39	20
SW6010B	35CSS031	1/11/2011	Nickel	Soil			85		81	80-120	4.10	20
SW6010B	35CSB002	1/31/2011	Nickel	Soil			86		84	80-120	1.85	20
SW6010B	35CSB013	2/8/2011	Nickel	Soil			93		94	80-120	0.64	20
SW6010B	35CSB006	2/2/2011	Nickel	Soil			83		96	80-120	11.93	20
SW6010B	35BSB017	1/19/2011	Potassium	Soil			273		275	80-120	0.27	20
SW6010B	35CSB013	2/8/2011	Potassium	Soil	J		180		210	80-120	2.33	20
SW6010B	35CSS031	1/11/2011	Potassium	Soil			109		117	80-120	1.22	20
SW6010B	35BSB012	1/24/2011	Potassium	Soil			100		164	80-120	8.90	20
SW6010B	35BSB004	1/27/2011	Potassium	Soil			148		117	80-120	4.31	20
SW6010B	35CSB002	1/31/2011	Potassium	Soil	J		168		114	80-120	4.56	20
SW6010B	35BSB011	1/24/2011	Potassium	Soil	J	*	137	*	149	80-120	2.62	20
SW6010B	35CSB006	2/2/2011	Potassium	Soil	J	*	135	*	145	80-120	2.48	20
SW6010B	35CSB006	2/2/2011	Selenium	Soil	U		83		84	80-120	0.59	20
SW6010B	35BSB004	1/27/2011	Selenium	Soil	U		95		93	80-120	2.54	20

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike % Recovery	Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35BSB017	1/19/2011	Selenium	Soil	U	83	84	80-120	1.78	20
SW6010B	35CSS031	1/11/2011	Selenium	Soil	J	89	85	80-120	4.47	20
SW6010B	35CSB013	2/8/2011	Selenium	Soil	J	89	90	80-120	1.09	20
SW6010B	35CSB002	1/31/2011	Selenium	Soil	J	87	87	80-120	0.00	20
SW6010B	35BSB012	1/24/2011	Selenium	Soil	U	95	97	80-120	2.04	20
SW6010B	35BSB011	1/24/2011	Selenium	Soil	U	93	98	80-120	4.53	20
SW6010B	35BSB011	1/24/2011	Silver	Soil	U	93	98	75-120	5.03	20
SW6010B	35BSB004	1/27/2011	Silver	Soil	U	99	97	75-120	1.47	20
SW6010B	35BSB012	1/24/2011	Silver	Soil	U	99	100	75-120	0.49	20
SW6010B	35CSB006	2/2/2011	Silver	Soil	U	88	89	75-120	1.10	20
SW6010B	35CSB013	2/8/2011	Silver	Soil	U	98	98	75-120	0.00	20
SW6010B	35CSS031	1/11/2011	Silver	Soil	U	85	83	75-120	1.78	20
SW6010B	35CSB002	1/31/2011	Silver	Soil	J	91	90	75-120	1.09	20
SW6010B	35BSB017	1/19/2011	Silver	Soil	U	89	92	75-120	2.74	20
SW6010B	35BSB017	1/19/2011	Sodium	Soil		95	97	80-120	1.85	20
SW6010B	35CSB006	2/2/2011	Sodium	Soil		82	88	80-120	2.82	20
SW6010B	35CSB002	1/31/2011	Sodium	Soil	J	91	88	80-120	1.54	20
SW6010B	35CSS031	1/11/2011	Sodium	Soil	J	* 77	83	80-120	6.60	20
SW6010B	35BSB012	1/24/2011	Sodium	Soil		88	94	80-120	2.23	20
SW6010B	35BSB004	1/27/2011	Sodium	Soil		103	96	80-120	3.26	20
SW6010B	35BSB011	1/24/2011	Sodium	Soil	J	* 78	91	80-120	5.46	20
SW6010B	35CSB013	2/8/2011	Sodium	Soil	U	106	107	80-120	0.50	20
SW6010B	35CSS031	1/11/2011	Thallium	Soil	UJ	81	* 79	80-120	2.50	20
SW6010B	35BSB017	1/19/2011	Thallium	Soil	U	87	88	80-120	1.14	20
SW6010B	35BSB004	1/27/2011	Thallium	Soil	U	89	88	80-120	1.63	20
SW6010B	35CSB002	1/31/2011	Thallium	Soil	UJ	* 70	* 70	80-120	0.00	20

Method	Location	Date	Analyte	Matrix	Flag		Matrix Spike % Recovery		Spike Duplicate % Recovery	Spike Limits	RPD	RPD Limits
SW6010B	35CSB013	2/8/2011	Thallium	Soil	UJ		80		80	80-120	0.00	20
SW6010B	35BSB012	1/24/2011	Thallium	Soil	U		88		89	80-120	1.66	20
SW6010B	35BSB011	1/24/2011	Thallium	Soil	J		87		91	80-120	4.28	20
SW6010B	35CSB006	2/2/2011	Thallium	Soil	U		82		85	80-120	2.93	20
SW6010B	35BSB011	1/24/2011	Vanadium	Soil			94		105	80-120	5.94	20
SW6010B	35CSS031	1/11/2011	Vanadium	Soil	J		92	*	79	80-120	8.99	20
SW6010B	35CSB006	2/2/2011	Vanadium	Soil			90		99	80-120	6.10	20
SW6010B	35BSB017	1/19/2011	Vanadium	Soil	J		97		101	80-120	2.55	20
SW6010B	35BSB004	1/27/2011	Vanadium	Soil	J		99		103	80-120	2.02	20
SW6010B	35CSB013	2/8/2011	Vanadium	Soil	J		111		111	80-120	0.00	20
SW6010B	35CSB002	1/31/2011	Vanadium	Soil			100		90	80-120	4.95	20
SW6010B	35BSB012	1/24/2011	Vanadium	Soil			94		105	80-120	5.30	20
SW6010B	35BSB004	1/27/2011	Zinc	Soil	J		105	*	159	80-120	16.25	20
SW6010B	35BSB012	1/24/2011	Zinc	Soil	J	*	75		105	80-120	11.31	20
SW6010B	35BSB011	1/24/2011	Zinc	Soil	J	*	209		102	80-120	**38.42**	20
SW6010B	35BSB017	1/19/2011	Zinc	Soil			108		112	80-120	1.50	20
SW6010B	35CSS031	1/11/2011	Zinc	Soil			83		93	80-120	3.85	20
SW6010B	35CSB013	2/8/2011	Zinc	Soil	J		101		107	80-120	1.98	20
SW6010B	35CSB006	2/2/2011	Zinc	Soil			98		93	80-120	2.92	20
SW6010B	35CSB002	1/31/2011	Zinc	Soil			100		82	80-120	5.95	20
SW6850	35BSB004	1/27/2011	Perchlorate	Soil			90		86	-	1.48	
SW6850	35CSB006	2/2/2011	Perchlorate	Soil			91		106	-	6.78	
SW6850	35BSB011	1/24/2011	Perchlorate	Soil	J		95		96	-	0.60	
SW6850	35CSB002	1/31/2011	Perchlorate	Soil			-1116		-1087	-	#Error	
SW6850	35CSS031	1/11/2011	Perchlorate	Soil			-8903		-8811	-	#Error	
SW6850	35CSB013	2/8/2011	Perchlorate	Soil	J		90		90	-	1.02	

Method	Location	Date	Analyte	Matrix	Flag	Matrix Spike %Recovery	Spike Duplicate %Recovery	Spike Limits	RPD	RPD Limits
SW6850	35BSB017	1/19/2011	Perchlorate	Soil	J	90	89	-	0.41	

Notes:
1) Flag definitions are on Tables C.2.
2) "*" = matrix spike and/or matrix spike duplicate %Recovery is outside control limits.
3) RPD = Relative Percent Difference.
4) Bold RPD results are outside control limit.

APPENDIX D

CALCULATION OF BACKGROUND THRESHOLD VALUES

APPENDIX D

CALCULATION OF BACKGROUND THRESHOLD VALUES

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CALCULATION OF BACKGROUND THRESHOLD VALUES

Metals at a site may occur naturally in soils or can be related to past waste disposal or OB/OD activities. When evaluating samples collected from a site, the samples are assumed to come from the same distribution as the background data set until significant evidence of contamination can be shown. One common method to test this is to derive a Background Threshold Value (BTV) for each metal constituent and compare the maximum detected concentrations found at the site to their respective BTVs. If the maximum detected concentration of a chemical at the site exceeds the BTV, the concentration of that chemical is assumed to be at a level which may represent contamination; i.e., it is elevated over background.

This memo presents the results of the calculations of the BTVs for metals in soils at the six inactive landfills at USAGYPG. It is anticipated that the methods for calculating BTVs presented in the RFI Work Plan (Parsons, 2010) are to be used as the remedial goal(s) if the risk-based remedial concentration(s) are below the BTV. The BTV methods presented in the RFI Work Plan (Parsons, 2010) were developed following USEPA (1989a, 1992, 2007) and US Navy (2002) guidance, and have been used to calculate a BTV for 24 metals.

Background samples have been collected as part of the RFIs being conducted at the inactive landfills and Muggins Mountain sites. These data will be used to develop BTVs for use in evaluating remediation goals. All background soil samples will be analyzed for metals using EPA Method 6010B/7471.

To calculate BTVs, the following procedures were followed. For metals that were detected only once, the one detected value was used as the BTV. For chemicals with more than one detect but including non-detects, the upper tolerance limit (UTL) on the 95th percentile with 95% confidence was used as the BTV. The UTL was calculated using the Kaplan-Meier method (USEPA 2006a, 2007b). For chemicals without non-detects, the following steps were followed:

1. The distribution of each metal was tested using the following method the Shapiro-Wilk's test for normal and lognormal distributions (USEPA 2002, 2006b, 2007b) and the Anderson-Darling test for gamma distribution (USEPA 2007b).
2. The UTL was calculated as appropriate for the distribution of each metal (USEPA 1989, 2007b).

All calculations described above were performed using the current version of ProUCL (USEPA, 2007b); i.e., v4.00.002. The outputs for these calculations from ProUCL are provided as Attachment 1 to this Appendix. The data for each background sample is provided as Table D.1. Summary statistics of the ProUCL calculation and the selection of the BTV for each

metal for the Inactive Landfills are provided as Table D.1. Background test pit logs for YPG-35 (35BG001 through 35BG009) are provided in Appendix A.

TABLE D.1

BACKGROUND INORGANIC ANALYTICAL RESULTS
MUGGINS MOUNTAIN OB/OD FACILITY (YPG-35a, b, and c)

U.S. Army Garrison Yuma Proving Ground, Yuma, Arizona

Location ID	Sample Depth	Sample Type	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium (Total)	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Background Threshold Value				20,000	--	8.9	350	0.89	0.24	81,000	14	8.2	61	25,000	14	12,000	440	0.005	1.1	18	6,700	0.67	--	8,400	--	36	70
035BG001	0-0.5	N	09-Feb-11	18,700 J	<0.24 U	5	226	0.75	0.18 J	82,800	16.7 J	6.4	19.7	20,000	9.81 J	9,790 J	357	<0.0035 U	0.53 J	15	6,150 J	<0.39 U	U	1,110	<0.2 U	26.5 J	50.2 J
035BG001	5.5-6.5	N	09-Feb-11	12,100	<0.24 UJ	3.92	262	0.43	0.057 J	40,300	17.7	5.92	60.8 J	21,100	6.43	6,970	244	<0.0035 U	0.49 J	12.6	5,220	0.55 J	U	1,380 J	UJ	29.1 J	72.2 J
035BG002	0-0.5	N	09-Feb-11	15,800	<0.24 U	2.19 J	107	0.66	0.15 J	37,600	14.7	7.11	18.3	20,000	11.4	8,640	384	<0.0035 U	0.51 J	15.4	4,770	0.57 J	U	994	<0.2 U	26.6	50.7
035BG002	5.5-6.5	N	09-Feb-11	11,400	<0.12 U	4.47	350	0.43	0.11 J	43,200	14.1	5.31	22.2	18,600	7.78	6,250	228	<0.0034 U	0.45 J	10.9	4,270	<0.2 U	U	450	<0.1 U	24.9	50.2
035BG003	0-0.5	N	09-Feb-11	11,000	<0.12 U	3.14	158	0.46	0.18 J	30,700	12.2	5.05	15.9	14,800	7.47	6,200	254	<0.0035 U	0.3 J	10.5	3,760	<0.19 U	U	713	<0.1 U	21.3	39.6
035BG003	5.5-6.5	N	09-Feb-11	6,330	<0.12 U	9.68	147	0.24	0.1 J	34,300	8.49	3.12	16.4	9,640	4.71	3,170	213	<0.0034 U	0.57 J	5.69	1,930	<0.2 U	U	2,030	<0.1 U	35.6	27.8
035BG004	0-0.5	N	09-Feb-11	11,400	<0.12 U	3.67	147	0.47	0.19 J	20,700	13.1	5.37	13.6	15,100	9.56	6,030	303	<0.0034 U	0.25 J	11.2	3,430	<0.19 U	U	109	<0.1 U	22.6	43
035BG004	5.5-6.5	N	09-Feb-11	7,580	<0.12 U	3.85	121	0.29	0.11 J	37,200	9.15	4.24	14.6	12,300	5.07	3,650	216	<0.0036 U	0.35 J	7.69	2,450	<0.2 U	U	180	<0.1 U	20.1	34
035BG005	0-0.5	N	09-Feb-11	16,600	<0.24 U	4.41	167	0.71	0.17 J	29,500	15.7	7.53	19.3	20,900	11.7	9,030	379	0.005 J	0.52 J	15.2	4,380	<0.39 U	U	<152 U	<0.2 U	30.4	53.3
035BG005	5.5-6.5	N	09-Feb-11	8,000	<0.12 U	5.6	278	0.24	0.083 J	37,500	8.8	3.8	19.8	13,000	4.82	4,190	199	<0.0035 U	0.54 J	7.14	2,720	<0.2 U	U	698	<0.1 U	20.1	36.1
035BG006	0-0.5	N	08-Feb-11	10,100	<0.12 U	2.57	89.8	0.41	0.14 J	8,600	11.3	5.5	12.4	15,000	8.46	5,610	303	<0.0034 U	0.36 J	11.4	2,910	<0.19 U	<0.035 U	420	<0.1 U	21.7	39.2
035BG006	5.5-6.5	N	08-Feb-11	8,950	<0.12 U	3.61	135	0.21	0.088 J	27,100	10.7	4.75	28	15,600	5.49	5,310	241	<0.0035 U	0.44 J	8.53	3,920	<0.2 U	<0.036 U	964	<0.1 U	21.6	45.1
035BG007	0-0.5	N	08-Feb-11	12,300	<0.12 U	3.72	77.9	0.53	0.16 J	38,000	10.4	5.57	14.3	15,000	8.73	6,480	336	<0.0035 U	0.4 J	11.8	3,870	<0.2 U	<0.035 U	682	<0.1 U	21.2	41.8
035BG007	5.5-6.5	N	08-Feb-11	9,320	<0.12 U	5.1	183	0.21	0.086 J	42,500	14.3	4.87	21.2	16,200	4.99	5,510	272	<0.0035 U	1.35	7.5	3,970	<0.2 U	<0.036 U	939	<0.1 U	25.1	41
035BG008	0-0.5	N	08-Feb-11	11,500	<0.12 U	2.78	83.2	0.46	0.17 J	27,300	11.1	5.58	17	14,600	9.65	6,790	323	<0.0035 U	0.32 J	11.9	3,530	<0.19 U	<0.035 U	518	<0.1 U	20.3	42
035BG008	5.5-6.5	N	08-Feb-11	12,100	<0.24 U	3.37	187	0.34 J	0.044 J	30,100	11.9	5.87	38.7	21,700	5.41	6,980	316	<0.0035 U	0.64 J	9.8	6,090	0.74 J	<0.071 U	899	<0.2 U	24.2	57.3
035BG009	0-0.5	N	08-Feb-11	16,000	<0.24 U	3.97	124	0.7	0.15 J	37,800	13.9	6.94	16.6	20,000	11.7	10,700	376	<0.0035 U	0.45 J	14.5	4,400	<0.39 U	<0.071 U	<313 U	<0.2 U	30.7	49.3
035BG009	5.5-6.5	N	08-Feb-11	7,350	<0.12 U	2.76	121	0.14 J	0.063 J	20,100	8.66	5.21	30	14,000	4.51	4,200	237	<0.0034 U	0.69 J	8.03	3,480	<0.19 U	<0.035 U	186	<0.1 U	16.6	42.7

TABLE D.2

BACKGROUND THRESHOLD VALUES SELECTED FOR METALS
MUGGINS MOUNTAIN OB/OD FACILITY (YPG-35a, b, and c)

U.S. Army Garrison Yuma Proving Ground, Yuma, Arizona

Analyte	# of Detections (18 Samples)	BTV (mg/kg)	Distribution Type	Maximum Detection	Minimum Detection	nr_SRL	GPL
Aluminum	18	20000	N	18700	6330	920000	--
Antimony	0	ND	--	--		410	35
Arsenic	18	8.9	N	9.68	2.19	10	290
Barium	18	350	N	350	77.9	170000	12000
Beryllium	18	0.89	N	0.75	0.14	1900	23
Cadmium	18	0.24	N	0.19	0.044	510	29
Calcium	18	81000	G	82800	8600	--	--
Chromium	18	19	N	17.7	8.49	140000	590
Cobalt	18	8.2	N	7.53	3.12	13000	--
Copper	18	61	NP	60.8	12.4	41000	--
Iron	18	25000	N	21700	9640	--	--
Lead	18	14	N	11.7	4.51	800	290
Magnesium	18	12000	N	10700	3170	--	--
Manganese	18	440	N	384	199	32000	--
Mercury	1	0.005	--	0.005		310	12
Molybdenum	18	1.1	G	1.35	0.25	5100	--
Nickel	18	18	N	15.4	5.69	20000	590
Potassium	18	6700	N	6150	1930	--	--
Selenium	3	0.67	NP	0.74	0.55	5100	290
Silver	0	ND	--	--		5100	--
Sodium	18	8400	N	2030	109	--	--
Thallium	0	ND	--	--		67	12
Vanadium	18	36	N	35.6	16.6	1000	--
Zinc	18	70	N	72.2	27.8	310000	--

ATTACHMENT 1

PROUCL OUTPUT

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Aluminum

General Statistics

Total Number of Observations 18

Number of Distinct Observations 16

Raw Statistics

Minimum	6330
Maximum	18700
Second Largest	16600
First Quartile	8713
Median	11400
Third Quartile	13175
Mean	11474
SD	3456
Coefficient of Variation	0.301
Skewness	0.563

Log-Transformed Statistics

Minimum	8.753
Maximum	9.836
Second Largest	9.717
First Quartile	9.071
Median	9.341
Third Quartile	9.48
Mean	9.305
SD	0.301

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical Value	0.897

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.968
Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	19950
95% UPL (t)	17650
90% Percentile (z)	15902
95% Percentile (z)	17158
99% Percentile (z)	19513

Assuming Lognormal Distribution

95% UTL with 95% Coverage	23023
95% UPL (t)	18839
90% Percentile (z)	16177
95% Percentile (z)	18048
99% Percentile (z)	22162

Gamma Distribution Test

k star	9.965
Theta Star	1151
MLE of Mean	11474
MLE of Standard Deviation	3635
nu star	358.7
A-D Test Statistic	0.316
5% A-D Critical Value	0.739
K-S Test Statistic	0.145
5% K-S Critical Value	0.203

Data appear Gamma Distributed at 5% Significance Level

Data Distribution Test

Data appear Normal at 5% Significance Level

Nonparametric Statistics

90% Percentile	16810
95% Percentile	18700
99% Percentile	18700
95% UTL with 95% Coverage	18700
95% Percentile Bootstrap UTL with 95% Coverage	18700
95% BCA Bootstrap UTL with 95% Coverage	18700
95% UPL	18700
95% Chebyshev UPL	26949
Upper Threshold Limit Based upon IQR	19869

Assuming Gamma Distribution

90% Percentile	16309
95% Percentile	18032
99% Percentile	21572
95% WH Approx. Gamma UPL	18297
95% HW Approx. Gamma UPL	18415
95% WH Approx. Gamma UTL with 95% Coverage	21586
95% HW Approx. Gamma UTL with 95% Coverage	21890

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Antimony

General Statistics

Number of Valid Data 18	Number of Detected Data 0
Number of Distinct Detected Data 0	Number of Non-Detect Data 18

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!

Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!

The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Antimony was not processed!

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Arsenic

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18

Raw Statistics		Log-Transformed Statistics	
Minimum	2.19	Minimum	0.784
Maximum	9.68	Maximum	2.27
Second Largest	5.6	Second Largest	1.723
First Quartile	3.05	First Quartile	1.114
Median	3.785	Median	1.331
Third Quartile	4.603	Third Quartile	1.525
Mean	4.101	Mean	1.352
SD	1.664	SD	0.338
Coefficient of Variation	0.406		
Skewness	2.326		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.783	Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	8.183	95% UTL with 95% Coverage	8.858
95% UPL (t)	7.075	95% UPL (t)	7.072
90% Percentile (z)	6.234	90% Percentile (z)	5.96
95% Percentile (z)	6.838	95% Percentile (z)	6.739
99% Percentile (z)	7.972	99% Percentile (z)	8.486

Gamma Distribution Test		Data Distribution Test
k star	7.168	Data appear Gamma Distributed at 5% Significance Level
Theta Star	0.572	
MLE of Mean	4.101	
MLE of Standard Deviation	1.532	
nu star	258	
A-D Test Statistic	0.508	
5% A-D Critical Value	0.74	
K-S Test Statistic	0.159	
5% K-S Critical Value	0.204	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
90% Percentile	6.145	90% Percentile	6.008
95% Percentile	6.901	95% Percentile	9.68
99% Percentile	8.474	99% Percentile	9.68
		95% UTL with 95% Coverage	9.68
		95% Percentile Bootstrap UTL with 95% Coverage	9.68
		95% BCA Bootstrap UTL with 95% Coverage	9.68
		95% UPL	9.68
		95% Chebyshev UPL	11.55
95% WH Approx. Gamma UPL	7.009	Upper Threshold Limit Based upon IQR	6.931
95% HW Approx. Gamma UPL	7.017		
95% WH Approx. Gamma UTL with 95% Coverage	8.47		
95% HW Approx. Gamma UTL with 95% Coverage	8.546		

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Barium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16

Raw Statistics		Log-Transformed Statistics	
Minimum	77.9	Minimum	4.355
Maximum	350	Maximum	5.858
Second Largest	278	Second Largest	5.628
First Quartile	117.5	First Quartile	4.765
Median	147	Median	4.99
Third Quartile	196.8	Third Quartile	5.278
Mean	164.7	Mean	5.019
SD	73.32	SD	0.418
Coefficient of Variation	0.445		
Skewness	1.161		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.902	Shapiro Wilk Test Statistic	0.975
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	344.5	95% UTL with 95% Coverage	421.9
95% UPL (t)	295.7	95% UPL (t)	319.4
90% Percentile (z)	258.6	90% Percentile (z)	258.5
95% Percentile (z)	285.3	95% Percentile (z)	300.9
99% Percentile (z)	335.2	99% Percentile (z)	400.1

Gamma Distribution Test		Data Distribution Test
k star	5.076	Data appear Normal at 5% Significance Level
Theta Star	32.44	
MLE of Mean	164.7	
MLE of Standard Deviation	73.09	
nu star	182.7	
A-D Test Statistic	0.282	
5% A-D Critical Value	0.742	
K-S Test Statistic	0.11	
5% K-S Critical Value	0.204	
Data appear Gamma Distributed at 5% Significance Level		

Nonparametric Statistics	
90% Percentile	285.2
95% Percentile	350
99% Percentile	350
95% UTL with 95% Coverage	350
95% Percentile Bootstrap UTL with 95% Coverage	350
95% BCA Bootstrap UTL with 95% Coverage	350
95% UPL	350
95% Chebyshev UPL	493
Upper Threshold Limit Based upon IQR	315.6

Assuming Gamma Distribution	
90% Percentile	262.5
95% Percentile	300.3
99% Percentile	380.2
95% WH Approx. Gamma UPL	306.8
95% HW Approx. Gamma UPL	309.4
95% WH Approx. Gamma UTL with 95% Coverage	381.7
95% HW Approx. Gamma UTL with 95% Coverage	389.6

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Beryllium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	14

Raw Statistics		Log-Transformed Statistics	
Minimum	0.14	Minimum	-1.966
Maximum	0.75	Maximum	-0.288
Second Largest	0.71	Second Largest	-0.342
First Quartile	0.24	First Quartile	-1.427
Median	0.43	Median	-0.844
Third Quartile	0.563	Third Quartile	-0.58
Mean	0.427	Mean	-0.955
SD	0.188	SD	0.485
Coefficient of Variation	0.441		
Skewness	0.307		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.938	Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	0.888	95% UTL with 95% Coverage	1.266
95% UPL (t)	0.763	95% UPL (t)	0.916
90% Percentile (z)	0.668	90% Percentile (z)	0.717
95% Percentile (z)	0.736	95% Percentile (z)	0.855
99% Percentile (z)	0.864	99% Percentile (z)	1.19

Gamma Distribution Test		Data Distribution Test
k star	4.221	Data appear Normal at 5% Significance Level
Theta Star	0.101	
MLE of Mean	0.427	
MLE of Standard Deviation	0.208	
nu star	152	
A-D Test Statistic	0.366	
5% A-D Critical Value	0.743	
K-S Test Statistic	0.136	
5% K-S Critical Value	0.204	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
90% Percentile	0.705	90% Percentile	0.714
95% Percentile	0.815	95% Percentile	0.75
99% Percentile	1.051	99% Percentile	0.75
		95% UTL with 95% Coverage	0.75
		95% Percentile Bootstrap UTL with 95% Coverage	0.75
		95% BCA Bootstrap UTL with 95% Coverage	0.75
		95% UPL	0.75
		95% Chebyshev UPL	1.269
95% WH Approx. Gamma UPL	0.837	Upper Threshold Limit Based upon IQR	1.046
95% HW Approx. Gamma UPL	0.853		
95% WH Approx. Gamma UTL with 95% Coverage	1.059		
95% HW Approx. Gamma UTL with 95% Coverage	1.097		

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Cadmium

General Statistics

Total Number of Observations 18

Number of Distinct Observations 14

Raw Statistics

Minimum	0.044
Maximum	0.19
Second Largest	0.18
First Quartile	0.0853
Median	0.125
Third Quartile	0.17
Mean	0.124
SD	0.0471
Coefficient of Variation	0.38
Skewness	-0.192

Log-Transformed Statistics

Minimum	-3.124
Maximum	-1.661
Second Largest	-1.715
First Quartile	-2.462
Median	-2.087
Third Quartile	-1.772
Mean	-2.171
SD	0.441

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical Value	0.897

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.909
Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	0.24
95% UPL (t)	0.208
90% Percentile (z)	0.184
95% Percentile (z)	0.201
99% Percentile (z)	0.234

Assuming Lognormal Distribution

95% UTL with 95% Coverage	0.337
95% UPL (t)	0.251
90% Percentile (z)	0.201
95% Percentile (z)	0.236
99% Percentile (z)	0.319

Gamma Distribution Test

k star	5.214
Theta Star	0.0238
MLE of Mean	0.124
MLE of Standard Deviation	0.0543
nu star	187.7

A-D Test Statistic	0.553
5% A-D Critical Value	0.742
K-S Test Statistic	0.178
5% K-S Critical Value	0.204

Data appear Gamma Distributed at 5% Significance Level

Data Distribution Test

Data appear Normal at 5% Significance Level

Nonparametric Statistics

90% Percentile	0.181
95% Percentile	0.19
99% Percentile	0.19
95% UTL with 95% Coverage	0.19
95% Percentile Bootstrap UTL with 95% Coverage	0.19
95% BCA Bootstrap UTL with 95% Coverage	0.19
95% UPL	0.19
95% Chebyshev UPL	0.335
Upper Threshold Limit Based upon IQR	0.297

Assuming Gamma Distribution

90% Percentile	0.197
95% Percentile	0.225
99% Percentile	0.284
95% WH Approx. Gamma UPL	0.23
95% HW Approx. Gamma UPL	0.234
95% WH Approx. Gamma UTL with 95% Coverage	0.285
95% HW Approx. Gamma UTL with 95% Coverage	0.295

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Calcium

General Statistics

Total Number of Observations 18

Number of Distinct Observations 18

Raw Statistics

Minimum	8600
Maximum	82800
Second Largest	43200
First Quartile	27250
Median	35750
Third Quartile	38575
Mean	34739
SD	14928
Coefficient of Variation	0.43
Skewness	1.74

Log-Transformed Statistics

Minimum	9.06
Maximum	11.32
Second Largest	10.67
First Quartile	10.21
Median	10.48
Third Quartile	10.56
Mean	10.37
SD	0.451

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.819
Shapiro Wilk Critical Value	0.897

Data not Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.866
Shapiro Wilk Critical Value	0.897

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	71357
95% UPL (t)	61419
90% Percentile (z)	53870
95% Percentile (z)	59293
99% Percentile (z)	69466

Assuming Lognormal Distribution

95% UTL with 95% Coverage	96354
95% UPL (t)	71355
90% Percentile (z)	56798
95% Percentile (z)	66914
99% Percentile (z)	91003

Gamma Distribution Test

k star	4.984
Theta Star	6970
MLE of Mean	34739
MLE of Standard Deviation	15560
nu star	179.4
A-D Test Statistic	0.835
5% A-D Critical Value	0.742
K-S Test Statistic	0.191
5% K-S Critical Value	0.204

Data follow Appx. Gamma Distribution at 5% Significance Level

Data Distribution Test

Data Follow Appr. Gamma Distribution at 5% Significance Level

Nonparametric Statistics

90% Percentile	47160
95% Percentile	82800
99% Percentile	82800
95% UTL with 95% Coverage	82800
95% Percentile Bootstrap UTL with 95% Coverage	82800
95% BCA Bootstrap UTL with 95% Coverage	82800
95% UPL	82800
95% Chebyshev UPL	101591
Upper Threshold Limit Based upon IQR	55563

Assuming Gamma Distribution

90% Percentile	55571
95% Percentile	63646
99% Percentile	80713
95% WH Approx. Gamma UPL	64948
95% HW Approx. Gamma UPL	66084
95% WH Approx. Gamma UTL with 95% Coverage	80844
95% HW Approx. Gamma UTL with 95% Coverage	83523

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Chromium, Total

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18

Raw Statistics		Log-Transformed Statistics	
Minimum	8.49	Minimum	2.139
Maximum	17.7	Maximum	2.874
Second Largest	16.7	Second Largest	2.815
First Quartile	10.09	First Quartile	2.31
Median	12.05	Median	2.489
Third Quartile	14.4	Third Quartile	2.667
Mean	12.38	Mean	2.492
SD	2.817	SD	0.23
Coefficient of Variation	0.227		
Skewness	0.264		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.956	Shapiro Wilk Test Statistic	0.956
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	19.29	95% UTL with 95% Coverage	21.23
95% UPL (t)	17.42	95% UPL (t)	18.22
90% Percentile (z)	15.99	90% Percentile (z)	16.22
95% Percentile (z)	17.02	95% Percentile (z)	17.63
99% Percentile (z)	18.94	99% Percentile (z)	20.62

Gamma Distribution Test		Data Distribution Test
k star	17.03	Data appear Normal at 5% Significance Level
Theta Star	0.727	
MLE of Mean	12.38	
MLE of Standard Deviation	3.001	
nu star	613	
A-D Test Statistic	0.262	
5% A-D Critical Value	0.739	
K-S Test Statistic	0.116	
5% K-S Critical Value	0.203	
Data appear Gamma Distributed at 5% Significance Level		

Nonparametric Statistics	
90% Percentile	16.8
95% Percentile	17.7
99% Percentile	17.7
95% UTL with 95% Coverage	17.7
95% Percentile Bootstrap UTL with 95% Coverage	17.7
95% BCA Bootstrap UTL with 95% Coverage	17.7
95% UPL	17.7
95% Chebyshev UPL	25
Upper Threshold Limit Based upon IQR	20.87

Assuming Gamma Distribution	
90% Percentile	16.35
95% Percentile	17.7
99% Percentile	20.41
95% WH Approx. Gamma UPL	17.89
95% HW Approx. Gamma UPL	17.96
95% WH Approx. Gamma UTL with 95% Coverage	20.4
95% HW Approx. Gamma UTL with 95% Coverage	20.58

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Cobalt

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18

Raw Statistics		Log-Transformed Statistics	
Minimum	3.12	Minimum	1.138
Maximum	7.53	Maximum	2.019
Second Largest	7.11	Second Largest	1.962
First Quartile	4.84	First Quartile	1.577
Median	5.435	Median	1.693
Third Quartile	6.04	Third Quartile	1.798
Mean	5.452	Mean	1.675
SD	1.12	SD	0.218
Coefficient of Variation	0.205		
Skewness	-0.0826		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.978	Shapiro Wilk Test Statistic	0.952
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	8.199	95% UTL with 95% Coverage	9.114
95% UPL (t)	7.454	95% UPL (t)	7.882
90% Percentile (z)	6.887	90% Percentile (z)	7.058
95% Percentile (z)	7.294	95% Percentile (z)	7.641
99% Percentile (z)	8.058	99% Percentile (z)	8.866

Gamma Distribution Test		Data Distribution Test
k star	19.61	Data appear Normal at 5% Significance Level
Theta Star	0.278	
MLE of Mean	5.452	
MLE of Standard Deviation	1.231	
nu star	706	
A-D Test Statistic	0.289	
5% A-D Critical Value	0.739	
K-S Test Statistic	0.113	
5% K-S Critical Value	0.203	
Data appear Gamma Distributed at 5% Significance Level		

Nonparametric Statistics	
90% Percentile	7.152
95% Percentile	7.53
99% Percentile	7.53
95% UTL with 95% Coverage	7.53
95% Percentile Bootstrap UTL with 95% Coverage	7.53
95% BCA Bootstrap UTL with 95% Coverage	7.53
95% UPL	7.53
95% Chebyshev UPL	10.47
Upper Threshold Limit Based upon IQR	7.84

Assuming Gamma Distribution	
90% Percentile	7.078
95% Percentile	7.623
99% Percentile	8.717
95% WH Approx. Gamma UPL	7.697
95% HW Approx. Gamma UPL	7.738
95% WH Approx. Gamma UTL with 95% Coverage	8.708
95% HW Approx. Gamma UTL with 95% Coverage	8.796

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Copper

General Statistics

Total Number of Observations 18

Number of Distinct Observations 18

Raw Statistics

Minimum	12.4
Maximum	60.8
Second Largest	38.7
First Quartile	15.58
Median	18.8
Third Quartile	23.65
Mean	22.16
SD	11.67
Coefficient of Variation	0.527
Skewness	2.482

Log-Transformed Statistics

Minimum	2.518
Maximum	4.108
Second Largest	3.656
First Quartile	2.745
Median	2.934
Third Quartile	3.158
Mean	3.009
SD	0.399

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.71
Shapiro Wilk Critical Value	0.897

Data not Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.88
Shapiro Wilk Critical Value	0.897

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	50.78
95% UPL (t)	43.01
90% Percentile (z)	37.11
95% Percentile (z)	41.35
99% Percentile (z)	49.3

Assuming Lognormal Distribution

95% UTL with 95% Coverage	53.98
95% UPL (t)	41.38
90% Percentile (z)	33.81
95% Percentile (z)	39.09
99% Percentile (z)	51.32

Gamma Distribution Test

k star	4.841
Theta Star	4.576
MLE of Mean	22.16
MLE of Standard Deviation	10.07
nu star	174.3

A-D Test Statistic	1.085
5% A-D Critical Value	0.742
K-S Test Statistic	0.22
5% K-S Critical Value	0.204

Data not Gamma Distributed at 5% Significance Level

Data Distribution Test

Data do not follow a Discernable Distribution (0.05)

Nonparametric Statistics

90% Percentile	40.91
95% Percentile	60.8
99% Percentile	60.8
95% UTL with 95% Coverage	60.8
95% Percentile Bootstrap UTL with 95% Coverage	60.8
95% BCA Bootstrap UTL with 95% Coverage	60.8
95% UPL	60.8
95% Chebyshev UPL	74.42
Upper Threshold Limit Based upon IQR	35.76

Assuming Gamma Distribution

90% Percentile	35.64
95% Percentile	40.89
99% Percentile	51.99
95% WH Approx. Gamma UPL	41.64
95% HW Approx. Gamma UPL	41.54
95% WH Approx. Gamma UTL with 95% Coverage	52
95% HW Approx. Gamma UTL with 95% Coverage	52.37

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Iron

General Statistics

Total Number of Observations 18

Number of Distinct Observations 15

Raw Statistics

Minimum	9640
Maximum	21700
Second Largest	21100
First Quartile	14450
Median	15350
Third Quartile	20000
Mean	16530
SD	3479
Coefficient of Variation	0.21
Skewness	-0.0549

Log-Transformed Statistics

Minimum	9.174
Maximum	9.985
Second Largest	9.957
First Quartile	9.578
Median	9.639
Third Quartile	9.903
Mean	9.691
SD	0.22

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.93
Shapiro Wilk Critical Value	0.897

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.926
Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	25064
95% UPL (t)	22748
90% Percentile (z)	20989
95% Percentile (z)	22253
99% Percentile (z)	24623

Assuming Lognormal Distribution

95% UTL with 95% Coverage	27752
95% UPL (t)	23967
90% Percentile (z)	21441
95% Percentile (z)	23227
99% Percentile (z)	26989

Gamma Distribution Test

k star	19.01
Theta Star	869.6
MLE of Mean	16530
MLE of Standard Deviation	3791
nu star	684.3
A-D Test Statistic	0.566
5% A-D Critical Value	0.739
K-S Test Statistic	0.177
5% K-S Critical Value	0.203

Data appear Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

90% Percentile	21537
95% Percentile	23220
99% Percentile	26603
95% WH Approx. Gamma UPL	23451
95% HW Approx. Gamma UPL	23567
95% WH Approx. Gamma UTL with 95% Coverage	26578
95% HW Approx. Gamma UTL with 95% Coverage	26836

Data Distribution Test

Data appear Normal at 5% Significance Level

Nonparametric Statistics

90% Percentile	21160
95% Percentile	21700
99% Percentile	21700
95% UTL with 95% Coverage	21700
95% Percentile Bootstrap UTL with 95% Coverage	21700
95% BCA Bootstrap UTL with 95% Coverage	21700
95% UPL	21700
95% Chebyshev UPL	32110
Upper Threshold Limit Based upon IQR	28325

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Lead

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17

Raw Statistics		**Log-Transformed Statistics**	
Minimum	4.51	Minimum	1.506
Maximum	11.7	Maximum	2.46
Second Largest	11.7	Second Largest	2.46
First Quartile	5.05	First Quartile	1.619
Median	7.625	Median	2.031
Third Quartile	9.69	Third Quartile	2.271
Mean	7.649	Mean	1.98
SD	2.572	SD	0.343
Coefficient of Variation	0.336		
Skewness	0.29		

Background Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.897	Shapiro Wilk Test Statistic	0.901
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 95% Coverage	13.96	95% UTL with 95% Coverage	16.8
95% UPL (t)	12.25	95% UPL (t)	13.37
90% Percentile (z)	10.95	90% Percentile (z)	11.24
95% Percentile (z)	11.88	95% Percentile (z)	12.73
99% Percentile (z)	13.63	99% Percentile (z)	16.08

Gamma Distribution Test		**Data Distribution Test**
k star	7.777	Data appear Normal at 5% Significance Level
Theta Star	0.984	
MLE of Mean	7.649	
MLE of Standard Deviation	2.743	
nu star	280	
A-D Test Statistic	0.663	
5% A-D Critical Value	0.74	
K-S Test Statistic	0.19	
5% K-S Critical Value	0.204	
Data appear Gamma Distributed at 5% Significance Level		

Nonparametric Statistics	
90% Percentile	11.7
95% Percentile	11.7
99% Percentile	11.7
95% UTL with 95% Coverage	11.7
95% Percentile Bootstrap UTL with 95% Coverage	11.7
95% BCA Bootstrap UTL with 95% Coverage	11.7
95% UPL	11.7
95% Chebyshev UPL	19.17
Upper Threshold Limit Based upon IQR	16.65

Assuming Gamma Distribution	
90% Percentile	11.31
95% Percentile	12.65
99% Percentile	15.43
95% WH Approx. Gamma UPL	12.87
95% HW Approx. Gamma UPL	12.98
95% WH Approx. Gamma UTL with 95% Coverage	15.46
95% HW Approx. Gamma UTL with 95% Coverage	15.74

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Magnesium

General Statistics

Total Number of Observations 18

Number of Distinct Observations 18

Raw Statistics

Minimum	3170
Maximum	10700
Second Largest	9790
First Quartile	5033
Median	6225
Third Quartile	7395
Mean	6417
SD	2076
Coefficient of Variation	0.324
Skewness	0.49

Log-Transformed Statistics

Minimum	8.061
Maximum	9.278
Second Largest	9.189
First Quartile	8.519
Median	8.736
Third Quartile	8.904
Mean	8.716
SD	0.332

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.957
Shapiro Wilk Critical Value	0.897

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.97
Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	11509
95% UPL (t)	10127
90% Percentile (z)	9077
95% Percentile (z)	9831
99% Percentile (z)	11246

Assuming Lognormal Distribution

95% UTL with 95% Coverage	13778
95% UPL (t)	11044
90% Percentile (z)	9337
95% Percentile (z)	10534
99% Percentile (z)	13210

Gamma Distribution Test

k star	8.398
Theta Star	764.1
MLE of Mean	6417
MLE of Standard Deviation	2214
nu star	302.3

A-D Test Statistic	0.253
5% A-D Critical Value	0.739
K-S Test Statistic	0.132
5% K-S Critical Value	0.203

Data appear Gamma Distributed at 5% Significance Level

Data Distribution Test

Data appear Normal at 5% Significance Level

Nonparametric Statistics

90% Percentile	9881
95% Percentile	10700
99% Percentile	10700

Assuming Gamma Distribution

90% Percentile	9367
95% Percentile	10439
99% Percentile	12654
95% WH Approx. Gamma UPL	10610
95% HW Approx. Gamma UPL	10702
95% WH Approx. Gamma UTL with 95% Coverage	12672
95% HW Approx. Gamma UTL with 95% Coverage	12900

95% UTL with 95% Coverage	10700
95% Percentile Bootstrap UTL with 95% Coverage	10700
95% BCA Bootstrap UTL with 95% Coverage	10700
95% UPL	10700
95% Chebyshev UPL	15713
Upper Threshold Limit Based upon IQR	10939

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Manganese

General Statistics

Total Number of Observations 18

Number of Distinct Observations 17

Raw Statistics

Minimum	199
Maximum	384
Second Largest	379
First Quartile	234.8
Median	287.5
Third Quartile	341.3
Mean	287.8
SD	61.95
Coefficient of Variation	0.215
Skewness	0.218

Log-Transformed Statistics

Minimum	5.293
Maximum	5.951
Second Largest	5.938
First Quartile	5.458
Median	5.66
Third Quartile	5.832
Mean	5.64
SD	0.217

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.926
Shapiro Wilk Critical Value	0.897

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.935
Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	439.8
95% UPL (t)	398.6
90% Percentile (z)	367.2
95% Percentile (z)	389.7
99% Percentile (z)	432

Assuming Lognormal Distribution

95% UTL with 95% Coverage	479.1
95% UPL (t)	414.7
90% Percentile (z)	371.7
95% Percentile (z)	402.1
99% Percentile (z)	466.1

Gamma Distribution Test

k star	19.07
Theta Star	15.1
MLE of Mean	287.8
MLE of Standard Deviation	65.92
nu star	686.4
A-D Test Statistic	0.459
5% A-D Critical Value	0.739
K-S Test Statistic	0.146
5% K-S Critical Value	0.203

Data appear Gamma Distributed at 5% Significance Level

Data Distribution Test

Data appear Normal at 5% Significance Level

Nonparametric Statistics

90% Percentile	379.5
95% Percentile	384
99% Percentile	384
95% UTL with 95% Coverage	384
95% Percentile Bootstrap UTL with 95% Coverage	384
95% BCA Bootstrap UTL with 95% Coverage	384
95% UPL	384
95% Chebyshev UPL	565.3
Upper Threshold Limit Based upon IQR	501

Assuming Gamma Distribution

90% Percentile	374.9
95% Percentile	404.1
99% Percentile	462.9
95% WH Approx. Gamma UPL	408.2
95% HW Approx. Gamma UPL	409.7
95% WH Approx. Gamma UTL with 95% Coverage	462.5
95% HW Approx. Gamma UTL with 95% Coverage	466.2

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Mercury

General Statistics

Number of Valid Data 18	Number of Detected Data 1
Number of Distinct Detected Data 1	Number of Non-Detect Data 17

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Mercury was not processed!

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Molybdenum

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17

Raw Statistics		Log-Transformed Statistics	
Minimum	0.25	Minimum	-1.386
Maximum	1.35	Maximum	0.3
Second Largest	0.69	Second Largest	-0.371
First Quartile	0.358	First Quartile	-1.029
Median	0.47	Median	-0.756
Third Quartile	0.548	Third Quartile	-0.603
Mean	0.509	Mean	-0.75
SD	0.24	SD	0.375
Coefficient of Variation	0.472		
Skewness	2.681		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.728	Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	1.098	95% UTL with 95% Coverage	1.183
95% UPL (t)	0.938	95% UPL (t)	0.922
90% Percentile (z)	0.817	90% Percentile (z)	0.763
95% Percentile (z)	0.904	95% Percentile (z)	0.874
99% Percentile (z)	1.068	99% Percentile (z)	1.129

Gamma Distribution Test		Data Distribution Test
k star	5.74	Data appear Gamma Distributed at 5% Significance Level
Theta Star	0.0887	
MLE of Mean	0.509	
MLE of Standard Deviation	0.212	
nu star	206.6	
A-D Test Statistic	0.622	
5% A-D Critical Value	0.742	
K-S Test Statistic	0.167	
5% K-S Critical Value	0.204	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
90% Percentile	0.793	90% Percentile	0.756
95% Percentile	0.901	95% Percentile	1.35
99% Percentile	1.128	99% Percentile	1.35
		95% UTL with 95% Coverage	1.35
		95% Percentile Bootstrap UTL with 95% Coverage	1.35
		95% BCA Bootstrap UTL with 95% Coverage	1.35
		95% UPL	1.35
		95% Chebyshev UPL	1.584
95% WH Approx. Gamma UPL	0.916	Upper Threshold Limit Based upon IQR	0.833
95% HW Approx. Gamma UPL	0.916		
95% WH Approx. Gamma UTL with 95% Coverage	1.127		
95% HW Approx. Gamma UTL with 95% Coverage	1.137		

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Nickel

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18

Raw Statistics		Log-Transformed Statistics	
Minimum	5.69	Minimum	1.739
Maximum	15.4	Maximum	2.734
Second Largest	15.2	Second Largest	2.721
First Quartile	7.945	First Quartile	2.072
Median	11.05	Median	2.402
Third Quartile	13.08	Third Quartile	2.569
Mean	10.82	Mean	2.343
SD	2.988	SD	0.291
Coefficient of Variation	0.276		
Skewness	0.0586		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.95	Shapiro Wilk Test Statistic	0.948
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	18.15	95% UTL with 95% Coverage	21.28
95% UPL (t)	16.16	95% UPL (t)	17.53
90% Percentile (z)	14.65	90% Percentile (z)	15.13
95% Percentile (z)	15.74	95% Percentile (z)	16.81
99% Percentile (z)	17.77	99% Percentile (z)	20.51

Gamma Distribution Test		Data Distribution Test
k star	11	Data appear Normal at 5% Significance Level
Theta Star	0.984	
MLE of Mean	10.82	
MLE of Standard Deviation	3.263	
nu star	396	
A-D Test Statistic	0.333	
5% A-D Critical Value	0.739	
K-S Test Statistic	0.108	
5% K-S Critical Value	0.203	
Data appear Gamma Distributed at 5% Significance Level		

Nonparametric Statistics	
90% Percentile	15.22
95% Percentile	15.4
99% Percentile	15.4
95% UTL with 95% Coverage	15.4
95% Percentile Bootstrap UTL with 95% Coverage	15.4
95% BCA Bootstrap UTL with 95% Coverage	15.4
95% UPL	15.4
95% Chebyshev UPL	24.2
Upper Threshold Limit Based upon IQR	20.77

Assuming Gamma Distribution	
90% Percentile	15.16
95% Percentile	16.69
99% Percentile	19.82
95% WH Approx. Gamma UPL	16.92
95% HW Approx. Gamma UPL	17.05
95% WH Approx. Gamma UTL with 95% Coverage	19.83
95% HW Approx. Gamma UTL with 95% Coverage	20.13

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Potassium

General Statistics

Total Number of Observations 18

Number of Distinct Observations 18

Raw Statistics

Minimum	1930
Maximum	6150
Second Largest	6090
First Quartile	3300
Median	3895
Third Quartile	4493
Mean	3958
SD	1133
Coefficient of Variation	0.286
Skewness	0.354

Log-Transformed Statistics

Minimum	7.565
Maximum	8.724
Second Largest	8.714
First Quartile	8.099
Median	8.267
Third Quartile	8.41
Mean	8.243
SD	0.299

Background Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.968
Shapiro Wilk Critical Value	0.897

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.969
Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% UTL with 95% Coverage	6738
95% UPL (t)	5984
90% Percentile (z)	5411
95% Percentile (z)	5822
99% Percentile (z)	6595

Assuming Lognormal Distribution

95% UTL with 95% Coverage	7922
95% UPL (t)	6490
90% Percentile (z)	5578
95% Percentile (z)	6219
99% Percentile (z)	7627

Gamma Distribution Test

k star	10.44
Theta Star	379.3
MLE of Mean	3958
MLE of Standard Deviation	1225
nu star	375.7
A-D Test Statistic	0.209
5% A-D Critical Value	0.739
K-S Test Statistic	0.123
5% K-S Critical Value	0.203

Data appear Gamma Distributed at 5% Significance Level

Data Distribution Test

Data appear Normal at 5% Significance Level

Nonparametric Statistics

90% Percentile	6096
95% Percentile	6150
99% Percentile	6150
95% UTL with 95% Coverage	6150
95% Percentile Bootstrap UTL with 95% Coverage	6150
95% BCA Bootstrap UTL with 95% Coverage	6150
95% UPL	6150
95% Chebyshev UPL	9033
Upper Threshold Limit Based upon IQR	6281

Assuming Gamma Distribution

90% Percentile	5587
95% Percentile	6165
99% Percentile	7350
95% WH Approx. Gamma UPL	6253
95% HW Approx. Gamma UPL	6304
95% WH Approx. Gamma UTL with 95% Coverage	7353
95% HW Approx. Gamma UTL with 95% Coverage	7471

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Selenium

General Statistics

Number of Valid Data	18	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	15
		Percent Non-Detects	83.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.55	Minimum Detected	-0.598
Maximum Detected	0.74	Maximum Detected	-0.301
Mean of Detected	0.62	Mean of Detected	-0.487
SD of Detected	0.104	SD of Detected	0.162
Minimum Non-Detect	0.19	Minimum Non-Detect	-1.661
Maximum Non-Detect	0.39	Maximum Non-Detect	-0.942

Data with Multiple Detection Limits

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Single Detection Limit Scenario

Number treated as Non-Detect with Single DL	15
Number treated as Detected with Single DL	3
Single DL Non-Detect Percentage	83.33%

Warning: There are only 3 Distinct Detected Values in this data set
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

Background Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.828	Shapiro Wilk Test Statistic	0.839
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.201	Mean (Log Scale)	-1.903
SD	0.199	SD (Log Scale)	0.704
95% UTL 95% Coverage	0.69	95% UTL 95% Coverage	0.838
95% UPL (t)	0.558	95% UPL (t)	0.525
90% Percentile (z)	0.457	90% Percentile (z)	0.367
95% Percentile (z)	0.529	95% Percentile (z)	0.474
99% Percentile (z)	0.665	99% Percentile (z)	0.766
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.065	Mean in Original Scale	0.324
SD	0.367	SD in Original Scale	0.158
95% UTL with 95% Coverage	0.966	95% UTL with 95% Coverage	0.871
		95% BCA UTL with 95% Coverage	0.74
		95% Bootstrap (%) UTL with 95% Coverage	0.74
95% UPL (t)	0.721	95% UPL (t)	0.649
90% Percentile (z)	0.536	90% Percentile (z)	0.519
95% Percentile (z)	0.669	95% Percentile (z)	0.609
99% Percentile (z)	0.919	99% Percentile (z)	0.824

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Gamma Distribution Test with Detected Values Only

k star (bias corrected)	N/A
Theta Star	N/A
nu star	N/A
A-D Test Statistic	N/A
5% A-D Critical Value	N/A
K-S Test Statistic	N/A
5% K-S Critical Value	N/A

Data not Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics with Extrapolated Data

Mean	N/A
Median	N/A
SD	N/A
k star	N/A
Theta star	N/A
Nu star	N/A
95% Percentile of Chisquare (2k)	N/A
90% Percentile	N/A
95% Percentile	N/A
99% Percentile	N/A

Data Distribution Test with Detected Values Only

Data appear Normal at 5% Significance Level

Nonparametric Statistics

Kaplan-Meier (KM) Method

Mean	0.562
SD	0.0435
SE of Mean	0.0126
95% KM UTL with 95% Coverage	0.668
95% KM Chebyshev UPL	0.756
95% KM UPL (t)	0.639
90% Percentile (z)	0.617
95% Percentile (z)	0.633
99% Percentile (z)	0.663

Gamma ROS Limits with Extrapolated Data

95% Wilson Hilferty (WH) Approx. Gamma UPL	N/A
95% Hawkins Wixley (HW) Approx. Gamma UPL	N/A
95% WH Approx. Gamma UTL with 95% Coverage	N/A
95% HW Approx. Gamma UTL with 95% Coverage	N/A

Note: UPL represents a preferred estimate of BTV

For an Example: KM-UPL may be used when multiple detection limits are present

Note: DL/2 is not a recommended method.

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Silver

General Statistics

Number of Valid Data 18	Number of Detected Data 0
Number of Distinct Detected Data 0	Number of Non-Detect Data 18

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!

Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!

The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Silver was not processed!

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Sodium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18

Raw Statistics		Log-Transformed Statistics	
Minimum	109	Minimum	4.691
Maximum	2030	Maximum	7.616
Second Largest	1380	Second Largest	7.23
First Quartile	281.3	First Quartile	5.616
Median	690	Median	6.537
Third Quartile	971.5	Third Quartile	6.879
Mean	707.6	Mean	6.289
SD	494.7	SD	0.824
Coefficient of Variation	0.699		
Skewness	1.07		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.916	Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	1921	95% UTL with 95% Coverage	4061
95% UPL (t)	1592	95% UPL (t)	2347
90% Percentile (z)	1342	90% Percentile (z)	1547
95% Percentile (z)	1521	95% Percentile (z)	2087
99% Percentile (z)	1858	99% Percentile (z)	3658

Gamma Distribution Test		Data Distribution Test
k star	1.688	Data appear Normal at 5% Significance Level
Theta Star	419.1	
MLE of Mean	707.6	
MLE of Standard Deviation	544.6	
nu star	60.78	
A-D Test Statistic	0.29	**Nonparametric Statistics**
5% A-D Critical Value	0.753	90% Percentile 1445
K-S Test Statistic	0.13	95% Percentile 2030
5% K-S Critical Value	0.206	99% Percentile 2030
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution			
90% Percentile	1433	95% UTL with 95% Coverage	2030
95% Percentile	1772	95% Percentile Bootstrap UTL with 95% Coverage	2030
99% Percentile	2534	95% BCA Bootstrap UTL with 95% Coverage	2030
		95% UPL	2030
		95% Chebyshev UPL	2923
95% WH Approx. Gamma UPL	1855	Upper Threshold Limit Based upon IQR	2007
95% HW Approx. Gamma UPL	1935		
95% WH Approx. Gamma UTL with 95% Coverage	2588		
95% HW Approx. Gamma UTL with 95% Coverage	2799		

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Thallium

General Statistics

Number of Valid Data 18	Number of Detected Data 0
Number of Distinct Detected Data 0	Number of Non-Detect Data 18

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!

Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!

The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Thallium was not processed!

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Vanadium

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17

Raw Statistics		Log-Transformed Statistics	
Minimum	16.6	Minimum	2.809
Maximum	35.6	Maximum	3.572
Second Largest	30.7	Second Largest	3.424
First Quartile	20.98	First Quartile	3.043
Median	23.4	Median	3.152
Third Quartile	27.23	Third Quartile	3.303
Mean	24.37	Mean	3.176
SD	4.766	SD	0.19
Coefficient of Variation	0.196		
Skewness	0.747		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.945	Shapiro Wilk Test Statistic	0.97
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	36.06	95% UTL with 95% Coverage	38.17
95% UPL (t)	32.88	95% UPL (t)	33.64
90% Percentile (z)	30.47	90% Percentile (z)	30.55
95% Percentile (z)	32.21	95% Percentile (z)	32.74
99% Percentile (z)	35.45	99% Percentile (z)	37.27

Gamma Distribution Test		Data Distribution Test
k star	24.23	Data appear Normal at 5% Significance Level
Theta Star	1.006	
MLE of Mean	24.37	
MLE of Standard Deviation	4.95	
nu star	872.2	
A-D Test Statistic	0.352	
5% A-D Critical Value	0.739	
K-S Test Statistic	0.153	
5% K-S Critical Value	0.203	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
90% Percentile	30.89	90% Percentile	31.19
95% Percentile	33.04	95% Percentile	35.6
99% Percentile	37.34	99% Percentile	35.6
		95% UTL with 95% Coverage	35.6
		95% Percentile Bootstrap UTL with 95% Coverage	35.6
		95% BCA Bootstrap UTL with 95% Coverage	35.6
		95% UPL	35.6
		95% Chebyshev UPL	45.71
95% WH Approx. Gamma UPL	33.32	Upper Threshold Limit Based upon IQR	36.6
95% HW Approx. Gamma UPL	33.39		
95% WH Approx. Gamma UTL with 95% Coverage	37.28		
95% HW Approx. Gamma UTL with 95% Coverage	37.48		

Note: UPL represents a preferred estimate of BTV

Attachment 1
ProUCL Output

Note: Highlighted UTL is the Selected Background Threshold Value (BTV)

Zinc

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17

Raw Statistics		Log-Transformed Statistics	
Minimum	27.8	Minimum	3.325
Maximum	72.2	Maximum	4.279
Second Largest	57.3	Second Largest	4.048
First Quartile	39.5	First Quartile	3.676
Median	42.85	Median	3.758
Third Quartile	50.33	Third Quartile	3.918
Mean	45.31	Mean	3.792
SD	9.902	SD	0.213
Coefficient of Variation	0.219		
Skewness	0.951		

Background Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.939	Shapiro Wilk Test Statistic	0.975
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% UTL with 95% Coverage	69.59	95% UTL with 95% Coverage	74.76
95% UPL (t)	63	95% UPL (t)	64.88
90% Percentile (z)	58	90% Percentile (z)	58.25
95% Percentile (z)	61.59	95% Percentile (z)	62.94
99% Percentile (z)	68.34	99% Percentile (z)	72.77

Gamma Distribution Test		Data Distribution Test
k star	19.48	Data appear Normal at 5% Significance Level
Theta Star	2.326	
MLE of Mean	45.31	
MLE of Standard Deviation	10.27	
nu star	701.2	
A-D Test Statistic	0.294	
5% A-D Critical Value	0.739	
K-S Test Statistic	0.127	
5% K-S Critical Value	0.203	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
90% Percentile	58.86	90% Percentile	58.79
95% Percentile	63.41	95% Percentile	72.2
99% Percentile	72.54	99% Percentile	72.2
		95% UTL with 95% Coverage	72.2
		95% Percentile Bootstrap UTL with 95% Coverage	72.2
		95% BCA Bootstrap UTL with 95% Coverage	72.2
		95% UPL	72.2
		95% Chebyshev UPL	89.65
95% WH Approx. Gamma UPL	64.01	Upper Threshold Limit Based upon IQR	66.56
95% HW Approx. Gamma UPL	64.2		
95% WH Approx. Gamma UTL with 95% Coverage	72.44		
95% HW Approx. Gamma UTL with 95% Coverage	72.95		

Note: UPL represents a preferred estimate of BTV

APPENDIX E

ECOLOGICAL RISK ASSESSMENT

APPENDIX E

ECOLOGICAL RISK ASSESSMENT

This ecological risk assessment (ERA) evaluates the potential for ecological impacts from potential exposure to chemicals of potential ecological concern (COPECs) in soils at YPG-35a, b, and c at the U.S. Army Garrison Yuma Proving Ground (USAGYPG) near Yuma, Arizona. The results of this ERA provide a basis for decision in making regarding further action with respect to the COPECs in soils at the site.

Following USEPA (1997, 1998) guidance, the ERA process consists of four major components:

- Problem formulation
- Analysis
- Risk characterization
- Uncertainty analysis

Each step of the ERA process is discussed in detail below.

E.1 PROBLEM FORMULATION

Problem formulation is a systemic planning process that identifies the major factors to be considered in the ERA (USEPA 1997, 1998). This section includes the site descriptions, the approach for evaluation of available environmental data, selection of COPECs, exposure pathway characterization, development of a conceptual site model (CSM), and selection of assessment endpoints. Each is described below.

E.1.1 General Habitat Characterization

USAGYPG is a “U” shaped installation occupying approximately 1,300 square miles in located in southwestern Arizona just to the west of the Colorado River (Figure 1.1). The installation is 23 miles northeast of the City of Yuma along U.S. Highway 95, between Interstate Highways 8 and 10 (Figure 1.1). There are three wildlife refuges adjacent to USAYPG: 1) Cibola National Wildlife Refuge, 2) Imperial National Refuge, and 3) Kofa National Wildlife Refuge. The Cibola and Imperial National Refuges are both located along the Colorado River to the west of USAGYPG, while the Kofa National Wildlife Refuge is located within and to the north of the “U” shaped boundary.

USAGYPG is located in the Sonoran Desert, a low elevation, hot, arid desert. It is characterized by high daytime temperatures with large daily temperature variations, low relative humidity, and very low average precipitation. The average monthly air temperature ranges from a low of 47.6 degrees Fahrenheit (°F) in January to a high of 106.8°F in July. The average annual

precipitation in Yuma and other areas along the lower Colorado River is very low, approximately 3.5 inches per year (NWS, 2011).

No perennial lakes or streams occur within USAGYPG, however two major rivers flow through the adjacent desert. The Colorado River traverses a generally north-south direction west of USAGYPG with the mostly dry Gila River drainage traversing an east-west direction south of USAGYPG. Surface drainage on the northern and western part of USAGYPG flows into the Colorado River with the central and eastern parts of USAGYPG flowing into the Gila River (Figure 1.1).

E.1.2 Species at Yuma Proving Ground

More than 60 species of mammals have been observed at USAGYPG. Large mammal species that have been observed include the mule deer (*Odocoileus hemionus*), wild horse (*Equus caballus*), burro (*Equus asinus*), coyote (*Canis latrans*), mountain lion (*Puma concolor*), and kit fox (*Vulpes macrotis*). Small mammal species present at TEAD include mice (*Mus* spp. and *Peromyscus* spp.), pocket mice (*Chaetodipus* spp. and *Perognathus* spp.), kangaroo rats (*Dipodomys* spp.), bats (multiple genera), squirrels (*Ammospermophilus* spp. and *Spermophilus* spp.), and rabbits and hares (*Lepus* and *Sylvilagus* spp.) (Table E.1).

More than 141 species of birds have been observed at USAGYPG, including the red-tailed hawk (*Buteo jamaicencis*), rough-legged hawk (*Buteo lagopus*), bald eagle (*Haliaeetus leucocephalus*), turkey vulture (*Cathartes aura*), prairie falcon (*Falco mexicanus*), and six species of owls (Table E.1).

Thirty three species of reptiles have been observed on USAGYPG, including the Sonoran desert tortoise (*Gopherus morafkai*), Mohave fringe-toed lizard (*Uma scoparia*), collared lizard (*Crotaphytus collaris*), northern side blotched lizard (*Uta stansburiana*), western whiptail (*Aspidoscelis tigris*), gopher snake (*Pituophis catenifer*), and Mojave rattlesnake (*Crotalus scutulatus*) (Table E.1).

Three species of amphibians have been recorded at USAGYPG: Red-spotted toad (*Bufo punctatus*), Colorado River toad (*Bufo alvarius*), and Couch's spadefoot toad (*Scaphiopus couchii*) (Table E.1).

No fish have been recorded at USAGYPG.

Numerous plant species have been recorded at USAGYPG, including 7 Arizona special status species (Table E.1). The Nichol's turks' head cactus, a federally listed species, is listed in the current INRMP as occurring at YPG. The Nichol's turks' head cactus was reportedly photographed on the base in a 1994 plant survey; however, subsequent field surveys by the photographer, contract personnel, and USAGYPG staff have failed to find the plant (Command Technology Directorate et al., 2001). However, if the cactus is at USAGYPG, it is almost

certainly within the boundary of the proposed White Tanks Conservation Area (Laura Merrill, pers. comm.). Therefore, this species is assumed to not be present at YPG-35a through c.

There are no federally listed threatened or endangered species known to occur on USAGYPG (Table E.1). However, 17 Arizona special status species have been observed at the facility. A list of amphibian, bird, mammal, and reptile species found at USAGYPG is presented in Table E.1.

E.1.3 Site Descriptions, Land Use, Wildlife, and Plants

Three sites, YPG-35a through YPG-35c, make up the former Muggins Mountain OB/OD area (Figure 2.1). Muggins Mountain was used from 1952 until 1974 for the treatment of unused, rejected, and waste munitions from various localities around USAGYPG. The entire site is approximately 500 acres and includes burial trenches, open burn areas, and open detonation pits (Parsons, 2010). Muggins Mountain is located within the southwestern portion of the Kofa Firing Range, approximately 3 miles southeast of the Kofa Administration Area at the base of Muggins Mountain. The three areas are described in more detail below:

- YPG-35a General Muggins Mountain OB/OD Area: approximately 360 acres and excludes YPG-35b and YPG-35c. Open detonation operations may have occurred in dry stream beds within the site. Miscellaneous surface debris may also be present as kick-outs from OB/OD operations at YPG-35b and YPG-35c. However, a visual instrument-aided reconnaissance was performed by a qualified UXO technician at YPG-35a and no surface debris or OB/OD sites were found. Therefore, it is assumed that there were no releases at YPG-35a and the site is not evaluated further here.
- YPG-35b Burial Trenches Area (13.47 acres): a geophysical survey and visual observations at YPG-35b have identified one large open trench (TR-1) and 10 suspect burial trenches (TR-2 to TR-11) where MEC and MD disposal may have occurred (Figure 2.2). The burial trenches (TR-2 to TR-11) are assumed to contain buried MEC.
- YPG-35c OB/OD Area of Muggins Mountain (52.98 acres): includes detonation pits, open dunnage pit TR-14, two suspected burial trenches TR-12 and TR-13, an area where propellants were burned on the ground surface called the “Burn on Ground (BOG) Propellant Area”, and an area where white phosphorus (WP) was burned on the ground surface (Figure 2.3). The burial trenches (TR-12 to TR-14) are assumed to contain buried MEC.

In 1977, burial actions were discontinued and no additional activities are reported to have occurred at the site until 1985. Cleanup operations began in 1985, which involved removing and disposing of munitions from the burial trenches at YPG-35b. Subsequently, the OB/OD Area was reactivated in the 1985-1986 timeframe to provide detonation support for live or suspected-live munitions removed from open trench TR-1 at YPG-35b. Operations at the OB/OD area

continued to support the Burial Trenches Area cleanup until the late 1990s, when cleanup of open trench TR-1 was discontinued.

For the forseeable future, Muggins Mountain will remain vacant unused land. The site has been listed in the base master plan as "to be removed from consideration for new construction projects," meaning that there are no plans for development of the site in the future.

Much of the site has been disturbed by past landfill and munition disposal activities and has little to no vegetation. Vegetation across the former Muggins Mountain OB/OD Facility consists of low-lying shrubs and brush, including desert ironwood, palo verde, catclaw acacia, saguaro cactus, ocotillo, Anderson thornbush, smoketree, and creosote bush. Brittlebush, saltbush, and sweetbush are some common shrubs in the Muggins Mountains.

While the Sonoran desert tortoise (*Gopherus morafkai*) is known to occur at USAGYPG, it has only been found in the northwestern corner of the base (Grandmaison, 2010). The US Geological Survey (USGS) (Nussear et al., 2009) has modeled the habitat preferences of desert tortoises and generated a map of the suitable habitat in southern California and Arizona. Based on this habitat suitability map, YPG-35 b and c does contain suitable desert tortoise habitat. On a scale of 0 to 1 (with 1 being the most suitable habitat), the suitability for each site YPG-35 b and c was estimated by Nussear et al. (2009) to be 0.40.

E.1.4 Selection of Representative Ecological Receptors

Ecological receptors (i.e., representative species) include non-domesticated plants and wildlife that may reasonably be expected to inhabit or regularly forage at the site, given current and anticipated future site conditions. As generally recognized by ERA guidance documents, it is impractical to evaluate all possible ecological receptors for a given site. Instead, a few species representative of the habitat functions and trophic structure present are selected for evaluation in the ERA.

The species present at USAGYPG are shown in Table E.1. Plants and terrestrial invertebrates were selected for evaluation. In addition, one mammal and one bird species were selected for evaluation from each of the major trophic guilds (i.e., herbivores, insectivores, and carnivores). Special status species, and those species with small home ranges, occurring on the base were preferentially selected for evaluation. Species that are primarily associated with the rivers and the farmlands bordering the base were not selected for evaluation. Note that although there are several special status bat species that occur on the base, bats have larger home ranges than shrews and mice, which were selected for evaluation instead because evaluation of species with smaller home ranges will result in a more conservative risk estimates. The representative species selected for evaluation are as follows:

Plants:

- Terrestrial plants

Invertebrates:

- Terrestrial (soil dwelling) invertebrates

Mammals:

- Desert shrew (*Notiosorex crawfordi*)
- Little pocket mouse (*Perognathus longimembris*)
- Kit fox (*Vulpes macrotis*)

Birds:

- Gambel's quail (*Callipepla gambelii*)
- Verdin (*Auriparus flaviceps*)
- American kestrel (*Falco sparverius*)

Reptiles:

- Sonoran desert tortoise (*Gopherus morafkai*)

Although the Sonoran desert tortoise has not been observed at YPG-35 b, and c, the Sonoran desert tortoise is a Wildlife [species] of Special Concern in Arizona, and YPG-35 b, and c is somewhat suitable habitat for the desert tortoise (Section E.1.3). Therefore, this species was selected for evaluation.

Although the Mohave fringe-toed lizard (*Uma scoparia*) occurs at USAGYPG (AGFD, 2008) and is an Arizona species of special concern, it is "restricted to sparsely vegetated areas that concentrate fine sands such as dunes and large washes in arid environments" (AGFD, 2008). Since there are no dunes or fine sands at YPG-35, b, and c, the Mohave fringe-toed lizard is unlikely to be present and was not selected for evaluation.

E.1.5 Selection of Chemicals of Potential Ecological Concern

COPECs are those chemical detected in environmental media at the site for which exposure may result in adverse ecological effects. The selection of COPECs consisted of a five step process, as follows:

- Data review
- Exclusion of essential nutrients
- Identification of metals elevated above background
- Comparison of maximum detect to ecological screening levels
- Comparison of upper confidence limit (UCL) to risk-based screening levels

E.1.5.1 Data Review

The data collected by Parsons at the site is presented in detail in Section 4. Briefly, a total of 20 soil borings were drilled at YPG-35b from which a total of 48 samples (including 4 duplicates) were collected. At YPG-35c, 14 borings were advanced from which a total of 35 samples (including 3 duplicates) were collected. Note that no borings were advanced within burial trenches TR-2 to TR-14 due to the potential presence of MEC. However, borings were advanced adjacent to the trenches (Figures 4.1 and 4.2). An additional 31 (including 1 duplicate) surface (0-0.5 ft bgs) grab samples were collected at YPG-35c. All samples were analyzed for metals via USEPA Methods 6010B and 7471A, VOCs via USEPA Method 8260B, SVOCs via USEPA Method 8270C, explosives via USEPA Method 8330, nitroguanidine via UW29 or USEPA Method 8330. The sample locations are shown in Figures 4.1 and 4.2.

Jason and Associates (2002, 2003) completed two sampling events in 2002 and 2003 at YPG-35c. Twenty seven soil samples were collected in December 2002, analyzed for lead USEPA Method 6010B, explosives USEPA Method 8330, and SVOCs via USEPA Method 8270C, and are designed with WP, HE, and BOG in Figure 4.2. In the 2003 sampling event, 9 samples were collected, analyzed for metals via USEPA Methods 6010B and 7471, explosives via USEPA Method 8330, perchlorate via USEPA Method 6850, and are designated with a B, PA, PS, or WS. All samples collected by Jason and Associates (2002, 2003) were used in this assessment (Figure 4.2), except for PA-3 and B-8 which were samples of propellant found on the ground surface and are not representative of soils. Two samples were also collected outside the YPG-35a,b,c site boundaries and were excluded from the risk assessment; i.e., B-8 and WS-1. These samples are also not shown on Figure 4.2.

The quality of the data collected by Parsons was evaluated in Appendix C. As part of the data quality assessment, the data was assigned qualifiers. Data without qualifiers and data with J qualifiers were considered appropriate for risk assessment purposes (USEPA, 1989, 1992). U and UJ qualified data were considered to be non-detect (ND) but usable for risk assessment purposes. R qualified data were excluded from this risk assessment (USEPA, 1989, 1992). The data collected by Jason and Associates (2002, 2003) was not validated following USEPA Contract Laboratory Program (CLP) National Functional Guidelines as was done for the data collected by Parsons (see Appendix C). Therefore, the data collected by Jason was used here as is.

E.1.5.2 Exclusion of Essential Nutrients

Essential nutrients are toxic only at very high doses (i.e., much higher than those associated with exposure at the site) and were not selected as COPECs. These include calcium, magnesium, potassium, iron, and sodium (USEPA, 1989).

E.1.5.3 Background

Metals are naturally occurring in soils. To determine which metals are present at the site due to past releases, the maximum detected concentrations from 0-6.5 ft bgs at the site were compared with statistically derived background threshold values (BTVs). Normally, data from 0-10 ft bgs would be compared to BTVs; however, no soil samples were collected between 6.5 and 19 ft bgs at YPG-35b or YPG-35c. Therefore, all data from 0-6.5 ft bgs was compared to BTVs.

Metals detected at concentrations less than the BTVs were assumed to be present at naturally occurring concentrations and were not evaluated further. Metals detected at concentrations exceeding the BTVs were evaluated further. The derivation of the BTVs is presented in Appendix D.

E.1.5.4 Comparison of Maximum Detects to Ecological Screening Levels

The maximum detected concentrations from 0-6.5 ft bgs were compared to ecological screening levels derived from the following hierarchy of sources:

1. USEPA (2011) Ecological Soil Screening Levels
2. Los Alamos National Laboratory (2011) EcoRisk Database v3.0
3. USEPA Region 4 (2001) Ecological Screening Values
4. USEPA Region 5 (2003) Ecological Screening Levels

Chemicals from 0-6.5 ft bgs with maximum detected concentrations less than the ecological screening levels were determined not to be present at concentrations with the potential to cause adverse effects and were eliminated as COPECs.

For aluminum, USEPA (2003a) states that "potential ecological risks associated with aluminum in soils is [sic] identified based on the measured soil pH. Aluminum is identified as a COPC [chemical of potential concern] only for those soils with a soil pH less than 5.5. The technical basis for this procedure is that the soluble and toxic forms of aluminum are only present in soil under [sic] soil pH values of less than 5.5." The soils within USAGYPG and the YPG-35 b, and c site, are predominately slightly to moderately alkaline, with pH values between 7.8 to 8.4 (Table 2.1). Therefore, aluminum was eliminated as a COPEC and not evaluated further in this ERA.

E.1.5.5 Comparison of UCL to Risk-Based Screening Levels

In the last step, 95% upper confidence limits (UCLs) on the mean were calculated using USEPA's (2010) ProUCL v4.1.01 software and compared to the ecological screening levels. Those chemicals with UCLs greater than ecological screening levels were selected as COPECs. The output from ProUCL for 0-10 ft bgs is presented as Attachment 1 to this Appendix.

Using the process outlined above, the following COPECs were selected for YPG-35b (Table E.2):

- Bis(2-ethylhexyl) phthalate
- Cadmium
- Lead
- Manganese
- Nitroguanidine (due to lack of screening levels)
- Perchlorate (due to lack of screening levels)
- Thallium
- Zinc

Using the same process mentioned above, the following twenty COPECs were selected YPG-35c (Table E.3):

- Antimony
- Benzoic acid
- Bis(2-ethylhexyl) phthalate
- Cadmium
- Copper
- Di-n-butyl phthalate
- 1,3-Dinitrobenzene
- 2,4 Dinitrotoluene
- 2,6 Dinitrotoluene
- Lead
- Manganese
- Mercury
- Nitrobenzene
- Nitroguanidine (due to lack of screening levels)
- Perchlorate (due to lack of screening levels)
- Selenium
- Tetryl
- 2,4,6 Trinitrotoluene
- Vanadium
- Zinc

E.1.6 Exposure-Pathway Analysis and Conceptual Site Model

Ecological receptors may be at-risk from exposures to COPECs if there is a complete exposure pathway between the COPEC source and the receptor. Results of the soil sampling activities conducted during this RFI indicate that COPECs are present in site soils. In addition, the ingestion of plants and animals from these sites may expose animals to site-related chemicals

via food-web transfers. There is no surface water or sediment at YPG-35 b, and c and groundwater has not been affected. Thus, ecological receptors are assumed to be exposed to COPECs via the following pathways:

- Dermal contact with soils
- Incidental ingestion of soils
- Ingestion of site-associated biota
- Inhalation of contaminants emitted from soils

These exposure pathways form the basis for the assessment endpoints and the CSM, which is graphically illustrated in Figure E.1.

E.1.6.1 Soil Exposure Pathways

Wildlife can incidentally ingest soils while foraging or during other activities (e.g., during dust bathing, preening, grooming) (USEPA 1993). Some animals (e.g., deer) may also intentionally ingest soils to supplement their trace mineral intake (Beyer et al., 1994). Thus, soil ingestion was assumed to be a complete exposure pathway.

Plants present at the site may be exposed to contaminants in soils through root contact, and some contaminants may be taken up into the vegetation and then consumed by herbivorous organisms. Similarly, invertebrates potentially residing in contaminated soils would contact and potentially incorporate these contaminants.

Wildlife exposures to chemicals in soil via dermal contact were not evaluated in this ERA. USEPA (2003b) states that "[a]lthough dermal exposure through direct contact with soil can be considered a complete exposure pathway for birds and mammals, this exposure pathway is usually considered to be incidental due to low frequency and/or duration of exposure and the relative contribution to risk compared to oral exposures... Feathers of birds, fur on mammals, and scales on reptiles are believed to reduce dermal exposure by limiting the contact of the skin surface with the contaminated media."

USEPA (2003b) also states that inhalation exposures are generally insignificant. Therefore, exposures via the inhalation of COPECs emitted from soils were assumed to be insignificant and were not evaluated here.

For most plants, most of the root mass and uptake process usually occurs in fairly shallow soils. Globally, 95% of all plants have rooting depths between 1.3 and 5 ft bgs. In particular, the maximum rooting depth of crops and pasture species is (on average) between 3 and 5 ft bgs (Breuer et al., 2003; Schenk and Jackson, 2002). Schenk and Jackson (2009) have also modeled ecosystem rooting depths in North America and their maps show that the mean 95% ecosystem rooting depth is approximately 5.5 to 6.2 ft bgs (1.7 to 1.9 meters) in the area surrounding YPG-35 b, and c. Therefore, plants were assumed to be exposed to soils up to 6 ft bgs.

In general, terrestrial invertebrates are assumed to burrow up to 6 ft bgs. Non-burrowing animals are generally assumed to be exposed to soils from 0-2 inches bgs. Therefore, the non-burrowing animals evaluated in this HRA (i.e., desert shrew, Gambel's quail, verdin, and American kestrel), were assumed to be exposed to soils from 0-2 inches bgs. If suitable soils are present, the Sonoran desert tortoise will dig burrows up to 6 ft deep on the slopes of rocky foothills (USACE, 2006). Therefore, the Sonoran desert tortoise was assumed to be exposed to soils up to 6 ft bgs. Kit fox dens extend approximately 1.3-3 meters bgs (Arjo et al., 2003). Therefore, it was assumed the kit foxes may be exposed to soils as deep as 10 ft bgs. Little pocket mice typically have tunnels that reach up to approximately 2 ft bgs (Kenagy, 1973). In contrast, desert shrews do not generally burrow, but nest on the surface (Hoffmeister and Goodpaster, 1962).

At both sites YPG 35 b and c, the shallowest samples were collected from 0-0.5 feet bgs, with the next samples collected at 5.5 to 6.5 ft bgs and lastly 19.5 to 20.5 ft bgs. Therefore, soil data from 0-0.5 ft bgs were used to represent exposures to receptors assumed to be exposed to 0-2 inches bgs and 0-6.5 ft bgs were used for all other exposures to receptors.

Based on this information, the following exposure intervals were used to estimate exposures:

- Terrestrial plants: 0-6.5 ft bgs
- Terrestrial invertebrates: 0-6.5 ft bgs
- Desert shrew: 0-.5 ft bgs
- Kit fox: 0-.5 ft bgs
- Little pocket mouse: 0-0.5 ft bgs
- Gambel's quail: 0-0.5 ft bgs
- Verdin: 0-0.5 ft bgs
- American kestrel: 0-0.5 ft bgs
- Sonoran desert tortoise: 0-6.5 ft bgs

E.1.6.2 Food Web Exposure Pathways

Wildlife may be exposed to the COPECs at the site via the consumption of food items (e.g., plants and invertebrates). Wildlife exposures via the consumption of food items from the site were assumed to be a complete exposure pathway and were quantitatively evaluated.

E.1.6.3 Surface Water Exposure Pathways

There is no surface water or sediment at the site. Therefore, surface water and sediment exposure pathways are assumed to be incomplete.

E.1.6.4 Groundwater Exposure Pathways

It is expected that groundwater occurs at approximately 300-400 ft bgs at the site (Section 2.6.2). Since groundwater does not come to the surface at the site, and most plants do not have roots that extend to 300-400 ft bgs, groundwater exposure pathways were assumed to be incomplete.

E.1.6.5 Exposure Pathway Summary and Conceptual Site Model

The ecological receptors evaluated in this ERA were assumed to be exposed to the COPECs at the site via the consumption of food items (e.g., plants and invertebrates) and the incidental ingestion of soil. These exposure pathways were quantitatively evaluated in the ERA and are illustrated in Figure E.1.

E.1.7 Selection of Assessment Endpoints

In accordance with USEPA (1997) guidance for ecological risk assessment, assessment endpoints are "explicit expressions of the actual environmental values (e.g., ecological resources) that are to be protected." USEPA (1998) further states that "once ecological values are selected as potential assessment endpoints, they need to be operationally defined. Two elements are required to define an assessment endpoint." The two elements are 1) an ecological entity and 2) "the characteristic about the entity of concern that is important to protect and potentially at risk" (USEPA 1998). An "ecological entity" can be a species (e.g., the desert shrew), a functional group of species (e.g., plants), a community (e.g., soil invertebrates), an ecosystem (e.g., sediment benthos), or a specific valued habitat (e.g., high desert). Several different species and groups of species, representing a broad range of potential ecological receptors, were selected (see Section E.1.4) for evaluation in this ERA. The characteristics to be protected include survival, reproduction, and development.

The interpretation of available site-specific and biological information and an understanding of the structure and function of the terrestrial communities at the site were used to identify general assessment endpoints for the ERA. The following assessment endpoints were selected for this analysis: development (including growth), survivorship, and reproduction in populations of the selected ecological receptors (Section E.1.4).

These general assessment endpoints, and their measurable attributes, represent the basic complete exposure pathways relevant to addressing ecological hazards due to the presence of site-specific COPECs.

E.2 ANALYSIS

The purpose of the analysis phase is to 1) characterize the potential types of effects that might occur in receptors if exposed to site-related contaminants, and 2) quantify the exposure for

complete exposure pathways. This section presents the derivation of effects and exposure estimates.

E.2.1 Selection of Toxicity Reference Values

Toxicity reference values (TRVs) are used to evaluate the potential hazards from exposure to each COPEC. Numerical values chosen for a TRV are based on a specific "assessment endpoint" (i.e., unaffected development, survivorship, or reproduction of the representative species as described in Section E.1.4). Since adverse reproductive and developmental effects generally occur at lower exposures than mortality, TRVs protective of reproductive and developmental effects were assumed to be protective of mortality. Population persistence was assumed to be maintained if reproduction and growth were not affected.

The numerical values used as TRVs are called "measures of effect." From each toxicity study, there are multiple potential numerical values that can be used as measures of effect. The measures of effect used in this ERA were the no observable adverse effect levels (NOAELs) and lowest observable adverse effect levels (LOAELs) protective of reproductive and developmental (including growth) effects.

Toxicity reference values for mammals and birds were obtained from the following hierarchy of sources:

1. USEPA (2011) Ecological Soil Screening Levels (Eco-SSLs)
2. Los Alamos National Laboratory (2011) EcoRisk Database v3.0
3. US Army Public Health Command (USAPHC) (2012) Wildlife Toxicity Assessment program
4. Navy/Biological Technical Assistance Group (BTAG) Toxicity Reference Values as updated by the California Department of Toxic Substances Control (2000)
5. Peer-reviewed academic literature

In the Eco-SSLs, only NOAEL-based TRVs are derived. These were determined by USEPA as the lesser of the 1) geometric mean of all NOAELs for growth and reproduction and 2) the highest bounded NOAEL[1] lower than the lowest bounded LOAEL[2] for reproduction, growth, and survival. The NOAEL-based TRVs reported by USEPA were used here. Because the LOAELs for each study reviewed during the development of the EcoSSLs are also provided, LOAEL-based TRVs were calculated here as the geometric mean of the LOAELs from the acceptable studies with the same endpoint(s) that were used to derive the NOAEL-based TRVs. Since the data presented in the EcoSSLs are from multiple chronic oral exposure studies using animals of

[1]A bounded NOAEL is a NOAEL from a study that also produced a LOAEL

[2]A bounded LOAEL is a LOAEL from a study that also produced a NOAEL

multiple body weights and LOAELs were not used to extrapolate to NOAELs (and vice versa), no uncertainty factors were applied to TRVs derived from the EcoSSLs.

For TRVs taken from the LANL (2011) EcoRisk Database, the uncertainty factors used by LANL (2011) were used here. For TRVs derived from the academic literature, the following uncertainty factors were used:

- Uncertainty Factors Used to Derive Toxicity Reference Values

Extrapolation Goal	Test-Study Result	Uncertainty Factor
NOAEL	NOAEL	1
	LOAEL	5
	Overt Effect-Level	10
	LD_{50} (median lethal dose)	15
LOAEL	NOAEL	0.2 (=1/5)
	LOAEL	1
	Overt Effect-Level or LD_{50}	5
Chronic Duration	Single dose or <5 days	15
	A few weeks	10
	A few months	5
	Chronic; lifetime	1

For plants and invertebrates, the following hierarchy of sources for TRVs (expressed as soil screening levels) was used:

1. USEPA (2011) Eco-SSLs
2. Los Alamos National Laboratory (2011) EcoRisk Database v3.0
3. Canadian Council of Ministers of the Environment (2011) Canadian Environmental Quality Guidelines
4. Efroymson et al. (1997)
5. Peer-reviewed academic literature

For antimony, no soil screening level protective of plants is available from USEPA (2011). The screening values from LANL (2010) and Efroymson et al. (1997) were based on an unspecified plant species exposed to antimony for an unspecified duration and an unspecified effect. Therefore, the screening values from LANL (2010) and Efroymson et al. (1997) are not

considered usable. The following screening levels for plants are available from the academic literature:

- He and Yang (1999): evaluated effects of antimony on rice but did not statistically analyze their data. However, RIVM (2005) reports an EC_{10} of 56 mg/kg from this study based on reduced biomass.
- Oorts et al. (2008): evaluated effects of antimony on barley and lettuce and derived an EC_{10} of 510 mg/kg.
- Pan et al. (2011) evaluated effects of antimony on corn and found a NOAEL and LOAEL of 0 and 10 mg/kg, respectively, for reduced root biomass and total root length.

Oorts et al. (2008) state that other studies on the toxicity of antimony to plants are confounded by the ions bound to the antimony added to soils (e.g., $SbCl_3$ or $KSb(OH)_6$) that may affect soil pH and/or salinity. Only the experiment by Oorts et al. (2008) demonstrated that the toxic effects of antimony were not confounded by pH or salinity effects. Therefore, the EC_{10} derived by Oorts et al. (2008) of 510 mg/kg is used here.

For vanadium, USEPA (2011) does not provide a screening level protective of plants. Los Alamos National Laboratory (2011) provides a screening level of 0.025 mg/kg in soil protective of plants stating that it was taken from a secondary source and was "the only value available." However, USEPA (2011) listed one chronic study on broccoli by Kaplan et al. (1990) and there are two additional chronic toxicity studies available in the literature. The results of each are summarized below.

- Kaplan et al. (1990): Tested broccoli by adding $VOSO_4$ to two different soils. In Blanton soil, vanadium reduced aboveground biomass with a NOAEL of 60 mg/kg and a LOAEL of 80 mg/kg. In Orangeburg soils, vanadium did not affect aboveground biomass at up to 100 mg/kg. RIVM (2005) derived an EC_{10} from this experiment of 62 mg/kg.
- Wang and Liu (1999): tested soybeans by adding NH_4VO_3 to two different soils. In fluvo-aquic soils, vanadium reduced shoot and root biomass with a NOAEL of 15 mg/kg and a LOAEL of 30 mg/kg. In Oxisol soils, vanadium did not affect shoot and root biomass at up to 75 mg/kg. RIVM (2005) derived an EC_{10} from this experiment of 25 mg/kg.
- Vachirapatama and Jirakiattikul (2008): tested Chinese green mustard by adding NH_4VO_3 to soils. Vanadium reduced plant height at the number of leaves with a NOAEL of 12.2 mg/kg and a LOAEL of 21.0 mg/kg.

To provide a protective risk-assessment, the NOAEL from Vachirapatama and Jirakiattikul (2008) of 12.2 mg/kg was used.

The TRVs selected for use in this ERA for plant and invertebrate, avian, mammalian, and reptilian receptors are provided in Tables E.4 through E.7.

E.2.2 Exposure Characterization

For plants and invertebrates, measured soil concentrations may be used directly to assess exposures. However, the TRVs used to assess the potential toxic effects of chemical exposures to avian, mammalian, and reptilian receptors are expressed in terms of an average daily dose (ADD), which is defined as the average mass of the chemical ingested, in milligram $(mg)_{chemical}$/kilogram $(kg)_{Body\ Weight\ (BW)}$-day. Therefore, it is necessary to develop reasonable estimates of the doses to which the ecological receptors may be exposed at each site. The exposure dose is estimated as a function of the concentrations in environmental media (e.g., soil), biotransfer through the food web, and the manner in which receptors use the location (e.g., length of time a receptor is expected to forage at the location based on their home range size, seasonal behavior, dietary composition, and food ingestion rates). The equation used to estimate the ADD is as follows:

$$ADD = IR_F \times \left[\left(C_p \times df_p\right) + \left(C_i \times df_i\right) + \left(C_m \times df_m\right) + \left(C_s \times df_s\right)\right] \times AUF$$

where:

ADD =	Average daily dose (mg chemical ingested per kg body weight per day [mg/kg-day])
IR_F =	Food ingestion rate (kg_{food}-dry weight [dw]/kg_{BW}-day)
C_p =	COPEC concentration in plants (mg/kg-dw)
df_p =	Dietary fraction consisting of terrestrial plants
C_i =	COPEC concentration in terrestrial invertebrates (mg/kg-dw)
df_i =	Dietary fraction consisting of terrestrial invertebrates
C_m =	COPEC concentration in small mammals/birds (mg/kg-dw)
df_m =	Dietary fraction consisting of small mammals/birds
C_s =	COPEC concentration in soil (mg/kg-dw)
df_s =	Dietary fraction consisting of soil
AUF =	Area Use Factor; ratio of the size of the site to the receptor-specific foraging area

Each of the variables used to estimate ADD is explained below and summarized in Table E.8.

E.2.2.1 Body Weight (BW)

Body weight is the average weight of each ecological receptor and is used to determine food ingestion rates and is negatively related to exposure and hazard estimates. Where available, the body weight of the smaller sex was used.

Mammals:

- Desert Shrew: Body weighs have been summarized in USACHPPM (2006). Adult body weights range from 3.5 to 4.5 grams (g), with an average of 4 g for adults. Therefore, the mean body weight of 4 g was used.
- Kit Fox: Average body weighs have been summarized in USACHPPM (2006) as follows:
  - Arizona
    - Females: 1.67 ± standard error of 0.04 kg
    - Females: 1.87 ± standard error of 0.06 kg
    - Males: 1.77 ± standard error of 0.06 kg
    - Males: 1.82 ± standard error of 0.06 kg
    - Both sexes: 1.76 ± standard error of 0.05 kg
  - California
    - Males: 2.4 ± standard error of 0.01 kg
    - Females: 2.1 ± standard error of 0.01 kg
  - Utah
    - Males: 2.06 kg (range 1.7-2.5 kg)
    - Females: 1.91 kg (range 1.6-2.1 kg)

To provide a protective risk assessment, the lowest reported mean body weight from Arizona of 1.67 kg was used.

- Little pocket mouse: The mean body weight for mice in the Owens valley of California is 7.1 g ± standard error of 0.11 g, with a range of 6.3 to 8.0 g (Kenagy, 1973). Therefore, a mean body weight of 7.1 g was used.

Birds:

- American kestrel: Body weights have been summarized in USEPA (1993) and USACHPPM (2006). Average adult body weights range from 103 to 138 g. No body weight data from Arizona was presented. Therefore, to provide a protective risk assessment, the lowest reported mean body weight from of 103 g was used.
- Gambel's quail: Average body weights have been summarized by Brown et al. (1998), as follows:
  - Arizona
    - Females: 167.4 g (range 157–176 g)
    - Males: 171.1 g (range 164–180 g)
    - Both sexes: 169.3 g (range 157–180 g)
    - Both sexes: range 160-175 g
  - New Mexico
    - Females: 177.3 ± standard deviation of 10 g
    - Males: 181.8 ± standard deviation of 10 g

To provide a protective risk assessment, the lowest reported mean body weight from Arizona of 167.4 g was used.

- Verdin: Average body weights have been summarized by Webster (1999). Winter body weights in Riverside County California were 6.9 ± standard deviation of 0.2 g during the

winter and 6.3 ± standard deviation of 0.6 g during the summer. To provide a protective risk assessment, the lowest reported mean body weight of 6.3 g was used.

Reptiles:

- Sonoran desert tortoise: The Cal/Ecotox Database[3] presents body weight data from a large number of studies, most of which are unpublished reports. Only one study in the Cal/Ecotox Database reported results for the Sonoran desert tortoise; i.e., desert tortoises collected east of the Colorado River. That study reported mean body weights for males and females of 3.28 kg (with a standard deviation of 0.56 kg) and 2.65 kg (with a standard deviation of 0.39), respectively. Specimens were collected from Washington County (UT) and Mohave County (AZ). To provide a protective risk assessment, the mean body weight for females of 2.65 kg was used.

E.2.2.2 Food Ingestion Rate (IR_F)

The food ingestion rate is the amount of food an ecological receptor consumes on a daily basis. Food ingestion rates vary with many factors, including metabolic rate, the energy devoted to growth and reproduction, and composition of the diet. The metabolic rate of free-ranging animals is a function of several factors, including ambient temperature, activity levels, and body weight (USEPA, 1993). For most wild animals, experimentally derived dietary intake rates are not available. However, Nagy (2001) has provided equations that can be used to estimate the metabolically required dietary intake rate from the average body weight of a species. Since Nagy (2001) derived equations for several different groups of birds and mammals, the equations provided by Nagy (2001) that best fits the data (i.e., the Class with the highest correlation coefficient $[r]^2$, with an r^2 of one indicating the equation perfectly matches the data) was used to estimate the dietary intake rate for each receptor. The equations applicable to each receptor, and their respective r^2 values, are as follows:

Mammals:

Desert shrew - carnivores, $r^2 = 0.954$, equation:

$$\mathrm{IR_D}(kg\text{-}dw/day) = 0.153 \times (\mathrm{BW})^{0.834} \times \frac{1\ kg}{1{,}000\ g}$$

Kit fox – carnivores, $r^2 = 0.954$, equation:

$$\mathrm{IR_D}(kg\text{-}dw/day) = 0.153 \times (\mathrm{BW})^{0.834} \times \frac{1\ kg}{1{,}000\ g}$$

Little pocket mouse - mammals, $r^2 = 0.947$, equation:

$$\mathrm{IR_D}(kg\text{-}dw/day) = 0.323 \times (\mathrm{BW})^{0.744} \times \frac{1\ kg}{1{,}000\ g}$$

[3] http://www.oehha.ca.gov/scripts/cal_ecotox/species.asp

Birds:

American kestrel – birds, $r^2 = 0.940$

$$\mathrm{IR_D(kg\text{-}dw/day)} = 0.638 \times (\mathrm{BW})^{0.685} \times \frac{1\ kg}{1{,}000\ g}$$

Gambel's quail – Galliformes, $r^2 = 0.992$, equation:

$$\mathrm{IR_D(kg\text{-}dw/day)} = 0.088 \times (\mathrm{BW})^{0.891} \times \frac{1\ kg}{1{,}000\ g}$$

Verdin – desert birds, $r^2 = 0.961$, equation:

$$\mathrm{IR_D(kg\text{-}dw/day)} = 0.407 \times (\mathrm{BW})^{0.681} \times \frac{1\ kg}{1{,}000\ g}$$

Reptiles:

Sonoran desert tortoise – reptiles, $r^2 = 0.952$

$$\mathrm{IR_D(kg\text{-}dw/day)} = 0.0111 \times (\mathrm{BW})^{0.920} \times \frac{1\ kg}{1{,}000\ g}$$

where:

IR_D (kg-dw/day) = dietary intake rate, or the amount of food ingested per day in dry weight

BW = average body weight (g)

The estimated dietary intake rates (IR_D) are presented in Table E.7. The dietary intake rates are then body weight normalized, as follows:

$$IR_F = \frac{IR_D}{BW}$$

where:

IR_D = dietary intake rate (kg-dw/day)

IR_F = body weight normalized amount of food ingested per day (kg-dw/kg-day)

BW = average body weight (g)

The estimated food ingestion rates based on the average body weight and dietary intake rate presented above are presented in Table E.8.

E.2.2.3 Dietary Fraction (df)

Most ecological receptors consume a variety of food items. However, for the purposes of an ecological risk assessment, it is necessary to know what fraction of the total amount of food consumed (on average) is composed of plant matter, small mammals, insects, etc. This is discussed below for each ecological receptor.

Mammals:

- Desert shrew: Dietary information is available from USACHPPM (2006), which states that their main source of food is insects but, "occasionally they will eat … carrion such as dead birds, mammals, and reptiles but will not eat live rodents." However, quantitative information on the consumption of birds, mammals, and reptiles was not available. Therefore, birds, mammals, and reptiles were assumed to represent 1% of the desert shrew's diet, with the remaining 99% assumed to be invertebrates.
- Kit fox: According to USACHPPM (2006), kit foxes are almost exclusively carnivorous. While kit foxes do consume insects, USACHPPM (2006) did not provide a quantitative estimate of insect consumption. Therefore, insects were assumed to represent 1% of the kit fox's diet, with the remaining 99% assumed to be small mammals and birds.
- Little pocket mouse: Quantitative dietary information for this species is available from two sources, as follows:
  - Bradley and Mauer (1973), Clark County, Nevada, by % volume of stomach contents
    - Plants: 99%
    - Insects: 1%
  - Lemen and Freeman (1986), Goldfield, Nevada by % coverage of stomach contents
    - Plants: 96.4%
    - Insects: 2.9%

Both of these estimates are very similar. However, % volume provides a more accurate estimate of the amount of material consumed. Therefore, the little pocket mouse was assumed to have a diet of 99% plant matter and 1% insects.

Birds:

- American kestrel: Dietary composition has been summarized by USEPA (1993) and USACHPPM (2006). Kestrels prey on a variety of small animals, including invertebrates (e.g., worms, spiders, scorpions, beetles, and grasshoppers), amphibians and reptiles (e.g., frogs, lizards, and snakes), and a wide variety of small-to medium-sized birds and mammals. USEPA (1993) and USACHPPM (2006) summarize the results of three dietary studies, as follows:
  - California-open areas, woods: 32.6% invertebrates, 63.9% small mammals/birds/herpetofauna, 3.5% other
  - Florida-woodlands: 51% invertebrates, 49% small mammals/birds/herpetofauna
  - California-hayfields, pasture: 25% invertebrates, 71.3% small mammals/birds/herpetofauna, 3.7% not specified

The average dietary intake[4] of these three studies was used assumed to be representative of the diets of American kestrels at the site and is as follows:

- Terrestrial invertebrates: 36.2%
- Small mammals/birds: 63.8%

[4] with "other" or unspecified fractions assumed to be small mammals/birds/herpetofauna

- Gambel's quail: Dietary composition studies on the Gamble's quail have been summarized by Brown et al. (1998), who states that Gambel's quail consumes seeds, grass, leaves, fruit, berries, and insects. Quantitative information on the diet of Gambel's quail are available as follows:
  - Brown et al. (1998), southern Arizona, by frequency
    - Plants: 92%
    - Insects: 7%
  - Hungerford (1962), southern Arizona, by frequency
    - Plants: 95.2%
    - Insects: 4.8%
  - Campbell (1957), New Mexico, by %volume of stomach contents
    - Plants: 98.4%
    - Insects: 1.6%

Only one study (Campbell, 1957) was available that quantified the diets of Gambel's quails by % volume; therefore, that study was selected as the basis for assuming that the diet of Gambel's quail is 98.4% plants and 1.6% insects.

- Verdin: Dietary composition has been summarized Webster (1999), who states that the verdin's diet consists of scale insects, caterpillars, jumping spiders, aphids, beetles, wasp larvae, leafhoppers, some berries, nectar, palm fruits, and seedpods of legumes. However, quantitative information was not available on the composition of the verdin's diet. Therefore, it was assumed that plants made up 1% of the verdin's diet, with the remaining 99% assumed to be invertebrates.

Reptiles:

- Sonoran desert tortoise: Dietary composition has been summarized Van Devender (2002). Sonoran desert tortoises in Arizona have been documented to eat 199 species of plants including herbs (55.3%), grasses (17.6%), woody plants (22.1%), and succulents (5.0%), Therefore, it was assumed that plants made up 100% of the Sonoran desert tortoise's diet.

E.2.2.4 Soil Ingestion (df_s)

Soil ingestion rates are available for a handful of non-domesticated wildlife species from the academic literature. The relevant literature is surveyed below for each species.

Mammals:

- Desert shrew: The soil ingestion rate for this species has not been determined. Talmage and Walton (1980) are often cited as the source for a 13% soil ingestion rate for the short-tail shrew. However, Talmage and Walton (1980) state that they obtained that information from a study by Garten (1980). Unfortunately, Garten (1980) did not sample short-tail shrews (*Blarina brevicauda*), or any other species from the shrew family (Soricidae). Therefore, the 13% soil ingestion rate reported by Talmage and Walton (1980) cannot be used. However, based on unpublished data from Garten, USEPA (2007) estimated a mean soil ingestion rate of 1.1% for the short-tail shrew. Since that is

the only available information available for any species of shrew, a soil ingestion rate of 1.1% was assumed for the desert shrew.

- Kit fox: The soil ingestion rate for this species has not been determined. Beyer et al. (1994) reported a mean soil ingestion rate of 2.8% in the red fox (*Vulpes vulpes*). Therefore, a soil ingestion rate of 2.8% was assumed for the kit fox.
- Little pocket mouse: the soil ingestion rate has not been determined for this species or for any other species in the same family (Heteromyidae). Soil ingestion rates are available for several other small mouse-like mammals from the family Cricetidae: white-footed mouse (<2%), meadow vole (2.4%) (Beyer et al., 1994), and the hispid cotton rat (2.8%) (Garten, 1980). The only other rodents for which soil ingestion rates are available are the black-tailed prairie dog (7.7%) and the white-tailed prairie dog (2.7%) (Beyer et al., 1994), which are both significantly larger the little pocket mouse. Therefore, it was assumed that that soil ingestion rate of the hispid cotton rat should be protective of the soil ingestion rate of the little pocket mouse and a soil ingestion rate of 2.8% was assumed.

Birds:

- American kestrel: USACHPPM (2006) states that soil ingestion is likely to be negligible and consist only of that associated with prey that are consumed. However, USEPA (2007) estimated a mean soil ingestion rate for the red-tailed hawk (*Buteo jamaicensis*) of 2.6%. Assuming that the soil ingestion rate of the red-tailed hawk is representative of the American kestrel, a soil ingestion rate of 2.6% was assumed here.
- Gambel's quail: The soil ingestion rate has not been determined for this species. However, Beyer et al. (1994) provide a soil ingestion rate of 9.3% for the wild turkey. Since wild turkeys are in the same order as Gambel's quail (i.e., Galliformes), both species forage on the ground, and both species have a similar diet (i.e., mostly plant matter with some insects), it was assumed that the soil ingestion rate of wild turkeys would be representative of Gambel's quail. Therefore, a soil ingestion rate of 9.3% was used.
- Verdin: the soil ingestion rate has not been determined for this species. Johnson et al. (2007) measured the ingestion rates of several other species of Passeriformes, including the eastern bluebird (<2%), eastern phoebe (<2%), prairie warbler (<2%), and the brown thrasher (7%). These birds all eat insects, like the mountain verdin. The eastern phoebe and the prairie warbler catch insects either while flying or on tree limbs, as does the verdin. Therefore, the verdin was assumed to have a soil ingestion rate similar to that of the eastern phoebe (<2%) and the prairie warbler (<2%). To provide a protective risk assessment, a soil ingestion rate of 2% was assumed.

Reptiles:

- Sonoran desert tortoise: the soil ingestion rate has not been determined for this species. It has, however been documented that tortoises intentionally consume soil, probably for mineral supplementation (Esque and Peters, 1992, Marlow and Tollestrup, 1982). Since there is no available information, but it is known that desert tortoises intentionally ingest soil, a soil ingestion rate of 5% was assumed.

Note that because the dietary intake rate presented above (Section E.2.2.2) is the metabolically required amount of food that must be ingested, and soils are not assumed to have any metabolic value, the amount of soil ingested is assumed to be in addition to the amount of food ingested. Therefore, the total dietary proportions, when soil is included will be greater than 100% (e.g., 105% for the Sonoran desert tortoise).

E.2.2.5 Foraging Area and Area Use Factor (AUF)

The AUF is the ratio of the size of the site to the receptor-specific foraging area/home range. When ecological receptors have foraging areas larger than a site, they are assumed to obtain only a portion of their total dietary intake from the site. That portion is assumed to be equal to the AUF. This section presents the foraging areas for each of the receptors and estimated AUFs.

Mammals:

- Desert shrew: The home range of this species has not been measured. However, USACHPPM (2006) estimated that the home range of adult desert shrews should be between 0.2 and 1.75 acres, based on body weight. To provide a health protective risk assessment, the smallest home range of 0.2 acres was used.
- Kit fox: Studies on the average home ranges for kit foxes have been summarized by USACHPPM (2006), as follows:
  - San Joaquin Valley, California: 642-1,285 acres
  - Western Arizona
    - Males: 3,039 ± a standard error of 247 acres
    - Females: 2,422 ± 346 acres
    - Both sexes: 2,768 ± 232 acres
  - California : 2866 ± 222 acres

To provide a health protective risk assessment, the smallest average home range reported from Arizona (2,422 acres) was used.

- Little pocket mouse: Home range information is available from several sources, as follows:
  - Burge and Jorgensen (1973), Nevada (assuming 95% confidence and 99% coverage)
    - Males: 38.88 meter (m) radius
    - Females: 36.09 m radius
  - Jorgensen (1968), Nevada:
    - Males: 41.89 m radius
    - Females: 44.45 m radius
  - Maza et al. (1973), Nevada (assuming 99% coverage)
    - Male: 53.7 m radius
    - Female: 60.3 m radius
    - Both sexes: 57.0 m radius
  - Kenagy (1973), Owens Valley, California: maximum distance moved less than 50 m.

Since none of the available studies are from Arizona, the smallest home range radius (36.09 m radius) was converted to an area (i.e., area = πr^2) of 1.0 acres.

Birds:

- American kestrel: USACHPPM (2006) summarizes the available home range data for kestrels, as follows:
  - California (winter):
    - Female: 31.6 hectare (ha) ± standard deviation of 10.7 (78 ± 26 acres)
    - Male: 13.1 ha ± standard deviation of 2.0 (32 ± 4.9 acres)
    - Mean: 154 ha (381 acres)
  - Wyoming (summer): 202 ha ± standard deviation of 131 (499 ± 324 acres)
  - Michigan: 131 ha ± standard deviation of 100 (324 ± 247 acres)

  To provide a protective assessment, the smallest reported home range of 32 acres was used.
- Gambel's quail: Gullion (1962) reported that home ranges of Gambel's quail ranged from of 19 to 95 acres, with an average of 35.7 acres. Therefore, a home range of 35.7 acres was used.
- Verdin: Home range information is available from several sources, as follows:
  - Taylor (1971), Maricopa County, Arizona: 23.7 acres (8.9 and 31.2 acres) (breeding territory)
  - Webster (1999), Doña Ana County, New Mexico:
    - Breeding territory: 19.8 acres
    - Nonbreeding territory: 48.4 acres
  - Webster (1999), Riverside County, California: 48.4 acres

The home range of 23.7 acres for the only study from Arizona (Taylor 1971) was used.

Reptiles:

- Sonoran desert tortoise: Home range information is available from two sources, as follows:
  - Barrett (1990), Picacho Mountains, Arizona:
    - Males: 63.8 ± standard error of 20.4 acres
    - Females: 37.9 ± 13.6 acres
    - Range for both sexes: 7.0 to 132.0 acres
  - Riedle et al. (2008), Florence Military Reservation, Arizona:
    - Males: 82.5 ± standard deviation of 71.6 acres
    - Females: 44.0 ± 42.6 acres
    - Range for both sexes: 7.7 to 230.1 acres
  - Averill-Murray (2002) summarizes several studies from Arizona, as follows:
    - Harcuvar Mountains
      - Males: 22.7 acres (range 2.5-55.1 acres)
      - Females: 11.6 acres (range 6.7-18.5 acres)
    - Little Shipp Wash
      - Males: 53.6 acres (range 37.6-77.8 acres)
      - Females: 57.6 acres (range 8.4-127.3 acres)

- Mazatzal Mountains
  - Females: 31.6 acres (range 5.7-125.3 acres)
- San Pedro Valley
  - Males: 27.2 acres (range 9.6-54.9 acres)
  - Females: 6.4 acres (range 2.7-14.8 acres)
- Tortolita Mountains
  - Males: 40.3 acres (range 8.2-62.3 acres)
  - Females: 32.4 acres (20.0-53.4)

As all reported home ranges are from Arizona, the smallest reported home range of 6.4 acres was used.

Using the above home ranges, the area use factors were calculated as follows (Table E.8):

YPG-35b – 13.47 acres

- Desert shrew: 13.47 acres/0.2 acres >1, therefore, 1 was used
- Kit fox: 13.47 acres/2,422 acres = 0.0056
- Little pocket mouse: 13.47 acres/1.0 acres >1, therefore, 1 was used
- American kestrel: 13.47 acres/32 acres = 0.42
- Gambel's quail: 13.47 acres/35.7 acres = 0.38
- Verdin: 13.47 acres/23.7 acres = 0.57
- Sonoran desert tortoise: 13.47 acres/6.4 acres >1, therefore, 1 was used

YPG-35c – 52.98 acres

- Desert shrew: 52.98 acres/0.2 acres >1, therefore, 1 was used
- Kit fox: 52.98 acres/2,422 acres = 0.022
- Little pocket mouse: 52.98 acres/1.0 acres >1, therefore, 1 was used
- American kestrel: 52.98 acres/32 acres >1, therefore, 1 was used
- Gambel's quail: 52.98 acres/35.7 acres >1, therefore, 1 was used
- Verdin: 52.98 acres/23.7 acres >1, therefore, 1 was used
- Sonoran desert tortoise: 52.98 acres/6.4 acres >1, therefore, 1 was used

E.2.2.6 Exposure Point Concentrations (C_s, C_p, C_i)

An exposure point concentration (EPC) is the concentration of a particular chemical in an environmental medium (e.g., soil), at the point of contact with the receptor. An EPC was calculated for soils, invertebrates, small mammal/bird prey, and plants. EPCs for soil and food items (plants, invertebrates, and small mammal/bird prey) were estimated based on the corresponding soil intervals presented in Section E.1.6.1 above. Soil EPCs are provided in Table E.9 for YPG-35b and Table E.10 for YPG-35c.

EPCs were calculated as the lesser of the UCL or the maximum detected concentration within the respective soil interval. As discussed in Section E.1.5.5 UCLs were calculated using the most recent version of USEPA's ProUCL software. At the time the report was prepared, this was v4.1.01. ProUCL output is provided in Attachment 1.

Since plants, invertebrates, and small mammals were not sampled, bioaccumulation models were used to predict concentrations in these organisms. The models used were taken from the following hierarchy of sources:

1. USEPA (2011) Eco-SSLs
2. Los Alamos National Laboratory (2011) EcoRisk Database v3.0
3. Ecological risk assessment protocol for hazardous waste combustion facilities (USEPA 1999)
4. Bechtel Jacobs Company (1998)
5. Peer-reviewed academic literature

The bioaccumulation models may take several different forms. USEPA (2011) provides both bioaccumulation factors and regression models. The bioaccumulation models used and predicted EPCs are provided in Tables E.11 through E.13.

For bis(2-ethylhexyl)phthalate, Los Alamos National Laboratory (2011) provides bioaccumulation models to predict concentrations in terrestrial invertebrates and plants, but not small mammals. USEPA (2005) states that 99% of bis(2-ethylhexyl)phthalate that is ingested by mammals is metabolized. Biotransfer factors calculated using models based on log K_{ow} for bis(2-ethylhexyl)phthalate must be divided by a factor of 100 to correct for the effect of metabolism. Therefore, it was assumed that the concentrations of bis(2-ethylhexyl)phthalate in small mammals eaten by larger mammals and predatory birds would be negligible and was not modeled here.

To provide a basis for comparison, EPCs were also estimated for background conditions.

E.3 RISK CHARACTERIZATION

Risk characterization involves two components: hazard estimates and risk description. For vertebrates, hazard estimates are based on the comparison of average daily dose to the chemical- and receptor-specific TRVs and are expressed as a hazard quotient (HQ):

$$HQ = \frac{Average\ daily\ dose\ (ADD)}{Toxicity\ Reference\ Value\ (TRV)}$$

For invertebrates and plants, the HQ is calculated by dividing the soil EPC by the benchmark concentration, as follows:

$$HQ = \frac{Soil\ Exposure\ Point\ Concentration\ (EPC)}{Benchmark\ Concentration}$$

The HQ provides a mathematically derived index that expresses the relationship between the ADD and derived TRV. A NOAEL-based HQ of one is the threshold at or below which the contaminant is unlikely to cause adverse ecological effects: NOAEL-based HQs greater than one indicates that exposures exceeds a no-effect dose and does not necessarily indicate that adverse effects will occur. LOAEL-based HQs better indicate the potential for adverse effects to receptors because they are based on effect-based toxicological data. Thus, LOAEL-based HQs greater than one indicate that adverse effects may occur, but whether or not significant effects would actually occur cannot be judged with certainty. Menzie et al. (1993) recommended the following guidelines for interpreting HQs or HIs:

- Adverse effects are not expected for HQ or HI values less than one.
- A low potential for adverse effects may be indicated by HQ or HI values between one and 10.
- A significant potential for adverse effects on ecological receptors and communities may be indicated by HQ or HI values greater than 10, particularly if they exceed a value of 100.

The second component of the risk characterization step is the risk description. The risk description is an interpretation of the risks estimated for the assessment endpoints. It includes an "evaluation of the lines of evidence supporting or refuting the risk estimates and interpretation of the significance of the adverse effects on the assessment endpoints" (USEPA, 1998).

The plant and invertebrate screening levels and HQs are shown in Table E.14. Calculated ADDs, and the resulting HQs, are provided in Tables E.15 and E.16. To provide an estimate of the incremental hazards contributed by exposures at the site compared to background, ADDs and HQs were also estimated for background conditions (Table E.17).

E.3.1 Hazard Estimates

E.3.1.1 Site 35b

Six COPECs (i.e., bis[2-ethyhexyl]phthalate, cadmium, lead, manganese, thallium, and zinc) were selected for evaluation at YPG-35b (Section E.1.5). Two EPCs exceeded the screening levels for plants (i.e., manganese and thallium) and none of the EPCs exceeded the screening levels for invertebrates (Table E.14). Thus, manganese and thallium may be present at YPG-35b levels that represent a potential hazard to plants. No screening levels were available to assess plant and invertebrate exposures to bis(2-ethyhexyl)phthalate.

Among the vertebrate receptors, all of the NOAEL-based HQs were less than one for the kit fox little pocket mouse, American kestrel, Gambel's quail, and Sonoran desert tortoise (Table

E.15). For the desert shrew and verdin, the NOAEL-based HQs exceed one for assumed exposures to thallium and lead, respectively. Additionally, the NOAEL-based hazard indexes (i.e., the sum of several HQs) exceeded the threshold value of one for the desert shrew and verdin. However, none of the LOAEL-based HQs and hazards indexes exceeded the threshold value of one.

E.3.1.2 Site 35c

Twenty one COPECs (see Table E.10) were selected for evaluation at YPG-35b (Section E.1.5). The EPCs for 5 COPECs exceeded the screening levels for plants (i.e., 2,4-dinitrotoluene, lead, manganese, selenium, and vanadium) and the EPCs for four COPECs exceeded the screening levels for invertebrates (i.e., 2,4-dinitrotoluene, nitrobenzene, perchlorate, and selenium) (Table E.14). Thus, potential hazards may be present at YPG-35c to plants and invertebrates. No screening levels were available to assess plant and invertebrate exposures to several of the COPECs at YPG-35c and, therefore, the hazards to these receptors may have been under estimated.

Among the vertebrate receptors, NOAEL-based hazard indexes were greater than one for all receptors, with the exception of the kit fox (Table E.16). The NOAEL-based HQs for 10 COPECs exceeded the threshold value of one for one or more receptors. LOAEL-based HQs and hazard indexes exceeded the threshold of one for all receptors except the kit fox. Assumed exposures to di-n-butyl phthalate, 2,4-dinitrotoluene, and 2,6-dinitrotoluene resulted in LOAEL-based HQs that exceeded the threshold value of one for one or more receptors as well.

E.3.2 Risk Description

E.3.2.1 Site 35b

For plants, the hazard quotient for assumed exposures to manganese under background conditions was higher than at the site. Therefore, there is no incremental hazard (i.e., site minus background) for manganese and site related exposures are not expected to result in adverse effects. However, site related exposures to thallium may result in adverse effects for plants (Table E.14). No adverse effects from assumed exposures to the COPECs at the site are expected for invertebrates.

For the vertebrate receptors, the LOAEL-based HQs and HIs (i.e., the sum of all HQs for an individual receptor) were less than the threshold value of one for all receptors (Table E.15). Indicating adverse effects to vertebrate receptors from soil exposures at YPG-35b are unlikely.

E3.2.2 Site 35c

For plants, the hazard quotient for assumed exposures to manganese and vanadium was higher than at the site. Therefore, there is no incremental hazard for manganese and vanadium

and site related exposures are not expected to result in adverse effects. However, site related exposures to 2,4-dinitrotoluene, lead, and selenium may result in adverse effects for plants; and site related exposures to 2,4-dinitrotoluene, nitrobenzene, perchlorate, and selenium may result in adverse effects for invertebrates (Table E.14).

The LOAEL-based hazard indexes exceeded the threshold value of one for all receptors except the kit fox. Assumed exposures to di-n-butyl phthalate, 2,4-dinitrotoluene, and 2,6-dinitortoluene may result in adverse effects for the desert shrew, little pocket mouse, American kestrel, Gambel's quail, verdin, and Sonoran desert tortoise.

E.4 UNCERTAINTY ANALYSIS

All risk assessments involve the use of assumptions, professional judgment, and imperfect data to varying degrees, which results in uncertainty in the final hazard estimates. Uncertainties associated with the ecological risk assessment are qualitatively evaluated here.

No samples could be collected in burial trenches TR-2 through TR-14 due to the presume presence of MEC. Therefore, the HQs for assumed ecological exposures to the soils in the burial trenches could not be estimated.

Outside of the burial trenches, the soil samples collected at part of this RFI used to calculate the soil EPCs were generally biased samples; i.e., sampling was biased toward areas of contamination. Thus, the soil EPCs presented here are likely to be representative of the most contaminated areas at the site and are unlikely to be representative of true site-wide average concentrations. Thus, the risks estimated here for assumed exposures outside of the burial trenches are likely to be over estimated.

Exposure estimates in this ERA incorporate an assumption of 100% bioavailability for all COPECs in soils. This is likely to result in an over-estimation of exposure, as it is unlikely that all of the COPECs are 100% bioavailable in soil. Actual ADDs are expected to be less than what was estimated in this ERA.

Bioaccumulation models were not readily available for all of the COPECs. For those COPECs without bioaccumulation models, assumed vertebrate exposures may have been under estimated. Additionally, the bioaccumulation models used in this ERA are not site-specific. Therefore, the actual concentrations of EPCs in plants, terrestrial invertebrates, and small mammals/birds may differ from what was assumed here. Additionally, bioaccumulation is expected to differ among species of plants, terrestrial invertebrates, and small animals, as well as by site-specific soil properties. Therefore, the bioaccumulation models used here represent a degree of uncertainty in the assessments.

Although it is possible to estimate concentrations of bis(2ethylhexyl)phthalate in small mammals, USEPA (2005) states that 99% of the chemical is metabolized in mammals. Thus,

carnivores that eat small mammals are still exposed to some bis(2ethylhexyl)phthalate and the hazard quotients for the kit fox and American kestrel may, therefore, have been under estimated. However, this is expected to be a minor source of uncertainty.

The exposure parameters used to estimate average daily intakes are generally the most conservative available; i.e., of the available data, the parameter values that would result in the highest exposure levels were used. Thus, it is anticipated that the exposures at the site are unlikely to be lower than what has been estimated here. However, it should also be noted that the exposure parameters used in this ERA are not taken from the populations at USAGYPG and the actual exposure parameters may differ somewhat from what was assumed in this ERA.

For reptiles, TRVs were available only to assess the potential effects from assumed exposures to four of the COPECs. Thus, HQs could not be calculated for the other COPECs at the site and it is likely that the hazards to reptiles have been under estimated.

No screening levels were available to assess plant and invertebrate exposures to 7 COPECs. Thus, plant and invertebrate exposures to these COPECs could not be assessed and are likely to have been under estimated.

No TRVs were available that are specific to the species evaluated in this ERA. Thus, the degree to which the TRVs used here reflect the toxicity to the species evaluated is uncertain.

Actual annual average food ingestion rates for the species investigated in this ERA were not available. Therefore, the food ingestion rates were based on regression models of metabolic rates for mammals, birds, and reptiles (Nagy, 2001). Since the field measurements were not made at YPG-35 b, and c for the species investigated here, there is some uncertainty regarding the accuracy of the estimated food ingestion rates.

For most of the species assessed in this ERA, soil ingestion rates have not been measured and it was necessary to extrapolate a soil ingestion rate based on similar species. This may have resulted in some uncertainty in the exposures estimated for soil ingestion.

For several receptors at both sites, NOAEL-based HQs exceeded the threshold value of one for while the LOAEL-based HQs were hazard indexes equal to or less than one for several COPECs. Although adverse effects may occur at concentrations less than the LOAELs but greater than the NOAELs, this is expected to be a minor source of uncertainty when considered in the light of the accompanying estimated LOAEL-based HQs and hazard indexes, several of which were greater than the threshold value of one at YPG-35c.

Using the HQ method to assess hazards to ecological receptors includes intrinsic uncertainties. Limitations of this method (Tannenbaum et al. 2003) include:

- HQs are not measures of a potential hazard to ecological health, but only indicate if estimated exposure exceeds a particular toxicological value.
- HQs generally lack population-level relevance. The TRVs used in this ERA are based on responses of individuals. However, populations of ecological receptors are the focus of assessment-endpoint specifications for ERAs (in the absence of special-status species).
- HQ values in ERA seemingly indicate a linear relationship (e.g., an HQ=100 appears to be 100-fold worse than an HQ=1), whereas the underlying toxicological relationships may not be linear.
- Conservatism, assumptions, and uncertainties (particularly the use of "uncertainty factors" in deriving proxy values for no-effect TRVs) can combine to produce highly elevated HQ values that reflect toxicologically implausible conditions (e.g., extant conditions could be interpreted to be acutely lethal with respect to chemical concentrations, yet habitat is present and occupied by organisms).

It was also assumed in this ERA that the effects of exposures to multiple COPECs were additive. However, in some cases, the effects of exposures to multiple chemicals may result in synergistic (i.e., greater than additive) or antagonistic (i.e., less than additive) effects.

These sources of uncertainty should be considered when evaluating this ERA as the basis for further action at the site. However, the generally conservative nature of the ERA process and the assumptions used in this ERA, should result in a generally health-protective assessment.

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TABLES

TABLE E.1

List of Species at Yuma Proving Ground

RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Amphibia	Red-spotted toad	*Bufo punctatus*	Carnivore					
Amphibia	Colorado River toad	*Bufo alvarius*	Carnivore					
Amphibia	Couch's spadefoot toad	*Scaphiopus couchii*	Carnivore					
Aves	Cooper's hawk	*Accipiter cooperii*	Carnivore			X	X	
Aves	Sharp-shinned hawk	*Accipiter striatus*	Carnivore			X	X	X
Aves	Spotted sandpiper	*Actitis macularius*	Insectivore				X	
Aves	White-throated swift	*Aeronautes saxatalis*	Insectivore			X		
Aves	Red-winged blackbird	*Agelaius phoeniceus*	Herbivore				X	X
Aves	Black-throated sparrow	*Amphispiza bilineata*	Omnivore			X		
Aves	Northern pintail	*Anas acuta*	Omnivore			X	X	
Aves	American wigeon	*Anas americana*	Herbivore			X	X	X
Aves	Northern shoveler	*Anas clypeata*	Insectivore			X	X	
Aves	Green-winged teal	*Anas crecca*	Omnivore			X	X	
Aves	Cinnamon teal	*Anas cyanoptera*	Omnivore			X	X	
Aves	Blue-winged teal	*Anas discors*	Omnivore			X	X	
Aves	Mallard	*Anas platyrhynchos*	Omnivore			X	X	
Aves	Gadwall	*Anas strepera*	Omnivore			X	X	X
Aves	Golden eagle	*Aquila chrysaetos*	Carnivore			X		
Aves	Black-chinned hummingbird	*Archilochus alexandri*	Omnivore			X	X	X
Aves	Great blue heron	*Ardea herodias*	Carnivore			X	X	X
Aves	Long-earned owl	*Asio otus*	Carnivore			X		
Aves	Burrowing owl	*Athene cunicularia*	Carnivore			X		
Aves	Verdin	*Auriparus flaviceps*	Insectivore			X		
Aves	Cedar waxwing	*Bombycilla cedrorum*	Omnivore			X	X	X
Aves	Great horned owl	*Bubo virginianus*	Carnivore			X		
Aves	Cattle egret	*Bubulcus ibis*	Carnivore			X	X	X
Aves	Bufflehead	*Bucephala albeola*	Insectivore			X	X	
Aves	Zone-tailed hawk	*Buteo albonotatus*	Carnivore			X		
Aves	Red-tailed hawk	*Buteo jamaicensis*	Carnivore			X		
Aves	Rough-legged hawk	*Buteo lagopus*	Carnivore			X		

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Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Aves	Gambel's quail	*Callipepla gambelii*	Herbivore					
Aves	Costa's hummingbird	*Calypte costae*	Omnivore			X		
Aves	Cactus wren	*Campylorhynchus brunneicapillus*	Omnivore			X		
Aves	House finch	*Carpodacus mexicanus*	Herbivore			X		
Aves	Turkey vulture	*Cathartes aura*	Carnivore			X		
Aves	Hermit thrush	*Catharus guttatus*	Omnivore			X		
Aves	Swainson's thrush	*Catharus ustulatus*	Omnivore			X	X	
Aves	Canyon wren	*Catherpes mexicanus*	Insectivore			X		
Aves	Vaux's swift	*Chaetura vauxi*	Insectivore			X		
Aves	Killdeer	*Charadrius vociferus*	Insectivore			X		X
Aves	Lesser nighthawk	*Chordeiles acutipennis*	Insectivore			X		
Aves	Northern harrier	*Circus cyaneus*	Carnivore			X		
Aves	Northern flicker	*Colaptes auratus*	Insectivore			X		
Aves	Gilded flicker	*Colaptes chrysoides*	Insectivore			X		
Aves	Rock dove	*Columba livia*	Herbivore					
Aves	Inca dove	*Columbina inca*	Herbivore			X		
Aves	Common ground dove	*Columbina passerina*	Herbivore			X		
Aves	Olive-sided flycatcher	*Contopus cooperi*	Insectivore			X	X	
Aves	Western wood-peewee	*Contopus sordidulus*	Insectivore			X	X	
Aves	Common raven	*Corvus corax*	Omnivore			X		
Aves	Yellow-rumped warbler	*Dendroica coronata*	Omnivore			X		
Aves	Black-throated gray warbler	*Dendroica nigrescens*	Insectivore			X		
Aves	Hermit warbler	*Dendroica occidentalis*	Insectivore			X	X	X
Aves	Yellow warbler	*Dendroica petechia*	Insectivore			X	X	X
Aves	Townsend's warbler	*Dendroica townsendi*	Insectivore			X	X	
Aves	Pacific-slope flycatcher	*Empidonax difficilis*	Insectivore			X		
Aves	Hammond's flycatcher	*Empidonax hammondii*	Insectivore			X		
Aves	Gray flycatcher	*Empidonax wrightii*	Insectivore			X		
Aves	Horned lark	*Eremophila alpestris*	Herbivore			X		

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Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Aves	Merlin	*Falco columbarius*	Carnivore			X		
Aves	Prairie falcon	*Falco mexicanus*	Carnivore			X		
Aves	American peregrine falcon	*Falco peregrinus*	Carnivore	Delisted	WSC	X	X	
Aves	American kestrel	*Falco sparverius*	Carnivore			X		
Aves	Greater roadrunner	*Geococcyx californianus*	Omnivore			X		
Aves	Common yellowthroat	*Geothlypis trichas*	Insectivore			X	X	X
Aves	Sandhill crane	*Grus canadensis*	Omnivore			X	X	X
Aves	Bald eagle	*Haliaeetus leucocephalus*	Carnivore	Delisted	WSC	X	X	
Aves	Black-necked stilt	*Himantopus mexicanus*	Insectivore			X	X	X
Aves	Barn swallow	*Hirundo rustica*	Omnivore			X		
Aves	Baltimore oriole	*Icterus galbula*	Omnivore			X		
Aves	Scott's oriole	*Icterus parisorum*	Omnivore			X		
Aves	Loggerhead shrike	*Lanius ludovicianus*	Carnivore			X		
Aves	California gull	*Larus californicus*	Carnivore			X	X	X
Aves	Ring-billed gull	*Larus delawarensis*	Carnivore			X	X	X
Aves	Belted Kingfisher	*Megaceryle alcyon*	Carnivore		WSC	X	X	
Aves	Western Screech-Owl	*Megascops kennicottii*	Carnivore			X		
Aves	Gila woodpecker	*Melanerpes uropygialis*	Omnivore			X		
Aves	Elf owl	*Micrathene whitneyi*	Insectivore			X		
Aves	Northern mockingbird	*Mimus polyglottos*	Omnivore			X		
Aves	Brown-headed cowbird	*Molothrus ater*	Omnivore			X		
Aves	Ash-throated flycatcher	*Myiarchus cinerascens*	Insectivore			X		
Aves	Brown-crested flycatcher	*Myiarchus tyrannulus*	Insectivore			X		
Aves	Long-billed curlew	*Numenius americanus*	Carnivore			X		
Aves	Black-crowned night-heron	*Nycticorax nycticorax*	Omnivore			X	X	X
Aves	MacGillivray's warbler	*Oporornis tolmiei*	Herbivore			X		
Aves	Sage thrasher	*Oreoscoptes montanus*	Omnivore			X		
Aves	Ruddy duck	*Oxyura jamaicensis*	Insectivore			X	X	
Aves	Osprey	*Pandion haliaetus*	Carnivore		WSC	X	X	
Aves	House sparrow	*Passer domesticus*	Herbivore					X

TABLE E.1

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RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Aves	Lazuli bunting	*Passerina amoena*	Omnivore			X		
Aves	California brown pelican	*Pelecanus occidentalis*	Carnivore			X	X	
Aves	Cliff Swallow	*Petrochelidon pyrrhonota*	Insectivore			X		
Aves	Phainopepla	*Phainopepla nitens*	Omnivore			X		
Aves	Common poorwill	*Phalaenoptilus nuttallii*	Insectivore			X		
Aves	Wilson's phalarope	*Phalaropus tricolor*	Insectivore			X	X	X
Aves	Black-headed grosbeak	*Pheucticus melanocephalus*	Omnivore					
Aves	Ladder-backed woodpecker	*Picoides scalaris*	Insectivore			X		
Aves	Abert's towhee	*Pipilo aberti*	Omnivore			X	X	
Aves	Green-tailed towhee	*Pipilo chlorurus*	Omnivore			X		
Aves	Western tanager	*Piranga ludoviciana*	Insectivore			X		
Aves	Eared grebe	*Podiceps nigricollis*	Insectivore			X	X	
Aves	Blue-gray gnatcatcher	*Polioptila caerulea*	Insectivore			X		
Aves	Black-tailed gnatcatcher	*Polioptila melanura*	Insectivore			X		
Aves	Purple martin	*Progne subis*	Insectivore			X		
Aves	Vermilion flycatcher	*Pyrocephalus rubinus*	Insectivore			X		
Aves	Great-tailed grackle	*Quiscalus mexicanus*	Omnivore			X		X
Aves	American avocet	*Recurvirostra americana*	Omnivore			X	X	
Aves	Ruby-crowned kinglet	*Regulus calendula*	Insectivore			X		
Aves	Rock wren	*Salpinctes obsoletus*	Insectivore			X		
Aves	Black phoebe	*Sayornis nigricans*	Insectivore			X	X	X
Aves	Say's phoebe	*Sayornis saya*	Insectivore			X		
Aves	Rufous hummingbird	*Selasphorus rufus*	Omnivore			X		
Aves	Lesser goldfinch	*Spinus psaltria*	Herbivore				X	X
Aves	Black-chinned sparrow	*Spizella atrogularis*	Omnivore			X		
Aves	Brewer's sparrow	*Spizella breweri*	Insectivore			X		
Aves	Chipping sparrow	*Spizella passerina*	Herbivore			X		X
Aves	Northern rough-winged swallow	*Stelgidopteryx serripennis*	Insectivore			X	X	
Aves	Eurasian Collared dove	*Streptopelia decaocto*	Herbivore					X
Aves	Western meadowlark	*Sturnella neglecta*	Omnivore			X		X

TABLE E.1

List of Species at Yuma Proving Ground

RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Aves	European starling	*Sturnus vulgaris*	Omnivore				X	X
Aves	Tree swallow	*Tachycineta bicolor*	Insectivore			X	X	
Aves	Violet-green swallow	*Tachycineta thalassina*	Insectivore			X		
Aves	Bendire's thrasher	*Toxostoma bendirei*	Omnivore			X		
Aves	Crissal thrasher	*Toxostoma crissale*	Insectivore			X		
Aves	Le Conte's thrasher	*Toxostoma lecontei*	Omnivore			X		
Aves	Brown thrasher	*Toxostoma rufum*	Omnivore			X		
Aves	Greater yellowlegs	*Tringa melanoleuca*	Carnivore			X	X	X
Aves	House wren	*Troglodytes aedon*	Insectivore			X		
Aves	American Robin	*Turdus migratorius*	Omnivore			X		
Aves	Western kingbird	*Tyrannus verticalis*	Insectivore			X		
Aves	Cassin's kingbird	*Tyrannus vociferans*	Insectivore			X		
Aves	Barn owl	*Tyto alba*	Carnivore			X		
Aves	Orange-crowned warbler	*Vermivora celata*	Insectivore			X		
Aves	Golden-winged warbler	*Vermivora chrysoptera*	Insectivore			X		
Aves	Lucy's warbler	*Vermivora luciae*	Insectivore			X		
Aves	Nashville warbler	*Vermivora ruficapilla*	Insectivore			X		
Aves	Virginia's warbler	*Vermivora virginiae*	Insectivore			X		
Aves	Bell's vireo	*Vireo bellii arizonae*	Insectivore			X	X	
Aves	Cassin's vireo	*Vireo cassinii*	Insectivore			X	X	
Aves	Warbling vireo	*Vireo gilvus*	Insectivore			X		
Aves	Wilson's warbler	*Wilsonia pusilla*	Insectivore			X		
Aves	White-winged dove	*Zenaida asiatica*	Herbivore			X		
Aves	Mourning dove	*Zenaida macroura*	Herbivore			X		
Aves	White-crowned sparrow	*Zonotrichia leucophrys*	Omnivore			X		
Mammalia	Harris' antelope squirrel	*Ammospermophilus harrisii*	Herbivore					
Mammalia	White-tailed antelope squirrel	*Ammospermophilus leucurus*	Herbivore					
Mammalia	Pallid bat	*Antrozous pallidus*	Insectivore					
Mammalia	Ringtail	*Bassariscus astutus*	Omnivore					
Mammalia	Coyote	*Canis latrans*	Omnivore					

TABLE E.1

List of Species at Yuma Proving Ground

RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Mammalia	Bailey's pocket mouse	*Chaetodipus baileyi*	Herbivore					
Mammalia	Long-tailed pocket mouse	*Chaetodipus formosus*	Herbivore					
Mammalia	Rock pocket mouse	*Chaetodipus intermedius*	Herbivore					
Mammalia	Desert pocket mouse	*Chaetodipus penicillatus*	Herbivore					
Mammalia	Townsend's big-eared bat	*Corynorhinus townsendii*	Insectivore					
Mammalia	Desert kangaroo rat	*Dipodomys deserti*	Herbivore					
Mammalia	Merriam's kangaroo rat	*Dipodomys merriami*	Herbivore					
Mammalia	Big brown bat	*Eptesicus fuscus*	Insectivore					
Mammalia	Burro	*Equus asinus*	Herbivore					
Mammalia	Horse	*Equus caballus*	Herbivore					
Mammalia	Porcupine	*Erethizon dorsatum*	Herbivore					
Mammalia	Spotted bat	*Euderma maculatum*	Insectivore		WSC			
Mammalia	Western mastiff bat	*Eumops perotis*	Insectivore					
Mammalia	Allen's big-eared bat	*Idionycteris phyllotis*	Insectivore					
Mammalia	Silver-haired bat	*Lasionycteris noctivagans*	Insectivore				X	
Mammalia	Western red bat	*Lasiurus blossevillii*	Insectivore		WSC		X	
Mammalia	Hoary bat	*Lasiurus cinereus*	Insectivore					
Mammalia	Southern yellow bat	*Lasiurus ega*	Insectivore					
Mammalia	Western yellow bat	*Lasiurus xanthinus*	Insectivore		WSC			
Mammalia	Black-tailed jack rabbit	*Lepus californicus*	Herbivore					
Mammalia	Bobcat	*Lynx rufus*	Carnivore					
Mammalia	California leaf-nosed bat	*Macrotus californicus*	Insectivore		WSC			
Mammalia	Striped skunk	*Mephitis mephitis*	Omnivore					
Mammalia	House mouse	*Mus musculus*	Omnivore				X	X
Mammalia	California myotis	*Myotis californicus*	Insectivore					
Mammalia	Western small-footed bat	*Myotis ciliolabrum*	Insectivore					
Mammalia	Arizona myotis	*Myotis occultus*	Insectivore				X	
Mammalia	Cave myotis	*Myotis velifer*	Insectivore					
Mammalia	Long-legged myotis	*Myotis volans*	Insectivore					
Mammalia	Yuma myotis	*Myotis yumanensis*	Insectivore				X	

TABLE E.1

List of Species at Yuma Proving Ground

RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Mammalia	White-throated woodrat	*Neotoma albigula*	Herbivore					
Mammalia	Desert woodrat	*Neotoma lepida*	Herbivore					
Mammalia	Desert shrew	*Notiosorex crawfordi*	Insectivore					
Mammalia	Pocketed free-tailed bat	*Nyctinomops femorosaccus*	Insectivore					
Mammalia	Big free-tailed bat	*Nyctinomops macrotis*	Insectivore					
Mammalia	Mule deer	*Odocoileus hemionus*	Herbivore					
Mammalia	Muskrat	*Ondatra zibethicus*	Herbivore				X	
Mammalia	Southern grasshopper mouse	*Onychomys torridus*	Omnivore					
Mammalia	Desert bighorn sheep	*Ovis canadensis mexicana*	Herbivore					
Mammalia	Arizona pocket mouse	*Perognathus amplus*	Herbivore					
Mammalia	Little pocket mouse	*Perognathus longimembris*	Herbivore					
Mammalia	Brush mouse	*Peromyscus boylii*	Omnivore					
Mammalia	Canyon mouse	*Peromyscus crinitus*	Omnivore					
Mammalia	Cactus mouse	*Peromyscus eremicus*	Omnivore					
Mammalia	Deer mouse	*Peromyscus maniculatus*	Omnivore					
Mammalia	Western pipistrelle	*Pipistrellus hesperus*	Insectivore					
Mammalia	Racoon	*Procyon lotor*	Omnivore				X	X
Mammalia	Mountain lion	*Puma concolor*	Carnivore					
Mammalia	Round-tailed ground squirrel	*Spermophilus tereticaudus*	Herbivore					
Mammalia	Rock Squirrel	*Spermophilus variegatus*	Herbivore					
Mammalia	Spotted skunk	*Spilogale putorius*	Omnivore					
Mammalia	Desert cottontail	*Sylvilagus audubonii*	Herbivore					
Mammalia	Brazilian free-tailed bat	*Tadarida brasiliensis*	Insectivore					
Mammalia	American badger	*Taxidea taxus*	Carnivore					
Mammalia	Botta's pocket gopher	*Thomomys bottae*	Herbivore					
Mammalia	Gray fox	*Urocyon cinereoargenteus*	Carnivore				X	X
Mammalia	Kit fox	*Vulpes macrotis*	Carnivore					
Reptilia	Glossy snake	*Arizona elegans*	Carnivore					
Reptilia	Western whiptail	*Aspidoscelis tigris*	Carnivore					
Reptilia	Zebra-tailed lizard	*Callisaurus draconoides*	Insectivore					

TABLE E.1

List of Species at Yuma Proving Ground

RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Reptilia	Rosy boa	*Charina trivirgata gracia*	Carnivore					
Reptilia	Western shovel-nosed snake	*Chionactis occipitalis*	Carnivore					
Reptilia	Western banded gecko	*Coleonyx variegatus*	Insectivore					
Reptilia	Western diamondback rattlesnake	*Crotalus atrox*	Carnivore					
Reptilia	Sidewinder	*Crotalus cerastes*	Carnivore					
Reptilia	Speckled rattlesnake	*Crotalus mitchellii*	Carnivore					
Reptilia	Mojave rattlesnake	*Crotalus scutulatus*	Carnivore					
Reptilia	Collared lizard	*Crotaphytus collaris*	Carnivore					
Reptilia	Great Basin collared lizard	*Crotaphytus bicintores*	Carnivore					
Reptilia	Desert iguana	*Dipsosaurus dorsalis*	Herbivore					
Reptilia	Long-nosed leopard lizard	*Gambelia wislizenii*	Carnivore					
Reptilia	Morafka's desert tortoise (aka Sonoran)	*Gopherus morafkai*	Herbivore		WSC			
Reptilia	Mediterranean house gecko	*Hemidactylus turcicus*	Insectivore					
Reptilia	Night snake	*Hypsiglena torquata*	Carnivore					
Reptilia	Common kingsnake	*Lampropeltis getula*	Carnivore					X
Reptilia	Western slender blind snake	*Leptotyphlops humilis*	Insectivore					
Reptilia	Coachwhip	*Masticophis flagellum*	Carnivore					
Reptilia	Western coral snake	*Micruroides euryxanthus*	Carnivore					
Reptilia	Desert horned lizard	*Phrynosoma platyrhinos*	Insectivore					
Reptilia	Spotted leaf-nosed snake	*Phyllorhynchus decurtatus*	Carnivore					
Reptilia	Gopher snake	*Pituophis catenifer*	Carnivore					
Reptilia	Long-nosed snake	*Rhinocheilus lecontei*	Carnivore					
Reptilia	Western patch-nosed snake	*Salvadora hexalepis*	Carnivore					
Reptilia	Common chuckwalla	*Sauromalus ater*	Herbivore					
Reptilia	Desert spiny lizard	*Sceloporus magister*	Insectivore					
Reptilia	Ground snake	*Sonora semiannulata*	Insectivore					
Reptilia	Mohave fringe-toed lizard	*Uma scoparia*	Insectivore		WSC			
Reptilia	Long-tailed brush lizard	*Urosaurus graciosus*	Insectivore					
Reptilia	Tree lizard	*Urosaurus ornatus*	Insectivore				X	

TABLE E.1
List of Species at Yuma Proving Ground
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Class[1,2,3]	Common Name	Scientific Name	Trophic Level	Federal Status	Arizona Status	Migratory Bird Treaty Act	Associated with Colorado & Gila Rivers[4]	Associated with Farmlands[4]
Reptilia	Side-blotched lizard	*Uta stansburiana*	Insectivore					
Plants	Nichol's turkshead cactus	*Echinocactus horizonthalonius var. nicholii*	Plants	Endangered	HS			
Plants	Crucifixion thorn (Thorn of Christ)	*Castela emoryi*	Plants		HS			
Plants	Engelman's hedgehog cactus	*Echinocereus engelmannii*	Plants		SR			
Plants	Nichol's hedgehog cactus	*Echinocereus nicholii*	Plants		SR			
Plants	California barrel cactus	*Ferocactus cylindraceus*	Plants		SR			
Plants	Candy barrel cactus	*Ferocactus wislizeni*	Plants		SR			
Plants	Graham's nipple cactus	*Mammillaria grahamii*	Plants		SR			
Plants	Queen of the Night	*Peniocereus greggii*	Plants		SR			

Definitions:

WSC - Wildlife of Special Concern in Arizona.

HS- Highly Safeguarded

SR- Salvage Restricted

Notes:

1 - Includes only those species that have been observed at YPG

2 - For birds, the list presented here does not include "accidentals" (i.e., present as a result of weather events) or vagrants, unless the bird was also observed as breeding at YPG

3 - For plants, only special status species are shown

4 - Although these species may occasionally be found at Yuma Proving Ground (YPG), they are primarily associated with surface water and/or farmland and their presence at YPG is restricted to areas adjacent to surface water and/or farmland

TABLE E.2
Chemicals of Potential Ecological Concern at YPG-35b
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Group	Chemical	MaxD[1] (mg/kg)	UCL[1] (mg/kg)	BTV (mg/kg)	ESL (mg/kg)	ESL Source	MaxD Exceeds BTV	MaxD Exceeds ESL	UCL Exceeds ESL	COPEC
Metals	Aluminum	11,900	-	20,000	NA[2]	Eco-SSL	No	No	-	No
	Arsenic	8.65	-	8.9	18	Eco-SSL	No	No	-	No
	Barium	561	194.3	350	330	Eco-SSL	Yes	Yes	No	No
	Beryllium	0.54	-	0.89	21	Eco-SSL	No	No	-	No
	Cadmium	2.54	0.58	0.24	0.36	Eco-SSL	Yes	Yes	Yes	Yes
	Chromium, Total	31.7	11.51	19	26[3]	Eco-SSL	Yes	Yes	No	No
	Cobalt	6.15	-	8.2	13	Eco-SSL	No	No	-	No
	Copper	44.7	-	61	28	Eco-SSL	No	Yes	-	No
	Lead	300	46.37	14	11	Eco-SSL	Yes	Yes	Yes	Yes
	Manganese	628	263.8	440	220	Eco-SSL	Yes	Yes	Yes	Yes
	Mercury	0.048	0.0071	0.005	0.013	LANL ESL	Yes	Yes	No	No
	Molybdenum	1.99	-	1.1	17	LANL ESL	Yes	No	-	No
	Nickel	15.6	-	18	38	Eco-SSL	No	No	-	No
	Thallium	0.24	0.167	-	0.032	LANL ESL	-	Yes	Yes	Yes
	Vanadium	24	-	36	7.8	Eco-SSL	No	Yes	-	No
	Zinc	231	55.25	70	46	Eco-SSL	Yes	Yes	Yes	Yes
SVOCs	2-Methylnaphthalene	0.0769	-	NA	16	LANL ESL	NA	No	-	No
	2-Methylphenol (o-cresol)	0.0181	-	NA	0.67	LANL ESL	NA	No	-	No
	Bis(2-ethylhexyl)phthalate	0.0284	0.0256	NA	0.02	LANL ESL	NA	Yes	Yes	Yes
	Chrysene	0.0223	-	NA	1.1[4]	Eco-SSL	NA	No	-	No
	Diethyl phthalate	0.0956	-	NA	100	LANL ESL	NA	No	-	No
	Di-n-butyl phthalate	0.03	0.010	NA	0.011	LANL ESL	NA	Yes	No	No

TABLE E.2
Chemicals of Potential Ecological Concern at YPG-35b
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Group	Chemical	MaxD[1] (mg/kg)	UCL[1] (mg/kg)	BTV (mg/kg)	ESL (mg/kg)	ESL Source	MaxD Exceeds BTV	MaxD Exceeds ESL	UCL Exceeds ESL	COPEC
Explosives	2,4-Dinitrotoluene	0.19	-	NA	2.50	LANL ESL	NA	No	-	No
	2,6-Dinitrotoluene	0.12	-	NA	1.80	LANL ESL	NA	No	-	No
	2-Amino-4,6-dinitrotoluene	0.32	-	NA	10.0	LANL ESL	NA	No	-	No
	Nitroguanidine	0.075	-	NA	NA	NA	NA	NA	-	Yes
	Perchlorate	0.27	-	NA	NA	NA	NA	NA	-	Yes
	Tetryl	0.047	-	NA	0.99	LANL ESL	NA	No	-	No

Notes:

1 For 0-6.5 ft bgs

2 ESL is not applicable for alumnium because aluminum is identified as a COPC only for those soils with a soil pH less than 5.5 and the pH at the site is higher than 5.5.

3 as Chromium III

4 High molecular weight PAH

Definitions:

BTV - Background threshold value

COPEC - Chemical of potential ecological concern

Eco-SSL - United States Environmnetal Protection Agency (USEPA) Ecological Soil Screening Level (http://www.epa.gov/ecotox/ecossl/)

ESL - Ecological screening level

LANL ESL - Los Alamos National Laboratory, EcoRisk Database v3.0 (http://www.lanl.gov/environment/cleanup/ecorisk.shtml)

MaxD - Maximum detected value

NA - Not applicable

Shaded - exceeded screening levels.

UCL - Upper confidence limit

SVOC - Semi-volatile organic compound

TABLE E.3
Chemicals of Potential Ecological Concern at YPG-35c
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Group	Chemical	MaxD[1] (mg/kg)	UCL[1] (mg/kg)	BTV (mg/kg)	ESL		MaxD Exceeds		UCL Exceeds	COPEC
					(mg/kg)	Source	BTV	ESL	ESL	
Metals	Aluminum	24,600	-	20,000	NA[2]	Eco-SSL	Yes	No	-	No
	Antimony	3.3	0.432	-	0.27	Eco-SSL	-	Yes	Yes	Yes
	Arsenic	8.6	4.533	8.9	18	Eco-SSL	No	No	No	No
	Barium	1,290	226.6	350	330	Eco-SSL	Yes	Yes	No	No
	Beryllium	0.98	-	0.89	21	Eco-SSL	Yes	No	-	No
	Cadmium	20	2.351	0.24	0.36	Eco-SSL	Yes	Yes	Yes	Yes
	Chromium, Total	32.7	14.2	19	26[3]	Eco-SSL	Yes	Yes	No	No
	Cobalt	8.5	-	8.2	13	Eco-SSL	Yes	No	-	No
	Copper	142	38.89	61	28	Eco-SSL	Yes	Yes	Yes	Yes
	Lead	17,000	1,150	14	11	Eco-SSL	Yes	Yes	Yes	Yes
	Manganese	498	301.5	440	220	Eco-SSL	Yes	Yes	Yes	Yes
	Mercury	0.18	0.0144	0.005	0.013	LANL ESL	Yes	Yes	Yes	Yes
	Molybdenum	1.4	-	1.1	17	LANL ESL	Yes	No	-	No
	Nickel	47.3	13.47	18	38	Eco-SSL	Yes	Yes	No	No
	Selenium	24	4.714	0.67	0.52	Eco-SSL	Yes	Yes	Yes	Yes
	Silver	2	-	-	4.2	Eco-SSL	NA	No	-	No
	Thallium	1.4	0.278	-	0.32	LANL ESL	NA	Yes	No	No
	Vanadium	35	21.16	-	7.8	Eco-SSL	No	Yes	Yes	Yes
	Zinc	299	74.37	70	46	Eco-SSL	Yes	Yes	Yes	Yes
SVOCs	Benzoic acid	2.4	1.126	NA	1	LANL ESL	NA	Yes	Yes	Yes
	Benzo(b)fluoranthene	0.13	-	NA	1.1[4]	Eco-SSL	NA	No	No	No
	Bis(2-chloroethyl) ether	0.12	-	NA	23.7	USEPA R5	NA	No	-	-
	Bis(2-ethylhexyl) phthalate	0.33	0.0318	NA	0.02	LANL ESL	NA	Yes	Yes	Yes
	Diethyl phthalate	21	-	NA	100	LANL ESL	NA	No	No	No
	Dimethyl phthalate	3	-	NA	10	LANL ESL	NA	No	No	No
	Di-n-butyl phthalate	61	6.747	NA	0.011	LANL ESL	NA	Yes	Yes	Yes
	2,4-Dinitrotoluene	110	9.098	NA	2.5	LANL ESL	NA	Yes	Yes	Yes
	2,6-Dinitrotoluene	5.7	0.309	NA	1.8	LANL ESL	NA	Yes	No	No
	4-Methylphenol	0.11	-	NA	163	USEPA R5	NA	No	-	No
	2-Nitrophenol	0.25	-	NA	1.6	USEPA R5	NA	No	No	No

TABLE E.3
Chemicals of Potential Ecological Concern at YPG-35c
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Group	Chemical	MaxD[1] (mg/kg)	UCL[1] (mg/kg)	BTV (mg/kg)	ESL (mg/kg)	ESL Source	MaxD Exceeds BTV	MaxD Exceeds ESL	UCL Exceeds ESL	COPEC
	4-Nitrophenol	0.28	-	NA	7	USEPA R4	NA	No	-	-
	Pentachlorophenol	0.13	-	NA	0.36	LANL ESL	NA	No	-	-
Explosives	2-Amino-4,6-dinitrotoluene	12	0.875	NA	10	LANL ESL	NA	Yes	No	No
	4-Amino-2,6-dinitrotoluene	13	0.465	NA	3.60	LANL ESL	NA	Yes	No	No
	1,3-Dinitrobenzene	1.4	0.0794	NA	0.073	LANL ESL	NA	Yes	Yes	Yes
	2,4-Dinitrotoluene	780	69.58	NA	2.5	LANL ESL	NA	Yes	Yes	Yes
	2,6-Dinitrotoluene	43	3.848	NA	1.8	LANL ESL	NA	Yes	Yes	Yes
	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	11	1.61	NA	7.5	LANL ESL	NA	Yes	No	No
	Nitrobenzene	4.8	NA[5]	NA	2.2	LANL ESL	NA	Yes	NA	Yes
	Nitroglycerin	6.8	-	NA	71	LANL ESL	NA	No	-	-
	Nitroguanidine	3.7	-	NA	NA	NA	NA	NA	-	Yes
	2-Nitrotoluene	0.55	-	NA	9.9	LANL ESL	NA	No	-	-
	3-Nitrotoluene	1		NA	12	LANL ESL	NA	No		
	4-Nitrotoluene	0.69	-	NA	22	LANL ESL	NA	No	-	-
	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2	-	NA	27	LANL ESL	NA	No	-	-
	Perchlorate	160	-	NA	NA	NA	NA	NA	-	Yes
	Tetryl	5.1	1.251	NA	0.99	LANL ESL	NA	Yes	Yes	Yes
	1,3,5-Trinitrobenzene	3.6	-	NA	6.6	LANL ESL	NA	No	-	No
	2,4,6-Trinitrotoluene	270	23.91	NA	6.4	LANL ESL	NA	Yes	Yes	Yes

Notes:

1 For 0-6.5 ft bgs

2 ESL is not applicable for alumnium because aluminum is identified as a COPC only for those soils with a soil pH less than 5.5 and the pH at the site is higher than 5.5

3 as Chromium III

4 High molecular weight PAH

5 Only one detect. UCL could not be calculated.

Definitions:

BTV - Background threshold value

COPEC - Chemical of potential ecological concern

TABLE E.3
Chemicals of Potential Ecological Concern at YPG-35c
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Group	Chemical	MaxD[1] (mg/kg)	UCL[1] (mg/kg)	BTV (mg/kg)	ESL		MaxD Exceeds		UCL Exceeds	COPEC
					(mg/kg)	Source	BTV	ESL	ESL	

Eco-SSL - United States Environmnetal Protection Agency (USEPA) Ecological Soil Screening Level (http://www.epa.gov/ecotox/ecossl/)
ESL - Ecological screening level
LANL ESL - Los Alamos National Laboratory, EcoRisk Database v3.0 (http://www.lanl.gov/environment/cleanup/ecorisk.shtml)
MaxD - Maximum detected value
NA - Not applicable
Shaded - exceeded screening levels.
UCL - Upper confidence limit
SVOC - Semi-volatile organic compound
USEPA R4 - USEPA Region 4 (2001) Ecological Screening Values
USEPA R5 - USEPA Region 5 (2003) Ecological Screening Levels

TABLE E.4
Soil Screening Levels for Plants and Invertebrates
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Plant Screening-Benchmark Concentration		Invertebrate Screening-Benchmark	
	(mg/kg)	Source	(mg/kg)	Source
Antimony	510	Oorts et al. (2008)	78	USEPA (2011)
Bis(2-ethylhexyl)phthalate	-	-	-	-
Benzoic Acid	-	-	-	-
Cadmium	32	USEPA (2011)	140	USEPA (2011)
Copper	70	USEPA (2011)	80	USEPA (2011)
Di-n-butyl phthalate	160	LANL (2011)	-	-
1,3-Dinitrobenzene	-	-	-	-
2,4-Dinitrotoluene	6	Checkai and Kuperman (2011)	18	Checkai and Kuperman (2011)
2,6-Dinitrotoluene	6	Checkai and Kuperman (2011)	7	Checkai and Kuperman (2011)
Lead	120	USEPA (2011)	1,700	USEPA (2011)
Manganese	220	USEPA (2011)	450	USEPA (2011)
Mercury	34	LANL (2011)	0.05	LANL (2011)
Nitrobenzene	-		2.2	LANL (2011)
Nitroguanidine	-	-	-	-
Perchlorate	-	-	1.3	Landrum et al. (2006)
Selenium	0.52	USEPA (2011)	4.1	USEPA (2011)
Tetryl	-	-	-	-
Thallium	0.1	LANL (2011)	1	RIVM (2005)
2,4,6-Trinitrotoluene	62	LANL (2011)	32	LANL (2011)
Vanadium	12.2	Vachirapatama and Jirakiattikul (2008)	-	-
Zinc	160	USEPA (2011)	120	USEPA (2011)

Definitions:

COPEC = chemical of potential ecological concern

kg = kilogram

mg = milligram

TABLE E.5
Toxicity Reference Values for Birds
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Test Species	Test Effect Dose (mg/kg-day)		Exposure Route	Effect	Source	Total Uncertainty Factors		TRV (mg/kg-day)	
		NOAEL[1]	LOAEL				NOAEL	LOAEL	NOAEL-based	LOAEL-based
Antimony	-	-	-	-	-	-	-	-	-	-
Benzoic acid	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	Dove, Ringed	1.1	11	Oral	Reproduction	LANL (2011)	1	10	1.1	11
Cadmium	Chicken, duck, quail	1.47	6.35	Oral	Reproduction, growth	USEPA (2011)	1	1	1.47	6.35
Copper	Chicken, duck, quail, turkey	4.05	34.87	Oral	Reproduction, growth	USEPA (2011)	1	1	4.05	34.87
Di-n-butyl phthalate	Dove, Ringed turtle	-	1.4	Oral	Reproduction	LANL (2011)	10	1	0.14	1.4
1,3-Dinitrobenzene	Blackbird, Redwinged	-	42.2	Oral	Survival	LANL (2011)	100	10	0.422	4.22
2,4-Dinitrotoluene	Bobwhite	1	5	Oral	Kidney	USAPHC (2012)	100	4	0.01	1.25
2,6-Dinitrotoluene	-	-	-	-	-	2	-	-	0.01	1.25
Lead	Chicken, dove, duck, kestrel, quail	1.63	44.63	Oral	Reproduction, growth	USEPA (2011)	1	1	1.63	44.63
Manganese	Chicken, quail, turkey	179.0	376.56	Oral	Reproduction, growth	USEPA (2011)	1	1	179	376.56
Mercury	Quail, japanese	0.019	0.19	Oral	Reproduction	LANL (2011)	0.1	1	0.019	0.19
Nitrobenzene	-	-	-	-	-	-	-	-	-	-
Nitroguanidine	-	-	-	-	-	-	-	-	-	-
Perchlorate	Quail	130	261	Oral	Growth	USAPHC (2012)	10	10	13	26.1
Selenium	Chicken, duck, quail, kestrel, heron, owl	0.29	0.78	Oral	Reproduction, growth	USEPA (2011)	1	1	0.29	0.78
Tetryl	-	-	-	-	-	-	-	-	-	-

TABLE E.5
Toxicity Reference Values for Birds
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Test Species	Test Effect Dose (mg/kg-day)		Exposure Route	Effect	Source	Total Uncertainty Factors		TRV (mg/kg-day)	
		NOAEL[1]	LOAEL				NOAEL	LOAEL	NOAEL-based	LOAEL-based
Thallium	Robin	0.350	3.50	Oral	Reproduction, growth	LANL (2011)	0.1	1	0.35	3.5
2,4,6-Trinitrotoluene	Quail	97.5	178	Oral	Survival	LANL (2011)	10	10	9.75	17.8
Vanadium	Chicken and quail	0.34	1.70	Oral	Reproduction, growth	USEPA (2011)	1	1	0.34	1.70
Zinc	Chicken, duck, quail, turkey	66.1	171.44	Oral	Reproduction, growth	USEPA (2011)	1	1	66.1	171.44

Definitions:

COPEC = Chemical of potential ecological concern
EcoSSL = USEPA Ecological Screening Levels
kg = kilogram
LOAEL = Lowest observed adverse effect level
mg = milligram
NOAEL = No observed adverse effect level
TRV = Toxicity reference value

Notes:

1 - Value is the lesser of the 1) geometric mean of all NOAELs and 2) the highest bounded NOAEL for reproduction, growth or survival.
2 - No toxicity data available. 2,4-Dinitrotoluene used as a surrogate.

TABLE E.6
Toxicity Reference Values for Mammals
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Test Species	Test Effect Dose (mg/kg-day)		Exposure Route	Effect	Source	Total Uncertainty Factors		TRV (mg/kg-day)	
		NOAEL[1]	LOAEL				NOAEL	LOAEL	NOAEL-based	LOAEL-based
Antimony	Rat, mouse	0.059	2.76	Oral	Reproduction, growth	USEPA (2011)	1	1	0.059	2.76
Benzoic acid	Mouse	-	40	Oral	Reproduction	LANL (2011)	10	1	4	40
Bis(2-ethylhexyl)phthalat	Mouse	18.3	183	Oral	Reproduction	LANL (2011)	1	1	18.3	183
Cadmium	Mouse, shrew, rat, dog, sheep, pig, vole, cattle	0.77	6.9	Oral	Reproduction, growth	USEPA (2011)	1	1	0.77	6.90
Copper	Cow, shrew, goat, guinea pig, horse, mink, mouse, pig, rabbit, rat, sheep	5.6	82.70	Oral	Reproduction, growth	LANL (2011)	1	1	5.60	82.70
Di-n-butyl phthalate	Mouse	1,340	3,174	Oral	Reproduction, growth, survival	LANL (2011)	1	1	1,340	3,174
1,3-Dinitrobenzene	Rat	1.13	2.64	Oral	Reproduction	LANL (2011)	10	10	0.113	0.26
2,4-Dinitrotoluene	Dog	0.67	1.40	Oral	Neurological	USAPHC (2012)	1	1	0.67	1.40
2,6-Dinitrotoluene	Rat	-	7.0	Oral	Growth	USAPHC (2012)	10	1	0.70	7.0
Lead	Rat, dog, sheep, mouse, cattle, pig, vole, shrew, guinea pig, hamster, horse, rabbit	4.7	186.4	Oral	Reproduction, growth	USEPA (2011)	1	1	4.70	186.40
Manganese	Desert mouse, desert cottontail	51.5	515	Oral	Reproduction, growth	LANL (2011)	1	10	51.50	515.00
Mercury	Mink	1.41	14.1	Oral	Reproduction	LANL (2011)	1	10	1.41	14.10
Nitrobenzene	Mouse	-	590	Oral	Survival	LANL (2011)	100	10	5.90	59
Nitroguanidine	-	-	-	-	-	-	-	-	-	-
Perchlorate	Rabbit	-	640	Oral	Survival	USAPHC (2012)	100	20	6.40	32
Selenium	Cow, dog, hamster, mouse, pig, pronghorn, rabbit, rat, sheep	0.143	0.66	Oral	Reproduction, growth	USEPA (2011)	1	10	0.14	0.66

TABLE E.6
Toxicity Reference Values for Mammals
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Test Species	Test Effect Dose (mg/kg-day)		Exposure Route	Effect	Source	Total Uncertainty Factors		TRV (mg/kg-day)	
		NOAEL[1]	LOAEL				NOAEL	LOAEL	NOAEL-based	LOAEL-based
Tetryl	Rat	13	62	Oral	Reproduction, survival	LANL (2011)	10	10	1.3	6.2
Thallium	Montane Shrew	0.0071	0.07	Oral	Reproduction, growth	LANL (2011)	0.1	1	0.007	0.07
2,4,6-Trinitrotoluene	Rat	34.7	160.00	Oral	Growth	LANL (2011)	1	1	34.7	160
Vanadium	Red fox, shrew	4.16	9.44	Oral	Reproduction, growth	LANL (2011)	1	1	4.16	9.44
Zinc	Cow, hamster, mink, mouse, pig, rabbit, rat, sheep, buffalo	75.4	297.58	Oral	Reproduction, growth	USEPA (2011)	1	1	75.40	297.58

Definitions:

COPEC = Chemical of potential ecological concern
EcoSSL = USEPA Ecological Screening Levels
LOAEL = Lowest observed adverse effect level
kg = kilogram
mg = milligram
NOAEL = No observed adverse effect level
TRV = Toxicity reference value

Notes:

1 - for NOAELs from USEPA (2001), value is the lesser of the 1) geometric mean of all NOAELs and 2) the highest bounded NOAEL for reproduction, growth or survival.

TABLE E.7
Toxicity Reference Values for Reptiles
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Test Species	Test Effect Dose (mg/kg-day)		Exposure Route	Effect	Source	Uncertainty Factors			TRV (mg/kg-day)	
		NOAEL	LOAEL				Study Duration	Endpoint	Total	NOAEL-based	LOAEL-based
Antimony	-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalat	-	-	-	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-
Di-n-butyl phthalate	-	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	Lizard	9	15	Oral	Growth, kidney	Suski et al. (2008)	10	1	10	0.9	1.5
2,6-Dinitrotoluene	-	-	-	-	-	-	-	-	-	-	-
Lead	Lizard	1	10	Oral	Reproduction, kidney	Salice et al. (2009)	10	1	10	0.1	1
Manganese	-	-	-	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	-	-	-	-	-	-	-	-	-	-	-
Nitroguanidine	-	-	-	-	-	-	-	-	-	-	-
Perchlorate	-	-	-	-	-	-	-	-	-	-	-
Selenium	Gecko	0.022	0.21	Oral	Growth	Rich and Talent (2009)	10	1	10	0.0022	0.021
Tetryl	-	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene	Lizard	25	35	Oral	Reproduction, kidney, liver	McFarland et al. (2008)	10	1	10	2.5	3.5
Vanadium	-	-	-	-	-	-	-	-	-	-	-

TABLE E.7
Toxicity Reference Values for Reptiles
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Test Species	Test Effect Dose (mg/kg-day)		Exposure Route	Effect	Source	Uncertainty Factors			TRV (mg/kg-day)	
		NOAEL	LOAEL				Study Duration	Endpoint	Total	NOAEL-based	LOAEL-based
Zinc	-	-	-	-	-	-	-	-	-	-	-

Definitions:

COPEC = Chemical of potential ecological concern
EcoSSL = USEPA Ecological Screening Levels
kg = kilogram
LOAEL = Lowest observed adverse effect level
mg = milligram
NOAEL = No observed adverse effect level
TRV = Toxicity reference value

TABLE E.8
Exposure Parameters for Wildlife Receptors
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Receptor	Average Body Weight (kg)	Dietary Intake Rate (kg-dw/day)	Food Ingestion Rate (kg-dw/kg-day)	Dietary Fraction				Foraging Area	Area Use Factor (AUF) (unitless)	
				Soils	Terrestrial Plants	Terrestrial Invertebrates	Terrestrial Small Mammals/ Birds			
	BW	IR_D	IR_F	df_s	df_P	df_I	df_m	(acres)	35B	35C
Mammals										
Desert shrew	0.004	4.86E-04	0.12	0.011	0	0.99	0.01	0.2	1.0	1.0
Kit fox	1.67	7.45E-02	0.045	0.028	0	0.01	0.99	2,422	0.0056	0.022
Little pocket mouse	0.0071	1.39E-03	0.20	0.028	0.99	0.01	0	1.0	1.0	1.0
Birds										
American kestrel	0.103	1.53E-02	0.15	0.026	0	0.362	0.638	32	0.42	1.0
Gambel's quail	0.1674	8.43E-03	0.05	0.093	0.984	0.016	0	35.7	0.38	1.0
Verdin	0.0063	1.43E-03	0.23	0.02	0.01	0.99	0	23.7	0.57	1.0
Reptiles										
Sonoran desert tortoise	2.65	1.57E-02	0.0059	0.05	1	0	0	6.4	1.0	1.0

Definitions:

df_s = Dietary fraction consisting of soil
df_P = Dietary fraction consisting plants
df_I = Dietary fraction consisting invertebrates
df_m = Dietary fraction consisting small mammals/birds
kg = kilogram
mg = milligram

TABLE E.9
Soil Exposure Point Concentrations for YPG-35b
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Analyte	Number of Results		Percent Detections	Detected Results		ProUCL UCL[1]	EPC[2]
	Total	Detects		Minimum	Maximum		
0-0.5 feet bgs							
Bis(2-ethylhexyl)phthalate	21	0	0%	-	-	-	-
Cadmium	21	18	86%	0.014	2.54	0.908	0.908
Lead	21	21	100%	5.71	300	84.34	84.34
Manganese	21	21	100%	213	628	304	304
Thallium	21	2	10%	0.16	0.24	0.174	0.174
Zinc	21	21	100%	31.1	231	68.57	68.57
0-6.5 feet bgs							
Bis(2-ethylhexyl)phthalate	42	2	5%	0.0254	0.0284	0.0256	0.0256
Cadmium	42	35	83%	0.014	2.54	0.58	0.58
Lead	42	42	100%	4.42	300	46.37	46.37
Manganese	42	42	100%	184	628	263.8	263.8
Thallium	42	2	5%	0.16	0.24	0.167	0.167
Zinc	42	42	100%	15.8	231	55.25	55.25
Background							
Cadmium	18	18	100%	0.044	0.19	0.143	0.14
Lead	18	18	100%	4.51	11.7	8.704	8.704
Manganese	18	18	100%	199	384	313.2	313.2
Thallium	18	0	0%	-	-	-	-
Zinc	18	18	100%	27.8	72.2	49.37	49.37

Definitions:

EPC - exposure point concentration

UCL - 95% upper confidence limit

Notes:

1 - The 1st recommended UCL from ProUCL.

2 - The lesser of the maximum detected concentration and the UCL.

TABLE E.10
Exposure Point Concentration
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Analyte	Number of		Percent	Detected Results		ProUCL	
	Total	Detects	Detections	Minimum	Maximum	UCL[2]	EPC[3]
0-0.5 feet bgs							
Antimony	66	18	27%	0.15	3.3	0.5	0.5
Benzoic acid	24	2	8%	0.27	2.4	1.126	1.126
Bis(2-ethylhexyl)phthalate	60	4	7%	0.049	0.33	0.0665	0.0665
Cadmium	66	63	8%	0.028	20	2.855	2.855
Copper	42	42	100%	11.2	142	54.56	54.56
Di-n-butyl phthalate	60	35	58%	0.0085	61	8.404	8.404
1,3-Dinitrobenzene	69	9	13%	0.0055	1.4	0.0988	0.0988
2,4-Dinitrotoluene (via 8270)	60	21	35%	0.122	110	11.31	11.31
2,4-Dinitrotoluene (via 8330)	69	36	52%	0.0084	780	84.67	84.67
2,6 Dinitrotoluene	69	14	20%	0.016	43	4.695	4.695
Lead	66	66	100%	3.2	17,000	1,410	1,410
Manganese	42	42	100%	202	498	324.1	324.1
Mercury	60	22	37%	0.0038	0.18	0.0171	0.0171
Nitrobenzene	69	1	1%	4.8	4.8	-	4.8
Nitroguanidine	37	9	24%	0.032	3.70	0.398	0.398
Perchlorate	43	37	86%	0.0003	160	40.95	40.95
Selenium	42	31	74%	0.22	24	6.19	6.19
Tetryl	69	3	4%	1.1	5.1	1.283	1.283
2,4,6-Trinitrotoluene	69	16	23%	0.026	270	29.11	29.11
Vanadium	42	42	100%	8.5	35	20.31	20.31
Zinc	66	66	100%	31.7	299	80.13	80.13
0-6.5 feet bgs							
Antimony	81	18	22%	0.15	3.3	0.432	0.432
Benzoic acid	24	2	8%	0.27	2.4	1.126	1.126
Bis(2-ethylhexyl)phthalate	75	8	11%	0.0146	0.33	0.0318	0.0318
Cadmium	81	75	93%	0.016	20	2.351	2.351
Copper	57	57	100%	11.2	142	38.89	38.89
Di-n-butyl phthalate	75	38	51%	0.0085	61	6.747	6.747
1,3-Dinitrobenzene	84	11	13%	0.0055	1.4	0.079	0.079

TABLE E.10
Exposure Point Concentration
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

Analyte	Number of Total	Number of Detects	Percent Detections	Detected Results Minimum	Detected Results Maximum	ProUCL UCL[2]	EPC[3]
2,4-Dinitrotoluene (via 8270)	75	21	28%	0.122	110	9.10	9.10
2,4-Dinitrotoluene (via 8330)	84	40	48%	0.0084	780	69.58	69.58
2,6 Dinitrotoluene	84	16	19%	0.016	43	3.848	3.848
Lead	81	81	100%	3.2	17000	1150	1150
Manganese	57	57	100%	168	498	301.5	301.5
Mercury	75	23	31%	0.0038	0.18	0.0144	0.0144
Nitrobenzene	84	1	1%	4.8	4.8	-	4.8
Nitroguanidine	52	11	21%	0.032	3.7	0.294	0.294
Perchlorate	58	52	90%	0.0003	160	30.41	30.41
Selenium	57	37	65%	0.22	24	4.714	4.714
Tetryl	84	3	4%	1.1	5.1	1.251	1.251
2,4,6-Trinitrotoluene	84	17	20%	0.026	270	23.91	23.91
Vanadium	57	57	100%	8.5	35	21.16	21.16
Zinc	81	81	100%	31.3	299	74.37	74.37
Background							
Antimony	-	-	-	-	-	-	-
Cadmium	18	14	78%	0.044	0.19	0.143	0.143
Copper	18	18	100%	12.4	60.8	26.94	26.94
Lead	18	18	100%	4.51	11.7	8.704	8.704
Manganese	18	18	100%	199	384	313.2	313.2
Mercury	18	1	6%	0.005	0.005	0.005	0.005
Selenium	18	3	17%	0.55	0.74	0.584	0.584
Vanadium	18	18	100%	16.6	35.6	26.32	26.32
Zinc	18	18	100%	27.8	72.2	49.37	49.37

Definitions:

EPC - exposure point concentration

UCL - 95% upper confidence limit

Notes:

1 - The 1st recommended UCL from ProUCL.

2 - The lesser of the maximum detected concentration and the UCL.

TABLE E.11
Predicted COPEC Concentrations in Plants
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Soil EPC (C_s) (mg/kg)		Uptake Parameters		Concentration in Plants (C_p) (mg/kg)	
	YPG-35b	YPG-35c	Formula	Source	YPG-35b	YPG-35c
Site (0-6.5 ft bgs)						
Antimony	-	0.432	ln(Cp) = 0.938 * ln(Cs) - 3.233	USEPA (2007)	-	1.79E-02
Benzoic acid	-	1.126	Cp = 10.5 * Cs	LANL (2011)		1.18E+01
Bis(2-ethylhexyl)phthalate	0.0256	0.0318	$C_p = 0.05 * C_s$	LANL (2011)	1.28E-03	1.59E-03
Cadmium	0.58	2.351	$\ln(C_p) = 0.546 * \ln(C_s) - 0.475$	USEPA (2007)	4.62E-01	9.92E-01
Copper	-	38.89	$\ln(C_p) = 0.394 * \ln(C_s) + 0.668$	USEPA (2007)	-	8.25E+00
Di-n-butyl phthalate	-	6.747	$C_p = 0.9 * C_s$	LANL (2011)	-	6.07E+00
1,3-Dinitrobenzene	-	0.0794	$C_p = 15 * C_s$	LANL (2011)	-	1.19E+00
2,4-Dinitrotoluene (via 8270)	-	9.098	$C_p = 9.5 * C_s$	LANL (2011)	-	8.64E+01
2,4-Dinitrotoluene (via 8330)	-	69.58	$C_p = 9.5 * C_s$	LANL (2011)	-	6.61E+02
2,6 Dinitrotoluene	-	3.848	$C_p = 8.5 * C_s$	LANL (2011)	-	3.27E+01
Lead	46.37	1150	$\ln(C_p) = 0.561 * \ln(C_s) - 1.328$	USEPA (2007)	2.28E+00	1.38E+01
Manganese	263.8	301.5	$C_p = 0.079 * C_s$	USEPA (2007)	2.08E+01	2.38E+01
Mercury	-	0.0144	$C_p = 0.663 * C_s$	LANL (2011)	-	9.55E-03
Nitrobenzene	-	4.8	$C_p = 10.7 * C_s$	LANL (2011)		5.14E+01
Nitroguanidine	-	0.294	-	-	-	-
Perchlorate	-	30.41	-	-	-	-
Selenium	-	4.714	$\ln(C_p) = 1.104 * \ln(C_s) - 0.677$	USEPA (2007)	-	2.81E+00
Tetryl	-	1.251	$C_p = 13.1 * C_s$	LANL (2011)	-	1.64E+01
Thallium	0.167	-	$C_p = 0.004 * C_s$	LANL (2011)	6.68E-04	-
2,4,6-Trinitrotoluene	-	23.91	$C_p = 4.23 * C_s$	LANL (2011)	-	1.01E+02
Vanadium	-	21.16	$C_p = 0.00485 * C_s$	USEPA (2007)	-	1.03E-01
Zinc	55.25	74.37	$\ln(C_p) = 0.554 * \ln(C_s) + 1.575$	USEPA (2007)	4.46E+01	5.26E+01
Background						
Antimony	-	-	ln(Cp) = 0.938 * ln(Cs) - 3.233	USEPA (2007)	-	-

TABLE E.11
Predicted COPEC Concentrations in Plants
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Soil EPC (C_s) (mg/kg)		Uptake Parameters		Concentration in Plants (C_p) (mg/kg)	
	YPG-35b	YPG-35c	Formula	Source	YPG-35b	YPG-35c
Cadmium	0.14	0.14	$\ln(C_p) = 0.546 * \ln(C_s) - 0.475$	USEPA (2007)	2.15E-01	2.15E-01
Copper	26.94	26.94	$\ln(C_p) = 0.394 * \ln(C_s) + 0.668$	USEPA (2007)	7.14E+00	7.14E+00
Lead	8.70	8.70	$\ln(C_p) = 0.561 * \ln(C_s) - 1.328$	USEPA (2007)	8.92E-01	8.92E-01
Manganese	313.20	313.20	$C_p = 0.079 * C_s$	USEPA (2007)	2.47E+01	2.47E+01
Mercury	0.005	0.005	$C_p = 0.663 * C_s$	LANL (2011)	3.32E-03	3.32E-03
Selenium	0.584	0.584	$\ln(C_p) = 1.104 * \ln(C_s) - 0.677$	USEPA (2007)	2.81E-01	2.81E-01
Thallium	-	-	$C_p = 0.004 * C_s$	LANL (2011)	-	-
Vanadium	26.320	26.320	$C_p = 0.00485 * C_s$	USEPA (2007)	1.28E-01	1.28E-01
Zinc	49.37	49.37	$\ln(C_p) = 0.554 * \ln(C_s) + 1.575$	USEPA (2007)	4.19E+01	4.19E+01

Definitions:

C_p = concentration in terrestrial plants
C_s = concentration in soil
COPEC = Chemical of potential ecological concern
EPC = Exposure point concentration
kg = kilogram
mg = milligram

TABLE E.12
Predicted COPEC Concentrations in Invertebrates
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Soil EPC (C_s) (mg/kg)		Uptake Parameters		Concentration in Invertebrates (C_i) (mg/kg)	
	YPG-35b	YPG-35c	Formula	Source	YPG-35b	YPG-35c
Site (0-6.5 ft bgs)						
Antimony	-	0.432	Ci = Cs	USEPA (2007)	-	4.32E-01
Benzoic acid	-	1.126	Ci = 18.5 * Cs	LANL (2011)	-	2.08E+01
Bis(2-ethylhexyl)phthalate	0.026	0.032	$C_i = 154 * C_s$	LANL (2011)	3.94E+00	4.90E+00
Cadmium	0.58	2.351	$\ln(C_i) = 0.795 * \ln(C_s) + 2.114$	USEPA (2007)	5.37E+00	1.63E+01
Copper	-	38.89	Ci = 0.515 * Cs	USEPA (2007)	-	2.00E+01
Di-n-butyl phthalate	-	6.747	Ci = 35.6 * Cs	LANL (2011)	-	2.40E+02
1,3-Dinitrobenzene	-	0.079	Ci = 0.568 * Cs	LANL (2011)	-	4.51E-02
2,4-Dinitrotoluene (via 8270)	-	9.098	Ci = 0.893 * Cs	LANL (2011)	-	8.12E+00
2,4-Dinitrotoluene (via 8330)	-	69.58	Ci = 0.893 * Cs	LANL (2011)	-	6.21E+01
2,6 Dinitrotoluene	-	3.848	Ci = 1.14 * Cs	LANL (2011)	-	4.39E+00
Lead	46.37	1150	$\ln(C_i) = 0.807 * \ln(C_s) - 0.218$	USEPA (2007)	1.78E+01	1.78E+01
Manganese	263.8	301.5	$\ln(C_i) = 0.682 * \ln(C_s) - 0.809$	USEPA (2007)	2.00E+01	2.00E+01
Mercury	-	0.014	$C_i = 3.93 * C_s$	LANL (2011)	-	5.66E-02
Nitrobenzene	-	4.8	$C_i = 1.34 * C_s$	LANL (2011)	-	6.43E+00
Nitroguanidine	-	0.294	-	-	-	-
Perchlorate	-	30.41	-	-	-	-
Selenium	-	4.714	$\ln(C_i) = 0.733 * \ln(Cs) - 0.075$	USEPA (2007)	-	2.89E+00
Tetryl	-	1.251	$C_i = 0.079 * C_s$	LANL (2011)	-	9.88E-02
Thallium	0.167	-	$C_i = 1.00 * C_s$	LANL (2011)	1.67E-01	-
2,4,6-Trinitrotoluene	-	23.91	$C_i = 0.085 * C_s$	LANL (2011)	-	2.03E+00
Vanadium	-	21.16	$C_i = 0.042 * C_s$	USEPA (2007)	-	8.89E-01
Zinc	55.25	74.37	$\ln(C_i) = 0.328 * \ln(C_s) + 4.449$	USEPA (2007)	3.19E+02	3.52E+02
Background						
Antimony	-	-	Ci = Cs	USEPA (2007)	-	-
Cadmium	0.14	0.14	$\ln(C_i) = 0.795 * \ln(C_s) + 2.114$	USEPA (2007)	1.76E+00	1.76E+00

Copper	26.94	26.94	Ci = 0.515 * Cs	USEPA (2007)	1.39E+01	1.39E+01
Lead	8.7	8.7	$\ln(C_i) = 0.807 * \ln(C_s) - 0.218$	USEPA (2007)	4.61E+00	4.61E+00
Manganese	313.2	313.2	$\ln(C_i) = 0.682 * \ln(C_s) - 0.809$	USEPA (2007)	2.24E+01	2.24E+01
Mercury	0.005	0.005	$C_i = 3.93 * C_s$	LANL (2011)	1.97E-02	1.97E-02
Selenium	0.584	0.584	ln(Ci) = 0.733 * ln(Cs) - 0.075	USEPA (2007)	6.25E-01	6.25E-01
Thallium	-	-	$C_i = 1.00 * C_s$	LANL (2011)	-	-
Vanadium	26.32	26.32	$C_i = 0.042 * C_s$	USEPA (2007)	1.11E+00	1.11E+00
Zinc	49.37	49.37	$\ln(C_i) = 0.328 * \ln(C_s) + 4.449$	USEPA (2007)	3.07E+02	3.07E+02

Definitions:

C_i = concentration in terrestrial invertebrates
C_s = concentration in soil
COPEC = Chemical of potential ecological concern
dw = dry weight
EPC = Exposure point concentration
kg = kilogram
mg = milligram

TABLE E.13
Predicted COPEC Concentrations in Small Mammals/Birds
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Soil EPC (C_s) (mg/kg)		Uptake Parameters		Small Mammals/Birds (C_m) (mg/kg)	
	YPG-35b	YPG-35c	Formula	Source	YPG-35b	YPG-35c
Site (0-6.5 ft bgs)						
Antimony	-	0.43	Cm = 0.001*50*Cs	USEPA (2007)	-	2.16E-02
Benzoic Acid	-	1.13	Cm = 0.223 * Cs	LANL (2011)	-	2.51E-01
Bis(2-ethylhexyl)phthalate	0.026	0.032	-	USEPA (2005)	-	-
Cadmium	0.580	2.351	$\ln(C_m) = 0.4723 * \ln(C_s) - 1.2571$	USEPA (2007)	2.20E-01	4.26E-01
Copper	-	38.89	ln(Cm) = 0.1444 * ln(Cs) + 2.042	USEPA (2007)	-	1.31E+01
Di-n-butyl phthalate	-	6.747	Cm = 5.85 * Cs	LANL (2011)	-	3.95E+01
1,3-Dinitrobenzene	-	0.079	Cm = 0.0485 * Cs	LANL (2011)	-	3.85E-03
2,4-Dinitrotoluene (via 8270)	-	9.098	Cm = 0.0505 * Cs	LANL (2011)	-	4.59E-01
2,4-Dinitrotoluene (via 8330)	-	69.58	Cm = 0.0505 * Cs	LANL (2011)	-	3.51E+00
2,6 Dinitrotoluene	-	3.848	Cm = 0.0396 * Cs	LANL (2011)	-	1.52E-01
Lead	46.4	1150	$\ln(C_m) = 0.4422 * \ln(C_s) + 0.0761$	USEPA (2007)	5.89E+00	2.43E+01
Manganese	263.8	301.5	$C_m = 0.0205 * C_s$	USEPA (2007)	5.41E+00	6.18E+00
Mercury	-	0.014	$C_m = 0.649 * C_s$	LANL (2011)	-	9.35E-03
Nitrobenzene	-	4.8	$C_m = 0.0484 * C_s$	LANL (2011)	-	2.32E-01
Nitroguanidine	-	0.294	-	-	-	-
Perchlorate	-	30.41	-	-	-	-
Selenium	-	4.714	ln(Cm) = 0.3764* ln(Cs) - 0.4158	USEPA (2007)	-	1.18E+00
Tetryl	-	1.251	$C_m = 0.0494 * C_s$	LANL (2011)	-	6.18E-02
Thallium	0.167	-	$C_m = 0.0267 * C_s$	LANL (2011)	4.46E-03	-
2,4,6-Trinitrotoluene	-	23.91	$C_m = 0.0153 * C_s$	LANL (2011)	-	3.66E-01
Vanadium	-	21.16	$C_m = 0.0123 * C_s$	USEPA (2007)	-	2.60E-01

TABLE E.13
Predicted COPEC Concentrations in Small Mammals/Birds
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Soil EPC (C_s) (mg/kg)		Uptake Parameters		Small Mammals/Birds (C_m) (mg/kg)	
	YPG-35b	YPG-35c	Formula	Source	YPG-35b	YPG-35c
Zinc	55.25	74.37	$\ln(C_m) = 0.0706 * \ln(C_s) + 4.3632$	USEPA (2007)	1.04E+02	1.06E+02
Background						
Antimony	-	-	Cm = 0.001*50*Cs	USEPA (2007)	-	-
Cadmium	0.14	0.14	$\ln(C_m) = 0.4723 * \ln(C_s) - 1.2571$	USEPA (2007)	1.14E-01	1.14E-01
Copper	26.94	26.94	ln(Cm) = 0.1444 * ln(Cs) + 2.042	USEPA (2007)	1.24E+01	1.24E+01
Lead	8.70	8.70	$\ln(C_m) = 0.4422 * \ln(C_s) + 0.0761$	USEPA (2007)	2.81E+00	2.81E+00
Manganese	313.20	313.2	$C_m = 0.0205 * C_s$	USEPA (2007)	6.42E+00	6.42E+00
Mercury	0.005	0.005	$C_m = 0.649 * C_s$	LANL (2011)	3.25E-03	3.25E-03
Selenium	0.584	0.584	ln(Cm) = 0.3764* ln(Cs) - 0.4158	USEPA (2007)	5.39E-01	5.39E-01
Thallium	-	-	$C_m = 0.0267 * C_s$	LANL (2011)	-	-
Vanadium	26.32	26.32	$C_m = 0.0123 * C_s$	USEPA (2007)	3.24E-01	3.24E-01
Zinc	49.37	49.37	$\ln(C_m) = 0.0706 * \ln(C_s) + 4.3632$	USEPA (2007)	1.03E+02	1.03E+02

Definitions:

BAF = bioaccumulation factor
C_m = concentration in small mammals/birds
C_s = concentration in soil
COPEC = Chemical of potential ecological concern
dw = dry weight
EPC = Exposure point concentration
kg = kilogram
mg = milligram

TABLE E.14
Hazard Quotients for Plants and Invertebrates
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Soil EPC (mg/kg)		Screening Benchmarks (mg/kg)		Hazard Quotients YPG-35b (unitless)		Hazard Quotients YPG-35c (unitless)	
	YPG-35b	YPG-35c	Plants	Invertebrates	Plants	Invertebrates	Plants	Invertebrates
Site (0-6.5 ft bgs)								
Antimony	-	0.432	510	78	-	-	8.47E-04	5.54E-03
Benzoic Acid	-	1.126	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	0.026	0.0318	-	-	-	-	-	-
Cadmium	0.58	2.351	32	140	1.81E-02	4.14E-03	7.35E-02	1.68E-02
Copper	-	38.89	70	80	-	-	5.56E-01	4.86E-01
Di-n-butyl phthalate	-	6.747	160	-	-	-	4.22E-02	-
1,3-Dinitrobenzene	-	0.0794	-	-	-	-	-	-
2,4-Dinitrotoluene (via 8270)	-	9.098	6	18	-	-	1.52E+00	5.05E-01
2,4-Dinitrotoluene (via 8330)	-	69.58	6	18	-	-	1.16E+01	3.87E+00
2,6 Dinitrotoluene	-	3.848	6	7	-	-	6.41E-01	5.50E-01
Lead	46.37	1,150	120	1,700	3.86E-01	2.73E-02	9.58E+00	6.76E-01
Manganese	263.8	301.5	220	450	1.20E+00	5.86E-01	1.37E+00	6.70E-01
Mercury	-	0.0144	34	0.05	-	-	4.24E-04	2.88E-01
Nitrobenzene	-	4.8	-	2	-	-	-	2.18E+00
Nitroguanidine	-	0.294	-	-	-	-	-	-
Perchlorate	-	30.41	-	1	-	-	-	2.34E+01
Selenium	-	4.714	0.52	4	-	-	9.07E+00	1.15E+00
Tetryl	-	1.251	-	-	-	-	-	-
Thallium	0.167	-	0.1	1	1.67E+00	1.67E-01	-	-
2,4,6-Trinitrotoluene	-	23.91	62	32	-	-	3.86E-01	7.47E-01
Vanadium	-	21.16	12	-	-	-	1.73E+00	-
Zinc	55.25	74.37	160	120	3.45E-01	4.60E-01	4.65E-01	6.20E-01
Background								

Antimony	-	-			-	-	-	-
Cadmium	0.14	0.14	32	140	4.47E-03	1.02E-03	4.47E-03	1.02E-03
Copper	26.94	26.94			-	-	-	-
Lead	8.7	8.7	120	1,700	7.25E-02	5.12E-03	7.25E-02	5.12E-03
Manganese	313.2	313.2	220	450	1.42E+00	6.96E-01	1.42E+00	6.96E-01
Mercury	0.005	0.005	34	0.05	1.47E-04	1.00E-01	1.47E-04	1.00E-01
Selenium	0.584	0.584			-	-	-	-
Thallium	-	-	0	1	-	-	-	-
Vanadium	26.32	26.32	12	-	2.16E+00	-	2.16E+00	-
Zinc	49.37	49.37	160	120	3.09E-01	4.11E-01	3.09E-01	4.11E-01

Definitions:

COPEC = Chemical of potential ecological concern

EPC = Exposure point concentration

kg = kilogram

mg = milligram

Cells shaded blue indicate an HQ>1

TABLE E.15
Average Daily Doses and Hazard Quotients for Wildlife Receptors at YPG-35B
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Mammals			Birds			Reptiles
	Desert shrew (0-0.5 ft bgs)	Kit fox (0-6.5 ft bgs)	Little pocket mouse (0-0.5 ft bgs)	American kestrel (0-0.5 ft bgs)	Gambel's quail (0-0.5 ft bgs)	Verdin (0-0.5 ft bgs)	Sonoran desert tortoise (0-6.5 ft bgs)
Average Daily Dose (mg/kg-day)							
Bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-
Cadmium	6.48E-01	7.14E-05	1.05E-01	1.31E-01	1.19E-02	6.87E-01	2.90E-03
Lead	2.26E+00	1.81E-03	9.38E-01	7.73E-01	1.97E-01	2.48E+00	2.72E-02
Manganese	2.81E+00	3.21E-03	5.74E+00	1.16E+00	9.33E-01	3.35E+00	2.01E-01
Thallium	2.03E-02	2.67E-06	1.41E-03	4.23E-03	3.71E-04	2.17E-02	5.33E-05
Zinc	3.86E+01	2.68E-02	9.63E+00	1.15E+01	1.05E+00	4.08E+01	2.80E-01
NOAEL-based Hazard Quotient (unitless)							
Bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-
Cadmium	8.41E-01	9.28E-05	1.36E-01	8.94E-02	8.08E-03	4.67E-01	-
Lead	4.81E-01	3.86E-04	2.00E-01	4.74E-01	1.21E-01	1.52E+00	2.72E-01
Manganese	5.46E-02	6.24E-05	1.11E-01	6.47E-03	5.21E-03	1.87E-02	-
Thallium	2.86E+00	3.76E-04	1.98E-01	1.21E-02	1.06E-03	6.20E-02	-
Zinc	5.12E-01	3.55E-04	1.28E-01	1.73E-01	1.59E-02	6.18E-01	-
Total	**5**	**0.001**	**0.8**	**0.8**	**0.2**	**3**	**0.3**
LOAEL-based Hazard Quotient (unitless)							
Bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-
Cadmium	9.39E-02	3.90E-07	1.52E-02	2.07E-02	1.87E-03	1.08E-01	-
Lead	1.21E-02	9.91E-06	5.03E-03	1.73E-02	4.42E-03	5.56E-02	2.72E-02
Manganese	5.46E-03	1.76E-05	1.11E-02	3.08E-03	2.48E-03	8.89E-03	
Thallium	2.86E-01	1.46E-08	1.98E-02	1.21E-03	1.06E-04	6.20E-03	
Zinc	1.30E-01	1.46E-04	3.24E-02	6.68E-02	6.14E-03	2.38E-01	-
Total	**0.5**	**0.0002**	**0.08**	**0.1**	**0.02**	**0.4**	**0.03**

Definitions:

ADD = Average daily dose (mg chemical ingested per kg body weight per day [mg/kg-day])
COPEC = Chemical of potential ecological concern
EPC = Exposure point concentration
kg = kilogram
mg = milligram
Cells shaded blue indicate an HQ>1

TABLE E.16
Average Daily Doses and Hazard Quotients for Wildlife Receptors
for YPG-35c
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Mammals			Birds			Reptiles
	Desert shrew (0-0.5 ft bgs)	Kit fox (0-6.5 ft bgs)	Little pocket mouse (0-0.5 ft bgs)	American kestrel (0-0.5 ft bgs)	Gambel's quail (0-0.5 ft bgs)	Verdin (0-0.5 ft bgs)	Sonoran desert tortoise (0-6.5 ft bgs)
Average Daily Dose (mg/kg-day)							
Antimony	5.27E-02	3.69E-05	7.06E-03	2.71E-02	3.58E-03	9.91E-02	2.34E-04
Benzoic acid	2.51E+00	4.77E-04	2.34E+00	1.15E+00	6.08E-01	4.70E+00	7.02E-02
Bis(2-ethylhexyl)phthalate	5.89E-01	4.87E-05	1.02E-02	2.63E-01	4.34E-03	1.10E+00	1.88E-05
Cadmium	1.97E+00	6.36E-04	2.40E-01	9.28E-01	7.57E-02	3.68E+00	6.55E-03
Copper	2.50E+00	1.39E-02	1.94E+00	2.52E+00	6.81E-01	4.75E+00	6.02E-02
Di-n-butyl phthalate	2.90E+01	4.07E-02	1.69E+00	1.66E+01	5.34E-01	5.39E+01	3.79E-02
1,3-Dinitrobenzene	5.56E-03	6.33E-06	2.31E-01	3.16E-03	5.95E-02	1.32E-02	7.06E-03
2,4-Dinitrotoluene (via 8270)	9.93E-01	7.72E-04	1.68E+01	5.23E-01	4.34E+00	2.07E+00	5.13E-01
2,4-Dinitrotoluene (via 8330)	7.59E+00	5.91E-03	1.29E+02	3.99E+00	3.32E+01	1.58E+01	3.93E+00
2,6-Dinitrotoluene (via 8330)	5.34E-01	2.95E-04	6.37E+00	2.68E-01	1.65E+00	1.08E+00	1.94E-01
Lead	4.05E+00	5.52E-02	1.04E+01	8.69E+00	7.30E+00	1.04E+01	4.21E-01
Manganese	2.84E+00	1.44E-02	6.43E+00	2.90E+00	2.71E+00	5.99E+00	2.30E-01
Mercury	6.84E-03	9.98E-06	2.05E-03	3.98E-03	5.99E-04	1.28E-02	6.07E-05
Nitrobenzene	7.81E-01	4.19E-04	9.98E+00	3.85E-01	2.57E+00	1.58E+00	3.05E-01
Nitroguanidine	5.32E-04	8.04E-06	2.18E-03	1.53E-03	1.86E-03	1.80E-03	8.69E-05
Perchlorate	5.48E-02	8.31E-04	2.24E-01	1.58E-01	1.92E-01	1.85E-01	8.98E-03
Selenium	3.58E-01	1.30E-03	5.84E-01	2.91E-01	1.71E-01	6.82E-01	1.80E-02
Tetryl	1.37E-02	9.49E-05	3.18E+00	1.61E-02	8.18E-01	6.50E-02	9.72E-02
2,4,6-Trinitrotoluene	2.84E-01	1.03E-03	1.97E+01	2.56E-01	5.15E+00	8.16E-01	6.05E-01
Vanadium	1.34E-01	8.39E-04	1.33E-01	1.51E-01	1.01E-01	2.91E-01	6.86E-03
Zinc	4.25E+01	1.08E-01	1.13E+01	2.92E+01	3.26E+00	7.92E+01	3.33E-01
NOAEL-based Hazard Quotient (unitless)							
Antimony	8.93E-01	6.26E-04	1.20E-01	-	-	-	-
Benzoic acid	6.27E-01	1.19E-04	5.84E-01	-	-	-	-
Bis(2-ethylhexyl)phthalate	3.22E-02	2.66E-06	5.60E-04	2.39E-01	3.94E-03	9.98E-01	-

TABLE E.16
Average Daily Doses and Hazard Quotients for Wildlife Receptors for YPG-35c
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Mammals			Birds			Reptiles
	Desert shrew (0-0.5 ft bgs)	Kit fox (0-6.5 ft bgs)	Little pocket mouse (0-0.5 ft bgs)	American kestrel (0-0.5 ft bgs)	Gambel's quail (0-0.5 ft bgs)	Verdin (0-0.5 ft bgs)	Sonoran desert tortoise (0-6.5 ft bgs)
Cadmium	2.56E+00	8.25E-04	3.11E-01	6.31E-01	5.15E-02	2.50E+00	-
Copper	4.46E-01	2.48E-03	3.46E-01	6.22E-01	1.68E-01	1.17E+00	-
Di-n-butyl phthalate	2.16E-02	3.04E-05	1.26E-03	1.19E+02	3.81E+00	3.85E+02	-
1,3-Dinitrobenzene	4.92E-02	5.61E-05	2.05E+00	7.50E-03	1.41E-01	3.14E-02	-
2,4-Dinitrotoluene (via 8270)	1.48E+00	1.15E-03	2.51E+01	5.23E+01	4.34E+02	2.07E+02	5.70E-01
2,4-Dinitrotoluene (via 8330)	1.13E+01	8.81E-03	1.92E+02	3.99E+02	3.32E+03	1.58E+03	4.36E+00
2,6-Dinitrotoluene	7.63E-01	4.22E-04	9.10E+00	2.68E+01	1.65E+02	1.08E+02	-
Lead	8.63E-01	1.17E-02	2.22E+00	5.33E+00	4.48E+00	6.38E+00	4.21E+00
Manganese	5.52E-02	2.80E-04	1.25E-01	1.62E-02	1.52E-02	3.35E-02	-
Mercury	4.85E-03	7.08E-06	1.46E-03	2.10E-01	3.15E-02	6.72E-01	-
Nitrobenzene	1.32E-01	7.10E-05	1.69E+00	-	-	-	-
Nitroguanidine	-	-	-	-	-	-	-
Perchlorate	8.55E-03	1.30E-04	3.50E-02	1.21E-02	1.48E-02	1.43E-02	-
Selenium	2.50E+00	9.09E-03	4.09E+00	1.00E+00	5.89E-01	2.35E+00	8.19E+00
Tetryl	1.05E-02	7.30E-05	2.45E+00	-	-	-	-
2,4,6-Trinitrotoluene	8.18E-03	2.96E-05	5.69E-01	2.62E-02	5.28E-01	8.37E-02	2.42E-01
Vanadium	3.23E-02	2.02E-04	3.19E-02	4.43E-01	2.97E-01	8.56E-01	-
Zinc	5.64E-01	1.44E-03	1.50E-01	4.42E-01	4.94E-02	1.20E+00	-
Total with 2,4-dinitrotoluene measured using							
8270	**11**	**0.03**	**49**	**207**	**609**	**715**	**13**
8330	**21**	**0.04**	**216**	**554**	**3,495**	**2,088**	**17**
LOAEL-based Hazard Quotient (unitless)							
Antimony	1.91E-02	1.34E-05	2.56E-03	-	-	-	-
Benzoic acid	6.27E-02	1.19E-05	5.84E-02	-	-	-	-
Bis(2-ethylhexyl)phthalate	3.22E-03	2.66E-07	5.60E-05	2.39E-02	3.94E-04	9.98E-02	-
Cadmium	2.86E-01	9.21E-05	3.47E-02	1.46E-01	1.19E-02	5.79E-01	-

TABLE E.16
Average Daily Doses and Hazard Quotients for Wildlife Receptors for YPG-35c
RCRA FACILITY INVESTIGATION REPORT - YPG-35a, b, and c

COPEC	Mammals			Birds			Reptiles
	Desert shrew (0-0.5 ft bgs)	Kit fox (0-6.5 ft bgs)	Little pocket mouse (0-0.5 ft bgs)	American kestrel (0-0.5 ft bgs)	Gambel's quail (0-0.5 ft bgs)	Verdin (0-0.5 ft bgs)	Sonoran desert tortoise (0-6.5 ft bgs)
Copper	3.02E-02	1.68E-04	2.34E-02	7.23E-02	1.95E-02	1.36E-01	-
Di-n-butyl phthalate	9.12E-03	1.28E-05	5.33E-04	1.19E+01	3.81E-01	3.85E+01	-
1,3-Dinitrobenzene	2.11E-02	2.40E-05	8.76E-01	7.50E-04	1.41E-02	3.14E-03	-
2,4-Dinitrotoluene (via 8270)	7.10E-01	5.52E-04	1.20E+01	4.18E-01	3.47E+00	1.65E+00	3.42E-01
2,4-Dinitrotoluene (via 8330)	5.42E+00	4.22E-03	9.18E+01	3.19E+00	2.66E+01	1.26E+01	2.62E+00
2,6-Dinitrotoluene	7.63E-02	4.22E-05	9.10E-01	2.14E-01	1.32E+00	8.62E-01	-
Lead	2.18E-02	2.96E-04	5.60E-02	1.95E-01	1.64E-01	2.33E-01	4.21E-01
Manganese	5.52E-03	2.80E-05	1.25E-02	7.71E-03	7.21E-03	1.59E-02	-
Mercury	4.85E-04	7.08E-07	1.46E-04	2.10E-02	3.15E-03	6.72E-02	-
Nitrobenzene	1.32E-02	7.10E-06	1.69E-01	-	-	-	-
Nitroguanidine	-	-	-	-	-	-	-
Perchlorate	1.71E-03	2.60E-05	7.01E-03	6.04E-03	7.35E-03	7.10E-03	-
Selenium	5.42E-01	1.97E-03	8.86E-01	3.73E-01	2.19E-01	8.74E-01	8.58E-01
Tetryl	2.21E-03	1.53E-05	5.13E-01	-	-	-	-
2,4,6 Trinitrotoluene	1.77E-03	6.42E-06	1.23E-01	1.44E-02	2.89E-01	4.58E-02	1.73E-01
Vanadium	1.42E-02	8.89E-05	1.41E-02	8.85E-02	5.94E-02	1.71E-01	-
Zinc	1.43E-01	3.64E-04	3.80E-02	1.70E-01	1.90E-02	4.62E-01	-
Total with 2,4-dinitrotoluene measured using							
8270	**2**	**0.004**	**16**	**14**	**6**	**44**	**2**
8330	**7**	**0.007**	**96**	**16**	**29**	**55**	**4**

Definitions:

ADD = Average daily dose (mg chemical ingested per kg body weight per day [mg/kg-day])

COPEC = Chemical of potential ecological concern

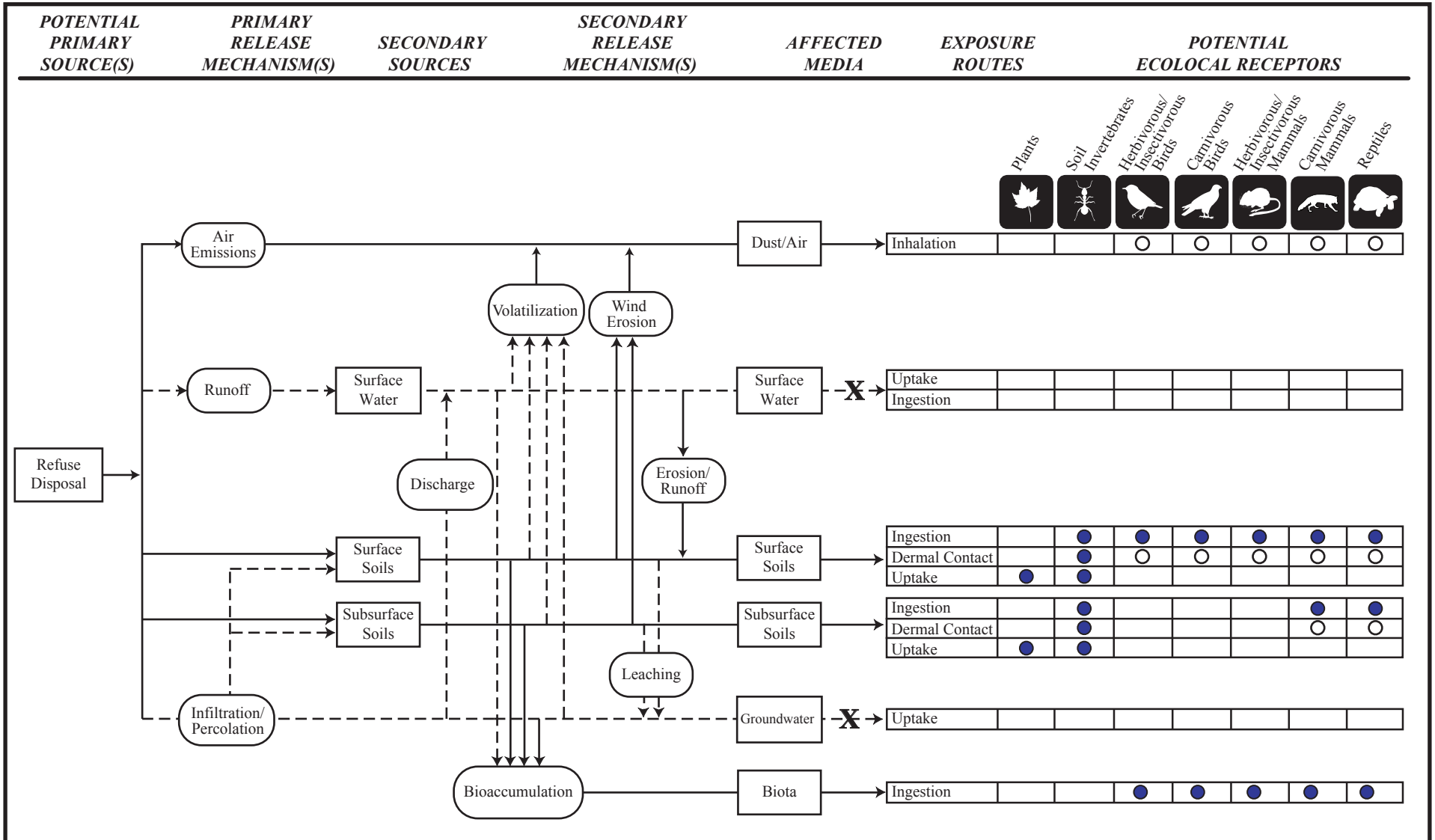
EPC = Exposure point concentration

kg = kilogram

mg = milligram

Cells shaded blue indicate an HQ>1

FIGURES



Legend

- Potentially complete exposure pathway
- Potentially incomplete exposure pathway
- Incomplete exposure pathway
- Potentially complete exposure route
- Potentially complete (but insignificant) exposure route

Figure E.1
Conceptual Site Model for Ecological Receptors

YPG-35b and c

U.S. Army Garrison Yuma Proving Ground

PARSONS

Salt Lake City, UT

ATTACHMENT 1

PROUCL OUTPUT

Attachment E1-1

ProUCL Output for 0-0.5 feet bgs

YPG-35b

bis(2-ETHYLHEXYL) PHTHALATE

General Statistics

Number of Valid Data	21	Number of Detected Data	0
Number of Distinct Detected Data	0	Number of Non-Detect Data	21
		Percent Non-Detects	100.00%

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable bis(2-ETHYLHEXYL) PHTHALATE was not processed!

Attachment E1-1

ProUCL Output for 0-0.5 feet bgs

YPG-35b

CADMIUM

General Statistics

Number of Valid Data	21	Number of Detected Data	18
Number of Distinct Detected Data	16	Number of Non-Detect Data	3
		Percent Non-Detects	14.29%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.014	Minimum Detected	-4.269
Maximum Detected	2.54	Maximum Detected	0.932
Mean of Detected	0.417	Mean of Detected	-1.618
SD of Detected	0.602	SD of Detected	1.309
Minimum Non-Detect	0.0098	Minimum Non-Detect	-4.625
Maximum Non-Detect	0.0099	Maximum Non-Detect	-4.615

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	3
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	18
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	14.29%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.635	Shapiro Wilk Test Statistic	0.979
5% Shapiro Wilk Critical Value	0.897	5% Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.358	Mean	-2.146
SD	0.575	SD	1.793
95% DL/2 (t) UCL	0.574	95% H-Stat (DL/2) UCL	2.667
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.301	Mean in Log Scale	-2.046
SD	0.624	SD in Log Scale	1.62
95% MLE (t) UCL	0.536	Mean in Original Scale	0.359
95% MLE (Tiku) UCL	0.526	SD in Original Scale	0.574
		95% t UCL	0.575
		95% Percentile Bootstrap UCL	0.58
		95% BCA Bootstrap UCL	0.671
		95% H UCL	1.709

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.702	Data appear Gamma Distributed at 5% Significance Level
Theta Star	0.594	
nu star	25.29	
A-D Test Statistic	0.474	
5% A-D Critical Value	0.776	
K-S Test Statistic	0.776	
5% K-S Critical Value	0.211	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.36
Maximum	2.54	SD	0.56
		SE of Mean	0.126
		95% KM (t) UCL	0.576
		95% KM (z) UCL	0.566
		95% KM (jackknife) UCL	0.573
		95% KM (bootstrap t) UCL	0.8
		95% KM (BCA) UCL	0.596

Attachment E1-1

ProUCL Output for 0-0.5 feet bgs

YPG-35b

Mean	0.358	95% KM (Percentile Bootstrap) UCL	0.583
Median	0.16	95% KM (Chebyshev) UCL	0.908
SD	0.575	97.5% KM (Chebyshev) UCL	1.145
k star	0.286	99% KM (Chebyshev) UCL	1.61
Theta star	1.251		
Nu star	12	**Potential UCLs to Use**	
AppChi2	5.228	95% KM (Chebyshev) UCL	0.908
95% Gamma Approximate UCL (Use when n >= 40)	0.821		
95% Adjusted Gamma UCL (Use when n < 40)	0.878		

Attachment E1-1

ProUCL Output for 0-0.5 feet bgs

YPG-35b

LEAD

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	21

Raw Statistics		Log-transformed Statistics	
Minimum	5.71	Minimum of Log Data	1.742
Maximum	300	Maximum of Log Data	5.704
Mean	23.8	Mean of log Data	2.34
Geometric Mean	10.38	SD of log Data	0.889
Median	7.58		
SD	63.64		
Std. Error of Mean	13.89		
Coefficient of Variation	2.674		
Skewness	4.501		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.288	Shapiro Wilk Test Statistic	0.584
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	47.75	95% H-UCL	24.93
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	29.05
95% Adjusted-CLT UCL (Chen-1995)	61.22	97.5% Chebyshev (MVUE) UCL	35.12
95% Modified-t UCL (Johnson-1978)	50.03	99% Chebyshev (MVUE) UCL	47.04

Gamma Distribution Test		Data Distribution
k star (bias corrected)	0.653	Data do not follow a Discernable Distribution (0.05)
Theta Star	36.44	
MLE of Mean	23.8	
MLE of Standard Deviation	29.45	
nu star	27.43	
Approximate Chi Square Value (.05)	16.49	**Nonparametric Statistics**
Adjusted Level of Significance	0.0383	95% CLT UCL 46.65
Adjusted Chi Square Value	15.83	95% Jackknife UCL 47.75
		95% Standard Bootstrap UCL 46.01
Anderson-Darling Test Statistic	4.819	95% Bootstrap-t UCL 251
Anderson-Darling 5% Critical Value	0.785	95% Hall's Bootstrap UCL 224
Kolmogorov-Smirnov Test Statistic	0.408	95% Percentile Bootstrap UCL 51.43
Kolmogorov-Smirnov 5% Critical Value	0.197	95% BCA Bootstrap UCL 77.27
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 84.34
		97.5% Chebyshev(Mean, Sd) UCL 110.5
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 162
95% Approximate Gamma UCL (Use when n >= 40)	39.6	
95% Adjusted Gamma UCL (Use when n < 40)	41.23	

Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	84.34

Attachment E1-1

ProUCL Output for 0-0.5 feet bgs

YPG-35b

MANGANESE

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	19

Raw Statistics		Log-transformed Statistics	
Minimum	213	Minimum of Log Data	5.361
Maximum	628	Maximum of Log Data	6.443
Mean	271.5	Mean of log Data	5.573
Geometric Mean	263.3	SD of log Data	0.227
Median	252		
SD	86.4		
Std. Error of Mean	18.85		
Coefficient of Variation	0.318		
Skewness	3.826		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.52	Shapiro Wilk Test Statistic	0.674
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	304	95% H-UCL	295.8
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	328.5
95% Adjusted-CLT UCL (Chen-1995)	319.3	97.5% Chebyshev (MVUE) UCL	353.9
95% Modified-t UCL (Johnson-1978)	306.6	99% Chebyshev (MVUE) UCL	403.7

Gamma Distribution Test		Data Distribution
k star (bias corrected)	14.27	Data do not follow a Discernable Distribution (0.05)
Theta Star	19.03	
MLE of Mean	271.5	
MLE of Standard Deviation	71.87	
nu star	599.3	
Approximate Chi Square Value (.05)	543.5	**Nonparametric Statistics**
Adjusted Level of Significance	0.0383	95% CLT UCL 302.5
Adjusted Chi Square Value	539.4	95% Jackknife UCL 304
		95% Standard Bootstrap UCL 301.4
Anderson-Darling Test Statistic	2.342	95% Bootstrap-t UCL 357
Anderson-Darling 5% Critical Value	0.743	95% Hall's Bootstrap UCL 420.4
Kolmogorov-Smirnov Test Statistic	0.27	95% Percentile Bootstrap UCL 307.7
Kolmogorov-Smirnov 5% Critical Value	0.189	95% BCA Bootstrap UCL 328.2
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 353.7
		97.5% Chebyshev(Mean, Sd) UCL 389.2
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 459.1
95% Approximate Gamma UCL (Use when n >= 40)	299.3	
95% Adjusted Gamma UCL (Use when n < 40)	301.6	

Potential UCL to Use	Use 95% Student's-t UCL 304
	or 95% Modified-t UCL 306.6

Attachment E1-1

ProUCL Output for 0-0.5 feet bgs

YPG-35b

THALLIUM

General Statistics

Number of Valid Data	21	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	19
		Percent Non-Detects	90.48%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.16	Minimum Detected	-1.833
Maximum Detected	0.24	Maximum Detected	-1.427
Mean of Detected	0.2	Mean of Detected	-1.63
SD of Detected	0.0566	SD of Detected	0.287
Minimum Non-Detect	0.099	Minimum Non-Detect	-2.313
Maximum Non-Detect	0.5	Maximum Non-Detect	-0.693

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0738	Mean	-2.79
SD	0.0618	SD	0.525
95% DL/2 (t) UCL	0.097	95% H-Stat (DL/2) UCL	0.0893
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% t UCL	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
		95% H-UCL	N/A

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)

Attachment E1-1
ProUCL Output for 0-0.5 feet bgs
YPG-35b

Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	0.164
5% K-S Critical Value	N/A	SD	0.0174
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00551
		95% KM (t) UCL	0.174
Assuming Gamma Distribution		95% KM (z) UCL	0.173
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.217
Minimum	N/A	95% KM (bootstrap t) UCL	0.164
Maximum	N/A	95% KM (BCA) UCL	0.24
Mean	N/A	95% KM (Percentile Bootstrap) UCL	0.24
Median	N/A	95% KM (Chebyshev) UCL	0.188
SD	N/A	97.5% KM (Chebyshev) UCL	0.198
k star	N/A	99% KM (Chebyshev) UCL	0.219
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	95% KM (t) UCL	0.174
95% Gamma Approximate UCL (Use when n >= 40)	N/A	95% KM (% Bootstrap) UCL	0.24
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-1
ProUCL Output for 0-0.5 feet bgs
YPG-35b

ZINC

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	21

Raw Statistics		Log-transformed Statistics	
Minimum	31.1	Minimum of Log Data	3.437
Maximum	231	Maximum of Log Data	5.442
Mean	52.33	Mean of log Data	3.818
Geometric Mean	45.5	SD of log Data	0.443
Median	40.3		
SD	43.15		
Std. Error of Mean	9.416		
Coefficient of Variation	0.825		
Skewness	3.943		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.427	Shapiro Wilk Test Statistic	0.628
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	68.57	95% H-UCL	60.8
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	71.58
95% Adjusted-CLT UCL (Chen-1995)	76.48	97.5% Chebyshev (MVUE) UCL	80.94
95% Modified-t UCL (Johnson-1978)	69.92	99% Chebyshev (MVUE) UCL	99.35

Gamma Distribution Test		Data Distribution
k star (bias corrected)	3.229	Data do not follow a Discernable Distribution (0.05)
Theta Star	16.21	
MLE of Mean	52.33	
MLE of Standard Deviation	29.12	
nu star	135.6	
Approximate Chi Square Value (.05)	109.7	**Nonparametric Statistics**
Adjusted Level of Significance	0.0383	95% CLT UCL 67.82
Adjusted Chi Square Value	107.9	95% Jackknife UCL 68.57
		95% Standard Bootstrap UCL 67.88
Anderson-Darling Test Statistic	3.577	95% Bootstrap-t UCL 131.6
Anderson-Darling 5% Critical Value	0.748	95% Hall's Bootstrap UCL 125.2
Kolmogorov-Smirnov Test Statistic	0.369	95% Percentile Bootstrap UCL 69.99
Kolmogorov-Smirnov 5% Critical Value	0.19	95% BCA Bootstrap UCL 79.1
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 93.38
		97.5% Chebyshev(Mean, Sd) UCL 111.1
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 146
95% Approximate Gamma UCL (Use when n >= 40)	64.69	
95% Adjusted Gamma UCL (Use when n < 40)	65.76	

Potential UCL to Use	Use 95% Student's-t UCL 68.57
	or 95% Modified-t UCL 69.92

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

BARIUM

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	37
Raw Statistics		**Log-transformed Statistics**	
Minimum	83.4	Minimum of Log Data	4.424
Maximum	561	Maximum of Log Data	6.33
Mean	171.6	Mean of log Data	5.061
Median	143	SD of log Data	0.383
SD	87.29		
Std. Error of Mean	13.47		
Coefficient of Variation	0.509		
Skewness	2.707		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.699	Shapiro Wilk Test Statistic	0.87
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	194.3	95% H-UCL	189.3
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	214.3
95% Adjusted-CLT UCL (Chen-1995)	199.8	97.5% Chebyshev (MVUE) UCL	233.7
95% Modified-t UCL (Johnson-1978)	195.2	99% Chebyshev (MVUE) UCL	271.8
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	5.668	Data do not follow a Discernable Distribution (0.05)	
Theta Star	30.28		
MLE of Mean	171.6		
MLE of Standard Deviation	72.09		
nu star	476.1		
Approximate Chi Square Value (.05)	426.5	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0443	95% CLT UCL	193.8
Adjusted Chi Square Value	424.9	95% Jackknife UCL	194.3
		95% Standard Bootstrap UCL	193.9
Anderson-Darling Test Statistic	2.291	95% Bootstrap-t UCL	203.7
Anderson-Darling 5% Critical Value	0.751	95% Hall's Bootstrap UCL	212.4
Kolmogorov-Smirnov Test Statistic	0.205	95% Percentile Bootstrap UCL	194.9
Kolmogorov-Smirnov 5% Critical Value	0.137	95% BCA Bootstrap UCL	198.7
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	230.3
		97.5% Chebyshev(Mean, Sd) UCL	255.7
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	305.6
95% Approximate Gamma UCL	191.6		
95% Adjusted Gamma UCL	192.3	**Potential UCL to Use**	
		Use 95% Student's-t UCL	194.3
		or 95% Modified-t UCL	195.2

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

CADMIUM

General Statistics

Number of Valid Data	42	Number of Detected Data	35
Number of Distinct Detected Data	28	Number of Non-Detect Data	7
		Percent Non-Detects	16.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.014	Minimum Detected	-4.269
Maximum Detected	2.54	Maximum Detected	0.932
Mean of Detected	0.306	Mean of Detected	-1.922
SD of Detected	0.511	SD of Detected	1.136
Minimum Non-Detect	0.0098	Minimum Non-Detect	-4.625
Maximum Non-Detect	0.01	Maximum Non-Detect	-4.605

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	7
Number treated as Detected	35
Single DL Non-Detect Percentage	16.67%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.548	Shapiro Wilk Test Statistic	0.946
5% Shapiro Wilk Critical Value	0.934	5% Shapiro Wilk Critical Value	0.934
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.256	Mean	-2.487
SD	0.479	SD	1.644
95% DL/2 (t) UCL	0.38	95% H-Stat (DL/2) UCL	0.723
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.195	Mean in Log Scale	-2.343
SD	0.535	SD in Log Scale	1.414
95% MLE (t) UCL	0.334	Mean in Original Scale	0.257
95% MLE (Tiku) UCL	0.329	SD in Original Scale	0.478
		95% t UCL	0.381
		95% Percentile Bootstrap UCL	0.389
		95% BCA Bootstrap UCL	0.439
		95% H UCL	0.49

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.755	Data appear Lognormal at 5% Significance Level	
Theta Star	0.405		
nu star	52.86		
A-D Test Statistic	2.397	**Nonparametric Statistics**	
5% A-D Critical Value	0.785	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.785	Mean	0.257
5% K-S Critical Value	0.154	SD	0.473
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.074
		95% KM (t) UCL	0.382
Assuming Gamma Distribution		95% KM (z) UCL	0.379
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.381
Minimum	0.000001	95% KM (bootstrap t) UCL	0.504
Maximum	2.54	95% KM (BCA) UCL	0.401
Mean	0.255	95% KM (Percentile Bootstrap) UCL	0.383
Median	0.1	95% KM (Chebyshev) UCL	0.58
SD	0.48	97.5% KM (Chebyshev) UCL	0.719
k star	0.272	99% KM (Chebyshev) UCL	0.993
Theta star	0.937		
Nu star	22.83		
AppChi2	12.96	**Potential UCL to Use**	
95% Gamma Approximate UCL	0.449	95% KM (Chebyshev) UCL	0.58
95% Adjusted Gamma UCL	0.458		

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

CHROMIUM, TOTAL

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	36

Raw Statistics		**Log-transformed Statistics**	
Minimum	5.78	Minimum of Log Data	1.754
Maximum	31.7	Maximum of Log Data	3.456
Mean	10.56	Mean of log Data	2.322
Median	9.995	SD of log Data	0.238
SD	3.679		
Std. Error of Mean	0.568		
Coefficient of Variation	0.349		
Skewness	4.803		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.524	Shapiro Wilk Test Statistic	0.764
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	11.51	95% H-UCL	11.19
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	12.19
95% Adjusted-CLT UCL (Chen-1995)	11.94	97.5% Chebyshev (MVUE) UCL	12.92
95% Modified-t UCL (Johnson-1978)	11.58	99% Chebyshev (MVUE) UCL	14.37

Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	13.64	Data do not follow a Discernable Distribution (0.05)	
Theta Star	0.774		
MLE of Mean	10.56		
MLE of Standard Deviation	2.858		
nu star	1146		
Approximate Chi Square Value (.05)	1068	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0443	95% CLT UCL	11.49
Adjusted Chi Square Value	1066	95% Jackknife UCL	11.51
		95% Standard Bootstrap UCL	11.5
Anderson-Darling Test Statistic	3.349	95% Bootstrap-t UCL	12.54
Anderson-Darling 5% Critical Value	0.748	95% Hall's Bootstrap UCL	15.53
Kolmogorov-Smirnov Test Statistic	0.221	95% Percentile Bootstrap UCL	11.56
Kolmogorov-Smirnov 5% Critical Value	0.136	95% BCA Bootstrap UCL	12.16
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	13.03
		97.5% Chebyshev(Mean, Sd) UCL	14.1
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	16.2
95% Approximate Gamma UCL	11.32		
95% Adjusted Gamma UCL	11.35	**Potential UCL to Use**	
		Use 95% Student's-t UCL	11.51
		or 95% Modified-t UCL	11.58

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

LEAD

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	40

Raw Statistics		Log-transformed Statistics	
Minimum	4.42	Minimum of Log Data	1.486
Maximum	300	Maximum of Log Data	5.704
Mean	15.87	Mean of log Data	2.152
Median	7.48	SD of log Data	0.706
SD	45.35		
Std. Error of Mean	6.997		
Coefficient of Variation	2.857		
Skewness	6.295		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.227	Shapiro Wilk Test Statistic	0.585
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	27.65	95% H-UCL	13.85
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	16.63
95% Adjusted-CLT UCL (Chen-1995)	34.64	97.5% Chebyshev (MVUE) UCL	19.09
95% Modified-t UCL (Johnson-1978)	28.78	99% Chebyshev (MVUE) UCL	23.91

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	0.896	Data do not follow a Discernable Distribution (0.05)	
Theta Star	17.72		
MLE of Mean	15.87		
MLE of Standard Deviation	16.77		
nu star	75.25		
Approximate Chi Square Value (.05)	56.27	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0443	95% CLT UCL	27.38
Adjusted Chi Square Value	55.69	95% Jackknife UCL	27.65
		95% Standard Bootstrap UCL	27.35
Anderson-Darling Test Statistic	9.241	95% Bootstrap-t UCL	100.8
Anderson-Darling 5% Critical Value	0.78	95% Hall's Bootstrap UCL	91.32
Kolmogorov-Smirnov Test Statistic	0.414	95% Percentile Bootstrap UCL	29.22
Kolmogorov-Smirnov 5% Critical Value	0.141	95% BCA Bootstrap UCL	37.36
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	46.37
		97.5% Chebyshev(Mean, Sd) UCL	59.57
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	85.49
95% Approximate Gamma UCL	21.23		
95% Adjusted Gamma UCL	21.45	**Potential UCL to Use**	
		Use 95% Chebyshev (Mean, Sd) UCL	46.37

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

MANGANESE

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	33

Raw Statistics		Log-transformed Statistics	
Minimum	184	Minimum of Log Data	5.215
Maximum	628	Maximum of Log Data	6.443
Mean	246.3	Mean of log Data	5.484
Geometric Mean	240.7	SD of log Data	0.196
Median	237		
SD	67.42		
Std. Error of Mean	10.4		
Coefficient of Variation	0.274		
Skewness	4.61		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.551	Shapiro Wilk Test Statistic	0.75
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	263.8	95% H-UCL	258.7
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	277.9
95% Adjusted-CLT UCL (Chen-1995)	271.3	97.5% Chebyshev (MVUE) UCL	292.1
95% Modified-t UCL (Johnson-1978)	265	99% Chebyshev (MVUE) UCL	319.8

Gamma Distribution Test		Data Distribution
k star (bias corrected)	20.36	Data do not follow a Discernable Distribution (0.05)
Theta Star	12.1	
MLE of Mean	246.3	
MLE of Standard Deviation	54.59	
nu star	1710	
Approximate Chi Square Value (.05)	1615	**Nonparametric Statistics**
Adjusted Level of Significance	0.0443	95% CLT UCL 263.4
Adjusted Chi Square Value	1612	95% Jackknife UCL 263.8
		95% Standard Bootstrap UCL 262.9
Anderson-Darling Test Statistic	2.621	95% Bootstrap-t UCL 280.5
Anderson-Darling 5% Critical Value	0.747	95% Hall's Bootstrap UCL 336.5
Kolmogorov-Smirnov Test Statistic	0.226	95% Percentile Bootstrap UCL 264.8
Kolmogorov-Smirnov 5% Critical Value	0.136	95% BCA Bootstrap UCL 278.3
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 291.7
		97.5% Chebyshev(Mean, Sd) UCL 311.3
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 349.8
95% Approximate Gamma UCL (Use when n >= 40)	260.8	
95% Adjusted Gamma UCL (Use when n < 40)	261.3	

Potential UCL to Use		Use 95% Student's-t UCL	263.8
		or 95% Modified-t UCL	265

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

MERCURY

General Statistics

Number of Valid Data	42	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	35
		Percent Non-Detects	83.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0038	Minimum Detected	-5.573
Maximum Detected	0.048	Maximum Detected	-3.037
Mean of Detected	0.0121	Mean of Detected	-4.83
SD of Detected	0.0159	SD of Detected	0.84
Minimum Non-Detect	0.0033	Minimum Non-Detect	-5.714
Maximum Non-Detect	0.017	Maximum Non-Detect	-4.075

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	41
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	1
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	97.62%

Warning: There are only 7 Detected Values in this data

Note: It should be noted that even though bootstrap may be performed on this data set

the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.551	Shapiro Wilk Test Statistic	0.765
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.00373	Mean	-6.037
SD	0.00728	SD	0.704
95% DL/2 (t) UCL	0.00562	95% H-Stat (DL/2) UCL	0.00384
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-7.578
		SD in Log Scale	1.708
		Mean in Original Scale	0.00247
		SD in Original Scale	0.00751
		95% t UCL	0.00442
		95% Percentile Bootstrap UCL	0.00482
		95% BCA Bootstrap UCL	0.00599
		95% H-UCL	0.00522

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.86	Data do not follow a Discernable Distribution (0.05)	
Theta Star	0.0141		
nu star	12.04		
A-D Test Statistic	1.142	**Nonparametric Statistics**	
5% A-D Critical Value	0.723	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.723	Mean	0.00521
5% K-S Critical Value	0.318	SD	0.00676
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00113
		95% KM (t) UCL	0.0071
Assuming Gamma Distribution		95% KM (z) UCL	0.00706
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.00668

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

Minimum	0.000001	95% KM (bootstrap t) UCL	0.0137
Maximum	0.048	95% KM (BCA) UCL	0.00963
Mean	0.00202	95% KM (Percentile Bootstrap) UCL	0.00828
Median	0.000001	95% KM (Chebyshev) UCL	0.0101
SD	0.00761	97.5% KM (Chebyshev) UCL	0.0123
k star	0.135	99% KM (Chebyshev) UCL	0.0164
Theta star	0.015		
Nu star	11.36	Potential UCLs to Use	
AppChi2	4.806	95% KM (t) UCL	0.0071
95% Gamma Approximate UCL (Use when n >= 40)	0.00478	95% KM (% Bootstrap) UCL	0.00828
95% Adjusted Gamma UCL (Use when n < 40)	0.00493		

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

THALLIUM

General Statistics

Number of Valid Data	42	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	40
		Percent Non-Detects	95.24%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.16	Minimum Detected	-1.833
Maximum Detected	0.24	Maximum Detected	-1.427
Mean of Detected	0.2	Mean of Detected	-1.63
SD of Detected	0.0566	SD of Detected	0.287
Minimum Non-Detect	0.099	Minimum Non-Detect	-2.313
Maximum Non-Detect	0.5	Maximum Non-Detect	-0.693

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	42
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0619	Mean	-2.893
SD	0.0448	SD	0.381
95% DL/2 (t) UCL	0.0735	95% H-Stat (DL/2) UCL	0.0664
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% t UCL	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
		95% H-UCL	N/A

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)
Theta Star	N/A	
nu star	N/A	

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	0.162
5% K-S Critical Value	N/A	SD	0.0123
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00273
		95% KM (t) UCL	0.167
Assuming Gamma Distribution		95% KM (z) UCL	0.166
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.214
Minimum	N/A	95% KM (bootstrap t) UCL	N/A
Maximum	N/A	95% KM (BCA) UCL	N/A
Mean	N/A	95% KM (Percentile Bootstrap) UCL	N/A
Median	N/A	95% KM (Chebyshev) UCL	0.174
SD	N/A	97.5% KM (Chebyshev) UCL	0.179
k star	N/A	99% KM (Chebyshev) UCL	0.189
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	95% KM (t) UCL	0.167
95% Gamma Approximate UCL (Use when n >= 40)	N/A	95% KM (% Bootstrap) UCL	N/A
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

ZINC

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	39

Raw Statistics		Log-transformed Statistics	
Minimum	15.8	Minimum of Log Data	2.76
Maximum	231	Maximum of Log Data	5.442
Mean	47.18	Mean of log Data	3.766
Median	41.3	SD of log Data	0.359
SD	31.08		
Std. Error of Mean	4.796		
Coefficient of Variation	0.659		
Skewness	5.351		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.405	Shapiro Wilk Test Statistic	0.704
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	55.25	95% H-UCL	50.98
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	57.38
95% Adjusted-CLT UCL (Chen-1995)	59.3	97.5% Chebyshev (MVUE) UCL	62.3
95% Modified-t UCL (Johnson-1978)	55.91	99% Chebyshev (MVUE) UCL	71.97
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	5.44	Data do not follow a Discernable Distribution (0.05)	
Theta Star	8.674		
MLE of Mean	47.18		
MLE of Standard Deviation	20.23		
nu star	456.9		
Approximate Chi Square Value (.05)	408.4	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0443	95% CLT UCL	55.07
Adjusted Chi Square Value	406.7	95% Jackknife UCL	55.25
		95% Standard Bootstrap UCL	55.06
Anderson-Darling Test Statistic	5.388	95% Bootstrap-t UCL	73.96
Anderson-Darling 5% Critical Value	0.752	95% Hall's Bootstrap UCL	92.19
Kolmogorov-Smirnov Test Statistic	0.268	95% Percentile Bootstrap UCL	56.05
Kolmogorov-Smirnov 5% Critical Value	0.137	95% BCA Bootstrap UCL	62.25
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	68.09
		97.5% Chebyshev(Mean, Sd) UCL	77.13
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	94.9
95% Approximate Gamma UCL	52.79		
95% Adjusted Gamma UCL	53	**Potential UCL to Use**	
		Use 95% Student's-t UCL	55.25
		or 95% Modified-t UCL	55.91

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

BIS (2-ETHYLHEXYL) PHTHALATE

General Statistics

Number of Valid Data	42	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	40
		Percent Non-Detects	95.24%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0254	Minimum Detected	-3.673
Maximum Detected	0.0284	Maximum Detected	-3.561
Mean of Detected	0.0269	Mean of Detected	-3.617
SD of Detected	0.00212	SD of Detected	0.0789
Minimum Non-Detect	0.0126	Minimum Non-Detect	-4.374
Maximum Non-Detect	0.0133	Maximum Non-Detect	-4.32

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	40
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	2
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.24%

Warning: Data set has only 2 Distinct Detected Values.

This may not be adequate enough to compute meaningful and reliable test statistics and estimates.

The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.

Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.

However, results obtained using 4 to 9 distinct values may not be reliable.

It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.00739	Mean	-4.981
SD	0.00443	SD	0.309
95% DL/2 (t) UCL	0.00854	95% H-Stat (DL/2) UCL	0.00785
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% t UCL	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
		95% H-UCL	N/A
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	0.0255

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

5% K-S Critical Value	N/A	SD	0.0004574
Data not Gamma Distributed at 5% Significance Level		SE of Mean	9.981E-05
		95% KM (t) UCL	0.0256
Assuming Gamma Distribution		95% KM (z) UCL	0.0256
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0274
Minimum	N/A	95% KM (bootstrap t) UCL	N/A
Maximum	N/A	95% KM (BCA) UCL	N/A
Mean	N/A	95% KM (Percentile Bootstrap) UCL	0.0284
Median	N/A	95% KM (Chebyshev) UCL	0.0259
SD	N/A	97.5% KM (Chebyshev) UCL	0.0261
k star	N/A	99% KM (Chebyshev) UCL	0.0265
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	95% KM (t) UCL	0.0256
95% Gamma Approximate UCL (Use when n >= 40)	N/A	95% KM (% Bootstrap) UCL	0.0284
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

DI-N-BUTYL PHTHALATE

General Statistics

Number of Valid Data	42	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	40
		Percent Non-Detects	95.24%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.00836	Minimum Detected	-4.784
Maximum Detected	0.03	Maximum Detected	-3.507
Mean of Detected	0.0192	Mean of Detected	-4.145
SD of Detected	0.0153	SD of Detected	0.903
Minimum Non-Detect	0.0079	Minimum Non-Detect	-4.841
Maximum Non-Detect	0.00835	Maximum Non-Detect	-4.785

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	40
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	2
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.24%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!
It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.00475	Mean	-5.45
SD	0.00405	SD	0.327
95% DL/2 (t) UCL	0.0058	95% H-Stat (DL/2) UCL	0.00497
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% t UCL	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
		95% H-UCL	N/A
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	0.00888
5% K-S Critical Value	N/A	SD	0.0033
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.0007199
		95% KM (t) UCL	0.0101

Attachment E1-2
ProUCL Output for 0-6.5 feet bgs
YPG-35b

DI-N-BUTYL PHTHALATE (Continued)			
Assuming Gamma Distribution		95% KM (z) UCL	0.0101
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.023
Minimum	N/A	95% KM (bootstrap t) UCL	0.00888
Maximum	N/A	95% KM (BCA) UCL	0.03
Mean	N/A	95% KM (Percentile Bootstrap) UCL	N/A
Median	N/A	95% KM (Chebyshev) UCL	0.012
SD	N/A	97.5% KM (Chebyshev) UCL	0.0134
k star	N/A	99% KM (Chebyshev) UCL	0.016
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	95% KM (t) UCL	0.0101
95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL	N/A
95% Adjusted Gamma UCL	N/A		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

ANTIMONY

General Statistics

Number of Valid Data	66	Number of Detected Data	18
Number of Distinct Detected Data	15	Number of Non-Detect Data	48
		Percent Non-Detects	72.73%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.15	Minimum Detected	-1.897
Maximum Detected	3.3	Maximum Detected	1.194
Mean of Detected	0.93	Mean of Detected	-0.389
SD of Detected	0.821	SD of Detected	0.812
Minimum Non-Detect	0.12	Minimum Non-Detect	-2.12
Maximum Non-Detect	2.3	Maximum Non-Detect	0.833

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	64
Number treated as Detected	2
Single DL Non-Detect Percentage	96.97%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.795	Shapiro Wilk Test Statistic	0.954
5% Shapiro Wilk Critical Value	0.897	5% Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.431	Mean	-1.628
SD	0.601	SD	1.243
95% DL/2 (t) UCL	0.555	95% H-Stat (DL/2) UCL	0.594
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-2.09
		SD in Log Scale	1.361
		Mean in Original Scale	0.32
		SD in Original Scale	0.567
		95% t UCL	0.436
		95% Percentile Bootstrap UCL	0.443
		95% BCA Bootstrap UCL	0.476
		95% H-UCL	0.455

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	1.477	Data Follow Appr. Gamma Distribution at 5% Significance Level
Theta Star	0.63	
nu star	53.16	
A-D Test Statistic	0.67	
5% A-D Critical Value	0.755	
K-S Test Statistic	0.755	
5% K-S Critical Value	0.207	
Data follow Appr. Gamma Distribution at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.381
Maximum	3.3	SD	0.548
Mean	0.255	SE of Mean	0.0708
Median	0.000001	95% KM (t) UCL	0.5
SD	0.591	95% KM (z) UCL	0.498
k star	0.102	95% KM (jackknife) UCL	0.479
Theta star	2.499	95% KM (bootstrap t) UCL	0.535
Nu star	13.49	95% KM (BCA) UCL	0.649
AppChi2	6.222	95% KM (Percentile Bootstrap) UCL	0.587
95% Gamma Approximate UCL (Use when n >= 40)	0.554	95% KM (Chebyshev) UCL	0.69
95% Adjusted Gamma UCL (Use when n < 40)	0.564	97.5% KM (Chebyshev) UCL	0.824
		99% KM (Chebyshev) UCL	1.086
		Potential UCLs to Use	
		95% KM (t) UCL	0.5

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

CADMIUM

General Statistics

Number of Valid Data	66	Number of Detected Data	63
Number of Distinct Detected Data	48	Number of Non-Detect Data	3
		Percent Non-Detects	4.55%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.028	Minimum Detected	-3.576
Maximum Detected	20	Maximum Detected	2.996
Mean of Detected	1.259	Mean of Detected	-0.869
SD of Detected	3.139	SD of Detected	1.321
Minimum Non-Detect	0.0098	Minimum Non-Detect	-4.625
Maximum Non-Detect	0.1	Maximum Non-Detect	-2.303
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	9
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	57
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	13.64%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Lilliefors Test Statistic	0.347	Lilliefors Test Statistic	0.123
5% Lilliefors Critical Value	0.112	5% Lilliefors Critical Value	0.112
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.203	Mean	-1.001
SD	3.076	SD	1.446
95% DL/2 (t) UCL	1.835	95% H-Stat (DL/2) UCL	1.587
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.883	Mean in Log Scale	-0.991
SD	3.346	SD in Log Scale	1.415
95% MLE (t) UCL	1.571	Mean in Original Scale	1.203
95% MLE (Tiku) UCL	1.529	SD in Original Scale	3.076
		95% t UCL	1.835
		95% Percentile Bootstrap UCL	1.931
		95% BCA Bootstrap UCL	2.174
		95% H UCL	1.508
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.551	Data do not follow a Discernable Distribution (0.05)	
Theta Star	2.287		
nu star	69.36		
A-D Test Statistic	4.711	**Nonparametric Statistics**	
5% A-D Critical Value	0.81	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.81	Mean	1.204
5% K-S Critical Value	0.118	SD	3.053
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.379
		95% KM (t) UCL	1.836
Assuming Gamma Distribution		95% KM (z) UCL	1.827
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.835
Minimum	0.000001	95% KM (bootstrap t) UCL	2.843
Maximum	20	95% KM (BCA) UCL	1.896
Mean	1.202	95% KM (Percentile Bootstrap) UCL	1.905
Median	0.325	95% KM (Chebyshev) UCL	2.855
SD	3.077	97.5% KM (Chebyshev) UCL	3.569
k star	0.393	99% KM (Chebyshev) UCL	4.973
Theta star	3.06		
Nu star	51.84	Potential UCLs to Use	
AppChi2	36.3	95% KM (Chebyshev) UCL	2.855
95% Gamma Approximate UCL (Use when n >= 40)	1.716		
95% Adjusted Gamma UCL (Use when n < 40)	1.73		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

COPPER

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	39
Number of Missing Values	24		

Raw Statistics		Log-transformed Statistics	
Minimum	11.2	Minimum of Log Data	2.416
Maximum	142	Maximum of Log Data	4.956
Mean	35.1	Mean of log Data	3.325
Geometric Mean	27.8	SD of log Data	0.651
Median	24.55		
SD	28.79		
Std. Error of Mean	4.443		
Coefficient of Variation	0.82		
Skewness	2.199		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.718	Shapiro Wilk Test Statistic	0.889
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	42.57	95% H-UCL	42.17
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	50.29
95% Adjusted-CLT UCL (Chen-1995)	44.02	97.5% Chebyshev (MVUE) UCL	57.27
95% Modified-t UCL (Johnson-1978)	42.83	99% Chebyshev (MVUE) UCL	70.99

Gamma Distribution Test		Data Distribution
k star (bias corrected)	2.15	Data do not follow a Discernable Distribution (0.05)
Theta Star	16.32	
MLE of Mean	35.1	
MLE of Standard Deviation	23.94	
nu star	180.6	
Approximate Chi Square Value (.05)	150.5	**Nonparametric Statistics**
Adjusted Level of Significance	0.0443	95% CLT UCL 42.4
Adjusted Chi Square Value	149.5	95% Jackknife UCL 42.57
		95% Standard Bootstrap UCL 42.41
Anderson-Darling Test Statistic	1.387	95% Bootstrap-t UCL 45.05
Anderson-Darling 5% Critical Value	0.758	95% Hall's Bootstrap UCL 46.39
Kolmogorov-Smirnov Test Statistic	0.155	95% Percentile Bootstrap UCL 42.99
Kolmogorov-Smirnov 5% Critical Value	0.138	95% BCA Bootstrap UCL 44.71
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 54.46
		97.5% Chebyshev(Mean, Sd) UCL 62.84
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 79.3
95% Approximate Gamma UCL (Use when n >= 40)	42.11	
95% Adjusted Gamma UCL (Use when n < 40)	42.39	

Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	54.46

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

LEAD

General Statistics

Number of Valid Observations	66	Number of Distinct Observations	63

Raw Statistics		**Log-transformed Statistics**	
Minimum	3.2	Minimum of Log Data	1.163
Maximum	17000	Maximum of Log Data	9.741
Mean	288.7	Mean of log Data	2.952
Geometric Mean	19.14	SD of log Data	1.201
Median	13.5		
SD	2090		
Std. Error of Mean	257.2		
Coefficient of Variation	7.239		
Skewness	8.11		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Lilliefors Test Statistic	0.482	Lilliefors Test Statistic	0.2
Lilliefors Critical Value	0.109	Lilliefors Critical Value	0.109
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	717.9	95% H-UCL	54.68
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	69.87
95% Adjusted-CLT UCL (Chen-1995)	986.2	97.5% Chebyshev (MVUE) UCL	83.37
95% Modified-t UCL (Johnson-1978)	760.7	99% Chebyshev (MVUE) UCL	109.9

Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	0.258	Data do not follow a Discernable Distribution (0.05)	
Theta Star	1117		
MLE of Mean	288.7		
MLE of Standard Deviation	568		
nu star	34.1		
Approximate Chi Square Value (.05)	21.75	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0464	95% CLT UCL	711.8
Adjusted Chi Square Value	21.53	95% Jackknife UCL	717.9
		95% Standard Bootstrap UCL	706
Anderson-Darling Test Statistic	18.11	95% Bootstrap-t UCL	18480
Anderson-Darling 5% Critical Value	0.883	95% Hall's Bootstrap UCL	13334
Kolmogorov-Smirnov Test Statistic	0.435	95% Percentile Bootstrap UCL	799.7
Kolmogorov-Smirnov 5% Critical Value	0.12	95% BCA Bootstrap UCL	1307
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	1410
		97.5% Chebyshev(Mean, Sd) UCL	1895
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	2848
95% Approximate Gamma UCL (Use when n >= 40)	452.7		
95% Adjusted Gamma UCL (Use when n < 40)	457.4		
Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	1410

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

MANGANESE

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	40
Number of Missing Values	24		

Raw Statistics		Log-transformed Statistics	
Minimum	202	Minimum of Log Data	5.308
Maximum	498	Maximum of Log Data	6.211
Mean	306	Mean of log Data	5.7
Geometric Mean	299	SD of log Data	0.217
Median	301.5		
SD	67.85		
Std. Error of Mean	10.47		
Coefficient of Variation	0.222		
Skewness	0.681		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.907	Shapiro Wilk Test Statistic	0.924
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	323.6	95% H-UCL	324.5
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	350.9
95% Adjusted-CLT UCL (Chen-1995)	324.4	97.5% Chebyshev (MVUE) UCL	370.3
95% Modified-t UCL (Johnson-1978)	323.8	99% Chebyshev (MVUE) UCL	408.6

Gamma Distribution Test		Data Distribution
k star (bias corrected)	20.23	Data appear Gamma Distributed at 5% Significance Level
Theta Star	15.13	
MLE of Mean	306	
MLE of Standard Deviation	68.03	
nu star	1699	
Approximate Chi Square Value (.05)	1605	**Nonparametric Statistics**
Adjusted Level of Significance	0.0443	95% CLT UCL 323.2
Adjusted Chi Square Value	1601	95% Jackknife UCL 323.6
		95% Standard Bootstrap UCL 322.7
Anderson-Darling Test Statistic	0.343	95% Bootstrap-t UCL 323.9
Anderson-Darling 5% Critical Value	0.747	95% Hall's Bootstrap UCL 325.3
Kolmogorov-Smirnov Test Statistic	0.109	95% Percentile Bootstrap UCL 323.5
Kolmogorov-Smirnov 5% Critical Value	0.136	95% BCA Bootstrap UCL 323.5
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 351.6
		97.5% Chebyshev(Mean, Sd) UCL 371.4
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 410.2
95% Approximate Gamma UCL (Use when n >= 40)	324.1	
95% Adjusted Gamma UCL (Use when n < 40)	324.7	

Potential UCL to Use		Use 95% Approximate Gamma UCL	324.1

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

MERCURY			
General Statistics			
Number of Valid Data	60	Number of Detected Data	22
Number of Distinct Detected Data	15	Number of Non-Detect Data	38
Number of Missing Values	2	Percent Non-Detects	63.33%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0038	Minimum Detected	-5.573
Maximum Detected	0.18	Maximum Detected	-1.715
Mean of Detected	0.0239	Mean of Detected	-4.273
SD of Detected	0.0369	SD of Detected	0.976
Minimum Non-Detect	0.0029	Minimum Non-Detect	-5.843
Maximum Non-Detect	0.021	Maximum Non-Detect	-3.863
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	55
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	5
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	91.67%
UCL Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.496	Shapiro Wilk Test Statistic	0.92
5% Shapiro Wilk Critical Value	0.911	5% Shapiro Wilk Critical Value	0.911
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0118	Mean	-5.21
SD	0.0242	SD	1.155
95% DL/2 (t) UCL	0.017	95% H-Stat (DL/2) UCL	0.0158
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-5.715
		SD in Log Scale	1.489
		Mean in Original Scale	0.0103
		SD in Original Scale	0.0245
		95% t UCL	0.0156
		95% Percentile Bootstrap UCL	0.0164
		95% BCA Bootstrap UCL	0.0193
		95% H-UCL	0.0185
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.946	Data appear Lognormal at 5% Significance Level	
Theta Star	0.0253		
nu star	41.63		
A-D Test Statistic	1.138	**Nonparametric Statistics**	
5% A-D Critical Value	0.769	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.769	Mean	0.0118
5% K-S Critical Value	0.19	SD	0.0239
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00318
		95% KM (t) UCL	0.0171
Assuming Gamma Distribution		95% KM (z) UCL	0.0171
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.017

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Minimum	0.000001	95% KM (bootstrap t) UCL	0.0242
Maximum	0.18	95% KM (BCA) UCL	0.0181
Mean	0.00989	95% KM (Percentile Bootstrap) UCL	0.0177
Median	0.000001	95% KM (Chebyshev) UCL	0.0257
SD	0.0251	97.5% KM (Chebyshev) UCL	0.0317
k star	0.152	99% KM (Chebyshev) UCL	0.0435
Theta star	0.0652		
Nu star	18.2	Potential UCLs to Use	
AppChi2	9.535	95% KM (t) UCL	0.0171
95% Gamma Approximate UCL (Use when n >= 40)	0.0189	95% KM (% Bootstrap) UCL	0.0177
95% Adjusted Gamma UCL (Use when n < 40)	0.0192		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

SELENIUM

General Statistics

Number of Valid Data	42	Number of Detected Data	31
Number of Distinct Detected Data	27	Number of Non-Detect Data	11
Number of Missing Values	24	Percent Non-Detects	26.19%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.22	Minimum Detected	-1.514
Maximum Detected	24	Maximum Detected	3.178
Mean of Detected	3.33	Mean of Detected	-0.0806
SD of Detected	6.155	SD of Detected	1.417
Minimum Non-Detect	0.19	Minimum Non-Detect	-1.661
Maximum Non-Detect	0.39	Maximum Non-Detect	-0.942

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	18
Number treated as Detected	24
Single DL Non-Detect Percentage	42.86%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.548	Shapiro Wilk Test Statistic	0.711
5% Shapiro Wilk Critical Value	0.929	5% Shapiro Wilk Critical Value	0.929
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.487	Mean	-0.642
SD	5.456	SD	1.549
95% DL/2 (t) UCL	3.904	95% H-Stat (DL/2) UCL	3.634
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-0.837
		SD in Log Scale	1.804
		Mean in Original Scale	2.474
		SD in Original Scale	5.462
		95% t UCL	3.893
		95% Percentile Bootstrap UCL	3.937
		95% BCA Bootstrap UCL	4.306
		95% H-UCL	5.711

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.469	Data do not follow a Discernable Distribution (0.05)
Theta Star	7.098	
nu star	29.08	
A-D Test Statistic	5.545	
nu star	0.811	
K-S Test Statistic	0.811	
5% K-S Critical Value	0.167	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	2.517
Maximum	24	SD	5.378
Mean	2.458	SE of Mean	0.844
Median	0.46	95% KM (t) UCL	3.937
SD	5.47	95% KM (z) UCL	3.905
k star	0.17	95% KM (jackknife) UCL	3.92
Theta star	14.49	95% KM (bootstrap t) UCL	4.497
Nu star	14.24	95% KM (BCA) UCL	4.014
AppChi2	6.738	95% KM (Percentile Bootstrap) UCL	4.01
95% Gamma Approximate UCL (Use when n >= 40)	5.195	95% KM (Chebyshev) UCL	6.194
		97.5% KM (Chebyshev) UCL	7.785
		99% KM (Chebyshev) UCL	10.91
		Potential UCLs to Use	
		95% KM (Chebyshev) UCL	6.194

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

95% Adjusted Gamma UCL (Use when n < 40)	5.341

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

VANADIUM

General Statistics

Number of Valid Observations	42	Number of Distinct Observations	40
Number of Missing Values	24		

Raw Statistics		Log-transformed Statistics	
Minimum	8.5	Minimum of Log Data	2.14
Maximum	35	Maximum of Log Data	3.555
Mean	18.67	Mean of log Data	2.878
Geometric Mean	17.77	SD of log Data	0.321
Median	17.15		
SD	5.953		
Std. Error of Mean	0.918		
Coefficient of Variation	0.319		
Skewness	0.595		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.913	Shapiro Wilk Test Statistic	0.936
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	20.22	95% H-UCL	20.46
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	22.79
95% Adjusted-CLT UCL (Chen-1995)	20.27	97.5% Chebyshev (MVUE) UCL	24.57
95% Modified-t UCL (Johnson-1978)	20.23	99% Chebyshev (MVUE) UCL	28.07

Gamma Distribution Test		Data Distribution
k star (bias corrected)	9.551	Data appear Gamma Distributed at 5% Significance Level
Theta Star	1.955	
MLE of Mean	18.67	
MLE of Standard Deviation	6.042	
nu star	802.3	
Approximate Chi Square Value (.05)	737.6	**Nonparametric Statistics**
Adjusted Level of Significance	0.0443	95% CLT UCL 20.18
Adjusted Chi Square Value	735.4	95% Jackknife UCL 20.22
		95% Standard Bootstrap UCL 20.15
Anderson-Darling Test Statistic	0.332	95% Bootstrap-t UCL 20.34
Anderson-Darling 5% Critical Value	0.748	95% Hall's Bootstrap UCL 20.31
Kolmogorov-Smirnov Test Statistic	0.0973	95% Percentile Bootstrap UCL 20.2
Kolmogorov-Smirnov 5% Critical Value	0.136	95% BCA Bootstrap UCL 20.17
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 22.68
		97.5% Chebyshev(Mean, Sd) UCL 24.41
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 27.81
95% Approximate Gamma UCL (Use when n >= 40)	20.31	
95% Adjusted Gamma UCL (Use when n < 40)	20.37	

Potential UCL to Use	Use 95% Approximate Gamma UCL 20.31

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

ZINC

General Statistics

Number of Valid Observations	66	Number of Distinct Observations	64

Raw Statistics		Log-transformed Statistics	
Minimum	31.7	Minimum of Log Data	3.456
Maximum	299	Maximum of Log Data	5.7
Mean	70.33	Mean of log Data	4.117
Geometric Mean	61.36	SD of log Data	0.475
Median	55.45		
SD	47.69		
Std. Error of Mean	5.871		
Coefficient of Variation	0.678		
Skewness	2.904		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.249	Lilliefors Test Statistic	0.139
Lilliefors Critical Value	0.109	Lilliefors Critical Value	0.109
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	80.13	95% H-UCL	76.61
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	86.88
95% Adjusted-CLT UCL (Chen-1995)	82.23	97.5% Chebyshev (MVUE) UCL	94.81
95% Modified-t UCL (Johnson-1978)	80.48	99% Chebyshev (MVUE) UCL	110.4

Gamma Distribution Test		Data Distribution
k star (bias corrected)	3.659	Data do not follow a Discernable Distribution (0.05)
Theta Star	19.22	
MLE of Mean	70.33	
MLE of Standard Deviation	36.77	
nu star	483	
Approximate Chi Square Value (.05)	433	**Nonparametric Statistics**
Adjusted Level of Significance	0.0464	95% CLT UCL 79.99
Adjusted Chi Square Value	431.9	95% Jackknife UCL 80.13
		95% Standard Bootstrap UCL 79.83
Anderson-Darling Test Statistic	3.411	95% Bootstrap-t UCL 84.06
Anderson-Darling 5% Critical Value	0.755	95% Hall's Bootstrap UCL 83.72
Kolmogorov-Smirnov Test Statistic	0.183	95% Percentile Bootstrap UCL 80.49
Kolmogorov-Smirnov 5% Critical Value	0.11	95% BCA Bootstrap UCL 81.67
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 95.92
		97.5% Chebyshev(Mean, Sd) UCL 107
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 128.7
95% Approximate Gamma UCL (Use when n >= 40)	78.45	
95% Adjusted Gamma UCL (Use when n < 40)	78.64	

Potential UCL to Use	
Use 95% Student's-t UCL	80.13
or 95% Modified-t UCL	80.48

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

2,4,6-TRINITROTOLUENE

General Statistics

Number of Valid Data	69	Number of Detected Data	16
Number of Distinct Detected Data	15	Number of Non-Detect Data	53
Number of Missing Values	29	Percent Non-Detects	76.81%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.026	Minimum Detected	-3.65
Maximum Detected	270	Maximum Detected	5.598
Mean of Detected	17.4	Mean of Detected	-1.206
SD of Detected	67.37	SD of Detected	2.361
Minimum Non-Detect	0.018	Minimum Non-Detect	-4.017
Maximum Non-Detect	0.56	Maximum Non-Detect	-0.58

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	65
Number treated as Detected	4
Single DL Non-Detect Percentage	94.20%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.281	Shapiro Wilk Test Statistic	0.854
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	4.134	Mean	-2.633
SD	32.48	SD	1.969
95% DL/2 (t) UCL	10.65	95% H-Stat (DL/2) UCL	0.992
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-5.712
		SD in Log Scale	3.53
		Mean in Original Scale	4.045
		SD in Original Scale	32.49
		95% t UCL	10.57
		95% Percentile Bootstrap UCL	11.85
		95% BCA Bootstrap UCL	19.58
		95% H-UCL	10.99

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.191	Data do not follow a Discernable Distribution (0.05)
Theta Star	91.21	
nu star	6.106	
A-D Test Statistic	3.087	**Nonparametric Statistics**
5% A-D Critical Value	0.885	Kaplan-Meier (KM) Method
K-S Test Statistic	0.885	Mean 4.071
5% K-S Critical Value	0.238	SD 32.25
Data not Gamma Distributed at 5% Significance Level		SE of Mean 4.01
		95% KM (t) UCL 10.76
Assuming Gamma Distribution		95% KM (z) UCL 10.67
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL 10.59
Minimum	0.000001	95% KM (bootstrap t) UCL 472
Maximum	270	95% KM (BCA) UCL 11.93

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Mean	4.392	95% KM (Percentile Bootstrap) UCL	11.88
Median	0.000001	95% KM (Chebyshev) UCL	21.55
SD	32.52	97.5% KM (Chebyshev) UCL	29.11
k star	0.0776	99% KM (Chebyshev) UCL	43.97
Theta star	56.59		
Nu star	10.71	Potential UCLs to Use	
AppChi2	4.391	97.5% KM (Chebyshev) UCL	29.11
95% Gamma Approximate UCL (Use when n >= 40)	10.71		
95% Adjusted Gamma UCL (Use when n < 40)	10.93		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Benzoic Acid

General Statistics

Number of Valid Data	24	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	22
Number of Missing Values	69	Percent Non-Detects	91.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.27	Minimum Detected	-1.309
Maximum Detected	2.4	Maximum Detected	0.875
Mean of Detected	1.335	Mean of Detected	-0.217
SD of Detected	1.506	SD of Detected	1.545
Minimum Non-Detect	0.18	Minimum Non-Detect	-1.715
Maximum Non-Detect	1.9	Maximum Non-Detect	0.642

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	23
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	1
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.83%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.27	Mean	-1.98
SD	0.514	SD	0.904
95% DL/2 (t) UCL	0.45	95% H-Stat (DL/2) UCL	0.328
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% t UCL	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
		95% H-UCL	N/A

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)
Theta Star	N/A	

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

nu star	N/A		
A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	0.359
5% K-S Critical Value	N/A	SD	0.426
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.123
		95% KM (t) UCL	0.569
Assuming Gamma Distribution		95% KM (z) UCL	0.561
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.763
Minimum	N/A	95% KM (bootstrap t) UCL	N/A
Maximum	N/A	95% KM (BCA) UCL	2.4
Mean	N/A	95% KM (Percentile Bootstrap) UCL	2.4
Median	N/A	95% KM (Chebyshev) UCL	0.894
SD	N/A	97.5% KM (Chebyshev) UCL	1.126
k star	N/A	99% KM (Chebyshev) UCL	1.581
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	97.5% KM (Chebyshev) UCL	1.126
95% Gamma Approximate UCL (Use when n >= 40)	N/A		
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

bis(2-ETHYLHEXYL) PHTHALATE

General Statistics

Number of Valid Data	60	Number of Detected Data	4
Number of Distinct Detected Data	3	Number of Non-Detect Data	56
Number of Missing Values	33	Percent Non-Detects	93.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.049	Minimum Detected	-3.016
Maximum Detected	0.33	Maximum Detected	-1.109
Mean of Detected	0.16	Mean of Detected	-2.051
SD of Detected	0.12	SD of Detected	0.779
Minimum Non-Detect	0.0125	Minimum Non-Detect	-4.382
Maximum Non-Detect	0.78	Maximum Non-Detect	-0.248

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	60
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

Warning: There are only 3 Distinct Detected Values in this data set

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.

Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.

However, results obtained using 4 to 9 distinct values may not be reliable.

It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.867	Shapiro Wilk Test Statistic	0.944
5% Shapiro Wilk Critical Value	0.748	5% Shapiro Wilk Critical Value	0.748
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0401	Mean	-4.114
SD	0.0803	SD	1.193
95% DL/2 (t) UCL	0.0575	95% H-Stat (DL/2) UCL	0.0507
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-6.646
		SD in Log Scale	1.997
		Mean in Original Scale	0.0131
		SD in Original Scale	0.048
		95% t UCL	0.0235
		95% Percentile Bootstrap UCL	0.0243
		95% BCA Bootstrap UCL	0.0323
		95% H-UCL	0.0262

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.781	Data appear Normal at 5% Significance Level
Theta Star	0.205	
nu star	6.247	
A-D Test Statistic	0.344	Nonparametric Statistics

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

5% A-D Critical Value	0.66	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.66	Mean	0.0566
5% K-S Critical Value	0.397	SD	0.0391
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.00593
		95% KM (t) UCL	0.0665
Assuming Gamma Distribution		95% KM (z) UCL	0.0664
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.108
Minimum	0.000001	95% KM (bootstrap t) UCL	0.0695
Maximum	0.33	95% KM (BCA) UCL	0.147
Mean	0.0107	95% KM (Percentile Bootstrap) UCL	0.144
Median	0.000001	95% KM (Chebyshev) UCL	0.0825
SD	0.0484	97.5% KM (Chebyshev) UCL	0.0937
k star	0.102	99% KM (Chebyshev) UCL	0.116
Theta star	0.104		
Nu star	12.29	Potential UCLs to Use	
AppChi2	5.421	95% KM (t) UCL	0.0665
95% Gamma Approximate UCL (Use when n >= 40)	0.0242	95% KM (Percentile Bootstrap) UCL	0.144
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

DI-n-BUTYL PHTHALATE

General Statistics

Number of Valid Data	60	Number of Detected Data	35
Number of Distinct Detected Data	34	Number of Non-Detect Data	25
Number of Missing Values	34	Percent Non-Detects	41.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0085	Minimum Detected	-4.768
Maximum Detected	61	Maximum Detected	4.111
Mean of Detected	3.158	Mean of Detected	-1.049
SD of Detected	10.44	SD of Detected	2.167
Minimum Non-Detect	0.00789	Minimum Non-Detect	-4.842
Maximum Non-Detect	0.66	Maximum Non-Detect	-0.416

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	47
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	13
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	78.33%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.322	Shapiro Wilk Test Statistic	0.978
5% Shapiro Wilk Critical Value	0.934	5% Shapiro Wilk Critical Value	0.934
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.861	Mean	-2.343
SD	8.077	SD	2.421
95% DL/2 (t) UCL	3.603	95% H-Stat (DL/2) UCL	8.002
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-2.926
		SD in Log Scale	2.889
		Mean in Original Scale	1.846
		SD in Original Scale	8.08
		95% t UCL	3.589
		95% Percentile Bootstrap UCL	3.751
		95% BCA Bootstrap UCL	5.342
		95% H-UCL	27.94

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.304	Data appear Lognormal at 5% Significance Level	
Theta Star	10.39		
nu star	21.28		
A-D Test Statistic	1.954	Nonparametric Statistics	
5% A-D Critical Value	0.854	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.854	Mean	1.851
5% K-S Critical Value	0.161	SD	8.012
Data not Gamma Distributed at 5% Significance Level		SE of Mean	1.049
		95% KM (t) UCL	3.604
Assuming Gamma Distribution		95% KM (z) UCL	3.577
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	3.594
Minimum	0.000001	95% KM (bootstrap t) UCL	8.667
Maximum	61	95% KM (BCA) UCL	3.845

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Mean	1.842	95% KM (Percentile Bootstrap) UCL	3.901
Median	0.0254	95% KM (Chebyshev) UCL	6.425
SD	8.081	97.5% KM (Chebyshev) UCL	8.404
k star	0.12	99% KM (Chebyshev) UCL	12.29
Theta star	15.38		
Nu star	14.37	Potential UCLs to Use	
AppChi2	6.826	97.5% KM (Chebyshev) UCL	8.404
95% Gamma Approximate UCL (Use when n >= 40)	3.879		
95% Adjusted Gamma UCL (Use when n < 40)	3.953		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

NITROGUANIDINE

General Statistics

Number of Valid Data	37	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	28
Number of Missing Values	50	Percent Non-Detects	75.68%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.032	Minimum Detected	-3.442
Maximum Detected	3.7	Maximum Detected	1.308
Mean of Detected	0.785	Mean of Detected	-1.055
SD of Detected	1.145	SD of Detected	1.42
Minimum Non-Detect	0.02	Minimum Non-Detect	-3.912
Maximum Non-Detect	0.02	Maximum Non-Detect	-3.912

Warning: There are only 9 Detected Values in this data

Note: It should be noted that even though bootstrap may be performed on this data set

the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.654	Shapiro Wilk Test Statistic	0.979
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.198	Mean	-3.742
SD	0.636	SD	1.683
95% DL/2 (t) UCL	0.375	95% H-Stat (DL/2) UCL	0.245
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-5.338
		SD in Log Scale	3.269
		Mean in Original Scale	0.196
		SD in Original Scale	0.637
		95% t UCL	0.373
		95% Percentile Bootstrap UCL	0.401
		95% BCA Bootstrap UCL	0.503
		95% H-UCL	22.17

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.566	Data appear Gamma Distributed at 5% Significance Level
Theta Star	1.386	
nu star	10.19	
A-D Test Statistic	0.337	Nonparametric Statistics
5% A-D Critical Value	0.752	Kaplan-Meier (KM) Method
K-S Test Statistic	0.752	Mean 0.215
5% K-S Critical Value	0.29	SD 0.623
Data appear Gamma Distributed at 5% Significance Level		SE of Mean 0.109
		95% KM (t) UCL 0.398
Assuming Gamma Distribution		95% KM (z) UCL 0.394
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL 0.363

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Minimum	0.000001	95% KM (bootstrap t) UCL	0.649
Maximum	3.7	95% KM (BCA) UCL	0.526
Mean	0.191	95% KM (Percentile Bootstrap) UCL	0.459
Median	0.000001	95% KM (Chebyshev) UCL	0.689
SD	0.639	97.5% KM (Chebyshev) UCL	0.893
k star	0.101	99% KM (Chebyshev) UCL	1.296
Theta star	1.882		
Nu star	7.505	**Potential UCLs to Use**	
AppChi2	2.452	95% KM (t) UCL	0.398
95% Gamma Approximate UCL (Use when n >= 40)	0.584		
95% Adjusted Gamma UCL (Use when n < 40)	0.615		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

PERCHLORATE

General Statistics

Number of Valid Data	43	Number of Detected Data	37
Number of Distinct Detected Data	36	Number of Non-Detect Data	6
Number of Missing Values	55	Percent Non-Detects	13.95%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0003	Minimum Detected	-8.112
Maximum Detected	160	Maximum Detected	5.075
Mean of Detected	4.522	Mean of Detected	-3.482
SD of Detected	26.27	SD of Detected	2.894
Minimum Non-Detect	0.00025	Minimum Non-Detect	-8.294
Maximum Non-Detect	0.015	Maximum Non-Detect	-4.2

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	22
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	48.84%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.175	Shapiro Wilk Test Statistic	0.956
5% Shapiro Wilk Critical Value	0.936	5% Shapiro Wilk Critical Value	0.936
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	3.891	Mean	-4.056
SD	24.38	SD	3.128
95% DL/2 (t) UCL	10.14	95% H-Stat (DL/2) UCL	30.53
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-4.245
		SD in Log Scale	3.355
		Mean in Original Scale	3.891
		SD in Original Scale	24.38
		95% t UCL	10.14
		95% Percentile Bootstrap UCL	11.3
		95% BCA Bootstrap UCL	15.11
		95% H-UCL	76.35

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.159	Data appear Lognormal at 5% Significance Level	
Theta Star	28.43		
nu star	11.77		
A-D Test Statistic	5.52	Nonparametric Statistics	
5% A-D Critical Value	0.927	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.927	Mean	3.891
5% K-S Critical Value	0.162	SD	24.09
Data not Gamma Distributed at 5% Significance Level		SE of Mean	3.724
		95% KM (t) UCL	10.16
Assuming Gamma Distribution		95% KM (z) UCL	10.02
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	10.14
Minimum	0.000001	95% KM (bootstrap t) UCL	369.2

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Maximum	160	95% KM (BCA) UCL	11.36
Mean	3.891	95% KM (Percentile Bootstrap) UCL	11.33
Median	0.015	95% KM (Chebyshev) UCL	20.13
SD	24.38	97.5% KM (Chebyshev) UCL	27.15
k star	0.132	99% KM (Chebyshev) UCL	40.95
Theta star	29.43		
Nu star	11.37	Potential UCLs to Use	
AppChi2	4.816	99% KM (Chebyshev) UCL	40.95
95% Gamma Approximate UCL (Use when n >= 40)	9.187		
95% Adjusted Gamma UCL (Use when n < 40)	9.479		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

TETRYL

General Statistics

Number of Valid Data	69	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	66
Number of Missing Values	29	Percent Non-Detects	95.65%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.1	Minimum Detected	0.0953
Maximum Detected	5.1	Maximum Detected	1.629
Mean of Detected	2.6	Mean of Detected	0.732
SD of Detected	2.179	SD of Detected	0.8
Minimum Non-Detect	0.0094	Minimum Non-Detect	-4.667
Maximum Non-Detect	1.1	Maximum Non-Detect	0.0953

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	66
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	3
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.65%

Warning: There are only 3 Distinct Detected Values in this data set

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.

Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.

However, results obtained using 4 to 9 distinct values may not be reliable.

It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.842	Shapiro Wilk Test Statistic	0.92
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.328	Mean	-3.051
SD	0.667	SD	2.35
95% DL/2 (t) UCL	0.462	95% H-Stat (DL/2) UCL	1.777
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-6.335
		SD in Log Scale	2.935
		Mean in Original Scale	0.126
		SD in Original Scale	0.65
		95% t UCL	0.257
		95% Percentile Bootstrap UCL	0.277
		95% BCA Bootstrap UCL	0.377
		95% H-UCL	0.461

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level
Theta Star	N/A	
nu star	N/A	

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	1.165
5% K-S Critical Value	N/A	SD	0.481
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.0709
		95% KM (t) UCL	1.283
Assuming Gamma Distribution		95% KM (z) UCL	1.282
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.492
Minimum	N/A	95% KM (bootstrap t) UCL	1.474
Maximum	N/A	95% KM (BCA) UCL	5.1
Mean	N/A	95% KM (Percentile Bootstrap) UCL	N/A
Median	N/A	95% KM (Chebyshev) UCL	1.474
SD	N/A	97.5% KM (Chebyshev) UCL	1.608
k star	N/A	99% KM (Chebyshev) UCL	1.871
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	95% KM (t) UCL	1.283
95% Gamma Approximate UCL (Use when n >= 40)	N/A	95% KM (Percentile Bootstrap) UCL	N/A
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

2,4-DINITROTOLUENE via 8270

General Statistics

Number of Valid Data	60	Number of Detected Data	21
Number of Distinct Detected Data	21	Number of Non-Detect Data	39
Number of Missing Values	7	Percent Non-Detects	65.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.122	Minimum Detected	-2.104
Maximum Detected	110	Maximum Detected	4.7
Mean of Detected	8.311	Mean of Detected	0.189
SD of Detected	24.06	SD of Detected	1.799
Minimum Non-Detect	0.046	Minimum Non-Detect	-3.079
Maximum Non-Detect	0.69	Maximum Non-Detect	-0.371

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	48
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	12
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	80.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.371	Shapiro Wilk Test Statistic	0.918
5% Shapiro Wilk Critical Value	0.908	5% Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.937	Mean	-2.215
SD	14.56	SD	2.12
95% DL/2 (t) UCL	6.078	95% H-Stat (DL/2) UCL	3.198
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.393
		SD in Log Scale	3.066
		Mean in Original Scale	2.916
		SD in Original Scale	14.57
		95% t UCL	6.058
		95% Percentile Bootstrap UCL	6.346
		95% BCA Bootstrap UCL	9.584
		95% H-UCL	37.13

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.331	Data appear Lognormal at 5% Significance Level	
Theta Star	25.13		
nu star	13.89		
A-D Test Statistic	2.118	Nonparametric Statistics	
5% A-D Critical Value	0.836	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.836	Mean	2.989
5% K-S Critical Value	0.204	SD	14.43
Data not Gamma Distributed at 5% Significance Level		SE of Mean	1.909
		95% KM (t) UCL	6.179
Assuming Gamma Distribution		95% KM (z) UCL	6.129
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	6.111
Minimum	0.000001	95% KM (bootstrap t) UCL	19.73

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Maximum	110	95% KM (BCA) UCL	6.758
Mean	2.909	95% KM (Percentile Bootstrap) UCL	6.658
Median	0.000001	95% KM (Chebyshev) UCL	11.31
SD	14.57	97.5% KM (Chebyshev) UCL	14.91
k star	0.0901	99% KM (Chebyshev) UCL	21.98
Theta star	32.27		
Nu star	10.82	Potential UCLs to Use	
AppChi2	4.459	95% KM (Chebyshev) UCL	11.31
95% Gamma Approximate UCL (Use when n >= 40)	7.057		
95% Adjusted Gamma UCL (Use when n < 40)	7.22		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

1,3-DINITROBENZENE

General Statistics

Number of Valid Data	69	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	60
		Percent Non-Detects	86.96%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0055	Minimum Detected	-5.203
Maximum Detected	1.4	Maximum Detected	0.336
Mean of Detected	0.321	Mean of Detected	-2.34
SD of Detected	0.462	SD of Detected	1.878
Minimum Non-Detect	0.0039	Minimum Non-Detect	-5.547
Maximum Non-Detect	0.62	Maximum Non-Detect	-0.478

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	68
Number treated as Detected	1
Single DL Non-Detect Percentage	98.55%

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.732	Shapiro Wilk Test Statistic	0.965
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.152	Mean	-3.805
SD	0.219	SD	2.432
95% DL/2 (t) UCL	0.196	95% H-Stat (DL/2) UCL	1.042
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-7.451
		SD in Log Scale	3.018
		Mean in Original Scale	0.0436
		SD in Original Scale	0.192
		95% t UCL	0.0822
		95% Percentile Bootstrap UCL	0.0826
		95% BCA Bootstrap UCL	0.109
		95% H-UCL	0.212

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.423	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	0.759		
nu star	7.619		
A-D Test Statistic	0.283	Nonparametric Statistics	
5% A-D Critical Value	0.769	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.769	Mean	0.0547

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

5% K-S Critical Value	0.294	SD	0.196
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0264
		95% KM (t) UCL	0.0988
Assuming Gamma Distribution		95% KM (z) UCL	0.0982
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0926
Minimum	0.000001	95% KM (bootstrap t) UCL	0.142
Maximum	1.4	95% KM (BCA) UCL	0.136
Mean	0.0423	95% KM (Percentile Bootstrap) UCL	0.113
Median	0.000001	95% KM (Chebyshev) UCL	0.17
SD	0.192	97.5% KM (Chebyshev) UCL	0.22
k star	0.098	99% KM (Chebyshev) UCL	0.318
Theta star	0.431		
Nu star	13.52	Potential UCLs to Use	
AppChi2	6.247	95% KM (t) UCL	0.0988
95% Gamma Approximate UCL (Use when n >= 40)	0.0915		
95% Adjusted Gamma UCL (Use when n < 40)	0.0931		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

2,4-DINITROTOLUENE via 8330

General Statistics

Number of Valid Data	69	Number of Detected Data	36
Number of Distinct Detected Data	34	Number of Non-Detect Data	33
		Percent Non-Detects	47.83%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0084	Minimum Detected	-4.78
Maximum Detected	780	Maximum Detected	6.659
Mean of Detected	25.93	Mean of Detected	-0.495
SD of Detected	129.7	SD of Detected	2.474
Minimum Non-Detect	0.005	Minimum Non-Detect	-5.298
Maximum Non-Detect	0.59	Maximum Non-Detect	-0.528

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	51
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	18
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	73.91%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.209	Shapiro Wilk Test Statistic	0.955
5% Shapiro Wilk Critical Value	0.935	5% Shapiro Wilk Critical Value	0.935
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	13.6	Mean	-1.732
SD	93.95	SD	2.655
95% DL/2 (t) UCL	32.46	95% H-Stat (DL/2) UCL	16.41
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-2.712
		SD in Log Scale	3.176
		Mean in Original Scale	13.54
		SD in Original Scale	93.96
		95% t UCL	32.4
		95% Percentile Bootstrap UCL	35.78
		95% BCA Bootstrap UCL	48.77
		95% H-UCL	45.95

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.199	Data appear Lognormal at 5% Significance Level	
Theta Star	130.4		
nu star	14.32		
A-D Test Statistic	4.859	Nonparametric Statistics	
5% A-D Critical Value	0.902	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.902	Mean	13.55
5% K-S Critical Value	0.163	SD	93.28
Data not Gamma Distributed at 5% Significance Level		SE of Mean	11.39
		95% KM (t) UCL	32.54
Assuming Gamma Distribution		95% KM (z) UCL	32.28
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	32.41
Minimum	0.000001	95% KM (bootstrap t) UCL	270.2
Maximum	780	95% KM (BCA) UCL	35.86

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Mean	13.53	95% KM (Percentile Bootstrap) UCL	35.94
Median	0.016	95% KM (Chebyshev) UCL	63.19
SD	93.96	97.5% KM (Chebyshev) UCL	84.67
k star	0.0931	99% KM (Chebyshev) UCL	126.9
Theta star	145.3		
Nu star	12.84	Potential UCLs to Use	
AppChi2	5.788	97.5% KM (Chebyshev) UCL	84.67
95% Gamma Approximate UCL (Use when n >= 40)	30.02		
95% Adjusted Gamma UCL (Use when n < 40)	30.55		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

2,6-DINITROTOLUENE			
General Statistics			
Number of Valid Data	69	Number of Detected Data	14
Number of Distinct Detected Data	14	Number of Non-Detect Data	55
		Percent Non-Detects	79.71%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.016	Minimum Detected	-4.135
Maximum Detected	43	Maximum Detected	3.761
Mean of Detected	3.308	Mean of Detected	-1.813
SD of Detected	11.43	SD of Detected	2.06
Minimum Non-Detect	0.0069	Minimum Non-Detect	-4.976
Maximum Non-Detect	0.55	Maximum Non-Detect	-0.598
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	65
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	94.20%
UCL Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.319	Shapiro Wilk Test Statistic	0.843
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.767	Mean	-3.184
SD	5.163	SD	2.163
95% DL/2 (t) UCL	1.803	95% H-Stat (DL/2) UCL	0.948
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-6.07
		SD in Log Scale	3.055
		Mean in Original Scale	0.676
		SD in Original Scale	5.173
		95% t UCL	1.715
		95% Percentile Bootstrap UCL	1.915
		95% BCA Bootstrap UCL	3.145
		95% H-UCL	0.976
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.235	Data do not follow a Discernable Distribution (0.05)	
Theta Star	14.1		
nu star	6.567		
A-D Test Statistic	2.482	**Nonparametric Statistics**	
5% A-D Critical Value	0.858	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.858	Mean	0.69
5% K-S Critical Value	0.251	SD	5.134
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.641
		95% KM (t) UCL	1.759
Assuming Gamma Distribution		95% KM (z) UCL	1.745
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.717
Minimum	0.000001	95% KM (bootstrap t) UCL	30.83

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

Maximum	43	95% KM (BCA) UCL	1.959
Mean	0.729	95% KM (Percentile Bootstrap) UCL	1.944
Median	0.000001	95% KM (Chebyshev) UCL	3.486
SD	5.177	97.5% KM (Chebyshev) UCL	4.695
k star	0.0848	99% KM (Chebyshev) UCL	7.072
Theta star	8.593		
Nu star	11.7	Potential UCLs to Use	
AppChi2	5.03	97.5% KM (Chebyshev) UCL	4.695
95% Gamma Approximate UCL (Use when n >= 40)	1.695		
95% Adjusted Gamma UCL (Use when n < 40)	1.727		

Attachment E1-3
ProUCL Output for 0-0.5 feet bgs
YPG-35c

NITROBENZENE			
General Statistics			
Number of Valid Data	69	Number of Detected Data	1
Number of Distinct Detected Data	1	Number of Non-Detect Data	68
		Percent Non-Detects	98.55%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable NITROBENZENE was not processed!

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

ANTIMONY

General Statistics

Number of Valid Data	81	Number of Detected Data	18
Number of Distinct Detected Data	15	Number of Non-Detect Data	63
		Percent Non-Detects	77.78%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.15	Minimum Detected	-1.897
Maximum Detected	3.3	Maximum Detected	1.194
Mean of Detected	0.93	Mean of Detected	-0.389
SD of Detected	0.821	SD of Detected	0.812
Minimum Non-Detect	0.12	Minimum Non-Detect	-2.12
Maximum Non-Detect	2.3	Maximum Non-Detect	0.833

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	79
Number treated as Detected	2
Single DL Non-Detect Percentage	97.53%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.795	Shapiro Wilk Test Statistic	0.954
5% Shapiro Wilk Critical Value	0.897	5% Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.365	Mean	-1.822
SD	0.56	SD	1.199
95% DL/2 (t) UCL	0.468	95% H-Stat (DL/2) UCL	0.46
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-2.441
		SD in Log Scale	1.477
		Mean in Original Scale	0.264
		SD in Original Scale	0.524
		95% t UCL	0.361
		95% Percentile Bootstrap UCL	0.363
		95% BCA Bootstrap UCL	0.392
		95% H-UCL	0.407

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.477	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	0.63		
nu star	53.16		
A-D Test Statistic	0.67	Nonparametric Statistics	
5% A-D Critical Value	0.755	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.755	Mean	0.335
5% K-S Critical Value	0.207	SD	0.501
Data follow Appr. Gamma Distribution at 5% Significance Level		SE of Mean	0.0583
		95% KM (t) UCL	0.432
Assuming Gamma Distribution		95% KM (z) UCL	0.431
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.418
Minimum	0.000001	95% KM (bootstrap t) UCL	0.466
Maximum	3.3	95% KM (BCA) UCL	0.596
Mean	0.207	95% KM (Percentile Bootstrap) UCL	0.547
Median	0.000001	95% KM (Chebyshev) UCL	0.589
SD	0.543	97.5% KM (Chebyshev) UCL	0.699
k star	0.0939	99% KM (Chebyshev) UCL	0.915
Theta star	2.2		
Nu star	15.22	Potential UCLs to Use	
AppChi2	7.414	95% KM (t) UCL	0.432
95% Gamma Approximate UCL (Use when n >= 40)	0.424		
95% Adjusted Gamma UCL (Use when n < 40)	0.43		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

ARSENIC

General Statistics

Number of Valid Observations	81	Number of Distinct Observations	69

Raw Statistics		Log-transformed Statistics	
Minimum	1.8	Minimum of Log Data	0.588
Maximum	8.6	Maximum of Log Data	2.152
Mean	4.279	Mean of log Data	1.405
Geometric Mean	4.074	SD of log Data	0.316
Median	4.17		
SD	1.372		
Std. Error of Mean	0.152		
Coefficient of Variation	0.321		
Skewness	0.75		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.0866	Lilliefors Test Statistic	0.0838
Lilliefors Critical Value	0.0984	Lilliefors Critical Value	0.0984
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	4.533	95% H-UCL	4.554
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	4.948
95% Adjusted-CLT UCL (Chen-1995)	4.544	97.5% Chebyshev (MVUE) UCL	5.237
95% Modified-t UCL (Johnson-1978)	4.535	99% Chebyshev (MVUE) UCL	5.805

Gamma Distribution Test		Data Distribution
k star (bias corrected)	9.953	Data appear Normal at 5% Significance Level
Theta Star	0.43	
MLE of Mean	4.279	
MLE of Standard Deviation	1.356	
nu star	1612	
Approximate Chi Square Value (.05)	1520	**Nonparametric Statistics**
Adjusted Level of Significance	0.047	95% CLT UCL 4.53
Adjusted Chi Square Value	1518	95% Jackknife UCL 4.533
		95% Standard Bootstrap UCL 4.525
Anderson-Darling Test Statistic	0.552	95% Bootstrap-t UCL 4.556
Anderson-Darling 5% Critical Value	0.751	95% Hall's Bootstrap UCL 4.543
Kolmogorov-Smirnov Test Statistic	0.0863	95% Percentile Bootstrap UCL 4.528
Kolmogorov-Smirnov 5% Critical Value	0.0991	95% BCA Bootstrap UCL 4.56
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 4.944
		97.5% Chebyshev(Mean, Sd) UCL 5.231
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 5.796
95% Approximate Gamma UCL (Use when n >= 40)	4.539	
95% Adjusted Gamma UCL (Use when n < 40)	4.544	

Potential UCL to Use	Use 95% Student's-t UCL 4.533

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

BARIUM

General Statistics

Number of Valid Observations	81	Number of Distinct Observations	65

Raw Statistics		Log-transformed Statistics	
Minimum	83.2	Minimum of Log Data	4.421
Maximum	1290	Maximum of Log Data	7.162
Mean	198.2	Mean of log Data	5.157
Geometric Mean	173.7	SD of log Data	0.451
Median	164		
SD	153.6		
Std. Error of Mean	17.06		
Coefficient of Variation	0.775		
Skewness	5.192		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.229	Lilliefors Test Statistic	0.101
Lilliefors Critical Value	0.0984	Lilliefors Critical Value	0.0984
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	226.6	95% H-UCL	210.7
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	235.9
95% Adjusted-CLT UCL (Chen-1995)	236.8	97.5% Chebyshev (MVUE) UCL	254.8
95% Modified-t UCL (Johnson-1978)	228.3	99% Chebyshev (MVUE) UCL	292.1

Gamma Distribution Test		Data Distribution
k star (bias corrected)	3.809	Data do not follow a Discernable Distribution (0.05)
Theta Star	52.04	
MLE of Mean	198.2	
MLE of Standard Deviation	101.6	
nu star	617.1	
Approximate Chi Square Value (.05)	560.5	**Nonparametric Statistics**
Adjusted Level of Significance	0.047	95% CLT UCL 226.3
Adjusted Chi Square Value	559.5	95% Jackknife UCL 226.6
		95% Standard Bootstrap UCL 225.8
Anderson-Darling Test Statistic	3.226	95% Bootstrap-t UCL 251.9
Anderson-Darling 5% Critical Value	0.756	95% Hall's Bootstrap UCL 359.6
Kolmogorov-Smirnov Test Statistic	0.138	95% Percentile Bootstrap UCL 229
Kolmogorov-Smirnov 5% Critical Value	0.0997	95% BCA Bootstrap UCL 238.7
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 272.6
		97.5% Chebyshev(Mean, Sd) UCL 304.8
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 368
95% Approximate Gamma UCL (Use when n >= 40)	218.3	
95% Adjusted Gamma UCL (Use when n < 40)	218.6	

Potential UCL to Use	
Use 95% Student's-t UCL	226.6
or 95% Modified-t UCL	228.3

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

CADMIUM

General Statistics

Number of Valid Data	81	Number of Detected Data	75
Number of Distinct Detected Data	60	Number of Non-Detect Data	6
		Percent Non-Detects	7.41%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.016	Minimum Detected	-4.135
Maximum Detected	20	Maximum Detected	2.996
Mean of Detected	1.067	Mean of Detected	-1.216
SD of Detected	2.907	SD of Detected	1.47
Minimum Non-Detect	0.0098	Minimum Non-Detect	-4.625
Maximum Non-Detect	0.1	Maximum Non-Detect	-2.303

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	23
Number treated as Detected	58
Single DL Non-Detect Percentage	28.40%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Lilliefors Test Statistic	0.359	Lilliefors Test Statistic	0.0883
5% Lilliefors Critical Value	0.102	5% Lilliefors Critical Value	0.102
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.989	Mean	-1.462
SD	2.81	SD	1.689
95% DL/2 (t) UCL	1.509	95% H-Stat (DL/2) UCL	1.695
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.241	Mean in Log Scale	-1.439
SD	3.437	SD in Log Scale	1.634
95% MLE (t) UCL	0.877	Mean in Original Scale	0.989
95% MLE (Tiku) UCL	0.895	SD in Original Scale	2.81
		95% t UCL	1.509
		95% Percentile Bootstrap UCL	1.569
		95% BCA Bootstrap UCL	1.849
		95% H UCL	1.533

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.486	Data appear Lognormal at 5% Significance Level
Theta Star	2.197	
nu star	72.83	
A-D Test Statistic	4.657	
5% A-D Critical Value	0.819	
K-S Test Statistic	0.819	
5% K-S Critical Value	0.109	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.989
Maximum	20	SD	2.792
Mean	0.988	SE of Mean	0.312
Median	0.25	95% KM (t) UCL	1.509
SD	2.81	95% KM (z) UCL	1.503
k star	0.316	95% KM (jackknife) UCL	1.509
Theta star	3.127	95% KM (bootstrap t) UCL	2.356
Nu star	51.16	95% KM (BCA) UCL	1.583
AppChi2	35.73	95% KM (Percentile Bootstrap) UCL	1.57
95% Gamma Approximate UCL (Use when n >= 40)	1.414	95% KM (Chebyshev) UCL	2.351
95% Adjusted Gamma UCL (Use when n < 40)	1.423	97.5% KM (Chebyshev) UCL	2.94
		99% KM (Chebyshev) UCL	4.097
		Potential UCLs to Use	
		95% KM (Chebyshev) UCL	2.351

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

CHROMIUM, TOTAL

General Statistics

Number of Valid Observations	81	Number of Distinct Observations	64

Raw Statistics		Log-transformed Statistics	
Minimum	6.02	Minimum of Log Data	1.795
Maximum	32.7	Maximum of Log Data	3.487
Mean	13.34	Mean of log Data	2.536
Geometric Mean	12.63	SD of log Data	0.326
Median	13		
SD	4.799		
Std. Error of Mean	0.533		
Coefficient of Variation	0.36		
Skewness	1.64		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.133	Lilliefors Test Statistic	0.0756
Lilliefors Critical Value	0.0984	Lilliefors Critical Value	0.0984
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	14.23	95% H-UCL	14.2
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	15.46
95% Adjusted-CLT UCL (Chen-1995)	14.32	97.5% Chebyshev (MVUE) UCL	16.39
95% Modified-t UCL (Johnson-1978)	14.24	99% Chebyshev (MVUE) UCL	18.22

Gamma Distribution Test		Data Distribution
k star (bias corrected)	8.953	Data Follow Appr. Gamma Distribution at 5% Significance Level
Theta Star	1.49	
MLE of Mean	13.34	
MLE of Standard Deviation	4.459	
nu star	1450	
Approximate Chi Square Value (.05)	1363	**Nonparametric Statistics**
Adjusted Level of Significance	0.047	95% CLT UCL 14.22
Adjusted Chi Square Value	1361	95% Jackknife UCL 14.23
		95% Standard Bootstrap UCL 14.22
Anderson-Darling Test Statistic	0.853	95% Bootstrap-t UCL 14.38
Anderson-Darling 5% Critical Value	0.751	95% Hall's Bootstrap UCL 14.48
Kolmogorov-Smirnov Test Statistic	0.088	95% Percentile Bootstrap UCL 14.24
Kolmogorov-Smirnov 5% Critical Value	0.0992	95% BCA Bootstrap UCL 14.29
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 15.67
		97.5% Chebyshev(Mean, Sd) UCL 16.67
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 18.65
95% Approximate Gamma UCL (Use when n >= 40)	14.2	
95% Adjusted Gamma UCL (Use when n < 40)	14.21	

Potential UCL to Use		Use 95% Approximate Gamma UCL	14.2

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

COPPER

General Statistics

Number of Valid Observations	57	Number of Distinct Observations	53
Number of Missing Values	24		

Raw Statistics		Log-transformed Statistics	
Minimum	11.2	Minimum of Log Data	2.416
Maximum	142	Maximum of Log Data	4.956
Mean	33.79	Mean of log Data	3.318
Geometric Mean	27.61	SD of log Data	0.606
Median	25.2		
SD	25.79		
Std. Error of Mean	3.416		
Coefficient of Variation	0.763		
Skewness	2.351		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.195	Lilliefors Test Statistic	0.0853
Lilliefors Critical Value	0.117	Lilliefors Critical Value	0.117
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	39.51	95% H-UCL	38.89
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	45.47
95% Adjusted-CLT UCL (Chen-1995)	40.55	97.5% Chebyshev (MVUE) UCL	50.85
95% Modified-t UCL (Johnson-1978)	39.68	99% Chebyshev (MVUE) UCL	61.41

Gamma Distribution Test		Data Distribution
k star (bias corrected)	2.502	Data appear Lognormal at 5% Significance Level
Theta Star	13.51	
MLE of Mean	33.79	
MLE of Standard Deviation	21.36	
nu star	285.2	
Approximate Chi Square Value (.05)	247.1	**Nonparametric Statistics**
Adjusted Level of Significance	0.0458	95% CLT UCL 39.41
Adjusted Chi Square Value	246.2	95% Jackknife UCL 39.51
		95% Standard Bootstrap UCL 39.41
Anderson-Darling Test Statistic	1.474	95% Bootstrap-t UCL 41.55
Anderson-Darling 5% Critical Value	0.76	95% Hall's Bootstrap UCL 41.38
Kolmogorov-Smirnov Test Statistic	0.127	95% Percentile Bootstrap UCL 39.71
Kolmogorov-Smirnov 5% Critical Value	0.119	95% BCA Bootstrap UCL 40.86
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 48.69
		97.5% Chebyshev(Mean, Sd) UCL 55.13
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 67.79
95% Approximate Gamma UCL (Use when n >= 40)	39.01	
95% Adjusted Gamma UCL (Use when n < 40)	39.15	

Potential UCL to Use		Use 95% H-UCL	38.89

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

LEAD

General Statistics

Number of Valid Observations	81	Number of Distinct Observations	78

Raw Statistics		**Log-transformed Statistics**	
Minimum	3.2	Minimum of Log Data	1.163
Maximum	17000	Maximum of Log Data	9.741
Mean	236.2	Mean of log Data	2.706
Geometric Mean	14.97	SD of log Data	1.203
Median	11.3		
SD	1887		
Std. Error of Mean	209.7		
Coefficient of Variation	7.989		
Skewness	8.985		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Lilliefors Test Statistic	0.48	Lilliefors Test Statistic	0.166
Lilliefors Critical Value	0.0984	Lilliefors Critical Value	0.0984
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	585.1	95% H-UCL	42.84
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	52.82
95% Adjusted-CLT UCL (Chen-1995)	804.7	97.5% Chebyshev (MVUE) UCL	62.51
95% Modified-t UCL (Johnson-1978)	620	99% Chebyshev (MVUE) UCL	81.55

Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	0.255	Data do not follow a Discernable Distribution (0.05)
Theta Star	925.6	
MLE of Mean	236.2	
MLE of Standard Deviation	467.6	
nu star	41.34	
Approximate Chi Square Value (.05)	27.6	**Nonparametric Statistics**
Adjusted Level of Significance	0.047	95% CLT UCL 581.1
Adjusted Chi Square Value	27.4	95% Jackknife UCL 585.1
		95% Standard Bootstrap UCL 584.9
Anderson-Darling Test Statistic	21.29	95% Bootstrap-t UCL 14912
Anderson-Darling 5% Critical Value	0.885	95% Hall's Bootstrap UCL 10091
Kolmogorov-Smirnov Test Statistic	0.42	95% Percentile Bootstrap UCL 654.3
Kolmogorov-Smirnov 5% Critical Value	0.109	95% BCA Bootstrap UCL 1074
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 1150
		97.5% Chebyshev(Mean, Sd) UCL 1546
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 2322
95% Approximate Gamma UCL (Use when n >= 40)	353.7	
95% Adjusted Gamma UCL (Use when n < 40)	356.3	

Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	1150

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

MANGANESE

General Statistics

Number of Valid Observations	57	Number of Distinct Observations	54
Number of Missing Values	24		

Raw Statistics		Log-transformed Statistics	
Minimum	168	Minimum of Log Data	5.124
Maximum	498	Maximum of Log Data	6.211
Mean	285.8	Mean of log Data	5.627
Geometric Mean	277.8	SD of log Data	0.238
Median	283		
SD	70.05		
Std. Error of Mean	9.278		
Coefficient of Variation	0.245		
Skewness	0.763		

nu star

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.123	Lilliefors Test Statistic	0.105
Lilliefors Critical Value	0.117	Lilliefors Critical Value	0.117
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	301.3	95% H-UCL	301.8
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	325.4
95% Adjusted-CLT UCL (Chen-1995)	302	97.5% Chebyshev (MVUE) UCL	342.6
95% Modified-t UCL (Johnson-1978)	301.4	99% Chebyshev (MVUE) UCL	376.3

Gamma Distribution Test		Data Distribution
k star (bias corrected)	16.96	Data appear Gamma Distributed at 5% Significance Level
Theta Star	16.85	
MLE of Mean	285.8	
MLE of Standard Deviation	69.39	
nu star	1933	
Approximate Chi Square Value (.05)	1832	**Nonparametric Statistics**
Adjusted Level of Significance	0.0458	95% CLT UCL 301
Adjusted Chi Square Value	1829	95% Jackknife UCL 301.3
		95% Standard Bootstrap UCL 301
Anderson-Darling Test Statistic	0.52	95% Bootstrap-t UCL 302.7
Anderson-Darling 5% Critical Value	0.749	95% Hall's Bootstrap UCL 302.2
Kolmogorov-Smirnov Test Statistic	0.114	95% Percentile Bootstrap UCL 300.8
Kolmogorov-Smirnov 5% Critical Value	0.118	95% BCA Bootstrap UCL 301.8
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 326.2
		97.5% Chebyshev(Mean, Sd) UCL 343.7
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 378.1
95% Approximate Gamma UCL (Use when n >= 40)	301.5	
95% Adjusted Gamma UCL (Use when n < 40)	301.9	

Potential UCL to Use	Use 95% Approximate Gamma UCL 301.5

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

MERCURY

General Statistics

Number of Valid Data	75	Number of Detected Data	23
Number of Distinct Detected Data	16	Number of Non-Detect Data	52
Number of Missing Values	2	Percent Non-Detects	69.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0038	Minimum Detected	-5.573
Maximum Detected	0.18	Maximum Detected	-1.715
Mean of Detected	0.0233	Mean of Detected	-4.294
SD of Detected	0.0362	SD of Detected	0.958
Minimum Non-Detect	0.0029	Minimum Non-Detect	-5.843
Maximum Non-Detect	0.021	Maximum Non-Detect	-3.863

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	70
Number treated as Detected	5
Single DL Non-Detect Percentage	93.33%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.489	Shapiro Wilk Test Statistic	0.922
5% Shapiro Wilk Critical Value	0.914	5% Shapiro Wilk Critical Value	0.914
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.00984	Mean	-5.417
SD	0.0219	SD	1.127
95% DL/2 (t) UCL	0.0141	95% H-Stat (DL/2) UCL	0.0114
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-6.095
		SD in Log Scale	1.598
		Mean in Original Scale	0.00837
		SD in Original Scale	0.0222
		95% t UCL	0.0126
		95% Percentile Bootstrap UCL	0.0133
		95% BCA Bootstrap UCL	0.0157
		95% H-UCL	0.0139

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.963	Data appear Lognormal at 5% Significance Level
Theta Star	0.0242	
nu star	44.3	
A-D Test Statistic	1.194	
5% A-D Critical Value	0.768	
K-S Test Statistic	0.768	
5% K-S Critical Value	0.186	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.0102
Maximum	0.18	SD	0.0216
Mean	0.00777	SE of Mean	0.00256
Median	0.000001	95% KM (t) UCL	0.0144
SD	0.0227	95% KM (z) UCL	0.0144
k star	0.141	95% KM (jackknife) UCL	0.0143
Theta star	0.0553	95% KM (bootstrap t) UCL	0.0202
Nu star	21.08	95% KM (BCA) UCL	0.015
AppChi2	11.65	95% KM (Percentile Bootstrap) UCL	0.0151
95% Gamma Approximate UCL (Use when n >= 40)	0.0141	95% KM (Chebyshev) UCL	0.0213
95% Adjusted Gamma UCL (Use when n < 40)	0.0142	97.5% KM (Chebyshev) UCL	0.0262
		99% KM (Chebyshev) UCL	0.0357
		Potential UCLs to Use	
		95% KM (t) UCL	0.0144
		95% KM (% Bootstrap) UCL	0.0151

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

NICKEL

General Statistics

Number of Valid Observations	81	Number of Distinct Observations	72

Raw Statistics		Log-transformed Statistics	
Minimum	5.26	Minimum of Log Data	1.66
Maximum	47.3	Maximum of Log Data	3.857
Mean	12.51	Mean of log Data	2.448
Geometric Mean	11.57	SD of log Data	0.374
Median	11.5		
SD	6.048		
Std. Error of Mean	0.672		
Coefficient of Variation	0.484		
Skewness	3.217		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.156	Lilliefors Test Statistic	0.0641
Lilliefors Critical Value	0.0984	Lilliefors Critical Value	0.0984
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	13.63	95% H-UCL	13.36
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	14.71
95% Adjusted-CLT UCL (Chen-1995)	13.87	97.5% Chebyshev (MVUE) UCL	15.72
95% Modified-t UCL (Johnson-1978)	13.67	99% Chebyshev (MVUE) UCL	17.69

Gamma Distribution Test		Data Distribution
k star (bias corrected)	6.323	Data Follow Appr. Gamma Distribution at 5% Significance Level
Theta Star	1.978	
MLE of Mean	12.51	
MLE of Standard Deviation	4.974	
nu star	1024	
Approximate Chi Square Value (.05)	951	**Nonparametric Statistics**
Adjusted Level of Significance	0.047	95% CLT UCL 13.61
Adjusted Chi Square Value	949.7	95% Jackknife UCL 13.63
		95% Standard Bootstrap UCL 13.6
Anderson-Darling Test Statistic	1.455	95% Bootstrap-t UCL 13.99
Anderson-Darling 5% Critical Value	0.753	95% Hall's Bootstrap UCL 14.6
Kolmogorov-Smirnov Test Statistic	0.089	95% Percentile Bootstrap UCL 13.75
Kolmogorov-Smirnov 5% Critical Value	0.0993	95% BCA Bootstrap UCL 13.88
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 15.44
		97.5% Chebyshev(Mean, Sd) UCL 16.71
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 19.19
95% Approximate Gamma UCL (Use when n >= 40)	13.47	
95% Adjusted Gamma UCL (Use when n < 40)	13.49	

Potential UCL to Use		Use 95% Approximate Gamma UCL	13.47

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

SELENIUM

General Statistics

Number of Valid Data	57	Number of Detected Data	37
Number of Distinct Detected Data	30	Number of Non-Detect Data	20
Number of Missing Values	24	Percent Non-Detects	35.09%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.22	Minimum Detected	-1.514
Maximum Detected	24	Maximum Detected	3.178
Mean of Detected	2.891	Mean of Detected	-0.173
SD of Detected	5.712	SD of Detected	1.332
Minimum Non-Detect	0.19	Minimum Non-Detect	-1.661
Maximum Non-Detect	0.39	Maximum Non-Detect	-0.942

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	29
Number treated as Detected	28
Single DL Non-Detect Percentage	50.88%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.51	Shapiro Wilk Test Statistic	0.712
5% Shapiro Wilk Critical Value	0.936	5% Shapiro Wilk Critical Value	0.936
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.914	Mean	-0.906
SD	4.772	SD	1.472
95% DL/2 (t) UCL	2.971	95% H-Stat (DL/2) UCL	2.177
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-1.189
		SD in Log Scale	1.814
		Mean in Original Scale	1.897
		SD in Original Scale	4.778
		95% t UCL	2.956
		95% Percentile Bootstrap UCL	2.955
		95% BCA Bootstrap UCL	3.09
		95% H-UCL	3.698

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.489	Data do not follow a Discernable Distribution (0.05)
Theta Star	5.914	
nu star	36.17	
A-D Test Statistic	6.746	
5% A-D Critical Value	0.811	
K-S Test Statistic	0.811	
5% K-S Critical Value	0.153	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	1.955
Maximum	24	SD	4.715
Mean	1.876	SE of Mean	0.633
Median	0.38	95% KM (t) UCL	3.014
SD	4.787	95% KM (z) UCL	2.996
k star	0.143	95% KM (jackknife) UCL	2.993
Theta star	13.09	95% KM (bootstrap t) UCL	3.556
Nu star	16.35	95% KM (BCA) UCL	3.086
AppChi2	8.207	95% KM (Percentile Bootstrap) UCL	3.069
95% Gamma Approximate UCL (Use when n >= 40)	3.737	95% KM (Chebyshev) UCL	4.714
95% Adjusted Gamma UCL (Use when n < 40)	3.807	97.5% KM (Chebyshev) UCL	5.908
		99% KM (Chebyshev) UCL	8.254
		Potential UCLs to Use	
		95% KM (Chebyshev) UCL	4.714

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

THALLIUM

General Statistics

Number of Valid Data	81	Number of Detected Data	16
Number of Distinct Detected Data	9	Number of Non-Detect Data	65
		Percent Non-Detects	80.25%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.2	Minimum Detected	-1.609
Maximum Detected	1.4	Maximum Detected	0.336
Mean of Detected	0.397	Mean of Detected	-1.164
SD of Detected	0.356	SD of Detected	0.639
Minimum Non-Detect	0.099	Minimum Non-Detect	-2.313
Maximum Non-Detect	2.4	Maximum Non-Detect	0.875

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	81
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.628	Shapiro Wilk Test Statistic	0.742
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.22	Mean	-2.197
SD	0.34	SD	1.031
95% DL/2 (t) UCL	0.283	95% H-Stat (DL/2) UCL	0.245
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-2.908
		SD in Log Scale	1.191
		Mean in Original Scale	0.117
		SD in Original Scale	0.21
		95% t UCL	0.156
		95% Percentile Bootstrap UCL	0.158
		95% BCA Bootstrap UCL	0.174
		95% H-UCL	0.153

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	1.856	Data do not follow a Discernable Distribution (0.05)
Theta Star	0.214	
nu star	59.4	
A-D Test Statistic	2.001	
5% A-D Critical Value	0.749	
K-S Test Statistic	0.749	
5% K-S Critical Value	0.218	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.242
Maximum	1.4	SD	0.179
Mean	0.0784	SE of Mean	0.0213
Median	0.000001	95% KM (t) UCL	0.278
SD	0.221	95% KM (z) UCL	0.277
k star	0.0982	95% KM (jackknife) UCL	0.277
Theta star	0.799	95% KM (bootstrap t) UCL	0.35
Nu star	15.9	95% KM (BCA) UCL	0.285
AppChi2	7.893	95% KM (Percentile Bootstrap) UCL	0.279
95% Gamma Approximate UCL (Use when n >= 40)	0.158	95% KM (Chebyshev) UCL	0.335
95% Adjusted Gamma UCL (Use when n < 40)	0.16	97.5% KM (Chebyshev) UCL	0.375
		99% KM (Chebyshev) UCL	0.454
		Potential UCLs to Use	
		95% KM (t) UCL	0.278
		95% KM (% Bootstrap) UCL	0.279

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

VANADIUM

General Statistics

Number of Valid Observations	57	Number of Distinct Observations	49
Number of Missing Values	24		

Raw Statistics		Log-transformed Statistics	
Minimum	8.5	Minimum of Log Data	2.14
Maximum	35	Maximum of Log Data	3.555
Mean	19.86	Mean of log Data	2.944
Geometric Mean	18.99	SD of log Data	0.309
Median	19.7		
SD	5.849		
Std. Error of Mean	0.775		
Coefficient of Variation	0.294		
Skewness	0.289		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.0857	Lilliefors Test Statistic	0.072
Lilliefors Critical Value	0.117	Lilliefors Critical Value	0.117
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	21.16	95% H-UCL	21.37
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	23.52
95% Adjusted-CLT UCL (Chen-1995)	21.17	97.5% Chebyshev (MVUE) UCL	25.09
95% Modified-t UCL (Johnson-1978)	21.17	99% Chebyshev (MVUE) UCL	28.16

Gamma Distribution Test		Data Distribution
k star (bias corrected)	10.72	Data appear Normal at 5% Significance Level
Theta Star	1.854	
MLE of Mean	19.86	
MLE of Standard Deviation	6.068	
nu star	1222	
Approximate Chi Square Value (.05)	1142	**Nonparametric Statistics**
Adjusted Level of Significance	0.0458	95% CLT UCL 21.14
Adjusted Chi Square Value	1140	95% Jackknife UCL 21.16
		95% Standard Bootstrap UCL 21.16
Anderson-Darling Test Statistic	0.258	95% Bootstrap-t UCL 21.24
Anderson-Darling 5% Critical Value	0.75	95% Hall's Bootstrap UCL 21.15
Kolmogorov-Smirnov Test Statistic	0.0657	95% Percentile Bootstrap UCL 21.13
Kolmogorov-Smirnov 5% Critical Value	0.118	95% BCA Bootstrap UCL 21.07
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 23.24
		97.5% Chebyshev(Mean, Sd) UCL 24.7
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 27.57
95% Approximate Gamma UCL (Use when n >= 40)	21.26	
95% Adjusted Gamma UCL (Use when n < 40)	21.3	

Potential UCL to Use	Use 95% Student's-t UCL 21.16

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

ZINC

General Statistics

Number of Valid Observations	81	Number of Distinct Observations	76

Raw Statistics

Minimum	31.3
Maximum	299
Mean	66.21
Geometric Mean	58.34
Median	53.1
SD	44.14
Std. Error of Mean	4.904
Coefficient of Variation	0.667
Skewness	3.205

Log-transformed Statistics

Minimum of Log Data	3.444
Maximum of Log Data	5.7
Mean of log Data	4.066
SD of log Data	0.453

Relevant UCL Statistics

Normal Distribution Test

Lilliefors Test Statistic	0.248
Lilliefors Critical Value	0.0984

Data not Normal at 5% Significance Level

Lognormal Distribution Test

Lilliefors Test Statistic	0.142
Lilliefors Critical Value	0.0984

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

95% Student's-t UCL	74.37

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	76.14
95% Modified-t UCL (Johnson-1978)	74.66

Assuming Lognormal Distribution

95% H-UCL	70.88
95% Chebyshev (MVUE) UCL	79.36
97.5% Chebyshev (MVUE) UCL	85.77
99% Chebyshev (MVUE) UCL	98.35

Gamma Distribution Test

k star (bias corrected)	3.969
Theta Star	16.68
MLE of Mean	66.21
MLE of Standard Deviation	33.23
nu star	643
Approximate Chi Square Value (.05)	585.1
Adjusted Level of Significance	0.047
Adjusted Chi Square Value	584.1
Anderson-Darling Test Statistic	4.324
Anderson-Darling 5% Critical Value	0.756
Kolmogorov-Smirnov Test Statistic	0.182
Kolmogorov-Smirnov 5% Critical Value	0.0996

Data not Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

95% Approximate Gamma UCL (Use when n >= 40)	72.75
95% Adjusted Gamma UCL (Use when n < 40)	72.87

Data Distribution

Data do not follow a Discernable Distribution (0.05)

Nonparametric Statistics

95% CLT UCL	74.27
95% Jackknife UCL	74.37
95% Standard Bootstrap UCL	74.26
95% Bootstrap-t UCL	77.96
95% Hall's Bootstrap UCL	78.68
95% Percentile Bootstrap UCL	74.88
95% BCA Bootstrap UCL	76.66
95% Chebyshev(Mean, Sd) UCL	87.58
97.5% Chebyshev(Mean, Sd) UCL	96.83
99% Chebyshev(Mean, Sd) UCL	115

Potential UCL to Use

Use 95% Student's-t UCL	74.37
or 95% Modified-t UCL	74.66

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

2,4-DINITROTOLUENE via 8270

General Statistics

Number of Valid Data	75	Number of Detected Data	21
Number of Distinct Detected Data	21	Number of Non-Detect Data	54
Number of Missing Values	9	Percent Non-Detects	72.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.122	Minimum Detected	-2.104
Maximum Detected	110	Maximum Detected	4.7
Mean of Detected	8.311	Mean of Detected	0.189
SD of Detected	24.06	SD of Detected	1.799
Minimum Non-Detect	0.046	Minimum Non-Detect	-3.079
Maximum Non-Detect	0.69	Maximum Non-Detect	-0.371

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	63
Number treated as Detected	12
Single DL Non-Detect Percentage	84.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.371	Shapiro Wilk Test Statistic	0.918
5% Shapiro Wilk Critical Value	0.908	5% Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.354	Mean	-2.521
SD	13.06	SD	1.991
95% DL/2 (t) UCL	4.865	95% H-Stat (DL/2) UCL	1.283
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-4.215
		SD in Log Scale	3.27
		Mean in Original Scale	2.333
		SD in Original Scale	13.06
		95% t UCL	4.845
		95% Percentile Bootstrap UCL	5.141
		95% BCA Bootstrap UCL	6.997
		95% H-UCL	21.96

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.331	Data appear Lognormal at 5% Significance Level
Theta Star	25.13	
nu star	13.89	
A-D Test Statistic	2.118	
5% A-D Critical Value	0.836	
K-S Test Statistic	0.836	
5% K-S Critical Value	0.204	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	2.416
Maximum	110	SD	12.96
Mean	2.327	SE of Mean	1.533
Median	0.000001	95% KM (t) UCL	4.969
SD	13.06	95% KM (z) UCL	4.937
k star	0.0837	95% KM (jackknife) UCL	4.905
Theta star	27.81	95% KM (bootstrap t) UCL	17.02
Nu star	12.55	95% KM (BCA) UCL	5.616
AppChi2	5.593	95% KM (Percentile Bootstrap) UCL	5.27
95% Gamma Approximate UCL (Use when n >= 40)	5.223	95% KM (Chebyshev) UCL	9.098
95% Adjusted Gamma UCL (Use when n < 40)	5.309	97.5% KM (Chebyshev) UCL	11.99
		99% KM (Chebyshev) UCL	17.67
		Potential UCLs to Use	
		95% KM (Chebyshev) UCL	9.098

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

2,6-DINITROTOLUENE via 8270

General Statistics

Number of Valid Data	75	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	68
Number of Missing Values	8	Percent Non-Detects	90.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.066	Minimum Detected	-2.718
Maximum Detected	5.7	Maximum Detected	1.74
Mean of Detected	1.207	Mean of Detected	-0.702
SD of Detected	2.006	SD of Detected	1.405
Minimum Non-Detect	0.0193	Minimum Non-Detect	-3.948
Maximum Non-Detect	0.62	Maximum Non-Detect	-0.478

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	72
Number treated as Detected	3
Single DL Non-Detect Percentage	96.00%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.599	Shapiro Wilk Test Statistic	0.972
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.134	Mean	-3.933
SD	0.67	SD	1.313
95% DL/2 (t) UCL	0.263	95% H-Stat (DL/2) UCL	0.0689
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-7.351
		SD in Log Scale	3.198
		Mean in Original Scale	0.115
		SD in Original Scale	0.671
		95% t UCL	0.244
		95% Percentile Bootstrap UCL	0.265
		95% BCA Bootstrap UCL	0.361
		95% H-UCL	0.695

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.485	Data appear Gamma Distributed at 5% Significance Level
Theta Star	2.49	
nu star	6.785	
A-D Test Statistic	0.504	
5% A-D Critical Value	0.74	
K-S Test Statistic	0.74	
5% K-S Critical Value	0.324	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.173
Maximum	5.7	SD	0.657
Mean	0.113	SE of Mean	0.082
Median	0.000001	95% KM (t) UCL	0.309
SD	0.672	95% KM (z) UCL	0.308
k star	0.0858	95% KM (jackknife) UCL	0.289
Theta star	1.312	95% KM (bootstrap t) UCL	0.701
Nu star	12.87	95% KM (BCA) UCL	0.749
		95% KM (Percentile Bootstrap) UCL	0.59
		95% KM (Chebyshev) UCL	0.53
		97.5% KM (Chebyshev) UCL	0.685
		99% KM (Chebyshev) UCL	0.989
		Potential UCLs to Use	

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

AppChi2	5.807	95% KM (t) UCL	0.309
95% Gamma Approximate UCL (Use when n >= 40)	0.25		
95% Adjusted Gamma UCL (Use when n < 40)	0.254		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

Benzoic Acid

General Statistics

Number of Valid Data	24	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	22
Number of Missing Values	59	Percent Non-Detects	91.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.27	Minimum Detected	-1.309
Maximum Detected	2.4	Maximum Detected	0.875
Mean of Detected	1.335	Mean of Detected	-0.217
SD of Detected	1.506	SD of Detected	1.545
Minimum Non-Detect	0.18	Minimum Non-Detect	-1.715
Maximum Non-Detect	1.9	Maximum Non-Detect	0.642

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	23
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	1
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.83%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.27	Mean	-1.98
SD	0.514	SD	0.904
95% DL/2 (t) UCL	0.45	95% H-Stat (DL/2) UCL	0.328
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% t UCL	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
		95% H-UCL	N/A

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)
Theta Star	N/A	
nu star	N/A	
A-D Test Statistic	N/A	**Nonparametric Statistics**
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method
K-S Test Statistic	N/A	Mean 0.359
5% K-S Critical Value	N/A	SD 0.426
Data not Gamma Distributed at 5% Significance Level		SE of Mean 0.123
		95% KM (t) UCL 0.569

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

Assuming Gamma Distribution		95% KM (z) UCL	0.561
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.763
Minimum	N/A	95% KM (bootstrap t) UCL	0.359
Maximum	N/A	95% KM (BCA) UCL	2.4
Mean	N/A	95% KM (Percentile Bootstrap) UCL	N/A
Median	N/A	95% KM (Chebyshev) UCL	0.894
SD	N/A	97.5% KM (Chebyshev) UCL	1.126
k star	N/A	99% KM (Chebyshev) UCL	1.581
Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	97.5% KM (Chebyshev) UCL	1.126
95% Gamma Approximate UCL (Use when n >= 40)	N/A		
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

bis(2-ETHYLHEXYL) PHTHALATE

General Statistics

Number of Valid Data	75	Number of Detected Data	8
Number of Distinct Detected Data	7	Number of Non-Detect Data	67
Number of Missing Values	8	Percent Non-Detects	89.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0146	Minimum Detected	-4.227
Maximum Detected	0.33	Maximum Detected	-1.109
Mean of Detected	0.09	Mean of Detected	-2.996
SD of Detected	0.108	SD of Detected	1.151
Minimum Non-Detect	0.0125	Minimum Non-Detect	-4.382
Maximum Non-Detect	0.78	Maximum Non-Detect	-0.248

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	75
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

Warning: There are only 8 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.744	Shapiro Wilk Test Statistic	0.906
5% Shapiro Wilk Critical Value	0.818	5% Shapiro Wilk Critical Value	0.818
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0341	Mean	-4.241
SD	0.0728	SD	1.119
95% DL/2 (t) UCL	0.0481	95% H-Stat (DL/2) UCL	0.0367
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-7.475
		SD in Log Scale	2.318
		Mean in Original Scale	0.0106
		SD in Original Scale	0.0433
		95% t UCL	0.0189
		95% Percentile Bootstrap UCL	0.0197
		95% BCA Bootstrap UCL	0.0239
		95% H-UCL	0.0234

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.698	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	0.129		
nu star	11.17		
A-D Test Statistic	0.501	**Nonparametric Statistics**	
5% A-D Critical Value	0.736	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.736	Mean	0.0232
5% K-S Critical Value	0.302	SD	0.041
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.00515
		95% KM (t) UCL	0.0318
Assuming Gamma Distribution		95% KM (z) UCL	0.0316
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0301
Minimum	0.000001	95% KM (bootstrap t) UCL	0.0411
Maximum	0.33	95% KM (BCA) UCL	0.0549
Mean	0.0096	95% KM (Percentile Bootstrap) UCL	0.0361
Median	0.000001	95% KM (Chebyshev) UCL	0.0456
SD	0.0435	97.5% KM (Chebyshev) UCL	0.0553
k star	0.106	99% KM (Chebyshev) UCL	0.0744
Theta star	0.0906		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

Nu star	15.9		Potential UCLs to Use	
AppChi2	7.893		95% KM (t) UCL	0.0318
95% Gamma Approximate UCL (Use when n >= 40)	0.0193			
95% Adjusted Gamma UCL (Use when n < 40)	0.0196			

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

DI-n-BUTYL PHTHALATE

General Statistics

Number of Valid Data	75	Number of Detected Data	38
Number of Distinct Detected Data	37	Number of Non-Detect Data	37
Number of Missing Values	9	Percent Non-Detects	49.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0085	Minimum Detected	-4.768
Maximum Detected	61	Maximum Detected	4.111
Mean of Detected	2.912	Mean of Detected	-1.261
SD of Detected	10.05	SD of Detected	2.221
Minimum Non-Detect	0.00789	Minimum Non-Detect	-4.842
Maximum Non-Detect	0.66	Maximum Non-Detect	-0.416

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	62
Number treated as Detected	13
Single DL Non-Detect Percentage	82.67%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.311	Shapiro Wilk Test Statistic	0.969
5% Shapiro Wilk Critical Value	0.938	5% Shapiro Wilk Critical Value	0.938
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.491	Mean	-2.906
SD	7.251	SD	2.469
95% DL/2 (t) UCL	2.885	95% H-Stat (DL/2) UCL	3.679
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.808
		SD in Log Scale	3.161
		Mean in Original Scale	1.477
		SD in Original Scale	7.253
		95% t UCL	2.872
		95% Percentile Bootstrap UCL	3.074
		95% BCA Bootstrap UCL	4.04
		95% H-UCL	20.51

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.291	Data appear Lognormal at 5% Significance Level
Theta Star	10.02	
nu star	22.09	
A-D Test Statistic	2.221	
5% A-D Critical Value	0.859	
K-S Test Statistic	0.859	
5% K-S Critical Value	0.156	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	1.482
Maximum	61	SD	7.204
Mean	1.475	SE of Mean	0.843
Median	0.0085	95% KM (t) UCL	2.887
SD	7.254	95% KM (z) UCL	2.869
k star	0.108	95% KM (jackknife) UCL	2.877
Theta star	13.67	95% KM (bootstrap t) UCL	6.856
Nu star	16.18	95% KM (BCA) UCL	3.129
AppChi2	8.093	95% KM (Percentile Bootstrap) UCL	3.109
95% Gamma Approximate UCL (Use when n >= 40)	2.951	95% KM (Chebyshev) UCL	5.157
95% Adjusted Gamma UCL (Use when n < 40)	2.992	97.5% KM (Chebyshev) UCL	6.747
		99% KM (Chebyshev) UCL	9.87
		Potential UCLs to Use	
		97.5% KM (Chebyshev) UCL	6.747

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

1,3-DINITROBENZENE

General Statistics

Number of Valid Data	84	Number of Detected Data	11
Number of Distinct Detected Data	10	Number of Non-Detect Data	73
Number of Missing Values	1	Percent Non-Detects	86.90%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0055	Minimum Detected	-5.203
Maximum Detected	1.4	Maximum Detected	0.336
Mean of Detected	0.264	Mean of Detected	-2.782
SD of Detected	0.432	SD of Detected	1.956
Minimum Non-Detect	0.0039	Minimum Non-Detect	-5.547
Maximum Non-Detect	0.62	Maximum Non-Detect	-0.478

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	83
Number treated as Detected	1
Single DL Non-Detect Percentage	98.81%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.671	Shapiro Wilk Test Statistic	0.929
5% Shapiro Wilk Critical Value	0.85	5% Shapiro Wilk Critical Value	0.85
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.125	Mean	-4.195
SD	0.207	SD	2.367
95% DL/2 (t) UCL	0.163	95% H-Stat (DL/2) UCL	0.672
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-8.501
		SD in Log Scale	3.4
		Mean in Original Scale	0.0355
		SD in Original Scale	0.175
		95% t UCL	0.0672
		95% Percentile Bootstrap UCL	0.0713
		95% BCA Bootstrap UCL	0.09
		95% H-UCL	0.463

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.385	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	0.688		
nu star	8.46		
A-D Test Statistic	0.518	Nonparametric Statistics	
5% A-D Critical Value	0.792	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.792	Mean	0.0444
5% K-S Critical Value	0.271	SD	0.177
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0211
		95% KM (t) UCL	0.0794
Assuming Gamma Distribution		95% KM (z) UCL	0.079
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.078
Minimum	0.000001	95% KM (bootstrap t) UCL	0.119
Maximum	1.4	95% KM (BCA) UCL	0.0882
Mean	0.0346	95% KM (Percentile Bootstrap) UCL	0.0813
Median	0.000001	95% KM (Chebyshev) UCL	0.136
SD	0.175	97.5% KM (Chebyshev) UCL	0.176
k star	0.0959	99% KM (Chebyshev) UCL	0.254
Theta star	0.361		
Nu star	16.11	Potential UCLs to Use	
AppChi2	8.037	95% KM (t) UCL	0.0794
95% Gamma Approximate UCL (Use when n >= 40)	0.0694		
95% Adjusted Gamma UCL (Use when n < 40)	0.0703		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

2,4,6-TRINITROTOLUENE

General Statistics

Number of Valid Data	84	Number of Detected Data	17
Number of Distinct Detected Data	16	Number of Non-Detect Data	67
Number of Missing Values	1	Percent Non-Detects	79.76%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.026	Minimum Detected	-3.65
Maximum Detected	270	Maximum Detected	5.598
Mean of Detected	16.38	Mean of Detected	-1.316
SD of Detected	65.36	SD of Detected	2.331
Minimum Non-Detect	0.018	Minimum Non-Detect	-4.017
Maximum Non-Detect	0.56	Maximum Non-Detect	-0.58

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	80
Number treated as Detected	4
Single DL Non-Detect Percentage	95.24%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.271	Shapiro Wilk Test Statistic	0.844
5% Shapiro Wilk Critical Value	0.892	5% Shapiro Wilk Critical Value	0.892
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	3.398	Mean	-2.975
SD	29.44	SD	1.936
95% DL/2 (t) UCL	8.741	95% H-Stat (DL/2) UCL	0.668
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-6.683
		SD in Log Scale	3.859
		Mean in Original Scale	3.32
		SD in Original Scale	29.45
		95% t UCL	8.666
		95% Percentile Bootstrap UCL	9.731
		95% BCA Bootstrap UCL	16.09
		95% H-UCL	25.71

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.189	Data do not follow a Discernable Distribution (0.05)
Theta Star	86.77	
nu star	6.419	
A-D Test Statistic	3.361	
5% A-D Critical Value	0.89	
K-S Test Statistic	0.89	
5% K-S Critical Value	0.232	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	3.346
Maximum	270	SD	29.27
Mean	3.491	SE of Mean	3.292
Median	0.000001	95% KM (t) UCL	8.822
SD	29.45	95% KM (z) UCL	8.761
k star	0.0751	95% KM (jackknife) UCL	8.69
Theta star	46.48	95% KM (bootstrap t) UCL	417.3
Nu star	12.62	95% KM (BCA) UCL	9.796
AppChi2	5.637	95% KM (Percentile Bootstrap) UCL	9.741
95% Gamma Approximate UCL (Use when n >= 40)	7.815	95% KM (Chebyshev) UCL	17.7
95% Adjusted Gamma UCL (Use when n < 40)	7.93	97.5% KM (Chebyshev) UCL	23.91
		99% KM (Chebyshev) UCL	36.1
		Potential UCLs to Use	
		97.5% KM (Chebyshev) UCL	23.91

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

2,4-DINITROTOLUENE via 8330

General Statistics

Number of Valid Data	84	Number of Detected Data	40
Number of Distinct Detected Data	37	Number of Non-Detect Data	44
Number of Missing Values	1	Percent Non-Detects	52.38%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0084	Minimum Detected	-4.78
Maximum Detected	780	Maximum Detected	6.659
Mean of Detected	23.34	Mean of Detected	-0.747
SD of Detected	123.1	SD of Detected	2.479
Minimum Non-Detect	0.005	Minimum Non-Detect	-5.298
Maximum Non-Detect	0.59	Maximum Non-Detect	-0.528

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	66
Number treated as Detected	18
Single DL Non-Detect Percentage	78.57%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.198	Shapiro Wilk Test Statistic	0.949
5% Shapiro Wilk Critical Value	0.94	5% Shapiro Wilk Critical Value	0.94
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	11.18	Mean	-2.345
SD	85.2	SD	2.804
95% DL/2 (t) UCL	26.64	95% H-Stat (DL/2) UCL	19.04
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.516
		SD in Log Scale	3.45
		Mean in Original Scale	11.12
		SD in Original Scale	85.21
		95% t UCL	26.59
		95% Percentile Bootstrap UCL	29.73
		95% BCA Bootstrap UCL	39.32
		95% H-UCL	85.16

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.193	Data appear Lognormal at 5% Significance Level
Theta Star	121.1	
nu star	15.42	
A-D Test Statistic	5.572	
5% A-D Critical Value	0.909	
K-S Test Statistic	0.909	
5% K-S Critical Value	0.155	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution	
Gamma ROS Statistics using Extrapolated Data	
Minimum	0.000001
Maximum	780
Mean	11.11
Median	0.000001
SD	85.21
k star	0.088
Theta star	126.3
Nu star	14.79
AppChi2	7.114
95% Gamma Approximate UCL (Use when n >= 40)	23.1
95% Adjusted Gamma UCL (Use when n < 40)	23.41

Nonparametric Statistics	
Kaplan-Meier (KM) Method	
Mean	11.13
SD	84.7
SE of Mean	9.359
95% KM (t) UCL	26.7
95% KM (z) UCL	26.53
95% KM (jackknife) UCL	26.59
95% KM (bootstrap t) UCL	210.8
95% KM (BCA) UCL	30.04
95% KM (Percentile Bootstrap) UCL	29.43
95% KM (Chebyshev) UCL	51.93
97.5% KM (Chebyshev) UCL	69.58
99% KM (Chebyshev) UCL	104.3
Potential UCLs to Use	
97.5% KM (Chebyshev) UCL	69.58

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

2,6-DINITROTOLUENE via 8330

General Statistics

Number of Valid Data	84	Number of Detected Data	16
Number of Distinct Detected Data	15	Number of Non-Detect Data	68
Number of Missing Values	1	Percent Non-Detects	80.95%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.016	Minimum Detected	-4.135
Maximum Detected	43	Maximum Detected	3.761
Mean of Detected	2.897	Mean of Detected	-2.078
SD of Detected	10.7	SD of Detected	2.051
Minimum Non-Detect	0.0069	Minimum Non-Detect	-4.976
Maximum Non-Detect	0.55	Maximum Non-Detect	-0.598

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	80
Number treated as Detected	4
Single DL Non-Detect Percentage	95.24%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.294	Shapiro Wilk Test Statistic	0.836
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.631	Mean	-3.58
SD	4.682	SD	2.149
95% DL/2 (t) UCL	1.481	95% H-Stat (DL/2) UCL	0.65
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-6.884
		SD in Log Scale	3.302
		Mean in Original Scale	0.554
		SD in Original Scale	4.69
		95% t UCL	1.406
		95% Percentile Bootstrap UCL	1.574
		95% BCA Bootstrap UCL	2.592
		95% H-UCL	1.516

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.228	Data do not follow a Discernable Distribution (0.05)
Theta Star	12.71	
nu star	7.294	
A-D Test Statistic	2.91	
5% A-D Critical Value	0.866	
K-S Test Statistic	0.866	
5% K-S Critical Value	0.236	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.568
Maximum	43	SD	4.66
Mean	0.584	SE of Mean	0.525
Median	0.000001	95% KM (t) UCL	1.442
SD	4.691	95% KM (z) UCL	1.432
k star	0.0833	95% KM (jackknife) UCL	1.419
Theta star	7.017	95% KM (bootstrap t) UCL	26.1
Nu star	13.99	95% KM (BCA) UCL	1.601
AppChi2	6.564	95% KM (Percentile Bootstrap) UCL	1.592
95% Gamma Approximate UCL (Use when n >= 40)	1.245	95% KM (Chebyshev) UCL	2.857
95% Adjusted Gamma UCL (Use when n < 40)	1.262	97.5% KM (Chebyshev) UCL	3.848
		99% KM (Chebyshev) UCL	5.794
		Potential UCLs to Use	
		97.5% KM (Chebyshev) UCL	3.848

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

2-AMINO-4,6-DINITROTOLUENE

General Statistics

Number of Valid Data	84	Number of Detected Data	12
Number of Distinct Detected Data	11	Number of Non-Detect Data	72
Number of Missing Values	1	Percent Non-Detects	85.71%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.035	Minimum Detected	-3.352
Maximum Detected	12	Maximum Detected	2.485
Mean of Detected	1.302	Mean of Detected	-1.525
SD of Detected	3.413	SD of Detected	1.691
Minimum Non-Detect	0.012	Minimum Non-Detect	-4.423
Maximum Non-Detect	0.59	Maximum Non-Detect	-0.528

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	82
Number treated as Detected	2
Single DL Non-Detect Percentage	97.62%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.422	Shapiro Wilk Test Statistic	0.873
5% Shapiro Wilk Critical Value	0.859	5% Shapiro Wilk Critical Value	0.859
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.274	Mean	-3.433
SD	1.318	SD	1.971
95% DL/2 (t) UCL	0.513	95% H-Stat (DL/2) UCL	0.463
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-6.582
		SD in Log Scale	3.188
		Mean in Original Scale	0.191
		SD in Original Scale	1.324
		95% t UCL	0.431
		95% Percentile Bootstrap UCL	0.474
		95% BCA Bootstrap UCL	0.669
		95% H-UCL	1.26

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.335	Data appear Lognormal at 5% Significance Level
Theta Star	3.892	
nu star	8.031	
A-D Test Statistic	1.592	
5% A-D Critical Value	0.81	
K-S Test Statistic	0.81	
5% K-S Critical Value	0.263	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.223
Maximum	12	SD	1.312
Mean	0.192	SE of Mean	0.15
Median	0.000001	95% KM (t) UCL	0.472
SD	1.324	95% KM (z) UCL	0.469
k star	0.0872	95% KM (jackknife) UCL	0.456
Theta star	2.205	95% KM (bootstrap t) UCL	3.01
Nu star	14.65	95% KM (BCA) UCL	0.528
AppChi2	7.021	95% KM (Percentile Bootstrap) UCL	0.5
95% Gamma Approximate UCL (Use when n >= 40)	0.401	95% KM (Chebyshev) UCL	0.875
95% Adjusted Gamma UCL (Use when n < 40)	0.407	97.5% KM (Chebyshev) UCL	1.157
		99% KM (Chebyshev) UCL	1.711
		Potential UCLs to Use	
		95% KM (Chebyshev) UCL	0.875

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

4-AMINO-2,6-DINITROTOLUENE

General Statistics

Number of Valid Data	84	Number of Detected Data	4
Number of Distinct Detected Data	4	Number of Non-Detect Data	80
Number of Missing Values	1	Percent Non-Detects	95.24%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.013	Minimum Detected	-4.343
Maximum Detected	13	Maximum Detected	2.565
Mean of Detected	3.294	Mean of Detected	-1.698
SD of Detected	6.471	SD of Detected	2.971
Minimum Non-Detect	0.0094	Minimum Non-Detect	-4.667
Maximum Non-Detect	0.52	Maximum Non-Detect	-0.654

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	83
Number treated as Detected	1
Single DL Non-Detect Percentage	98.81%

Warning: There are only 4 Distinct Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.634	Shapiro Wilk Test Statistic	0.853
5% Shapiro Wilk Critical Value	0.748	5% Shapiro Wilk Critical Value	0.748
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.24	Mean	-3.787
SD	1.413	SD	1.924
95% DL/2 (t) UCL	0.496	95% H-Stat (DL/2) UCL	0.288
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-16.09
		SD in Log Scale	6.031
		Mean in Original Scale	0.157
		SD in Original Scale	1.418
		95% t UCL	0.414
		95% Percentile Bootstrap UCL	0.466
		95% BCA Bootstrap UCL	0.776
		95% H-UCL	3029

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.228	Data Follow Appr. Gamma Distribution at 5% Significance Level
Theta Star	14.43	
nu star	1.826	
A-D Test Statistic	0.654	
5% A-D Critical Value	0.719	
K-S Test Statistic	0.719	
5% K-S Critical Value	0.421	
Data follow Appr. Gamma Distribution at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	0.000001	Mean	0.17
Maximum	13	SD	1.408
Mean	0.157	SE of Mean	0.177
Median	0.000001	95% KM (t) UCL	0.465
SD	1.418	95% KM (z) UCL	0.462
k star	0.0792	95% KM (jackknife) UCL	0.386
		95% KM (bootstrap t) UCL	18.92
		95% KM (BCA) UCL	13
		95% KM (Percentile Bootstrap) UCL	0.698
		95% KM (Chebyshev) UCL	0.943
		97.5% KM (Chebyshev) UCL	1.278
		99% KM (Chebyshev) UCL	1.935

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ProUCL Output for 0-6.5 feet bgs
YPG-35c

Theta star	1.98		
Nu star	13.31	Potential UCLs to Use	
AppChi2	6.1	95% KM (t) UCL	0.465
95% Gamma Approximate UCL (Use when n >= 40)	0.342		
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE

General Statistics

Number of Valid Data	84	Number of Detected Data	46
Number of Distinct Detected Data	39	Number of Non-Detect Data	38
Number of Missing Values	1	Percent Non-Detects	45.24%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.015	Minimum Detected	-4.2
Maximum Detected	11	Maximum Detected	2.398
Mean of Detected	0.895	Mean of Detected	-1.524
SD of Detected	2.09	SD of Detected	1.605
Minimum Non-Detect	0.011	Minimum Non-Detect	-4.51
Maximum Non-Detect	0.57	Maximum Non-Detect	-0.562

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	71
Number treated as Detected	13
Single DL Non-Detect Percentage	84.52%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.456	Shapiro Wilk Test Statistic	0.955
5% Shapiro Wilk Critical Value	0.945	5% Shapiro Wilk Critical Value	0.945
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.558	Mean	-2.142
SD	1.586	SD	1.821
95% DL/2 (t) UCL	0.846	95% H-Stat (DL/2) UCL	1.157
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-2.682
		SD in Log Scale	1.986
		Mean in Original Scale	0.51
		SD in Original Scale	1.598
		95% t UCL	0.8
		95% Percentile Bootstrap UCL	0.844
		95% BCA Bootstrap UCL	0.941
		95% H-UCL	1.02

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.441	Data appear Lognormal at 5% Significance Level	
Theta Star	2.032		
nu star	40.54		
A-D Test Statistic	2.909	Nonparametric Statistics	
5% A-D Critical Value	0.824	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.824	Mean	0.517
5% K-S Critical Value	0.139	SD	1.586
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.175
		95% KM (t) UCL	0.808
Assuming Gamma Distribution		95% KM (z) UCL	0.805
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.804
Minimum	0.000001	95% KM (bootstrap t) UCL	1.073
Maximum	11	95% KM (BCA) UCL	0.895
Mean	0.536	95% KM (Percentile Bootstrap) UCL	0.84
Median	0.05	95% KM (Chebyshev) UCL	1.28
SD	1.601	97.5% KM (Chebyshev) UCL	1.61
k star	0.143	99% KM (Chebyshev) UCL	2.259

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

Theta star	3.74		
Nu star	24.07	**Potential UCLs to Use**	
AppChi2	13.91	97.5% KM (Chebyshev) UCL	1.61
95% Gamma Approximate UCL (Use when n >= 40)	0.928		
95% Adjusted Gamma UCL (Use when n < 40)	0.937		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

NITROBENZENE			
General Statistics			
Number of Valid Data	84	Number of Detected Data	1
Number of Distinct Detected Data	1	Number of Non-Detect Data	83
Number of Missing Values	1	Percent Non-Detects	98.81%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable NITROBENZENE was not processed!

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

NITROGUANIDINE			
General Statistics			
Number of Valid Data	52	Number of Detected Data	11
Number of Distinct Detected Data	11	Number of Non-Detect Data	41
Number of Missing Values	22	Percent Non-Detects	78.85%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.032	Minimum Detected	-3.442
Maximum Detected	3.7	Maximum Detected	1.308
Mean of Detected	0.659	Mean of Detected	-1.306
SD of Detected	1.062	SD of Detected	1.395
Minimum Non-Detect	0.019	Minimum Non-Detect	-3.963
Maximum Non-Detect	0.02	Maximum Non-Detect	-3.912
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	41
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	11
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	78.85%
UCL Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.606	Shapiro Wilk Test Statistic	0.971
5% Shapiro Wilk Critical Value	0.85	5% Shapiro Wilk Critical Value	0.85
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.147	Mean	-3.909
SD	0.541	SD	1.495
95% DL/2 (t) UCL	0.273	95% H-Stat (DL/2) UCL	0.113
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-5.938
		SD in Log Scale	3.31
		Mean in Original Scale	0.143
		SD in Original Scale	0.542
		95% t UCL	0.269
		95% Percentile Bootstrap UCL	0.28
		95% BCA Bootstrap UCL	0.357
		95% H-UCL	8.041
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.557	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	1.183		
nu star	12.25		
A-D Test Statistic	0.51	**Nonparametric Statistics**	
5% A-D Critical Value	0.768	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.768	Mean	0.165
5% K-S Critical Value	0.266	SD	0.532
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0773
		95% KM (t) UCL	0.294
Assuming Gamma Distribution		95% KM (z) UCL	0.292
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.272
Minimum	0.000001	95% KM (bootstrap t) UCL	0.491
Maximum	3.7	95% KM (BCA) UCL	0.381

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YPG-35c

Mean	0.139	95% KM (Percentile Bootstrap) UCL	0.325
Median	0.000001	95% KM (Chebyshev) UCL	0.502
SD	0.543	97.5% KM (Chebyshev) UCL	0.647
k star	0.0972	99% KM (Chebyshev) UCL	0.934
Theta star	1.434		
Nu star	10.1	Potential UCLs to Use	
AppChi2	4.007	95% KM (t) UCL	0.294
95% Gamma Approximate UCL (Use when n >= 40)	0.351		
95% Adjusted Gamma UCL (Use when n < 40)	0.361		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

PERCHLORATE			
General Statistics			
Number of Valid Data	58	Number of Detected Data	52
Number of Distinct Detected Data	48	Number of Non-Detect Data	6
Number of Missing Values	20	Percent Non-Detects	10.34%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0003	Minimum Detected	-8.112
Maximum Detected	160	Maximum Detected	5.075
Mean of Detected	3.309	Mean of Detected	-3.117
SD of Detected	22.16	SD of Detected	2.615
Minimum Non-Detect	0.00025	Minimum Non-Detect	-8.294
Maximum Non-Detect	0.015	Maximum Non-Detect	-4.2
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	22
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	36
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	37.93%
UCL Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Lilliefors Test Statistic	0.506	Lilliefors Test Statistic	0.0596
5% Lilliefors Critical Value	0.123	5% Lilliefors Critical Value	0.123
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.967	Mean	-3.581
SD	20.98	SD	2.898
95% DL/2 (t) UCL	7.574	95% H-Stat (DL/2) UCL	14.62
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.647
		SD in Log Scale	2.965
		Mean in Original Scale	2.967
		SD in Original Scale	20.98
		95% t UCL	7.574
		95% Percentile Bootstrap UCL	8.465
		95% BCA Bootstrap UCL	11.27
		95% H-UCL	18.11
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.177	Data appear Lognormal at 5% Significance Level	
Theta Star	18.69		
nu star	18.41		
A-D Test Statistic	7.345	**Nonparametric Statistics**	
5% A-D Critical Value	0.925	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.925	Mean	2.967
5% K-S Critical Value	0.138	SD	20.8
Data not Gamma Distributed at 5% Significance Level		SE of Mean	2.758
		95% KM (t) UCL	7.579
Assuming Gamma Distribution		95% KM (z) UCL	7.504
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	7.574
Minimum	0.000001	95% KM (bootstrap t) UCL	195
Maximum	160	95% KM (BCA) UCL	8.529

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

Mean	2.967	95% KM (Percentile Bootstrap) UCL	8.491
Median	0.0345	95% KM (Chebyshev) UCL	14.99
SD	20.98	97.5% KM (Chebyshev) UCL	20.19
k star	0.149	99% KM (Chebyshev) UCL	30.41
Theta star	19.87		
Nu star	17.32	Potential UCLs to Use	
AppChi2	8.904	99% KM (Chebyshev) UCL	30.41
95% Gamma Approximate UCL (Use when n >= 40)	5.772		
95% Adjusted Gamma UCL (Use when n < 40)	5.874		

Attachment E1-4
ProUCL Output for 0-6.5 feet bgs
YPG-35c

TETRYL

General Statistics

Number of Valid Data	84	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	81
Number of Missing Values	1	Percent Non-Detects	96.43%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.1	Minimum Detected	0.0953
Maximum Detected	5.1	Maximum Detected	1.629
Mean of Detected	2.6	Mean of Detected	0.732
SD of Detected	2.179	SD of Detected	0.8
Minimum Non-Detect	0.0094	Minimum Non-Detect	-4.667
Maximum Non-Detect	1.1	Maximum Non-Detect	0.0953

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	81
Number treated as Detected	3
Single DL Non-Detect Percentage	96.43%

Warning: There are only 3 Distinct Detected Values in this data set
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.842	Shapiro Wilk Test Statistic	0.92
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.271	Mean	-3.455
SD	0.616	SD	2.298
95% DL/2 (t) UCL	0.382	95% H-Stat (DL/2) UCL	1.141
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-6.839
		SD in Log Scale	3.065
		Mean in Original Scale	0.104
		SD in Original Scale	0.591
		95% t UCL	0.211
		95% Percentile Bootstrap UCL	0.223
		95% BCA Bootstrap UCL	0.309
		95% H-UCL	0.585

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level
Theta Star	N/A	
nu star	N/A	
A-D Test Statistic	N/A	
5% A-D Critical Value	N/A	
K-S Test Statistic	N/A	
5% K-S Critical Value	N/A	
Data not Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	N/A	Mean	1.154
Maximum	N/A	SD	0.437
Mean	N/A	SE of Mean	0.0583
Median	N/A	95% KM (t) UCL	1.251
SD	N/A	95% KM (z) UCL	1.25
k star	N/A	95% KM (jackknife) UCL	1.478
		95% KM (bootstrap t) UCL	1.415
		95% KM (BCA) UCL	N/A
		95% KM (Percentile Bootstrap) UCL	5.1
		95% KM (Chebyshev) UCL	1.408
		97.5% KM (Chebyshev) UCL	1.518
		99% KM (Chebyshev) UCL	1.734

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ProUCL Output for 0-6.5 feet bgs
YPG-35c

Theta star	N/A		
Nu star	N/A	**Potential UCLs to Use**	
AppChi2	N/A	95% KM (t) UCL	1.251
95% Gamma Approximate UCL (Use when n >= 40)	N/A	95% KM (Percentile Bootstrap) UCL	5.1
95% Adjusted Gamma UCL (Use when n < 40)	N/A		

APPENDIX F

HISTORICAL DATA

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-01	Phenol	0.062	0.062	0.34	mg/kg	ND
WP-01	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
WP-01	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND
WP-01	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
WP-01	1,4-Dichlorobenzene	0.055	0.055	0.34	mg/kg	ND
WP-01	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
WP-01	1,2-Dichlorobenzene	0.063	0.063	0.34	mg/kg	ND
WP-01	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.34	mg/kg	ND
WP-01	2-METHYLPHENOL (o-CRESOL)	0.061	0.061	0.34	mg/kg	ND
WP-01	Hexachloroethane	0.062	0.062	0.34	mg/kg	ND
WP-01	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
WP-01	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
WP-01	NITROBENZENE	0.061	0.061	0.34	mg/kg	ND
WP-01	Isophorone	0.061	0.061	0.34	mg/kg	ND
WP-01	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
WP-01	2,4-dimethylphenol	0.058	0.058	0.34	mg/kg	ND
WP-01	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
WP-01	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
WP-01	2,4-Dichlorophenol	0.062	0.062	0.34	mg/kg	ND
WP-01	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
WP-01	Naphthalene	0.058	0.058	0.34	mg/kg	ND
WP-01	4-Chloroaniline	0.33	0.33	0.34	mg/kg	ND
WP-01	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
WP-01	4-Chloro-3-methylphenol	0.063	0.063	0.34	mg/kg	ND
WP-01	2-Methylnaphthalene	0.061	0.061	0.34	mg/kg	ND
WP-01	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
WP-01	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
WP-01	2,4,5-Trichlorophenol	0.16	0.16	1.7	mg/kg	ND
WP-01	2-Chloronaphthalene	0.056	0.056	0.34	mg/kg	ND
WP-01	Acenaphthylene	0.062	0.062	0.34	mg/kg	ND
WP-01	DIMETHYL PHTHALATE	0.063	0.063	0.34	mg/kg	ND
WP-01	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
WP-01	Acenaphthene	0.061	0.061	0.34	mg/kg	ND
WP-01	2,4-Dinitrophenol	0.16	0.16	0.34	mg/kg	ND
WP-01	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
WP-01	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
WP-01	2,4-Dinitrotoluene	1.5	0.069	0.34	mg/kg	=
WP-01	Fluorene	0.068	0.068	0.34	mg/kg	ND
WP-01	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.34	mg/kg	ND
WP-01	DIETHYL PHTHALATE	0.059	0.059	0.34	mg/kg	ND
WP-01	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
WP-01	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
WP-01	1,2-Diphenylhydrazine	0.074	0.074	0.34	mg/kg	ND
WP-01	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
WP-01	Hexachlorobenzene	0.067	0.067	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-01	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
WP-01	Phenanthrene	0.064	0.064	0.34	mg/kg	ND
WP-01	Anthracene	0.065	0.065	0.34	mg/kg	ND
WP-01	DI-n-BUTYL PHTHALATE	2.2	0.066	0.34	mg/kg	=
WP-01	Fluoranthene	0.059	0.059	0.34	mg/kg	ND
WP-01	Pyrene	0.088	0.088	0.34	mg/kg	ND
WP-01	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
WP-01	Benzo(a)anthracene	0.067	0.067	0.34	mg/kg	ND
WP-01	3,3'-Dichlorobenzidine	0.13	0.13	0.34	mg/kg	ND
WP-01	Chrysene	0.064	0.064	0.34	mg/kg	ND
WP-01	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.34	mg/kg	ND
WP-01	Di-n-octylphthalate	0.054	0.054	0.34	mg/kg	ND
WP-01	Benzo(b)fluoranthene	0.074	0.074	0.34	mg/kg	ND
WP-01	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
WP-01	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
WP-01	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
WP-01	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
WP-01	Benzo(g,h,I)perylene	0.061	0.061	0.34	mg/kg	ND
WP-01	Antimony	0.41	0	0	mg/kg	=
WP-01	Arsenic	4.1	0	0	mg/kg	=
WP-01	Barium	131	0	0	mg/kg	=
WP-01	Beryllium	0.03	0	0	mg/kg	=
WP-01	Cadmium	0.41	0	0	mg/kg	=
WP-01	CHROMIUM, TOTAL	14.1	0	0	mg/kg	=
WP-01	Lead	12.8	0	0	mg/kg	=
WP-01	Mercury	0.02	0	0	mg/kg	=
WP-01	Nickel	33.3	0	0	mg/kg	=
WP-01	Silver	1	0	0	mg/kg	=
WP-01	Thallium	0.2	0	0	mg/kg	=
WP-01	Tin	1.4	0	0	mg/kg	=
WP-01	Zinc	53.8	0	0	mg/kg	=
WP-01	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.1	mg/kg	ND
WP-01	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.55	0.55	2.1	mg/kg	ND
WP-01	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
WP-01	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
WP-01	TETRYL	1.1	1.1	2.1	mg/kg	ND
WP-01	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
WP-01	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
WP-01	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
WP-01	2,4,6-TRINITROTOLUENE	0.54	0.54	2.1	mg/kg	ND
WP-01	2,6-Dinitrotoluene	0.53	0.53	2.1	mg/kg	ND
WP-01	2,4-Dinitrotoluene	0.8	0.57	2.1	mg/kg	=
WP-01	2-Nitrotoluene	0.53	0.53	2.1	mg/kg	ND
WP-01	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
WP-01	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-02	Phenol	0.068	0.068	0.38	mg/kg	ND
WP-02	bis(2-CHLOROETHYL) ETHER	0.061	0.061	0.38	mg/kg	ND
WP-02	2-Chlorophenol	0.058	0.058	0.38	mg/kg	ND
WP-02	1,3-Dichlorobenzene	0.055	0.055	0.38	mg/kg	ND
WP-02	1,4-Dichlorobenzene	0.06	0.06	0.38	mg/kg	ND
WP-02	Benzyl Alcohol	0.057	0.057	0.38	mg/kg	ND
WP-02	1,2-Dichlorobenzene	0.069	0.069	0.38	mg/kg	ND
WP-02	2,2'-oxybis(1-Chloropropane)	0.059	0.059	0.38	mg/kg	ND
WP-02	2-METHYLPHENOL (o-CRESOL)	0.067	0.067	0.38	mg/kg	ND
WP-02	Hexachloroethane	0.067	0.067	0.38	mg/kg	ND
WP-02	N-NITROSODI-n-PROPYLAMINE	0.067	0.067	0.38	mg/kg	ND
WP-02	4-Methylphenol	0.07	0.07	0.38	mg/kg	ND
WP-02	NITROBENZENE	0.067	0.067	0.38	mg/kg	ND
WP-02	Isophorone	0.067	0.067	0.38	mg/kg	ND
WP-02	2-Nitrophenol	0.061	0.061	0.38	mg/kg	ND
WP-02	2,4-dimethylphenol	0.063	0.063	0.38	mg/kg	ND
WP-02	bis(2-CHLOROETHOXY) METHANE	0.077	0.077	0.38	mg/kg	ND
WP-02	Benzoic Acid	0.21	0.21	1.8	mg/kg	ND
WP-02	2,4-Dichlorophenol	0.067	0.067	0.38	mg/kg	ND
WP-02	1,2,4-Trichlorobenzene	0.058	0.058	0.38	mg/kg	ND
WP-02	Naphthalene	0.063	0.063	0.38	mg/kg	ND
WP-02	4-Chloroaniline	0.36	0.36	0.38	mg/kg	ND
WP-02	Hexachlorobutadiene	0.067	0.067	0.38	mg/kg	ND
WP-02	4-Chloro-3-methylphenol	0.069	0.069	0.38	mg/kg	ND
WP-02	2-Methylnaphthalene	0.067	0.067	0.38	mg/kg	ND
WP-02	Hexaclorocyclopentadiene	0.2	0.2	0.38	mg/kg	ND
WP-02	2,4,6-Trichlorophenol	0.057	0.057	0.38	mg/kg	ND
WP-02	2,4,5-Trichlorophenol	0.18	0.18	1.8	mg/kg	ND
WP-02	2-Chloronaphthalene	0.061	0.061	0.38	mg/kg	ND
WP-02	Acenaphthylene	0.067	0.067	0.38	mg/kg	ND
WP-02	DIMETHYL PHTHALATE	0.068	0.068	0.38	mg/kg	ND
WP-02	2,6-Dinitrotoluene	0.068	0.068	0.38	mg/kg	ND
WP-02	Acenaphthene	0.067	0.067	0.38	mg/kg	ND
WP-02	2,4-Dinitrophenol	0.17	0.17	1.8	mg/kg	ND
WP-02	Dibenzofuran	0.068	0.068	0.38	mg/kg	ND
WP-02	4-Nitrophenol	0.18	0.18	1.8	mg/kg	ND
WP-02	2,4-Dinitrotoluene	10	0.75	3.8	mg/kg	=
WP-02	Fluorene	0.074	0.074	0.38	mg/kg	ND
WP-02	4-CHLOROPHENYL PHENYL ETHER	0.066	0.066	0.38	mg/kg	ND
WP-02	DIETHYL PHTHALATE	0.064	0.064	0.38	mg/kg	ND
WP-02	4,6-Dinitro-2-methylphenol	0.2	0.2	1.8	mg/kg	ND
WP-02	N-Nitrosodiphenylamine	0.079	0.079	0.38	mg/kg	ND
WP-02	1,2-Diphenylhydrazine	0.08	0.08	0.38	mg/kg	ND
WP-02	4-BROMOPHENYL PHENYL ETHER	0.075	0.075	0.38	mg/kg	ND
WP-02	Hexachlorobenzene	0.073	0.073	0.38	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-02	Pentachlorophenol	0.13	0.13	1.8	mg/kg	ND
WP-02	Phenanthrene	0.069	0.069	0.38	mg/kg	ND
WP-02	Anthracene	0.071	0.071	0.38	mg/kg	ND
WP-02	DI-n-BUTYL PHTHALATE	10	0.72	3.8	mg/kg	=
WP-02	Fluoranthene	0.064	0.064	0.38	mg/kg	ND
WP-02	Pyrene	0.096	0.096	0.38	mg/kg	ND
WP-02	Butylbenzylphthalate	0.075	0.075	0.38	mg/kg	ND
WP-02	Benzo(a)anthracene	0.073	0.073	0.38	mg/kg	ND
WP-02	3,3'-Dichlorobenzidine	0.14	0.14	0.38	mg/kg	ND
WP-02	Chrysene	0.069	0.069	0.38	mg/kg	ND
WP-02	bis(2-ETHYLHEXYL) PHTHALATE	0.085	0.085	0.38	mg/kg	ND
WP-02	Di-n-octylphthalate	0.059	0.059	0.38	mg/kg	ND
WP-02	Benzo(b)fluoranthene	0.081	0.081	0.38	mg/kg	ND
WP-02	Benzo(k)fluoranthene	0.076	0.076	0.38	mg/kg	ND
WP-02	Benzo(a)pyrene	0.07	0.07	0.38	mg/kg	ND
WP-02	INDENO(1,2,3-c,d)PYRENE	0.075	0.075	0.38	mg/kg	ND
WP-02	Dibenzo(a,h)anthracene	0.07	0.07	0.38	mg/kg	ND
WP-02	Benzo(g,h,I)perylene	0.066	0.066	0.38	mg/kg	ND
WP-02	Antimony	0.48	0	0	mg/kg	=
WP-02	Arsenic	4.6	0	0	mg/kg	=
WP-02	Barium	148	0	0	mg/kg	=
WP-02	Beryllium	0.03	0	0	mg/kg	=
WP-02	Cadmium	0.94	0	0	mg/kg	=
WP-02	CHROMIUM, TOTAL	21.8	0	0	mg/kg	=
WP-02	Lead	28.5	0	0	mg/kg	=
WP-02	Mercury	0.02	0	0	mg/kg	=
WP-02	Nickel	30.5	0	0	mg/kg	=
WP-02	Silver	1.4	0	0	mg/kg	=
WP-02	Thallium	0.24	0	0	mg/kg	=
WP-02	Tin	1.1	0	0	mg/kg	=
WP-02	Zinc	69.1	0	0	mg/kg	=
WP-02	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
WP-02	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
WP-02	1,3,5-Trinitrobenzene	0.6	0.6	2.1	mg/kg	ND
WP-02	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
WP-02	TETRYL	1.1	1.1	2.1	mg/kg	ND
WP-02	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
WP-02	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
WP-02	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
WP-02	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
WP-02	2,6-Dinitrotoluene	0.58	0.52	2.1	mg/kg	=
WP-02	2,4-Dinitrotoluene	11	0.56	2.1	mg/kg	=
WP-02	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
WP-02	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
WP-02	3-Nitrotoluene	0.95	0.95	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-03	Phenol	0.063	0.063	0.35	mg/kg	ND
WP-03	bis(2-CHLOROETHYL) ETHER	0.057	0.057	0.35	mg/kg	ND
WP-03	2-Chlorophenol	0.054	0.054	0.35	mg/kg	ND
WP-03	1,3-Dichlorobenzene	0.051	0.051	0.35	mg/kg	ND
WP-03	1,4-Dichlorobenzene	0.055	0.055	0.35	mg/kg	ND
WP-03	Benzyl Alcohol	0.053	0.053	0.35	mg/kg	ND
WP-03	1,2-Dichlorobenzene	0.064	0.064	0.35	mg/kg	ND
WP-03	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.35	mg/kg	ND
WP-03	2-METHYLPHENOL (o-CRESOL)	0.062	0.062	0.35	mg/kg	ND
WP-03	Hexachloroethane	0.062	0.062	0.35	mg/kg	ND
WP-03	N-NITROSODI-n-PROPYLAMINE	0.062	0.062	0.35	mg/kg	ND
WP-03	4-Methylphenol	0.065	0.065	0.35	mg/kg	ND
WP-03	NITROBENZENE	0.062	0.062	0.35	mg/kg	ND
WP-03	Isophorone	0.062	0.062	0.35	mg/kg	ND
WP-03	2-Nitrophenol	0.057	0.057	0.35	mg/kg	ND
WP-03	2,4-dimethylphenol	0.058	0.058	0.35	mg/kg	ND
WP-03	bis(2-CHLOROETHOXY) METHANE	0.071	0.071	0.35	mg/kg	ND
WP-03	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
WP-03	2,4-Dichlorophenol	0.062	0.062	0.35	mg/kg	ND
WP-03	1,2,4-Trichlorobenzene	0.054	0.054	0.35	mg/kg	ND
WP-03	Naphthalene	0.058	0.058	0.35	mg/kg	ND
WP-03	4-Chloroaniline	0.33	0.33	0.35	mg/kg	ND
WP-03	Hexachlorobutadiene	0.062	0.062	0.35	mg/kg	ND
WP-03	4-Chloro-3-methylphenol	0.064	0.064	0.35	mg/kg	ND
WP-03	2-Methylnaphthalene	0.062	0.062	0.35	mg/kg	ND
WP-03	Hexaclorocyclopentadiene	0.19	0.19	0.35	mg/kg	ND
WP-03	2,4,6-Trichlorophenol	0.053	0.053	0.35	mg/kg	ND
WP-03	2,4,5-Trichlorophenol	0.17	0.17	1.7	mg/kg	ND
WP-03	2-Chloronaphthalene	0.056	0.056	0.35	mg/kg	ND
WP-03	Acenaphthylene	0.062	0.062	0.35	mg/kg	ND
WP-03	DIMETHYL PHTHALATE	0.064	0.064	0.35	mg/kg	ND
WP-03	2,6-Dinitrotoluene	5.7	0.63	3.5	mg/kg	=
WP-03	Acenaphthene	0.062	0.062	0.35	mg/kg	ND
WP-03	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
WP-03	Dibenzofuran	0.063	0.063	0.35	mg/kg	ND
WP-03	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
WP-03	2,4-Dinitrotoluene	110	6.9	35	mg/kg	=
WP-03	Fluorene	0.069	0.069	0.35	mg/kg	ND
WP-03	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.35	mg/kg	ND
WP-03	DIETHYL PHTHALATE	0.62	0.06	0.35	mg/kg	=
WP-03	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
WP-03	N-Nitrosodiphenylamine	0.073	0.073	0.35	mg/kg	ND
WP-03	1,2-Diphenylhydrazine	0.074	0.074	0.35	mg/kg	ND
WP-03	4-BROMOPHENYL PHENYL ETHER	0.069	0.069	0.35	mg/kg	ND
WP-03	Hexachlorobenzene	0.067	0.067	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-03	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
WP-03	Phenanthrene	0.064	0.064	0.35	mg/kg	ND
WP-03	Anthracene	0.066	0.066	0.35	mg/kg	ND
WP-03	DI-n-BUTYL PHTHALATE	61	6.7	35	mg/kg	=
WP-03	Fluoranthene	0.059	0.059	0.35	mg/kg	ND
WP-03	Pyrene	0.089	0.089	0.35	mg/kg	ND
WP-03	Butylbenzylphthalate	0.069	0.069	0.35	mg/kg	ND
WP-03	Benzo(a)anthracene	0.067	0.067	0.35	mg/kg	ND
WP-03	3,3'-Dichlorobenzidine	13	13	35	mg/kg	ND
WP-03	Chrysene	0.064	0.064	0.35	mg/kg	ND
WP-03	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.35	mg/kg	ND
WP-03	Di-n-octylphthalate	0.054	0.054	0.35	mg/kg	ND
WP-03	Benzo(b)fluoranthene	0.075	0.075	0.35	mg/kg	ND
WP-03	Benzo(k)fluoranthene	0.07	0.07	0.35	mg/kg	ND
WP-03	Benzo(a)pyrene	0.065	0.065	0.35	mg/kg	ND
WP-03	INDENO(1,2,3-c,d)PYRENE	0.069	0.069	0.35	mg/kg	ND
WP-03	Dibenzo(a,h)anthracene	0.065	0.065	0.35	mg/kg	ND
WP-03	Benzo(g,h,I)perylene	0.061	0.061	0.35	mg/kg	ND
WP-03	Antimony	0.42	0	0	mg/kg	=
WP-03	Arsenic	4.2	0	0	mg/kg	=
WP-03	Barium	167	0	0	mg/kg	=
WP-03	Beryllium	0.03	0	0	mg/kg	=
WP-03	Cadmium	1.7	0	0	mg/kg	=
WP-03	CHROMIUM, TOTAL	16.3	0	0	mg/kg	=
WP-03	Lead	46.4	0	0	mg/kg	=
WP-03	Mercury	0.02	0	0	mg/kg	=
WP-03	Nickel	17.2	0	0	mg/kg	=
WP-03	Silver	1.4	0	0	mg/kg	=
WP-03	Thallium	0.21	0	0	mg/kg	=
WP-03	Tin	0.56	0	0	mg/kg	=
WP-03	Zinc	92.9	0	0	mg/kg	=
WP-03	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
WP-03	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
WP-03	1,3,5-Trinitrobenzene	3.6	0.6	2.1	mg/kg	=
WP-03	1,3-Dinitrobenzene	0.6	0.59	2.1	mg/kg	=
WP-03	TETRYL	1.1	1.1	2.1	mg/kg	ND
WP-03	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
WP-03	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
WP-03	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
WP-03	2,4,6-TRINITROTOLUENE	3.4	0.53	2.1	mg/kg	=
WP-03	2,6-Dinitrotoluene	43	0.52	2.1	mg/kg	=
WP-03	2,4-Dinitrotoluene	780	0.56	2.1	mg/kg	=
WP-03	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
WP-03	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
WP-03	3-Nitrotoluene	0.95	0.95	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-04	Phenol	0.062	0.062	0.34	mg/kg	ND
WP-04	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
WP-04	2-Chlorophenol	0.063	0.063	0.34	mg/kg	ND
WP-04	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
WP-04	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
WP-04	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
WP-04	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
WP-04	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
WP-04	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
WP-04	Hexachloroethane	0.061	0.061	0.34	mg/kg	ND
WP-04	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
WP-04	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
WP-04	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
WP-04	Isophorone	0.06	0.06	0.34	mg/kg	ND
WP-04	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
WP-04	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
WP-04	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
WP-04	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
WP-04	2,4-Dichlorophenol	0.061	0.061	0.34	mg/kg	ND
WP-04	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
WP-04	Naphthalene	0.057	0.057	0.34	mg/kg	ND
WP-04	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
WP-04	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
WP-04	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
WP-04	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
WP-04	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
WP-04	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
WP-04	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
WP-04	2-Chloronaphthalene	0.055	0.055	0.34	mg/kg	ND
WP-04	Acenaphthylene	0.061	0.061	0.34	mg/kg	ND
WP-04	DIMETHYL PHTHALATE	3	0.62	3.4	mg/kg	=
WP-04	2,6-Dinitrotoluene	0.59	0.062	0.34	mg/kg	=
WP-04	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
WP-04	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
WP-04	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
WP-04	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
WP-04	2,4-Dinitrotoluene	13	0.68	3.4	mg/kg	=
WP-04	Fluorene	0.067	0.067	0.34	mg/kg	ND
WP-04	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
WP-04	DIETHYL PHTHALATE	0.087	0.058	0.34	mg/kg	=
WP-04	4,6-Dinitro-2-methylphenol	0.19	0.19	1.6	mg/kg	ND
WP-04	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
WP-04	1,2-Diphenylhydrazine	0.073	0.073	0.34	mg/kg	ND
WP-04	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
WP-04	Hexachlorobenzene	0.066	0.066	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
WP-04	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
WP-04	Phenanthrene	0.063	0.063	0.34	mg/kg	ND
WP-04	Anthracene	0.064	0.064	0.34	mg/kg	ND
WP-04	DI-n-BUTYL PHTHALATE	7.2	0.65	3.4	mg/kg	=
WP-04	Fluoranthene	0.058	0.058	0.34	mg/kg	ND
WP-04	Pyrene	0.087	0.087	0.34	mg/kg	ND
WP-04	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
WP-04	Benzo(a)anthracene	0.066	0.066	0.34	mg/kg	ND
WP-04	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
WP-04	Chrysene	0.063	0.063	0.34	mg/kg	ND
WP-04	bis(2-ETHYLHEXYL) PHTHALATE	0.077	0.077	0.34	mg/kg	ND
WP-04	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
WP-04	Benzo(b)fluoranthene	0.073	0.073	0.34	mg/kg	ND
WP-04	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
WP-04	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
WP-04	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
WP-04	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
WP-04	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
WP-04	Antimony	2.3	0	0	mg/kg	=
WP-04	Arsenic	4.7	0	0	mg/kg	=
WP-04	Barium	172	0	0	mg/kg	=
WP-04	Beryllium	0.03	0	0	mg/kg	=
WP-04	Cadmium	1.5	0	0	mg/kg	=
WP-04	CHROMIUM, TOTAL	25.7	0	0	mg/kg	=
WP-04	Lead	512	0	0	mg/kg	=
WP-04	Mercury	0.18	0	0	mg/kg	=
WP-04	Nickel	47.3	0	0	mg/kg	=
WP-04	Silver	1.6	0	0	mg/kg	=
WP-04	Thallium	0.21	0	0	mg/kg	=
WP-04	Tin	3.1	0	0	mg/kg	=
WP-04	Zinc	181	0	0	mg/kg	=
WP-04	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
WP-04	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
WP-04	1,3,5-Trinitrobenzene	0.6	0.6	2.1	mg/kg	ND
WP-04	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
WP-04	TETRYL	1.1	1.1	2.1	mg/kg	ND
WP-04	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
WP-04	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
WP-04	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
WP-04	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
WP-04	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
WP-04	2,4-Dinitrotoluene	0.78	0.56	2.1	mg/kg	=
WP-04	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
WP-04	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
WP-04	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-01	Phenol	0.061	0.061	0.34	mg/kg	ND
HE-01	bis(2-CHLOROETHYL) ETHER	0.055	0.055	0.34	mg/kg	ND
HE-01	2-Chlorophenol	0.052	0.052	0.34	mg/kg	ND
HE-01	1,3-Dichlorobenzene	0.049	0.049	0.34	mg/kg	ND
HE-01	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
HE-01	Benzyl Alcohol	0.051	0.051	0.34	mg/kg	ND
HE-01	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
HE-01	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
HE-01	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
HE-01	Hexachloroethane	0.06	0.06	0.34	mg/kg	ND
HE-01	N-NITROSODI-n-PROPYLAMINE	0.06	0.06	0.34	mg/kg	ND
HE-01	4-Methylphenol	0.063	0.063	0.34	mg/kg	ND
HE-01	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
HE-01	Isophorone	0.06	0.06	0.34	mg/kg	ND
HE-01	2-Nitrophenol	0.055	0.055	0.34	mg/kg	ND
HE-01	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
HE-01	bis(2-CHLOROETHOXY) METHANE	0.069	0.069	0.34	mg/kg	ND
HE-01	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
HE-01	2,4-Dichlorophenol	0.06	0.06	0.34	mg/kg	ND
HE-01	1,2,4-Trichlorobenzene	0.052	0.052	0.34	mg/kg	ND
HE-01	Naphthalene	0.057	0.057	0.34	mg/kg	ND
HE-01	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
HE-01	Hexachlorobutadiene	0.06	0.06	0.34	mg/kg	ND
HE-01	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
HE-01	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
HE-01	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-01	2,4,6-Trichlorophenol	0.051	0.051	0.34	mg/kg	ND
HE-01	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
HE-01	2-Chloronaphthalene	0.054	0.054	0.34	mg/kg	ND
HE-01	Acenaphthylene	0.06	0.06	0.34	mg/kg	ND
HE-01	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
HE-01	2,6-Dinitrotoluene	1	0.61	3.4	mg/kg	=
HE-01	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
HE-01	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
HE-01	Dibenzofuran	0.061	0.061	0.34	mg/kg	ND
HE-01	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
HE-01	2,4-Dinitrotoluene	25	0.67	3.4	mg/kg	=
HE-01	Fluorene	0.067	0.067	0.34	mg/kg	ND
HE-01	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
HE-01	DIETHYL PHTHALATE	5.4	0.58	3.4	mg/kg	=
HE-01	4,6-Dinitro-2-methylphenol	0.18	0.18	1.6	mg/kg	ND
HE-01	N-Nitrosodiphenylamine	0.071	0.071	0.34	mg/kg	ND
HE-01	1,2-Diphenylhydrazine	0.072	0.072	0.34	mg/kg	ND
HE-01	4-BROMOPHENYL PHENYL ETHER	0.067	0.067	0.34	mg/kg	ND
HE-01	Hexachlorobenzene	0.065	0.065	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-01	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
HE-01	Phenanthrene	0.062	0.062	0.34	mg/kg	ND
HE-01	Anthracene	0.064	0.064	0.34	mg/kg	ND
HE-01	DI-n-BUTYL PHTHALATE	12	0.65	3.4	mg/kg	=
HE-01	Fluoranthene	0.057	0.057	0.34	mg/kg	ND
HE-01	Pyrene	0.086	0.086	0.34	mg/kg	ND
HE-01	Butylbenzylphthalate	0.067	0.067	0.34	mg/kg	ND
HE-01	Benzo(a)anthracene	0.065	0.065	0.34	mg/kg	ND
HE-01	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
HE-01	Chrysene	0.062	0.062	0.34	mg/kg	ND
HE-01	bis(2-ETHYLHEXYL) PHTHALATE	0.076	0.076	0.34	mg/kg	ND
HE-01	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
HE-01	Benzo(b)fluoranthene	0.072	0.072	0.34	mg/kg	ND
HE-01	Benzo(k)fluoranthene	0.068	0.068	0.34	mg/kg	ND
HE-01	Benzo(a)pyrene	0.063	0.063	0.34	mg/kg	ND
HE-01	INDENO(1,2,3-c,d)PYRENE	0.067	0.067	0.34	mg/kg	ND
HE-01	Dibenzo(a,h)anthracene	0.063	0.063	0.34	mg/kg	ND
HE-01	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
HE-01	Antimony	0.39	0	0	mg/kg	=
HE-01	Arsenic	4.9	0	0	mg/kg	=
HE-01	Barium	117	0	0	mg/kg	=
HE-01	Beryllium	0.02	0	0	mg/kg	=
HE-01	Cadmium	0.83	0	0	mg/kg	=
HE-01	CHROMIUM, TOTAL	12.1	0	0	mg/kg	=
HE-01	Lead	20.4	0	0	mg/kg	=
HE-01	Mercury	0.02	0	0	mg/kg	=
HE-01	Nickel	9	0	0	mg/kg	=
HE-01	Silver	0.71	0	0	mg/kg	=
HE-01	Thallium	0.2	0	0	mg/kg	=
HE-01	Tin	0.2	0	0	mg/kg	=
HE-01	Zinc	83.6	0	0	mg/kg	=
HE-01	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.54	0.54	2.1	mg/kg	ND
HE-01	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.53	0.53	2.1	mg/kg	ND
HE-01	1,3,5-Trinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-01	1,3-Dinitrobenzene	0.58	0.58	2.1	mg/kg	ND
HE-01	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-01	NITROBENZENE	0.48	0.48	2.1	mg/kg	ND
HE-01	4-AMINO-2,6-DINITROTOLUENE	0.49	0.49	2.1	mg/kg	ND
HE-01	2-AMINO-4,6-DINITROTOLUENE	0.55	0.55	2.1	mg/kg	ND
HE-01	2,4,6-TRINITROTOLUENE	0.52	0.52	2.1	mg/kg	ND
HE-01	2,6-Dinitrotoluene	0.51	0.51	2.1	mg/kg	ND
HE-01	2,4-Dinitrotoluene	0.55	0.55	2.1	mg/kg	ND
HE-01	2-Nitrotoluene	0.51	0.51	2.1	mg/kg	ND
HE-01	4-Nitrotoluene	0.59	0.59	2.1	mg/kg	ND
HE-01	3-Nitrotoluene	0.94	0.94	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-02	Phenol	0.061	0.061	0.34	mg/kg	ND
HE-02	bis(2-CHLOROETHYL) ETHER	0.055	0.055	0.34	mg/kg	ND
HE-02	2-Chlorophenol	0.052	0.052	0.34	mg/kg	ND
HE-02	1,3-Dichlorobenzene	0.049	0.049	0.34	mg/kg	ND
HE-02	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
HE-02	Benzyl Alcohol	0.051	0.051	0.34	mg/kg	ND
HE-02	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
HE-02	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
HE-02	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
HE-02	Hexachloroethane	0.06	0.06	0.34	mg/kg	ND
HE-02	N-NITROSODI-n-PROPYLAMINE	0.06	0.06	0.34	mg/kg	ND
HE-02	4-Methylphenol	0.11	0.063	0.34	mg/kg	=
HE-02	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
HE-02	Isophorone	0.06	0.06	0.34	mg/kg	ND
HE-02	2-Nitrophenol	0.078	0.055	0.34	mg/kg	=
HE-02	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
HE-02	bis(2-CHLOROETHOXY) METHANE	0.069	0.069	0.34	mg/kg	ND
HE-02	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
HE-02	2,4-Dichlorophenol	0.06	0.06	0.34	mg/kg	ND
HE-02	1,2,4-Trichlorobenzene	0.052	0.052	0.34	mg/kg	ND
HE-02	Naphthalene	0.057	0.057	0.34	mg/kg	ND
HE-02	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
HE-02	Hexachlorobutadiene	0.06	0.06	0.34	mg/kg	ND
HE-02	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
HE-02	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
HE-02	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-02	2,4,6-Trichlorophenol	0.051	0.051	0.34	mg/kg	ND
HE-02	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
HE-02	2-Chloronaphthalene	0.054	0.054	0.34	mg/kg	ND
HE-02	Acenaphthylene	0.06	0.06	0.34	mg/kg	ND
HE-02	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
HE-02	2,6-Dinitrotoluene	0.28	0.061	0.34	mg/kg	=
HE-02	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
HE-02	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
HE-02	Dibenzofuran	0.061	0.061	0.34	mg/kg	ND
HE-02	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
HE-02	2,4-Dinitrotoluene	4	0.67	3.4	mg/kg	=
HE-02	Fluorene	0.067	0.067	0.34	mg/kg	ND
HE-02	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
HE-02	DIETHYL PHTHALATE	21	0.58	3.4	mg/kg	=
HE-02	4,6-Dinitro-2-methylphenol	0.18	0.18	1.6	mg/kg	ND
HE-02	N-Nitrosodiphenylamine	0.071	0.071	0.34	mg/kg	ND
HE-02	1,2-Diphenylhydrazine	0.072	0.072	0.34	mg/kg	ND
HE-02	4-BROMOPHENYL PHENYL ETHER	0.067	0.067	0.34	mg/kg	ND
HE-02	Hexachlorobenzene	0.065	0.065	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-02	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
HE-02	Phenanthrene	0.062	0.062	0.34	mg/kg	ND
HE-02	Anthracene	0.064	0.064	0.34	mg/kg	ND
HE-02	DI-n-BUTYL PHTHALATE	4.4	0.65	3.4	mg/kg	=
HE-02	Fluoranthene	0.057	0.057	0.34	mg/kg	ND
HE-02	Pyrene	0.086	0.086	0.34	mg/kg	ND
HE-02	Butylbenzylphthalate	0.067	0.067	0.34	mg/kg	ND
HE-02	Benzo(a)anthracene	0.065	0.065	0.34	mg/kg	ND
HE-02	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
HE-02	Chrysene	0.062	0.062	0.34	mg/kg	ND
HE-02	bis(2-ETHYLHEXYL) PHTHALATE	0.076	0.076	0.34	mg/kg	ND
HE-02	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
HE-02	Benzo(b)fluoranthene	0.072	0.072	0.34	mg/kg	ND
HE-02	Benzo(k)fluoranthene	0.068	0.068	0.34	mg/kg	ND
HE-02	Benzo(a)pyrene	0.063	0.063	0.34	mg/kg	ND
HE-02	INDENO(1,2,3-c,d)PYRENE	0.067	0.067	0.34	mg/kg	ND
HE-02	Dibenzo(a,h)anthracene	0.063	0.063	0.34	mg/kg	ND
HE-02	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
HE-02	Antimony	0.41	0	0	mg/kg	=
HE-02	Arsenic	2.9	0	0	mg/kg	=
HE-02	Barium	137	0	0	mg/kg	=
HE-02	Beryllium	0.03	0	0	mg/kg	=
HE-02	Cadmium	0.45	0	0	mg/kg	=
HE-02	CHROMIUM, TOTAL	8.2	0	0	mg/kg	=
HE-02	Lead	10.5	0	0	mg/kg	=
HE-02	Mercury	0.02	0	0	mg/kg	=
HE-02	Nickel	6.4	0	0	mg/kg	=
HE-02	Silver	0.51	0	0	mg/kg	=
HE-02	Thallium	0.2	0	0	mg/kg	=
HE-02	Tin	0.2	0	0	mg/kg	=
HE-02	Zinc	51.7	0	0	mg/kg	=
HE-02	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.1	mg/kg	ND
HE-02	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.55	0.55	2.1	mg/kg	ND
HE-02	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
HE-02	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
HE-02	TETRYL	1.6	1.1	2.1	mg/kg	=
HE-02	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-02	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-02	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
HE-02	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
HE-02	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-02	2,4-Dinitrotoluene	22	0.57	2.1	mg/kg	=
HE-02	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-02	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
HE-02	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-03	Phenol	0.061	0.061	0.33	mg/kg	ND
HE-03	bis(2-CHLOROETHYL) ETHER	0.12	0.054	0.33	mg/kg	=
HE-03	2-Chlorophenol	0.052	0.052	0.33	mg/kg	ND
HE-03	1,3-Dichlorobenzene	0.049	0.049	0.33	mg/kg	ND
HE-03	1,4-Dichlorobenzene	0.053	0.053	0.33	mg/kg	ND
HE-03	Benzyl Alcohol	0.05	0.05	0.33	mg/kg	ND
HE-03	1,2-Dichlorobenzene	0.061	0.061	0.33	mg/kg	ND
HE-03	2,2'-oxybis(1-Chloropropane)	0.052	0.052	0.33	mg/kg	ND
HE-03	2-METHYLPHENOL (o-CRESOL)	0.059	0.059	0.33	mg/kg	ND
HE-03	Hexachloroethane	0.06	0.06	0.33	mg/kg	ND
HE-03	N-NITROSODI-n-PROPYLAMINE	0.06	0.06	0.33	mg/kg	ND
HE-03	4-Methylphenol	0.063	0.063	0.33	mg/kg	ND
HE-03	NITROBENZENE	0.059	0.059	0.33	mg/kg	ND
HE-03	Isophorone	0.059	0.059	0.33	mg/kg	ND
HE-03	2-Nitrophenol	0.25	0.054	0.33	mg/kg	=
HE-03	2,4-dimethylphenol	0.056	0.056	0.33	mg/kg	ND
HE-03	bis(2-CHLOROETHOXY) METHANE	0.068	0.068	0.33	mg/kg	ND
HE-03	Benzoic Acid	0.18	0.18	0.33	mg/kg	ND
HE-03	2,4-Dichlorophenol	0.06	0.06	0.33	mg/kg	ND
HE-03	1,2,4-Trichlorobenzene	0.052	0.052	0.33	mg/kg	ND
HE-03	Naphthalene	0.056	0.056	0.33	mg/kg	ND
HE-03	4-Chloroaniline	0.32	0.32	0.33	mg/kg	ND
HE-03	Hexachlorobutadiene	0.06	0.06	0.33	mg/kg	ND
HE-03	4-Chloro-3-methylphenol	0.061	0.061	0.33	mg/kg	ND
HE-03	2-Methylnaphthalene	0.059	0.059	0.33	mg/kg	ND
HE-03	Hexaclorocyclopentadiene	0.18	0.18	0.33	mg/kg	ND
HE-03	2,4,6-Trichlorophenol	0.051	0.051	0.33	mg/kg	ND
HE-03	2,4,5-Trichlorophenol	0.16	0.16	0.33	mg/kg	ND
HE-03	2-Chloronaphthalene	0.054	0.054	0.33	mg/kg	ND
HE-03	Acenaphthylene	0.06	0.06	0.33	mg/kg	ND
HE-03	DIMETHYL PHTHALATE	0.061	0.061	0.33	mg/kg	ND
HE-03	2,6-Dinitrotoluene	0.19	0.06	0.33	mg/kg	=
HE-03	Acenaphthene	0.059	0.059	0.33	mg/kg	ND
HE-03	2,4-Dinitrophenol	0.15	0.15	0.33	mg/kg	ND
HE-03	Dibenzofuran	0.061	0.061	0.33	mg/kg	ND
HE-03	4-Nitrophenol	0.28	0.16	0.33	mg/kg	=
HE-03	2,4-Dinitrotoluene	3	0.67	3.3	mg/kg	=
HE-03	Fluorene	0.066	0.066	0.33	mg/kg	ND
HE-03	4-CHLOROPHENYL PHENYL ETHER	0.059	0.059	0.33	mg/kg	ND
HE-03	DIETHYL PHTHALATE	10	0.57	3.3	mg/kg	=
HE-03	4,6-Dinitro-2-methylphenol	0.18	0.18	0.33	mg/kg	ND
HE-03	N-Nitrosodiphenylamine	0.07	0.07	0.33	mg/kg	ND
HE-03	1,2-Diphenylhydrazine	0.071	0.071	0.33	mg/kg	ND
HE-03	4-BROMOPHENYL PHENYL ETHER	0.066	0.066	0.33	mg/kg	ND
HE-03	Hexachlorobenzene	0.065	0.065	0.33	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-03	Pentachlorophenol	0.12	0.12	0.33	mg/kg	ND
HE-03	Phenanthrene	0.062	0.062	0.33	mg/kg	ND
HE-03	Anthracene	0.063	0.063	0.33	mg/kg	ND
HE-03	DI-n-BUTYL PHTHALATE	1.5	0.64	3.3	mg/kg	=
HE-03	Fluoranthene	0.057	0.057	0.33	mg/kg	ND
HE-03	Pyrene	0.086	0.086	0.33	mg/kg	ND
HE-03	Butylbenzylphthalate	0.066	0.066	0.33	mg/kg	ND
HE-03	Benzo(a)anthracene	0.065	0.065	0.33	mg/kg	ND
HE-03	3,3'-Dichlorobenzidine	0.12	0.12	0.33	mg/kg	ND
HE-03	Chrysene	0.062	0.062	0.33	mg/kg	ND
HE-03	bis(2-ETHYLHEXYL) PHTHALATE	0.33	0.075	0.33	mg/kg	=
HE-03	Di-n-octylphthalate	0.052	0.052	0.33	mg/kg	ND
HE-03	Benzo(b)fluoranthene	0.072	0.072	0.33	mg/kg	ND
HE-03	Benzo(k)fluoranthene	0.067	0.067	0.33	mg/kg	ND
HE-03	Benzo(a)pyrene	0.062	0.062	0.33	mg/kg	ND
HE-03	INDENO(1,2,3-c,d)PYRENE	0.066	0.066	0.33	mg/kg	ND
HE-03	Dibenzo(a,h)anthracene	0.063	0.063	0.33	mg/kg	ND
HE-03	Benzo(g,h,I)perylene	0.059	0.059	0.33	mg/kg	ND
HE-03	Antimony	0.53	0	0	mg/kg	=
HE-03	Arsenic	3	0	0	mg/kg	=
HE-03	Barium	124	0	0	mg/kg	=
HE-03	Beryllium	0.03	0	0	mg/kg	=
HE-03	Cadmium	1.9	0	0	mg/kg	=
HE-03	CHROMIUM, TOTAL	11.5	0	0	mg/kg	=
HE-03	Lead	37.6	0	0	mg/kg	=
HE-03	Mercury	0.04	0	0	mg/kg	=
HE-03	Nickel	9.9	0	0	mg/kg	=
HE-03	Silver	0.7	0	0	mg/kg	=
HE-03	Thallium	0.2	0	0	mg/kg	=
HE-03	Tin	0.2	0	0	mg/kg	=
HE-03	Zinc	244	0	0	mg/kg	=
HE-03	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
HE-03	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.1	0.54	2.1	mg/kg	=
HE-03	1,3,5-Trinitrobenzene	1.7	0.61	2.1	mg/kg	=
HE-03	1,3-Dinitrobenzene	1.4	0.6	2.1	mg/kg	=
HE-03	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-03	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-03	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-03	2-AMINO-4,6-DINITROTOLUENE	2	0.57	2.1	mg/kg	=
HE-03	2,4,6-TRINITROTOLUENE	2.1	0.53	2.1	mg/kg	=
HE-03	2,6-Dinitrotoluene	0.88	0.52	2.1	mg/kg	=
HE-03	2,4-Dinitrotoluene	18	0.57	2.1	mg/kg	=
HE-03	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-03	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
HE-03	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-04	Phenol	0.061	0.061	0.34	mg/kg	ND
HE-04	bis(2-CHLOROETHYL) ETHER	0.055	0.055	0.34	mg/kg	ND
HE-04	2-Chlorophenol	0.052	0.052	0.34	mg/kg	ND
HE-04	1,3-Dichlorobenzene	0.049	0.049	0.34	mg/kg	ND
HE-04	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
HE-04	Benzyl Alcohol	0.051	0.051	0.34	mg/kg	ND
HE-04	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
HE-04	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
HE-04	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
HE-04	Hexachloroethane	0.06	0.06	0.34	mg/kg	ND
HE-04	N-NITROSODI-n-PROPYLAMINE	0.06	0.06	0.34	mg/kg	ND
HE-04	4-Methylphenol	0.063	0.063	0.34	mg/kg	ND
HE-04	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
HE-04	Isophorone	0.06	0.06	0.34	mg/kg	ND
HE-04	2-Nitrophenol	0.055	0.055	0.34	mg/kg	ND
HE-04	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
HE-04	bis(2-CHLOROETHOXY) METHANE	0.069	0.069	0.34	mg/kg	ND
HE-04	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
HE-04	2,4-Dichlorophenol	0.06	0.06	0.34	mg/kg	ND
HE-04	1,2,4-Trichlorobenzene	0.052	0.052	0.34	mg/kg	ND
HE-04	Naphthalene	0.057	0.057	0.34	mg/kg	ND
HE-04	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
HE-04	Hexachlorobutadiene	0.06	0.06	0.34	mg/kg	ND
HE-04	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
HE-04	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
HE-04	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-04	2,4,6-Trichlorophenol	0.051	0.051	0.34	mg/kg	ND
HE-04	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
HE-04	2-Chloronaphthalene	0.054	0.054	0.34	mg/kg	ND
HE-04	Acenaphthylene	0.06	0.06	0.34	mg/kg	ND
HE-04	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
HE-04	2,6-Dinitrotoluene	0.061	0.061	0.34	mg/kg	ND
HE-04	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
HE-04	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
HE-04	Dibenzofuran	0.061	0.061	0.34	mg/kg	ND
HE-04	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
HE-04	2,4-Dinitrotoluene	0.73	0.34	1.7	mg/kg	=
HE-04	Fluorene	0.067	0.067	0.34	mg/kg	ND
HE-04	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
HE-04	DIETHYL PHTHALATE	1.2	0.29	1.7	mg/kg	=
HE-04	4,6-Dinitro-2-methylphenol	0.18	0.18	1.6	mg/kg	ND
HE-04	N-Nitrosodiphenylamine	0.071	0.071	0.34	mg/kg	ND
HE-04	1,2-Diphenylhydrazine	0.072	0.072	0.34	mg/kg	ND
HE-04	4-BROMOPHENYL PHENYL ETHER	0.067	0.067	0.34	mg/kg	ND
HE-04	Hexachlorobenzene	0.065	0.065	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-04	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
HE-04	Phenanthrene	0.062	0.062	0.34	mg/kg	ND
HE-04	Anthracene	0.064	0.064	0.34	mg/kg	ND
HE-04	DI-n-BUTYL PHTHALATE	0.13	0.065	0.34	mg/kg	=
HE-04	Fluoranthene	0.057	0.057	0.34	mg/kg	ND
HE-04	Pyrene	0.086	0.086	0.34	mg/kg	ND
HE-04	Butylbenzylphthalate	0.067	0.067	0.34	mg/kg	ND
HE-04	Benzo(a)anthracene	0.065	0.065	0.34	mg/kg	ND
HE-04	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
HE-04	Chrysene	0.062	0.062	0.34	mg/kg	ND
HE-04	bis(2-ETHYLHEXYL) PHTHALATE	0.076	0.076	0.34	mg/kg	ND
HE-04	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
HE-04	Benzo(b)fluoranthene	0.072	0.072	0.34	mg/kg	ND
HE-04	Benzo(k)fluoranthene	0.068	0.068	0.34	mg/kg	ND
HE-04	Benzo(a)pyrene	0.063	0.063	0.34	mg/kg	ND
HE-04	INDENO(1,2,3-c,d)PYRENE	0.067	0.067	0.34	mg/kg	ND
HE-04	Dibenzo(a,h)anthracene	0.063	0.063	0.34	mg/kg	ND
HE-04	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
HE-04	Antimony	1	0	0	mg/kg	=
HE-04	Arsenic	5.1	0	0	mg/kg	=
HE-04	Barium	154	0	0	mg/kg	=
HE-04	Beryllium	0.03	0	0	mg/kg	=
HE-04	Cadmium	1.6	0	0	mg/kg	=
HE-04	CHROMIUM, TOTAL	21.2	0	0	mg/kg	=
HE-04	Lead	95.9	0	0	mg/kg	=
HE-04	Mercury	0.05	0	0	mg/kg	=
HE-04	Nickel	14.4	0	0	mg/kg	=
HE-04	Silver	1.1	0	0	mg/kg	=
HE-04	Thallium	0.2	0	0	mg/kg	=
HE-04	Tin	1.6	0	0	mg/kg	=
HE-04	Zinc	147	0	0	mg/kg	=
HE-04	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
HE-04	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
HE-04	1,3,5-Trinitrobenzene	1.1	0.61	2.1	mg/kg	=
HE-04	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-04	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-04	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-04	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-04	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
HE-04	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
HE-04	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-04	2,4-Dinitrotoluene	0.73	0.56	2.1	mg/kg	=
HE-04	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-04	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
HE-04	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-05	Phenol	0.063	0.063	0.35	mg/kg	ND
HE-05	bis(2-CHLOROETHYL) ETHER	0.057	0.057	0.35	mg/kg	ND
HE-05	2-Chlorophenol	0.054	0.054	0.35	mg/kg	ND
HE-05	1,3-Dichlorobenzene	0.051	0.051	0.35	mg/kg	ND
HE-05	1,4-Dichlorobenzene	0.055	0.055	0.35	mg/kg	ND
HE-05	Benzyl Alcohol	0.053	0.053	0.35	mg/kg	ND
HE-05	1,2-Dichlorobenzene	0.064	0.064	0.35	mg/kg	ND
HE-05	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.35	mg/kg	ND
HE-05	2-METHYLPHENOL (o-CRESOL)	0.062	0.062	0.35	mg/kg	ND
HE-05	Hexachloroethane	0.062	0.062	0.35	mg/kg	ND
HE-05	N-NITROSODI-n-PROPYLAMINE	0.062	0.062	0.35	mg/kg	ND
HE-05	4-Methylphenol	0.065	0.065	0.35	mg/kg	ND
HE-05	NITROBENZENE	0.062	0.062	0.35	mg/kg	ND
HE-05	Isophorone	0.062	0.062	0.35	mg/kg	ND
HE-05	2-Nitrophenol	0.057	0.057	0.35	mg/kg	ND
HE-05	2,4-dimethylphenol	0.058	0.058	0.35	mg/kg	ND
HE-05	bis(2-CHLOROETHOXY) METHANE	0.071	0.071	0.35	mg/kg	ND
HE-05	Benzoic Acid	0.27	0.19	1.7	mg/kg	=
HE-05	2,4-Dichlorophenol	0.062	0.062	0.35	mg/kg	ND
HE-05	1,2,4-Trichlorobenzene	0.054	0.054	0.35	mg/kg	ND
HE-05	Naphthalene	0.058	0.058	0.35	mg/kg	ND
HE-05	4-Chloroaniline	0.33	0.33	0.35	mg/kg	ND
HE-05	Hexachlorobutadiene	0.062	0.062	0.35	mg/kg	ND
HE-05	4-Chloro-3-methylphenol	0.064	0.064	0.35	mg/kg	ND
HE-05	2-Methylnaphthalene	0.062	0.062	0.35	mg/kg	ND
HE-05	Hexaclorocyclopentadiene	0.19	0.19	0.35	mg/kg	ND
HE-05	2,4,6-Trichlorophenol	0.053	0.053	0.35	mg/kg	ND
HE-05	2,4,5-Trichlorophenol	0.18	0.18	1.7	mg/kg	ND
HE-05	2-Chloronaphthalene	0.056	0.056	0.35	mg/kg	ND
HE-05	Acenaphthylene	0.062	0.062	0.35	mg/kg	ND
HE-05	DIMETHYL PHTHALATE	0.064	0.064	0.35	mg/kg	ND
HE-05	2,6-Dinitrotoluene	0.063	0.063	0.35	mg/kg	ND
HE-05	Acenaphthene	0.062	0.062	0.35	mg/kg	ND
HE-05	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-05	Dibenzofuran	0.063	0.063	0.35	mg/kg	ND
HE-05	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-05	2,4-Dinitrotoluene	0.35	0.069	0.35	mg/kg	=
HE-05	Fluorene	0.069	0.069	0.35	mg/kg	ND
HE-05	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.35	mg/kg	ND
HE-05	DIETHYL PHTHALATE	1	0.3	1.7	mg/kg	=
HE-05	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
HE-05	N-Nitrosodiphenylamine	0.073	0.073	0.35	mg/kg	ND
HE-05	1,2-Diphenylhydrazine	0.074	0.074	0.35	mg/kg	ND
HE-05	4-BROMOPHENYL PHENYL ETHER	0.069	0.069	0.35	mg/kg	ND
HE-05	Hexachlorobenzene	0.067	0.067	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-05	Pentachlorophenol	0.13	0.12	1.7	mg/kg	=
HE-05	Phenanthrene	0.064	0.064	0.35	mg/kg	ND
HE-05	Anthracene	0.066	0.066	0.35	mg/kg	ND
HE-05	DI-n-BUTYL PHTHALATE	0.38	0.33	1.7	mg/kg	=
HE-05	Fluoranthene	0.059	0.059	0.35	mg/kg	ND
HE-05	Pyrene	0.089	0.089	0.35	mg/kg	ND
HE-05	Butylbenzylphthalate	0.069	0.069	0.35	mg/kg	ND
HE-05	Benzo(a)anthracene	0.067	0.067	0.35	mg/kg	ND
HE-05	3,3'-Dichlorobenzidine	0.13	0.13	0.35	mg/kg	ND
HE-05	Chrysene	0.064	0.064	0.35	mg/kg	ND
HE-05	bis(2-ETHYLHEXYL) PHTHALATE	0.13	0.078	0.35	mg/kg	=
HE-05	Di-n-octylphthalate	0.054	0.054	0.35	mg/kg	ND
HE-05	Benzo(b)fluoranthene	0.13	0.075	0.35	mg/kg	=
HE-05	Benzo(k)fluoranthene	0.07	0.07	0.35	mg/kg	ND
HE-05	Benzo(a)pyrene	0.065	0.065	0.35	mg/kg	ND
HE-05	INDENO(1,2,3-c,d)PYRENE	0.069	0.069	0.35	mg/kg	ND
HE-05	Dibenzo(a,h)anthracene	0.065	0.065	0.35	mg/kg	ND
HE-05	Benzo(g,h,I)perylene	0.061	0.061	0.35	mg/kg	ND
HE-05	Antimony	1.6	0	0	mg/kg	=
HE-05	Arsenic	6	0	0	mg/kg	=
HE-05	Barium	172	0	0	mg/kg	=
HE-05	Beryllium	0.03	0	0	mg/kg	=
HE-05	Cadmium	4.8	0	0	mg/kg	=
HE-05	CHROMIUM, TOTAL	29.3	0	0	mg/kg	=
HE-05	Lead	31.7	0	0	mg/kg	=
HE-05	Mercury	0.02	0	0	mg/kg	=
HE-05	Nickel	17.2	0	0	mg/kg	=
HE-05	Silver	0.92	0	0	mg/kg	=
HE-05	Thallium	0.22	0	0	mg/kg	=
HE-05	Tin	1.4	0	0	mg/kg	=
HE-05	Zinc	299	0	0	mg/kg	=
HE-05	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.1	mg/kg	ND
HE-05	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.62	0.55	2.1	mg/kg	=
HE-05	1,3,5-Trinitrobenzene	0.62	0.62	2.1	mg/kg	ND
HE-05	1,3-Dinitrobenzene	0.61	0.61	2.1	mg/kg	ND
HE-05	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-05	NITROBENZENE	0.5	0.5	2.1	mg/kg	ND
HE-05	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.1	mg/kg	ND
HE-05	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
HE-05	2,4,6-TRINITROTOLUENE	0.54	0.54	2.1	mg/kg	ND
HE-05	2,6-Dinitrotoluene	0.53	0.53	2.1	mg/kg	ND
HE-05	2,4-Dinitrotoluene	0.57	0.57	2.1	mg/kg	ND
HE-05	2-Nitrotoluene	0.53	0.53	2.1	mg/kg	ND
HE-05	4-Nitrotoluene	0.62	0.62	2.1	mg/kg	ND
HE-05	3-Nitrotoluene	0.97	0.97	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-06	Phenol	0.062	0.062	0.34	mg/kg	ND
HE-06	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
HE-06	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND
HE-06	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
HE-06	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
HE-06	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
HE-06	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
HE-06	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
HE-06	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
HE-06	Hexachloroethane	0.061	0.061	0.34	mg/kg	ND
HE-06	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
HE-06	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
HE-06	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
HE-06	Isophorone	0.06	0.06	0.34	mg/kg	ND
HE-06	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
HE-06	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
HE-06	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
HE-06	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
HE-06	2,4-Dichlorophenol	0.061	0.061	0.34	mg/kg	ND
HE-06	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
HE-06	Naphthalene	0.057	0.057	0.34	mg/kg	ND
HE-06	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
HE-06	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
HE-06	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
HE-06	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
HE-06	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-06	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
HE-06	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
HE-06	2-Chloronaphthalene	0.055	0.055	0.34	mg/kg	ND
HE-06	Acenaphthylene	0.061	0.061	0.34	mg/kg	ND
HE-06	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
HE-06	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
HE-06	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
HE-06	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
HE-06	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
HE-06	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
HE-06	2,4-Dinitrotoluene	0.068	0.068	0.34	mg/kg	ND
HE-06	Fluorene	0.067	0.067	0.34	mg/kg	ND
HE-06	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
HE-06	DIETHYL PHTHALATE	0.058	0.058	0.34	mg/kg	ND
HE-06	4,6-Dinitro-2-methylphenol	0.19	0.19	1.6	mg/kg	ND
HE-06	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
HE-06	1,2-Diphenylhydrazine	0.073	0.073	0.34	mg/kg	ND
HE-06	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
HE-06	Hexachlorobenzene	0.066	0.066	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-06	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
HE-06	Phenanthrene	0.063	0.063	0.34	mg/kg	ND
HE-06	Anthracene	0.064	0.064	0.34	mg/kg	ND
HE-06	DI-n-BUTYL PHTHALATE	0.065	0.065	0.34	mg/kg	ND
HE-06	Fluoranthene	0.058	0.058	0.34	mg/kg	ND
HE-06	Pyrene	0.087	0.087	0.34	mg/kg	ND
HE-06	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
HE-06	Benzo(a)anthracene	0.066	0.066	0.34	mg/kg	ND
HE-06	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
HE-06	Chrysene	0.063	0.063	0.34	mg/kg	ND
HE-06	bis(2-ETHYLHEXYL) PHTHALATE	0.077	0.077	0.34	mg/kg	ND
HE-06	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
HE-06	Benzo(b)fluoranthene	0.073	0.073	0.34	mg/kg	ND
HE-06	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
HE-06	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
HE-06	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
HE-06	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
HE-06	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
HE-06	Antimony	0.4	0	0	mg/kg	=
HE-06	Arsenic	3.5	0	0	mg/kg	=
HE-06	Barium	448	0	0	mg/kg	=
HE-06	Beryllium	0.03	0	0	mg/kg	=
HE-06	Cadmium	1.5	0	0	mg/kg	=
HE-06	CHROMIUM, TOTAL	16	0	0	mg/kg	=
HE-06	Lead	16.5	0	0	mg/kg	=
HE-06	Mercury	0.02	0	0	mg/kg	=
HE-06	Nickel	9.9	0	0	mg/kg	=
HE-06	Silver	0.74	0	0	mg/kg	=
HE-06	Thallium	0.2	0	0	mg/kg	=
HE-06	Tin	0.2	0	0	mg/kg	=
HE-06	Zinc	64	0	0	mg/kg	=
HE-06	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
HE-06	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
HE-06	1,3,5-Trinitrobenzene	0.6	0.6	2.1	mg/kg	ND
HE-06	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-06	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-06	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-06	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-06	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
HE-06	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
HE-06	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-06	2,4-Dinitrotoluene	0.56	0.56	2.1	mg/kg	ND
HE-06	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-06	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
HE-06	3-Nitrotoluene	0.95	0.95	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-07	Phenol	0.62	0.62	3.4	mg/kg	ND
HE-07	bis(2-CHLOROETHYL) ETHER	0.56	0.56	3.4	mg/kg	ND
HE-07	2-Chlorophenol	0.53	0.53	3.4	mg/kg	ND
HE-07	1,3-Dichlorobenzene	0.5	0.5	3.4	mg/kg	ND
HE-07	1,4-Dichlorobenzene	0.54	0.54	3.4	mg/kg	ND
HE-07	Benzyl Alcohol	0.52	0.52	3.4	mg/kg	ND
HE-07	1,2-Dichlorobenzene	0.62	0.62	3.4	mg/kg	ND
HE-07	2,2'-oxybis(1-Chloropropane)	0.53	0.53	3.4	mg/kg	ND
HE-07	2-METHYLPHENOL (o-CRESOL)	0.6	0.6	3.4	mg/kg	ND
HE-07	Hexachloroethane	0.61	0.61	3.4	mg/kg	ND
HE-07	N-NITROSODI-n-PROPYLAMINE	0.61	0.61	3.4	mg/kg	ND
HE-07	4-Methylphenol	0.64	0.64	3.4	mg/kg	ND
HE-07	NITROBENZENE	0.6	0.6	3.4	mg/kg	ND
HE-07	Isophorone	0.6	0.6	3.4	mg/kg	ND
HE-07	2-Nitrophenol	0.56	0.56	3.4	mg/kg	ND
HE-07	2,4-dimethylphenol	0.57	0.57	3.4	mg/kg	ND
HE-07	bis(2-CHLOROETHOXY) METHANE	0.7	0.7	3.4	mg/kg	ND
HE-07	Benzoic Acid	1.9	1.9	16	mg/kg	ND
HE-07	2,4-Dichlorophenol	0.61	0.61	3.4	mg/kg	ND
HE-07	1,2,4-Trichlorobenzene	0.53	0.53	3.4	mg/kg	ND
HE-07	Naphthalene	0.57	0.57	3.4	mg/kg	ND
HE-07	4-Chloroaniline	3.2	3.2	3.4	mg/kg	ND
HE-07	Hexachlorobutadiene	0.61	0.61	3.4	mg/kg	ND
HE-07	4-Chloro-3-methylphenol	0.62	0.62	3.4	mg/kg	ND
HE-07	2-Methylnaphthalene	0.6	0.6	3.4	mg/kg	ND
HE-07	Hexaclorocyclopentadiene	1.8	1.8	3.4	mg/kg	ND
HE-07	2,4,6-Trichlorophenol	0.52	0.52	3.4	mg/kg	ND
HE-07	2,4,5-Trichlorophenol	1.6	1.6	16	mg/kg	ND
HE-07	2-Chloronaphthalene	0.55	0.55	3.4	mg/kg	ND
HE-07	Acenaphthylene	0.61	0.61	3.4	mg/kg	ND
HE-07	DIMETHYL PHTHALATE	0.62	0.62	3.4	mg/kg	ND
HE-07	2,6-Dinitrotoluene	0.62	0.62	3.4	mg/kg	ND
HE-07	Acenaphthene	0.6	0.6	3.4	mg/kg	ND
HE-07	2,4-Dinitrophenol	1.5	1.5	16	mg/kg	ND
HE-07	Dibenzofuran	0.62	0.62	3.4	mg/kg	ND
HE-07	4-Nitrophenol	1.6	1.6	16	mg/kg	ND
HE-07	2,4-Dinitrotoluene	0.68	0.68	3.4	mg/kg	ND
HE-07	Fluorene	0.67	0.67	3.4	mg/kg	ND
HE-07	4-CHLOROPHENYL PHENYL ETHER	0.6	0.6	3.4	mg/kg	ND
HE-07	DIETHYL PHTHALATE	0.58	0.58	3.4	mg/kg	ND
HE-07	4,6-Dinitro-2-methylphenol	1.9	1.9	16	mg/kg	ND
HE-07	N-Nitrosodiphenylamine	0.72	0.72	3.4	mg/kg	ND
HE-07	1,2-Diphenylhydrazine	0.73	0.73	3.4	mg/kg	ND
HE-07	4-BROMOPHENYL PHENYL ETHER	0.68	0.68	3.4	mg/kg	ND
HE-07	Hexachlorobenzene	0.66	0.66	3.4	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-07	Pentachlorophenol	1.2	1.2	16	mg/kg	ND
HE-07	Phenanthrene	0.63	0.63	3.4	mg/kg	ND
HE-07	Anthracene	0.64	0.64	3.4	mg/kg	ND
HE-07	DI-n-BUTYL PHTHALATE	0.65	0.65	3.4	mg/kg	ND
HE-07	Fluoranthene	0.58	0.58	3.4	mg/kg	ND
HE-07	Pyrene	0.87	0.87	3.4	mg/kg	ND
HE-07	Butylbenzylphthalate	0.68	0.68	3.4	mg/kg	ND
HE-07	Benzo(a)anthracene	0.66	0.66	3.4	mg/kg	ND
HE-07	3,3'-Dichlorobenzidine	1.2	1.2	3.4	mg/kg	ND
HE-07	Chrysene	0.63	0.63	3.4	mg/kg	ND
HE-07	bis(2-ETHYLHEXYL) PHTHALATE	0.77	0.77	3.4	mg/kg	ND
HE-07	Di-n-octylphthalate	0.53	0.53	3.4	mg/kg	ND
HE-07	Benzo(b)fluoranthene	0.73	0.73	3.4	mg/kg	ND
HE-07	Benzo(k)fluoranthene	0.69	0.69	3.4	mg/kg	ND
HE-07	Benzo(a)pyrene	0.64	0.64	3.4	mg/kg	ND
HE-07	INDENO(1,2,3-c,d)PYRENE	0.68	0.68	3.4	mg/kg	ND
HE-07	Dibenzo(a,h)anthracene	0.64	0.64	3.4	mg/kg	ND
HE-07	Benzo(g,h,I)perylene	0.6	0.6	3.4	mg/kg	ND
HE-07	Antimony	0.88	0.41	3.1	mg/kg	=
HE-07	Arsenic	4	0.21	2.1	mg/kg	=
HE-07	Barium	734	0.041	0.41	mg/kg	=
HE-07	Beryllium	0.026	0.026	0.21	mg/kg	ND
HE-07	Cadmium	14	0.01	0.21	mg/kg	=
HE-07	CHROMIUM, TOTAL	13.1	0.31	2.1	mg/kg	=
HE-07	Lead	19.4	0.21	2.1	mg/kg	=
HE-07	Mercury	0.021	0.021	0.082	mg/kg	ND
HE-07	Nickel	9.1	0.062	2.1	mg/kg	=
HE-07	Silver	2	0.041	1	mg/kg	=
HE-07	Thallium	0.36	0.21	4.1	mg/kg	=
HE-07	Tin	0.21	0.21	9.2	mg/kg	ND
HE-07	Zinc	103	0.51	4.1	mg/kg	=
HE-07	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
HE-07	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.1	0.54	2.1	mg/kg	=
HE-07	1,3,5-Trinitrobenzene	2.2	0.6	2.1	mg/kg	=
HE-07	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-07	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-07	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-07	4-AMINO-2,6-DINITROTOLUENE	13	0.5	2.1	mg/kg	=
HE-07	2-AMINO-4,6-DINITROTOLUENE	12	0.56	2.1	mg/kg	=
HE-07	2,4,6-TRINITROTOLUENE	270	5.3	21	mg/kg	=
HE-07	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-07	2,4-Dinitrotoluene	1.3	0.56	2.1	mg/kg	=
HE-07	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-07	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
HE-07	3-Nitrotoluene	0.95	0.95	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-08	Phenol	0.062	0.062	0.34	mg/kg	ND
HE-08	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
HE-08	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND
HE-08	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
HE-08	1,4-Dichlorobenzene	0.055	0.055	0.34	mg/kg	ND
HE-08	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
HE-08	1,2-Dichlorobenzene	0.063	0.063	0.34	mg/kg	ND
HE-08	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.34	mg/kg	ND
HE-08	2-METHYLPHENOL (o-CRESOL)	0.061	0.061	0.34	mg/kg	ND
HE-08	Hexachloroethane	0.062	0.062	0.34	mg/kg	ND
HE-08	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
HE-08	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
HE-08	NITROBENZENE	0.061	0.061	0.34	mg/kg	ND
HE-08	Isophorone	0.061	0.061	0.34	mg/kg	ND
HE-08	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
HE-08	2,4-dimethylphenol	0.058	0.058	0.34	mg/kg	ND
HE-08	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
HE-08	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
HE-08	2,4-Dichlorophenol	0.062	0.062	0.34	mg/kg	ND
HE-08	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
HE-08	Naphthalene	0.058	0.058	0.34	mg/kg	ND
HE-08	4-Chloroaniline	0.33	0.33	0.34	mg/kg	ND
HE-08	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
HE-08	4-Chloro-3-methylphenol	0.063	0.063	0.34	mg/kg	ND
HE-08	2-Methylnaphthalene	0.061	0.061	0.34	mg/kg	ND
HE-08	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-08	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
HE-08	2,4,5-Trichlorophenol	0.16	0.16	1.7	mg/kg	ND
HE-08	2-Chloronaphthalene	0.056	0.056	0.34	mg/kg	ND
HE-08	Acenaphthylene	0.062	0.062	0.34	mg/kg	ND
HE-08	DIMETHYL PHTHALATE	0.063	0.063	0.34	mg/kg	ND
HE-08	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
HE-08	Acenaphthene	0.061	0.061	0.34	mg/kg	ND
HE-08	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-08	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
HE-08	4-Nitrophenol	0.16	0.16	0.34	mg/kg	ND
HE-08	2,4-Dinitrotoluene	0.069	0.069	0.34	mg/kg	ND
HE-08	Fluorene	0.068	0.068	0.34	mg/kg	ND
HE-08	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.34	mg/kg	ND
HE-08	DIETHYL PHTHALATE	0.059	0.059	0.34	mg/kg	ND
HE-08	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
HE-08	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
HE-08	1,2-Diphenylhydrazine	0.074	0.074	0.34	mg/kg	ND
HE-08	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
HE-08	Hexachlorobenzene	0.067	0.067	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-08	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
HE-08	Phenanthrene	0.064	0.064	0.34	mg/kg	ND
HE-08	Anthracene	0.065	0.065	0.34	mg/kg	ND
HE-08	DI-n-BUTYL PHTHALATE	0.066	0.066	0.34	mg/kg	ND
HE-08	Fluoranthene	0.059	0.059	0.34	mg/kg	ND
HE-08	Pyrene	0.088	0.088	0.34	mg/kg	ND
HE-08	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
HE-08	Benzo(a)anthracene	0.067	0.067	0.34	mg/kg	ND
HE-08	3,3'-Dichlorobenzidine	0.13	0.13	0.34	mg/kg	ND
HE-08	Chrysene	0.064	0.064	0.34	mg/kg	ND
HE-08	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.34	mg/kg	ND
HE-08	Di-n-octylphthalate	0.054	0.054	0.34	mg/kg	ND
HE-08	Benzo(b)fluoranthene	0.074	0.074	0.34	mg/kg	ND
HE-08	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
HE-08	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
HE-08	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
HE-08	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
HE-08	Benzo(g,h,I)perylene	0.061	0.061	0.34	mg/kg	ND
HE-08	Antimony	0.42	0.42	3.1	mg/kg	ND
HE-08	Arsenic	5.2	0.21	2.1	mg/kg	=
HE-08	Barium	275	0.042	0.42	mg/kg	=
HE-08	Beryllium	0.026	0.026	0.21	mg/kg	ND
HE-08	Cadmium	0.79	0.01	0.21	mg/kg	=
HE-08	CHROMIUM, TOTAL	16.4	0.31	2.1	mg/kg	=
HE-08	Lead	224	0.21	2.1	mg/kg	=
HE-08	Mercury	0.021	0.021	0.083	mg/kg	ND
HE-08	Nickel	12	0.062	2.1	mg/kg	=
HE-08	Silver	0.87	0.042	1	mg/kg	=
HE-08	Thallium	0.21	0.21	4.2	mg/kg	ND
HE-08	Tin	0.33	0.21	9.4	mg/kg	=
HE-08	Zinc	60.4	0.52	4.2	mg/kg	=
HE-08	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.1	0.55	2.1	mg/kg	=
HE-08	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	11	0.54	2.1	mg/kg	=
HE-08	1,3,5-Trinitrobenzene	0.6	0.6	2.1	mg/kg	ND
HE-08	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-08	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-08	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-08	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-08	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
HE-08	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
HE-08	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-08	2,4-Dinitrotoluene	0.56	0.56	2.1	mg/kg	ND
HE-08	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-08	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
HE-08	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-09	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
HE-09	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
HE-09	1,3,5-Trinitrobenzene	0.6	0.6	2.1	mg/kg	ND
HE-09	1,3-Dinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-09	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-09	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-09	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-09	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
HE-09	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
HE-09	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-09	2,4-Dinitrotoluene	0.56	0.56	2.1	mg/kg	ND
HE-09	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-09	4-Nitrotoluene	0.6	0.6	2.1	mg/kg	ND
HE-09	3-Nitrotoluene	0.94	0.94	2.1	mg/kg	ND
HE-10	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.54	0.54	2	mg/kg	ND
HE-10	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.53	0.53	2	mg/kg	ND
HE-10	1,3,5-Trinitrobenzene	0.6	0.6	2	mg/kg	ND
HE-10	1,3-Dinitrobenzene	0.58	0.58	2	mg/kg	ND
HE-10	TETRYL	1.1	1.1	2	mg/kg	ND
HE-10	NITROBENZENE	0.48	0.48	2	mg/kg	ND
HE-10	4-AMINO-2,6-DINITROTOLUENE	0.49	0.49	2	mg/kg	ND
HE-10	2-AMINO-4,6-DINITROTOLUENE	0.55	0.55	2	mg/kg	ND
HE-10	2,4,6-TRINITROTOLUENE	0.52	0.52	2	mg/kg	ND
HE-10	2,6-Dinitrotoluene	0.51	0.51	2	mg/kg	ND
HE-10	2,4-Dinitrotoluene	0.55	0.55	2	mg/kg	ND
HE-10	2-Nitrotoluene	0.51	0.51	2	mg/kg	ND
HE-10	4-Nitrotoluene	0.6	0.6	2	mg/kg	ND
HE-10	3-Nitrotoluene	0.94	0.94	2	mg/kg	ND
HE-12	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.54	0.54	2.1	mg/kg	ND
HE-12	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.53	0.53	2.1	mg/kg	ND
HE-12	1,3,5-Trinitrobenzene	0.59	0.59	2.1	mg/kg	ND
HE-12	1,3-Dinitrobenzene	0.58	0.58	2.1	mg/kg	ND
HE-12	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-12	NITROBENZENE	4.8	0.48	2.1	mg/kg	=
HE-12	4-AMINO-2,6-DINITROTOLUENE	0.49	0.49	2.1	mg/kg	ND
HE-12	2-AMINO-4,6-DINITROTOLUENE	0.55	0.55	2.1	mg/kg	ND
HE-12	2,4,6-TRINITROTOLUENE	0.52	0.52	2.1	mg/kg	ND
HE-12	2,6-Dinitrotoluene	0.51	0.51	2.1	mg/kg	ND
HE-12	2,4-Dinitrotoluene	0.55	0.55	2.1	mg/kg	ND
HE-12	2-Nitrotoluene	0.51	0.51	2.1	mg/kg	ND
HE-12	4-Nitrotoluene	0.59	0.59	2.1	mg/kg	ND
HE-12	3-Nitrotoluene	0.94	0.94	2.1	mg/kg	ND
HE-13	Phenol	0.064	0.064	0.35	mg/kg	ND
HE-13	bis(2-CHLOROETHYL) ETHER	0.057	0.057	0.35	mg/kg	ND
HE-13	2-Chlorophenol	0.055	0.055	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-13	1,3-Dichlorobenzene	0.051	0.051	0.35	mg/kg	ND
HE-13	1,4-Dichlorobenzene	0.056	0.056	0.35	mg/kg	ND
HE-13	Benzyl Alcohol	0.053	0.053	0.35	mg/kg	ND
HE-13	1,2-Dichlorobenzene	0.064	0.064	0.35	mg/kg	ND
HE-13	2,2'-oxybis(1-Chloropropane)	0.055	0.055	0.35	mg/kg	ND
HE-13	2-METHYLPHENOL (o-CRESOL)	0.062	0.062	0.35	mg/kg	ND
HE-13	Hexachloroethane	0.063	0.063	0.35	mg/kg	ND
HE-13	N-NITROSODI-n-PROPYLAMINE	0.063	0.063	0.35	mg/kg	ND
HE-13	4-Methylphenol	0.066	0.066	0.35	mg/kg	ND
HE-13	NITROBENZENE	0.062	0.062	0.35	mg/kg	ND
HE-13	Isophorone	0.062	0.062	0.35	mg/kg	ND
HE-13	2-Nitrophenol	0.057	0.057	0.35	mg/kg	ND
HE-13	2,4-dimethylphenol	0.059	0.059	0.35	mg/kg	ND
HE-13	bis(2-CHLOROETHOXY) METHANE	0.072	0.072	0.35	mg/kg	ND
HE-13	Benzoic Acid	2.4	0.2	1.7	mg/kg	=
HE-13	2,4-Dichlorophenol	0.063	0.063	0.35	mg/kg	ND
HE-13	1,2,4-Trichlorobenzene	0.055	0.055	0.35	mg/kg	ND
HE-13	Naphthalene	0.059	0.059	0.35	mg/kg	ND
HE-13	4-Chloroaniline	0.33	0.33	0.35	mg/kg	ND
HE-13	Hexachlorobutadiene	0.063	0.063	0.35	mg/kg	ND
HE-13	4-Chloro-3-methylphenol	0.064	0.064	0.35	mg/kg	ND
HE-13	2-Methylnaphthalene	0.062	0.062	0.35	mg/kg	ND
HE-13	Hexaclorocyclopentadiene	0.19	0.19	0.35	mg/kg	ND
HE-13	2,4,6-Trichlorophenol	0.054	0.054	0.35	mg/kg	ND
HE-13	2,4,5-Trichlorophenol	0.17	0.17	1.7	mg/kg	ND
HE-13	2-Chloronaphthalene	0.057	0.057	0.35	mg/kg	ND
HE-13	Acenaphthylene	0.063	0.063	0.35	mg/kg	ND
HE-13	DIMETHYL PHTHALATE	0.064	0.064	0.35	mg/kg	ND
HE-13	2,6-Dinitrotoluene	0.62	0.063	0.35	mg/kg	=
HE-13	Acenaphthene	0.062	0.062	0.35	mg/kg	ND
HE-13	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-13	Dibenzofuran	0.064	0.064	0.35	mg/kg	ND
HE-13	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-13	2,4-Dinitrotoluene	0.27	0.07	0.35	mg/kg	=
HE-13	Fluorene	0.07	0.07	0.35	mg/kg	ND
HE-13	4-CHLOROPHENYL PHENYL ETHER	0.062	0.062	0.35	mg/kg	ND
HE-13	DIETHYL PHTHALATE	0.06	0.06	0.35	mg/kg	ND
HE-13	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
HE-13	N-Nitrosodiphenylamine	0.074	0.074	0.35	mg/kg	ND
HE-13	1,2-Diphenylhydrazine	0.075	0.075	0.35	mg/kg	ND
HE-13	4-BROMOPHENYL PHENYL ETHER	0.07	0.07	0.35	mg/kg	ND
HE-13	Hexachlorobenzene	0.068	0.068	0.35	mg/kg	ND
HE-13	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
HE-13	Phenanthrene	0.065	0.065	0.35	mg/kg	ND
HE-13	Anthracene	0.066	0.066	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-13	DI-n-BUTYL PHTHALATE	0.067	0.067	0.35	mg/kg	ND
HE-13	Fluoranthene	0.06	0.06	0.35	mg/kg	ND
HE-13	Pyrene	0.09	0.09	0.35	mg/kg	ND
HE-13	Butylbenzylphthalate	0.07	0.07	0.35	mg/kg	ND
HE-13	Benzo(a)anthracene	0.068	0.068	0.35	mg/kg	ND
HE-13	3,3'-Dichlorobenzidine	0.13	0.13	0.35	mg/kg	ND
HE-13	Chrysene	0.065	0.065	0.35	mg/kg	ND
HE-13	bis(2-ETHYLHEXYL) PHTHALATE	0.079	0.079	0.35	mg/kg	ND
HE-13	Di-n-octylphthalate	0.055	0.055	0.35	mg/kg	ND
HE-13	Benzo(b)fluoranthene	0.076	0.076	0.35	mg/kg	ND
HE-13	Benzo(k)fluoranthene	0.071	0.071	0.35	mg/kg	ND
HE-13	Benzo(a)pyrene	0.066	0.066	0.35	mg/kg	ND
HE-13	INDENO(1,2,3-c,d)PYRENE	0.07	0.07	0.35	mg/kg	ND
HE-13	Dibenzo(a,h)anthracene	0.066	0.066	0.35	mg/kg	ND
HE-13	Benzo(g,h,I)perylene	0.062	0.062	0.35	mg/kg	ND
HE-13	Antimony	0.95	0.95	7.1	mg/kg	ND
HE-13	Arsenic	6.8	0.47	4.7	mg/kg	=
HE-13	Barium	386	0.095	0.95	mg/kg	=
HE-13	Beryllium	0.32	0.059	0.47	mg/kg	=
HE-13	Cadmium	1.1	0.024	0.47	mg/kg	=
HE-13	CHROMIUM, TOTAL	18	0.71	4.7	mg/kg	=
HE-13	Lead	28.9	0.47	4.7	mg/kg	=
HE-13	Mercury	0.021	0.021	0.085	mg/kg	ND
HE-13	Nickel	17.8	0.14	4.7	mg/kg	=
HE-13	Silver	0.78	0.095	2.4	mg/kg	=
HE-13	Thallium	0.47	0.47	9.5	mg/kg	ND
HE-13	Tin	0.47	0.47	21	mg/kg	ND
HE-13	Zinc	61.2	1.2	9.5	mg/kg	=
HE-13	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.57	0.57	2.2	mg/kg	ND
HE-13	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.56	0.56	2.2	mg/kg	ND
HE-13	1,3,5-Trinitrobenzene	0.62	0.62	2.2	mg/kg	ND
HE-13	1,3-Dinitrobenzene	0.61	0.61	2.2	mg/kg	ND
HE-13	TETRYL	1.1	1.1	2.2	mg/kg	ND
HE-13	NITROBENZENE	0.5	0.5	2.2	mg/kg	ND
HE-13	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.2	mg/kg	ND
HE-13	2-AMINO-4,6-DINITROTOLUENE	0.58	0.58	2.2	mg/kg	ND
HE-13	2,4,6-TRINITROTOLUENE	0.54	0.54	2.2	mg/kg	ND
HE-13	2,6-Dinitrotoluene	0.53	0.53	2.2	mg/kg	ND
HE-13	2,4-Dinitrotoluene	0.58	0.58	2.2	mg/kg	ND
HE-13	2-Nitrotoluene	0.53	0.53	2.2	mg/kg	ND
HE-13	4-Nitrotoluene	0.63	0.62	2.2	mg/kg	=
HE-13	3-Nitrotoluene	0.98	0.98	2.2	mg/kg	ND
HE-14	Phenol	0.062	0.062	0.34	mg/kg	ND
HE-14	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
HE-14	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-14	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
HE-14	1,4-Dichlorobenzene	0.055	0.055	0.34	mg/kg	ND
HE-14	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
HE-14	1,2-Dichlorobenzene	0.063	0.063	0.34	mg/kg	ND
HE-14	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.34	mg/kg	ND
HE-14	2-METHYLPHENOL (o-CRESOL)	0.061	0.061	0.34	mg/kg	ND
HE-14	Hexachloroethane	0.062	0.062	0.34	mg/kg	ND
HE-14	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
HE-14	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
HE-14	NITROBENZENE	0.061	0.061	0.34	mg/kg	ND
HE-14	Isophorone	0.061	0.061	0.34	mg/kg	ND
HE-14	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
HE-14	2,4-dimethylphenol	0.058	0.058	0.34	mg/kg	ND
HE-14	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
HE-14	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
HE-14	2,4-Dichlorophenol	0.062	0.062	0.34	mg/kg	ND
HE-14	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
HE-14	Naphthalene	0.058	0.058	0.34	mg/kg	ND
HE-14	4-Chloroaniline	0.33	0.33	0.34	mg/kg	ND
HE-14	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
HE-14	4-Chloro-3-methylphenol	0.063	0.063	0.34	mg/kg	ND
HE-14	2-Methylnaphthalene	0.061	0.061	0.34	mg/kg	ND
HE-14	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-14	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
HE-14	2,4,5-Trichlorophenol	0.16	0.16	1.7	mg/kg	ND
HE-14	2-Chloronaphthalene	0.056	0.056	0.34	mg/kg	ND
HE-14	Acenaphthylene	0.062	0.062	0.34	mg/kg	ND
HE-14	DIMETHYL PHTHALATE	0.063	0.063	0.34	mg/kg	ND
HE-14	2,6-Dinitrotoluene	0.066	0.062	0.34	mg/kg	=
HE-14	Acenaphthene	0.061	0.061	0.34	mg/kg	ND
HE-14	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-14	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
HE-14	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
HE-14	2,4-Dinitrotoluene	0.5	0.069	0.34	mg/kg	=
HE-14	Fluorene	0.068	0.068	0.34	mg/kg	ND
HE-14	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.34	mg/kg	ND
HE-14	DIETHYL PHTHALATE	0.059	0.059	0.34	mg/kg	ND
HE-14	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
HE-14	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
HE-14	1,2-Diphenylhydrazine	0.074	0.074	0.34	mg/kg	ND
HE-14	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
HE-14	Hexachlorobenzene	0.067	0.067	0.34	mg/kg	ND
HE-14	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
HE-14	Phenanthrene	0.064	0.064	0.34	mg/kg	ND
HE-14	Anthracene	0.065	0.065	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-14	DI-n-BUTYL PHTHALATE	0.066	0.066	0.34	mg/kg	ND
HE-14	Fluoranthene	0.059	0.059	0.34	mg/kg	ND
HE-14	Pyrene	0.088	0.088	0.34	mg/kg	ND
HE-14	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
HE-14	Benzo(a)anthracene	0.067	0.067	0.34	mg/kg	ND
HE-14	3,3'-Dichlorobenzidine	0.13	0.13	0.34	mg/kg	ND
HE-14	Chrysene	0.064	0.064	0.34	mg/kg	ND
HE-14	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.34	mg/kg	ND
HE-14	Di-n-octylphthalate	0.054	0.054	0.34	mg/kg	ND
HE-14	Benzo(b)fluoranthene	0.074	0.074	0.34	mg/kg	ND
HE-14	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
HE-14	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
HE-14	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
HE-14	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
HE-14	Benzo(g,h,I)perylene	0.061	0.061	0.34	mg/kg	ND
HE-14	Antimony	1	0.84	6.3	mg/kg	=
HE-14	Arsenic	6.5	0.42	4.2	mg/kg	=
HE-14	Barium	268	0.084	0.84	mg/kg	=
HE-14	Beryllium	0.26	0.052	0.42	mg/kg	=
HE-14	Cadmium	0.24	0.021	0.42	mg/kg	=
HE-14	CHROMIUM, TOTAL	14.9	0.63	4.2	mg/kg	=
HE-14	Lead	14.4	0.42	4.2	mg/kg	=
HE-14	Mercury	0.021	0.021	0.084	mg/kg	ND
HE-14	Nickel	18.6	0.13	4.2	mg/kg	=
HE-14	Silver	0.78	0.084	2.1	mg/kg	=
HE-14	Thallium	0.42	0.42	8.4	mg/kg	ND
HE-14	Tin	0.42	0.42	19	mg/kg	ND
HE-14	Zinc	51.5	1	8.4	mg/kg	=
HE-14	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
HE-14	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	7	0.54	2.1	mg/kg	=
HE-14	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
HE-14	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
HE-14	TETRYL	1.1	1.1	2.1	mg/kg	ND
HE-14	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
HE-14	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
HE-14	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
HE-14	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
HE-14	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-14	2,4-Dinitrotoluene	1.1	0.57	2.1	mg/kg	=
HE-14	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
HE-14	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
HE-14	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND
HE-15	Phenol	0.62	0.62	3.4	mg/kg	ND
HE-15	bis(2-CHLOROETHYL) ETHER	0.56	0.56	3.4	mg/kg	ND
HE-15	2-Chlorophenol	0.53	0.53	3.4	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-15	1,3-Dichlorobenzene	0.5	0.5	3.4	mg/kg	ND
HE-15	1,4-Dichlorobenzene	0.55	0.55	3.4	mg/kg	ND
HE-15	Benzyl Alcohol	0.52	0.52	3.4	mg/kg	ND
HE-15	1,2-Dichlorobenzene	0.63	0.63	3.4	mg/kg	ND
HE-15	2,2'-oxybis(1-Chloropropane)	0.54	0.54	3.4	mg/kg	ND
HE-15	2-METHYLPHENOL (o-CRESOL)	0.61	0.61	3.4	mg/kg	ND
HE-15	Hexachloroethane	0.62	0.62	3.4	mg/kg	ND
HE-15	N-NITROSODI-n-PROPYLAMINE	0.61	0.61	3.4	mg/kg	ND
HE-15	4-Methylphenol	0.64	0.64	3.4	mg/kg	ND
HE-15	NITROBENZENE	0.61	0.61	3.4	mg/kg	ND
HE-15	Isophorone	0.61	0.61	3.4	mg/kg	ND
HE-15	2-Nitrophenol	0.56	0.56	3.4	mg/kg	ND
HE-15	2,4-dimethylphenol	0.58	0.58	3.4	mg/kg	ND
HE-15	bis(2-CHLOROETHOXY) METHANE	0.7	0.7	3.4	mg/kg	ND
HE-15	Benzoic Acid	1.9	1.9	17	mg/kg	ND
HE-15	2,4-Dichlorophenol	0.62	0.62	3.4	mg/kg	ND
HE-15	1,2,4-Trichlorobenzene	0.53	0.53	3.4	mg/kg	ND
HE-15	Naphthalene	0.58	0.58	3.4	mg/kg	ND
HE-15	4-Chloroaniline	3.3	3.3	3.4	mg/kg	ND
HE-15	Hexachlorobutadiene	0.61	0.61	3.4	mg/kg	ND
HE-15	4-Chloro-3-methylphenol	0.63	0.63	3.4	mg/kg	ND
HE-15	2-Methylnaphthalene	0.61	0.61	3.4	mg/kg	ND
HE-15	Hexaclorocyclopentadiene	1.8	1.8	3.4	mg/kg	ND
HE-15	2,4,6-Trichlorophenol	0.52	0.52	3.4	mg/kg	ND
HE-15	2,4,5-Trichlorophenol	1.6	1.6	17	mg/kg	ND
HE-15	2-Chloronaphthalene	0.56	0.56	3.4	mg/kg	ND
HE-15	Acenaphthylene	0.62	0.62	3.4	mg/kg	ND
HE-15	DIMETHYL PHTHALATE	0.63	0.63	3.4	mg/kg	ND
HE-15	2,6-Dinitrotoluene	0.62	0.62	3.4	mg/kg	ND
HE-15	Acenaphthene	0.61	0.61	3.4	mg/kg	ND
HE-15	2,4-Dinitrophenol	1.6	1.6	17	mg/kg	ND
HE-15	Dibenzofuran	0.62	0.62	3.4	mg/kg	ND
HE-15	4-Nitrophenol	1.6	1.6	17	mg/kg	ND
HE-15	2,4-Dinitrotoluene	0.69	0.69	3.4	mg/kg	ND
HE-15	Fluorene	0.68	0.68	3.4	mg/kg	ND
HE-15	4-CHLOROPHENYL PHENYL ETHER	0.61	0.61	3.4	mg/kg	ND
HE-15	DIETHYL PHTHALATE	0.59	0.59	3.4	mg/kg	ND
HE-15	4,6-Dinitro-2-methylphenol	1.9	1.9	17	mg/kg	ND
HE-15	N-Nitrosodiphenylamine	0.72	0.72	3.4	mg/kg	ND
HE-15	1,2-Diphenylhydrazine	0.74	0.74	3.4	mg/kg	ND
HE-15	4-BROMOPHENYL PHENYL ETHER	0.68	0.68	3.4	mg/kg	ND
HE-15	Hexachlorobenzene	0.67	0.67	3.4	mg/kg	ND
HE-15	Pentachlorophenol	1.2	1.2	17	mg/kg	ND
HE-15	Phenanthrene	0.64	0.64	3.4	mg/kg	ND
HE-15	Anthracene	0.65	0.65	3.4	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-15	DI-n-BUTYL PHTHALATE	0.66	0.66	3.4	mg/kg	ND
HE-15	Fluoranthene	0.59	0.59	3.4	mg/kg	ND
HE-15	Pyrene	0.88	0.88	3.4	mg/kg	ND
HE-15	Butylbenzylphthalate	0.68	0.68	3.4	mg/kg	ND
HE-15	Benzo(a)anthracene	0.67	0.67	3.4	mg/kg	ND
HE-15	3,3'-Dichlorobenzidine	1.3	1.3	3.4	mg/kg	ND
HE-15	Chrysene	0.64	0.64	3.4	mg/kg	ND
HE-15	bis(2-ETHYLHEXYL) PHTHALATE	0.78	0.78	3.4	mg/kg	ND
HE-15	Di-n-octylphthalate	0.54	0.54	3.4	mg/kg	ND
HE-15	Benzo(b)fluoranthene	0.74	0.74	3.4	mg/kg	ND
HE-15	Benzo(k)fluoranthene	0.69	0.69	3.4	mg/kg	ND
HE-15	Benzo(a)pyrene	0.64	0.64	3.4	mg/kg	ND
HE-15	INDENO(1,2,3-c,d)PYRENE	0.68	0.68	3.4	mg/kg	ND
HE-15	Dibenzo(a,h)anthracene	0.64	0.64	3.4	mg/kg	ND
HE-15	Benzo(g,h,I)perylene	0.61	0.61	3.4	mg/kg	ND
HE-15	Antimony	1.4	0.83	6.2	mg/kg	=
HE-15	Arsenic	8.6	0.42	4.2	mg/kg	=
HE-15	Barium	1290	0.083	0.83	mg/kg	=
HE-15	Beryllium	0.052	0.052	0.42	mg/kg	ND
HE-15	Cadmium	6.1	0.021	0.42	mg/kg	=
HE-15	CHROMIUM, TOTAL	23.3	0.62	4.2	mg/kg	=
HE-15	Lead	43.3	0.42	4.2	mg/kg	=
HE-15	Mercury	0.021	0.021	0.083	mg/kg	ND
HE-15	Nickel	16.7	0.12	4.2	mg/kg	=
HE-15	Silver	1	0.083	2.1	mg/kg	=
HE-15	Thallium	0.42	0.42	8.3	mg/kg	ND
HE-15	Tin	0.42	0.42	19	mg/kg	ND
HE-15	Zinc	141	1	8.3	mg/kg	=
HE-15	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2	mg/kg	ND
HE-15	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2	mg/kg	ND
HE-15	1,3,5-Trinitrobenzene	0.6	0.6	2	mg/kg	ND
HE-15	1,3-Dinitrobenzene	0.59	0.59	2	mg/kg	ND
HE-15	TETRYL	1.1	1.1	2	mg/kg	ND
HE-15	NITROBENZENE	0.49	0.49	2	mg/kg	ND
HE-15	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2	mg/kg	ND
HE-15	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2	mg/kg	ND
HE-15	2,4,6-TRINITROTOLUENE	0.53	0.53	2	mg/kg	ND
HE-15	2,6-Dinitrotoluene	0.52	0.52	2	mg/kg	ND
HE-15	2,4-Dinitrotoluene	0.56	0.56	2	mg/kg	ND
HE-15	2-Nitrotoluene	0.52	0.52	2	mg/kg	ND
HE-15	4-Nitrotoluene	0.6	0.6	2	mg/kg	ND
HE-15	3-Nitrotoluene	0.95	0.95	2	mg/kg	ND
HE-16	Phenol	0.061	0.061	0.34	mg/kg	ND
HE-16	bis(2-CHLOROETHYL) ETHER	0.055	0.055	0.34	mg/kg	ND
HE-16	2-Chlorophenol	0.052	0.052	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-16	1,3-Dichlorobenzene	0.049	0.049	0.34	mg/kg	ND
HE-16	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
HE-16	Benzyl Alcohol	0.051	0.051	0.34	mg/kg	ND
HE-16	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
HE-16	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
HE-16	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
HE-16	Hexachloroethane	0.06	0.06	0.34	mg/kg	ND
HE-16	N-NITROSODI-n-PROPYLAMINE	0.06	0.06	0.34	mg/kg	ND
HE-16	4-Methylphenol	0.063	0.063	0.34	mg/kg	ND
HE-16	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
HE-16	Isophorone	0.06	0.06	0.34	mg/kg	ND
HE-16	2-Nitrophenol	0.055	0.055	0.34	mg/kg	ND
HE-16	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
HE-16	bis(2-CHLOROETHOXY) METHANE	0.069	0.069	0.34	mg/kg	ND
HE-16	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
HE-16	2,4-Dichlorophenol	0.06	0.06	0.34	mg/kg	ND
HE-16	1,2,4-Trichlorobenzene	0.052	0.052	0.34	mg/kg	ND
HE-16	Naphthalene	0.057	0.057	0.34	mg/kg	ND
HE-16	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
HE-16	Hexachlorobutadiene	0.06	0.06	0.34	mg/kg	ND
HE-16	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
HE-16	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
HE-16	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
HE-16	2,4,6-Trichlorophenol	0.051	0.051	0.34	mg/kg	ND
HE-16	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
HE-16	2-Chloronaphthalene	0.054	0.054	0.34	mg/kg	ND
HE-16	Acenaphthylene	0.06	0.06	0.34	mg/kg	ND
HE-16	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
HE-16	2,6-Dinitrotoluene	0.061	0.061	0.34	mg/kg	ND
HE-16	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
HE-16	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
HE-16	Dibenzofuran	0.061	0.061	0.34	mg/kg	ND
HE-16	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
HE-16	2,4-Dinitrotoluene	0.067	0.067	0.34	mg/kg	ND
HE-16	Fluorene	0.067	0.067	0.34	mg/kg	ND
HE-16	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
HE-16	DIETHYL PHTHALATE	0.058	0.058	0.34	mg/kg	ND
HE-16	4,6-Dinitro-2-methylphenol	0.18	0.18	1.6	mg/kg	ND
HE-16	N-Nitrosodiphenylamine	0.071	0.071	0.34	mg/kg	ND
HE-16	1,2-Diphenylhydrazine	0.072	0.072	0.34	mg/kg	ND
HE-16	4-BROMOPHENYL PHENYL ETHER	0.067	0.067	0.34	mg/kg	ND
HE-16	Hexachlorobenzene	0.065	0.065	0.34	mg/kg	ND
HE-16	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
HE-16	Phenanthrene	0.062	0.062	0.34	mg/kg	ND
HE-16	Anthracene	0.064	0.064	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
HE-16	DI-n-BUTYL PHTHALATE	0.074	0.065	0.34	mg/kg	=
HE-16	Fluoranthene	0.057	0.057	0.34	mg/kg	ND
HE-16	Pyrene	0.086	0.086	0.34	mg/kg	ND
HE-16	Butylbenzylphthalate	0.067	0.067	0.34	mg/kg	ND
HE-16	Benzo(a)anthracene	0.065	0.065	0.34	mg/kg	ND
HE-16	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
HE-16	Chrysene	0.062	0.062	0.34	mg/kg	ND
HE-16	bis(2-ETHYLHEXYL) PHTHALATE	0.076	0.076	0.34	mg/kg	ND
HE-16	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
HE-16	Benzo(b)fluoranthene	0.072	0.072	0.34	mg/kg	ND
HE-16	Benzo(k)fluoranthene	0.068	0.068	0.34	mg/kg	ND
HE-16	Benzo(a)pyrene	0.063	0.063	0.34	mg/kg	ND
HE-16	INDENO(1,2,3-c,d)PYRENE	0.067	0.067	0.34	mg/kg	ND
HE-16	Dibenzo(a,h)anthracene	0.063	0.063	0.34	mg/kg	ND
HE-16	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
HE-16	Antimony	1.4	0.41	3.1	mg/kg	=
HE-16	Arsenic	3.2	0.2	2	mg/kg	=
HE-16	Barium	192	0.041	0.41	mg/kg	=
HE-16	Beryllium	0.026	0.026	0.2	mg/kg	ND
HE-16	Cadmium	0.9	0.01	0.2	mg/kg	=
HE-16	CHROMIUM, TOTAL	32.7	0.31	2	mg/kg	=
HE-16	Lead	29.7	0.2	2	mg/kg	=
HE-16	Mercury	0.02	0.02	0.082	mg/kg	ND
HE-16	Nickel	13.5	0.061	2	mg/kg	=
HE-16	Silver	0.65	0.041	1	mg/kg	=
HE-16	Thallium	0.36	0.2	4.1	mg/kg	=
HE-16	Tin	0.2	0.2	9.2	mg/kg	ND
HE-16	Zinc	57.6	0.51	4.1	mg/kg	=
HE-16	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.57	0.57	2.2	mg/kg	ND
HE-16	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1	0.55	2.2	mg/kg	=
HE-16	1,3,5-Trinitrobenzene	0.62	0.62	2.2	mg/kg	ND
HE-16	1,3-Dinitrobenzene	0.61	0.61	2.2	mg/kg	ND
HE-16	TETRYL	1.1	1.1	2.2	mg/kg	ND
HE-16	NITROBENZENE	0.5	0.5	2.2	mg/kg	ND
HE-16	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.2	mg/kg	ND
HE-16	2-AMINO-4,6-DINITROTOLUENE	0.58	0.58	2.2	mg/kg	ND
HE-16	2,4,6-TRINITROTOLUENE	0.54	0.54	2.2	mg/kg	ND
HE-16	2,6-Dinitrotoluene	0.53	0.53	2.2	mg/kg	ND
HE-16	2,4-Dinitrotoluene	0.58	0.58	2.2	mg/kg	ND
HE-16	2-Nitrotoluene	0.53	0.53	2.2	mg/kg	ND
HE-16	4-Nitrotoluene	0.62	0.62	2.2	mg/kg	ND
HE-16	3-Nitrotoluene	0.98	0.98	2.2	mg/kg	ND
BOG-01	Phenol	0.062	0.062	0.34	mg/kg	ND
BOG-01	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
BOG-01	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-01	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
BOG-01	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
BOG-01	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
BOG-01	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
BOG-01	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
BOG-01	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
BOG-01	Hexachloroethane	0.061	0.061	0.34	mg/kg	ND
BOG-01	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
BOG-01	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
BOG-01	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
BOG-01	Isophorone	0.06	0.06	0.34	mg/kg	ND
BOG-01	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
BOG-01	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
BOG-01	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
BOG-01	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
BOG-01	2,4-Dichlorophenol	0.061	0.061	0.34	mg/kg	ND
BOG-01	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
BOG-01	Naphthalene	0.057	0.057	0.34	mg/kg	ND
BOG-01	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
BOG-01	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
BOG-01	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
BOG-01	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
BOG-01	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
BOG-01	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
BOG-01	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
BOG-01	2-Chloronaphthalene	0.055	0.055	0.34	mg/kg	ND
BOG-01	Acenaphthylene	0.061	0.061	0.34	mg/kg	ND
BOG-01	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
BOG-01	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
BOG-01	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
BOG-01	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
BOG-01	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
BOG-01	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
BOG-01	2,4-Dinitrotoluene	0.068	0.068	0.34	mg/kg	ND
BOG-01	Fluorene	0.067	0.067	0.34	mg/kg	ND
BOG-01	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
BOG-01	DIETHYL PHTHALATE	0.058	0.058	0.34	mg/kg	ND
BOG-01	4,6-Dinitro-2-methylphenol	0.19	0.19	1.6	mg/kg	ND
BOG-01	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
BOG-01	1,2-Diphenylhydrazine	0.073	0.073	0.34	mg/kg	ND
BOG-01	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
BOG-01	Hexachlorobenzene	0.066	0.066	0.34	mg/kg	ND
BOG-01	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
BOG-01	Phenanthrene	0.063	0.063	0.34	mg/kg	ND
BOG-01	Anthracene	0.064	0.064	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-01	DI-n-BUTYL PHTHALATE	0.065	0.065	0.34	mg/kg	ND
BOG-01	Fluoranthene	0.058	0.058	0.34	mg/kg	ND
BOG-01	Pyrene	0.087	0.087	0.34	mg/kg	ND
BOG-01	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
BOG-01	Benzo(a)anthracene	0.066	0.066	0.34	mg/kg	ND
BOG-01	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
BOG-01	Chrysene	0.063	0.063	0.34	mg/kg	ND
BOG-01	bis(2-ETHYLHEXYL) PHTHALATE	0.077	0.077	0.34	mg/kg	ND
BOG-01	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
BOG-01	Benzo(b)fluoranthene	0.073	0.073	0.34	mg/kg	ND
BOG-01	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
BOG-01	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
BOG-01	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
BOG-01	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
BOG-01	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
BOG-01	Antimony	0.43	0.41	3.1	mg/kg	=
BOG-01	Arsenic	4.6	0.21	2.1	mg/kg	=
BOG-01	Barium	198	0.041	0.41	mg/kg	=
BOG-01	Beryllium	0.16	0.026	0.21	mg/kg	=
BOG-01	Cadmium	4.9	0.01	0.21	mg/kg	=
BOG-01	CHROMIUM, TOTAL	10.5	0.31	2.1	mg/kg	=
BOG-01	Lead	10	0.21	2.1	mg/kg	=
BOG-01	Mercury	0.021	0.021	0.082	mg/kg	ND
BOG-01	Nickel	11.6	0.062	2.1	mg/kg	=
BOG-01	Silver	0.53	0.041	1	mg/kg	=
BOG-01	Thallium	0.21	0.21	4.1	mg/kg	ND
BOG-01	Tin	0.21	0.21	9.3	mg/kg	ND
BOG-01	Zinc	41.7	0.51	4.1	mg/kg	=
BOG-01	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.1	mg/kg	ND
BOG-01	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.55	0.55	2.1	mg/kg	ND
BOG-01	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
BOG-01	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
BOG-01	TETRYL	1.1	1.1	2.1	mg/kg	ND
BOG-01	NITROBENZENE	0.5	0.5	2.1	mg/kg	ND
BOG-01	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.1	mg/kg	ND
BOG-01	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
BOG-01	2,4,6-TRINITROTOLUENE	0.54	0.54	2.1	mg/kg	ND
BOG-01	2,6-Dinitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-01	2,4-Dinitrotoluene	0.57	0.57	2.1	mg/kg	ND
BOG-01	2-Nitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-01	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
BOG-01	3-Nitrotoluene	0.97	0.97	2.1	mg/kg	ND
BOG-02	Phenol	0.064	0.064	0.35	mg/kg	ND
BOG-02	bis(2-CHLOROETHYL) ETHER	0.057	0.057	0.35	mg/kg	ND
BOG-02	2-Chlorophenol	0.055	0.055	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-02	1,3-Dichlorobenzene	0.051	0.051	0.35	mg/kg	ND
BOG-02	1,4-Dichlorobenzene	0.056	0.056	0.35	mg/kg	ND
BOG-02	Benzyl Alcohol	0.053	0.053	0.35	mg/kg	ND
BOG-02	1,2-Dichlorobenzene	0.064	0.064	0.35	mg/kg	ND
BOG-02	2,2'-oxybis(1-Chloropropane)	0.055	0.055	0.35	mg/kg	ND
BOG-02	2-METHYLPHENOL (o-CRESOL)	0.062	0.062	0.35	mg/kg	ND
BOG-02	Hexachloroethane	0.063	0.063	0.35	mg/kg	ND
BOG-02	N-NITROSODI-n-PROPYLAMINE	0.063	0.063	0.35	mg/kg	ND
BOG-02	4-Methylphenol	0.066	0.066	0.35	mg/kg	ND
BOG-02	NITROBENZENE	0.062	0.062	0.35	mg/kg	ND
BOG-02	Isophorone	0.062	0.062	0.35	mg/kg	ND
BOG-02	2-Nitrophenol	0.057	0.057	0.35	mg/kg	ND
BOG-02	2,4-dimethylphenol	0.059	0.059	0.35	mg/kg	ND
BOG-02	bis(2-CHLOROETHOXY) METHANE	0.072	0.072	0.35	mg/kg	ND
BOG-02	Benzoic Acid	0.2	0.2	1.7	mg/kg	ND
BOG-02	2,4-Dichlorophenol	0.063	0.063	0.35	mg/kg	ND
BOG-02	1,2,4-Trichlorobenzene	0.055	0.055	0.35	mg/kg	ND
BOG-02	Naphthalene	0.059	0.059	0.35	mg/kg	ND
BOG-02	4-Chloroaniline	0.33	0.33	0.35	mg/kg	ND
BOG-02	Hexachlorobutadiene	0.063	0.063	0.35	mg/kg	ND
BOG-02	4-Chloro-3-methylphenol	0.064	0.064	0.35	mg/kg	ND
BOG-02	2-Methylnaphthalene	0.062	0.062	0.35	mg/kg	ND
BOG-02	Hexaclorocyclopentadiene	0.19	0.19	0.35	mg/kg	ND
BOG-02	2,4,6-Trichlorophenol	0.054	0.054	0.35	mg/kg	ND
BOG-02	2,4,5-Trichlorophenol	0.17	0.17	1.7	mg/kg	ND
BOG-02	2-Chloronaphthalene	0.057	0.057	0.35	mg/kg	ND
BOG-02	Acenaphthylene	0.063	0.063	0.35	mg/kg	ND
BOG-02	DIMETHYL PHTHALATE	0.064	0.064	0.35	mg/kg	ND
BOG-02	2,6-Dinitrotoluene	0.063	0.063	0.35	mg/kg	ND
BOG-02	Acenaphthene	0.062	0.062	0.35	mg/kg	ND
BOG-02	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-02	Dibenzofuran	0.064	0.064	0.35	mg/kg	ND
BOG-02	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-02	2,4-Dinitrotoluene	0.07	0.07	0.35	mg/kg	ND
BOG-02	Fluorene	0.07	0.07	0.35	mg/kg	ND
BOG-02	4-CHLOROPHENYL PHENYL ETHER	0.062	0.062	0.35	mg/kg	ND
BOG-02	DIETHYL PHTHALATE	0.06	0.06	0.35	mg/kg	ND
BOG-02	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
BOG-02	N-Nitrosodiphenylamine	0.074	0.074	0.35	mg/kg	ND
BOG-02	1,2-Diphenylhydrazine	0.075	0.075	0.35	mg/kg	ND
BOG-02	4-BROMOPHENYL PHENYL ETHER	0.07	0.07	0.35	mg/kg	ND
BOG-02	Hexachlorobenzene	0.068	0.068	0.35	mg/kg	ND
BOG-02	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
BOG-02	Phenanthrene	0.065	0.065	0.35	mg/kg	ND
BOG-02	Anthracene	0.066	0.066	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-02	DI-n-BUTYL PHTHALATE	0.067	0.067	0.35	mg/kg	ND
BOG-02	Fluoranthene	0.06	0.06	0.35	mg/kg	ND
BOG-02	Pyrene	0.09	0.09	0.35	mg/kg	ND
BOG-02	Butylbenzylphthalate	0.07	0.07	0.35	mg/kg	ND
BOG-02	Benzo(a)anthracene	0.068	0.068	0.35	mg/kg	ND
BOG-02	3,3'-Dichlorobenzidine	0.13	0.13	0.35	mg/kg	ND
BOG-02	Chrysene	0.065	0.065	0.35	mg/kg	ND
BOG-02	bis(2-ETHYLHEXYL) PHTHALATE	0.079	0.079	0.35	mg/kg	ND
BOG-02	Di-n-octylphthalate	0.055	0.055	0.35	mg/kg	ND
BOG-02	Benzo(b)fluoranthene	0.076	0.076	0.35	mg/kg	ND
BOG-02	Benzo(k)fluoranthene	0.071	0.071	0.35	mg/kg	ND
BOG-02	Benzo(a)pyrene	0.066	0.066	0.35	mg/kg	ND
BOG-02	INDENO(1,2,3-c,d)PYRENE	0.07	0.07	0.35	mg/kg	ND
BOG-02	Dibenzo(a,h)anthracene	0.066	0.066	0.35	mg/kg	ND
BOG-02	Benzo(g,h,I)perylene	0.062	0.062	0.35	mg/kg	ND
BOG-02	Antimony	3.3	0.85	6.4	mg/kg	=
BOG-02	Arsenic	5.9	0.43	4.3	mg/kg	=
BOG-02	Barium	149	0.085	0.85	mg/kg	=
BOG-02	Beryllium	0.18	0.053	0.43	mg/kg	=
BOG-02	Cadmium	0.24	0.021	0.43	mg/kg	=
BOG-02	CHROMIUM, TOTAL	15.7	0.64	4.3	mg/kg	=
BOG-02	Lead	17000	0.43	4.3	mg/kg	=
BOG-02	Mercury	0.021	0.021	0.086	mg/kg	ND
BOG-02	Nickel	14.1	0.13	4.3	mg/kg	=
BOG-02	Silver	1.1	0.085	2.1	mg/kg	=
BOG-02	Thallium	0.43	0.43	8.5	mg/kg	ND
BOG-02	Tin	17.4	0.43	19	mg/kg	=
BOG-02	Zinc	48.9	1.1	8.5	mg/kg	=
BOG-02	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.58	0.58	2.2	mg/kg	ND
BOG-02	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.57	0.57	2.2	mg/kg	ND
BOG-02	1,3,5-Trinitrobenzene	0.63	0.63	2.2	mg/kg	ND
BOG-02	1,3-Dinitrobenzene	0.62	0.62	2.2	mg/kg	ND
BOG-02	TETRYL	1.1	1.1	2.2	mg/kg	ND
BOG-02	NITROBENZENE	0.51	0.51	2.2	mg/kg	ND
BOG-02	4-AMINO-2,6-DINITROTOLUENE	0.52	0.52	2.2	mg/kg	ND
BOG-02	2-AMINO-4,6-DINITROTOLUENE	0.59	0.59	2.2	mg/kg	ND
BOG-02	2,4,6-TRINITROTOLUENE	0.56	0.56	2.2	mg/kg	ND
BOG-02	2,6-Dinitrotoluene	0.55	0.55	2.2	mg/kg	ND
BOG-02	2,4-Dinitrotoluene	0.59	0.59	2.2	mg/kg	ND
BOG-02	2-Nitrotoluene	0.55	0.55	2.2	mg/kg	ND
BOG-02	4-Nitrotoluene	0.63	0.63	2.2	mg/kg	ND
BOG-02	3-Nitrotoluene	1	0.1	2.2	mg/kg	=
BOG-03	Phenol	0.062	0.062	0.34	mg/kg	ND
BOG-03	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
BOG-03	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-03	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
BOG-03	1,4-Dichlorobenzene	0.055	0.055	0.34	mg/kg	ND
BOG-03	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
BOG-03	1,2-Dichlorobenzene	0.063	0.063	0.34	mg/kg	ND
BOG-03	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.34	mg/kg	ND
BOG-03	2-METHYLPHENOL (o-CRESOL)	0.061	0.061	0.34	mg/kg	ND
BOG-03	Hexachloroethane	0.062	0.062	0.34	mg/kg	ND
BOG-03	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
BOG-03	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
BOG-03	NITROBENZENE	0.061	0.061	0.34	mg/kg	ND
BOG-03	Isophorone	0.061	0.061	0.34	mg/kg	ND
BOG-03	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
BOG-03	2,4-dimethylphenol	0.058	0.058	0.34	mg/kg	ND
BOG-03	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
BOG-03	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
BOG-03	2,4-Dichlorophenol	0.062	0.062	0.34	mg/kg	ND
BOG-03	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
BOG-03	Naphthalene	0.058	0.058	0.34	mg/kg	ND
BOG-03	4-Chloroaniline	0.33	0.33	0.34	mg/kg	ND
BOG-03	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
BOG-03	4-Chloro-3-methylphenol	0.063	0.063	0.34	mg/kg	ND
BOG-03	2-Methylnaphthalene	0.061	0.061	0.34	mg/kg	ND
BOG-03	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
BOG-03	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
BOG-03	2,4,5-Trichlorophenol	0.16	0.16	1.7	mg/kg	ND
BOG-03	2-Chloronaphthalene	0.056	0.056	0.34	mg/kg	ND
BOG-03	Acenaphthylene	0.062	0.062	0.34	mg/kg	ND
BOG-03	DIMETHYL PHTHALATE	0.063	0.063	0.34	mg/kg	ND
BOG-03	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
BOG-03	Acenaphthene	0.061	0.061	0.34	mg/kg	ND
BOG-03	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-03	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
BOG-03	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-03	2,4-Dinitrotoluene	0.069	0.069	0.34	mg/kg	ND
BOG-03	Fluorene	0.068	0.068	0.34	mg/kg	ND
BOG-03	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.34	mg/kg	ND
BOG-03	DIETHYL PHTHALATE	0.059	0.059	0.34	mg/kg	ND
BOG-03	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
BOG-03	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
BOG-03	1,2-Diphenylhydrazine	0.074	0.074	0.34	mg/kg	ND
BOG-03	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
BOG-03	Hexachlorobenzene	0.067	0.067	0.34	mg/kg	ND
BOG-03	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
BOG-03	Phenanthrene	0.064	0.064	0.34	mg/kg	ND
BOG-03	Anthracene	0.065	0.065	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-03	DI-n-BUTYL PHTHALATE	0.066	0.066	0.34	mg/kg	ND
BOG-03	Fluoranthene	0.059	0.059	0.34	mg/kg	ND
BOG-03	Pyrene	0.088	0.088	0.34	mg/kg	ND
BOG-03	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
BOG-03	Benzo(a)anthracene	0.067	0.067	0.34	mg/kg	ND
BOG-03	3,3'-Dichlorobenzidine	0.13	0.13	0.34	mg/kg	ND
BOG-03	Chrysene	0.064	0.064	0.34	mg/kg	ND
BOG-03	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.34	mg/kg	ND
BOG-03	Di-n-octylphthalate	0.054	0.054	0.34	mg/kg	ND
BOG-03	Benzo(b)fluoranthene	0.074	0.074	0.34	mg/kg	ND
BOG-03	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
BOG-03	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
BOG-03	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
BOG-03	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
BOG-03	Benzo(g,h,I)perylene	0.061	0.061	0.34	mg/kg	ND
BOG-03	Antimony	0.42	0.42	3.1	mg/kg	ND
BOG-03	Arsenic	4.3	0.21	2.1	mg/kg	=
BOG-03	Barium	131	0.042	0.42	mg/kg	=
BOG-03	Beryllium	0.16	0.026	0.21	mg/kg	=
BOG-03	Cadmium	0.68	0.01	0.21	mg/kg	=
BOG-03	CHROMIUM, TOTAL	9.8	0.31	2.1	mg/kg	=
BOG-03	Lead	11.3	0.21	2.1	mg/kg	=
BOG-03	Mercury	0.021	0.021	0.083	mg/kg	ND
BOG-03	Nickel	11.9	0.062	2.1	mg/kg	=
BOG-03	Silver	0.54	0.042	1	mg/kg	=
BOG-03	Thallium	0.21	0.21	4.2	mg/kg	ND
BOG-03	Tin	0.21	0.21	9.3	mg/kg	ND
BOG-03	Zinc	41.3	0.52	4.2	mg/kg	=
BOG-03	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.1	mg/kg	ND
BOG-03	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.55	0.55	2.1	mg/kg	ND
BOG-03	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
BOG-03	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
BOG-03	TETRYL	1.1	1.1	2.1	mg/kg	ND
BOG-03	NITROBENZENE	0.5	0.5	2.1	mg/kg	ND
BOG-03	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.1	mg/kg	ND
BOG-03	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
BOG-03	2,4,6-TRINITROTOLUENE	0.54	0.54	2.1	mg/kg	ND
BOG-03	2,6-Dinitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-03	2,4-Dinitrotoluene	0.57	0.57	2.1	mg/kg	ND
BOG-03	2-Nitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-03	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
BOG-03	3-Nitrotoluene	0.97	0.97	2.1	mg/kg	ND
BOG-04	Phenol	0.062	0.062	0.34	mg/kg	ND
BOG-04	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
BOG-04	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-04	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
BOG-04	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
BOG-04	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
BOG-04	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
BOG-04	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
BOG-04	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
BOG-04	Hexachloroethane	0.061	0.061	0.34	mg/kg	ND
BOG-04	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
BOG-04	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
BOG-04	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
BOG-04	Isophorone	0.06	0.06	0.34	mg/kg	ND
BOG-04	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
BOG-04	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
BOG-04	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
BOG-04	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
BOG-04	2,4-Dichlorophenol	0.061	0.061	0.34	mg/kg	ND
BOG-04	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
BOG-04	Naphthalene	0.057	0.057	0.34	mg/kg	ND
BOG-04	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
BOG-04	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
BOG-04	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
BOG-04	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
BOG-04	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
BOG-04	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
BOG-04	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
BOG-04	2-Chloronaphthalene	0.055	0.055	0.34	mg/kg	ND
BOG-04	Acenaphthylene	0.061	0.061	0.34	mg/kg	ND
BOG-04	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
BOG-04	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
BOG-04	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
BOG-04	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
BOG-04	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
BOG-04	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
BOG-04	2,4-Dinitrotoluene	0.068	0.068	0.34	mg/kg	ND
BOG-04	Fluorene	0.067	0.067	0.34	mg/kg	ND
BOG-04	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
BOG-04	DIETHYL PHTHALATE	0.058	0.058	0.34	mg/kg	ND
BOG-04	4,6-Dinitro-2-methylphenol	0.19	0.19	1.6	mg/kg	ND
BOG-04	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
BOG-04	1,2-Diphenylhydrazine	0.073	0.073	0.34	mg/kg	ND
BOG-04	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
BOG-04	Hexachlorobenzene	0.066	0.066	0.34	mg/kg	ND
BOG-04	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
BOG-04	Phenanthrene	0.063	0.063	0.34	mg/kg	ND
BOG-04	Anthracene	0.064	0.064	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-04	DI-n-BUTYL PHTHALATE	0.065	0.065	0.34	mg/kg	ND
BOG-04	Fluoranthene	0.058	0.058	0.34	mg/kg	ND
BOG-04	Pyrene	0.087	0.087	0.34	mg/kg	ND
BOG-04	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
BOG-04	Benzo(a)anthracene	0.066	0.066	0.34	mg/kg	ND
BOG-04	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
BOG-04	Chrysene	0.063	0.063	0.34	mg/kg	ND
BOG-04	bis(2-ETHYLHEXYL) PHTHALATE	0.077	0.077	0.34	mg/kg	ND
BOG-04	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
BOG-04	Benzo(b)fluoranthene	0.073	0.073	0.34	mg/kg	ND
BOG-04	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
BOG-04	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
BOG-04	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
BOG-04	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
BOG-04	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
BOG-04	Antimony	0.83	0.83	6.2	mg/kg	ND
BOG-04	Arsenic	6.8	0.41	4.1	mg/kg	=
BOG-04	Barium	198	0.083	0.83	mg/kg	=
BOG-04	Beryllium	0.24	0.052	0.41	mg/kg	=
BOG-04	Cadmium	0.43	0.021	0.41	mg/kg	=
BOG-04	CHROMIUM, TOTAL	15	0.62	4.1	mg/kg	=
BOG-04	Lead	12	0.41	4.1	mg/kg	=
BOG-04	Mercury	0.03	0.021	0.083	mg/kg	=
BOG-04	Nickel	14	0.12	4.1	mg/kg	=
BOG-04	Silver	0.74	0.083	2.1	mg/kg	=
BOG-04	Thallium	0.41	0.41	8.3	mg/kg	ND
BOG-04	Tin	0.41	0.41	19	mg/kg	ND
BOG-04	Zinc	50	1	8.3	mg/kg	=
BOG-04	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.55	0.55	2.1	mg/kg	ND
BOG-04	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.54	0.54	2.1	mg/kg	ND
BOG-04	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
BOG-04	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
BOG-04	TETRYL	1.1	1.1	2.1	mg/kg	ND
BOG-04	NITROBENZENE	0.49	0.49	2.1	mg/kg	ND
BOG-04	4-AMINO-2,6-DINITROTOLUENE	0.5	0.5	2.1	mg/kg	ND
BOG-04	2-AMINO-4,6-DINITROTOLUENE	0.56	0.56	2.1	mg/kg	ND
BOG-04	2,4,6-TRINITROTOLUENE	0.53	0.53	2.1	mg/kg	ND
BOG-04	2,6-Dinitrotoluene	0.52	0.52	2.1	mg/kg	ND
BOG-04	2,4-Dinitrotoluene	0.56	0.56	2.1	mg/kg	ND
BOG-04	2-Nitrotoluene	0.52	0.52	2.1	mg/kg	ND
BOG-04	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
BOG-04	3-Nitrotoluene	0.96	0.96	2.1	mg/kg	ND
BOG-05	Phenol	0.063	0.063	0.35	mg/kg	ND
BOG-05	bis(2-CHLOROETHYL) ETHER	0.057	0.057	0.35	mg/kg	ND
BOG-05	2-Chlorophenol	0.054	0.054	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-05	1,3-Dichlorobenzene	0.051	0.051	0.35	mg/kg	ND
BOG-05	1,4-Dichlorobenzene	0.055	0.055	0.35	mg/kg	ND
BOG-05	Benzyl Alcohol	0.053	0.053	0.35	mg/kg	ND
BOG-05	1,2-Dichlorobenzene	0.064	0.064	0.35	mg/kg	ND
BOG-05	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.35	mg/kg	ND
BOG-05	2-METHYLPHENOL (o-CRESOL)	0.062	0.062	0.35	mg/kg	ND
BOG-05	Hexachloroethane	0.062	0.062	0.35	mg/kg	ND
BOG-05	N-NITROSODI-n-PROPYLAMINE	0.062	0.062	0.35	mg/kg	ND
BOG-05	4-Methylphenol	0.065	0.065	0.35	mg/kg	ND
BOG-05	NITROBENZENE	0.062	0.062	0.35	mg/kg	ND
BOG-05	Isophorone	0.062	0.062	0.35	mg/kg	ND
BOG-05	2-Nitrophenol	0.057	0.057	0.35	mg/kg	ND
BOG-05	2,4-dimethylphenol	0.058	0.058	0.35	mg/kg	ND
BOG-05	bis(2-CHLOROETHOXY) METHANE	0.071	0.071	0.35	mg/kg	ND
BOG-05	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
BOG-05	2,4-Dichlorophenol	0.062	0.062	0.35	mg/kg	ND
BOG-05	1,2,4-Trichlorobenzene	0.054	0.054	0.35	mg/kg	ND
BOG-05	Naphthalene	0.058	0.058	0.35	mg/kg	ND
BOG-05	4-Chloroaniline	0.33	0.33	0.35	mg/kg	ND
BOG-05	Hexachlorobutadiene	0.062	0.062	0.35	mg/kg	ND
BOG-05	4-Chloro-3-methylphenol	0.064	0.064	0.35	mg/kg	ND
BOG-05	2-Methylnaphthalene	0.062	0.062	0.35	mg/kg	ND
BOG-05	Hexaclorocyclopentadiene	0.19	0.19	0.35	mg/kg	ND
BOG-05	2,4,6-Trichlorophenol	0.053	0.053	0.35	mg/kg	ND
BOG-05	2,4,5-Trichlorophenol	0.17	0.17	1.7	mg/kg	ND
BOG-05	2-Chloronaphthalene	0.056	0.056	0.35	mg/kg	ND
BOG-05	Acenaphthylene	0.062	0.062	0.35	mg/kg	ND
BOG-05	DIMETHYL PHTHALATE	0.064	0.064	0.35	mg/kg	ND
BOG-05	2,6-Dinitrotoluene	0.063	0.063	0.35	mg/kg	ND
BOG-05	Acenaphthene	0.062	0.062	0.35	mg/kg	ND
BOG-05	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-05	Dibenzofuran	0.063	0.063	0.35	mg/kg	ND
BOG-05	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-05	2,4-Dinitrotoluene	0.069	0.069	0.35	mg/kg	ND
BOG-05	Fluorene	0.069	0.069	0.35	mg/kg	ND
BOG-05	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.35	mg/kg	ND
BOG-05	DIETHYL PHTHALATE	0.06	0.06	0.35	mg/kg	ND
BOG-05	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
BOG-05	N-Nitrosodiphenylamine	0.073	0.073	0.35	mg/kg	ND
BOG-05	1,2-Diphenylhydrazine	0.074	0.074	0.35	mg/kg	ND
BOG-05	4-BROMOPHENYL PHENYL ETHER	0.069	0.069	0.35	mg/kg	ND
BOG-05	Hexachlorobenzene	0.067	0.067	0.35	mg/kg	ND
BOG-05	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
BOG-05	Phenanthrene	0.064	0.064	0.35	mg/kg	ND
BOG-05	Anthracene	0.066	0.066	0.35	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-05	DI-n-BUTYL PHTHALATE	0.067	0.067	0.35	mg/kg	ND
BOG-05	Fluoranthene	0.059	0.059	0.35	mg/kg	ND
BOG-05	Pyrene	0.089	0.089	0.35	mg/kg	ND
BOG-05	Butylbenzylphthalate	0.069	0.069	0.35	mg/kg	ND
BOG-05	Benzo(a)anthracene	0.067	0.067	0.35	mg/kg	ND
BOG-05	3,3'-Dichlorobenzidine	0.13	0.13	0.35	mg/kg	ND
BOG-05	Chrysene	0.064	0.064	0.35	mg/kg	ND
BOG-05	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.35	mg/kg	ND
BOG-05	Di-n-octylphthalate	0.054	0.054	0.35	mg/kg	ND
BOG-05	Benzo(b)fluoranthene	0.075	0.075	0.35	mg/kg	ND
BOG-05	Benzo(k)fluoranthene	0.07	0.07	0.35	mg/kg	ND
BOG-05	Benzo(a)pyrene	0.065	0.065	0.35	mg/kg	ND
BOG-05	INDENO(1,2,3-c,d)PYRENE	0.069	0.069	0.35	mg/kg	ND
BOG-05	Dibenzo(a,h)anthracene	0.065	0.065	0.35	mg/kg	ND
BOG-05	Benzo(g,h,I)perylene	0.061	0.061	0.35	mg/kg	ND
BOG-05	Antimony	0.84	0.84	6.3	mg/kg	ND
BOG-05	Arsenic	6.1	0.42	4.2	mg/kg	=
BOG-05	Barium	236	0.084	0.84	mg/kg	=
BOG-05	Beryllium	0.37	0.052	0.42	mg/kg	=
BOG-05	Cadmium	0.32	0.021	0.42	mg/kg	=
BOG-05	CHROMIUM, TOTAL	16.9	0.63	4.2	mg/kg	=
BOG-05	Lead	11.1	0.42	4.2	mg/kg	=
BOG-05	Mercury	0.021	0.021	0.084	mg/kg	ND
BOG-05	Nickel	15.3	0.13	4.2	mg/kg	=
BOG-05	Silver	0.83	0.084	2.1	mg/kg	=
BOG-05	Thallium	0.58	0.42	8.4	mg/kg	=
BOG-05	Tin	0.42	0.42	19	mg/kg	ND
BOG-05	Zinc	51.4	1	8.4	mg/kg	=
BOG-05	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.85	0.56	2.1	mg/kg	=
BOG-05	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.4	0.55	2.1	mg/kg	=
BOG-05	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
BOG-05	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
BOG-05	TETRYL	1.1	1.1	2.1	mg/kg	ND
BOG-05	NITROBENZENE	0.5	0.5	2.1	mg/kg	ND
BOG-05	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.1	mg/kg	ND
BOG-05	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
BOG-05	2,4,6-TRINITROTOLUENE	0.54	0.54	2.1	mg/kg	ND
BOG-05	2,6-Dinitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-05	2,4-Dinitrotoluene	0.57	0.57	2.1	mg/kg	ND
BOG-05	2-Nitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-05	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
BOG-05	3-Nitrotoluene	0.97	0.97	2.1	mg/kg	ND
BOG-06	Phenol	0.062	0.062	0.34	mg/kg	ND
BOG-06	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
BOG-06	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-06	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
BOG-06	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
BOG-06	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
BOG-06	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
BOG-06	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
BOG-06	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
BOG-06	Hexachloroethane	0.061	0.061	0.34	mg/kg	ND
BOG-06	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
BOG-06	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
BOG-06	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
BOG-06	Isophorone	0.06	0.06	0.34	mg/kg	ND
BOG-06	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
BOG-06	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
BOG-06	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
BOG-06	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
BOG-06	2,4-Dichlorophenol	0.061	0.061	0.34	mg/kg	ND
BOG-06	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
BOG-06	Naphthalene	0.057	0.057	0.34	mg/kg	ND
BOG-06	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
BOG-06	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
BOG-06	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
BOG-06	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
BOG-06	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
BOG-06	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
BOG-06	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
BOG-06	2-Chloronaphthalene	0.055	0.055	0.34	mg/kg	ND
BOG-06	Acenaphthylene	0.061	0.061	0.34	mg/kg	ND
BOG-06	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
BOG-06	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
BOG-06	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
BOG-06	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
BOG-06	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
BOG-06	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
BOG-06	2,4-Dinitrotoluene	0.068	0.068	0.34	mg/kg	ND
BOG-06	Fluorene	0.067	0.067	0.34	mg/kg	ND
BOG-06	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
BOG-06	DIETHYL PHTHALATE	0.058	0.058	0.34	mg/kg	ND
BOG-06	4,6-Dinitro-2-methylphenol	0.19	0.19	1.6	mg/kg	ND
BOG-06	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
BOG-06	1,2-Diphenylhydrazine	0.073	0.073	0.34	mg/kg	ND
BOG-06	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
BOG-06	Hexachlorobenzene	0.066	0.066	0.34	mg/kg	ND
BOG-06	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
BOG-06	Phenanthrene	0.063	0.063	0.34	mg/kg	ND
BOG-06	Anthracene	0.064	0.064	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-06	DI-n-BUTYL PHTHALATE	0.065	0.065	0.34	mg/kg	ND
BOG-06	Fluoranthene	0.058	0.058	0.34	mg/kg	ND
BOG-06	Pyrene	0.087	0.087	0.34	mg/kg	ND
BOG-06	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
BOG-06	Benzo(a)anthracene	0.066	0.066	0.34	mg/kg	ND
BOG-06	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
BOG-06	Chrysene	0.063	0.063	0.34	mg/kg	ND
BOG-06	bis(2-ETHYLHEXYL) PHTHALATE	0.077	0.077	0.34	mg/kg	ND
BOG-06	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
BOG-06	Benzo(b)fluoranthene	0.073	0.073	0.34	mg/kg	ND
BOG-06	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
BOG-06	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
BOG-06	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
BOG-06	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
BOG-06	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
BOG-06	Antimony	0.41	0.41	3.1	mg/kg	ND
BOG-06	Arsenic	3.3	0.21	2.1	mg/kg	=
BOG-06	Barium	83.2	0.041	0.41	mg/kg	=
BOG-06	Beryllium	0.11	0.026	0.21	mg/kg	=
BOG-06	Cadmium	0.31	0.01	0.21	mg/kg	=
BOG-06	CHROMIUM, TOTAL	10.6	0.31	2.1	mg/kg	=
BOG-06	Lead	9.5	0.21	2.1	mg/kg	=
BOG-06	Mercury	0.021	0.021	0.082	mg/kg	ND
BOG-06	Nickel	13.3	0.062	2.1	mg/kg	=
BOG-06	Silver	0.7	0.041	1	mg/kg	=
BOG-06	Thallium	1.4	0.21	4.1	mg/kg	=
BOG-06	Tin	0.21	0.21	9.3	mg/kg	ND
BOG-06	Zinc	47.4	0.51	4.1	mg/kg	=
BOG-06	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.54	0.54	2.1	mg/kg	ND
BOG-06	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.53	0.53	2.1	mg/kg	ND
BOG-06	1,3,5-Trinitrobenzene	0.59	0.59	2.1	mg/kg	ND
BOG-06	1,3-Dinitrobenzene	0.58	0.58	2.1	mg/kg	ND
BOG-06	TETRYL	1.1	1.1	2.1	mg/kg	ND
BOG-06	NITROBENZENE	0.48	0.48	2.1	mg/kg	ND
BOG-06	4-AMINO-2,6-DINITROTOLUENE	0.49	0.49	2.1	mg/kg	ND
BOG-06	2-AMINO-4,6-DINITROTOLUENE	0.55	0.55	2.1	mg/kg	ND
BOG-06	2,4,6-TRINITROTOLUENE	0.52	0.52	2.1	mg/kg	ND
BOG-06	2,6-Dinitrotoluene	0.51	0.51	2.1	mg/kg	ND
BOG-06	2,4-Dinitrotoluene	0.55	0.55	2.1	mg/kg	ND
BOG-06	2-Nitrotoluene	0.51	0.51	2.1	mg/kg	ND
BOG-06	4-Nitrotoluene	0.59	0.59	2.1	mg/kg	ND
BOG-06	3-Nitrotoluene	0.94	0.94	2.1	mg/kg	ND
BOG-07	Phenol	0.062	0.062	0.34	mg/kg	ND
BOG-07	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
BOG-07	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-07	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
BOG-07	1,4-Dichlorobenzene	0.054	0.054	0.34	mg/kg	ND
BOG-07	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
BOG-07	1,2-Dichlorobenzene	0.062	0.062	0.34	mg/kg	ND
BOG-07	2,2'-oxybis(1-Chloropropane)	0.053	0.053	0.34	mg/kg	ND
BOG-07	2-METHYLPHENOL (o-CRESOL)	0.06	0.06	0.34	mg/kg	ND
BOG-07	Hexachloroethane	0.061	0.061	0.34	mg/kg	ND
BOG-07	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
BOG-07	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
BOG-07	NITROBENZENE	0.06	0.06	0.34	mg/kg	ND
BOG-07	Isophorone	0.06	0.06	0.34	mg/kg	ND
BOG-07	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
BOG-07	2,4-dimethylphenol	0.057	0.057	0.34	mg/kg	ND
BOG-07	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
BOG-07	Benzoic Acid	0.19	0.19	1.6	mg/kg	ND
BOG-07	2,4-Dichlorophenol	0.061	0.061	0.34	mg/kg	ND
BOG-07	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
BOG-07	Naphthalene	0.057	0.057	0.34	mg/kg	ND
BOG-07	4-Chloroaniline	0.32	0.32	0.34	mg/kg	ND
BOG-07	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
BOG-07	4-Chloro-3-methylphenol	0.062	0.062	0.34	mg/kg	ND
BOG-07	2-Methylnaphthalene	0.06	0.06	0.34	mg/kg	ND
BOG-07	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
BOG-07	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
BOG-07	2,4,5-Trichlorophenol	0.16	0.16	1.6	mg/kg	ND
BOG-07	2-Chloronaphthalene	0.055	0.055	0.34	mg/kg	ND
BOG-07	Acenaphthylene	0.061	0.061	0.34	mg/kg	ND
BOG-07	DIMETHYL PHTHALATE	0.062	0.062	0.34	mg/kg	ND
BOG-07	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
BOG-07	Acenaphthene	0.06	0.06	0.34	mg/kg	ND
BOG-07	2,4-Dinitrophenol	0.15	0.15	1.6	mg/kg	ND
BOG-07	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
BOG-07	4-Nitrophenol	0.16	0.16	1.6	mg/kg	ND
BOG-07	2,4-Dinitrotoluene	0.068	0.068	0.34	mg/kg	ND
BOG-07	Fluorene	0.067	0.067	0.34	mg/kg	ND
BOG-07	4-CHLOROPHENYL PHENYL ETHER	0.06	0.06	0.34	mg/kg	ND
BOG-07	DIETHYL PHTHALATE	0.058	0.058	0.34	mg/kg	ND
BOG-07	4,6-Dinitro-2-methylphenol	0.19	0.19	1.6	mg/kg	ND
BOG-07	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
BOG-07	1,2-Diphenylhydrazine	0.073	0.073	0.34	mg/kg	ND
BOG-07	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
BOG-07	Hexachlorobenzene	0.066	0.066	0.34	mg/kg	ND
BOG-07	Pentachlorophenol	0.12	0.12	1.6	mg/kg	ND
BOG-07	Phenanthrene	0.063	0.063	0.34	mg/kg	ND
BOG-07	Anthracene	0.064	0.064	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-07	DI-n-BUTYL PHTHALATE	0.065	0.065	0.34	mg/kg	ND
BOG-07	Fluoranthene	0.058	0.058	0.34	mg/kg	ND
BOG-07	Pyrene	0.087	0.087	0.34	mg/kg	ND
BOG-07	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
BOG-07	Benzo(a)anthracene	0.066	0.066	0.34	mg/kg	ND
BOG-07	3,3'-Dichlorobenzidine	0.12	0.12	0.34	mg/kg	ND
BOG-07	Chrysene	0.063	0.063	0.34	mg/kg	ND
BOG-07	bis(2-ETHYLHEXYL) PHTHALATE	0.077	0.077	0.34	mg/kg	ND
BOG-07	Di-n-octylphthalate	0.053	0.053	0.34	mg/kg	ND
BOG-07	Benzo(b)fluoranthene	0.073	0.073	0.34	mg/kg	ND
BOG-07	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
BOG-07	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
BOG-07	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
BOG-07	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
BOG-07	Benzo(g,h,I)perylene	0.06	0.06	0.34	mg/kg	ND
BOG-07	Antimony	0.41	0.41	3.1	mg/kg	ND
BOG-07	Arsenic	3.9	0.21	2.1	mg/kg	=
BOG-07	Barium	89.4	0.041	0.41	mg/kg	=
BOG-07	Beryllium	0.05	0.026	0.21	mg/kg	=
BOG-07	Cadmium	0.16	0.01	0.21	mg/kg	=
BOG-07	CHROMIUM, TOTAL	13.6	0.31	2.1	mg/kg	=
BOG-07	Lead	8.6	0.21	2.1	mg/kg	=
BOG-07	Mercury	0.021	0.021	0.083	mg/kg	ND
BOG-07	Nickel	10.4	0.062	2.1	mg/kg	=
BOG-07	Silver	0.56	0.041	1	mg/kg	=
BOG-07	Thallium	0.21	0.21	4.1	mg/kg	ND
BOG-07	Tin	0.21	0.21	9.3	mg/kg	ND
BOG-07	Zinc	37.1	0.52	4.1	mg/kg	=
BOG-07	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.1	mg/kg	ND
BOG-07	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.55	0.55	2.1	mg/kg	ND
BOG-07	1,3,5-Trinitrobenzene	0.61	0.61	2.1	mg/kg	ND
BOG-07	1,3-Dinitrobenzene	0.6	0.6	2.1	mg/kg	ND
BOG-07	TETRYL	1.1	1.1	2.1	mg/kg	ND
BOG-07	NITROBENZENE	0.5	0.5	2.1	mg/kg	ND
BOG-07	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.1	mg/kg	ND
BOG-07	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.1	mg/kg	ND
BOG-07	2,4,6-TRINITROTOLUENE	0.54	0.54	2.1	mg/kg	ND
BOG-07	2,6-Dinitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-07	2,4-Dinitrotoluene	0.57	0.57	2.1	mg/kg	ND
BOG-07	2-Nitrotoluene	0.53	0.53	2.1	mg/kg	ND
BOG-07	4-Nitrotoluene	0.61	0.61	2.1	mg/kg	ND
BOG-07	3-Nitrotoluene	0.97	0.97	2.1	mg/kg	ND
BOG-08	Phenol	0.062	0.062	0.34	mg/kg	ND
BOG-08	bis(2-CHLOROETHYL) ETHER	0.056	0.056	0.34	mg/kg	ND
BOG-08	2-Chlorophenol	0.053	0.053	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-08	1,3-Dichlorobenzene	0.05	0.05	0.34	mg/kg	ND
BOG-08	1,4-Dichlorobenzene	0.055	0.055	0.34	mg/kg	ND
BOG-08	Benzyl Alcohol	0.052	0.052	0.34	mg/kg	ND
BOG-08	1,2-Dichlorobenzene	0.063	0.063	0.34	mg/kg	ND
BOG-08	2,2'-oxybis(1-Chloropropane)	0.054	0.054	0.34	mg/kg	ND
BOG-08	2-METHYLPHENOL (o-CRESOL)	0.061	0.061	0.34	mg/kg	ND
BOG-08	Hexachloroethane	0.062	0.062	0.34	mg/kg	ND
BOG-08	N-NITROSODI-n-PROPYLAMINE	0.061	0.061	0.34	mg/kg	ND
BOG-08	4-Methylphenol	0.064	0.064	0.34	mg/kg	ND
BOG-08	NITROBENZENE	0.061	0.061	0.34	mg/kg	ND
BOG-08	Isophorone	0.061	0.061	0.34	mg/kg	ND
BOG-08	2-Nitrophenol	0.056	0.056	0.34	mg/kg	ND
BOG-08	2,4-dimethylphenol	0.058	0.058	0.34	mg/kg	ND
BOG-08	bis(2-CHLOROETHOXY) METHANE	0.07	0.07	0.34	mg/kg	ND
BOG-08	Benzoic Acid	0.19	0.19	1.7	mg/kg	ND
BOG-08	2,4-Dichlorophenol	0.062	0.062	0.34	mg/kg	ND
BOG-08	1,2,4-Trichlorobenzene	0.053	0.053	0.34	mg/kg	ND
BOG-08	Naphthalene	0.058	0.058	0.34	mg/kg	ND
BOG-08	4-Chloroaniline	0.33	0.33	0.34	mg/kg	ND
BOG-08	Hexachlorobutadiene	0.061	0.061	0.34	mg/kg	ND
BOG-08	4-Chloro-3-methylphenol	0.063	0.063	0.34	mg/kg	ND
BOG-08	2-Methylnaphthalene	0.061	0.061	0.34	mg/kg	ND
BOG-08	Hexaclorocyclopentadiene	0.18	0.18	0.34	mg/kg	ND
BOG-08	2,4,6-Trichlorophenol	0.052	0.052	0.34	mg/kg	ND
BOG-08	2,4,5-Trichlorophenol	0.16	0.16	1.7	mg/kg	ND
BOG-08	2-Chloronaphthalene	0.056	0.056	0.34	mg/kg	ND
BOG-08	Acenaphthylene	0.062	0.062	0.34	mg/kg	ND
BOG-08	DIMETHYL PHTHALATE	0.063	0.063	0.34	mg/kg	ND
BOG-08	2,6-Dinitrotoluene	0.062	0.062	0.34	mg/kg	ND
BOG-08	Acenaphthene	0.061	0.061	0.34	mg/kg	ND
BOG-08	2,4-Dinitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-08	Dibenzofuran	0.062	0.062	0.34	mg/kg	ND
BOG-08	4-Nitrophenol	0.16	0.16	1.7	mg/kg	ND
BOG-08	2,4-Dinitrotoluene	0.069	0.069	0.34	mg/kg	ND
BOG-08	Fluorene	0.068	0.068	0.34	mg/kg	ND
BOG-08	4-CHLOROPHENYL PHENYL ETHER	0.061	0.061	0.34	mg/kg	ND
BOG-08	DIETHYL PHTHALATE	0.059	0.059	0.34	mg/kg	ND
BOG-08	4,6-Dinitro-2-methylphenol	0.19	0.19	1.7	mg/kg	ND
BOG-08	N-Nitrosodiphenylamine	0.072	0.072	0.34	mg/kg	ND
BOG-08	1,2-Diphenylhydrazine	0.074	0.074	0.34	mg/kg	ND
BOG-08	4-BROMOPHENYL PHENYL ETHER	0.068	0.068	0.34	mg/kg	ND
BOG-08	Hexachlorobenzene	0.067	0.067	0.34	mg/kg	ND
BOG-08	Pentachlorophenol	0.12	0.12	1.7	mg/kg	ND
BOG-08	Phenanthrene	0.064	0.064	0.34	mg/kg	ND
BOG-08	Anthracene	0.065	0.065	0.34	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-08	DI-n-BUTYL PHTHALATE	0.066	0.066	0.34	mg/kg	ND
BOG-08	Fluoranthene	0.059	0.059	0.34	mg/kg	ND
BOG-08	Pyrene	0.088	0.088	0.34	mg/kg	ND
BOG-08	Butylbenzylphthalate	0.068	0.068	0.34	mg/kg	ND
BOG-08	Benzo(a)anthracene	0.067	0.067	0.34	mg/kg	ND
BOG-08	3,3'-Dichlorobenzidine	0.13	0.13	0.34	mg/kg	ND
BOG-08	Chrysene	0.064	0.064	0.34	mg/kg	ND
BOG-08	bis(2-ETHYLHEXYL) PHTHALATE	0.078	0.078	0.34	mg/kg	ND
BOG-08	Di-n-octylphthalate	0.054	0.054	0.34	mg/kg	ND
BOG-08	Benzo(b)fluoranthene	0.074	0.074	0.34	mg/kg	ND
BOG-08	Benzo(k)fluoranthene	0.069	0.069	0.34	mg/kg	ND
BOG-08	Benzo(a)pyrene	0.064	0.064	0.34	mg/kg	ND
BOG-08	INDENO(1,2,3-c,d)PYRENE	0.068	0.068	0.34	mg/kg	ND
BOG-08	Dibenzo(a,h)anthracene	0.064	0.064	0.34	mg/kg	ND
BOG-08	Benzo(g,h,I)perylene	0.061	0.061	0.34	mg/kg	ND
BOG-08	Antimony	0.84	0.84	6.3	mg/kg	ND
BOG-08	Arsenic	6.5	0.42	4.2	mg/kg	=
BOG-08	Barium	245	0.084	0.84	mg/kg	=
BOG-08	Beryllium	0.42	0.052	0.42	mg/kg	=
BOG-08	Cadmium	0.19	0.021	0.42	mg/kg	=
BOG-08	CHROMIUM, TOTAL	15.3	0.63	4.2	mg/kg	=
BOG-08	Lead	11.5	0.42	4.2	mg/kg	=
BOG-08	Mercury	0.021	0.021	0.084	mg/kg	ND
BOG-08	Nickel	15.6	0.13	4.2	mg/kg	=
BOG-08	Silver	0.74	0.084	2.1	mg/kg	=
BOG-08	Thallium	1.1	0.42	8.4	mg/kg	=
BOG-08	Tin	0.42	0.42	19	mg/kg	ND
BOG-08	Zinc	50.2	1	8.4	mg/kg	=
BOG-08	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.56	0.56	2.2	mg/kg	ND
BOG-08	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.55	0.55	2.2	mg/kg	ND
BOG-08	1,3,5-Trinitrobenzene	0.62	0.62	2.2	mg/kg	ND
BOG-08	1,3-Dinitrobenzene	0.61	0.61	2.2	mg/kg	ND
BOG-08	TETRYL	1.1	1.1	2.2	mg/kg	ND
BOG-08	NITROBENZENE	0.5	0.5	2.2	mg/kg	ND
BOG-08	4-AMINO-2,6-DINITROTOLUENE	0.51	0.51	2.2	mg/kg	ND
BOG-08	2-AMINO-4,6-DINITROTOLUENE	0.57	0.57	2.2	mg/kg	ND
BOG-08	2,4,6-TRINITROTOLUENE	0.54	0.54	2.2	mg/kg	ND
BOG-08	2,6-Dinitrotoluene	0.53	0.53	2.2	mg/kg	ND
BOG-08	2,4-Dinitrotoluene	0.57	0.57	2.2	mg/kg	ND
BOG-08	2-Nitrotoluene	0.53	0.53	2.2	mg/kg	ND

Table F.1
ANALYTICAL RESULTS FOR SAMPLING EVENT, DECEMBER 2002
MUGGINS MOUNTAIN OB/OD SITE

U.S. ARMY GARRISON, YUMA PROVING GROUND, ARIZONA

LOCATION	ANALYTE	RESULT	MDL	RL	UNITS	QUALIFIER[1]
BOG-08	4-Nitrotoluene	0.62	0.62	2.2	mg/kg	ND
BOG-08	3-Nitrotoluene	0.97	0.97	2.2	mg/kg	ND

Notes:

[1] In the original report, data qualifiers were not uniformly applied. For the results of the SVOC and metals analyses, an "ND" was given in the result column for non-detects. For that data, if a value was given it the result column, it was treated as a detect. For the explosives analyses, if the MDL was shown in the result column, the result was treated as a nondetect and if a value greater than the MDL was given in the result column, the result was treated as a detect.

Definitions:

= - Detected.

ND - Nondetect

MDL - Method detection limit

RL - Reporting Limit

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
B-8	1,3,5-TRINITROBENZENE		19	MG/KG	D2U	D2
B-8	1,3-DINITROBENZENE	18	16	MG/KG	D2J	D2E4
B-8	2,4,6-TRINITROTOLUENE (TNT)	110	17	MG/KG	D2J	D2E4
B-8	2,4-DINITROTOLUENE		21	MG/KG	D2U	D2
B-8	2,6-DINITROTOLUENE		25	MG/KG	D2U	D2
B-8	2-AMINO-4,6-DINITROTOLUENE		22	MG/KG	D2U	D2
B-8	2-NITROTOLUENE		25	MG/KG	D2U	D2
B-8	3-NITROTOLUENE		21	MG/KG	D2U	D2
B-8	4-AMINO-2,6-DINITROTOLUENE		20	MG/KG	D2U	D2
B-8	4-NITROTOLUENE		34	MG/KG	D2U	D2
B-8	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		30	MG/KG	D2U	D2
B-8	IGNITABILITY	25.2		MM/SE C		R
B-8	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		37	MG/KG	D2U	D2
B-8	NITROBENZENE		19	MG/KG	D2U	D2
B-8	NITROGLYCERIN	19000	130	MG/KG	D2D	D2
B-8	NITROGUANIDINE		24	UG/KG	H4U	
B-8	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		16	MG/KG	D2U	D2
B-8	PENTAERYTHRITOL TETRANITRATE		1.6	MG/KG	U	D2
B-8	PERCHLORATE		14	UG/KG	U	
PA-3	1,3,5-TRINITROBENZENE		30	MG/KG	D2U	D2
PA-3	1,3-DINITROBENZENE		26	MG/KG	D2U	D2
PA-3	2,4,6-TRINITROTOLUENE (TNT)	44	28	MG/KG	D2J	D2E4
PA-3	2,4-DINITROTOLUENE	14000	33	MG/KG	D2D	D2
PA-3	2,6-DINITROTOLUENE	750	40	MG/KG	D2J	D2E4
PA-3	2-AMINO-4,6-DINITROTOLUENE	67	35	MG/KG	D2J	D2E4
PA-3	2-NITROTOLUENE	120	39	MG/KG	D2J	D2E4
PA-3	3-NITROTOLUENE		34	MG/KG	D2U	D2

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
PA-3	4-AMINO-2,6-DINITROTOLUENE		32	MG/KG	D2U	D2
PA-3	4-NITROTOLUENE		54	MG/KG	D2U	D2
PA-3	ALUMINUM	342	2.6	MG/KG		
PA-3	ANTIMONY		2.2	MG/KG	U	
PA-3	ARSENIC		1	MG/KG	U	
PA-3	BARIUM	16.6	0.1	MG/KG		
PA-3	BERYLLIUM		0.1	MG/KG	U	
PA-3	CADMIUM		0.1	MG/KG	U	
PA-3	CALCIUM	3220	4.5	MG/KG		
PA-3	CHROMIUM	0.47	0.1	MG/KG	B	
PA-3	COBALT		0.2	MG/KG	U	
PA-3	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		48	MG/KG	D2U	D2
PA-3	IGNITABILITY	15.7		MM/SE C		R
PA-3	IRON	493	1.1	MG/KG		
PA-3	LEAD	7.2	1.7	MG/KG	B	
PA-3	MAGNESIUM	218	0.7	MG/KG		
PA-3	MANGANESE	11.5	0.1	MG/KG		
PA-3	METHYL-2,4,6-TRINITROPHENYLNITRA MINE		58	MG/KG	D2U	D2
PA-3	MOLYBDENUM		0.3	MG/KG	U	
PA-3	NICKEL		0.6	MG/KG	U	
PA-3	NITRATE AS N	44		MG/KG		R
PA-3	NITRITE AS N	3.7		MG/KG		R
PA-3	NITROBENZENE		30	MG/KG	D2U	D2
PA-3	NITROGLYCERIN		1.3	MG/KG	U	D2
PA-3	NITROGUANIDINE	240	240	UG/KG	D2H	D1
PA-3	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		25	MG/KG	D2U	D2
PA-3	PENTAERYTHRITOL TETRANITRATE		1.6	MG/KG	U	D2

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
PA-3	PERCHLORATE		14	UG/KG	U	
PA-3	POTASSIUM	257	39	MG/KG		
PA-3	SELENIUM	3.7	2.7	MG/KG	B	
PA-3	SILVER		0.3	MG/KG	U	
PA-3	SODIUM	53.2	7.5	MG/KG	B	
PA-3	THALLIUM		2.3	MG/KG	U	
PA-3	TIN		0.9	MG/KG	U	
PA-3	TOTAL KJELDAHL NITROGEN	13400		MG/KG	D2	
PA-3	VANADIUM	0.62	0.1	MG/KG	B	
PA-3	ZINC	5.2	1	MG/KG		
PS-1	1,3,5-TRINITROBENZENE		0.063	MG/KG	U	
PS-1	1,3-DINITROBENZENE	0.058	0.055	MG/KG	JN	E4
PS-1	2,4,6-TRINITROTOLUENE (TNT)	0.25	0.058	MG/KG	JN	E4
PS-1	2,4-DINITROTOLUENE	50	0.069	MG/KG	C	
PS-1	2,6-DINITROTOLUENE		0.084	MG/KG	U	
PS-1	2-AMINO-4,6-DINITROTOLUENE	0.14	0.074	MG/KG	JN	E4
PS-1	2-NITROTOLUENE	0.34	0.082	MG/KG	JN	E4
PS-1	3-NITROTOLUENE		0.071	MG/KG	U	
PS-1	4-AMINO-2,6-DINITROTOLUENE		0.068	MG/KG	U	
PS-1	4-NITROTOLUENE		0.12	MG/KG	U	
PS-1	ALUMINUM	17500	2.7	MG/KG		
PS-1	ANTIMONY		2.3	MG/KG	U	
PS-1	ARSENIC	4.6	1	MG/KG	B	
PS-1	BARIUM	155	0.1	MG/KG		
PS-1	BERYLLIUM	0.72	0.1	MG/KG	B	
PS-1	CADMIUM	0.27	0.1	MG/KG	B	
PS-1	CALCIUM	33300	4.7	MG/KG		

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ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
PS-1	CHROMIUM	14.7	0.1	MG/KG		
PS-1	COBALT	7.2	0.21	MG/KG		
PS-1	COPPER	29.9	0.1	MG/KG		
PS-1	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.27	0.11	MG/KG	JN	E4
PS-1	IGNITABILITY	NON IGNITAB LE		N/A		R
PS-1	IRON	18900	1.1	MG/KG		
PS-1	LEAD	12.1	1.8	MG/KG		
PS-1	MAGNESIUM	8600	0.73	MG/KG		
PS-1	MANGANESE	377	0.1	MG/KG		
PS-1	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		0.13	MG/KG	U	
PS-1	MOLYBDENUM	1.4	0.31	MG/KG	B	
PS-1	NICKEL	14.8	0.62	MG/KG		
PS-1	NITRATE AS N	22		MG/KG		R
PS-1	NITRITE AS N	3.4		MG/KG		R
PS-1	NITROBENZENE		0.064	MG/KG	U	
PS-1	NITROGLYCERIN		0.28	MG/KG	U	
PS-1	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		0.052	MG/KG	U	
PS-1	PENTAERYTHRITOL TETRANITRATE		0.33	MG/KG	U	
PS-1	PERCHLORATE	47	15	UG/KG		
PS-1	POTASSIUM	5670	40.4	MG/KG		
PS-1	SELENIUM	14.3	2.8	MG/KG	B	
PS-1	SILVER		0.31	MG/KG	U	
PS-1	SODIUM	353	7.8	MG/KG		
PS-1	THALLIUM		2.4	MG/KG	U	
PS-1	TIN		0.93	MG/KG	U	
PS-1	VANADIUM	26.8	0.1	MG/KG		
PS-1	ZINC	68.9	1	MG/KG		

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
PS-1 Dup	PERCHLORATE	39	15	UG/KG	E5	
PS-3	1,3,5-TRINITROBENZENE		0.063	MG/KG	U	
PS-3	1,3-DINITROBENZENE	0.14	0.055	MG/KG	JN	E4
PS-3	2,4,6-TRINITROTOLUENE (TNT)	0.09	0.058	MG/KG	JN	E4
PS-3	2,4-DINITROTOLUENE	34	0.069	MG/KG	C	
PS-3	2,6-DINITROTOLUENE	1.1	0.084	MG/KG	JN	E4
PS-3	2-AMINO-4,6-DINITROTOLUENE		0.074	MG/KG	U	
PS-3	2-NITROTOLUENE		0.082	MG/KG	U	
PS-3	3-NITROTOLUENE		0.071	MG/KG	U	
PS-3	4-AMINO-2,6-DINITROTOLUENE		0.068	MG/KG	U	
PS-3	4-NITROTOLUENE	0.16	0.12	MG/KG	JN	E4
PS-3	ALUMINUM	24600	2.6	MG/KG		
PS-3	ANTIMONY		2.2	MG/KG	U	
PS-3	ARSENIC	7.3	1	MG/KG	B	
PS-3	BARIUM	373	0.1	MG/KG		
PS-3	BERYLLIUM	0.98	0.1	MG/KG	B	
PS-3	CADMIUM	0.51	0.1	MG/KG	B	
PS-3	CALCIUM	53900	4.6	MG/KG		
PS-3	CHROMIUM	23.9	0.1	MG/KG		
PS-3	COBALT	8.5	0.2	MG/KG		
PS-3	COPPER	33.8	0.1	MG/KG		
PS-3	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.74	0.1	MG/KG	JN	E4
PS-3	LEAD	21.9	1.7	MG/KG		
PS-3	MAGNESIUM	12300	0.71	MG/KG		
PS-3	MANGANESE	453	0.1	MG/KG		
PS-3	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		0.13	MG/KG	U	
PS-3	MOLYBDENUM	2.3	0.3	MG/KG	B	

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
PS-3	NICKEL	19.4	0.61	MG/KG		
PS-3	NITRATE AS N	770		MG/KG	D2	R
PS-3	NITRITE AS N			MG/KG	UD1	R
PS-3	NITROBENZENE		0.064	MG/KG	U	
PS-3	NITROGLYCERIN	6.8	0.28	MG/KG	C	
PS-3	NITROGUANIDINE	350	25	UG/KG	H4C	
PS-3	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	0.22	0.052	MG/KG	JN	E4
PS-3	PENTAERYTHRITOL TETRANITRATE		0.33	MG/KG	U	
PS-3	PERCHLORATE	337	75	UG/KG		D2
PS-3	POTASSIUM	8040	39.5	MG/KG		
PS-3	SELENIUM	24	2.7	MG/KG		
PS-3	SILVER		0.3	MG/KG	U	
PS-3	SODIUM	5380	7.6	MG/KG		
PS-3	THALLIUM		2.3	MG/KG	U	
PS-3	TIN		0.91	MG/KG	U	
PS-3	VANADIUM	35	0.1	MG/KG		
PS-3	ZINC	74	1	MG/KG		
RL-1	LEAD (TCLP)	0.13	0.04	MG/L		
RL-2	LEAD (TCLP)		0.04	MG/L	U	
RL-3	LEAD (TCLP)	0.22	0.04	MG/L		
WS-1	1,3,5-TRINITROBENZENE	2.1	0.082	MG/KG	JN	E4
WS-1	1,3-DINITROBENZENE	1.3	0.072	MG/KG	JN	E4
WS-1	2,4,6-TRINITROTOLUENE (TNT)	0.11	0.076	MG/KG	JN	E4
WS-1	2,4-DINITROTOLUENE		0.09	MG/KG	U	
WS-1	2,6-DINITROTOLUENE		0.11	MG/KG	U	
WS-1	2-AMINO-4,6-DINITROTOLUENE		0.097	MG/KG	U	
WS-1	4-AMINO-2,6-DINITROTOLUENE		0.089	MG/KG	U	

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Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-1	4-NITROTOLUENE		0.15	MG/KG	U	
WS-1	ALUMINUM	9470	2.8	MG/KG		
WS-1	ANTIMONY		2.3	MG/KG	U	
WS-1	ARSENIC	3.4	1.1	MG/KG	B	
WS-1	BARIUM	145	0.11	MG/KG		
WS-1	BERYLLIUM	0.43	0.11	MG/KG	B	
WS-1	CADMIUM	0.19	0.11	MG/KG	B	
WS-1	CALCIUM	22000	4.8	MG/KG		
WS-1	CHROMIUM	11	0.11	MG/KG		
WS-1	COBALT	5.5	0.21	MG/KG		
WS-1	COPPER	18.8	0.11	MG/KG		
WS-1	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		0.14	MG/KG	U	
WS-1	IRON	13200	1.2	MG/KG		
WS-1	LEAD	8.9	1.8	MG/KG	B	
WS-1	MAGNESIUM	6020	0.74	MG/KG		
WS-1	MANGANESE	291	0.11	MG/KG		
WS-1	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TE		0.17	MG/KG	U	
WS-1	MOLYBDENUM	1.1	0.32	MG/KG	B	
WS-1	NICKEL	10.9	0.64	MG/KG		
WS-1	NITRATE AS N	5.9		MG/KG		R
WS-1	NITRITE AS N			MG/KG	U	R
WS-1	NITROBENZENE		0.084	MG/KG	U	
WS-1	NITROGLYCERIN		0.37	MG/KG	U	
WS-1	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		0.068	MG/KG	U	
WS-1	PENTAERYTHRITOL TETRANITRATE		0.43	MG/KG	U	
WS-1	PERCHLORATE	17	15	UG/KG	E5	
WS-1	PERCHLORATE		15	UG/KG	U	

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PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
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Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-2	1,3,5-TRINITROBENZENE	0.45	0.064	MG/KG	JN	E4
WS-2	1,3-DINITROBENZENE	0.53	0.056	MG/KG	JN	E4
WS-2	2,4,6-TRINITROTOLUENE (TNT)		0.059	MG/KG	U	
WS-2	2,4-DINITROTOLUENE		0.07	MG/KG	U	
WS-2	2,6-DINITROTOLUENE		0.086	MG/KG	U	
WS-2	2-AMINO-4,6-DINITROTOLUENE	0.49	0.075	MG/KG	JN	E4
WS-2	2-NITROTOLUENE		0.084	MG/KG	U	
WS-2	3-NITROTOLUENE		0.072	MG/KG	U	
WS-2	4-AMINO-2,6-DINITROTOLUENE		0.069	MG/KG	U	
WS-2	4-NITROTOLUENE		0.12	MG/KG	U	
WS-2	ALUMINUM	9860	2.6	MG/KG		
WS-2	ANTIMONY		2.2	MG/KG	U	
WS-2	ARSENIC	3	1	MG/KG	B	
WS-2	BARIUM	132	0.1	MG/KG		
WS-2	BERYLLIUM	0.38	0.1	MG/KG	B	
WS-2	CADMIUM		0.1	MG/KG	U	
WS-2	CALCIUM	30300	4.5	MG/KG		
WS-2	CHROMIUM	9.3	0.1	MG/KG		
WS-2	COBALT	4.4	0.2	MG/KG		
WS-2	COPPER	13	0.1	MG/KG		
WS-2	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		0.11	MG/KG	U	
WS-2	IRON	12600	1.1	MG/KG		
WS-2	LEAD	4.5	1.7	MG/KG	B	
WS-2	MAGNESIUM	5120	0.7	MG/KG		
WS-2	MANGANESE	218	0.1	MG/KG		
WS-2	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		0.13	MG/KG	U	
WS-2	MOLYBDENUM	0.82	0.3	MG/KG	B	

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PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-2	NICKEL	8.1	0.6	MG/KG		
WS-2	NITRATE AS N	4		MG/KG		R
WS-2	NITRATE AS N			MG/KG	U	R
WS-2	NIRTOBENZENE		0.65	MG/KG	U	
WS-2	NITROGLYCERIN		0.29	MG/KG	U	
WS-2	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		0.053	MG/KG	U	
WS-2	PENTAERYTHRITOL TETRANITRATE		0.34	MG/KG	U	
WS-2	PERCHLORATE	17	15	UG/KG	E5	
WS-2	POTASSIUM	3280	39.2	MG/KG		
WS-2	SELENIUM	12.7	2.7	MG/KG	B	
WS-2	SILVER		0.3	MG/KG	U	
WS-2	SODIUM	129	7.5	MG/KG		
WS-2	THALLIUM		2.3	MG/KG	U	
WS-2	TIN		0.91	MG/KG	U	
WS-2	VANADIUM	16.8	0.1	MG/KG		
WS-2	ZINC	34.6	1	MG/KG		
WS-3	1,3,5-TRINITROBENZENE	0.077	0.061	MG/KG	JN	E4
WS-3	1,3-DINITROBENZENE	0.12	0.053	MG/KG	JN	E4
WS-3	2,4,6-TRINITROTOLUENE (TNT)		0.056	MG/KG	U	
WS-3	2,4-DINITROTOLUENE		0.067	MG/KG	U	
WS-3	2,6-DINITROTOLUENE		0.082	MG/KG	U	
WS-3	2-AMINO-4,6-DINITROTOLUENE	0.21	0.072	MG/KG	JN	E4
WS-3	2-NITROTOLUENE		0.08	MG/KG	U	
WS-3	3-NITROTOLUENE		0.069	MG/KG	U	
WS-3	4-AMINO-2,6-DINITROTOLUENE		0.066	MG/KG	U	
WS-3	4-NITROTOLUENE		0.11	MG/KG	U	
WS-3	ALUMINUM	9490	2.6	MG/KG		

Table F.2
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PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-3	ANTIMONY		2.2	MG/KG	U	
WS-3	ARSENIC	2.7	1	MG/KG	B	
WS-3	BARIUM	147	0.1	MG/KG		
WS-3	BERYLLIUM	0.35	0.1	MG/KG	B	
WS-3	CADMIUM	0.54	0.1	MG/KG	B	
WS-3	CALCIUM	26600	4.5	MG/KG		
WS-3	CHROMIUM	11.7	0.1	MG/KG		
WS-3	COBALT	5.4	0.2	MG/KG		
WS-3	COPPER	52.2	0.1	MG/KG		
WS-3	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		0.098	MG/KG	U	
WS-3	IRON	15400	1.1	MG/KG		
WS-3	LEAD	21.6	1.7	MG/KG		
WS-3	MAGNESIUM	5170	0.7	MG/KG		
WS-3	MANGANESE	269	0.1	MG/KG		
WS-3	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		0.12	MG/KG	U	
WS-3	MOLYBDENUM	1.3	0.3	MG/KG	B	
WS-3	NICKEL	10.8	0.6	MG/KG		
WS-3	NITRATE AS N	1.6		MG/KG	E4	R
WS-3	NITRITE AS N			MG/KG	U	R
WS-3	NITROBENZENE		0.062	MG/KG	U	
WS-3	NITROGLYCERIN		0.27	MG/KG	U	
WS-3	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		0.05	MG/KG	U	
WS-3	PENTAERYTHRITOL TETRANITRATE		0.32	MG/KG	U	
WS-3	PERCHLORATE		15	UG/KG	U	
WS-3	POTASSIUM	3570	38.8	MG/KG		
WS-3	SELENIUM	15.6	2.7	MG/KG	B	
WS-3	SILVER		0.3	MG/KG	U	

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-3	SODIUM	124	7.5	MG/KG		
WS-3	THALLIUM		2.3	MG/KG	U	
WS-3	TIN		0.9	MG/KG	U	
WS-3	VANADIUM	19.7	0.1	MG/KG		
WS-3	ZINC	55.8	1	MG/KG		
WS-4	1,3,5-TRINITROBENZENE	0.11	0.062	MG/KG	JN	E4
WS-4	1,3-DINITROBENZENE		0.054	MG/KG	U	
WS-4	2,4,6-TRINITROTOLUENE (TNT)		0.057	MG/KG	U	
WS-4	2,4-DINITROTOLUENE		0.068	MG/KG	U	
WS-4	2,6-DINITROTOLUENE		0.083	MG/KG	U	
WS-4	2-AMINO-4,6-DINITROTOLUENE	0.075	0.073	MG/KG	U	
WS-4	2-NITROTOLUENE		0.081	MG/KG	U	
WS-4	3-NITROTOLUENE		0.07	MG/KG	U	
WS-4	4-AMINO-2,6-DINITROTOLUENE		0.067	MG/KG	U	
WS-4	4-NITROTOLUENE		0.12	MG/KG	U	
WS-4	ALUMINUM	7970	2.7	MG/KG		
WS-4	ANTIMONY		2.3	MG/KG	U	
WS-4	ARSENIC	1.8	1	MG/KG	B	
WS-4	BARIUM	242	0.1	MG/KG		
WS-4	BERYLLIUM	0.29	0.1	MG/KG	B	
WS-4	CADMIUM	20	0.1	MG/KG		
WS-4	CALCIUM	24100	4.7	MG/KG		
WS-4	CHROMIUM	10.6	0.1	MG/KG		
WS-4	COBALT	4.8	0.21	MG/KG		
WS-4	COPPER	80.5	0.1	MG/KG		
WS-4	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		0.099	MG/KG	U	
WS-4	IRON	14100	1.1	MG/KG		

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-4	LEAD	24.5	1.8	MG/KG		
WS-4	MAGNESIUM	4270	0.73	MG/KG		
WS-4	MANGANESE	223	0.1	MG/KG		
WS-4	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		0.13	MG/KG	U	
WS-4	MOLYBDENUM	1.4	0.31	MG/KG	B	
WS-4	NICKEL	8.5	0.62	MG/KG		
WS-4	NITRATE AS N	2		MG/KG	E4	R
WS-4	NITRITE AS N			MG/KG	U	R
WS-4	NITROBENZENE		0.063	MG/KG	U	
WS-4	NITROGLYCERIN		0.28	MG/KG	U	
WS-4	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET	1.1	0.051	MG/KG	JN	E4
WS-4	PENTAERYTHRITOL TETRANITRATE		0.33	MG/KG	U	
WS-4	PERCHLORATE	16	15	UG/KG	E5	
WS-4	POTASSIUM	3550	40.5	MG/KG		
WS-4	SELENIUM	11.8	2.8	MG/KG	B	
WS-4	SILVER		0.31	MG/KG	U	
WS-4	SODIUM	103	7.8	MG/KG	B	
WS-4	THALLIUM		2.4	MG/KG	U	
WS-4	TIN		0.94	MG/KG	U	
WS-4	VANADIUM	14	0.1	MG/KG		
WS-4	ZINC	60.8	1	MG/KG		
WS-5	1,3,5-TRINITROBENZENE		0.062	MG/KG	U	
WS-5	1,3-DINITROBENZENE		0.054	MG/KG	U	
WS-5	2,4,6-TRINITROTOLUENE (TNT)		0.057	MG/KG	U	
WS-5	2,4-DINITROTOLUENE		0.068	MG/KG	U	
WS-5	2,6-DINITROTOLUENE		0.083	MG/KG	U	
WS-5	2-AMINO-4,6-DINITROTOLUENE	0.082	0.073	MG/KG	JN	E4

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-5	2-NITROTOLUENE		0.081	MG/KG	U	
WS-5	3-NITROTOLUENE		0.07	MG/KG	U	
WS-5	4-AMINO-2,6-DINITROTOLUENE		0.067	MG/KG	U	
WS-5	4-NITROTOLUENE	0.69	0.12	MG/KG	JN	E4
WS-5	ALUMINUM	9820	2.7	MG/KG		
WS-5	ANTIMONY		2.3	MG/KG	U	
WS-5	ARSENIC	5.2	1	MG/KG	B	
WS-5	BARIUM	178	0.1	MG/KG		
WS-5	BERYLLIUM	0.4	0.1	MG/KG	B	
WS-5	CADMIUM		0.1	MG/KG	U	
WS-5	CALCIUM	47500	4.6	MG/KG		
WS-5	CHROMIUM	13.2	0.1	MG/KG		
WS-5	COBALT	5.9	0.21	MG/KG		
WS-5	COPPER	11.8	0.1	MG/KG		
WS-5	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		0.099	MG/KG	U	
WS-5	IRON	15000	1.1	MG/KG		
WS-5	LEAD	3.2	1.8	MG/KG	B	
WS-5	MAGNESIUM	6510	0.72	MG/KG		
WS-5	MANGANESE	232	0.1	MG/KG		
WS-5	METHYL-2,4,6-TRINITROPHENYLNITRA MINE (TETRYL)		0.13	MG/KG	U	
WS-5	MOLYBDENUM	0.86	0.31	MG/KG	B	
WS-5	NICKEL	9.8	0.62	MG/KG		
WS-5	NITRATE AS N	1.9		MG/KG	E4	R
WS-5	NITRATE AS N			MG/KG	U	R
WS-5	NITROBENZENE		0.063	MG/KG	U	
WS-5	NITROGLYCERIN		0.28	MG/KG	U	
WS-5	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TET		0.051	MG/KG	U	

Table F.2
ANALYITICAL RESULTS FOR SAMPLING EVENT, JUNE 2003
PROPELLANT AREAS AT MUGGINS MOUNTAIN OB/OD SITE
U.S. ARMY GARRISON YUMA PROVING GROUND, ARIZONA

Sample ID	Analyte	Result	MDL	Unit	EPA Data Qualifier[1]	AZ Qualifier
WS-5	PENTAERYTHRITOL TETRANITRATE		0.33	MG/KG	U	
WS-5	PERCHLORATE		15	UG/KG	U	
WS-5	POTASSIUM	4480	40.3	MG/KG		
WS-5	SELENIUM	12.2	2.8	MG/KG	B	
WS-5	SILVER		0.31	MG/KG	U	
WS-5	SODIUM	130	7.7	MG/KG		
WS-5	THALLIUM		2.4	MG/KG	U	
WS-5	TIN		0.93	MG/KG	U	
WS-5	VANADIUM	21.2	0.1	MG/KG		
WS-5	ZINC	40	1	MG/KG		

Notes:

[1] Analytes with a values in the results column were treated as a detects. Analytes with no value in the results column were treated as non-detect. This table is an excerpt from the 2003 sampling event report (Jason, 2003) and qualifier definitions are not listed here.

Values not used in risk assessment because sample consisted of actual propellent, not soil.

WS-1 values not used in the risk assessment because sample location is outside of YPG-35c boundary.

Not included in the risk assessment because sample is considered red lead.