QC

ERI00-SWMU91-B Baseline Sampling for SWMU 91-LASAGNA

120399REFLAYC

Collected: 12/3/99 Matrix: WATER Media Type: WQ Sample Type: RB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

121099REFLAYC

Collected: 12/10/99 Matrix: WATER Media Type: WQ Sample Type: RB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

Media Type Codes

AA Ambient Air
AG Soil Gas
AQ Air Quality Control Matrix
BA Biota, Whole Animal
DC Drill Cuttings
EA Effluent Air
EF Biota, Excreta (feces)
FR Filter Residue
FT Filter
GR Grout
GS Green Salt
LD Drilling Fluid
LE Liquid Emulsion
LF Floating/Free Product on Groundwater Table
LO Oil, All Types (Transformer, Waste, Motor, Mineral)
LT Liquid from tank
LV Liquid From Vadose Zone
MS Metal Shavings
NA Not Available
NW Non-Water Liquid
PC Precipitation
PW Porewater
QA Aquatic Animal
QB Aquatic Bird
QC Aquatic (Some combination of at least 2) of bird, plant, animal; Excludes benthic organism
QN Benthic Organism
QP Aquatic Plant
SC Cement
SE Sediment (associated with surface water)
SF Filter Sandpack
SL Sludge
SN Supernatant
SO Soil
SP Floor Sweepings
SQ Soil/Solid Quality Control Matrix
SS Scrapings
SW Swab or Wipe
SZ Solid Waste
TA Animal Tissue
TB Terrestrial Bird
TC Terrestrial (Some combination at least 2) of bird, plant, or animal.)
TP Plant Tissue
TQ Tissue Quality Control Matrix

Media Type Codes (Continued)

TW Treated Water
WC Wall corings
WD Well Development Water
WE Estuary
WG Groundwater
WH Equipment Wash Water, i.e., Water used for Washing
WL Water that has leached through waste
WO Ocean Water
WP Drinking Water
WQ Water Quality Control Matrix
WS Surface Water
WV Water From Vadose Zone
WW Waste Water
WZ Special Water Quality Control Matrix
YC Yellow Cake

SmpMethod Codes

? Other, defined in COMMENTS column
CSF Continuous Sample Flow
ES Estimate
FPC Flow Proportional Composite
GR Grab
NA Not Applicable
SC Spatial Composite
SPLT Split
TC Temporal Composite

SampleType Codes

? Other, defined in COMMENTS column
DI Deionized Water used for preparing blanks, etc.
DIL Laboratory dilution
FB Field Blank
FR Field Replicate (Code used for Field Duplicate)
PRBL Preservative blank
RB Refrigerator blank
REG Regular
REG2 Regular sample, secondary analysis
REP Replicate
REP1 Replicate 1
REP2 Replicate 2
REP3 Replicate 3
REP4 Replicate 4
RI QC Equipment Rinsate/Decon
TB Trip Blank
TLC Toxicity Laboratory Control Sample

Laboratory Result Codes

Footnote

A Insufficient uranium present in the sample to determine an assay.
B Maximum assay was used to calculate the MDA for total uranium activities.
C Normal assay was used to calculate the MDA for total uranium activites.
D Sample was analyzed by a non-destructive test per customer request.
E Gross activities are a calculated value. Gamma activity is converted to the corresponding gross alpha/beta measurement.
F Insufficient sample available/provided for gross beta analysis.
G TIMS assay used to calculate total uranium activity.
H No nuclide meet criteria for gross gamma.
I The MDA of all principal nuclide not identified and nuclide identified were summed to provide max. reportable activity.
J No analysis result available. Sample signal too weak.
K No analysis result available. Total U below reporting limit.
L No minor isotope determination available. Signal strength insufficient.
M Result is biased high and MDA is biased low due to interfering lines and/or increases in BKG due to sample activity.
N Measured U-235 act/mass was below MDA therefore all other cal. U isotopes & U-total wil be rpt as below their resp. MDAs
O Gross Gamma has no output error.
P The max. plant assay was assumed since the calculated assay was not within the range of plant cascade assays.
Q Mass of U-235 is < or = MDM, thus mass of total U/U isotopes won't be reported. Total U/U isotopes will be < their MDMs.
R Cs-134 activity will be understated due to the short half-life and will exclude any previous site induced Cs-134.
S Gross gamma is a Cs-137 equivalence. Activity assumes branch yield and det eff of Cs-137 for all lines in spectrum.
T Analyte is a common volatile laboratory contaminant.
W Analyte is present at the LCR.
Z Std Dev is calculated based on controls (SRM) prepared and analyzed with each sample batch. SRM is ~0.711 wt% U-235.

Laboratory Result Codes (continued)

Inorganic

*	Duplicate analysis not within control limits.
+	Method of standard additions (MSA) correlation coefficient less than 0.995.
<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Indicates that a TIC is suspected aldol-condensation product
B	Applies when the analyte is found in the associated blank
D	All compounds identified in the analysis at the secondary dilution factor
E	Result estimated due to interferences.
J	Indicates an estimated value
M	Duplicate injection precision not met.
N	Sample spike recovery not within control limits.
Q	No analytical result available or not required because total analyses < PQL
R	QC indicates that data are not usable. Resampling and re-analysis are necessary for verification
S	Result determined by method of standard additions (MSA).
U	Analyte analyzed for but not detected at or below the lowest concentration reported.
W	Post-digestion spike recovery out of control limits.
X	Other specific flags and footnotes may be required to properly define the results

Organic

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Tentatively identified compound (TIC) is suspected aldol-condensation product.
B	Compound found in blank as well as sample.
C	Compound presence confirmed by GC/MS. (GC/MS flag)
D	Compounds identified in an analysis at a secondary dilution factor.
E	Result exceeds calibration range. (GC/MS flag)
J	Indicates an estimated value
N	Presumptive evidence of a compound. (GC/MS flag)
P	Difference between results from two GC columns unacceptable.
U	Compound analyzed for but not detected at or below the lowest concentration reported.
X	Other specific flags and footnotes may be required to properly define the results
Y	MS,MSD recovery and/or RPD failed acceptance criteria
Z	(Reserved by CLP for a laboratory-defined organic data qualifier.)

Rads

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Analyzed but not detected at the analyte quantitation limit.
B	Method blank not statistically different from sample at 95% level of confidence.
D	Sample is statistically different from duplicate at 95% level of confidence.
J	Indicates an estimated value.
L	Expected and measured value for LCS is statistically different at 95% level of confidence.
M	Expected and measured value for MS is statistically different at 95% level of confidence.
R	QC indicates that data are not usable. Resampling and reanalysis are necessary for verification.
T	Tracer recovery is < or equal to 30% or > or equal to 105%.
U	Value reported is < the MDA and/or < 2 sigma TPE.
X	Other specific flags and footnotes may be required to properly define the results.

Verification Codes

?	Other, defined in COMMENTS column
B	Result exceeds background criteria
	Result exceeds established criteria
S	Result exceeds statistical controls based on historical data
T	Holding time exceeded for this analysis
X	Result exceeds permit limits

Validation Codes

	Validated result, which is detected and unqualified
	Other, defined in COMMENTS column
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Validation Codes (continued)

N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
R	Result rejected by validator.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte, compound or nuclide not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated; Refer to the RSLTQUAL field for more information
XV	Not validated; Refer to the RSLTQUAL field for more information
XX	Unknown; Refer to the RSLTQUAL field for more information
XZ	Data evaluation performed; Validation qualifiers not applied; Refer to RSLTQUAL field for more information

Assessment Qualifier Codes

?	Other, defined in COMMENTS column
BH-ER	Result may be biased high; chemical detected in associated equipment rinseate
BH-FB	Result may be biased high; chemical detected in associated field blank
BH-FB,&	Result may be biased high; chemical detected in associate field blank. See comments for additional assessment qualifiers
BH-LAB	Result may be biased high; compound is a known or probable lab contaminant
BH-LABPR	Result biased high due to laboratory process
BH-PURGE	Result may be biased high; sample may be diluted with driling fluid due to insufficient purging prior to sampling
BH-RB	Result may be biased high; chemical detected in associated refrigerator blank
BH-RI	Result may be biased high; chemical detected in associated equipment rinsate.
BH-SOLID	Result biased high due to sample containing a large amount of solids
BH-SS	Result may be biased high; sample may contain particles of the acetate sampling sleeve
BH-TEMP	Result biased high due to a temperature exceedance.
BL-LAB	Result may be biased low; compound is a known or probable lab contaminant
BL-LABPR	Result biased low due to laboratory process
BL-PURGE	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling
BL-PURGE,&	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling. See comments for additional assessment qualifiers
BL-T	Result may be biased low; sample holding time exceeded
BL-T,J	Result may be biased low; sample holding time exceeded, estimated
BL-TEMP	Result biased low due to a temperature exceedance
DIS-EDDF1	Discrepancies exist between the EDD and the Form 1. Form 1s are generated by instrument software that automatically reports all detected compounds. It is the lab's policy to not report quantities below LCRs within their EDD format. Both sets of data are correct. However, the EDD format data, which feeds OREIS, will be used for reporting.
IN-LAB	Result should be considered information only. Compound is a known or probable lab contaminant
IN-LAB,&	Result should be considered information only. Compound is a known or probable lab contaminant. See comments for additional assessment qualifiers
IN-METH	Result should be considered information only. Lab utilized a modified method.
J	Result estimated
KYRHTAB-50	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error accounts for greater than 50% of the results.
KYRHTAB-ER	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data presents error problems (ie., no counting uncertainty or zero counting uncertainty).
KYRHTAB-LT	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the results are less than (LT) the maximum detectable activity (MDA) or detection limit and should not be plotted.
KYRHTAB-NE	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error exhibits a negative value, which is a statistical outlier.
KYRHTAB-OK	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data is acceptable for use.
N/A	Not Applicable
NOVAL	Validation requested but qualifier not provided due to missing Form I
NOVAL-FLAB	Validation targeted for this project but not required for field laboratory data.
NR	Assessment question not resolved.
R	Result unusable.
R-C	Result questionable, credibility at issue.
R-C,&	Result questionable, credibility at issue. See comments for additional assessment qualifiers
R-H	Result unusable due to historical trending (i.e., outlier).
R-HSS	Rejected due to high suspended solids content.
R-MTRX	Result rejected due to matrix interference.
R-NORAD	Result unusable; Uranium-235 portion of calculation is below reliable detection limits.
R-NORAD,&	Result unusable; Uranium-235 portion of calculation is below reliable detection limits. See comments for additional assessment qualifiers
R-NTRSFW	Result rejected; not a true representative sample of formation water
R-PRES	Result rejected due to improper preservative added.
R-RERUN	Result unusable, results from re-analysis should be used
R-T	Result rejected due to missed holding time
U	Not detected
U,J	Not detected and result estimated
U-RAD	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result
U-RAD,&	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result, see comments for additional assessment qualifiers

APPENDIX C

PROGRESS SAMPLING EVENT A RESULTS
AUGUST 2000

Paducah-OREIS Data Report

BOR06

ERI00-SWMU91-1

Lasagna Progress Sampling - First Event

020616710C

Collected: 10/9/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	J	35	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
Trichloroethene	EJ	1000	ug/kg			10	SW846-8260
Vinyl chloride	JU	10	ug/kg			10	SW846-8260

020616743E

Collected: 10/9/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1822	ug/kg			20	SW846-8021 M

020626743E

Collected: 10/9/00 Matrix: SOI Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		232	ug/kg			20	SW846-8021 M

*QUALIFIER Codes See attached List.

BOR07

ERI00-SWMU91-1 **Lasagna Progress Sampling - First Event**

020706743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		552000	ug/kg			5000	SW846-8021 M

020711743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		131000	ug/kg			5000	SW846-8021 M

020716743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		44000	ug/kg			2500	SW846-8021 M

020721743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		16000	ug/kg			1000	SW846-8021 M

020726743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1600	ug/kg			20	SW846-8021 M

020731710C

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
Trichloroethene	JU	10	ug/kg			10	SW846-8260
Vinyl chloride	JU	10	ug/kg			10	SW846-8260

*QUALIFIER Codes See attached List

BOR07

ERI00-SWMU91-1 **Lasagna Progress Sampling - First Event**

020731743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1100	ug/kg			20	SW846-8021 M

020736743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		959	ug/kg			20	SW846-8021 M

020741743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		543	ug/kg			20	SW846-8021 M

020736743D

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: FR

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		820	ug/kg			20	SW846-8021 M

*QUALIFIER Codes See attached List.

BOR08

ERI00-SWMU91-1 Lasagna Progress Sampling - First Event

020821710C

Collected: 10/9/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
Trichloroethene	J	48	ug/kg			10	SW846-8260
Vinyl chloride	JU	10	ug/kg			10	SW846-8260

020821743E

Collected: 10/9/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1994	ug/kg			20	SW846-8021 M

BOR09

ERI00-SWMU91-1 **Lasagna Progress Sampling - First Event**

020921743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		28000	ug/kg			500	SW846-8021 M

020926710C

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
Trichloroethene	JUX	10	ug/kg			10	SW846-8260
Vinyl chloride	JU	10	ug/kg			10	SW846-8260

020926743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		110	ug/kg			10	SW846-8021 M

020931743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene			ug/kg				SW846-8021 M

020936743E

Collected: 10/10/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		10	ug/kg				SW846-8021 M

BOR10

ERI00-SWMU91-1 **Lasagna Progress Sampling - First Event**

021036710C

Collected: 10/11/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/kg			10	SW846-8260
Trichloroethene	JU	10	ug/kg			10	SW846-8260
Vinyl chloride	JU	10	ug/kg			10	SW846-8260

021036743E

Collected: 10/11/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		9	ug/kg				SW846-8021 M

021041743E

Collected: 10/11/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		9	ug/kg				SW846-8021 M

021046743E

Collected: 10/11/00 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		20	ug/kg				SW846-8021 M

QC

ERI00-SWMU91-1 **Lasagna Progress Sampling - First Event**

020001710T

Collected: 10/9/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/L			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/L			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/L			10	SW846-8260
Trichloroethene	JU	10	ug/L			10	SW846-8260
Vinyl chloride	JU	10	ug/L			10	SW846-8260

020006743T

Collected: 10/9/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L			1	SW846-8021 M

020001743T

Collected: 10/10/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1	ug/L			1	SW846-8021 M

020003710T

Collected: 10/10/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/L			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/L			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/L			10	SW846-8260
Trichloroethene	JU	10	ug/L			10	SW846-8260
Vinyl chloride	JU	10	ug/L			10	SW846-8260

020007743T

Collected: 10/10/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L			1	SW846-8021 M

QC

ERI00-SWMU91-1 Lasagna Progress Sampling - First Event

020005710T

Collected: 10/11/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	JU	10	ug/L			10	SW846-8260
cis-1,2-Dichloroethene	JU	10	ug/L			10	SW846-8260
trans-1,2-Dichloroethene	JU	10	ug/L			10	SW846-8260
Trichloroethene	JU	10	ug/L			10	SW846-8260
Vinyl chloride	JU	10	ug/L			10	SW846-8260

020005743T

Collected: 10/11/00 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

020001743R

Collected: 10/9/00 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L			1	SW846-8021 M

*QUALIFIER Codes See attached List.

Media Type Codes

AA	Ambient Air
AG	Soil Gas
AQ	Air Quality Control Matrix
BA	Biota, Whole Animal
DC	Drill Cuttings
EA	Effluent Air
EF	Biota, Excreta (feces)
FR	Filter Residue
FT	Filter
GR	Grout
GS	Green Salt
LD	Drilling Fluid
LE	Liquid Emulsion
LF	Floating/Free Product on Groundwater Table
LO	Oil, All Types (Transformer, Waste, Motor, Mineral)
LT	Liquid from tank
LV	Liquid From Vadose Zone
MS	Metal Shavings
NA	Not Available
NW	Non-Water Liquid
PC	Precipitation
PW	Porewater
QA	Aquatic Animal
QB	Aquatic Bird
QC	Aquatic (Some combination of at least 2) of bird, plant, animal; Excludes benthic organism
QN	Benthic Organism
QP	Aquatic Plant
SC	Cement
SE	Sediment (associated with surface water)
SF	Filter Sandpack
SL	Sludge
SN	Supernatant
SO	Soil
SP	Floor Sweepings
SQ	Soil/Solid Quality Control Matrix
SS	Scrapings
SW	Swab or Wipe
SZ	Solid Waste
TA	Animal Tissue
TB	Terrestrial Bird
TC	Terrestrial (Some combination at least 2) of bird, plant, or animal.)
TP	Plant Tissue
TQ	Tissue Quality Control Matrix

Media Type Codes (Continued)

TW	Treated Water
WC	Wall corings
WD	Well Development Water
WE	Estuary
WG	Groundwater
WH	Equipment Wash Water, i.e., Water used for Washing
WL	Water that has leached through waste
WO	Ocean Water
WP	Drinking Water
WQ	Water Quality Control Matrix
WS	Surface Water
WV	Water From Vadose Zone
WW	Waste Water
WZ	Special Water Quality Control Matrix
YC	Yellow Cake

SmpMethod Codes

?	Other, defined in COMMENTS column
CSF	Continuous Sample Flow
ES	Estimate
FPC	Flow Proportional Composite
GR	Grab
NA	Not Applicable
SC	Spatial Composite
SPLT	Split
TC	Temporal Composite

SampleType Codes

?	Other, defined in COMMENTS column
DI	Deionized Water used for preparing blanks, etc.
DIL	Laboratory dilution
FB	Field Blank
FR	Field Replicate (Code used for Field Duplicate)
PRBL	Preservative blank
RB	Refrigerator blank
REG	Regular
REG2	Regular sample, secondary analysis
REP	Replicate
REP1	Replicate 1
REP2	Replicate 2
REP3	Replicate 3
REP4	Replicate 4
RI	QC Equipment Rinsate/Decon
TB	Trip Blank
TLC	Toxicity Laboratory Control Sample

Laboratory Result Codes

Footnote	
A	Insufficient uranium present in the sample to determine an assay.
B	Maximum assay was used to calculate the MDA for total uranium activities.
C	Normal assay was used to calculate the MDA for total uranium activites.
D	Sample was analyzed by a non-destructive test per customer request.
E	Gross activities are a calculated value. Gamma activity is converted to the corresponding gross alpha/beta measurement.
F	Insufficient sample available/provided for gross beta analysis.
G	TIMS assay used to calculate total uranium activity.
H	No nuclide meet criteria for gross gamma.
I	The MDA of all principal nuclide not identified and nuclide identified were summed to provide max. reportable activity.
J	No analysis result available. Sample signal too weak.
K	No analysis result available. Total U below reporting limit.
L	No minor isotope determination available. Signal strength insufficient.
M	Result is biased high and MDA is biased low due to interfering lines and/or increases in BKG due to sample activity.
N	Measured U-235 act/mass was below MDA therefore all other cal. U isotopes & U-total wil be rpt as below their resp. MDAs
O	Gross Gamma has no output error.
P	The max. plant assay was assumed since the calculated assay was not within the range of plant cascade assays.
Q	Mass of U-235 is < or = MDM, thus mass of total U/U isotopes won't be reported. Total U/U isotopes will be < their MDMs.
R	Cs-134 activity will be understated due to the short half-life and will exclude any previous site induced Cs-134.
S	Gross gamma is a Cs-137 equivalence. Activity assumes branch yield and det eff of Cs-137 for all lines in spectrum.
T	Analyte is a common volatile laboratory contaminant.
W	Analyte is present at the LCR.
Z	Std Dev is calculated based on controls (SRM) prepared and analyzed with each sample batch. SRM is ~0.711 wt% U-235

Laboratory Result Codes (continued)

Inorganic

*	Duplicate analysis not within control limits.
+	Method of standard additions (MSA) correlation coefficient less than 0.995.
<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Indicates that a TIC is suspected aldol-condensation product
B	Applies when the analyte is found in the associated blank
D	All compounds identified in the analysis at the secondary dilution factor
E	Result estimated due to interferences.
J	Indicates an estimated value
M	Duplicate injection precision not met.
N	Sample spike recovery not within control limits.
Q	No analytical result available or not required because total analyses < PQL
R	QC indicates that data are not usable. Resampling and re-analysis are necessary for verification
S	Result determined by method of standard additions (MSA).
U	Analyte analyzed for but not detected at or below the lowest concentration reported.
W	Post-digestion spike recovery out of control limits.
X	Other specific flags and footnotes may be required to properly define the results

Organic

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Tentatively identified compound (TIC) is suspected aldol-condensation product.
B	Compound found in blank as well as sample.
C	Compound presence confirmed by GC/MS. (GC/MS flag)
D	Compounds identified in an analysis at a secondary dilution factor.
E	Result exceeds calibration range. (GC/MS flag)
J	Indicates an estimated value
N	Presumptive evidence of a compound. (GC/MS flag)
P	Difference between results from two GC columns unacceptable.
U	Compound analyzed for but not detected at or below the lowest concentration reported.
X	Other specific flags and footnotes may be required to properly define the results
Y	MS,MSD recovery and/or RPD failed acceptance criteria
Z	(Reserved by CLP for a laboratory-defined organic data qualifier.)

Rads

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Analyzed but not detected at the analyte quantitation limit.
B	Method blank not statistically different from sample at 95% level of confidence.
D	Sample is statistically different from duplicate at 95% level of confidence.
J	Indicates an estimated value.
L	Expected and measured value for LCS is statistically different at 95% level of confidence.
M	Expected and measured value for MS is statistically different at 95% level of confidence.
R	QC indicates that data are not usable. Resampling and reanalysis are necessary for verification.
T	Tracer recovery is < or equal to 30% or > or equal to 105%.
U	Value reported is < the MDA and/or < 2 sigma TPE.
X	Other specific flags and footnotes may be required to properly define the results.

Verification Codes

?	Other, defined in COMMENTS column
B	Result exceeds background criteria
I	Result exceeds established criteria
S	Result exceeds statistical controls based on historical data
T	Holding time exceeded for this analysis
X	Result exceeds permit limits

Validation Codes

=	Validated result, which is detected and unqualified
?	Other, defined in COMMENTS column
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Validation Codes (continued)

N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
R	Result rejected by validator.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte, compound or nuclide not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated; Refer to the RSLTQUAL field for more information
XV	Not validated; Refer to the RSLTQUAL field for more information
XX	Unknown; Refer to the RSLTQUAL field for more information
XZ	Data evaluation performed; Validation qualifiers not applied; Refer to RSLTQUAL field for more information

Assessment Qualifier Codes

?	Other, defined in COMMENTS column
BH-ER	Result may be biased high; chemical detected in associated equipment rinseate
BH-FB	Result may be biased high; chemical detected in associated field blank
BH-FB,&	Result may be biased high; chemical detected in associate field blank. See comments for additional assessment qualifiers
BH-LAB	Result may be biased high; compound is a known or probable lab contaminant
BH-LABPR	Result biased high due to laboratory process
BH-PURGE	Result may be biased high; sample may be diluted with driling fluid due to insufficient purging prior to sampling
BH-RB	Result may be biased high; chemical detected in associated refrigerator blank
BH-RI	Result may be biased high; chemical detected in associated equipment rinsate.
BH-SOLID	Result biased high due to sample containing a large amount of solids
BH-SS	Result may be biased high; sample may contain particles of the acetate sampling sleeve
BH-TEMP	Result biased high due to a temperature exceedance.
BL-LAB	Result may be biased low; compound is a known or probable lab contaminant
BL-LABPR	Result biased low due to laboratory process
BL-PURGE	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling
BL-PURGE,&	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling. See comments for additional assessment qualifiers
BL-T	Result may be biased low; sample holding time exceeded
BL-T,J	Result may be biased low; sample holding time exceeded, estimated
BL-TEMP	Result biased low due to a temperature exceedance
DIS-EDDF1	Discrepancies exist between the EDD and the Form 1. Form 1s are generated by instrument software that automatically reports all detected compounds. It is the lab's policy to not report quantities below LCRs within their EDD format. Both sets of data are correct. However, the EDD format data, which feeds OREIS, will be used for reporting.
IN-LAB	Result should be considered information only. Compound is a known or probable lab contaminant
IN-LAB,&	Result should be considered information only. Compound is a known or probable lab contaminant. See comments for additional assessment qualifiers
IN-METH	Result should be considered information only. Lab utilized a modified method.
J	Result estimated
KYRHTAB-50	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error accounts for greater than 50% of the results.
KYRHTAB-ER	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data presents error problems (ie., no counting uncertainty or zero counting uncertainty).
KYRHTAB-LT	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the results are less than (LT) the maximum detectable activity (MDA) or detection limit and should not be plotted.
KYRHTAB-NE	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error exhibits a negative value, which is a statistical outlier.
KYRHTAB-OK	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data is acceptable for use.
N/A	Not Applicable
NOVAL	Validation requested but qualifier not provided due to missing Form I
NOVAL-FLAB	Validation targeted for this project but not required for field laboratory data.
NR	Assessment question not resolved.
R	Result unusable.
R-C	Result questionable, credibility at issue.
R-C,&	Result questionable, credibility at issue. See comments for additional assessment qualifiers
R-H	Result unusable due to historical trending (i.e., outlier).
R-HSS	Rejected due to high suspended solids content.
R-MTRX	Result rejected due to matrix interference.
R-NORAD	Result unusable; Uranium-235 portion of calculation is below reliable detection limits.
R-NORAD,&	Result unusable; Uranium-235 portion of calculation is below reliable detection limits. See comments for additional assessment qualifiers
R-NTRSFW	Result rejected; not a true representative sample of formation water
R-PRES	Result rejected due to improper preservative added.
R-RERUN	Result unusable, results from re-analysis should be used
R-T	Result rejected due to missed holding time
U	Not detected
U,J	Not detected and result estimated
U-RAD	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result
U-RAD,&	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result, see comments for additional assessment qualifiers

APPENDIX D

PROGRESS SAMPLING EVENT B RESULTS
AUGUST 2001

BOR06

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

BOR06LAS06

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		21500	ug/kg			250	SW846-8021 M

BOR06LAS11

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		7900	ug/kg			250	SW846-8021 M

BOR06LAS16

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		197	ug/kg			10	SW846-8021 M

BOR06LAS21

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		594	ug/kg			10	SW846-8021 M

BOR06LAS26

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		25	ug/kg			10	SW846-8021 M

BOR07

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

BOR07LAS06

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		6700	ug/kg			100	SW846-8021 M

BOR07LAS11

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		27000	ug/kg			250	SW846-8021 M

BOR07LAS16

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2900	ug/kg			100	SW846-8021 M

BOR07LAS21

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		92	ug/kg			10	SW846-8021 M

BOR07LAS26

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		12200	ug/kg			250	SW846-8021 M

BOR07LAS31

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1900	ug/kg			10	SW846-8021 M

BOR07LAS36

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		35	ug/kg			10	SW846-8021 M

BOR07

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

BOR07LAS41

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		44	ug/kg			10	SW846-8021 M

BOR07LAS46

Collected: 8/28/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
Trichloroethene	U	1	ug/kg			1	SW846-8021 M
Trichloroethene	U	10	ug/kg			10	SW846-8260
Vinyl chloride	U	10	ug/kg			10	SW846-8260

BOR08

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

BOR08LAS06

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		780	ug/kg			250	SW846-8021 M

BOR08LAS11

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
Trichloroethene	U	1	ug/kg			1	SW846-8021 M
Trichloroethene	U	10	ug/kg			10	SW846-8260
Vinyl chloride	U	10	ug/kg			10	SW846-8260

BOR08LAS16

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR08LAS21

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg				SW846-8021 M

BOR09

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

BOR09LAS06

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR09LAS11

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR09LAS16

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR09LAS21

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
Trichloroethene	U	10	ug/kg			10	SW846-8260
Trichloroethene	U	1	ug/kg			1	SW846-8021 M
Vinyl chloride	U	10	ug/kg			10	SW846-8260

BOR09LAS26

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR10

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

BOR10LAS06

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	10	ug/kg			10	SW846-8260
cis-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
trans-1,2-Dichloroethene	U	10	ug/kg			10	SW846-8260
Trichloroethene	U	1	ug/kg			1	SW846-8021 M
Trichloroethene	U	10	ug/kg			10	SW846-8260
Vinyl chloride	U	10	ug/kg			10	SW846-8260

BOR10LAS11

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR10LAS16

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR10LAS21

Collected: 8/27/01 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

QC

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

TB1LAS8-01

Collected: 8/27/01 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

TB2LAS8-01

Collected: 8/27/01 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

RI1LAS8-01

Collected: 8/27/01 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

RI2LAS8-01

Collected: 8/28/01 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

RB1LAS8-01

Collected: 8/27/01 Matrix: WATER Media Type: WQ Sample Type: RB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

FB1LAS8-01

Collected: 8/27/01 Matrix: WATER Media Type: WQ Sample Type: FB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	10	ug/L			10	SW846-8260
cis-1,2-Dichloroethene	U	10	ug/L			10	SW846-8260
trans-1,2-Dichloroethene	U	10	ug/L			10	SW846-8260
Trichloroethene	U	10	ug/L			10	SW846-8260
Trichloroethene	U	1	ug/L			1	SW846-8021 M
Vinyl chloride	U	10	ug/L			10	SW846-8260

QC

ERI01-SWMU91-2 Lasagna Progress Sampling - Second Event ERI01-SW

FB2LAS8-01

Collected: 8/28/01 Matrix: WATER Media Type: WQ Sample Type: FB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

*QUALIFIER Codes See attached List.

Media Type Codes

AA Ambient Air
AG Soil Gas
AQ Air Quality Control Matrix
BA Biota, Whole Animal
DC Drill Cuttings
EA Effluent Air
EF Biota, Excreta (feces)
FR Filter Residue
FT Filter
GR Grout
GS Green Salt
LD Drilling Fluid
LE Liquid Emulsion
LF Floating/Free Product on Groundwater Table
LO Oil, All Types (Transformer, Waste, Motor, Mineral)
LT Liquid from tank
LV Liquid From Vadose Zone
MS Metal Shavings
NA Not Available
NW Non-Water Liquid
PC Precipitation
PW Porewater
QA Aquatic Animal
QB Aquatic Bird
QC Aquatic (Some combination of at least 2) of bird, plant, animal; Excludes benthic organism
QN Benthic Organism
QP Aquatic Plant
SC Cement
SE Sediment (associated with surface water)
SF Filter Sandpack
SL Sludge
SN Supernatant
SO Soil
SP Floor Sweepings
SQ Soil/Solid Quality Control Matrix
SS Scrapings
SW Swab or Wipe
SZ Solid Waste
TA Animal Tissue
TB Terrestrial Bird
TC Terrestrial (Some combination at least 2) of bird, plant, or animal.)
TP Plant Tissue
TQ Tissue Quality Control Matrix

Media Type Codes (Continued)

TW Treated Water
WC Wall corings
WD Well Development Water
WE Estuary
WG Groundwater
WH Equipment Wash Water, i.e., Water used for Washing
WL Water that has leached through waste
WO Ocean Water
WP Drinking Water
WQ Water Quality Control Matrix
WS Surface Water
WV Water From Vadose Zone
WW Waste Water
WZ Special Water Quality Control Matrix
YC Yellow Cake

SmpMethod Codes

? Other, defined in COMMENTS column
CSF Continuous Sample Flow
ES Estimate
FPC Flow Proportional Composite
GR Grab
NA Not Applicable
SC Spatial Composite
SPLT Split
TC Temporal Composite

SampleType Codes

? Other, defined in COMMENTS column
DI Deionized Water used for preparing blanks, etc.
DIL Laboratory dilution
FB Field Blank
FR Field Replicate (Code used for Field Duplicate)
PRBL Preservative blank
RB Refrigerator blank
REG Regular
REG2 Regular sample, secondary analysis
REP Replicate
REP1 Replicate 1
REP2 Replicate 2
REP3 Replicate 3
REP4 Replicate 4
RI QC Equipment Rinsate/Decon
TB Trip Blank
TLC Toxicity Laboratory Control Sample

Laboratory Result Codes

Footnote

A Insufficient uranium present in the sample to determine an assay.
B Maximum assay was used to calculate the MDA for total uranium activities.
C Normal assay was used to calculate the MDA for total uranium activites.
D Sample was analyzed by a non-destructive test per customer request.
E Gross activities are a calculated value. Gamma activity is converted to the corresponding gross alpha/beta measurement.
F Insufficient sample available/provided for gross beta analysis.
G TIMS assay used to calculate total uranium activity.
H No nuclide meet criteria for gross gamma.
I The MDA of all principal nuclide not identified and nuclide identified were summed to provide max. reportable activity.
J No analysis result available. Sample signal too weak.
K No analysis result available. Total U below reporting limit.
L No minor isotope determination available. Signal strength insufficient.
M Result is biased high and MDA is biased low due to interfering lines and/or increases in BKG due to sample activity.
N Measured U-235 act/mass was below MDA therefore all other cal. U isotopes & U-total wil be rpt as below their resp. MDAs
O Gross Gamma has no output error.
P The max. plant assay was assumed since the calculated assay was not within the range of plant cascade assays.
Q Mass of U-235 is < or = MDM, thus mass of total U/U isotopes won't be reported. Total U/U isotopes will be < their MDMs.
R Cs-134 activity will be understated due to the short half-life and will exclude any previous site induced Cs-134.
S Gross gamma is a Cs-137 equivalence. Activity assumes branch yield and det eff of Cs-137 for all lines in spectrum.
T Analyte is a common volatile laboratory contaminant.
W Analyte is present at the LCR.
Z Std Dev is calculated based on controls (SRM) prepared and analyzed with each sample batch. SRM is ~0.711 wt% U-235.

Laboratory Result Codes (continued)

Inorganic

*	Duplicate analysis not within control limits.
+	Method of standard additions (MSA) correlation coefficient less than 0.995.
<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Indicates that a TIC is suspected aldol-condensation product
B	Applies when the analyte is found in the associated blank
D	All compounds identified in the analysis at the secondary dilution factor
E	Result estimated due to interferences.
J	Indicates an estimated value
M	Duplicate injection precision not met.
N	Sample spike recovery not within control limits.
Q	No analytical result available or not required because total analyses < PQL
R	QC indicates that data are not usable. Resampling and re-analysis are necessary for verification
S	Result determined by method of standard additions (MSA).
U	Analyte analyzed for but not detected at or below the lowest concentration reported.
W	Post-digestion spike recovery out of control limits.
X	Other specific flags and footnotes may be required to properly define the results

Organic

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Tentatively identified compound (TIC) is suspected aldol-condensation product.
B	Compound found in blank as well as sample.
C	Compound presence confirmed by GC/MS. (GC/MS flag)
D	Compounds identified in an analysis at a secondary dilution factor.
E	Result exceeds calibration range. (GC/MS flag)
J	Indicates an estimated value
N	Presumptive evidence of a compound. (GC/MS flag)
P	Difference between results from two GC columns unacceptable.
U	Compound analyzed for but not detected at or below the lowest concentration reported.
X	Other specific flags and footnotes may be required to properly define the results
Y	MS,MSD recovery and/or RPD failed acceptance criteria
Z	(Reserved by CLP for a laboratory-defined organic data qualifier.)

Rads

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Analyzed but not detected at the analyte quantitation limit.
B	Method blank not statistically different from sample at 95% level of confidence.
D	Sample is statistically different from duplicate at 95% level of confidence.
J	Indicates an estimated value.
L	Expected and measured value for LCS is statistically different at 95% level of confidence.
M	Expected and measured value for MS is statistically different at 95% level of confidence.
R	QC indicates that data are not usable. Resampling and reanalysis are necessary for verification.
T	Tracer recovery is < or equal to 30% or > or equal to 105%.
U	Value reported is < the MDA and/or < 2 sigma TPE.
X	Other specific flags and footnotes may be required to properly define the results.

Verification Codes

	Other, defined in COMMENTS column
B	Result exceeds background criteria
	Result exceeds established criteria
S	Result exceeds statistical controls based on historical data
T	Holding time exceeded for this analysis
X	Result exceeds permit limits

Validation Codes

=	Validated result, which is detected and unqualified
?	Other, defined in COMMENTS column
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Validation Codes (continued)

N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
R	Result rejected by validator.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte, compound or nuclide not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated; Refer to the RSLTQUAL field for more information
XV	Not validated; Refer to the RSLTQUAL field for more information
XX	Unknown; Refer to the RSLTQUAL field for more information
XZ	Data evaluation performed; Validation qualifiers not applied; Refer to RSLTQUAL field for more information

Assessment Qualifier Codes

?	Other, defined in COMMENTS column
BH-ER	Result may be biased high; chemical detected in associated equipment rinseate
BH-FB	Result may be biased high; chemical detected in associated field blank
BH-FB,&	Result may be biased high; chemical detected in associate field blank. See comments for additional assessment qualifiers
BH-LAB	Result may be biased high; compound is a known or probable lab contaminant
BH-LABPR	Result biased high due to laboratory process
BH-PURGE	Result may be biased high; sample may be diluted with driling fluid due to insufficient purging prior to sampling
BH-RB	Result may be biased high; chemical detected in associated refrigerator blank
BH-RI	Result may be biased high; chemical detected in associated equipment rinsate.
BH-SOLID	Result biased high due to sample containing a large amount of solids
BH-SS	Result may be biased high; sample may contain particles of the acetate sampling sleeve
BH-TEMP	Result biased high due to a temperature exceedance.
BL-LAB	Result may be biased low; compound is a known or probable lab contaminant
BL-LABPR	Result biased low due to laboratory process
BL-PURGE	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling
BL-PURGE,&	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling. See comments for additional assessment qualifiers
BL-T	Result may be biased low; sample holding time exceeded
BL-T,J	Result may be biased low; sample holding time exceeded, estimated
BL-TEMP	Result biased low due to a temperature exceedance
DIS-EDDF1	Discrepancies exist between the EDD and the Form 1. Form 1s are generated by instrument software that automatically reports all detected compounds. It is the lab's policy to not report quantities below LCRs within their EDD format. Both sets of data are correct. However, the EDD format data, which feeds OREIS, will be used for reporting.
IN-LAB	Result should be considered information only. Compound is a known or probable lab contaminant
IN-LAB,&	Result should be considered information only. Compound is a known or probable lab contaminant. See comments for additional assessment qualifiers
IN-METH	Result should be considered information only. Lab utilized a modified method.
J	Result estimated
KYRHTAB-50	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error accounts for greater than 50% of the results.
KYRHTAB-ER	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data presents error problems (ie., no counting uncertainty or zero counting uncertainty).
KYRHTAB-LT	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the results are less than (LT) the maximum detectable activity (MDA) or detection limit and should not be plotted.
KYRHTAB-NE	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error exhibits a negative value, which is a statistical outlier.
KYRHTAB-OK	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data is acceptable for use.
N/A	Not Applicable
NOVAL	Validation requested but qualifier not provided due to missing Form I
NOVAL-FLAB	Validation targeted for this project but not required for field laboratory data.
NR	Assessment question not resolved.
R	Result unusable.
R-C	Result questionable, credibility at issue.
R-C,&	Result questionable, credibility at issue. See comments for additional assessment qualifiers
R-H	Result unusable due to historical trending (i.e., outlier).
R-HSS	Rejected due to high suspended solids content.
R-MTRX	Result rejected due to matrix interference.
R-NORAD	Result unusable; Uranium-235 portion of calculation is below reliable detection limits.
R-NORAD,&	Result unusable; Uranium-235 portion of calculation is below reliable detection limits. See comments for additional assessment qualifiers
R-NTRSFW	Result rejected; not a true representative sample of formation water
R-PRES	Result rejected due to improper preservative added.
R-RERUN	Result unusable, results from re-analysis should be used
R-T	Result rejected due to missed holding time
U	Not detected
U,J	Not detected and result estimated
U-RAD	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result
U-RAD,&	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result, see comments for additional assessment qualifiers

APPENDIX E

FINAL VERIFICATION SAMPLING EVENT RESULTS
APRIL/MAY 2002

BOR01V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR01LAS08

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR01LAS23

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2.6	ug/kg				SW846-8021 M

BOR01LAS38

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	1	ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
Trichloroethene	U	1	ug/kg			1	SW846-8260A
Trichloroethene	U	1	ug/kg			1	SW846-8021 M
Vinyl chloride	U	1	ug/kg			1	SW846-8260A

BOR01DLAS38

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: FR

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1.9	ug/kg				SW846-8021 M

BOR02V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR02LAS08

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR02LAS23

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		41.4	ug/kg			1	SW846-8021 M

BOR02LAS38

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		8.3	ug/kg				SW846-8021 M

BOR03V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR03LAS08

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		14	ug/kg			1	SW846-8021 M

BOR03LAS23

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR03LAS38

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		7.9	ug/kg				SW846-8021 M

BOR04V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR04LAS08

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR04LAS23

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg				SW846-8021 M

BOR04LAS38

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR05V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR05LAS08

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR05LAS23

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR05LAS38

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR06V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR06LAS08

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U		ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene	U		ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U		ug/kg			1	SW846-8260A
Trichloroethene	U		ug/kg			1	SW846-8021 M
Trichloroethene	U		ug/kg			1	SW846-8260A
Vinyl chloride	U		ug/kg			1	SW846-8260A

BOR06LAS23

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR06LAS38

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR07V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR07LAS08

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR07LAS23

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR07LAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR08V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR08LAS08

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2.5	ug/kg				SW846-8021 M

BOR08LAS23

Collected: 5/7/2002 Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1.3	ug/kg				SW846-8021 M

BOR08LAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2.9	ug/kg				SW846-8021 M

BOR09V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR09LAS08

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		7.2	ug/kg			1	SW846-8021 M

BOR09LAS23

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR09LAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		11	ug/kg			1	SW846-8021 M

BOR10V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR10LAS08

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR10LAS23

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR10LAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		7.2	ug/kg			1	SW846-8021 M

BOR10DLAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: FR

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		6.7	ug/kg			1	SW846-8021 M

BOR11V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR11LAS08

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	1	ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene		2	ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
Trichloroethene		276	ug/kg			1	SW846-8021 M
Trichloroethene		87	ug/kg			1	SW846-8260A
Vinyl chloride	U	1	ug/kg			1	SW846-8260A

BOR11LAS23

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		13.2	ug/kg			1	SW846-8021 M

BOR11LAS38

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1.9	ug/kg			1	SW846-8021 M

BOR12V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR12LAS08

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		37.5	ug/kg			1	SW846-8021 M

BOR12LAS23

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2442	ug/kg				SW846-8021 M

BOR12LAS38

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		4506	ug/kg				SW846-8021 M

BOR13V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR13LAS08

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR13LAS23

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2503	ug/kg			1	SW846-8021 M

BOR13LAS38

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2722	ug/kg				SW846-8021 M

BOR14V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR14LAS08

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR14LAS23

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2426	ug/kg				SW846-8021 M

BOR14LAS38

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		3214	ug/kg				SW846-8021 M

BOR15V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR15LAS04

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR15LAS08

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg				SW846-8021 M

BOR15LAS23

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		975	ug/kg			1	SW846-8021 M

BOR15LAS38

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		2325	ug/kg			1	SW846-8021 M

BOR16V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR16LAS04

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1126	ug/kg			1	SW846-8021 M

BOR16LAS08

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1751	ug/kg			1	SW846-8021 M

BOR16LAS23

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR16LAS38

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR16LAS48

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	1	ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene		33	ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U		ug/kg			1	SW846-8260A
Trichloroethene		59	ug/kg			1	SW846-8021 M
Trichloroethene		17	ug/kg			1	SW846-8260A
Vinyl chloride	U	1	ug/kg			1	SW846-8260A

BOR17V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR17LAS08

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR17LAS23

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene		5	ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene		10	ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
Trichloroethene	E	1200	ug/kg			1000	SW846-8260A
Trichloroethene	E	2100	ug/kg			10	SW846-8260A
Trichloroethene		9.3	ug/kg			1	SW846-8021 M
Vinyl chloride	U	1	ug/kg			1	SW846-8260A

BOR17LAS38

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR18V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR18LAS08

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR18LAS23

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR18LAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR19V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR19LAS08

Collected: 5/3/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1.1	ug/kg				SW846-8021 M

BOR19LAS23

Collected: 5/3/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg				SW846-8021 M

BOR19LAS38

Collected: 5/3/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene			ug/kg				SW846-8021 M

BOR20V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR20LAS08

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		5	ug/kg			1	SW846-8021 M

BOR20LAS23

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR20LAS38

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR20LAS48

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg				SW846-8021 M

BOR20DLAS48

Collected: 5/2/2002 Matrix: SOIL Media Type: SO Sample Type: FR

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BOR21V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR21LAS08

Collected: 5/3/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR21LAS23

Collected: 5/3/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		577	ug/kg			1	SW846-8021 M

BOR21LAS38

Collected: 5/3/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1213	ug/kg				SW846-8021 M

BOR22V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR22LAS08

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR22LAS23

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		252	ug/kg				SW846-8021 M

BOR22LAS38

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		259	ug/kg				SW846-8021 M

BOR22DLAS08

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: FR

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOR23V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR23LAS08

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOR23LAS23

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		511	ug/kg				SW846-8021 M

BOR23LAS38

Collected: 5/6/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		1239	ug/kg				SW846-8021 M

BOR24V

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOR24LAS08

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		32.4	ug/kg				SW846-8021 M

BOR24LAS23

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		8.4	ug/kg				SW846-8021 M

BOR24LAS38

Collected: 4/30/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	1	ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
Trichloroethene		1.1	ug/kg			1	SW846-8021 M
Trichloroethene	U	1	ug/kg			1	SW846-8260A
Vinyl chloride	U	1	ug/kg			1	SW846-8260A

BOREAV

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BOREALAS08

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOREALAS23

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BOREALAS38

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg				SW846-8021 M

BOREADLAS23

Collected: 5/7/2002 Matrix: SOIL Media Type: SO Sample Type: FR

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg				SW846-8021 M

BORNOV

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BORNOLAS08

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	1	ug/kg				SW846-8260A
cis-1,2-Dichloroethene		3	ug/kg				SW846-8260A
trans-1,2-Dichloroethene	U	1	ug/kg				SW846-8260A
Trichloroethene	U	1	ug/kg				SW846-8021 M
Trichloroethene		6	ug/kg				SW846-8260A
Vinyl chloride	U	1	ug/kg				SW846-8260A

BORNOLAS23

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene		3	ug/kg				SW846-8021 M

BORNOLAS38

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BORSOV

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BORSOLAS08

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BORSOLAS23

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BORSOLAS38

Collected: 5/8/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

BORWEV

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

BORWELAS08

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/kg			1	SW846-8021 M

BORWELAS23

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	1	ug/kg			1	SW846-8260A
cis-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
trans-1,2-Dichloroethene	U	1	ug/kg			1	SW846-8260A
Trichloroethene	U	1	ug/kg			1	SW846-8021 M
Trichloroethene	U	1	ug/kg			1	SW846-8260A
Vinyl chloride	U	1	ug/kg			1	SW846-8260A

BORWELAS38

Collected: 5/1/2002 Matrix: SOIL Media Type: SO Sample Type: REG

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/kg			1	SW846-8021 M

QC

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

TB1LAS4-02

Collected: 4/30/2002 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	2	ug/L			2	SW846-8260A
cis-1,2-Dichloroethene	U	2	ug/L			2	SW846-8260A
trans-1,2-Dichloroethene	U	2	ug/L			2	SW846-8260A
Trichloroethene	U	2	ug/L			2	SW846-8260A
Trichloroethene	U	1	ug/L			1	SW846-8021 M
Vinyl chloride	U	1	ug/L			1	SW846-8260A

TB2LAS4-02

Collected: 5/1/2002 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

TB4LAS4-02

Collected: 5/3/2002 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

TB5LAS4-02

Collected: 5/6/2002 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L				SW846-8021 M

TB7LAS4-02

Collected: 5/8/2002 Matrix: WATER Media Type: WQ Sample Type: TB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L			1	SW846-8021 M

RI1LAS4-02

Collected: 4/30/2002 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	2	ug/L			2	SW846-8260A
cis-1,2-Dichloroethene	U	2	ug/L			2	SW846-8260A
trans-1,2-Dichloroethene	U	2	ug/L			2	SW846-8260A
Trichloroethene	U	1	ug/L			1	SW846-8021 M
Trichloroethene	U	2	ug/L			2	SW846-8260A
Vinyl chloride	U	1	ug/L			1	SW846-8260A

*QUALIFIER Codes See attached List.

QC

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

RI3LAS4-02

Collected: 5/6/2002 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

RI4LAS4-02

Collected: 5/7/2002 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

RI5LAS4-02

Collected: 5/8/2002 Matrix: WATER Media Type: WQ Sample Type: RI

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

RB1LAS4-02

Collected: 5/1/2002 Matrix: WATER Media Type: WQ Sample Type: RB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L			1	SW846-8021 M

FB1LAS4-02

Collected: 4/30/2002 Matrix: WATER Media Type: WQ Sample Type: FB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
1,1-Dichloroethene	U	2	ug/L			2	SW846-8260A
cis-1,2-Dichloroethene	U	2	ug/L			2	SW846-8260A
trans-1,2-Dichloroethene	U	2	ug/L			2	SW846-8260A
Trichloroethene	U	2	ug/L			2	SW846-8260A
Trichloroethene	U	1	ug/L			1	SW846-8021 M
Vinyl chloride	U	1	ug/L			1	SW846-8260A

FB2LAS4-02

Collected: 5/1/2002 Matrix: WATER Media Type: WQ Sample Type: FB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L			1	SW846-8021 M

QC

ERI02-SWMU91-V Lasagna Verification Sampling ERI02-SWMU91-V

FB4LAS4-02

Collected: 5/3/2002 Matrix: WATER Media Type: WQ Sample Type: FB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U	1	ug/L				SW846-8021 M

FB5LAS4-02

Collected: 5/7/2002 Matrix: WATER Media Type: WQ Sample Type: FB

Analysis	Qualifiers*	Results	Units	Counting Error (+/-)	Total Propagated Uncertainty	Detect Limit	Method
VOA							
Trichloroethene	U		ug/L				SW846-8021 M

Media Type Codes

AA	Ambient Air
AG	Soil Gas
AQ	Air Quality Control Matrix
BA	Biota, Whole Animal
DC	Drill Cuttings
EA	Effluent Air
EF	Biota, Excreta (feces)
FR	Filter Residue
FT	Filter
GR	Grout
GS	Green Salt
LD	Drilling Fluid
LE	Liquid Emulsion
LF	Floating/Free Product on Groundwater Table
LO	Oil, All Types (Transformer, Waste, Motor, Mineral)
LT	Liquid from tank
LV	Liquid From Vadose Zone
MS	Metal Shavings
NA	Not Available
NW	Non-Water Liquid
PC	Precipitation
PW	Porewater
QA	Aquatic Animal
QB	Aquatic Bird
QC	Aquatic (Some combination of at least 2) of bird, plant, animal; Excludes benthic organism
QN	Benthic Organism
QP	Aquatic Plant
SC	Cement
SE	Sediment (associated with surface water)
SF	Filter Sandpack
SL	Sludge
SN	Supernatant
SO	Soil
SP	Floor Sweepings
SQ	Soil/Solid Quality Control Matrix
SS	Scrapings
SW	Swab or Wipe
SZ	Solid Waste
TA	Animal Tissue
TB	Terrestrial Bird
TC	Terrestrial (Some combination at least 2) of bird, plant, or animal.)
TP	Plant Tissue
TQ	Tissue Quality Control Matrix

Media Type Codes (Continued)

TW	Treated Water
WC	Wall corings
WD	Well Development Water
WE	Estuary
WG	Groundwater
WH	Equipment Wash Water, i.e., Water used for Washing
WL	Water that has leached through waste
WO	Ocean Water
WP	Drinking Water
WQ	Water Quality Control Matrix
WS	Surface Water
WV	Water From Vadose Zone
WW	Waste Water
WZ	Special Water Quality Control Matrix
YC	Yellow Cake

SmpMethod Codes

?	Other, defined in COMMENTS column
CSF	Continuous Sample Flow
ES	Estimate
FPC	Flow Proportional Composite
GR	Grab
NA	Not Applicable
SC	Spatial Composite
SPLT	Split
TC	Temporal Composite

SampleType Codes

?	Other, defined in COMMENTS column
DI	Deionized Water used for preparing blanks, etc.
DIL	Laboratory dilution
FB	Field Blank
FR	Field Replicate (Code used for Field Duplicate)
PRBL	Preservative blank
RB	Refrigerator blank
REG	Regular
REG2	Regular sample, secondary analysis
REP	Replicate
REP1	Replicate 1
REP2	Replicate 2
REP3	Replicate 3
REP4	Replicate 4
RI	QC Equipment Rinsate/Decon
TB	Trip Blank
TLC	Toxicity Laboratory Control Sample

Laboratory Result Codes

Footnote

A	Insufficient uranium present in the sample to determine an assay.
B	Maximum assay was used to calculate the MDA for total uranium activities.
C	Normal assay was used to calculate the MDA for total uranium activites.
D	Sample was analyzed by a non-destructive test per customer request.
E	Gross activities are a calculated value. Gamma activity is converted to the corresponding gross alpha/beta measurement.
F	Insufficient sample available/provided for gross beta analysis.
G	TIMS assay used to calculate total uranium activity.
H	No nuclide meet criteria for gross gamma.
I	The MDA of all principal nuclide not identified and nuclide identified were summed to provide max. reportable activity.
J	No analysis result available. Sample signal too weak.
K	No analysis result available. Total U below reporting limit.
L	No minor isotope determination available. Signal strength insufficient.
M	Result is biased high and MDA is biased low due to interfering lines and/or increases in BKG due to sample activity.
N	Measured U-235 act/mass was below MDA therefore all other cal. U isotopes & U-total wil be rpt as below their resp. MDAs
O	Gross Gamma has no output error.
P	The max. plant assay was assumed since the calculated assay was not within the range of plant cascade assays.
Q	Mass of U-235 is < or = MDM, thus mass of total U/U isotopes won't be reported. Total U/U isotopes will be < their MDMs.
R	Cs-134 activity will be understated due to the short half-life and will exclude any previous site induced Cs-134.
S	Gross gamma is a Cs-137 equivalence. Activity assumes branch yield and det eff of Cs-137 for all lines in spectrum.
T	Analyte is a common volatile laboratory contaminant.
W	Analyte is present at the LCR.
Z	Std Dev is calculated based on controls (SRM) prepared and analyzed with each sample batch. SRM is ~0.711 wt% U-235.

Laboratory Result Codes (continued)

Inorganic

*	Duplicate analysis not within control limits.
+	Method of standard additions (MSA) correlation coefficient less than 0.995.
<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Indicates that a TIC is suspected aldol-condensation product
B	Applies when the analyte is found in the associated blank
D	All compounds identified in the analysis at the secondary dilution factor
E	Result estimated due to interferences.
J	Indicates an estimated value
M	Duplicate injection precision not met.
N	Sample spike recovery not within control limits.
Q	No analytical result available or not required because total analyses < PQL
R	QC indicates that data are not usable. Resampling and re-analysis are necessary for verification
S	Result determined by method of standard additions (MSA).
U	Analyte analyzed for but not detected at or below the lowest concentration reported.
W	Post-digestion spike recovery out of control limits.
X	Other specific flags and footnotes may be required to properly define the results

Organic

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Tentatively identified compound (TIC) is suspected aldol-condensation product.
B	Compound found in blank as well as sample.
C	Compound presence confirmed by GC/MS. (GC/MS flag)
D	Compounds identified in an analysis at a secondary dilution factor.
E	Result exceeds calibration range. (GC/MS flag)
J	Indicates an estimated value
N	Presumptive evidence of a compound. (GC/MS flag)
P	Difference between results from two GC columns unacceptable.
U	Compound analyzed for but not detected at or below the lowest concentration reported.
X	Other specific flags and footnotes may be required to properly define the results
Y	MS,MSD recovery and/or RPD failed acceptance criteria
Z	(Reserved by CLP for a laboratory-defined organic data qualifier.)

Rads

<	Analyte analyzed for but not detected at or below the lowest concentration reported.
!	Indicates that a qualifier is present on the data (historical qualifier).
A	Analyzed but not detected at the analyte quantitation limit.
B	Method blank not statistically different from sample at 95% level of confidence.
D	Sample is statistically different from duplicate at 95% level of confidence.
J	Indicates an estimated value.
L	Expected and measured value for LCS is statistically different at 95% level of confidence.
M	Expected and measured value for MS is statistically different at 95% level of confidence.
R	QC indicates that data are not usable. Resampling and reanalysis are necessary for verification.
T	Tracer recovery is < or equal to 30% or > or equal to 105%.
U	Value reported is < the MDA and/or < 2 sigma TPE.
X	Other specific flags and footnotes may be required to properly define the results.

Verification Codes

?	Other, defined in COMMENTS column
B	Result exceeds background criteria
	Result exceeds established criteria
S	Result exceeds statistical controls based on historical data
	Holding time exceeded for this analysis
	Result exceeds permit limits

Validation Codes

	Validated result, which is detected and unqualified
	Other, defined in COMMENTS column
	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Validation Codes (continued)

N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
R	Result rejected by validator.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte, compound or nuclide not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated; Refer to the RSLTQUAL field for more information
XV	Not validated; Refer to the RSLTQUAL field for more information
XX	Unknown; Refer to the RSLTQUAL field for more information
XZ	Data evaluation performed; Validation qualifiers not applied; Refer to RSLTQUAL field for more information

Assessment Qualifier Codes

?	Other, defined in COMMENTS column
BH-ER	Result may be biased high; chemical detected in associated equipment rinseate
BH-FB	Result may be biased high; chemical detected in associated field blank
BH-FB,&	Result may be biased high; chemical detected in associate field blank. See comments for additional assessment qualifiers
BH-LAB	Result may be biased high; compound is a known or probable lab contaminant
BH-LABPR	Result biased high due to laboratory process
BH-PURGE	Result may be biased high; sample may be diluted with driling fluid due to insufficient purging prior to sampling
BH-RB	Result may be biased high; chemical detected in associated refrigerator blank
BH-RI	Result may be biased high; chemical detected in associated equipment rinsate.
BH-SOLID	Result biased high due to sample containing a large amount of solids
BH-SS	Result may be biased high; sample may contain particles of the acetate sampling sleeve
BH-TEMP	Result biased high due to a temperature exceedance.
BL-LAB	Result may be biased low; compound is a known or probable lab contaminant
BL-LABPR	Result biased low due to laboratory process
BL-PURGE	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling
BL-PURGE,&	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling. See comments for additional assessment qualifiers
BL-T	Result may be biased low; sample holding time exceeded
BL-T,J	Result may be biased low; sample holding time exceeded, estimated
BL-TEMP	Result biased low due to a temperature exceedance
DIS-EDDF1	Discrepancies exist between the EDD and the Form 1. Form 1s are generated by instrument software that automatically reports all detected compounds. It is the lab's policy to not report quantities below LCRs within their EDD format. Both sets of data are correct. However, the EDD format data, which feeds OREIS, will be used for reporting.
IN-LAB	Result should be considered information only. Compound is a known or probable lab contaminant
IN-LAB,&	Result should be considered information only. Compound is a known or probable lab contaminant. See comments for additional assessment qualifiers
IN-METH	Result should be considered information only. Lab utilized a modified method.
J	Result estimated
KYRHTAB-50	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error accounts for greater than 50% of the results.
KYRHTAB-ER	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data presents error problems (ie., no counting uncertainty or zero counting uncertainty).
KYRHTAB-LT	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the results are less than (LT) the maximum detectable activity (MDA) or detection limit and should not be plotted.
KYRHTAB-NE	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error exhibits a negative value, which is a statistical outlier.
KYRHTAB-OK	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data is acceptable for use.
N/A	Not Applicable
NOVAL	Validation requested but qualifier not provided due to missing Form I
NOVAL-FLAB	Validation targeted for this project but not required for field laboratory data.
NR	Assessment question not resolved.
R	Result unusable.
R-C	Result questionable, credibility at issue.
R-C,&	Result questionable, credibility at issue. See comments for additional assessment qualifiers
R-H	Result unusable due to historical trending (i.e., outlier).
R-HSS	Rejected due to high suspended solids content.
R-MTRX	Result rejected due to matrix interference.
R-NORAD	Result unusable; Uranium-235 portion of calculation is below reliable detection limits.
R-NORAD,&	Result unusable; Uranium-235 portion of calculation is below reliable detection limits. See comments for additional assessment qualifiers
R-NTRSFW	Result rejected; not a true representative sample of formation water
R-PRES	Result rejected due to improper preservative added.
R-RERUN	Result unusable, results from re-analysis should be used
R-T	Result rejected due to missed holding time
U	Not detected
U,J	Not detected and result estimated
U-RAD	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result
U-RAD,&	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result, see comments for additional assessment qualifiers

APPENDIX F

SUMMARY TABLES OF SAMPLING EVENTS

Table F.1 TCE Concentrations
Baseline, Progress Event A, and Progress Event B

Sample Location	Sample Depth (ft bgs)	Baseline TCE Concentration (ppm)	Progress Sampling Event A TCE Concentration (ppm)	Progress Sampling Event B TCE Concentration (ppm)
1a	6	Non-detect	Not sampled	Not sampled
	11	Non-detect	Not sampled	Not sampled
	16	Non-detect	Not sampled	Not sampled
	21	Non-detect	Not sampled	Not sampled
1b	26	Non-detect	Not sampled	Not sampled
	31	Non-detect	Not sampled	Not sampled
	38	Non-detect	Not sampled	Not sampled
	41	Non-detect	Not sampled	Not sampled
	46	Non-detect	Not sampled	Not sampled
2	6	Non-detect	Not sampled	Not sampled
	11	Non-detect	Not sampled	Not sampled
	16	Non-detect	Not sampled	Not sampled
	21	Non-detect	Not sampled	Not sampled
	26	Non-detect	Not sampled	Not sampled
	31	Non-detect	Not sampled	Not sampled
	36	Non-detect	Not sampled	Not sampled
	41	Non-detect	Not sampled	Not sampled
	46	Non-detect	Not sampled	Not sampled
3	7	Non-detect	Not sampled	Not sampled
	11	Non-detect	Not sampled	Not sampled
	16	Non-detect	Not sampled	Not sampled
	21	Non-detect	Not sampled	Not sampled
	26	Non-detect	Not sampled	Not sampled
	31	Non-detect	Not sampled	Not sampled
	36	Non-detect	Not sampled	Not sampled
	41	Non-detect	Not sampled	Not sampled
	46	Non-detect	Not sampled	Not sampled
4	6	Non-detect	Not sampled	Not sampled
	11	Non-detect	Not sampled	Not sampled
	16	Non-detect	Not sampled	Not sampled
	21	Non-detect	Not sampled	Not sampled
	26	0.002	Not sampled	Not sampled
	33	Non-detect	Not sampled	Not sampled
	36	Non-detect	Not sampled	Not sampled
	41	.0019	Not sampled	Not sampled
	49	Non-detect	Not sampled	Not sampled
5a	6	Non-detect	Not sampled	Not sampled
	11	0.0025	Not sampled	Not sampled
	16	0.0577	Not sampled	Not sampled
	21	Non-detect	Not sampled	Not sampled
	26	0.365	Not sampled	Not sampled
	31	0.358	Not sampled	Not sampled
5b	36	Non-detect	Not sampled	Not sampled
	41	0.0052	Not sampled	Not sampled
	46	Non-detect	Not sampled	Not sampled

Table F.1 TCE Concentrations
Baseline, Progress Event A, and Progress Event B

Sample Location	Sample Depth (ft bgs)	Baseline TCE Concentration (ppm)	Progress Sampling Event A TCE Concentration (ppm)	Progress Sampling Event B TCE Concentration (ppm)
6	6	3.10	Not sampled	21.5
	11	5.10	Not sampled	7.90
	16	29.4	1.82	0.197
	21	1.80	Not sampled	0.594
	26	26.4	0.232	0.025
	31	2.00	Not sampled	Not sampled
	36	0.110	Not sampled	Not sampled
	41	0.021	Not sampled	Not sampled
	46	Non-detect	Not sampled	Not sampled
7a	6	3.40	552	6.70
	11	6.80	131	27.0
7b	16	4.00	44.0	2.90
	21	9.90	16.0	0.092
	26	12.7	1.60	12.2
	31	26.3	1.10	1.90
	36	14.9	0.959	0.035
	41	0.0037	0.543	0.044
	46	0.0034	Not sampled	Non-detect
8	6	0.002	Not sampled	0.780
	11	0.273	Not sampled	Non-detect
	16	0.176	Not sampled	Non-detect
	21	21.70	1.99	Non-detect
	26	3.60	Not sampled	Not sampled
	31	0.594	Not sampled	Not sampled
	36	0.0015	Not sampled	Not sampled
	41	Non-detect	Not sampled	Not sampled
	46	0.0018	Not sampled	Not sampled
9a	6	0.353	Not sampled	Non-detect
9b	11	3.60	Not sampled	Non-detect
	16	5.00	Not sampled	Non-detect
	21	16.3	28.0	Non-detect
	26	29.6	0.110	Non-detect
	31	3.70	0.004	Not sampled
	36	0.0016	0.010	Not sampled
	41	0.616	Not sampled	Not sampled
	46	0.0069	Not sampled	Not sampled
10	6	0.0277	Not sampled	Non-detect
	11	Non-detect	Not sampled	Non-detect
	16	0.741	Not sampled	Non-detect
	21	1.250	Not sampled	Non-detect
	26	0.113	Not sampled	Non-detect
	31	0.115	Not sampled	Not sampled
	36	1.40	0.009	Not sampled
	41	0.290	0.009	Not sampled
	46	0.254	0.020	Not sampled

Table F.2 TCE Concentrations
Final Verification Sampling

Final Sample Location	Sample Depth (ft bgs)	TCE Concentration (ppm)
BOR01	8	Non-detect
	23	0.0026
	38	Non-detect
BOR02	8	Non-detect
	23	0.0414
	38	0.0083
BOR03	8	0.014
	23	Non-detect
	38	0.0079
BOR04	8	Non-detect
	23	Non-detect
	38	Non-detect
BOR05	8	Non-detect
	23	Non-detect
	38	Non-detect
BOR06	8	Non-detect
	23	Non-detect
	38	Non-detect
BOR07	8	Non-detect
	23	Non-detect
	38	Non-detect
BOR08	8	0.0025
	23	0.0013
	38	0.0029
BOR09	8	0.0072
	23	Non-detect
	38	0.011
BOR10	8	Non-detect
	23	Non-detect
	38	0.0072
BOR11	8	0.276
	23	0.0132
	38	0.0019
BOR12	8	0.0375
	23	2.442
	38	4.506
BOR13	8	Non-detect
	23	2.503
	38	2.722
BOR14	8	Non-detect
	23	2.426
	38	3.214
BOR15	4	Non-detect
	8	Non-detect
	23	0.975
	38	2.325

Final Sample Location	Sample Depth (ft bgs)	TCE Concentration (ppm)
BOR16	4	1.126
	8	1.751
	23	Non-detect
	38	Non-detect
	48	0.059
BOR17	8	Non-detect
	23	0.0093
	38	Non-detect
BOR18	8	Non-detect
	23	Non-detect
	38	Non-detect
BOR19	8	0.0011
	23	Non-detect
	38	Non-detect
BOR20	8	0.005
	23	Non-detect
	38	Non-detect
	48	Non-detect
BOR21	8	Non-detect
	23	0.577
	38	1.213
BOR22	8	Non-detect
	23	0.252
	38	0.259
BOR23	8	Non-detect
	23	0.511
	38	1.239
BOR24	8	0.0324
	23	0.0084
	38	0.0011
BOREA	8	Non-detect
	23	Non-detect
	38	Non-detect
BORNO	8	Non-detect
	23	0.003
	38	Non-detect
BORSO	8	Non-detect
	23	Non-detect
	38	Non-detect
BORWE	8	Non-detect
	23	Non-detect
	38	Non-detect

APPENDIX G

WELL ABANDONMENT FORMS

MW 158

KENTUCKY MONITORING WELL RECORD

Please read all instructions prior to completing this form. Do not write in shaded area. The original copy of this form must be submitted within 30 days of well completion to the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water - Groundwater Branch, 14 Reilly Road, Frankfort, KY 40601. Telephone (502) 564-3410.

(TYPE OR PRINT CLEARLY)

(1) Attach Monitoring Well Identification Number Label Here (if applicable)

None Attached

(2) GENERAL INFORMATION:

Facility Name: Paducah Gaseous Diffusion Plant
Mailing Address: 761 Veterans Ave.
City: Paducah
State: Kentucky Zip: 42053

Facility Name: Paducah Gaseous Diffusion Plant
City: Paducah
State: Kentucky Zip: 42053
Owner's Phone ( )

Date Received:

(3) IDENTIFICATION NUMBER

(4) WELL LOCATION:
USGS Quadrangle Name: N/A
County: McCracken
Latitude N: NA
Longitude W: N/A

(5) GENERAL WELL CONSTRUCTION:
Start Date: 8-18-99
Finish Date: 8-23-99
Drilling Method:
( ) Auger HS ( ) Reverse Rotary ( ) Push/probe
( ) Auger SS ( ) Cable Tool ( ) Excavation
( ) Air Rotary ( ) Hand Auger (X) Sonic
( ) Mud Rotary ( ) Other:
Work Type:
( ) New Well ( ) Nested Well ( ) Rework (X) Plug
Surface Elevation: N/A Total Depth:
Depth to Bedrock: Static Water Level:
Wellhead:
( ) Flush Mount (X) Locking Cap ( ) No Cap
(X) Stickup; inches above surface: 3'

(6) FACILITY TYPE:
( ) RCRA ( ) Surface Mining
( ) CERCLA ( ) Site Assessment
( ) TSCA ( ) Solid Waste Landfill
( ) UST ( ) Landfarm
(X) Other: Government

(7) WELL USE: (check all that apply)
( ) Water Quality ( ) Dry Hole
( ) Ambient Monitoring ( ) Not Used
( ) Water Level Monitoring (X) Abandoned
( ) Remediation ( ) Destroyed
( ) Other:

(8) PHYSIOGRAPHIC REGION:
( ) Blue Grass ( ) Ohio River Alluvium
( ) E. Coal Field ( ) W. Coal Field
( ) Miss. Plateau ( ) Jackson Purchase

(9) ATTACHMENTS:
Required
1. Site plan or sketch map (X)
2. Well construction diagram (X)
3. Well location
On topographic map, or ( )
Obtained by GPS unit ( )
Optional
4. Laboratory analysis report ( )
5. Other:

(10) WELL COMPLETION INFORMATION

Feet Below Surface From	To	Borehole Diameter	Casing Diameter	Casing Type
0	108'	12"	8"	Steel

Well Screens:
I.D. (in.) 2 From 92' To 108' Type SS Slot Size 0.02
I.D. (in.) From To Type Slot Size
I.D. (in.) From To Type Slot Size

Annulus Fill and Seal:

Feet Below Surface From	To	Material
0	110'	30% Solids Grout

(11) LITHOLOGIC LOG

Feet Below Surface From	To	Description

(12) COMMENTS: Overdrilled 12" Sonic Casing To 40' Ruled 8" Surface Casing Then Overdrilled 7" Sonic Casing To 110' Therein Created Hole As Casing Withdrawn.

(13) AFFIRMATION: The work described above was done under my supervision, and this report is true and correct to the best of my knowledge.

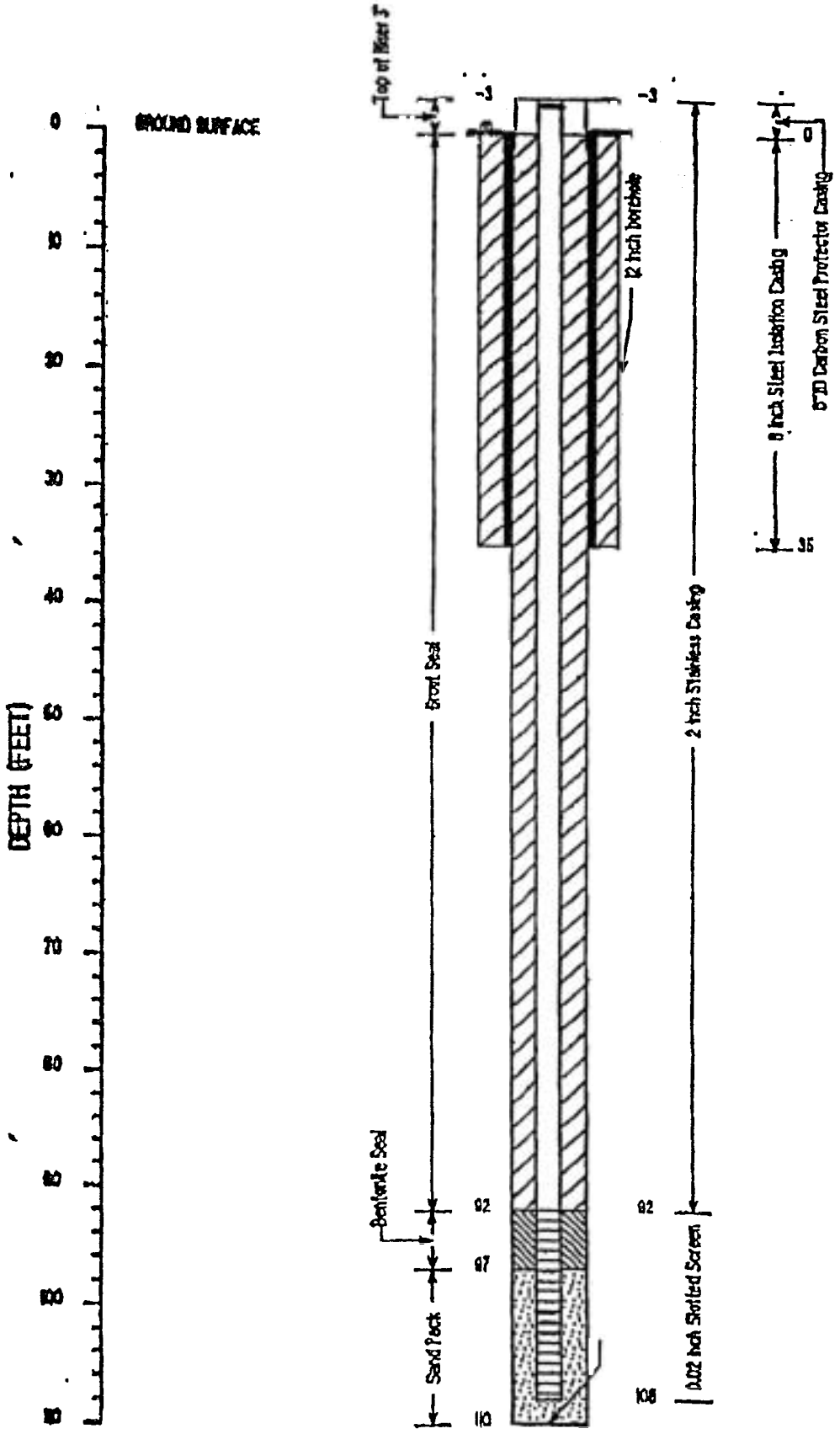
Drilling Company	State Certification Number or Rig Operator's Number	Signature of Responsible Certified Driller
Alliance Environmental Inc.	182021000	

Company Mailing Address	City	State	Zip Code	Date
117 Industry Road	Mansfield	Ohio	45750	9 10 99 Month, Day, Year

Number of Attached

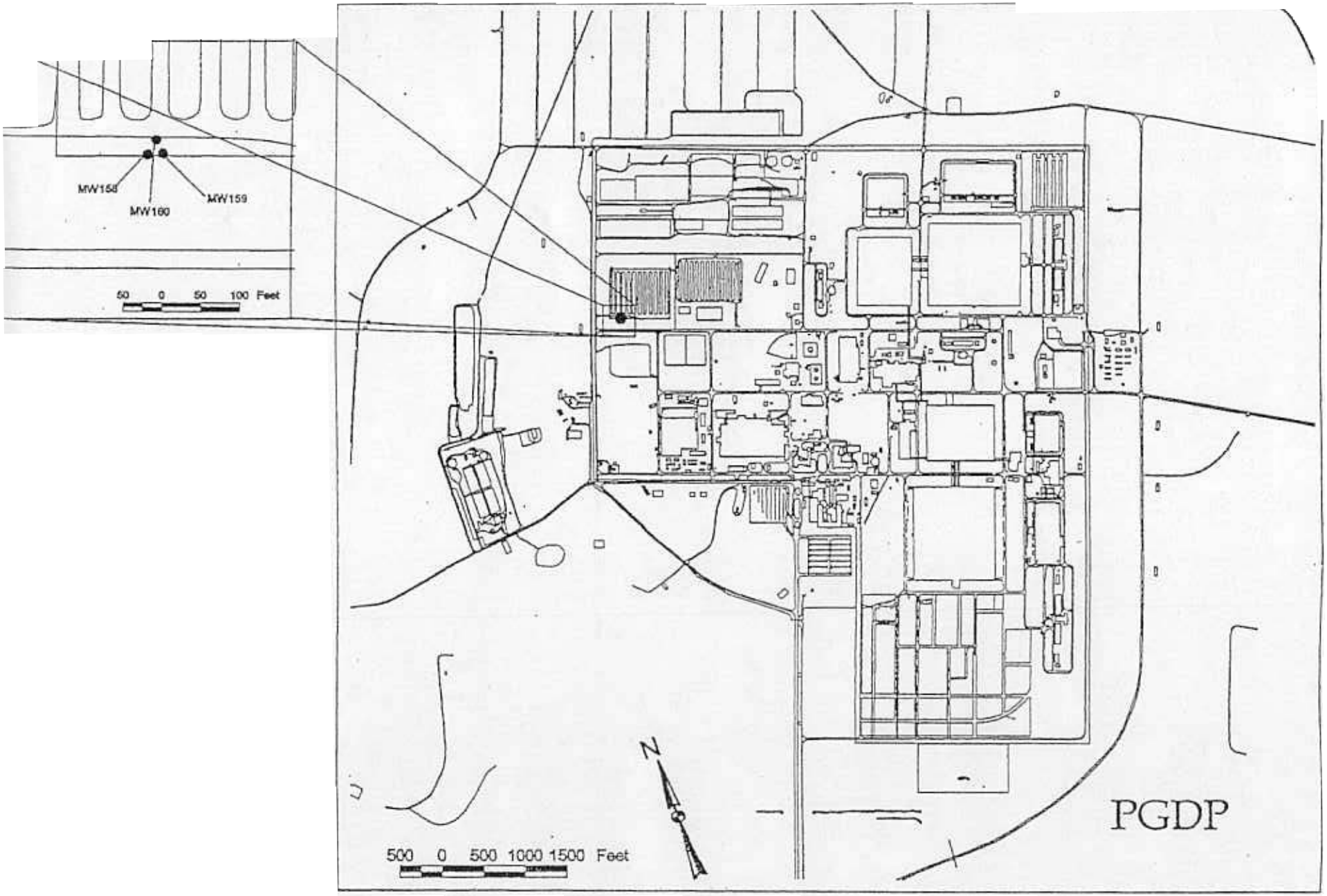
DEP-8043

(See Logbook # 15)



WELL CONSTRUCTION DETAILS
WELL MW-158
ELEVATION: 2' TOC N/A

PGDP Phase II Site Investigation
WMU-91, Cylinder Drop Test Area



ocation of Monitoring Wells 158, 159, and 160

MW-159

KENTUCKY MONITORING WELL RECORD

Please read all instructions prior to completing this form. Do not write in shaded area. The original copy of this form must be submitted within 30 days of well completion to the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water - Groundwater Branch, 14 Reilly Road, Frankfort, KY 40601. Telephone (502) 564-3410.

(TYPE OR PRINT CLEARLY)

(2) GENERAL INFORMATION:

Facility Name: Paducah Gaseous Diffusion Plant
Mailing Address: 761 Veterans Ave.
City: Paducah
State: Kentucky Zip: 42053

Facility Name: Paducah Gaseous Diffusion Plant
City: Paducah
State: Kentucky Zip: 42053
Owner's Phone: ( )

Date Received:

(3) IDENTIFICATION NUMBER

County: McCracken
Latitude: N N/A
Longitude: W N/A

(5) GENERAL WELL CONSTRUCTION:

Start Date: 8-11-99
Finish Date: 8-13-99

Drilling Method:
( ) Auger HS ( ) Reverse Rotary ( ) Push/probe
( ) Auger SS ( ) Cable Tool ( ) Excavation
( ) Air Rotary ( ) Hand Auger (X) Sonic
( ) Mud Rotary ( ) Other:

Work Type:
( ) New Well ( ) Nested Well ( ) Rework (X) Plug

Surface Elevation: N/A Total Depth:
Depth to Bedrock: Static Water Level:

Wellhead:
( ) Flush Mount (X) Locking Cap ( ) No Cap
(X) Stickup; Inches above surface: 3'

(6) FACILITY TYPE:
( ) RCRA ( ) Surface Mining
( ) CERCLA ( ) Site Assessment
( ) TSCA ( ) Solid Waste Landfill
( ) UST ( ) Landfarm
(X) Other: Government

(8) PHYSIOGRAPHIC REGION:
( ) Blue Grass ( ) Ohio River Alluvi
( ) E. Coal Field ( ) W. Coal Field
( ) Miss. Plateau ( ) Jackson Purcha

(10) WELL COMPLETION INFORMATION

Feet Below Surface From	To	Borehole Diameter	Casing Diameter	Casing Type
0	3'	12"	5"	Steel

Well Screens:
I.D. (in.) 2" From 63' To 68' Type SS Slot Size 0.02
I.D. (in.) From To Type Slot Size
I.D. (in.) From To Type Slot Size

Annulus Fill and Seal:

Feet Below Surface From	To	Material
0	70'	30% Solids Grout

(12) COMMENTS: Overdrilled Surface Casing with 10" Sonic Casing Pulled Surface Casing Then Overdrill with 5" Sonic Casing To 70' Retrieved all of the well except the 5' Screen Tremie Grouted with 30% Solids As Casing withdrawn.

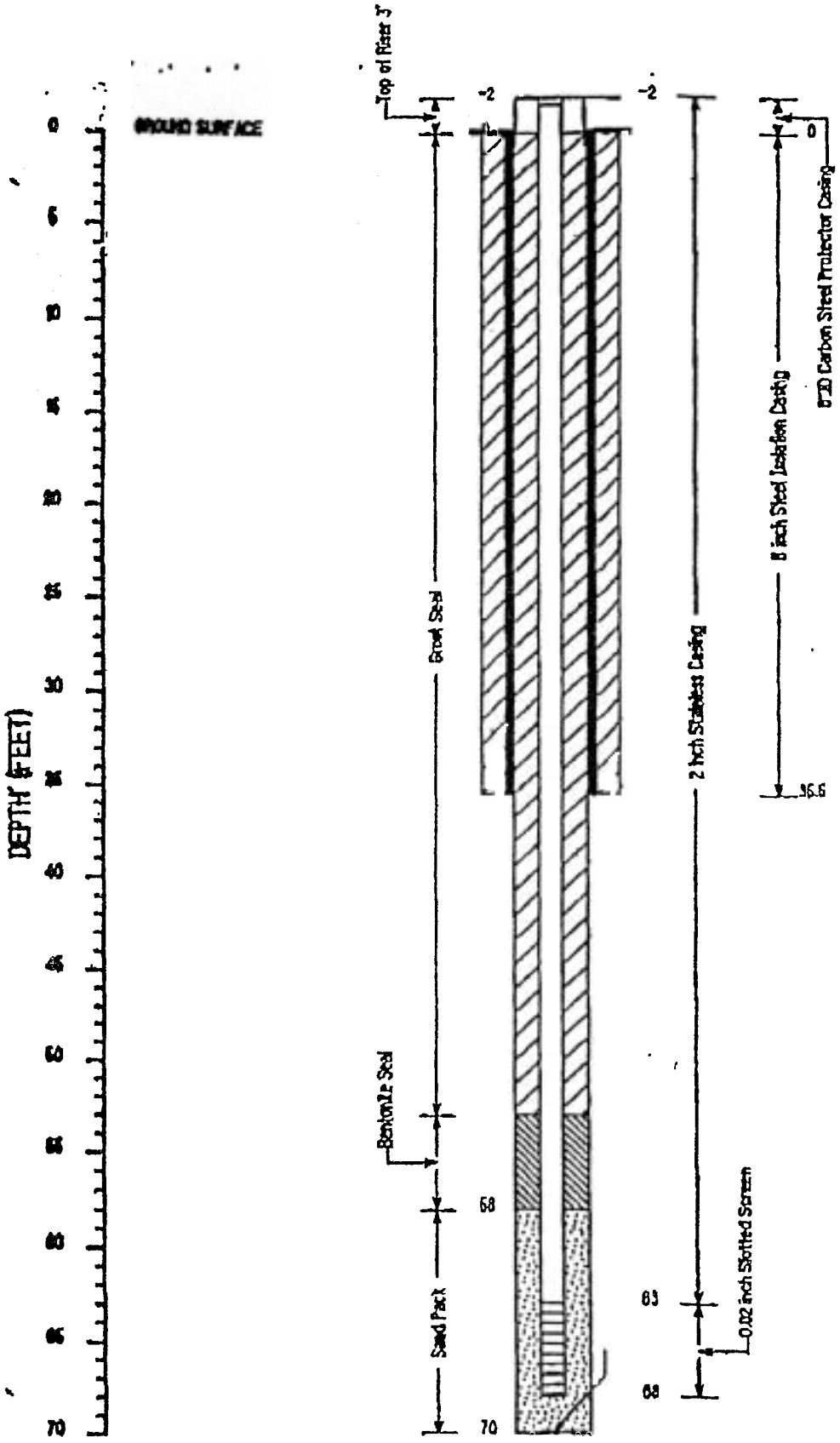
(13) AFFIRMATION: The work described above was done under my supervision, and this report is true and correct to the best of my knowledge.

Drilling Company	State Certification Number or Rig Operator's Number	Signature of Responsible Certified Driller
Alliance Environmental Inc.	1820210000	

Company Mailing Address	City	State	Zip Code	Date
117 Industry Road	Mansfield	Ohio	44903	9 10 99 Month, Day, Year

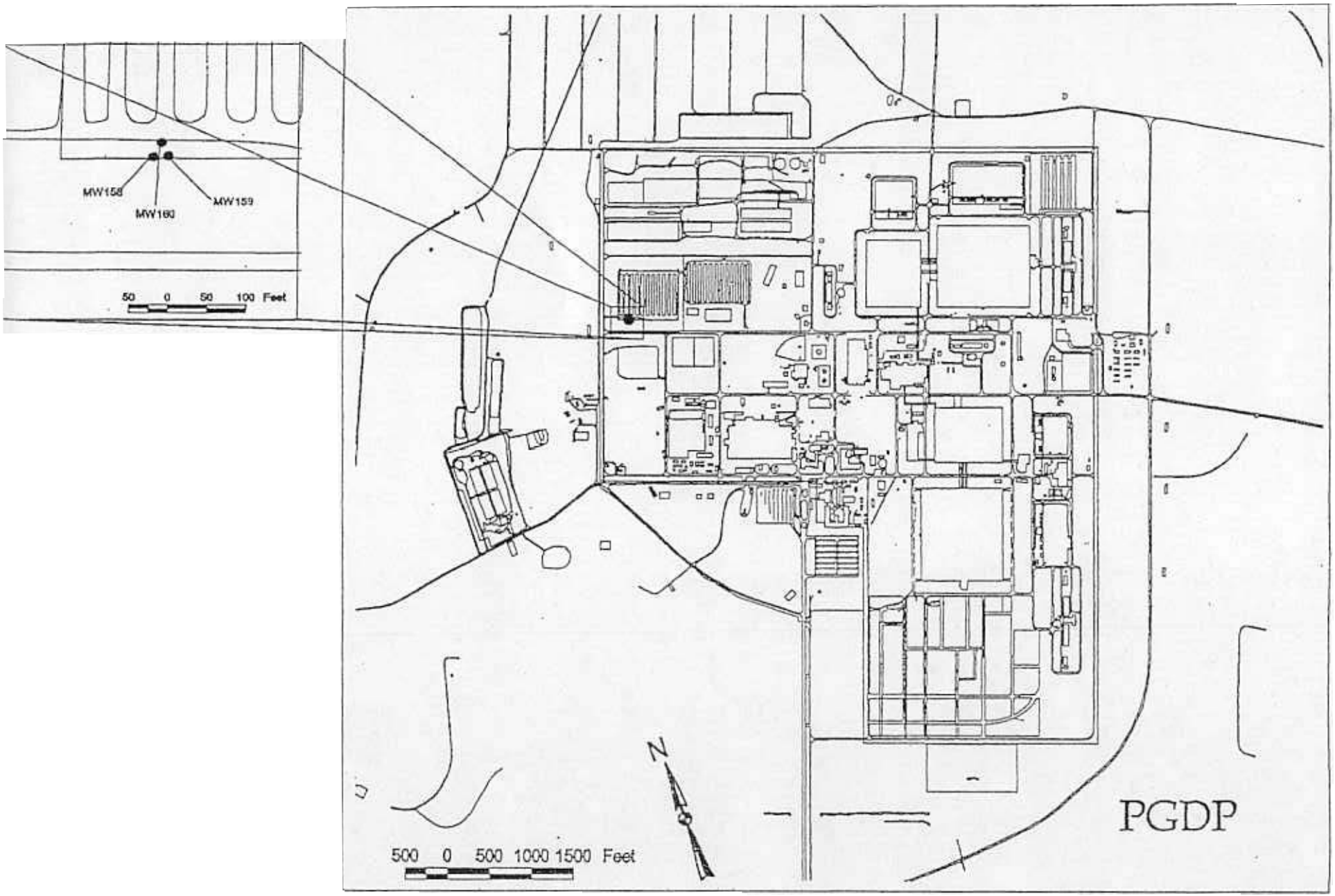
Number of Attached

(See Logbook # 15)



WELL CONSTRUCTION DETAILS
WELL MW-159
ELEVATION: 2' TOC N/A

PGDP Phase II Site Investigation



ocation of Monitoring Wells 158, 159, and 160

MW-160

KENTUCKY MONITORING WELL RECORD

Please read all instructions prior to completing this form. Do not write in shaded area. The original copy of this form must be submitted within 30 days of well completion to the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water - Groundwater Branch, 14 Reilly Road, Frankfort, KY 40601. Telephone (502) 564-3410.

(TYPE OR PRINT CLEARLY)

(1) Attach Monitoring Well Identification Number Label Here (if applicable)

None Attached

(2) GENERAL INFORMATION:

Facility Name: Paducah Gaseous Diffusion Plant
Mailing Address: 761 Veterans Ave.
City: Paducah
State: Kentucky Zip: 42053

Facility Name: Paducah Gaseous Diffusion Plant
City: Paducah
State: Kentucky Zip: 42053
Owner's Phone ( ) _____

Date Received:

(3) IDENTIFICATION NUMBER: ☐☐☐☐-☐☐☐☐

(4) WELL LOCATION:
USGS Quadrangle Name: N/A
County: McCracken
Latitude N: N/A
Longitude W: N/A

(5) GENERAL WELL CONSTRUCTION:
Start Date: 8-9-99
Finish Date: 8-9-99
Drilling Method:
( ) Auger HS ( ) Reverse Rotary ( ) Push/probe
( ) Auger SS ( ) Cable Tool ( ) Excavation
( ) Air Rotary ( ) Hand Auger (X) Sonic
( ) Mud Rotary ( ) Other: _____
Work Type:
( ) New Well ( ) Nested Well ( ) Rework (X) Plug
Surface Elevation: N/A Total Depth: _____
Depth to Bedrock: _____ Static Water Level: _____
Wellhead:
( ) Flush Mount (X) Locking Cap ( ) No Cap
(X) Stickup; Inches above surface: 2.5'

(6) FACILITY TYPE:
( ) RCRA ( ) Surface Mining
( ) CERCLA ( ) Site Assessment
( ) TSCA ( ) Solid Waste Landfill
( ) UST ( ) Landfarm
(X) Other: Government

(7) WELL USE: (check all that apply)
( ) Water Quality ( ) Dry Hole
( ) Ambient Monitoring ( ) Not Used
( ) Water Level Monitoring (X) Abandoned
( ) Remediation ( ) Destroyed
( ) Other: _____

(8) PHYSIOGRAPHIC REGION:
( ) Blue Grass ( ) Ohio River Alluvium
( ) E. Coal Field ( ) W. Coal Field
( ) Miss. Plateau ( ) Jackson Purchase

(9) ATTACHMENTS:
Required
1. Site plan or sketch map (X)
2. Well construction diagram (X)
3. Well location
On topographic map, or ( )
Obtained by GPS unit ( )
Optional
4. Laboratory analysis report ( )
5. Other: _____

(10) WELL COMPLETION INFORMATION

Feet Below Surface From	To	Borehole Diameter	Casing Diameter	Casing Type
0	30'	8"	2"	Stainless Steel

Well Screens:
I.D. (in.) 2 From 25' To 35' Type SS Slot Size 0.02
I.D. (in.) ____ From ____ To ____ Type ____ Slot Size ____
I.D. (in.) ____ From ____ To ____ Type ____ Slot Size ____

Annulus Fill and Seal:

Feet Below Surface From	To	Material
0	30'	30% Solids Grout

(11) LITHOLOGIC LOG

Feet Below Surface From	To	Description

(12) COMMENTS: Overdrilled with 12" Sonic Casing, Removed Well Then Treamied Created To Grout Level with 30% Solids Grout as Casing was Removed

(13) AFFIRMATION: The work described above was done under my supervision, and this report is true and correct to the best of my knowledge.

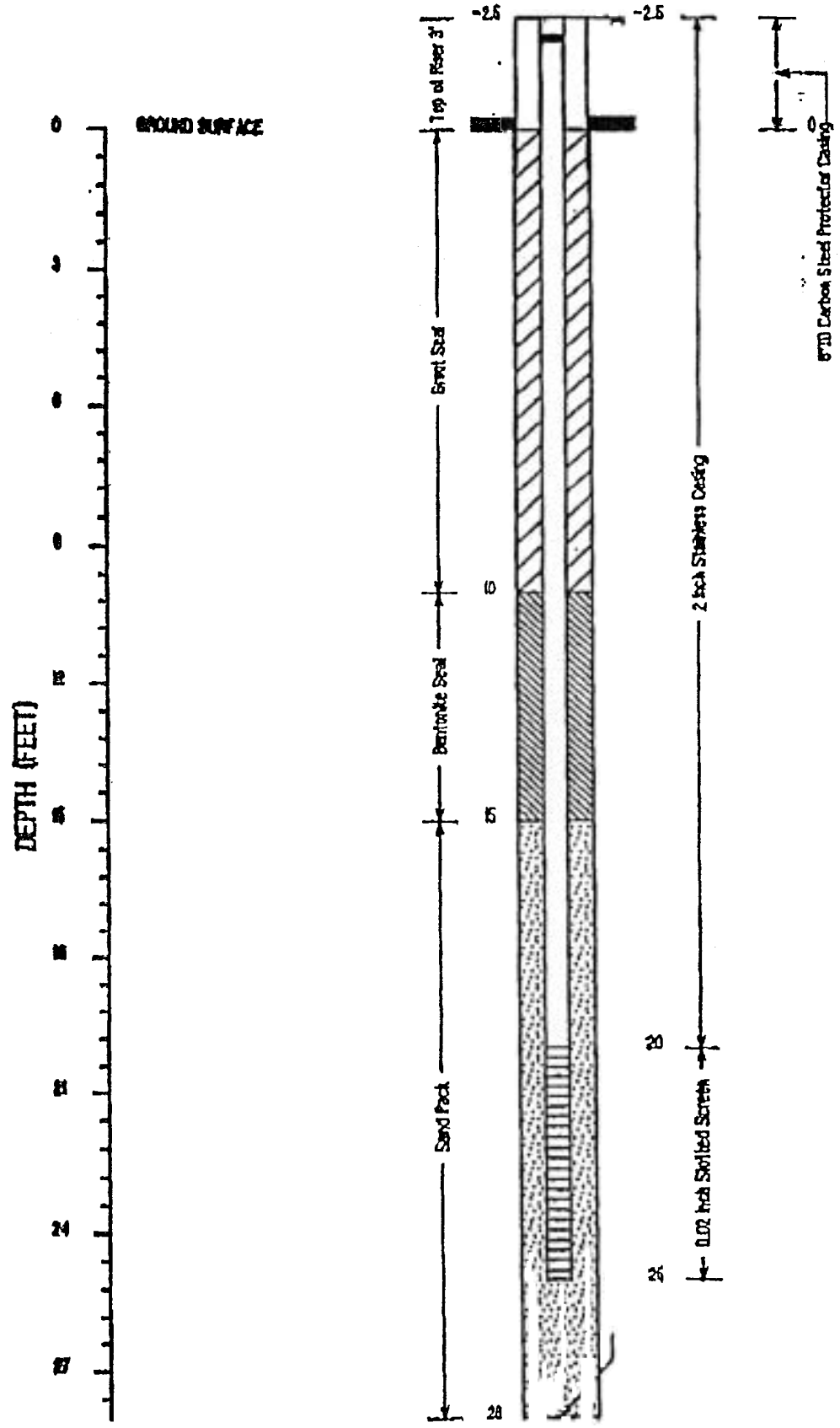
Drilling Company	State Certification Number or Rig Operator's Number	Signature of Responsible Certified Driller
Alliance Environmental Inc.	1820d1000	Ron Bell

Company Mailing Address	City	State	Zip Code	Date
117 Industry Road	Marietta	Ohio	45750	9 10 99 Month, Day, Year

Number of Attached _____

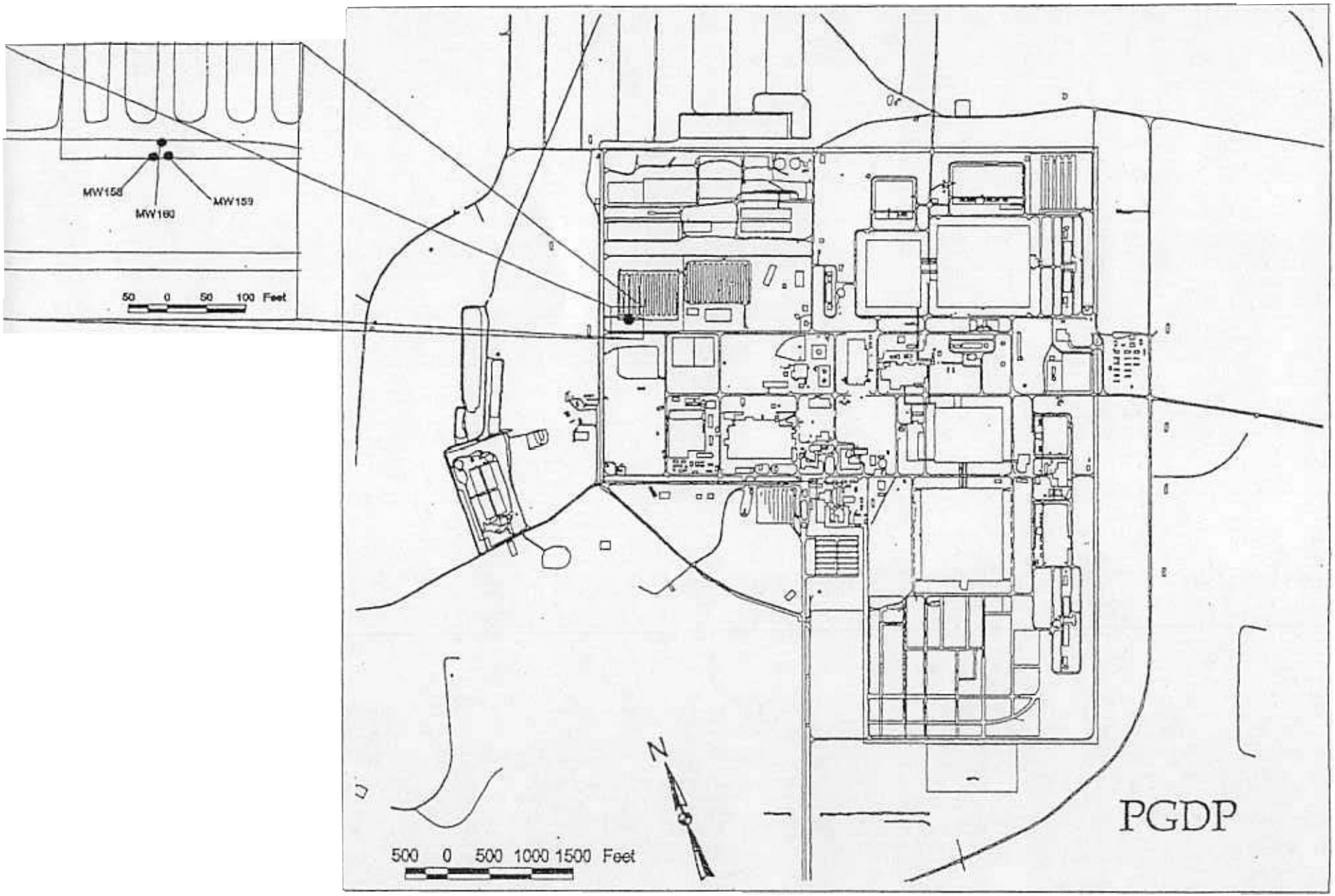
DEP-6043

(See Logbook # 15)



WELL CONSTRUCTION DETAILS
WELL MW-180
ELEVATION: 2' TOC N/A

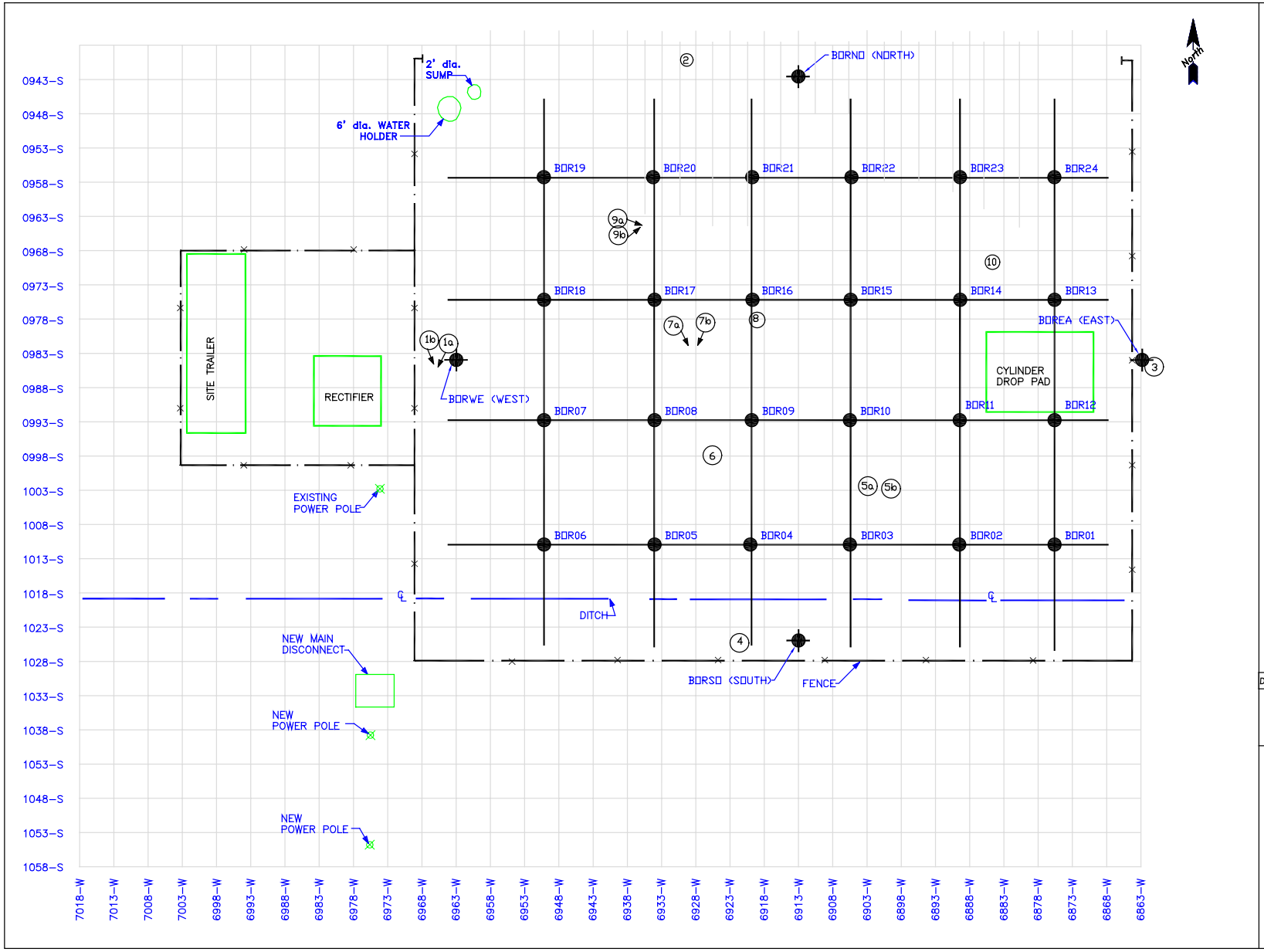
PGDP Phase II



ocation of Monitoring Wells 158, 159, and 160

APPENDIX H

SITE LAYOUT AND SAMPLE LOCATIONS

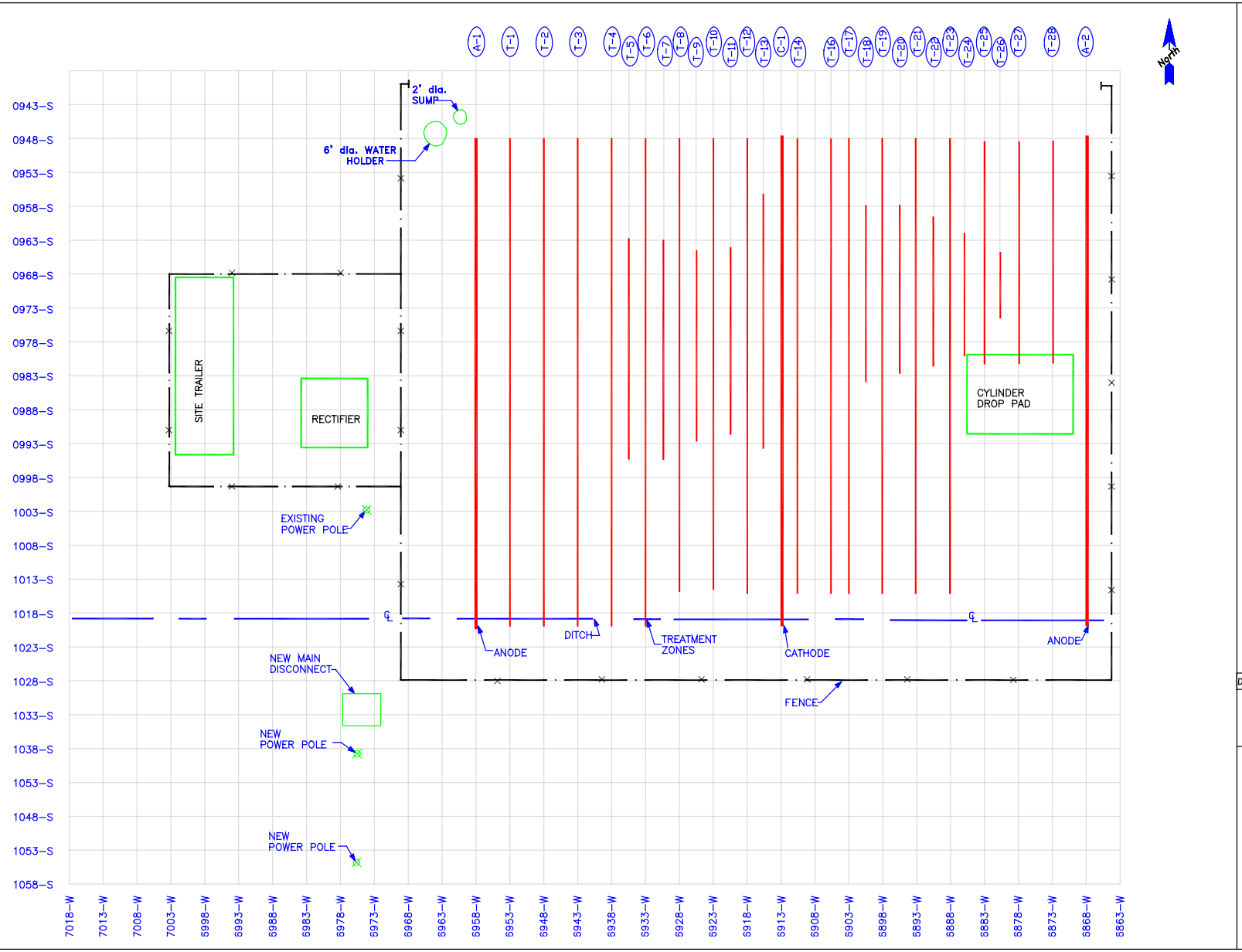


LEGEND

- ℄ (Centerline) Ditch
- Fence
- BOR01 Final Verification Soil Sample Location
- 1a Baseline/Progress Soil Sample Location (a)
- 5 Foot Grid

DRAWN BY: SLA	REVISED:	APPROVED BY: CJA
		DATE: 11/07/01
		DRAWING NAME: h.1.dwg

Figure H.1. Lasagna Phase IIb sample location layout



LEGEND

A- = ANODE ZONE

T- = TREATMENT ZONE

℄ (Centerline) Ditch

Fence

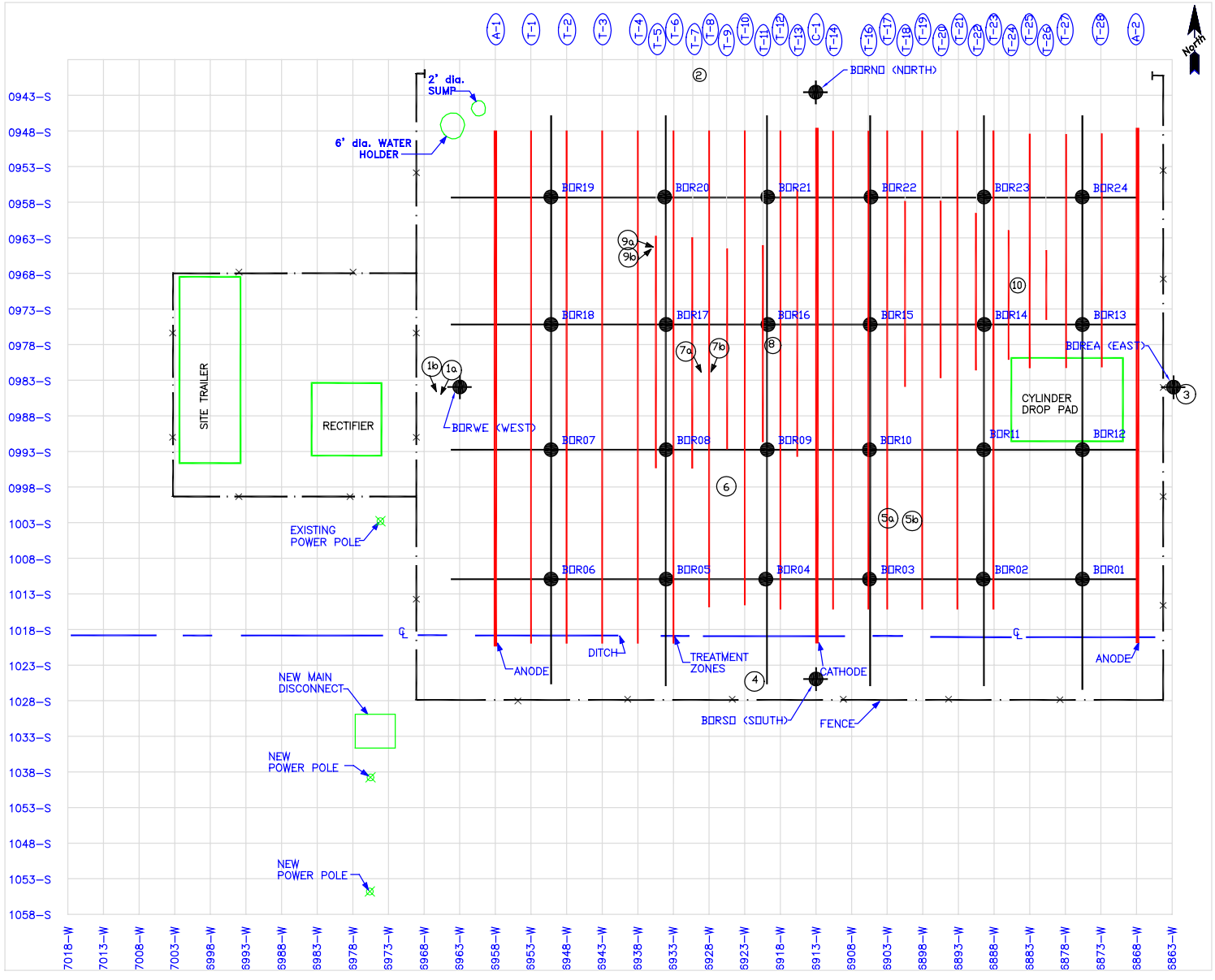
Anode/Cathode

Treatment Zone

5 Foot Grid

DRAWN BY: SLA	REVISED:	APPROVED BY: CJA
		DATE: 11/07/01
		DRAWING NAME: h.2.dwg

Figure H.2. Lasagna Phase IIb site layout showing treatment zones



LEGEND

A- = ANODE ZONE

T- = TREATMENT ZONE

℄ (Centerline) Ditch

Fence

Anode/Cathode

Treatment Zone

BOR01 Final Verification Soil Sample Location

1a Baseline/Progress Soil Sample Location (a)

5 Foot Grid

DRAWN BY: SLA	REVISED:	APPROVED BY: CJA
		DATE: 11/07/01
		DRAWING NAME: h.3.dwg

Figure H.3. Lasagna Phase IIb site layout

APPENDIX I

OPERATIONAL CHARTS

Figure I.1. Temperature vs Time for the East and West Segments and Center Cathode

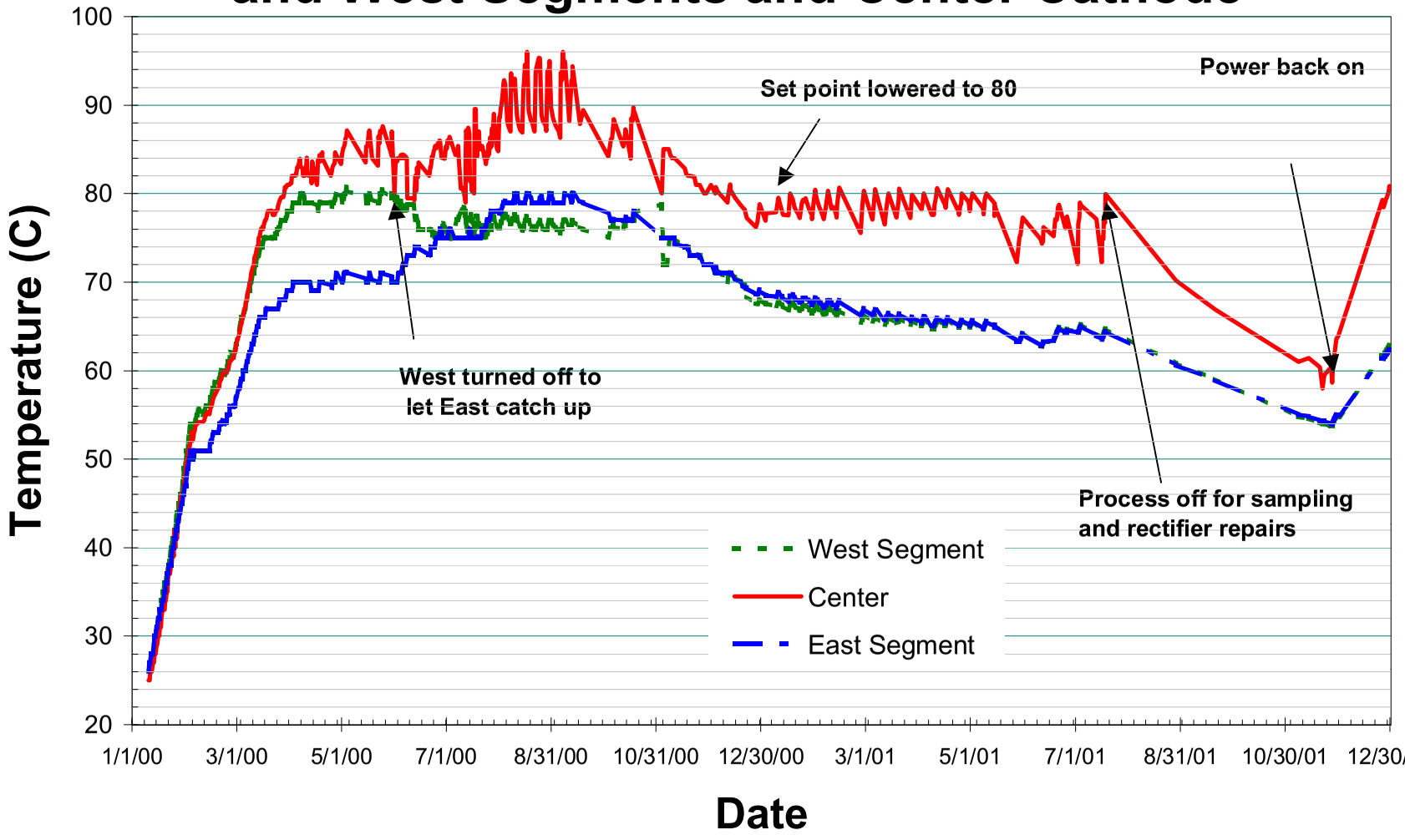


Figure I.2. East and West Segments Pore Water Travel Distance