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PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America D8F050387

Sampling Event: June 4th & 19th, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 08/13/08

Peer Reviewer: Stacey Malerba Date Completed: 08/14/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses						
					VOCs (8260B)	SVOCs (8270C)	Methane (RSK 175)	GRO (8015B)	DRO (8015B)	Dissolved Metals (6010 & 6020)	General Chemistry
D8F050387											
Ned's Spring	SA	D8F050387-001	6/4/08	Water	X	--	X	---	---	X	X^m
Ned's Cabin	SA	D8F050387-002	6/4/08	Water	X	---	X	---	---	X	X
Second Spring	SA	D8F050387-003	6/4/08	Water	X	---	X	---	---	X	X
Dick's Spring	SA	D8F050387-004	6/4/08	Water	X	---	X	---	---	X	X
Donna's Spring	SA	D8F050387-005	6/4/08	Water	X	---	X	---	---	X	X
Ned's Stock Pond	SA	D8F050387-006	6/4/08	Water	X	---	X	---	---	X	X
CSOC 697-14 NO. 1 PROD. WTR.	SA	D8F050387-007	6/4/08	Water	X	X	---	---	---	X	X^m
Ned's Spring	SA	D8F050387-008	6/4/08	Soil	---	---	---	X^m	X^m	---	---

Analyses:

VOCs – Volatile Organic Compounds SVOCs – Semivolatile Organic Compounds GRO – Gasoline Range Organics

DRO – Diesel Range Organics

General Chemistry – pH (SM18 4500-H B), Total Alkalinity (SM18 2320 B), Bicarbonate Alkalinity (SM18 2320 B), carbonate Alkalinity (SM18 2320 B), Hydroxide Alkalinity (SM18 2320 B), Bromide (300.0), Chloride (300.0), Fluoride (300.0), Nitrate as N (300.0), Nitrite as N (300.0), Orthophosphate as P (300.0), Sulfate (300.0), Specific Conductance (SM18 2510 B), Total Dissolved Solids (SM18 2540 C)

QC Type: SA - Sample TB - Trip Blank FD – Field Duplicate m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

The data review was conducted in accordance with the Data Validation SOP included as Attachment B to the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.

__X__ Data are usable with qualification (noted below).

_____ Data are usable with qualification (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperatures were 2.8°C, 2.4°C, and 2.3°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	Yes	All samples were analyzed within the holding time requirements specified in the Work Plan. Data qualification was not required.

Review Parameter	Criteria Met?	Comments
Method Blanks	Yes	Target analytes were not reported as detected within the associated method blanks. Data qualification was not required.
Matrix QC • MS/MSD Ned's Spring (Bromide, Fluoride, Orthophosphate as P) CSOC 697-14 NO.1 PROD. WTR. (Bromide, Fluoride, Nitrate, nitrite, Orthophosphate as P, Sulfate) • LD Ned's Spring (Specific Conductance) CSOC 697-14 NO.1 PROD. WTR. (TDS)	No	With the exceptions summarized below in Table 1, the recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPDs for the laboratory duplicate analyses were within the applicable acceptance criteria. Data qualification was not required.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) N/A • Field Duplicate N/A	N/A	Trip blanks were not associated with this work order.
Surrogates	No	With the exceptions summarized below in Table 2, all surrogate recoveries were within the laboratory acceptance limits. Sample CSOC 697-14 NO. 1 PROD. WTR. required a dilution for the SVOC analyses. The applicable surrogate recoveries could not be calculated because the extract was diluted beyond the ability to quantitate surrogate recoveries. Due to the dilution, it was not considered applicable for the surrogate recoveries to be evaluated as a measure of accuracy.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	Yes	LCS and LCSD recoveries were within the laboratory determined acceptance limits. Data qualification was not required.
Non-detect Results w/ Elevated RLs?	No	The VOC, SVOCs, nitrate, and nitrite analyses were performed at dilutions for some samples. Several results were reported as non-detect at elevated RLs. Therefore, these results that were reported as non-detect at elevated RLs will need to be evaluated with respect to the project objectives.
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL.

Table 1: MS/MSD Recovery Outliers and Resultant data Qualification

Sample	Analyte	%Rs (Limits)	Qualification
CSOC 697-14 NO.1 PROD. WTR.	Orthophosphate as P	69/ 69 (80-120)	As the potential bias was considered to be low, the orthophosphate as P result for sample CSOC 697-14 NO.1 PROD. WTR. was qualified as estimated (J MS-L).

%Rs – Percent Recoveries J – Estimated MS – Matrix spike and/or matrix spike duplicate failure. L – Low Bias

Table 2: Surrogate Recovery Outliers and Resultant Data Qualification

Sample	Surrogate	%R (Limits)	Qualification
D8F050387			

Ned's Spring	a,a,a-Trifluorotoluene	76 (77-123)	As the potential bias was considered to be low, the GRO result for sample Ned's Spring was qualified as estimated (UJ SUR-L).

%R – Percent Recovery GRO – Gasoline range Organics UJ – Estimated SUR – Surrogate recovery failure.
L – Low Bias

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRG1655, NRG1903, NRG1800

Sampling Event: July 15th – 21st, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 08/13/08

Peer Reviewer: Stacey Malerba Date Completed: 08/14/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Matrix	Analyses			
				VOCs (8260B)	GRO (8015B)	DRO (8015B)	Methane (RSK 175)
NRG1655							
PSBH-06 15-16'	SA	NRG1655-01	Soil	X	X	X	---
PSBH-04 14-16'	SA	NRG1655-02	Soil	X	X	X	---
PSBH-03 20-21.5'	SA	NRG1655-03	Soil	X[m]	X	---	---
NRG1903							
PSMW-11D	SA	NRG1903-01	Water	X[m]	---	---	X
NRG1800							
PSBH-11S 17.5-19'	SA	NRG1800-01	Soil	X	X	X[m]	---
PSMW-04	SA	NRG1800-02	Water	X[m]	---	---	X[m]
PSMW-03	SA	NRG1800-03	Water	X	---	---	X
PSMW-11S	SA	NRG1800-04	Water	X	---	---	X
Trip Blank	TB	NRG1800-05	Water	X	---	---	---

Analyses:
VOCs – Volatile Organic Compounds GRO – Gasoline Range Organics DRO – Diesel Range Organics
QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate
--- Sample not analyzed for this parameter.

The data review was conducted in accordance with the Data Validation SOP included as Attachment B to the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
__X__ Data are usable with qualification (noted below).
_____ Data are usable with qualification (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperatures were 2.0°C, 5.8°C, and 3.2°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	Yes	All samples were analyzed within the holding time requirements specified in the Work Plan. Qualification of data was not required.
Method Blanks	No	With the exception summarized below in Table 1, target analytes were not reported as detected within the associated method blanks.

Review Parameter	Criteria Met?	Comments
Matrix QC • MS/MSD PSBH-03 20-21.5' (VOCs) PSMW-11D (VOCs) PSMW-04 (VOCs, Dissolved Methane) PSBH-11S 17.5-19' (DRO) • LD N/A	No	With the exceptions summarized below in Table 2, the recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) None • Field Duplicate None	N/A	
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized below in Table 3, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect Results w/ Elevated RLs?	Yes	No results were reported as non-detect at elevated RLs. Further action was not required.
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL.

Table 1: Method Blank Outliers and Resultant data Qualification

Associated Samples	Analyte	Concentration	Qualification
NRG1800 (Soil)			
VOCs			
Batch 8073002	Methylene Chloride	0.00449 mg/Kg wet	As the associated methylene chloride result was reported at a concentration <10x the blank contamination, the methylene chloride result was qualified as non-detect at the reported value (U MB-I).

mg/Kg – Milligrams per Kilogram U – Non-detect MB – Method Blank I – Indeterminate Bias

Table 2: MS/MSD Recovery and RPD Outliers and Resultant Data Qualification

Sample	Analyte	%R (Limits)	RPD (Limit)	Qualification
NRG1903				
VOCs (Water)				
PSMW-11D	Sec-Butylbenzene	**160**/ **166** (73-142)	3 (17)	None. As the potential bias was considered to be high and the listed analytical results were reported as non-detect, data qualification was not necessary.
	n-Butylbenzene	**154**/ **163** (64-147)	6 (18)	
	2-Chlorotoluene	**143**/ **145** (76-134)	1 (16)	
	4-Chlorotoluene	**140**/ **142** (80-133)	1 (17)	
	1,2-Dibromo-3-chloroproapne	**56**/ 76 (60-136)	**32** (29)	As the potential bias was considered indeterminate, the listed analytical result

Sample	Analyte	%R (Limits)	RPD (Limit)	Qualification
				was qualified as estimated (UJ MS, D-I).
	Ethylbenzene	**146**/ **145** (80-135)	0.6 (17)	None. As the potential bias was considered to be high and the listed analytical results were reported as non-detect, data qualification was not necessary.
	p-Isopropyltoluene	**150**/ **155** (74-139)	3 (17)	
	Naphthalene	**39**/ 68 (50-154)	**55** (39)	As the potential bias was considered indeterminate, the listed analytical result was qualified as estimated (UJ MS, D-I).
	n-Propylbenzene	**161**/ **165** (78-141)	2 (17)	None. As the potential bias was considered to be high and the listed analytical result was reported as non-detect, data qualification was not necessary.
	1,2,3-Trichlorobenzene	**42**/ 68 (49-144)	**47** (31)	As the potential bias was considered indeterminate, the listed analytical result was qualified as estimated (UJ MS, D-I).
	1,3,5-Trimethylbenzene	**145**/ **148** (78-136)	2 (16)	None. As the potential bias was considered to be high and the listed analytical results were reported as non-detect, data qualification was not necessary.
	1,2,4-Trimethylbenzene	**145**/ **145** (70-143)	0.2 (22)	
	Total Xylenes	**140**/ **138** (80-136)	2 (18)	
	Bromomethane	46/ 124 (39-166)	**91** (45)	As the potential bias was considered indeterminate, the listed analytical result was qualified as estimated (UJ D-I).
	Tert-Butylbenzene	147/ **150** (70-148)	2 (17)	None. As the potential bias was considered to be high and the listed analytical results were reported as non-detect, data qualification was not necessary.
	1,3-Dichlorobenzene	129/**133** (75-132)	3 (18)	
	1,2,4-Trichlorobenzene	56/81 (55-135)	**36** (26)	As the potential bias was considered indeterminate, the listed analytical result was qualified as estimated (UJ D-I).
NRG1800 (Water)				
VOCs				
PSMW-04	Bromoform	**124**/ **126** (67-123)	2 (24)	As the potential bias was considered to be high and the listed analytical result was reported as non-

Sample	Analyte	%R (Limits)	RPD (Limit)	Qualification
				detect, data qualification was not necessary.

%R – Percent Recovery RPD – Relative Percent Difference UJ – Estimated

MS – matrix spike and/or matrix spike duplicate recovery failure. D – Duplicate failure. I – Indeterminate Bias

Table 3: LCS/ LCSD Recovery Outliers and Resultant Data Qualification

Associated Samples	Analyte	%R (Limits)	Qualification
NRG1655 (Soil)			
VOCs			
Batch 8072867	1,2-Dibromo-3-chloropropane	**150**/ 139 (62-142)	As the potential bias was considered to be high and all associated 1, 2-dibromo-3-chloropropane and 1, 2, 3-trichlorobenzene results were reported as non-detect, data qualification was not necessary.
	1,2,3-Trichlrobenzene	**139**/ 135 (64-136)	

%R – Percent Recovery

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRH0688

Sampling Event: August 8th, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 08/15/08

Peer Reviewer: Geoff Webb Date Completed: 08/15/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Matrix	Analyses			
				VOCs (8260B)	Methane (RSK 175)	Dissolved Metals (6010B)	General Chemistry
NRH0688							
Spring 2	SA	NRH0688-01	Water	X[m]	X[m]	X	X[m]
Prather Spring	SA	NRH0688-02	Water	X	X	X[m]	X
Prather Spring Upgradient	SA	NRH0688-03	Water	X	---	---	---
Trip Blank	AS	NRH0688-04	Water	X	---	---	---

Analyses:

VOCs – Volatile Organic Compounds

Dissolved metals including arsenic, barium, cadmium, chromium, iron, lead, magnesium, manganese, potassium, selenium, and sodium.

General chemistry parameters including total alkalinity (SM2320B), bromide (EPA 300.0), chloride (EPA 300.0), fluoride (EPA 300.0), nitrate/ nitrite as N (EPA 353.2), pH (SM4500 HB), sulfate (EPA 300.0), and total dissolved solids (EPA 170.1)

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

The data review was conducted in accordance with the Data Validation SOP included as Attachment B to the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.

__X__ Data are usable with qualification (noted below).

_____ Data are usable with qualification (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 5.1°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exception summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. Samples for aqueous pH were analyzed four days after collection, which exceeds the holding time requirement of immediate analysis. Therefore, the pH result and Temperature of pH determination result for samples Spring 2 and Prather Spring were qualified as estimated (J HT-I) with an indeterminate bias.
Method Blanks	Yes	Target analytes were not reported as detected within the associated method blanks. Data qualification was not required.

Review Parameter	Criteria Met?	Comments
Matrix QC • MS/MSD Spring 2 (General Chemistry – bromide, chloride, fluoride, & sulfate only, Methane, VOCs) Prather Spring (Dissolved Metals) • LD Prather Spring (TDS, Bromide, Chloride, Fluoride, Sulfate)	No	With the exceptions summarized below in Table 1, the recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPDs for the laboratory duplicate analyses were within the applicable acceptance criteria. Data qualification was not required.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	No target analytes were reported as detected in the trip blank sample. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized below in Table 2, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect Results w/ Elevated RLs?	Yes	No results were reported as non-detect at elevated RLs. Further action was not required.
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL.

Table 1: MS/MSD Recovery and RPD Outliers and Resultant Data Qualification

Sample	Analyte	%R (Limits)	RPD (Limit)	Qualification
VOCs				
Spring 2	Dichlorodifluoromethane	**157**/ **161** (36-146)	3 (14)	None. As the potential bias was considered to be high and the dichlorodifluoromethane result for sample Prather Spring was reported as non-detect, data qualification was not necessary.

%R – Percent Recovery RPD – Relative Percent Difference

Table 2: LCS/ LCSD Recovery Outliers and Resultant Data Qualification

Associated Samples	Analyte	%R (Limits)	Qualification
VOCs			
Batch 8081360	Dichlorodifluoromethane	**139**/ **143** (36-120)	As the potential bias was considered to be high and all associated dichlorodifluoromethane results were reported as non-detect, data qualification was not necessary.

%R – Percent Recovery

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI0466

Sampling Event: September 3 & 4, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/19/08

Peer Reviewer: Geoff Webb Date Completed: 09/22/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses		
					VOCs (8260)	GRO	DRO
PS-MW06R 17' – 21'	SA	NRI0466-01	09/03/08	Soil	X	X	X
PS-MW08S 10' – 12'	SA	NRI0466-02	09/03/08	Soil	X	X	---
PS-MW07S 14' - 16'	SA	NRI0466-03	09/04/08	Soil	X^m	X	---
Trip Blank	TB	NRI0466-04	09/03/08	Water	X	---	---

Analyses:
VOCs – Volatile Organic Compounds GRO – Gasoline Range Organics DRO – Diesel Range Organics
QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate
--- Sample not analyzed for this parameter.

These samples are a subset split of native samples reported in Chem Solutions data packages URS-038 and URS-039. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
_X_ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 1.4°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	Yes	All samples were analyzed within the holding time requirements specified in the Work Plan. Data qualification was not required.
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.
Matrix QC • MS/MSD PS-MW07S 14' - 16' (VOCs) • LD PS-MW07S 14' - 16' (% Solids)	Yes	The recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPD between parent result and the laboratory duplicate results satisfied the applicable evaluation criterion.

Review Parameter	Criteria Met?	Comments
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	Target analytes were reported as non-detect in the trip blank. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	Yes	LCS and LCSD recoveries were within the laboratory determined acceptance limits. Data qualification was not required.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW06R 17'-21' (VOCs, GRO, DRO) • PS-MW08S 10'-12' (VOCs, GRO, DRO) • PS-MW07S 14'-16' (VOCs, GRO, DRO) A comparison of detected split sample results and detected parent sample results is summarized below in Table 2. As applicable, qualification has been applied to both the native and split samples.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8090363	GRO	1.42 mg/Kg	The associated GRO result was reported at a concentration <5x the method blank contamination. Therefore, the GRO result was qualified as non-detect at the reporting limit (U MB-I).

mg/Kg – Milligrams per Kilogram U – Non-detect MB – Method blank contamination.
I – Indeterminate

Table 2: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
PS-MW06R	Acetone	ND	35.4 µg/Kg	100 µg/Kg	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Benzene	ND	1.24 µg/Kg	5 µg/Kg	
	Toluene	ND	1.65 µg/Kg	5 µg/Kg	
	DRO	ND	10.5 mg/Kg	20 mg/Kg	
PS-MW08S	GRO	ND	1.01 mg/Kg	20 mg/Kg	
	Acetone	ND	70.9 µg/Kg	5 µg/Kg	As the absolute difference between the split sample acetone result and parent sample acetone result exceeded 2xRL, the acetone result was qualified as estimated (UJ/J D-I).
	Carbon Disulfide	ND	8.69 µg/Kg	5 µg/Kg	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Methylene Chloride	ND	7.89 µg/Kg	5 µg/Kg	
	Carbon Disulfide	ND	1.48 µg/Kg	5 µg/Kg	
	Methylene Chloride	ND	6.85 µg/Kg	5 µg/Kg	
	GRO	ND	1.13 mg/Kg	20 mg/Kg	

[1] RL is for primary sample. ND – Non-detect J = Estimated D = Duplicate analysis criteria not met. I = Indeterminate Bias
U/UJ – Non-detect RL – Reporting Limit GRO – Gasoline Range Organics DRO – Diesel Range Organics
mg/Kg – Milligrams per Kilogram µg/Kg – Micrograms per Kilogram

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI0729

Sampling Event: September 8, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/19/08

Peer Reviewer: Geoff Webb Date Completed: 09/22/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses			
					Inorganics	Dissolved Metals	VOCs (8260)	Methane (RSK-175)
PSMW 05 D	SA	NRI0729-01	09/08/08	Water	X[m]	X	X	X
PSMW 08 S	SA	NRI0729-02	09/08/08	Water	X[m]	X[m]	X	X
PSMW 08 D	SA	NRI0729-03	09/08/08	Water	X	X[m]	X	X
Trip Blank	TB	NRI0729-04	09/08/08	Water	X	---	---	---

Analyses:

Inorganics – Total Alkalinity, Bicarbonate Alkalinity, Carbonate Alkalinity, Hydroxide Alkalinity, Bromide, Chloride, Fluoride, Nitrate as N, Nitrite as N, Sulfate, Total Dissolved Solids

Dissolved Metals – Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium (6010), Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Selenium, and Silver (6020).

VOCs – Volatile Organic Compounds

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

These samples are a subset split of native samples reported in Paragon data package 08-09-060. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
__X__ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 0.3°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exceptions summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. The nitrate as N and nitrite as N analyses for samples PSMW 05 D, PSMW 08 S, and PSMW 08 D exceeded the 48 hour holding time. These samples were analyzed 10 hours after the holding time limit and were qualified as estimated (J HT-I).

Review Parameter	Criteria Met?	Comments
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.
Matrix QC • MS/MSD PSMW 05 D (Fluoride, Total Alkalinity) PSMW 08 S (Bromide, Chloride, Nitrate as N, Nitrite as N, Sulfide, Boron, Iron, Manganese) PSMW 08 D (Arsenic, barium, cadmium, Chromium, Copper, Lead, Manganese, Selenium, Silver) • LD PSMW 08 D (Fluoride)	No	The recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The MS/MSD recoveries for sample PSMW 08 S could not be evaluated for chloride because the results in the native sample were greater than four times the concentration of the spike added during digestion. The MS/MSD recoveries for sample PSMW 05 D could not be evaluated for total alkalinity because the results in the native sample were greater than four times the concentration of the spike added during digestion. Since the sample concentrations are so much greater than the spike added, the MS/MSD recoveries are not considered to be a representative measure of accuracy. Further action or qualification was not necessary. The RPD between parent result and the laboratory duplicate results satisfied the applicable evaluation criterion.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	No	With the exception of hexachlorobutadiene, target analytes were reported as non-detect in the trip blank. Hexachlorobutadiene was detected in the trip blank at a concentration of 1.12 µg/L. As the associated hexachlorobutadiene sample results were reported as non-detect, data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized in Table 2, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW05D (General Chemistry, Dissolved Metals, VOCs, Dissolved Methane) • PS-MW08S (General Chemistry, Dissolved Metals, VOCs, Dissolved Methane) • PS-MW08D (General Chemistry, Dissolved Metals, VOCs, Dissolved Methane) A comparison of detected split sample results and detected parent sample results is summarized below in Table 2. As applicable, qualification has been applied to both the native and split samples.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8092005 (All samples)	Arsenic	0.210 µg/L	None. The associated arsenic and selenium results were reported at concentrations >5x the method blank contamination.
	Selenium	0.130 µg/L	
	Silver	0.100 µg/L	The associated silver results that were reported at concentrations <5x the method blank contamination were qualified as non-detect (U MB-I) at the reporting limit.

µg/L – Micrograms per Liter U – Non-detect MB – Method blank contamination. I – Indeterminate

Table 2: LCS/LCSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recovery	Qualification
Batch 8091376	Bromoform	132/ 134 (69-127)	None. As the potential bias was high and the results were reported as non-detect, data qualification was not required.
	Chloromethane	131/ 139 (33-125)	
	1,2-Dibromo-3-chloropropane	142/ 145 (60-136)	

Table 3: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result (µg/L)	Split Sample Result (µg/L)	RL[1] (µg/L)	Qualification
PSMW05D	Barium	120 µg/L	121 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Boron	73 µg/L	60.7 µg/L	100 µg/L	
	Chromium	ND	2.15 µg/L	10 µg/L	
	Copper	4.3 µg/L	2.97 µg/L	10 µg/L	
	Arsenic	19 µg/L	17.8 µg/L	2 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Cadmium	0.3 µg/L	0.450 µg/L	0.3 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Selenium	13 µg/L	8.01 µg/L	1 µg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Bicarbonate Alkalinity	250 mg/L	364 mg/L	50 mg/L	
	Total Alkalinity	250 mg/L	364 mg/L	50 mg/L	
	TDS	550 mg/L	436 mg/L	20 mg/L	
	Chloride	53 mg/L	49.2 mg/L	2 mg/L	
	Nitrate as N	1.1 mg/L	1.15 mg/L	0.2 mg/L	
	Sulfate	88 mg/L	79.2 mg/L	1 mg/L	
	Carbon Disulfide	ND	0.420 µg/L	1 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Chloroform	ND	0.960 µg/L	1 µg/L	
	Toluene	ND	0.930 µg/L	1 µg/L	

Sample	Detected Analytes	Primary Sample Result (µg/L)	Split Sample Result (µg/L)	RL[1] (µg/L)	Qualification
	Dissolved Methane	2 µg/L	ND	1 µg/L	
PSMW08S	Barium	180 µg/L	180 µg/L	100 µg/L	
	Boron	74 µg/L	79.6 µg/L	100 µg/L	
	Calcium	120000 µg/L	110000 µg/L	1000 µg/L	None. The RPDs between the split sample result and parent sample result was ≤30%.
	Chromium	ND	0.630 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Copper	2.2 µg/L	1.10 µg/L	10 µg/L	
	Magnesium	37000 µg/L	37000 µg/L	1000 µg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Manganese	140 µg/L	161 µg/L	10 µg/L	
	Potassium	7800 µg/L	8240 µg/L	1000 µg/L	
	Sodium	80000 µg/L	99000 µg/L	1000 µg/L	
	Arsenic	1.8 µg/L	2.26 µg/L	2 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Selenium	ND	0.950 µg/L	1 µg/L	
	Bicarbonate Alkalinity	230 mg/L	314 mg/L	20 mg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Total Alkalinity	230 mg/L	314 mg/L	20 mg/L	
	TDS	900 mg/L	732 mg/L	20 mg/L	
	Bromide	1.1 mg/L	1.04 mg/L	0.2 mg/L	
	Chloride	260 mg/L	247 mg/L	4 mg/L	
	Fluoride	ND	0.360 mg/L	0.1 mg/L	As the absolute difference between the split sample fluoride result and parent sample fluoride result exceeded 2xRL, the fluoride result was qualified as estimated (UJ/J D-I).
	Nitrate as N	0.57 mg/L	0.501 mg/L	0.2 mg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Sulfate	58 mg/L	78.1 mg/L	1 mg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Acetone	8.1 µg/L	ND	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Carbon Disulfide	0.25 µg/L	ND	1 µg/L	
PSMW08D	Barium	110 µg/L	180 µg/L	100 µg/L	
	Boron	61 µg/L	70.6 µg/L	100 µg/L	
	Calcium	110000 µg/L	102000 µg/L	1000 µg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Chromium	1.2 µg/L	0.630 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Copper	4.2 µg/L	1.10 µg/L	10 µg/L	
	Magnesium	36000 µg/L	34900 µg/L	1000 µg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.

Sample	Detected Analytes	Primary Sample Result (µg/L)	Split Sample Result (µg/L)	RL[1] (µg/L)	Qualification
	Manganese	31 µg/L	119 µg/L	10 µg/L	As the absolute difference between the split sample manganese result and parent sample manganese result exceeded 2xRL, the manganese result was qualified as estimated (UJ/J D-I).
	Potassium	4000 µg/L	4580	1000 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Sodium	210000 µg/L	252000 µg/L	1000 µg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Arsenic	24 µg/L	25 µg/L	2 µg/L	
	Selenium	4 µg/L	1.88 µg/L	1 µg/L	As the absolute difference between the split sample selenium result and parent sample selenium result exceeded 2xRL, the selenium result was qualified as estimated (UJ/J D-I).
	Bicarbonate Alkalinity	220 mg/L	298 mg/L	20 mg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Total Alkalinity	220 mg/L	298 mg/L	20 mg/L	
	Sulfide	ND	1.30 mg/L	2 mg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	TDS	1000 mg/L	1130 mg/L	20 mg/L	None. The RPD between the split sample results and parent sample results were ≤30%.
	Chloride	270 mg/L	294 mg/L	4 mg/L	
	Nitrate as N	0.56 mg/L	0.487 mg/L	0.2 mg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Sulfate	180 mg/L	302 mg/L	20 mg/L	The RPD between the results was ≤50%, exceeding the evaluation criteria of RPD≤30%. Therefore, the sulfate results were qualified as estimated (J D-I).
	Chloroform	ND	0.610 µg/L	1 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Dissolved Methane	1.2 µg/L	ND	1 µg/L	

[1] RL is for primary sample. ND – Non-detect U/UJ - Non-detect J - Estimated D - Duplicate analysis criteria not met.
I - Indeterminate Bias RPD – Relative Percent Difference RL – Reporting Limit mg/L – Milligrams per Liter
µg/L – Micrograms per Liter

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI0779

Sampling Event: September 7 & 8, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/19/08

Peer Reviewer: Geoff Webb Date Completed: 09/22/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses					
					Inorganics	Dissolved Metals	VOCs (8260)	Methane (RSK-175)	GRO	DRO
PSMW10S 10'-12'	SA	NRI0779-01	09/07/08	Soil	---	---	X	---	X	X
PSMW 03 D	SA	NRI0779-02	09/08/08	Water	X	X	X	X	---	---
PSMW 04 D	SA	NRI0779-03	09/08/08	Water	X	X	X	X[m]	---	---
PSMW 06 R	SA	NRI0779-04	09/08/08	Water	---	---	X	X	---	---
Trip Blank	TB	NRI0779-05	09/08/08	Water	---	---	X	---	---	---

Analyses:

Inorganics – Total Alkalinity, Bicarbonate Alkalinity, Carbonate Alkalinity, Hydroxide Alkalinity, Bromide, Chloride, Fluoride, Nitrate as N, Nitrite as N, Sulfate, Total Dissolved Solids

Dissolved Metals – Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium (6010), Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Selenium, and Silver (6020).

VOCs – Volatile Organic Compounds GRO – Gasoline Range Organics DRO – Diesel Range Organics

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

These samples are a subset split of native samples reported in Evergreen Analytical Laboratory data package 08-6809 and Paragon data package 08-09-060. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
_X_ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 0.1°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exceptions summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. The nitrate as N and nitrite as N analyses for samples PSMW 03 D and PSMW 04 D exceeded the 48 hour holding time. These samples were analyzed 12 hours after the holding time limit and were qualified as estimated (UJ/J HT-I).

Review Parameter	Criteria Met?	Comments
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.
Matrix QC • MS/MSD PSMW 04 D (Methane) • LD PSMW 04 D (Bromide, Chloride, Nitrate as N, Nitrite as N, Sulfate, Sulfide, Carbonate Alkalinity)	Yes	The recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPD between parent result and the laboratory duplicate results satisfied the applicable evaluation criterion.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	Target analytes were reported as non-detect in the trip blank. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized in Table 2, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW10S (Metals, VOCs, GRO, DRO, Inorganics and Dissolved Methane) • PS-MW03D (Metals, VOCs, GRO, DRO, Inorganics and Dissolved Methane) • PS-MW04D (Metals, VOCs, GRO, DRO, Inorganics and Dissolved Methane) • PS-MW06R (Metals, VOCs, GRO, DRO, Inorganics and Dissolved Methane) A comparison of detected split sample results and detected parent sample results is summarized below in Table 3. As applicable, qualification has been applied to both the native and split samples.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8091475 (PSMW10S 10'-12')	GRO	2.53 mg/Kg	The associated GRO result was reported at a concentration <5x the method blank contamination. Therefore, the GRO result was qualified as non-detect at the reporting limit (U MB-I).
Batch 8092005 (PSMW 03 D & PSMW 04 D)	Arsenic	0.10 µg/L	None. The associated arsenic and selenium results were reported at concentrations >5x the method blank contamination.
	Selenium	0.130 µg/L	
	Silver	0.100 µg/L	The associated silver results were reported at concentrations <5x the method blank contamination. Therefore, the silver results were qualified as non-detect at the reporting limit (U MB-I).

µg/L – Micrograms per Liter mg/Kg – Milligrams per Kilogram U – Non-detect MB – Method blank contamination.
I – Indeterminate GRO – Gasoline Range Organics

Table 2: LCS/LCSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recovery	Qualification
Batch 8091394	2,2-Dichloropropane	152/ 150 (62-142)	None. As the potential bias was high and the results were reported as non-detect, data qualification was not required.

Table 3: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
PSMW10S	Methylene Chloride	ND	6.01 µg/Kg	33 µg/Kg	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
PSMW 06 R	2-Butanone	3.3 µg/L	ND	1.0 µg/L	As the absolute difference between the split sample 2-butanone result and parent sample 2-butanone result exceeded 2xRL, the 2-butanone result was qualified as estimated (UJ/J D-I).
	Carbon Disulfide	0.25 µg/L	ND	0.2 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	2-Hexanone	0.37 µg/L	ND	0.5 µg/L	
	4-Methyl-2-pentanone	1.2 µg/L	ND	0.2 µg/L	
	Toluene	0.21 µg/L	ND	0.2 µg/L	
	m,p-Xylene	0.20 µg/L	ND	0.4 µg/L	
	o - Xylene	0.13 µg/L	ND	0.2 µg/L	
	Total Xylenes	0.33 µg/L	ND	0.4 µg/L	
PSMW03D	Boron	50.6 µg/L	45 µg/L	100 µg/L	
	Calcium	51400 µg/L	55000 µg/L	1000 µg/L	None. The RPDs between the split

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
	Magnesium	17200 µg/L	16000 µg/L	1000 µg/L	sample results and parent sample results were ≤30%.
	Manganese	38 µg/L	34 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Potassium	3330 µg/L	2800 µg/L	1000 µg/L	
	Sodium	50700 µg/L	42000 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Barium	70 µg/L	76.5 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Chromium	13 µg/L	15 µg/L	10 µg/L	
	Copper	0.52 µg/L	2.04 µg/L	10 µg/L	
	Arsenic	18 µg/L	22.7 µg/L	2 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Cadmium	ND µg/L	0.250 µg/L	0.3 µg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Lead	ND µg/L	0.290 µg/L	0.5 µg/L	As the absolute difference between the split sample lead result and parent sample lead result exceeded 2xRL, the lead result was qualified as estimated (UJ/J D-I)
	Selenium	7.9 µg/L	5.15 µg/L	1 µg/L	The RPD between the split sample result and parent sample result was ≤42%, exceeding the evaluation criteria of RPD≤30%. Therefore, the both selenium results were qualified as estimated (J D-I).
	Bicarbonate Alkalinity	220 mg/L	258 mg/l	20 mg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Total Alkalinity	220 mg/L	258 mg/L	20 mg/L	
	Sulfide	ND	1 mg/L	2 mg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	TDS	370 mg/L	346 mg/L	20 mg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	Chloride	6.2 mg/L	5.95 mg/L	0.2 mg/L	
	Nitrite as N	0.16 mg/L	0.257 mg/L	0.1 mg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Sulfate	71 mg/L	72.8 mg/L	1 mg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
PSMW04D	Barium	70 µg/L	76.5 µg/L	100 µg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Boron	58 µg/L	68.1 µg/L	100 µg/L	
	Calcium	50000 µg/L	49600 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Chromium	3 µg/L	15 µg/L	10 µg/L	None. The absolute difference between the split sample result and parent
	Copper	ND	2.04 µg/L	10 µg/L	

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
					sample result agrees within 2xRL.
	Magnesium	17400 µg/L	16000 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Manganese	39 µg/L	62 µg/L	10 µg/L	As the absolute difference between the split sample manganese result and parent sample manganese result exceeded 2xRL, the lead result was qualified as estimated (UJ/J D-I)
	Potassium	2100 µg/L	2240 µg/L	1000 µg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Sodium	45000 µg/L	48900 µg/L	1000 µg/L	None. The RPD between the split sample results and parent sample results were ≤30%.
	Arsenic	43 µg/L	32.5 µg/L	2 µg/L	
	Cadmium	ND	0.280 µg/L	0.3 µg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Selenium	6.4 µg/L	4.04 µg/L	1 µg/L	
	Bicarbonate Alkalinity	230 mg/L	78 mg/L	20 mg/L	As the absolute difference between the split sample bicarbonate and total alkalinity results and parent sample bicarbonate and total alkalinity results exceeded 2xRL, the bicarbonate and total alkalinity results were qualified as estimated (UJ/J D-I).
	Total Alkalinity	230 mg/L	78 mg/L	20 mg/L	
	Total Dissolved Solids	360 mg/L	407 mg/L	20 mg/L	None. The RPD between the split sample results and parent sample results was ≤30%.
	Chloride	11 mg/L	11.6 mg/L	0.2 mg/L	
	Fluoride	0.21 mg/L	0.230 mg/L	0.1 mg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Nitrate as N	1.3 mg/L	1.2 mg/L	0.2 mg/L	None. The RPD between the split sample results and parent sample results were ≤30%.
	Sulfate	53 mg/L	52.5 mg/L	1 mg/L	
	Acetone	14 µg/L	ND	10 µg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Carbon Disulfide	0.33 µg/L	ND	1 µg/L	
	Toluene	0.17 µg/L	ND	1 µg/L	
	Dissolved Methane	8.6 µg/L	ND	1 µg/L	As the absolute difference between the split sample dissolved methane results and parent sample dissolved methane results exceeded 2xRL, the dissolved methane results were qualified as estimated (UJ/J D-I).

[1] RL is for primary sample. ND – Non-detect J = Estimated D = Duplicate analysis criteria not met. I = Indeterminate Bias
µg/L – Micrograms per Liter µg/Kg – Micrograms per Kilogram mg/L – Milligrams per Liter
RPD –Relative Percent Difference RL – Reporting Limit

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI1052

Sampling Event: September 9, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/23/08

Peer Reviewer: Geoff Webb Date Completed: 09/25/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses			
					Inorganics	Dissolved Metals	VOCs (8260)	Methane (RSK-175)
PS-MW12M[1]	SA	NRI1052-01	09/09/08	Water	X[m]	X	X	X
PS-MW13D	SA	NRI1052-02	09/09/08	Water	---	---	X	X[m]
PS-MW07D	SA	NRI1052-03	09/09/08	Water	---	---	X	X
Trip Blank	TB	NRI1052-04	09/09/08	Water	---	---	X	---

Analyses:

Inorganics – Total Alkalinity, Bromide, Chloride, Fluoride, Nitrate/Nitrite as N, pH, Sulfate, TDS

Dissolved Metals – Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium (6010), Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Selenium, and Silver (6020).

VOCs – Volatile Organic Compounds

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

[1] The sampler inadvertently labeled this sample as PS-MW12D on the COC. To reflect the proper nomenclature the data sheets and database have been updated with the correct sample identification, PS-MW12M.

These samples are a subset split of native samples reported in Paragon data package 08-09-093. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
_X_ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 0.1°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exceptions summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. All samples were analyzed for pH eight days after collection, which exceeds the holding time requirement of immediate analysis. Therefore, the pH and temperature of pH determination results for all the samples were qualified as estimated (J HT-I) with an indeterminate bias.

Review Parameter	Criteria Met?	Comments
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.
Matrix QC • MS/MSD PS-MW12M (Bromide, Chloride, Sulfate, Fluoride) PS-MW13D (Methane) • LD PS-MW12M (pH, Temperature of determination pH)	Yes	With the exceptions summarized in Table 2, the recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPD between parent result and the laboratory duplicate results satisfied the applicable evaluation criterion.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	Target analytes were reported as non-detect in the trip blank. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized in Table 3, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	No	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW10S (Inorganics, Dissolved Metals, VOCs, Methane) • PS-MW10D (Inorganics, Dissolved Metals, VOCs, Methane) A comparison of detected split sample results and detected parent sample results is summarized below in Table 4.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8092074 (PS-MW12M)	Boron	0.00630 mg/L	None. The associated calcium and boron results were reported at concentrations >5x the method blank contamination.
	Calcium	0.193 mg/L	
Batch 8091889 (All Samples)	Hexachlorobutadiene	1.23 µg/L	None. All associated hexachlorobutadiene results were reported as non-detect.
Batch 8092005 (PS-MW12M)	Arsenic	0.210 µg/L	None. The associated arsenic and selenium results were reported at concentrations >5x the method blank contamination.
	Selenium	0.130 µg/L	
	Silver	0.100 µg/L	None. The associated silver result was reported as non-detect.

µg/L – Micrograms per Liter mg/L – Milligrams per Liter

Table 2: MS/MSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recoveries (Limits)	Qualification
PS-MW12M	Sulfate	59/ 59 (80-120)	As the potential bias was low, the sulfate result was qualified as estimated (J MS-L).

J – Estimated MS- Matrix spike recovery failure. L – Low Bias

Table 3: LCS/LCSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recovery (Limits)	Qualification
Batch 8092060 (PS-MW12M)	Total Dissolved Solids	82 (90-110)	As the potential bias was low, the total dissolved solid result was qualified as estimated (J LCS-L).
Batch 8091889 (All Samples)	Chloromethane	151/ 148 (33-125)	None. As the potential bias was high and all chloromethane results were reported as non-detect, data qualification was not required.

J – Estimated MS – Matrix spike recovery failure. L – Low Bias

Table 4: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
PS-MW12M	Barium	67 µg/L	80 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Boron	32 µg/L	48.1 µg/L	100 µg/L	
	Calcium	57000 µg/L	53800 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Chromium	0.93 µg/L	1.21 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Copper	0.87 µg/L	1.33 µg/L	10 µg/L	

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
	Magnesium	18000 µg/L	17600 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Manganese	23 µg/L	35.1 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Potassium	1700 µg/L	1570 µg/L	1000 µg/L	
	Sodium	32000 µg/L	35700 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Arsenic	3.6 µg/L	4.02 µg/L	2 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Selenium	ND	1.30 µg/L	1.2 µg/L	
	Total Alkalinity	230 mg/L	364 mg/L	20 mg/L	The RPD between the split sample result and parent sample result was -45%, exceeding the evaluation criteria of RPD≤30%. Therefore, the both total alkalinity results were qualified as estimated (J D-I).
	Chloride	9.2 mg/L	8.38 mg/L	0.2 mg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Fluoride	0.093 mg/L	0.120 mg/L	0.1 mg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Sulfate	43 mg/L	40.0 mg/L	1 mg/L	None. The RPDs between the split sample results and parent sample results were ≤30%.
	TDS	330 mg/L	227 mg/L	20 mg/L	
PS-MW13D	Dissolved Methane	11 µg/L	ND	1 µg/L	As the absolute difference between the split sample dissolved methane result and parent sample dissolved methane result exceeded 2xRL, both dissolved methane results were qualified as estimated (UJ/J D-I).
	Carbon Disulfide	0.27 µg/L	0.380 µg/L	1 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	2-Butanone	2.2 µg/L	ND	10 µg/L	
	Toluene	0.23 µg/L	0.330 µg/L	1 µg/L	
PS-MW07D	Acetone	17 µg/L	ND	10 µg/L	
	Carbon Disulfide	0.28 µg/L	0.28 µg/L	1 µg/L	

[1] RL is for primary sample. ND – Non-detect J = Estimated D = Duplicate analysis criteria not met. I = Indeterminate Bias
µg/L – Micrograms per Liter µg/Kg – Micrograms per Kilogram mg/L – Milligrams per Liter
RPD –Relative Percent Difference RL – Reporting Limit

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI1054

Sampling Event: September 9, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/23/08

Peer Reviewer: Geoff Webb Date Completed: 09/25/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses			
					Inorganics	Dissolved Metals	VOCs (8260)	Methane (RSK-175)
PS-MW10S	SA	NRI1054-01	09/09/08	Water	X	X	X	X
PS-MW10D	SA	NRI1054-02	09/09/08	Water	X	X[m]	X	X
Trip Blank	TB	NRI1054-03	09/09/08	Water	---	---	X	---

Analyses:

Inorganics – Total Alkalinity, Bromide, Chloride, Fluoride, Nitrate/Nitrite as N, pH, Sulfate, TDS

Dissolved Metals – Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium (6010), Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Selenium, and Silver (6020).

VOCs – Volatile Organic Compounds

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

These samples are a subset split of native samples reported in Paragon data package 08-09-093. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
_X_ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 0.1°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exceptions summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. All samples were analyzed for pH eight days after collection, which exceeds the holding time requirement of immediate analysis. Therefore, the pH and temperature of pH determination results for all the samples were qualified as estimated (J HT-I) with an indeterminate bias.

Review Parameter	Criteria Met?	Comments
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.
Matrix QC • MS/MSD PS-MW10D (Boron, Iron, Manganese) • LD PS-MW10S (Total Alkalinity)	Yes	The recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPD between parent result and the laboratory duplicate results satisfied the applicable evaluation criterion.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	Target analytes were reported as non-detect in the trip blank. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized in Table 2, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW10S (Inorganics, Dissolved Metals, VOCs, Methane) • PS-MW10D (Inorganics, Dissolved Metals, VOCs, Methane) A comparison of detected split sample results and detected parent sample results is summarized below in Table 3.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8092074 (PS-MW10S, PS-MW10D)	Boron	0.00630 mg/L	None. The associated boron and calcium results were reported at concentrations >5x the method blank contamination.
	Calcium	0.193 mg/L	
Batch 8091889 (All Samples)	Hexachlorobutadiene	1.23 µg/L	None. All associated hexachlorobutadiene results were reported as non-detect.
Batch 8092005 (PS-MW10S, PS-MW10D)	Arsenic	0.210 µg/L	None. The associated arsenic and selenium results were reported at concentrations >5x the method blank contamination.
	Selenium	0.130 µg/L	
	Silver	0.100 µg/L	None. All associated silver results were reported as non-detect.

µg/L – Micrograms per Liter mg/L – Milligrams per Liter

Table 2: LCS/LCSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recovery (Limits)	Qualification
Batch 8092060	Total Dissolved Solids	82 (90-110)	As the potential bias was low, all total dissolved solid results were qualified as estimated (J MS-L).
Batch 8091889	Chloromethane	151/ 148 (33-125)	None. As the potential bias was high and the results were reported as non-detect, data qualification was not required.

J – Estimated MS – Matrix spike recovery failure. L – Low Bias

Table 3: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
PS-MW10S	Barium	150 µg/L	176 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Boron	26 µg/L	39.7 µg/L	100 µg/L	
	Calcium	140000 µg/L	124000 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Chromium	ND	0.650 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Magnesium	46000 µg/L	44600 µg/L	1000 µg/L	
	Manganese	26 µg/L	59.6 µg/L	10 µg/L	As the absolute difference between the split sample manganese result and parent sample manganese result exceeded 2xRL, the manganese result was qualified as estimated (UJ/J D-I).
	Potassium	1600 µg/L	1940 µg/L	1000 µg/L	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Sodium	57000 µg/L	65600 µg/L	1000 µg/L	None. The RPD between the split

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
					sample result and parent sample result was ≤30%.
	Arsenic	4 µg/L	4.80 µg/L	2 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Selenium	ND	1.01 µg/L	1 µg/L	
	Total Alkalinity	220 mg/L	210 mg/L	10 mg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Bromide	1.4 mg/L	1.4 mg/L	1 mg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Chloride	287 mg/L	290 mg/L	100 mg/L	
	Fluoride	0.154 mg/L	0.065 mg/L	0.1 mg/L	
	Sulfate	63.4 mg/L	68 mg/L	3 mg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	TDS	623 mg/L	870 mg/L	33.3 mg/L	
	Benzene	0.76 µg/L	0.370 µg/L	1 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	2-Butanone	10 µg/L	4.23 µg/L	10 µg/L	
	Toluene	1.3 µg/L	1.01 µg/L	1 µg/L	
PS-MW10D	Barium	250 µg/L	267 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Boron	31 µg/L	39.5 µg/L	100 µg/L	
	Calcium	120000 µg/L	102000 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Chromium	ND	0.460 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Copper	ND	0.920 µg/L	10 µg/L	
	Magnesium	37000 µg/L	35300 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Manganese	35 µg/L	32.8 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Potassium	1600 µg/L	1310 µg/L	1000 µg/L	
	Sodium	49000 µg/L	55800 µg/L	1000 µg/L	None. The RPDs between the split sample results and parent sample results was ≤30%.
	Arsenic	14 µg/L	14.9 µg/L	2 µg/L	
	Cadmium	0.13 µg/L	0.130 µg/L	0.3 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Selenium	5.6 µg/L	3.84 µg/L	1 µg/L	
	Total Alkalinity	312 mg/L	220 mg/L	10 mg/L	The RPD between the split sample result and parent sample result was -35%, exceeding the evaluation criteria of RPD≤30%. Therefore, the both total alkalinity results were qualified as estimated (J D-I).
	Bromide	1.09 mg/L	1 mg/L	1 mg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Chloride	226 mg/L	200 mg/L	100 mg/L	
	Fluoride	0.354 mg/L	0.077 mg/L	0.2 mg/L	
	Sulfate	53.6 mg/L	58 mg/L	2 mg/L	None. The RPDs between the split sample results and parent sample results was ≤30%.
	TDS	582 mg/L	630 mg/L	10 mg/L	

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
	Acetone	4.2 µg/L	ND	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Methylene Chloride	0.25 µg/L	ND	1 µg/L	
	Dissolved Methane	1.6 µg/L	ND	1 µg/L	

[1] RL is for primary sample. ND – Non-detect J = Estimated D = Duplicate analysis criteria not met. I = Indeterminate Bias
µg/L – Micrograms per Liter µg/Kg – Micrograms per Kilogram mg/L – Milligrams per Liter
RPD –Relative Percent Difference RL – Reporting Limit

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI1060

Sampling Event: September 9, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/23/08

Peer Reviewer: Geoff Webb Date Completed: 09/25/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses			
					Inorganics	Dissolved Metals	VOCs (8260)	Methane (RSK-175)
PS-MW07S	SA	NRI1060-01	09/09/08	Water	X	X	X^m	X
PS-MW09S	SA	NRI1060-02	09/09/08	Water	X	X	X	X
Trip Blank	TB	NRI1060-03	09/09/08	Water	---	---	X	---

Analyses:

Inorganics – Total Alkalinity, Bromide, Chloride, Fluoride, Nitrate/Nitrite as N, pH, Sulfate, TDS

Dissolved Metals – Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium (6010), Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Selenium, and Silver (6020).

VOCs – Volatile Organic Compounds

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

These samples are a subset split of native samples reported in Paragon data package 08-09-093. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
_X_ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 0.1°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exceptions summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. All samples were analyzed for pH eight days after collection, which exceeds the holding time requirement of immediate analysis. Therefore, the pH and temperature of pH determination results for all the samples were qualified as estimated (J HT-I) with an indeterminate bias.

Review Parameter	Criteria Met?	Comments
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.
Matrix QC • MS/MSD PS-MW07S (VOCs) • LD PS-MW09S (Nitrate/nitrite as N, Bromide, chloride, Fluoride, Sulfate)	Yes	With the exceptions summarized in Table 2, the recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. The RPD between parent result and the laboratory duplicate results satisfied the applicable evaluation criterion.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	Target analytes were reported as non-detect in the trip blank. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	No	With the exceptions summarized in Table 3, LCS and LCSD recoveries were within the laboratory determined acceptance limits.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW10S (Inorganics, Dissolved Metals, VOCs, Methane) • PS-MW10D (Inorganics, Dissolved Metals, VOCs, Methane) A comparison of detected split sample results and detected parent sample results is summarized below in Table 4.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8092074 (PS-MW07S, PS-MW09S)	Boron	0.00630 mg/L	The associated boron results that were reported at concentrations <5x the positive blank contamination were qualified as non-detect at the reporting limit (U MB-I).
	Calcium	0.193 mg/L	None. The associated calcium results were reported at concentrations >5x the method blank contamination.
Batch 8091889 (All Samples)	Hexachlorobutadiene	1.23 µg/L	None. All associated hexachlorobutadiene results were reported as non-detect.
Batch 8092005 (PS-MW07S, PS-MW09S)	Arsenic	0.210 µg/L	None. The associated arsenic and selenium results were reported at concentrations >5x the method blank contamination.
	Selenium	0.130 µg/L	
	Silver	0.100 µg/L	None. All associated silver results were reported as non-detect.

µg/L – Micrograms per Liter mg/L – Milligrams per Liter U – Non-detect MB – Method blank contamination.
I – Indeterminate Bias

Table 2: MS/MSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recoveries (Limits)	Qualification
PS-MW07S	Chloromethane	166/ 157 (33-138)	None. As the potential bias was high and all chloromethane results were reported as non-detect, data qualification was not required.

Table 3: LCS/LCSD Recovery Outliers and Resultant Data Qualification

Sample	Analyte	Recovery (Limits)	Qualification
Batch 8092060	Total Dissolved Solids	82 (90-110)	As the potential bias was low, all total dissolved solid results were qualified as estimated (J LCS-L).
Batch 8091889	Chloromethane	151/ 148 (33-125)	None. As the potential bias was high and the results were reported as non-detect, data qualification was not required.

J – Estimated MS – Matrix spike recovery failure. L – Low Bias

Table 4: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
PS-MW07S	Barium	130 µg/L	144 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Boron	26 µg/L	35.1 µg/L	100 µg/L	
	Calcium	130000 µg/L	118000 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
	Chromium	1.1 µg/L	1.12 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Copper	ND	1.06 µg/L	10 µg/L	
	Magnesium	48000 µg/L	45500 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Manganese	18 µg/L	44.9 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Potassium	1700 µg/L	1860 µg/L	1000 µg/L	
	Sodium	57000 µg/L	66900 µg/L	1000 µg/L	None. The RPD between the split sample result and parent sample result was ≤30%.
	Arsenic	5.9 µg/L	5.72 µg/L	2 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Cadmium	0.3 µg/L	ND	0.3 µg/L	
	Selenium	ND	1.32 µg/L	1.2 µg/L	
	Total Alkalinity	322 mg/L	200 mg/L	10 mg/L	The RPD between the split sample result and parent sample result was -46%, exceeding the evaluation criteria of RPD≤30%. Therefore, the both total alkalinity results were qualified as estimated (J D-I).
	Bromide	1.43 mg/L	1.5 mg/L	1 mg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Chloride	232 mg/L	280 mg/L	100 mg/L	
	Fluoride	0.154 mg/L	0.067 mg/L	0.1 mg/L	
	Sulfate	67.2 mg/L	72 mg/L	3.0 mg/L	None. The RPD between the split sample results and parent sample results was ≤30%.
	TDS	729 mg/L	880 mg/L	10 mg/L	
	Benzene	0.49 µg/L	1.51 µg/L	1 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Toluene	0.72 µg/L	2.37 µg/L	1 µg/L	
	Dissolved Methane	2.2 µg/L	ND	1 µg/L	As the absolute difference between the split sample dissolved methane result and parent sample dissolved methane result exceeded 2xRL, the dissolved methane result was qualified as estimated (UJ/J D-I).
PS-MW09S	Barium	63 µg/L	70.8 µg/L	100 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Boron	21 µg/L	ND	100 µg/L	
	Calcium	56000 µg/L	50700 µg/L	1000 µg/L	None. The RPD between the split sample results and parent sample results was ≤30%.
	Chromium	ND	0.570 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Copper	ND	0.940 µg/L	10 µg/L	
	Magnesium	16000 µg/L	15600 µg/L	1000 µg/L	None. The RPD between the split sample results and parent sample results was ≤30%.
	Manganese	66 µg/L	61.3 µg/L	10 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Potassium	2000 µg/L	1920 µg/L	1000 µg/L	

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
	Sodium	26000 µg/L	28900 µg/L	1000 µg/L	None. The RPD between the split sample results and parent sample results was ≤30%.
	Arsenic	3.4 µg/L	3.60 µg/L	2 µg/L	None. The absolute difference between the split sample results and parent sample results agrees within 2xRL.
	Cadmium	0.064 µg/L	ND	0.3 µg/L	
	Selenium	ND	1.02 µg/L	1 µg/L	
	Dissolved Methane	1.6 µg/L	ND	1 µg/L	

[1] RL is for primary sample. ND – Non-detect J = Estimated D = Duplicate analysis criteria not met. I = Indeterminate Bias
µg/L – Micrograms per Liter µg/Kg – Micrograms per Kilogram mg/L – Milligrams per Liter
RPD –Relative Percent Difference RL – Reporting Limit

PRATHER SPRINGS DATA REVIEW SUMMARY

Data Package Number: Test America NRI1696

Sampling Event: September 17, 2008

Sample-specific Parameter Review? **Yes** Laboratory Performance Parameters? **No**

Data Reviewer: Liz Kraak Date Completed: 09/25/08

Peer Reviewer: Geoff Webb Date Completed: 09/26/08

The table below summarizes the results presented in this data package.

Field ID	Sample Type	Lab ID	Sampling Date	Matrix	Analyses			
					Inorganics	Dissolved Metals	VOCs (8260)	Methane (RSK-175)
PSMW02D	SA	NRI1696-01	09/17/08	Water	X	X	X	X
Trip Blank	TB	NRI1696-02	09/17/08	Water			X	

Analyses:

Inorganics – Total Alkalinity, Bromide, Chloride, Fluoride, Nitrate/Nitrite as N, pH, Sulfate, TDS

Dissolved Metals – Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium (6010), Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Selenium, and Silver (6020).

VOCs – Volatile Organic Compounds

QC Type: SA - Sample TB - Trip Blank m - Matrix Spike/Matrix Spike Duplicate

--- Sample not analyzed for this parameter.

These samples are a subset split of native samples reported in Paragon data package 08-09-141. The data review was conducted in accordance with the Phase I Site Investigation Work Plan – Prather Spring Investigation dated July 31, 2008.

General Overall Assessment:

_____ Data are usable without qualification.
__X__ Data are usable with qualification (noted below).
_____ Some data are unusable for any purpose (noted below).

Case Narrative Summary: Except as noted below, any of the issues noted in the laboratory case narrative potentially affecting data quality are addressed in the appropriate sections in the table below.

Review Parameter	Criteria Met?	Comments
Sample-specific Parameters	Complete with "Yes", "No", or "Not Applicable (N/A)".	For each "No" response, list what was out, associated acceptance limits, all qualified data, and bias direction or reference associated table with pertinent details.
COC & Sample Receipt	Yes	Samples were received intact and the cooler temperature was 1.6°C upon arrival at the laboratory, within the ≤6°C temperature criterion.
Holding Times	No	With the exceptions summarized below, all samples were analyzed within the holding time requirements specified in the Work Plan. All samples were analyzed for pH six days after collection, which exceeds the holding time requirement of immediate analysis. Therefore, the pH and temperature of pH determination results for all the samples were qualified as estimated (J HT-I) with an indeterminate bias.
Method Blanks	No	With the exceptions summarized in Table 1, target analytes were not reported as detected within the associated method blanks.

Review Parameter	Criteria Met?	Comments
Matrix QC • MS/MSD PSMW02D (Fluoride, Nitrate/Nitrite as N, Bromide, Sulfate, Boron, Iron. Manganese, Arsenic, barium, cadmium, Chromium, Copper, Lead, Selenium, Silver) • LD PSMW02D (TDS, Fluoride, Bromide, Chloride, Sulfate)	Yes	The recoveries and RPDs for the matrix spike (MS) and matrix spike duplicate (MSD) analyses were within the laboratory-determined acceptance range. Data qualification was not required. The RPD between parent results and the laboratory duplicate results satisfied the applicable evaluation criterion. Data qualification was not required.
Field QC • Field Blanks (Ambient, Rinsate, or Trip) Trip Blank • Field Duplicate None	Yes	Target analytes were reported as non-detect in the trip blank. Data qualification was not required.
Surrogates	Yes	All surrogate recoveries were within the laboratory acceptance limits. Therefore, data qualification was not required.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	Yes	LCS and LCSD recoveries were within the laboratory determined acceptance limits. Data qualification was not required.
Non-detect results without associated elevated RLs	Yes	
Package Completeness	Yes	
Other Parameters	Yes	Detected analytes with concentrations between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) were qualified as estimated (J). A qualifier code of "SQL-I" (Sample Quantitation Limit) was assigned to reflect the greater uncertainty in quantitative values below the RL. **Split Samples** Split sample evaluation criteria were not included in the Work Plan. As such, the following concentration-dependent criteria were used: • If both results were ≤5xRL, then the absolute difference between the results should agree within ±2xRL (Waters) and ±3.5xRL (Soils) • If both results were ≥5xRL, then the RPD should be ≤30% (Waters) and ≤50% (Soils) The following split samples were collected: • PS-MW02D (Inorganics, Dissolved Metals, VOCs, Methane) A comparison of detected split sample results and detected parent sample results is summarized below in Table 2.

Table 1: Method Blank Outliers and Resultant Data Qualification

Associated Sample	Analyte	Concentration	Qualification
Batch 8093076 (All Samples)	Methylene Chloride	0.880 µg/L	None. The associated methylene chloride results were reported as non-detect.
Batch 8093326 (PSMW02D)	Selenium	0.120 µg/L	None. The associated selenium result was reported at concentrations >5x the positive blank contamination.

µg/L – Micrograms per Liter

Table 2: Split Sample Comparison

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
PS-MW02D	Boron	69	82.3	100	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Calcium	50000	46600	1000	None. The RPDs between the split sample results and parent sample results was ≤30%.
	Magnesium	21000	19100	1000	
	Manganese	37	36.5	10	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Potassium	6900	6250	1000	None. The RPDs between the split sample results and parent sample results was ≤30%.
	Sodium	42000	51000	1000	
	Arsenic	74	311	2	
	Barium	75	84.5	100	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Cadmium	ND	0.300	0.3	
	Chromium	ND	0.930	10	
	Copper	ND	2.29	10	
	Lead	0.087	0.120	0.5	
	Selenium	6.1	6.41	1	None. The RPD between the split sample result and parent sample result was ≤30%.
	Silver	ND	0.170	0.1	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Total Alkalinity	240	250	20	None. The RPDs between the split sample results and parent sample results was ≤30%.
	Chloride	11	14.1	0.2	
	Fluoride	0.38	0.550	0.1	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.
	Sulfate	56	58.2	1	None. The RPDs between the split sample results and parent sample results was ≤30%.
	TDS	380	307	20	
	Carbon Disulfide	0.36	0.380	1	None. The absolute difference between the split sample result and parent sample result agrees within 2xRL.

Sample	Detected Analytes	Primary Sample Result	Split Sample Result	RL[1]	Qualification
	Naphthalene	ND	3.48	1	As the absolute difference between the split sample naphthalene result and parent sample naphthalene result exceeded 2xRL, the naphthalene result was qualified as estimated (UJ/J D-I).

[1] RL is for primary sample. ND – Non-detect J = Estimated D = Duplicate analysis criteria not met. I = Indeterminate Bias
µg/L – Micrograms per Liter µg/Kg – Micrograms per Kilogram mg/L – Milligrams per Liter
RPD –Relative Percent Difference RL – Reporting Limit