

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109



DE	ET	DE	ES
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Received 2/15/2012  
Rifle COGCC

Spill 2222980

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 96850	4. Contact Name Karolina Blaney	Complete the Attachment Checklist  OP OGCC
2. Name of Operator: WPX Energy rocky Mountain LLC	Phone: 970 683 2295	
3. Address: 1058 CR 215 City: Parachute State: CO Zip: 81635	Fax: 970 285 9573	
5. API Number <del>05-045-20702</del> 045-21180	OGCC Facility ID Number <del>423258</del> 426533	Survey Plat
6. Well/Facility Name: Federal #21-A	7. Well/Facility Number <del>KP 41-28</del> DeJour well pad	Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): NENE 528 T6S R91W 6pm		Surface Eqpm Diagram
9. County: Garfield	10. Field Name: Kokopelli	Technical Info Page <input checked="" type="checkbox"/>
11. Federal, Indian or State Lease Number: SESW 21		Other <input checked="" type="checkbox"/>

Clarification: spill/  
dumping occurred in a  
De Jour pad pit,  
COGCC location  
426533, (permit api  
045-21180) -SWSE sec  
21 6S 91W.  
Source of dumped  
material was well api  
#045-20702 on COGCC  
location 423258, the  
Jolley KP 41-28 pad  
(NENE sec 28 6S 91W).  
Intended pit/pad for  
material dumped was  
COGCC location  
335507 (Jolley  
KP-33-21) pad pit

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNL/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Is location in a High Density Area (rule 603b)? Yes/No <input type="checkbox"/>
	Distance to nearest well same formation
	Surface owner consultation date: _____
GPS DATA:	
Date of Measurement	PDOP Reading
	Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	
Formation	Formation Code
Spacing order number	Unit Acreage
	Unit configuration
<input type="checkbox"/> Remove from surface bond	
Signed surface use agreement attached	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	
Effective Date: _____	
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	
<input type="checkbox"/> CHANGE WELL NAME	
From: _____	
To: _____	
Effective Date: _____	
<input type="checkbox"/> ABANDONED LOCATION:	
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Ready for Inspection: _____	
<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS	
Date well shut in or temporarily abandoned: _____	
Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
MIT required if shut in longer than two years. Date of last MIT: _____	
<input type="checkbox"/> SPUD DATE: _____	
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)	
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	
*submit cbl and cement job summaries	
Method used	Cementing tool setting/perf depth
Cement volume	Cement top
Cement bottom	Date
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.	
Final reclamation will commence on approximately _____	
<input type="checkbox"/> Final reclamation is completed and site is ready for inspection.	

Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent		<input type="checkbox"/> Report of Work Done	
Approximate Start Date: _____		Date Work Completed: _____	
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)			
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal	
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste	
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input checked="" type="checkbox"/> Status Update/Change of Remediation Plans	
<input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Other: _____	for Spills and Releases	

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Karolina Blaney Date: 2/13/2012 Email: Karolina.Blaney@WPXEnergy.com  
Print Name: Karolina Blaney Title: Environmental Specialist

COGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: 7/30/2012

CONDITIONS OF APPROVAL, IF ANY:

See conditions of approval on page 2.

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

Received 2/15/2012  
Rifle COGCC

Spill # 2222980

1. OGCC Operator Number: 96850 API Number: 05-045-20702
2. Name of Operator: WPX Energy rocky Mountain LLC OGCC Facility ID # 423258
3. Well/Facility Name: KP 41-28 Well/Facility Number:
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NENE S28 T6S R91W 6pm

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

WPX Energy is submitting the attached analytical data for KP 41-28 release as requested by the COGCC. The release was discovered on January 31, 2012. No surface water was impacted and the entire release was contained within the drilling pit boundaries on Dejour's well pad (see Form 19 submitted on 2/9/2012 for details). Two grab samples were collected on February 3, 2012, one from the excavated area and one of the waste stream itself, and analyzed for the COGCC 910-1 constituents. All parameters were below Table 910-1 standards for hydrocarbons and metals in soil with the exception of arsenic. WPX Energy would like to close this incident if approved by the COGCC.

COGCC Comments: Arsenic in pit bottom is higher than arsenic in waste that was dumped (see drilling waste sample results) and within the range of background arsenic concentrations observed in this area, thus the arsenic level appears to be background.

Ph in pit bottom is above Table 910-1 levels, but pit bottom is greater than 3 feet below ground surface so below the root zone. Ec and SAR are below Table 910-1 levels.

COAs: Based on the information provided in this sundry, the COGCC staff approves the closure of this investigation. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards related to this dumping incident or if ground water is found to be significantly impacted related to this dumping incident, then WPX may be required to conduct further investigation and/or remediation at the site.



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

Karolina Blaney  
WPX Energy  
1058 County Road 215  
Parachute, CO 81635

### Report Summary

Sunday February 12, 2012

Report Number: L558753

Samples Received: 02/03/12

Client Project:

Description: Dejour

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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# REPORT OF ANALYSIS

Karolina Blaney  
WPX Energy  
1058 County Road 215  
Parachute, CO 81635

February 12, 2012

Date Received : February 03, 2012  
Description : Dejour  
Sample ID : DRILLING WASTE  
Collected By :  
Collection Date : 02/01/12 14:30

ESC Sample # : L558753-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/08/12	1
Chromium,Trivalent	14.	2.0	mg/kg	Calc.	02/07/12	1
ORP	7.0		mV	2580	02/07/12	1
pH	13.		su	9045D	02/09/12	1
Sodium Adsorption Ratio	75.			Calc.	02/07/12	1
Specific Conductance	14000		umhos/cm	9050AMod	02/04/12	1
Mercury	0.022	0.020	mg/kg	7471	02/07/12	1
Arsenic	2.5	1.0	mg/kg	6010B	02/07/12	1
Barium	2900	0.25	mg/kg	6010B	02/07/12	1
Cadmium	BDL	0.25	mg/kg	6010B	02/07/12	1
Chromium	14.	0.50	mg/kg	6010B	02/07/12	1
Copper	7.3	5.0	mg/kg	6010B	02/07/12	5
Lead	8.8	1.2	mg/kg	6010B	02/07/12	5
Nickel	12.	1.0	mg/kg	6010B	02/07/12	1
Selenium	BDL	1.0	mg/kg	6010B	02/07/12	1
Silver	BDL	2.5	mg/kg	6010B	02/07/12	5
Zinc	59.	1.5	mg/kg	6010B	02/07/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/12/12 16:37 Printed: 02/12/12 16:38  
L558753-01 (PH) - 13@18.5c



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# REPORT OF ANALYSIS

Karolina Blaney  
WPX Energy  
1058 County Road 215  
Parachute, CO 81635

February 12, 2012

Date Received : February 03, 2012  
Description : Dejour  
Sample ID : DRILLING WASTE  
Collected By :  
Collection Date : 02/01/12 14:30

ESC Sample # : L558753-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.0036	0.0025	mg/kg	8021/8015	02/04/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	02/04/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	02/04/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	02/04/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	02/04/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene (FID)	93.5		% Rec.	8021/8015	02/04/12	5
a,a,a-Trifluorotoluene (PID)	97.9		% Rec.	8021/8015	02/04/12	5
TPH (GC/FID) High Fraction	37.	4.0	mg/kg	3546/DRO	02/07/12	1
Surrogate recovery(%)						
o-Terphenyl	50.0		% Rec.	3546/DRO	02/07/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Fluorene	0.0064	0.0060	mg/kg	8270C-SIM	02/08/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Naphthalene	0.047	0.0060	mg/kg	8270C-SIM	02/08/12	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Surrogate Recovery						
Nitrobenzene-d5	80.6		% Rec.	8270C-SIM	02/08/12	1
2-Fluorobiphenyl	67.7		% Rec.	8270C-SIM	02/08/12	1
p-Terphenyl-d14	68.9		% Rec.	8270C-SIM	02/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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# REPORT OF ANALYSIS

Karolina Blaney  
WPX Energy  
1058 County Road 215  
Parachute, CO 81635

February 12, 2012

Date Received : February 03, 2012  
Description : Dejour  
Sample ID : PIT BOTTOM  
Collected By :  
Collection Date : 02/01/12 14:00

ESC Sample # : L558753-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/08/12	1
Chromium,Trivalent	10.	2.0	mg/kg	Calc.	02/07/12	1
ORP	1.0		mV	2580	02/07/12	1
pH	11.		su	9045D	02/09/12	1
Sodium Adsorption Ratio	6.3			Calc.	02/06/12	1
Specific Conductance	7800		umhos/cm	9050AMod	02/04/12	1
Mercury	BDL	0.020	mg/kg	7471	02/07/12	1
Arsenic	3.0	1.0	mg/kg	6010B	02/07/12	1
Barium	280	0.25	mg/kg	6010B	02/07/12	1
Cadmium	0.40	0.25	mg/kg	6010B	02/07/12	1
Chromium	10.	0.50	mg/kg	6010B	02/07/12	1
Copper	8.7	1.0	mg/kg	6010B	02/07/12	1
Lead	31.	0.25	mg/kg	6010B	02/07/12	1
Nickel	11.	1.0	mg/kg	6010B	02/07/12	1
Selenium	BDL	1.0	mg/kg	6010B	02/07/12	1
Silver	BDL	0.50	mg/kg	6010B	02/07/12	1
Zinc	78.	1.5	mg/kg	6010B	02/07/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 02/12/12 16:37 Printed: 02/12/12 16:38  
L558753-03 (PH) - 11@17.9c



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Est. 1970

# REPORT OF ANALYSIS

Karolina Blaney  
WPX Energy  
1058 County Road 215  
Parachute, CO 81635

February 12, 2012

Date Received : February 03, 2012  
Description : Dejour  
Sample ID : PIT BOTTOM  
Collected By :  
Collection Date : 02/01/12 14:00

ESC Sample # : L558753-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	02/04/12	5
Toluene	BDL	0.0025	mg/kg	8021/8015	02/04/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	02/04/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	02/04/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	02/04/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene (FID)	94.5		% Rec.	8021/8015	02/04/12	5
a,a,a-Trifluorotoluene (PID)	99.4		% Rec.	8021/8015	02/04/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	02/07/12	1
Surrogate recovery(%)						
o-Terphenyl	64.9		% Rec.	3546/DRO	02/07/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/08/12	1
Surrogate Recovery						
Nitrobenzene-d5	72.6		% Rec.	8270C-SIM	02/08/12	1
2-Fluorobiphenyl	66.8		% Rec.	8270C-SIM	02/08/12	1
p-Terphenyl-d14	62.9		% Rec.	8270C-SIM	02/08/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L558753-01	WG577151	SAMP	Silver	R2028936	O
	WG577454	SAMP	pH	R2031232	T8
	WG577426	SAMP	ORP	R2028752	T8
L558753-03	WG577454	SAMP	pH	R2031232	T8
	WG577426	SAMP	ORP	R2028752	T8
		SAMP	ORP	R2028752	T8



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
02/12/12 at 16:38:25

TSR Signing Reports: 364  
R5 - Desired TAT

on 910 list samples, please log BTEXGRO, DRO and PAHSIM to separate dash numbers.

Sample: L558753-01 Account: WILPCO Received: 02/03/12 09:00 Due Date: 02/10/12 00:00 RPT Date: 02/12/12 16:37

Sample: L558753-02 Account: WILPCO Received: 02/03/12 09:00 Due Date: 02/10/12 00:00 RPT Date: 02/12/12 16:37

Sample: L558753-03 Account: WILPCO Received: 02/03/12 09:00 Due Date: 02/10/12 00:00 RPT Date: 02/12/12 16:37

Sample: L558753-04 Account: WILPCO Received: 02/03/12 09:00 Due Date: 02/10/12 00:00 RPT Date: 02/12/12 16:37



WPX Energy  
Karolina Blaney  
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report  
Level II

L558753

12065 Lebanon Rd.  
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February 12, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG577001	02/03/12 18:46
Ethylbenzene	< .0005	mg/kg			WG577001	02/03/12 18:46
Toluene	< .005	mg/kg			WG577001	02/03/12 18:46
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG577001	02/03/12 18:46
Total Xylene	< .0015	mg/kg			WG577001	02/03/12 18:46
a,a,a-Trifluorotoluene(FID)		% Rec.	95.26	59-128	WG577001	02/03/12 18:46
a,a,a-Trifluorotoluene(PID)		% Rec.	101.2	54-144	WG577001	02/03/12 18:46
Specific Conductance	1.45	umhos/cm			WG577050	02/04/12 10:23
Mercury	< .02	mg/kg			WG577061	02/07/12 15:03
Arsenic	< 1	mg/kg			WG577151	02/07/12 23:20
Barium	< .25	mg/kg			WG577151	02/07/12 23:20
Cadmium	< .25	mg/kg			WG577151	02/07/12 23:20
Chromium	< .5	mg/kg			WG577151	02/07/12 23:20
Copper	< 1	mg/kg			WG577151	02/07/12 23:20
Lead	< .25	mg/kg			WG577151	02/07/12 23:20
Nickel	< 1	mg/kg			WG577151	02/07/12 23:20
Selenium	< 1	mg/kg			WG577151	02/07/12 23:20
Silver	< .5	mg/kg			WG577151	02/07/12 23:20
Zinc	< 1.5	mg/kg			WG577151	02/07/12 23:20
TPH (GC/FID) High Fraction	< 4	ppm			WG577178	02/07/12 11:33
o-Terphenyl		% Rec.	77.19	50-150	WG577178	02/07/12 11:33
Chromium, Hexavalent	< 2	mg/kg			WG577027	02/08/12 14:33
Acenaphthene	< .006	mg/kg			WG577251	02/08/12 13:01
Anthracene	< .006	mg/kg			WG577251	02/08/12 13:01
Benzo(a)anthracene	< .006	mg/kg			WG577251	02/08/12 13:01
Benzo(a)pyrene	< .006	mg/kg			WG577251	02/08/12 13:01
Benzo(b)fluoranthene	< .006	mg/kg			WG577251	02/08/12 13:01
Benzo(k)fluoranthene	< .006	mg/kg			WG577251	02/08/12 13:01
Chrysene	< .006	mg/kg			WG577251	02/08/12 13:01
Dibenz(a,h)anthracene	< .006	mg/kg			WG577251	02/08/12 13:01
Fluoranthene	< .006	mg/kg			WG577251	02/08/12 13:01
Fluorene	< .006	mg/kg			WG577251	02/08/12 13:01
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG577251	02/08/12 13:01
Naphthalene	< .006	mg/kg			WG577251	02/08/12 13:01
Pyrene	< .006	mg/kg			WG577251	02/08/12 13:01
2-Fluorobiphenyl		% Rec.	64.93	34-129	WG577251	02/08/12 13:01
Nitrobenzene-d5		% Rec.	66.35	14-141	WG577251	02/08/12 13:01
p-Terphenyl-d14		% Rec.	80.93	25-139	WG577251	02/08/12 13:01
pH	4.44	su			WG577454	02/09/12 13:45

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Specific Conductance	umhos/cm	810.	950.	15.8	20	I558320-01	WG577050

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Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
ORP	mV	190.	200.	3.05	20	L558518-07	WG577426
ORP	mV	94.0	99.0	5.18	20	L559077-01	WG577426
Mercury	mg/kg	0.0310	0.0270	14.4	20	L558767-01	WG577061
Arsenic	mg/kg	4.00	3.90	3.03	20	L558965-06	WG577151
Barium	mg/kg	220.	240.	7.79	20	L558965-06	WG577151
Cadmium	mg/kg	0	0	0	20	L558965-06	WG577151
Chromium	mg/kg	22.0	26.0	16.7	20	L558965-06	WG577151
Copper	mg/kg	14.0	13.0	4.51	20	L558965-06	WG577151
Lead	mg/kg	11.0	13.0	15.8	20	L558965-06	WG577151
Nickel	mg/kg	16.0	18.0	13.0	20	L558965-06	WG577151
Selenium	mg/kg	0	0	0	20	L558965-06	WG577151
Silver	mg/kg	0	0	0	20	L558965-06	WG577151
Zinc	mg/kg	53.0	58.0	8.26	20	L558965-06	WG577151
Chromium, Hexavalent	mg/kg	0	0	0	20	L558518-12	WG577027
pH	su	7.60	7.70	1.04*	1	L558965-01	WG577454
pH	su	9.60	9.70	0.517	1	L559073-01	WG577454

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0536	107.	76-113	WG577001
Ethylbenzene	mg/kg	.05	0.0544	109.	78-115	WG577001
Toluene	mg/kg	.05	0.0522	104.	76-114	WG577001
Total Xylene	mg/kg	.15	0.164	109.	81-118	WG577001
a,a,a-Trifluorotoluene (PID)				99.59	54-144	WG577001
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.61	102.	67-135	WG577001
a,a,a-Trifluorotoluene (FID)				101.3	59-128	WG577001
Specific Conductance	umhos/cm	350	345.	98.6	85-115	WG577050
ORP	mV	229	230.	100.	95.6-104.37	WG577426
Mercury	mg/kg	3.77	3.77	100.	71.6-128	WG577061
Arsenic	mg/kg	92.6	88.0	95.0	82.9-117	WG577151
Barium	mg/kg	169	164.	97.0	82.8-117	WG577151
Cadmium	mg/kg	61.8	60.4	97.7	83.3-117	WG577151
Chromium	mg/kg	71.3	68.9	96.6	81.8-118	WG577151
Copper	mg/kg	81.2	82.6	102.	83.9-116	WG577151
Lead	mg/kg	92.4	91.2	98.7	83.3-117	WG577151
Nickel	mg/kg	59.1	56.4	95.4	83.8-116	WG577151
Selenium	mg/kg	89.5	85.5	95.5	79-121	WG577151
Silver	mg/kg	34.4	32.9	95.6	66.3-134	WG577151
Zinc	mg/kg	141	140.	99.3	80.9-119	WG577151

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	ppm	60	44.0	73.4	50-150	WG577178
o-Terphenyl				76.99	50-150	WG577178
Chromium, Hexavalent	mg/kg	203	141.	69.5	50-150	WG577027
Acenaphthene	mg/kg	.033	0.0241	73.2	52-108	WG577251
Anthracene	mg/kg	.033	0.0265	80.2	58-120	WG577251
Benzo (a) anthracene	mg/kg	.033	0.0248	75.0	54-110	WG577251
Benzo (a) pyrene	mg/kg	.033	0.0252	76.5	56-118	WG577251
Benzo (b) fluoranthene	mg/kg	.033	0.0235	71.1	55-114	WG577251
Benzo (k) fluoranthene	mg/kg	.033	0.0256	77.7	55-122	WG577251
Chrysene	mg/kg	.033	0.0266	80.7	57-118	WG577251
Dibenz (a, h) anthracene	mg/kg	.033	0.0277	84.0	53-122	WG577251
Fluoranthene	mg/kg	.033	0.0254	76.9	58-118	WG577251
Fluorene	mg/kg	.033	0.0249	75.4	54-109	WG577251
Indeno (1, 2, 3-cd) pyrene	mg/kg	.033	0.0277	83.9	51-125	WG577251
Naphthalene	mg/kg	.033	0.0241	73.0	45-105	WG577251
Pyrene	mg/kg	.033	0.0264	80.0	53-121	WG577251
2-Fluorobiphenyl				68.93	34-129	WG577251
Nitrobenzene-d5				65.94	14-141	WG577251
p-Terphenyl-d14				80.67	25-139	WG577251
pH	su	7.98	8.06	101.*	98-101	WG577454

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0507	0.0536	101.	76-113	5.47	20	WG577001
Ethylbenzene	mg/kg	0.0514	0.0544	103.	78-115	5.60	20	WG577001
Toluene	mg/kg	0.0493	0.0522	98.0	76-114	5.82	20	WG577001
Total Xylene	mg/kg	0.155	0.164	103.	81-118	5.45	20	WG577001
a, a, a-Trifluorotoluene (PID)				98.34	54-144			WG577001
TPH (GC/FID) Low Fraction	mg/kg	5.48	5.61	100.	67-135	2.44	20	WG577001
a, a, a-Trifluorotoluene (FID)				100.9	59-128			WG577001
Specific Conductance	umhos/	345.	345.	98.0	85-115	0	20	WG577050
ORP	mV	230.	230.	100.	95.6-104.37	0	20	WG577426
TPH (GC/FID) High Fraction	ppm	48.9	44.0	82.0	50-150	10.5	25	WG577178
o-Terphenyl				83.04	50-150			WG577178
Chromium, Hexavalent	mg/kg	124.	141.	61.0	50-150	12.8	20	WG577027
Acenaphthene	mg/kg	0.0242	0.0241	73.0	52-108	0.372	22	WG577251
Anthracene	mg/kg	0.0266	0.0265	80.0	58-120	0.415	20	WG577251
Benzo (a) anthracene	mg/kg	0.0260	0.0248	79.0	54-110	4.93	22	WG577251
Benzo (a) pyrene	mg/kg	0.0256	0.0252	78.0	56-118	1.35	21	WG577251
Benzo (b) fluoranthene	mg/kg	0.0249	0.0235	75.0	55-114	5.97	20	WG577251
Benzo (k) fluoranthene	mg/kg	0.0261	0.0256	79.0	55-122	1.75	25	WG577251
Chrysene	mg/kg	0.0272	0.0266	82.0	57-118	1.96	20	WG577251

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Dibenz (a,h) anthracene	mg/kg	0.0265	0.0277	80.0	53-122	4.59	20	WG577251
Fluoranthene	mg/kg	0.0266	0.0254	80.0	58-118	4.56	20	WG577251
Fluorene	mg/kg	0.0244	0.0249	74.0	54-109	1.97	20	WG577251
Indeno (1,2,3-cd) pyrene	mg/kg	0.0267	0.0277	81.0	51-125	3.57	21	WG577251
Naphthalene	mg/kg	0.0253	0.0241	77.0	45-105	4.91	24	WG577251
Pyrene	mg/kg	0.0257	0.0264	78.0	53-121	2.60	20	WG577251
2-Fluorobiphenyl				69.01	34-129			WG577251
Nitrobenzene-d5				72.58	14-141			WG577251
p-Terphenyl-d14				85.35	25-139			WG577251
pH	su	8.05	8.06	101.	98-101	0.124	20	WG577454

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.235	0.0220	.05	85.2	32-137	L558718-01	WG577001
Ethylbenzene	mg/kg	0.227	0	.05	91.0	10-150	L558718-01	WG577001
Toluene	mg/kg	0.226	0	.05	90.4	20-142	L558718-01	WG577001
Total Xylene	mg/kg	0.689	0	.15	91.9	16-141	L558718-01	WG577001
a,a,a-Trifluorotoluene (PID)					98.52	54-144		WG577001
TPH (GC/FID) Low Fraction	mg/kg	22.0	0.408	5.5	78.6	55-109	L558718-01	WG577001
a,a,a-Trifluorotoluene (FID)					99.75	59-128		WG577001
Mercury	mg/kg	0.256	0.0270	.25	91.6	70-130	L558767-01	WG577061
Arsenic	mg/kg	49.2	3.90	50	90.6	75-125	L558965-06	WG577151
Barium	mg/kg	279.	240.	50	78.0	75-125	L558965-06	WG577151
Cadmium	mg/kg	45.2	0	50	90.4	75-125	L558965-06	WG577151
Chromium	mg/kg	65.6	26.0	50	79.2	75-125	L558965-06	WG577151
Copper	mg/kg	59.2	13.0	50	92.4	75-125	L558965-06	WG577151
Lead	mg/kg	56.8	13.0	50	87.6	75-125	L558965-06	WG577151
Nickel	mg/kg	57.2	18.0	50	78.4	75-125	L558965-06	WG577151
Selenium	mg/kg	40.4	0	50	80.8	75-125	L558965-06	WG577151
Silver	mg/kg	45.1	0	50	90.2	75-125	L558965-06	WG577151
Zinc	mg/kg	101.	58.0	50	86.0	75-125	L558965-06	WG577151
TPH (GC/FID) High Fraction	ppm	49.0	0	60	81.7	50-150	L558930-05	WG577178
o-Terphenyl					70.19	50-150		WG577178
Chromium, Hexavalent	mg/kg	11.9	0	20	59.5	50-150	L558518-02	WG577027
Acenaphthene	mg/kg	0.0263	0	.033	79.6	43-133	L558749-02	WG577251
Anthracene	mg/kg	0.0287	0	.033	86.8	38-153	L558749-02	WG577251
Benzo (a) anthracene	mg/kg	0.0302	0	.033	91.5	31-142	L558749-02	WG577251
Benzo (a) pyrene	mg/kg	0.0291	0	.033	88.2	26-152	L558749-02	WG577251
Benzo (b) fluoranthene	mg/kg	0.0274	0	.033	83.1	10-188	L558749-02	WG577251
Benzo (k) fluoranthene	mg/kg	0.0276	0	.033	83.7	22-163	L558749-02	WG577251
Chrysene	mg/kg	0.0290	0	.033	87.9	26-146	L558749-02	WG577251
Dibenz (a,h) anthracene	mg/kg	0.0274	0	.033	83.2	10-160	L558749-02	WG577251
Fluoranthene	mg/kg	0.0301	0	.033	91.2	23-160	L558749-02	WG577251
Fluorene	mg/kg	0.0280	0	.033	84.8	44-143	L558749-02	WG577251
Indeno (1,2,3-cd) pyrene	mg/kg	0.0272	0	.033	82.4	10-157	L558749-02	WG577251
Naphthalene	mg/kg	0.0269	0	.033	81.6	22-156	L558749-02	WG577251

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Pyrene	mg/kg	0.0278	0	.033	84.3	12-170	L558749-02	WG577251
2-Fluorobiphenyl					74.04	34-129		WG577251
Nitrobenzene-d5					76.47	14-141		WG577251
p-Terphenyl-d14					73.52	25-139		WG577251

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.244	0.235	88.7	32-137	3.68	39	L558718-01	WG577001
Ethylbenzene	mg/kg	0.228	0.227	91.4	10-150	0.450	44	L558718-01	WG577001
Toluene	mg/kg	0.226	0.226	90.3	20-142	0.0600	42	L558718-01	WG577001
Total Xylene	mg/kg	0.687	0.689	91.7	16-141	0.250	46	L558718-01	WG577001
a,a,a-Trifluorotoluene (PID)				98.70	54-144				WG577001
TPH (GC/FID) Low Fraction	mg/kg	21.1	22.0	75.4	55-109	4.09	20	L558718-01	WG577001
a,a,a-Trifluorotoluene (FID)				99.97	59-128				WG577001
Mercury	mg/kg	0.263	0.256	94.4	70-130	2.70	20	L558767-01	WG577061
Arsenic	mg/kg	49.7	49.2	91.6	75-125	1.01	20	L558965-06	WG577151
Barium	mg/kg	277.	279.	74.0*	75-125	0.719	20	L558965-06	WG577151
Cadmium	mg/kg	46.6	45.2	93.2	75-125	3.05	20	L558965-06	WG577151
Chromium	mg/kg	67.4	65.6	82.8	75-125	2.71	20	L558965-06	WG577151
Copper	mg/kg	60.5	59.2	95.0	75-125	2.17	20	L558965-06	WG577151
Lead	mg/kg	58.1	56.8	90.2	75-125	2.26	20	L558965-06	WG577151
Nickel	mg/kg	58.4	57.2	80.8	75-125	2.08	20	L558965-06	WG577151
Selenium	mg/kg	42.0	40.4	84.0	75-125	3.88	20	L558965-06	WG577151
Silver	mg/kg	45.9	45.1	91.8	75-125	1.76	20	L558965-06	WG577151
Zinc	mg/kg	103.	101.	90.0	75-125	1.96	20	L558965-06	WG577151
TPH (GC/FID) High Fraction	ppm	39.4	49.0	65.7	50-150	21.7	25	L558930-05	WG577178
o-Terphenyl				66.51	50-150				WG577178
Chromium, Hexavalent	mg/kg	13.4	11.9	67.0	50-150	11.9	20	L558518-02	WG577027
Acenaphthene	mg/kg	0.0286	0.0263	86.8	43-133	8.58	26	L558749-02	WG577251
Anthracene	mg/kg	0.0297	0.0287	89.9	38-153	3.46	27	L558749-02	WG577251
Benzo (a) anthracene	mg/kg	0.0316	0.0302	95.7	31-142	4.46	31	L558749-02	WG577251
Benzo (a) pyrene	mg/kg	0.0302	0.0291	91.5	26-152	3.63	32	L558749-02	WG577251
Benzo (b) fluoranthene	mg/kg	0.0290	0.0274	88.0	10-188	5.68	33	L558749-02	WG577251
Benzo (k) fluoranthene	mg/kg	0.0296	0.0276	89.5	22-163	6.72	29	L558749-02	WG577251
Chrysene	mg/kg	0.0300	0.0290	90.9	26-146	3.38	30	L558749-02	WG577251
Dibenz (a, h) anthracene	mg/kg	0.0288	0.0274	87.2	10-160	4.72	39	L558749-02	WG577251
Fluoranthene	mg/kg	0.0305	0.0301	92.4	23-160	1.29	22	L558749-02	WG577251
Fluorene	mg/kg	0.0277	0.0280	84.0	44-143	0.972	23	L558749-02	WG577251
Indeno (1,2,3-cd) pyrene	mg/kg	0.0285	0.0272	86.3	10-157	4.56	40	L558749-02	WG577251
Naphthalene	mg/kg	0.0279	0.0269	84.6	22-156	3.50	27	L558749-02	WG577251
Pyrene	mg/kg	0.0295	0.0278	89.4	12-170	5.95	24	L558749-02	WG577251
2-Fluorobiphenyl				77.67	34-129				WG577251
Nitrobenzene-d5				85.26	14-141				WG577251
p-Terphenyl-d14				77.55	25-139				WG577251

Batch number /Run number / Sample number cross reference

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WG577001: R2025954: L558753-02 04  
WG577050: R2026114: L558753-01 03  
WG577099: R2026172: L558753-03  
WG577426: R2028752: L558753-01 03  
WG577061: R2028834: L558753-01 03  
WG577151: R2028936: L558753-01 03  
WG577235: R2029053: L558753-01  
WG577178: R2029054: L558753-02 04  
WG577027: R2029612: L558753-01 03  
WG577251: R2030814: L558753-02 04  
WG577454: R2031232: L558753-01 03

\* \* Calculations are performed prior to rounding of reported values.

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February 12, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.