

Release 2921  
Unocal bulk plant #0028  
Auburn

January 15, 2008

Mr. Michael D. Noll  
ConocoPhillips Site Manager  
11921 185<sup>th</sup> Avenue SE  
Snohomish, Washington 98290

SUBJ: Third Quarter 2007 Remediation System Status Report  
112 - 3<sup>rd</sup> Street N.W., Auburn, Washington  
RM&R No. 0960  
Delta Project No. WAZ09-6016-1

Dear Mr. Noll:

Delta Consultants (Delta) is pleased to submit this Third Quarter 2007 Remediation System Status Report for the ConocoPhillips Site No. 0960 located at 112 3<sup>rd</sup> Street N.W. in Auburn, Washington.



**WORK PERFORMED THIS QUARTER [Third - 2007]**

- > Monthly operation and maintenance (O&M) of the dual-phase extraction (DPE) remediation system.
- > Investigate and resolve cause of system alarms and shut-downs.

**WORK PROPOSED FOR NEXT QUARTER [Fourth - 2007]**

- > Continue monthly O&M of the DPE system.

**DPE SUMMARY**

Current Remedial Activities:

DPE, catalytic oxidation of vapors, air stripper treatment of entrained groundwater

DPE Equipment Description:

Rietschle SMV500 COVAC DPE  
Continental CP-67-CS01P air-water separator pump,  
Continental CP44-CSQMP air-product separator pump,  
Scot influent transfer pump, Scot effluent transfer pump, H2-350 oil-water separator, poly batch tank, (2) H2 steel high vacuum knockout, H2Oil air stripper with Rotron blower, 55-gallon moisture separator, H2Oil H2-500E electric catalytic oxidizer (Cat-Ox).

Permits for Discharge:

PSCAA No. 8873 (air) (NPDES,  
POTW No. 4060-01 (water) POTW)

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1-31-08

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Start-up Date:	<u>01/23/04 (following cat-ox repair)</u>
Reporting Period:	<u>07/01/07 - 09/30/07</u>
Days in Operation during Period:	<u>58 (period 06/26/07 - 09/26/07)</u>
Percent Operating Time:	<u>63 (period 06/26/07 - 09/26/07) (%)</u>
System Alarms and Shutdowns:	<u>See Operational Discussion</u>
Total Hours of Operation since Start-Up:	<u>17,651</u> (hours)
DPE Wells Extracted During Period:	<u>DPE-1 through DPE-10</u>
DPE Operating Vacuum Range:	<u>7.0 - 8.0</u> (inches Hg)
Cumulative LPH Recovered to Date:	<u>0.0 (from current system)</u> (gallons) <u>(Approx. 40.9 gallons recovered from previous remedial activities)</u>
Average Vapor Influent Flow Rate into Cat-Ox:	<u>330</u> (SCFM)
Maximum Vapor Influent Concentration for Period:	<u>492 (lab analysis from 08/27/07)</u> (ppmv)
Total Volatile Hydrocarbon (TVH) Removal for Period:	<u>1,839.5</u> (lbs)
Cumulative Hydrocarbon Removal to Date:	<u>9,448.7</u> (lbs)
Offgas Emissions for Period:	<u>242.8</u> (lbs)
Offgas Emissions to Date:	<u>466.5</u> (lbs)
Maximum Offgas Emission Concentration for Period:	<u>35.9 (lab analysis from 09/26/07)</u> (ppmv)
Groundwater Recovered and Treated for Period:	<u>8,859</u> (gallons)
Average Recovered Groundwater Flow Rate for Period:	<u>0.11</u> (gpm)
Analytical Results of TPH Concentration in Treated Groundwater Discharge Sample:	<u>Not Measured</u> (mg/L)

## DISCUSSION

### System Operation and Maintenance

From June 26, 2007 through September 26, 2007, the system logged 1,404 hours of operation out of an estimated possible 2,208 hours. On July 12, 2007, Delta employees arrived on site to address a high interior temperature alarm. The system had automatically cleared the alarms and restarted because the cause of the alarm was minor. Delta returned to the site on July 18, 2007 address oxidizer draft loss alarm. The R2 wire was pulled and the system was restarted. On July 23, 2007 a Delta employee went to the site to perform the monthly O&M. While the system was off, all sensors, totalizers, filters, and air stripper shelves were cleaned. The top e-ring on the knock out drum sensor broke. A zip tie was use to temporarily fix the sensor. The system was restarted and the dilution valve was closed to 4.5 Hg.

On July 26, 2007, a representative from the City of Auburn's water department performed a site visit to gain information on the current remediation. A representative from H2Oil replaced the e-clip on the knock out drum sensor and disconnected the wire for the draft failure alarm to prevent false alarms. The system was restarted but the high vac blower alarm shut the system back off. The system was reset and turned back on. The next monthly O&M event was performed on August 27, 2007. During this event, an alarm was present for the interior of the container being too hot and one was present for the oxidizer being timed off. Prior to restarting, the system had more alarms. They were cleared and the system was restarted. The concentrations of hydrocarbons in the effluent were too high so the dilution valve was opened to 4.0 Hg. This reduced the effluent concentration to a good level. Delta returned to the site on September 26, 2007 to perform the last O&M event of the quarter. No water had moved through the system during the month of September. Most of the stingers were lengthened and placed 2' into the water.

During the third quarter of 2007, the DPE system recovered and treated approximately 8,859 gallons of impacted groundwater and removed approximately 1,840 pounds of total volatile hydrocarbons (TVH) from the site in the vapor stream. All DPE wells (DPE-1 through VPE-10) were open for the reporting period.

Since startup on January 23, 2004, a total of 1,031,919 gallons of impacted groundwater has been recovered and treated by the DPE system and 9,448.7 pounds of TVH has been removed from the site. A summary of DPE system operation parameters is presented in Table 1 and the estimated removal of volatile hydrocarbons from the vapor stream is included in Table 2.

### Effluent Quality and Quantity

King County Major Discharge Authorization No. 4060-01 was issued for the project with an effective date of July 15, 2003 and an expiration date of July 15, 2008. The permit requires that groundwater produced by the remediation process be treated prior to discharge to the sanitary sewer. Treated groundwater must meet maximum concentration limits for hydrocarbon compounds [130 micrograms per liter ( $\mu\text{g/L}$ ) for benzene and 100 milligrams per liter ( $\text{mg/L}$ ) for TPH].

Analytical testing to document compliance with discharge limits is required on a semi-annual basis. Effluent groundwater samples were collected during the second quarter on May 22, 2007 to evaluate the total hydrocarbon compound concentrations. The analytical laboratory results indicated a total gasoline range hydrocarbon compound concentration of 1.5  $\text{mg/L}$  and that the effluent benzene concentration was  $<0.5 \mu\text{g/L}$ . Lab analytical data for these samples were included as an attachment to the second quarter 2007 report.

The permit also requires that the total discharge volume cannot exceed 23.6 gallons per minute, or 34,000 gallons per day. Flow is recorded by a totalizer prior to sewer discharge. The water treatment unit operated within permitted discharge parameters during this reporting period. A summary of water treatment unit operation is presented in Table 3.

## Vapor Emissions

Puget Sound Clean Air Agency (PSCAA) issued Notice of Construction No. 9662 for the DPE remediation system on July 25, 2007 and does not have an expiration date. The PSCAA permit for the site requires all air discharges be routed through the Cat-Ox, that the Cat-Ox destruction efficiency of total petroleum hydrocarbons (TPH) is at least 99% or that outlet concentrations of TPH are less than 30 parts per million by volume (ppmv). In addition, the permit specifies a maximum air flow of 600 standard cubic feet per minute (SCFM), that influent concentrations do not exceed 3,000 ppmv, that the Cat-Ox maintain a bed temperature between 550 degrees Fahrenheit (F) and 1,100 degrees F, and that these parameters be monitored on a monthly basis.

The Cat-Ox operated with an average destruction efficiency of 77.7 percent during the third quarter of 2007. Based on the monthly field monitoring event conducted on August 27, 2007 hydrocarbon concentrations in the effluent vapor emissions were observed to be slightly above the limits of the PSCAA permit, at a concentration of 34.3 ppmv. On September 6, 2007 effluent air readings were obtained using a photo-ionization detector (PID) and used to adjust the amount of atmospheric air brought into the system in order to reduce TPH concentrations. An effluent sample was collected for laboratory analysis and confirmed that the system was no longer exceeding PSCAA discharge limitations at a concentration of 10.9 ppmv. During the September 26, 2007 O&M event, laboratory analysis showed again that the effluent was slightly above the limits of the PSCAA permit at a concentration of 35.9 ppm.

During the third quarter of 2007, the average system vapor emission was 32.3 ppmv. A summary of Cat-Ox operating parameters is included with estimated removal of volatile hydrocarbons in Table 2. System flow rate calculations were derived using field measurements of DPE and AS vacuum in inches of mercury and inches of water column, respectively, and are included in Table 4.

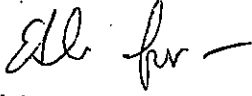
## LIMITATIONS

The services described in this report were performed in accordance with generally accepted professional consulting principles and practices. No other warranty, either expressed or implied, is made. These services were performed in accordance with terms established with our client. This report is solely for the use of our client and reliance on any part of this report by a third party is at such party's sole risk.

Delta appreciates the opportunity to provide environmental services for ConocoPhillips Company. Please call Elisabeth Silver at 425-498-7736 if you have any questions regarding the contents of this report.

Sincerely,

**DELTA CONSULTANTS**



Jaime KC  
Senior Field Technician



Elisabeth Silver, L.G.  
Senior Project Manager



**ELISABETH S. SILVER**

cc: Carrie McDougal, Washington State Dept. of Ecology - Northwest Regional Office, Bellevue, WA 98008  
Steve Small, P.O. Box 626, Auburn, WA 98071  
Water Quality Program Coordinator, City of Auburn, 25 W. Main, Auburn, WA 98001

Enc: Table 1 - DPE System Operation Summary  
Table 2 - Catalytic Oxidizer Operation Summary  
Table 3 - Water Treatment Unit Operation Summary  
Table 4 - System Flow Rate Summary  
Figure 1 - Remedial System Site Map  
Laboratory Analytical Report and Chain of Custody Documentation

**TABLE 1**  
**DPE SYSTEM OPERATION SUMMARY**  
 ConocoPhillips Site No. 0960  
 112 Third Street NW  
 Auburn, Washington

Date	System Hours	Elapsed Operational Time (hours)	Influent Totalizer Reading (gallons)	Volume Recovered (gallons)	Average Flowrate (gpm)	System Vacuum (inches Hg)	Estimated Liquid Phase Hydrocarbon Recovered (lb)
01/23/04	2128.7	0.0	106,195	0.0	0.00	18.0	0
01/27/04	2202.6	74	124,180	17,985	4.06	20.0	0
02/05/04	2422.3	220	169,282	45,102	3.42	18.0	0
03/02/04	3020.6	598	257,518	88,236	2.46	18.0	0
03/30/04	3205.9	185	283,436	25,918	2.33	18.0	0
04/29/04	3775.5	570	332,587	49,151	1.44	18.0	0
05/27/04	4449.6	674	365,530	32,943	0.81	15.5	0
06/10/04	4785.2	336	374,251	8,721	0.43	13.5	0
06/24/04	5119.4	334	380,463	6,212	0.31	18.0	0
07/13/04	5575.9	457	386,521	6,058	0.22	17.0	0
07/14/04	5578.8	2.9	386,750	230	1.32	18.0	0
07/22/04	5628.7	50	387,161	411	0.14	18.0	0
08/16/04	6140.3	512	389,034	1,873	0.06	-	0
09/21/04	6801.3	661	393,612	4,578	0.12	19.0	0
10/21/04	7291.3	490	395,012	1,400	0.05	21.0	0
11/22/04	7983.1	692	431,040	36,028	0.67	17.0	0
12/17/04	8583.7	601	469,594	38,554	1.07	19.0	0
01/27/05	9391.0	807	539,923	70,329	1.45	19.5	0
02/17/05	9894.9	504	574,353	34,430	1.14	18.5	0
03/18/05	10363.2	468	595,055	20,702	0.74	19.0	0
04/13/05	10989.1	626	640,491	45,436	1.21	21.0	0
05/11/05	11584.0	595	692,301	51,810	1.45	13.0	0
06/29/05	12063.4	479	768,403	76,102	2.65	13.0	0
07/11/05	12122.8	59	778,760	10,358	2.91	-	0
08/23/05	13110.4	988	820,780	42,020	0.71	-	0
09/30/05	13894.0	784	824,934	4,154	0.09	17.5	0
10/14/05	14185.0	291	825,605	671	0.04	20.0	0
10/31/05	14593.9	409	827,355	1,750	0.07	20.0	0
11/29/05	14873.5	280	831,894	4,538	0.27	20.5	0
12/05/05	14880.0	6.5	832,669	775	1.99	21.0	0
12/19/05	14967.0	87	842,850	10,181	1.95	20.5	0
01/30/06	15109.0	142	876,603	33,754	3.96	24.0	0
02/27/06	15353.2	244	935,547	58,944	4.02	19.5	0
03/27/06	15752.8	400	982,864	47,317	1.97	19.0	0
04/27/06	15753.9	1.1	983,532	688	10.13	14.5	0
05/31/06	15968.6	215	1,042,275	58,743	4.56	11.8	0
06/29/06	16273.9	305	1,094,303	52,028	2.84	11.5	0
07/31/06	16296.4	23	1,098,521	4,218	3.12	11.5	0
08/24/06	16305.6	9.2	1,100,293	1,772	3.21	12.0	0
09/27/06	16400.7	95	1,101,472	1,179	0.21	9.0	0
10/30/06	16801.6	201	1,101,560	88	0.007	10.0	0
11/30/06	16610.4	8.8	1,101,560	0.10	0.00	9.0	0
12/22/06	16831.3	221	1,101,658	98	0.007	-	0
01/29/07	16831.3	0	1,101,658	0	0.00	-	0
03/05/07	16831.3	0	1,101,658	0	0.00	-	0
03/22/07	16832.8	1.3	1,101,736	78	1.00	10	0
03/27/07	16948.8	116	1,101,756	20	0.003	10	0
04/25/07	17303.0	354	1,101,756	0	0.000	10.0	0
05/22/07	17549.1	246	1,111,868	10,112	0.685	10.2	0
06/05/07	17879.2	330	1,117,493	5,625	0.284	10.0	0
06/25/07	18353.5	474	1,128,966	11,473	0.403	8.0	0
06/26/07	18376.1	23	1,129,255	289	0.213	8.0	0
07/12/07	18753.0	377	1,133,486	4,231	0.187	8.0	0
07/18/07	18900.5	148	1,134,568	1,083	0.122	8.0	0
07/23/07	19018.5	118	1,135,339	771	0.109	8.0	0
07/26/07	19089.8	71	1,135,770	431	0.101	8.0	0
08/27/07	19509.8	420	1,138,114	2,344	0.093	7.2	0
09/06/07	NM	NM	NM	NM	NM	NM	0
09/26/07	19779.8	270	1,138,114	0	0.000	7.0	0
<b>Total To Date.</b>		<b>17,651</b>		<b>1,031,919</b>	<b>0.97</b>		
<b>Total for 3rd Quarter</b>		<b>1,404</b>		<b>8,859</b>	<b>0.105</b>		

**NOTES:**  
 gpm = gallons per minute  
 inches Hg = inches of mercury  
 lb = pounds  
 NM = not measured

**TABLE 2  
CATALYTIC OXIDIZER OPERATION SUMMARY**  
ConocoPhillips Site No. 0960  
112 Third Street NW  
Auburn, Washington

Date	System Hour Reading	Elapsed Operational Time (hours)	Catox Heater Hour Reading	Pre-Operational Temperature (Fahrenheit)	Operational Temperature (Fahrenheit)	Average Flowrate (SCFM)	Influent TVH <sup>1</sup> Concentration (ppmv)	Effluent TVH <sup>2</sup> Concentration (ppmv)	TVH Recovered in Vapor Stream <sup>3</sup> (lbs)	TVH Emissions (lbs)	Destructive Efficiency (%)
01/23/04	2128.7	0	914.0	NM	800	255*	70.0	0.3	-	-	-
01/27/04	2202.6	74	975.3	NM	807	255*	63.7	0.8	20.1	0.3	98.7
02/05/04	2422.3	220	1147.2	NM	800	211	83.8	0.7	64.9	0.5	99.2
03/02/04	3020.6	598	1526.2	NM	812	255*	78.2	0.6	199.5	1.5	99.2
03/30/04	3205.9	185	1617.8	NM	700	255*	152	3.4	120.1	2.7	97.8
04/29/04	3775.5	570	1799.3	NM	699	251	138	<2.36	329.9	0.0	100.0
05/27/04	4449.6	674	2013.5	NM	700	247	58.7 <sup>A</sup>	0.4 <sup>A</sup>	163.4	1.1	99.3
06/10/04	4785.2	336	2122.8	NM	699	289	86*	0.8*	139.2	1.2	99.1
06/24/04	5119.4	334	2232.3	NM	701	252	113	1.0*	159.1	1.4	99.1
07/13/04	5575.9	457	2370.8	NM	700	261	87*	0.8*	173.2	1.6	99.1
07/14/04	5578.8	3	2371.6	NM	700*	255*	87*	0.8*	1.1	0.0	99.1
07/22/04	5628.7	50	2387.4	NM	696	252	60.9 <sup>A</sup>	11.1 <sup>A</sup>	12.8	2.3	81.8
08/16/04	6140.3	512	2538.8	NM	697	273	78.9 <sup>A</sup>	0.1 <sup>A</sup>	184.2	0.2	99.9
09/21/04	6801.3	661	2739.1	NM	685	242	48.6 <sup>A</sup>	0.2 <sup>A</sup>	130.0	0.5	99.6
10/21/04	7291.3	490	2913.2	NM	637	223	74.6 <sup>A</sup>	1.1 <sup>A</sup>	136.3	2.0	98.5
11/22/04	7983.1	692	3142.4	NM	683	260	85.3	<2.36	256.5	0.0	100.0
12/17/04	8583.7	601	3341.4	NM	669	242	44.2	<2.36	107.4	0.0	100.0
01/27/05	9391.0	807	3588.2	NM	664	237	27.5	<2.36	88.0	0.0	100.0
02/17/05	9894.9	504	3736.0	NM	674	247	96.1	<2.36	200.0	0.0	100.0
03/18/05	10363.2	468	3873.6	NM	677	242	283.0	2.67	536.2	5.1	99.1
04/13/05	10989.1	626	4058.1	NM	654	222	3.26	<2.36	7.6	0.0	100.0
05/11/05	11584.0	595	4231.4	NM	673	293	135	<2.36	393.4	0.0	100.0
06/29/05	12063.4	479	4406.8	NM	706	293	492.0	8.41	1155.4	19.8	98.3
07/11/05	12122.8	59	4427.3	NM	724	260	NM	NM	NM	NM	98.3*
08/23/05	13110.4	988	4768.8	NM	662	255*	33.9	2.57	142.7	10.8	92.4
09/30/05	13894.0	784	5028.6	NM	686	256	206.0	2.71	690.9	9.1	98.7
10/31/05	14593.9	700	5260.9	NM	701	233	60.4	3.11	164.7	8.5	94.9
11/29/05	14873.5	280	5355.9	NM	701	228	<2.36	<2.36	0.0	0.0	N/A
12/19/05	14967.0	94	5386.6	NM	705	228	<2.36	<2.36	0.0	0.0	N/A
01/30/06	15109.0	142	5441.5	NM	629	188	9.99	<2.36	4.5	0.0	100.0
02/27/06	15353.2	244	5519.3	NM	660	237	<2.36	<2.36	0.0	0.0	N/A
03/27/06	15752.8	400	5652.7	NM	631	242	<2.36	<2.36	0.0	0.0	N/A
04/27/06	15753.9	1.1	5653.8	NM	713	280	1.720	31.8 <sup>4</sup>	8.9	0.2	98.2
05/31/06	15968.6	215	5744.7	NM	696	302	206	33.4	223.3	36.2	83.8
06/29/06	16273.9	305	5890.1	NM	674	304	124	17.0	192.4	26.4	86.3
07/31/06	16296.4	23	5901.2	NM	729	304	419	34.4	47.9	3.9	91.8
08/24/06	16305.6	9	5905.1	NM	714	300	NM	NM	0.9	0.1	85.3
09/01/06	NM	NM	NM	NM	NM	NM	19.3	2.84	NM	NM	NM
09/27/06	16400.7	95	5931.5	NM	710	322	261	4.67	133.6	2.4	98.2
10/30/06	16601.6	201	6045.8	NM	705	315	54.2	22.9	57.3	24.2	57.7
11/30/06	16610.4	8.8	6051.8	NM	664	322	28.5	<2.36	1.4	0.0	100.0
12/22/06	16831.3	221	6172.0	NM	55	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>
01/29/07	16831.3	0.0	6172.0	NM	53	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>
03/05/07	16831.3	0.0	6172.0	NM	60	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>
03/22/07	16832.6	1.3	6173.3	NM	664	315	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>	- <sup>5</sup>
03/27/07	16948.8	116	6236.0	NM	676	315	NM	NM	NM	NM	NM
04/25/07	17303.0	354	6422.6	705	670	315	<2.36	<2.36	0.0	0.0	N/A
05/22/07	17549.1	246	6549.1	NM	993	313	922	38.5	1187	50	96
06/05/07	17879.2	330	6712.6	NM	704	315	10	2.78	17.4	4.8	72
06/25/07	18353.5	474	7001.6	701	681	328	60.6	2.76	157.6	7.2	95
06/28/07	18376.1	23	7014.3	697	688	328	NM	5.75	NM	NM	NM
07/12/07	18753.0	377	7220.1	701	689	328	NM	NM	NM	NM	NM
07/18/07	18900.5	148	7301.8	698	692	328	NM	NM	NM	NM	NM
07/23/07	19018.5	118	7367.0	701	698	328	69.8	26.80	246.2	94.5	62
07/26/07	19089.8	71	7406.0	702	698	328	NM	NM	NM	NM	NM
08/27/07	19509.8	420	7635.7	697	722	334	492	34.3	1348	94	93
09/06/07	NM	NM	NM	695	693	NM	NM	10.9	NM	NM	NM
09/26/07	19779.8	270	7789.9	700	691	335	162	35.90	245	54	78
<b>Total To Date</b>		<b>17,651</b>							<b>9,448.7</b>	<b>466.5</b>	<b>95.2</b>
<b>Total for 3rd Quarter</b>		<b>1,404</b>	<b>776</b>						<b>1,839.5</b>	<b>242.8</b>	<b>77.5</b>

TABLE 2  
CATALYTIC OXIDIZER OPERATION SUMMARY  
ConocoPhillips Site No. 0960  
112 Third Street NW  
Auburn, Washington

NOTES:

TVH = total volatile hydrocarbons, based on analytical results or PID readings measured in the field.

SCFM = standard cubic feet per minute

NM = not measured

62.000000

N/A = Data not available

93.000000

ppmv = part per million by volume

78.000000

lbs = pounds

77.686667

< n = values were not detectable above the laboratory reporting limit

\* Estimated value

^ PID Readings measured in the field.

<sup>1</sup> TVH concentrations were measured from soil vapors prior to entering the catalytic-oxidizer. Tables updated to include analytical results unless otherwise noted.

<sup>2</sup> TVH concentrations were measured from catalytic-oxidizer emissions. Tables updated to include analytical results unless otherwise noted.

<sup>3</sup> Recovered TVH estimated using influent TVH concentration, average flowrate, and operational time period.

<sup>4</sup> Sample was mis-labeled as System Influent. Reported value corresponds to air collected from System Effluent.

<sup>5</sup> The system was unable to be restarted. Operational parameters including Influent and Effluent samples were not collected.

<sup>6</sup> Unable to use PID due to equipment failure.

**TABLE 3**  
**WATER TREATMENT UNIT OPERATION SUMMARY**  
 ConocoPhillips Site No. 0960  
 112 Third Street NW  
 Auburn, Washington

Date	System Hours	Elapsed Operational Time (hours)	Influent Totalizer Reading (gallons)	Volume Recovered (gallons)	Average Flowrate (gpm)	Effluent Benzene Concentration (ug/L)	Effluent TPH Concentration (mg/L)	elapsed operational days
01/23/04	2128.7	0	106,195	0	0.00	NS	NS	0
01/27/04	2202.8	74	124,180	17,985	4.06	NS	NS	3
02/05/04	2422.3	220	169,282	45,102	3.42	NS	NS	9
03/02/04	3020.6	598	257,518	88,236	2.46	NS	NS	25
03/30/04	3205.9	185	283,436	25,918	2.33	<0.500	5.98	8
04/29/04	3775.5	570	332,587	49,151	1.44	<1.0	27.78	24
05/27/04	4449.8	674	365,530	32,943	0.81	NS	NS	28
06/10/04	4785.2	336	374,251	8,721	0.43	NS	NS	14
06/24/04	5119.4	334	380,463	6,212	0.31	NS	NS	14
07/13/04	5575.9	457	386,521	6,058	0.22	NS	NS	19
07/14/04	5578.8	3	386,750	230	1.32	NS	NS	0.121
07/22/04	5628.7	50	387,161	411	0.14	NS	NS	2
08/16/04	6140.3	512	389,034	1,873	0.06	NS	NS	21
09/21/04	6801.3	661	393,612	4,578	0.12	NS	NS	28
10/21/04	7291.3	490	395,012	1,400	0.05	NS	NS	20
11/22/04	7983.1	692	431,040	36,028	0.87	NS	NS	29
12/17/04	8583.7	601	469,594	38,554	1.07	<1	2.00	25
01/27/05	9391.0	807	539,923	70,329	1.45	NS	NS	34
02/17/05	9894.9	504	574,353	34,430	1.14	NS	NS	21
03/18/05	10363.2	468	595,055	20,702	0.74	NS	NS	20
04/13/05	10989.1	626	640,491	45,436	1.21	NS	NS	26
05/11/05	11584.0	595	692,301	51,810	1.45	<1	0.777	25
08/29/05	12063.4	479	788,403	76,102	2.65	NS	NS	20
07/11/05	12122.8	59	778,760	10,358	2.91	NS	NS	2
08/23/05	13110.4	988	820,780	42,020	0.71	NS	NS	41
09/30/05	13894.0	784	824,934	4,154	0.09	NS	NS	33
10/31/05	14593.9	700	827,355	2,421	0.06	NS	NS	29
11/29/05	14873.5	280	831,894	4,538	0.27	NS	NS	12
12/05/05	14880.0	6.5	832,669	775	1.99	NS	NS	0.27
12/19/05	14967.0	87	842,850	10,181	1.95	0.6	2.316	3.63
01/30/06	15109.0	142	876,603	33,754	3.96	NS	NS	5.92
02/27/06	15353.2	244	935,547	58,944	4.02	NS	NS	10.18
03/27/06	15752.8	400	982,864	47,317	1.97	NS	NS	16.65
04/27/06	15753.9	1.1	983,532	668	10.13	NS	NS	0.05
05/31/06	15968.6	215	1,042,275	58,743	4.56	<0.5	3.866	8.95
06/29/06	16273.9	305	1,094,303	52,028	2.84	NS	NS	12.72
07/31/06	16296.4	23	1,098,521	4,218	3.12	NS	NS	0.94
08/24/06	16305.6	9.2	1,100,293	1,772	3.21	NS	NS	0.38
09/27/06	16400.7	95	1,101,472	1,179	0.21	NS	NS	3.96
10/30/06	16606.6	206	1,101,560	88	0.01	NS	NS	8.58
11/30/06	16610.4	3.8	1,101,560	0.28	0.00	NS	NS	0.16
12/22/06	16831.3	221	1,101,658	98	0.01	NS <sup>2</sup>	NS <sup>2</sup>	9.20
01/29/07	16831.3	0.0	1,101,658	0	0.00	NS <sup>2</sup>	NS <sup>2</sup>	0.00
03/05/07	16831.3	0.0	1,101,658	0	0.00	NS <sup>2</sup>	NS <sup>2</sup>	0.00
03/22/07	16832.6	1.3	1,101,736	78	1.00	NS	NS	0.05
03/27/07	16948.8	116	1,101,756	20	0.0028	NS	NS	4.84
04/25/07	17303.0	354	1,101,756	0	0.0000	NS	NS	14.76
05/22/07	17549.1	246	1,111,868	10,112	0.6848	<0.5	1.5	10.25
06/05/07	17879.2	330	1,117,493	5,625	0.2840	NS	NS	13.75
06/25/07	18353.5	474	1,128,966	11,473	0.4031	NS	NS	19.76
06/26/07	18376.1	23	1,129,255	289	0.2132	NS	NS	0.94
07/12/07	18753.0	377	1,133,486	4,231	0.1871	NS	NS	15.70
07/18/07	18900.5	148	1,134,568	1,083	0.1224	NS	NS	6.15
07/23/07	19018.5	118	1,135,339	771	0.1089	NS	NS	4.92
07/26/07	19089.8	71	1,135,770	431	0.1008	NS	NS	2.97
08/27/07	19509.8	420	1,138,114	2,344	0.0930	NS	NS	17.50
09/06/07	NM	NM	NM	NM	NM	NS	NS	NM
09/26/07	19779.8	270	1,138,114	0	0.0000	NS	NS	11.25
<b>King Co. Wastewater Discharge Permit 4060-01 Limits:</b>					<b>23.6</b>	<b>130</b>	<b>100</b>	
<b>Total To Date</b>		<b>17,651</b>	<b>1,031,919</b>	<b>0.97</b>				
<b>Total for 3rd Quarter</b>		<b>1,404</b>	<b>8,859</b>	<b>0.11</b>				<b>58.49</b>
<p><b>NOTES:</b>                      TPH = total petroleum hydrocarbons as gasoline, diesel, and heavy oil                      gpm = gallons per minute                      ug/L = micrograms per liter                      mg/L = milligrams per liter                      NS = not sampled                      NM = not measured                      &lt; n = values were not detectable above the laboratory reporting limit  <sup>1</sup>Sample analyzed outside of holding time.  <sup>2</sup>The system was unable to be restarted, therefore an Effluent water sample was not able to be collected.</p>								

**TABLE 4**  
**SYSTEM FLOW RATE SUMMARY**  
 ConocoPhillips Site No. 0960  
 112 Third Street NW  
 Auburn, WA

Date	DPE vac (in. Hg)	DPE vac (psia)	DPE Flow (scfm)	A.S. vac (in. w.c.)	A.S. vac (psia)	A.S. Flow (scfm)	Total Flow (scfm)	Estimated Total Velocity (fpm)
02/19/04	22.0	3.9	177	15.0	14.2	34	211	2,423
04/29/04	18.0	5.9	217	8.0	14.4	35	251	2,881
05/27/04	18.5	5.6	212	8.0	14.4	35	247	2,829
06/10/04	13.5	8.1	254	7.0	14.4	35	289	3,310
06/23/04	15.0	7.4	242	8.5	14.4	35	277	3,174
06/24/04	18.0	5.9	217	6.0	14.5	35	252	2,882
07/13/04	17.0	6.4	226	2.5	14.6	35	261	2,985
07/14/04	18.0	5.9	217	-	-	-	-	-
07/22/04	18.0	5.9	217	5.0	14.5	35	252	2,883
08/16/04	15.5	7.1	238	4.5	14.5	35	273	3,129
08/27/04	18.5	5.6	212	13.0	14.2	35	247	2,826
09/21/04	19.0	5.4	207	6.0	14.5	35	242	2,777
10/21/04	21.0	4.4	188	2.0	14.6	35	223	2,552
11/22/04	17.0	6.4	226	6.5	14.5	35	260	2,983
12/17/04	19.0	5.4	207	14.0	14.2	34	242	2,773
01/27/05	19.5	5.1	203	8.0	14.4	35	237	2,721
02/17/05	18.5	5.6	212	7.0	14.4	35	247	2,829
03/18/05	19.0	5.4	207	2.5	14.6	35	242	2,778
04/13/05	21.0	4.4	188	10.5	14.3	35	222	2,548
05/11/05	13.0	8.3	258	10.0	14.3	35	293	3,352
06/21/05	13.5	8.1	254	10.0	14.3	35	289	3,308
06/29/05	13.0	8.3	258	10.0	14.3	35	293	3,352
07/11/05	17.0	6.4	226	4.0	14.6	35	260	2,984
09/30/05	17.5	6.1	221	6.0	14.5	35	256	2,933
10/14/05	20.0	4.9	198	2.0	14.6	35	233	2,668
10/31/05	20.0	4.9	198	5.0	14.5	35	233	2,667
11/29/05	20.5	4.7	193	7.0	14.4	35	228	2,608
12/19/05	20.5	4.7	193	8.0	14.4	35	228	2,608
01/30/06	24.0	2.9	153	8.0	14.4	35	188	2,155
02/27/06	19.5	5.1	203	9.5	14.4	35	237	2,720
03/27/06	19.0	5.4	207	20.0	14.0	34	242	2,770
04/27/06	14.5	7.6	246	20.0	14.0	34	280	3,214
05/31/06	11.8	8.9	267	9.0	14.4	35	302	3,455
06/29/06	11.5	9.1	269	1.5	14.6	35	304	3,484
07/31/06	11.5	9.1	269	4.0	14.6	35	304	3,483
08/24/06	12.0	8.8	265	0.8	14.7	35	300	3,442
09/27/06	9.0	10.3	287	1.5	14.6	35	322	3,685
10/30/06	10.0	9.8	280	1.0	14.7	35	315	3,607
11/30/06	9.0	10.3	287	3.2	14.6	35	322	3,685
12/22/06	-1	-1	-1	-1	-1	-1	-1	-1
01/29/07	-1	-1	-1	-1	-1	-1	-1	-1
03/05/07	-1	-1	-1	-1	-1	-1	-1	-1
03/22/07	10.0	9.8	280	1.5	14.6	35	315	3,606
03/27/07	10.0	9.8	280	1.0	14.7	35	315	3,607
04/25/07	10.0	9.8	280	1.0	14.7	35	315	3,607
05/22/07	10.2	9.7	278	4.5	14.5	35	313	3,589
06/05/07	10.0	9.8	280	1.5	14.6	35	315	3,606
06/25/07	8.0	10.8	293	1.0	14.7	35	328	3,763
06/26/07	8.0	10.8	293	1.8	14.6	35	328	3,762
07/12/07	8.0	10.8	293	1.5	14.6	35	328	3,763
07/18/07	8.0	10.8	293	1.5	14.6	35	328	3,763
07/23/07	8.0	10.8	293	1.5	14.6	35	328	3,763
07/26/07	8.0	10.8	293	1.0	14.7	35	328	3,763
08/27/07	7.2	11.2	299	1.0	14.7	35	334	3,823
09/06/07	-	-	-	-	-	-	-	-
09/26/07	7.0	11.3	300	1.5	14.6	35	335	3,838
<b>Average To Date</b>							<b>335</b>	<b>3,838</b>
<b>Average for 3rd Quarter</b>							<b>277</b>	<b>3,171</b>
							<b>330</b>	<b>3,785</b>

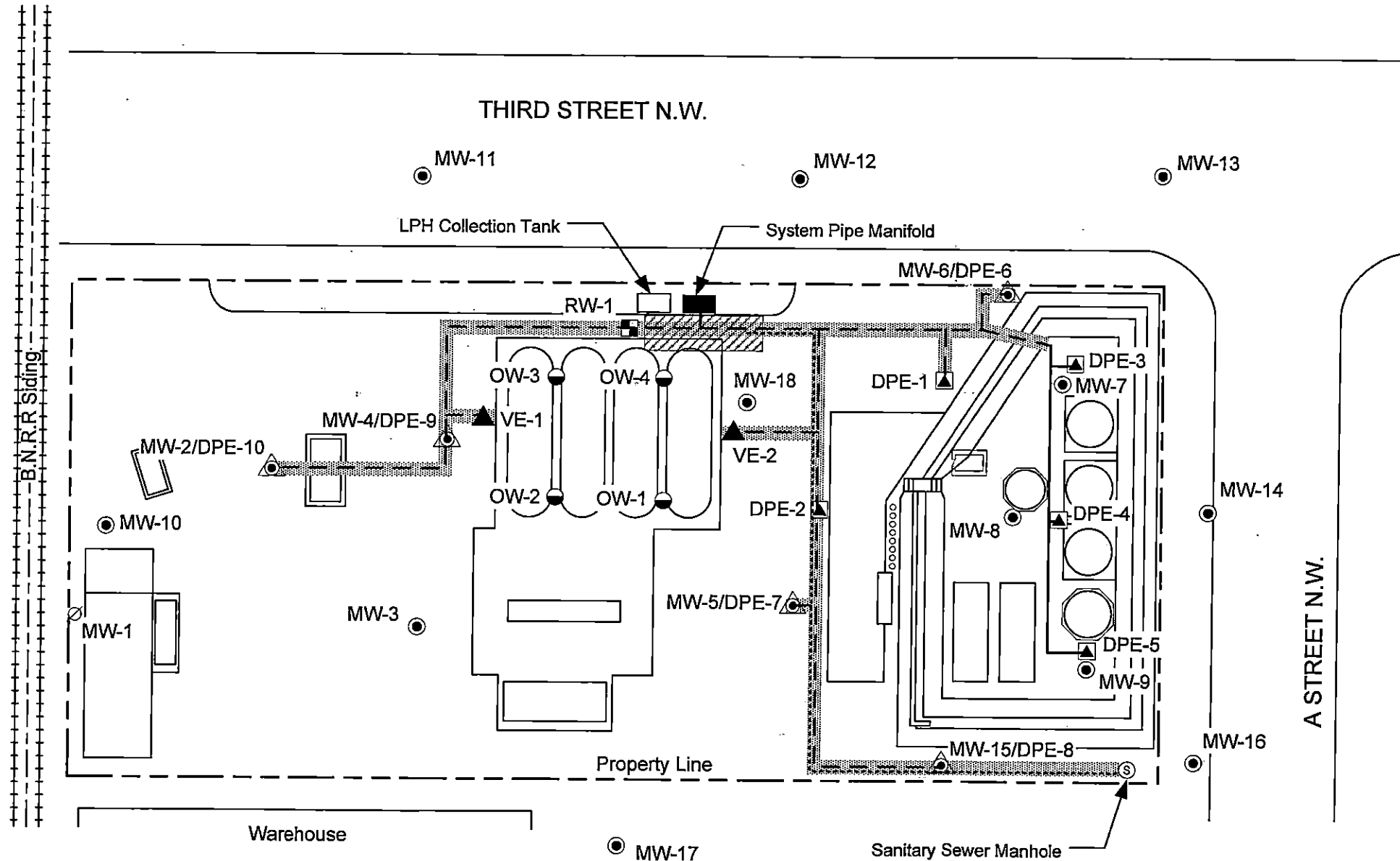
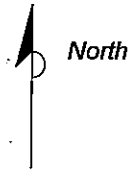
**NOTES:**

Flowrate (Q) = 128.8 \* K \* D<sup>2.5</sup> \* √[(P\*ΔP)/((T+460)\*Ss)]

<b>DPE Component, 3" pipe</b>	<b>Air Stripper Component, 3" pipe</b>
D = 2.9 inches	D = 2.9 inches
K = 0.67	K = 0.67
T = ~200 degrees F	T = ~100 degrees F
ΔP = 10 inches w.c.	ΔP = 0.089 inches w.c.
Ss = -1	Ss = -1
P = DPE blower vacuum (psia)	P = air stripper blower vacuum (psia)

Measured total air velocity on 10/12/05 with anemometer at 3,000 fpm; calculated flowrate through 4" pipe = 262 cfm.

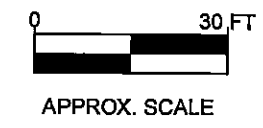
-1 The system was unable to be restarted. Operational parameters were not able to be recorded.



- LEGEND**
- MW-3 ● GROUNDWATER MONITORING WELL
  - MW-1 ∅ ABANDONED GROUNDWATER MONITORING WELL
  - OW-1 ○ UNDERGROUND STORAGE TANK OBSERVATION WELL
  - MW-2/DPE-10 ▲ GROUNDWATER MONITORING AND DUAL PHASE EXTRACTION WELL
  - DPE-3 ▲ DUAL PHASE (LIQUID AND VAPOR) EXTRACTION WELL
  - VE-1 ▲ VAPOR EXTRACTION WELL
  - RW-1 ◻ PRODUCT/GROUNDWATER RECOVERY WELL
  - ▨ REMEDIATION EQUIPMENT CONTAINER
  - ▤ SYSTEM PIPING TRENCH
  - ABOVEGROUND REMEDIATION PIPING
  - - - UNDERGROUND REMEDIATION PIPING
  - · - · - TREATED EFFLUENT DISCHARGE PIPING TO SANITARY SEWER

**FIGURE 1**  
**REMEDIAL SYSTEM SITE MAP**  
 CONOCO PHILLIPS SITE NO. 0960  
 112 THIRD STREET NW  
 AUBURN, WASHINGTON

PROJECT NO. WAZ09-6012-1	DRAWN BY TS 2/10/05
FILE NO. WAZ09-6012-1	PREPARED BY TS 2/10/05
REVISION NO. 0	REVIEWED BY EL



Site map based on drawing prepared by GeoEngineers dated 6/03

**LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY  
DOCUMENTATION**

Remedial System Monitoring  
ConocoPhillips Site No. 0960

July 30, 2007

Elisabeth Silver  
Delta Environmental  
4006 148th Ave NE  
Redmond, WA/USA 98052

RE: 0960 Auburn

Enclosed are the results of analyses for samples received by the laboratory on 07/24/07 11:00.  
The following list is a summary of the Work Orders contained in this report, generated on 07/30/07  
16:33.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQG0507	0960 Auburn	WAZ09-6019

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain  
of custody document. This analytical report shall not be reproduced except in full,  
without the written approval of the laboratory.*



<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>07/30/07 16:33</b>
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INF.	BQG0507-01	Air	07/23/07 11:50	07/24/07 11:00
EFF.	BQG0507-02	Air	07/23/07 11:58	07/24/07 11:00

TestAmerica - Seattle, WA

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*Sandra Yakamavich*

Sandra Yakamavich, Project Manager



<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>07/30/07 16:33</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B**  
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BQG0507-01 (INF.)</b>	<b>Air</b>									
<b>Sampled: 07/23/07 11:50</b>										
Gasoline Range Hydrocarbons	NWTPH Modified	296	---	10.0	mg/m <sup>3</sup> Air	1x	7G25034	07/25/07 11:57	07/25/07 16:03	
Gasoline Range Hydrocarbons (v/v)	"	69.8	---	2.36	ppmv	"	"	"	"	
Benzene (v/v)	"	0.267	---	0.0308	"	"	"	"	"	
Toluene (v/v)	"	3.96	---	0.0261	"	"	"	"	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	"	"	"	
Xylenes, total (v/v)	"	0.0512	---	0.0454	"	"	"	"	"	
Benzene	"	0.866	---	0.100	mg/m <sup>3</sup> Air	"	"	"	"	
Toluene	"	15.2	---	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.100	"	"	"	"	"	
Xylenes (total)	"	0.226	---	0.200	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			92.4%		50 - 150 %	"				
4-BFB (PID)			104%		75 - 133 %	"				

<b>BQG0507-02 (EFF.)</b>	<b>Air</b>									
<b>Sampled: 07/23/07 11:58</b>										
Gasoline Range Hydrocarbons	NWTPH Modified	114	---	10.0	mg/m <sup>3</sup> Air	1x	7G25034	07/25/07 11:57	07/25/07 17:04	
Gasoline Range Hydrocarbons (v/v)	"	26.8	---	2.36	ppmv	"	"	"	"	
Benzene (v/v)	"	0.100	---	0.0308	"	"	"	"	"	
Toluene (v/v)	"	0.392	---	0.0261	"	"	"	"	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	"	"	"	
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	"	"	"	
Benzene	"	0.326	---	0.100	mg/m <sup>3</sup> Air	"	"	"	"	
Toluene	"	1.50	---	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.100	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.200	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			90.7%		50 - 150 %	"				
4-BFB (PID)			101%		75 - 133 %	"				

TestAmerica - Seattle, WA

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sandra Yakamovich*

Sandra Yakamovich, Project Manager



<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>07/30/07 16:33</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7G25034**      Air Preparation Method: **EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7G25034-BLK1)</b>														
Extracted: 07/25/07 11:57														
Gasoline Range Hydrocarbons	NWTPH Modified	ND	--	10.0	mg/m <sup>3</sup> Air	1x	--	--	--	--	--	--	07/25/07 13:33	
Gasoline Range Hydrocarbons (v/v)	"	ND	--	2.36	ppmv	"	--	--	--	--	--	--	"	
Benzene (v/v)	"	ND	--	0.0308	"	"	--	--	--	--	--	--	"	
Toluene (v/v)	"	ND	--	0.0261	"	"	--	--	--	--	--	--	"	
Ethylbenzene (v/v)	"	ND	--	0.0227	"	"	--	--	--	--	--	--	"	
Xylenes, total (v/v)	"	ND	--	0.0454	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	--	0.100	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Toluene	"	ND	--	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	--	0.100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	--	0.200	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery: 94.6%		Limits: 50-150%		"						07/25/07 13:33		
4-BFB (PID)		105%		75-133%		"								
<b>LCS (7G25034-BS1)</b>														
Extracted: 07/25/07 11:57														
Gasoline Range Hydrocarbons	NWTPH Modified	75.2	--	10.0	mg/m <sup>3</sup> Air	1x	--	100	75.2%	(50-150)	--	--	07/25/07 14:03	
Surrogate(s): 4-BFB (FID)		Recovery: 94.3%		Limits: 50-150%		"						07/25/07 14:03		
<b>LCS (7G25034-BS2)</b>														
Extracted: 07/25/07 11:57														
Benzene	NWTPH Modified	1.52	--	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	75.8%	(50-150)	--	--	07/25/07 15:03	
Toluene	"	1.57	--	0.100	"	"	--	"	78.4%	"	--	--	"	
Ethylbenzene	"	1.42	--	0.100	"	"	--	"	71.1%	"	--	--	"	
Xylenes (total)	"	4.44	--	0.200	"	"	--	6.00	74.1%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 108%		Limits: 75-133%		"						07/25/07 15:03		
<b>LCS Dup (7G25034-BSD1)</b>														
Extracted: 07/25/07 11:57														
Gasoline Range Hydrocarbons	NWTPH Modified	73.3	--	10.0	mg/m <sup>3</sup> Air	1x	--	100	73.3%	(50-150)	2.55%	(50)	07/25/07 14:33	
Surrogate(s): 4-BFB (FID)		Recovery: 94.3%		Limits: 50-150%		"						07/25/07 14:33		
<b>LCS Dup (7G25034-BSD2)</b>														
Extracted: 07/25/07 11:57														
Benzene	NWTPH Modified	1.71	--	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	85.3%	(50-150)	11.7%	(50)	07/25/07 15:33	
Toluene	"	1.60	--	0.100	"	"	--	"	80.1%	"	2.16%	"	"	
Ethylbenzene	"	1.60	--	0.100	"	"	--	"	80.1%	"	11.9%	"	"	
Xylenes (total)	"	4.87	--	0.200	"	"	--	6.00	81.2%	"	9.25%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 109%		Limits: 75-133%		"						07/25/07 15:33		

TestAmerica - Seattle, WA

*Sandra Yakamovich*

Sandra Yakamovich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>07/30/07 16:33</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7G25034**      Air Preparation Method: **EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Duplicate (7G25034-DUP1)</b>		QC Source: <b>BQG0507-01</b>				Extracted: <b>07/25/07 11:57</b>								
Gasoline Range Hydrocarbons (v/v)	NWTPH Modified	69.4	--	2.36	ppmv	1x	69.8	--	--	--	0.504% (30)		07/25/07 16:34	
Gasoline Range Hydrocarbons	"	295	--	10.0	mg/m <sup>3</sup> Air	"	296	--	--	--	0.504% "	"	"	"
Benzene (v/v)	"	0.264	--	0.0308	ppmv	"	0.267	--	--	--	1.11% "	"	"	"
Toluene (v/v)	"	3.97	--	0.0261	"	"	3.96	--	--	--	0.0527% "	"	"	"
Ethylbenzene (v/v)	"	ND	--	0.0227	"	"	ND	--	--	--	NR "	"	"	"
Xylenes, total (v/v)	"	ND	--	0.0454	"	"	0.0512	--	--	--	15.2% "	"	"	"
Benzene	"	0.856	--	0.100	mg/m <sup>3</sup> Air	"	0.866	--	--	--	1.11% "	"	"	"
Toluene	"	15.2	--	0.100	"	"	15.2	--	--	--	0.0527% "	"	"	"
Ethylbenzene	"	ND	--	0.100	"	"	ND	--	--	--	NR "	"	"	R4
Xylenes (total)	"	ND	--	0.200	"	"	0.226	--	--	--	15.2% "	"	"	R4

Surrogate(s): 4-BFB (FID)      Recovery: 90.6%      Limits: 50-150% "      07/25/07 16:34  
 4-BFB (PID)      103%      75-133% "      "

TestAmerica - Seattle, WA

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*Sandra Yakamavich*

Sandra Yakamavich, Project Manager



**Delta Environmental**

4006 148th Ave NE  
Redmond, WA/USA 98052

Project Name: **0960 Auburn**  
Project Number: **WAZ09-6019**  
Project Manager: **Elisabeth Silver**

Report Created:  
**07/30/07 16:33**

### Notes and Definitions

Report Specific Notes:

- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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## CHAIN OF CUSTODY REPORT

Work Order #: **RQ60507**

CLIENT: <b>Delta</b>		INVOICE TO: <b>ATTN: Elisabeth Silver Delta Consultants</b>										<b>TURNAROUND REQUEST</b> In Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 <small>STD.</small> Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 <small>STD.</small> <input type="checkbox"/> OTHER Specify: <small>* Turnaround Requests less than standard may incur Rush Charges.</small>									
REPORT TO: <b>Elisabeth Silver</b> ADDRESS: <b>4006 148<sup>th</sup> Ave NE Redmond, WA 98052</b>		P.O. NUMBER:																			
PHONE: <b>425-498-7736</b> FAX:		PRESERVATIVE																			
PROJECT NAME: <b>0960 Auburn</b>		REQUESTED ANALYSES																			
PROJECT NUMBER: <b>WA209-6019</b>																					
SAMPLED BY: <b>JF</b>																					
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NAPTH-EX	BTEX												MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID			
1 <b>Inf.</b>	<b>7-23-07/11:50</b>														<b>A</b>	<b>1</b>		<b>01</b>			
2 <b>Eff.</b>	<b>7-23-07/11:58</b>														<b>A</b>	<b>1</b>		<b>02</b>			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
RELEASED BY: <b>Julie Forcier</b>		FIRM: <b>Delta</b>		DATE: <b>7-24-07</b>		TIME:		RECEIVED BY: <b>Francisco Lenc, Jr</b>		FIRM: <b>TA-3</b>		DATE: <b>7/24/07</b>		TIME: <b>1100</b>							
RELEASED BY:		FIRM:		DATE:		TIME:		RECEIVED BY:		FIRM:		DATE:		TIME:							
PRINT NAME:		FIRM:		DATE:		TIME:		PRINT NAME:		FIRM:		DATE:		TIME:							
ADDITIONAL REMARKS:																					
																<b>@Lab 1600 w/o</b>		TEMP: <b>25.3°</b>		PAGE OF	

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and for any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice unless otherwise contracted. Sample(s) will be disposed of after 30 days unless otherwise contracted.

September 05, 2007

Elisabeth Silver  
Delta Environmental  
4006 148th Ave NE  
Redmond, WA/USA 98052

RE: 0960 Auburn

Enclosed are the results of analyses for samples received by the laboratory on 08/28/07 10:55.  
The following list is a summary of the Work Orders contained in this report, generated on 09/05/07  
15:06.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQH0666	0960 Auburn	WAZ0960191

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ0960191</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/05/07 15:06</b>
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C-Inf	BQH0666-01	Air	08/27/07 12:40	08/28/07 10:55
C-Eff	BQH0666-02	Air	08/27/07 12:45	08/28/07 10:55

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ0960191</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/05/07 15:06</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B**  
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BQH0666-01 (C-Inf)</b>	<b>Air</b>									
<b>Sampled: 08/27/07 12:40</b>										
Gasoline Range Hydrocarbons	NWTPH Modified	2090	—	250	mg/m <sup>3</sup> Air	25x	7H29030	08/30/07 00:00	08/30/07 12:18	
Gasoline Range Hydrocarbons (v/v)	"	492	—	59.0	ppmv	"	"	"	"	
Benzene (v/v)	"	ND	—	0.770	"	"	"	"	"	RL1
Toluene (v/v)	"	11.9	—	0.652	"	"	"	"	"	
Ethylbenzene (v/v)	"	ND	—	0.568	"	"	"	"	"	RL1
Xylenes, total (v/v)	"	ND	—	1.14	"	"	"	"	"	RL1
Benzene	"	ND	—	2.50	mg/m <sup>3</sup> Air	"	"	"	"	RL1
Toluene	"	45.7	—	2.50	"	"	"	"	"	
Ethylbenzene	"	ND	—	2.50	"	"	"	"	"	RL1
Xylenes (total)	"	ND	—	5.00	"	"	"	"	"	RL1
Surrogate(s):	4-BFB (FID)		96.4%		50 - 150 %	1x				
	4-BFB (PID)		95.4%		75 - 133 %	"				

<b>BQH0666-02 (C-Eff)</b>	<b>Air</b>									
<b>Sampled: 08/27/07 12:45</b>										
Gasoline Range Hydrocarbons	NWTPH Modified	146	—	10.0	mg/m <sup>3</sup> Air	1x	7H29030	08/30/07 00:00	08/30/07 11:48	
Gasoline Range Hydrocarbons (v/v)	"	34.3	—	2.36	ppmv	"	"	"	"	
Benzene (v/v)	"	0.0616	—	0.0308	"	"	"	"	"	
Toluene (v/v)	"	0.232	—	0.0261	"	"	"	"	"	
Ethylbenzene (v/v)	"	ND	—	0.0227	"	"	"	"	"	
Xylenes, total (v/v)	"	ND	—	0.0454	"	"	"	"	"	
Benzene	"	0.200	—	0.100	mg/m <sup>3</sup> Air	"	"	"	"	
Toluene	"	0.888	—	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	—	0.100	"	"	"	"	"	
Xylenes (total)	"	ND	—	0.200	"	"	"	"	"	
Surrogate(s):	4-BFB (FID)		91.0%		50 - 150 %	"				
	4-BFB (PID)		101%		75 - 133 %	"				

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ0960191</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/05/07 15:06</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7H29030**      Air Preparation Method: **EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7H29030-BLK1)</b>														
Extracted: 08/30/07 00:00														
Gasoline Range Hydrocarbons	NWTPH Modified	ND	---	10.0	mg/m <sup>3</sup> Air	1x	--	--	--	--	--	--	08/30/07 11:18	
Gasoline Range Hydrocarbons (v/v)	"	ND	---	2.36	ppmv	"	--	--	--	--	--	--	"	
Benzene (v/v)	"	ND	---	0.0308	"	"	--	--	--	--	--	--	"	
Toluene (v/v)	"	ND	---	0.0261	"	"	--	--	--	--	--	--	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	--	--	--	--	--	--	"	
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.100	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery:	90.9%	Limits: 50-150%		"							08/30/07 11:18	
4-BFB (PID)		Recovery:	105%	Limits: 75-133%		"							"	
<b>LCS (7H29030-BS1)</b>														
Extracted: 08/30/07 00:00														
Gasoline Range Hydrocarbons	NWTPH Modified	66.5	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	66.5%	(50-150)	--	--	08/30/07 13:48	
Surrogate(s): 4-BFB (FID)		Recovery:	91.5%	Limits: 50-150%		"							08/30/07 13:48	
<b>LCS (7H29030-BS2)</b>														
Extracted: 08/30/07 00:00														
Benzene	NWTPH Modified	1.35	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	67.7%	(50-150)	--	--	08/30/07 14:48	
Toluene	"	1.40	---	0.100	"	"	--	"	70.2%	"	--	--	"	
Ethylbenzene	"	1.28	---	0.100	"	"	--	"	64.0%	"	--	--	"	
Xylenes (total)	"	4.01	---	0.200	"	"	--	6.00	66.8%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery:	109%	Limits: 75-133%		"							08/30/07 14:48	
<b>LCS Dup (7H29030-BSD1)</b>														
Extracted: 08/30/07 00:00														
Gasoline Range Hydrocarbons	NWTPH Modified	74.3	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	74.3%	(50-150)	11.0%	(50)	08/30/07 14:18	
Surrogate(s): 4-BFB (FID)		Recovery:	92.2%	Limits: 50-150%		"							08/30/07 14:18	
<b>LCS Dup (7H29030-BSD2)</b>														
Extracted: 08/30/07 00:00														
Benzene	NWTPH Modified	1.60	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	80.1%	(50-150)	16.8%	(50)	08/30/07 15:18	
Toluene	"	1.51	---	0.100	"	"	--	"	75.5%	"	7.32%	"	"	
Ethylbenzene	"	1.51	---	0.100	"	"	--	"	75.4%	"	16.4%	"	"	
Xylenes (total)	"	4.61	---	0.200	"	"	--	6.00	76.9%	"	14.0%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery:	108%	Limits: 75-133%		"							08/30/07 15:18	

TestAmerica - Seattle, WA

*Sandra Yakamovich*

Sandra Yakamovich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ0960191</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/05/07 15:06</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle WA

QC Batch: 7H29030      Air Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Duplicate (7H29030-DUP1)</b>		QC Source: BQH0666-02				Extracted: 08/30/07 00:00								
Gasoline Range Hydrocarbons (v/v)	NWTPH Modified	31.1	---	2.36	ppmv	1x	34.3	-	-	-	10.0%	(30)	08/30/07 13:18	
Gasoline Range Hydrocarbons	"	132	---	10.0	mg/m <sup>3</sup> Air	"	146	-	-	-	10.0%	"	"	
Benzene (v/v)	"	0.0604	---	0.0308	ppmv	"	0.0616	-	-	-	2.02%	"	"	
Toluene (v/v)	"	0.202	---	0.0261	"	"	0.232	-	-	-	14.0%	"	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	ND	-	-	-	NR	"	"	R4
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	ND	-	-	-	57.7%	"	"	R4
Benzene	"	0.196	---	0.100	mg/m <sup>3</sup> Air	"	0.200	-	-	-	2.02%	"	"	
Toluene	"	0.772	---	0.100	"	"	0.888	-	-	-	14.0%	"	"	
Ethylbenzene	"	ND	---	0.100	"	"	ND	-	-	-	NR	"	"	R4
Xylenes (total)	"	ND	---	0.200	"	"	ND	-	-	-	57.7%	"	"	R4
Surrogate(s): 4-BFB (FID)		Recovery: 90.1%	Limits: 50-150%										08/30/07 13:18	
4-BFB (PID)		99.4%	75-133%										"	

TestAmerica - Seattle, WA

*Sandra Yakamavich*  
 Sandra Yakamavich, Project Manager

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**Delta Environmental**

4006 148th Ave NE  
Redmond, WA/USA 98052

Project Name: **0960 Auburn**  
Project Number: WAZ0960191  
Project Manager: Elisabeth Silver

Report Created:  
09/05/07 15:06

### Notes and Definitions

Report Specific Notes:

- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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September 10, 2007

Elisabeth Silver  
Delta Environmental  
4006 148th Ave NE  
Redmond, WA/USA 98052

RE: 0960 Auburn

Enclosed are the results of analyses for samples received by the laboratory on 09/06/07 14:05.  
The following list is a summary of the Work Orders contained in this report, generated on 09/10/07  
16:45.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQI0106	0960 Auburn	WAZ09-6019

TestAmerica - Seattle, WA



Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/10/07 16:45</b>
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## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Effluent	BQI0106-01	Air	09/06/07 13:05	09/06/07 14:05

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Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/10/07 16:45</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B**  
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BQI0106-01 (Effluent)</b>		<b>Air</b>			<b>Sampled: 09/06/07 13:05</b>					
<b>Gasoline Range Hydrocarbons</b>	NWTPH Modified	<b>46.1</b>	---	10.0	mg/m <sup>3</sup> Air	1x	7106063	09/06/07 17:25	09/07/07 00:24	
<b>Gasoline Range Hydrocarbons (v/v)</b>	"	<b>10.9</b>	---	2.36	ppmv	"	"	"	"	
<b>Benzene (v/v)</b>	"	<b>0.0542</b>	---	0.0308	"	"	"	"	"	
<b>Toluene (v/v)</b>	"	<b>0.0960</b>	---	0.0261	"	"	"	"	"	
<b>Ethylbenzene (v/v)</b>	"	<b>ND</b>	---	0.0227	"	"	"	"	"	
<b>Xylenes, total (v/v)</b>	"	<b>0.0779</b>	---	0.0454	"	"	"	"	"	
<b>Benzene</b>	"	<b>0.176</b>	---	0.100	mg/m <sup>3</sup> Air	"	"	"	"	
<b>Toluene</b>	"	<b>0.367</b>	---	0.100	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>ND</b>	---	0.100	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>0.343</b>	---	0.200	"	"	"	"	"	
<i>Surrogate(s):</i> 4-BFB (FID)			79.7%		50 - 150 %	"				
4-BFB (PID)			100%		75 - 133 %	"				

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Curtis D. Armstrong For Sandra Yakamovich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>09/10/07 16:45</b>
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**Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7I06063**      Air Preparation Method: **EPA 5030B (PT)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7I06063-BLK1)</b>														
Extracted: 09/06/07 17:25														
Gasoline Range Hydrocarbons	NWTPH Modified	ND	---	10.0	mg/m <sup>3</sup> Air	1x	--	--	--	--	--	--	09/06/07 20:24	
Gasoline Range Hydrocarbons (v/v)	"	ND	---	2.36	ppmv	"	--	--	--	--	--	--	"	
Benzene (v/v)	"	ND	---	0.0308	"	"	--	--	--	--	--	--	"	
Toluene (v/v)	"	ND	---	0.0261	"	"	--	--	--	--	--	--	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	--	--	--	--	--	--	"	
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.100	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery:	89.3%	Limits: 50-150%		"							09/06/07 20:24	
4-BFB (PID)			104%	75-133%		"							"	


<b>LCS (7I06063-BS1)</b>														
Extracted: 09/06/07 17:25														
Gasoline Range Hydrocarbons	NWTPH Modified	133	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	133%	(50-150)	--	--	09/06/07 20:54	
Surrogate(s): 4-BFB (FID)		Recovery:	96.6%	Limits: 50-150%		"							09/06/07 20:54	

<b>LCS (7I06063-BS2)</b>														
Extracted: 09/06/07 17:25														
Benzene	NWTPH Modified	1.89	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	94.7%	(50-150)	--	--	09/06/07 21:54	
Toluene	"	1.82	---	0.100	"	"	--	"	90.8%	"	--	--	"	
Ethylbenzene	"	1.83	---	0.100	"	"	--	"	91.4%	"	--	--	"	
Xylenes (total)	"	5.56	---	0.200	"	"	--	6.00	92.7%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery:	106%	Limits: 75-133%		"							09/06/07 21:54	

<b>LCS Dup (7I06063-BSD1)</b>														
Extracted: 09/06/07 17:25														
Gasoline Range Hydrocarbons	NWTPH Modified	120	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	120%	(50-150)	10.1%	(50)	09/06/07 21:24	
Surrogate(s): 4-BFB (FID)		Recovery:	93.2%	Limits: 50-150%		"							09/06/07 21:24	

<b>LCS Dup (7I06063-BSD2)</b>														
Extracted: 09/06/07 17:25														
Benzene	NWTPH Modified	1.70	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	84.9%	(50-150)	10.8%	(50)	09/06/07 22:24	
Toluene	"	1.61	---	0.100	"	"	--	"	80.4%	"	12.1%	"	"	
Ethylbenzene	"	1.64	---	0.100	"	"	--	"	82.2%	"	10.6%	"	"	
Xylenes (total)	"	4.96	---	0.200	"	"	--	6.00	82.6%	"	11.6%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery:	103%	Limits: 75-133%		"							09/06/07 22:24	

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 Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ09-6019</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>-09/10/07 16:45</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7106063**      Air Preparation Method: **EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Duplicate (7106063-DUP1)</b>			QC Source: BQI0106-01			Extracted: 09/06/07 17:25								
Gasoline Range Hydrocarbons (v/v)	NWTPH Modified	11.6	--	2.36	ppmv	1x	10.9	--	--	--	6.27% (30)		09/07/07 00:54	
Gasoline Range Hydrocarbons	"	49.0	--	10.0	mg/m <sup>3</sup> Air	"	46.1	--	--	--	6.27%	"	"	
Benzene (v/v)	"	0.0377	--	0.0308	ppmv	"	0.0542	--	--	--	36.0%	"	"	
Toluene (v/v)	"	0.0934	--	0.0261	"	"	0.0960	--	--	--	2.70%	"	"	R4
Ethylbenzene (v/v)	"	ND	--	0.0227	"	"	ND	--	--	--	84.2%	"	"	
Xylenes, total (v/v)	"	ND	--	0.0454	"	"	0.0779	--	--	--	63.1%	"	"	R4
Benzene	"	0.122	--	0.100	mg/m <sup>3</sup> Air	"	0.176	--	--	--	36.0%	"	"	R4
Toluene	"	0.358	--	0.100	"	"	0.367	--	--	--	2.70%	"	"	R4
Ethylbenzene	"	ND	--	0.100	"	"	ND	--	--	--	84.2%	"	"	R4
Xylenes (total)	"	ND	--	0.200	"	"	0.343	--	--	--	63.1%	"	"	R4
Surrogate(s): 4-BFB (FID)		Recovery: 84.1%		Limits: 50-150%		"						09/07/07 00:54		
4-BFB (PID)		102%		75-133%		"						"		

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Curtis D. Armstrong For Sandra Yakamavich, Project Manager



**Delta Environmental**

4006 148th Ave NE  
Redmond, WA/USA 98052

Project Name: **0960 Auburn**  
Project Number: **WAZ09-6019**  
Project Manager: **Elisabeth Silver**

Report Created:  
09/10/07 16:45

## Notes and Definitions

### Report Specific Notes:

- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

### Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Curtis D. Armstrong For Sandra Yakamavich, Project Manager



## CHAIN OF CUSTODY REPORT

Work Order #: **BOI 0106**

CLIENT: <b>Delta</b>		INVOICE TO: <b>Attn: Elisabeth Silven Delta Consultants</b>		<b>TURNAROUND REQUEST</b> In Business Days * Organic & Inorganic Analyses STD: [10] [7] [5] [4] [3] [2] [1] [<1] Petroleum Hydrocarbon Analyses STD: [5] [4] [3] [2] [1] [<1] OTHER Specify: _____ * Turnaround Requests less than standard may incur Rush Charges.						
REPORT TO: <b>Elisabeth Silven</b> ADDRESS: <b>4006 143rd Ave NE Redmond, WA 98052</b>		P.O. NUMBER:								
PHONE: <b>425 498 7736</b> FAX:		PROJECT NAME: <b>0960 Auburn</b>		PRESERVATIVE REQUESTED ANALYSES						
PROJECT NUMBER: <b>WA209-6019</b>		SAMPLED BY: <b>Javan Ruark</b>								
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NUTRA-2 X-OTEX					MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1. Effluent	9/6/07/13:05		X	X						
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
RELEASED BY: <b>Javan Ruark</b>	DATE: <b>9/06/07</b>	RECEIVED BY: <b>Patricia Cramble</b>	DATE: <b>9/6/07</b>							
PRINT NAME: <b>Javan Ruark</b>	TIME: <b>11:05</b>	PRINT NAME: <b>Cathy Cramble</b>	TIME: <b>11:05</b>							
RELEASED BY:	DATE:	RECEIVED BY:	DATE:							
PRINT NAME:	TIME:	PRINT NAME:	TIME:							
ADDITIONAL REMARKS:										

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and for any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice unless otherwise contracted. Sample(s) will be disposed of after 30 days unless otherwise contracted.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400  
BOTHELL, WA 98011-8244  
PH: (425) 420.9200 FAX: (425) 420.9210

October 04, 2007

Elisabeth Silver  
Delta Environmental  
4006 148th Ave NE  
Redmond, WA/USA 98052

RE: 0960 Auburn

Enclosed are the results of analyses for samples received by the laboratory on 09/27/07 17:15.  
The following list is a summary of the Work Orders contained in this report, generated on 10/04/07  
16:51.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQI0633	0960 Auburn	WAZ096619-1

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ096619-1</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: 10/04/07 16:51
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## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Influent	BQI0633-01	Air	09/26/07 15:45	09/27/07 17:15
Effluent	BQI0633-02	Air	09/26/07 16:25	09/27/07 17:15

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*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ096619-1</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>10/04/07 16:51</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B**  
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BQI0633-01 (Influent)</b>	<b>Air</b>									
<b>Sampled: 09/26/07 15:45</b>										
Benzene (v/v)	NWTPH Modified	0.769	—	0.0308	ppmv	1x	7128026	09/28/07 10:00	09/28/07 18:20	
Toluene (v/v)	"	3.76	—	0.0261	"	"	"	"	"	
Ethylbenzene (v/v)	"	ND	—	0.0227	"	"	"	"	"	
Xylenes, total (v/v)	"	0.183	—	0.0454	"	"	"	"	"	
Benzene	"	2.50	—	0.100	mg/m <sup>3</sup> Air	"	"	"	"	
Toluene	"	14.4	—	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	—	0.100	"	"	"	"	"	
Xylenes (total)	"	0.807	—	0.200	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)			106%		75 - 125 %	"				
<b>BQI0633-01RE1 (Influent)</b>	<b>Air</b>									
<b>Sampled: 09/26/07 15:45</b>										
Gasoline Range Hydrocarbons	NWTPH Modified	689	—	50.0	mg/m <sup>3</sup> Air	5x	7302017	10/02/07 09:10	10/02/07 15:52	H2
Gasoline Range Hydrocarbons (v/v)	"	162	—	11.8	ppmv	"	"	"	"	
Surrogate(s): 4-BFB (FID)			94.3%		70 - 150 %	1x				
<b>BQI0633-02 (Effluent)</b>	<b>Air</b>									
<b>Sampled: 09/26/07 16:25</b>										
Gasoline Range Hydrocarbons	NWTPH Modified	152	—	10.0	mg/m <sup>3</sup> Air	1x	7128026	09/28/07 10:00	09/28/07 14:30	
Gasoline Range Hydrocarbons (v/v)	"	35.9	—	2.36	ppmv	"	"	"	"	
Benzene (v/v)	"	0.190	—	0.0308	"	"	"	"	"	
Toluene (v/v)	"	0.174	—	0.0261	"	"	"	"	"	
Ethylbenzene (v/v)	"	ND	—	0.0227	"	"	"	"	"	
Xylenes, total (v/v)	"	ND	—	0.0454	"	"	"	"	"	
Benzene	"	0.618	—	0.100	mg/m <sup>3</sup> Air	"	"	"	"	
Toluene	"	0.668	—	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	—	0.100	"	"	"	"	"	
Xylenes (total)	"	ND	—	0.200	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			77.8%		70 - 150 %	"				
4-BFB (PID)			105%		75 - 125 %	"				

TestAmerica - Seattle, WA

*Sandra Yakamavich*  
 Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ096619-1</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>10/04/07 16:51</b>
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**Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7I28026**      Air Preparation Method: **EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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**Blank (7I28026-BLK1)** Extracted: 09/28/07 10:00

Gasoline Range Hydrocarbons (v/v)	NWTPH Modified	ND	---	2.36	ppmv	1x	--	--	--	--	--	--	09/28/07 10:59	
Gasoline Range Hydrocarbons	"	ND	---	10.0	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Benzene (v/v)	"	ND	---	0.0308	ppmv	"	--	--	--	--	--	--	"	
Toluene (v/v)	"	ND	---	0.0261	"	"	--	--	--	--	--	--	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	--	--	--	--	--	--	"	
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.100	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery:	89.3%	Limits:	70-150%	"							09/28/07 10:59	
4-BFB (PID)		Recovery:	103%	Limits:	75-125%	"							"	

**LCS (7I28026-BS1)** Extracted: 09/28/07 10:00

Gasoline Range Hydrocarbons	NWTPH Modified	73.9	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	73.9%	(50-150)	--	--	09/28/07 11:29	
Surrogate(s): 4-BFB (FID)		Recovery:	91.3%	Limits:	70-150%	"							09/28/07 11:29	

**LCS (7I28026-BS2)** Extracted: 09/28/07 10:00

Benzene	NWTPH Modified	1.81	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	90.6%	(50-150)	--	--	09/28/07 12:29	
Toluene	"	1.78	---	0.100	"	"	--	"	89.2%	"	--	--	"	
Ethylbenzene	"	1.76	---	0.100	"	"	--	"	88.1%	"	--	--	"	
Xylenes (total)	"	5.42	---	0.200	"	"	--	6.00	90.3%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery:	107%	Limits:	75-125%	"							09/28/07 12:29	

**LCS Dup (7I28026-BSD1)** Extracted: 09/28/07 10:00

Gasoline Range Hydrocarbons	NWTPH Modified	70.3	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	70.3%	(50-150)	4.97%	(50)	09/28/07 11:59	
Surrogate(s): 4-BFB (FID)		Recovery:	88.4%	Limits:	70-150%	"							09/28/07 11:59	

**LCS Dup (7I28026-BSD2)** Extracted: 09/28/07 10:00

Benzene	NWTPH Modified	1.91	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	95.4%	(50-150)	5.21%	(50)	09/28/07 12:59	
Toluene	"	1.79	---	0.100	"	"	--	"	89.6%	"	0.391%	"	"	
Ethylbenzene	"	1.82	---	0.100	"	"	--	"	91.0%	"	3.15%	"	"	
Xylenes (total)	"	5.53	---	0.200	"	"	--	6.00	92.1%	"	2.02%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery:	108%	Limits:	75-125%	"							09/28/07 12:59	

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*Sandra Yakamavich*  
 Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	<b>Project Name:</b> 0960 Auburn <b>Project Number:</b> WAZ096619-1 <b>Project Manager:</b> Elisabeth Silver	<b>Report Created:</b> 10/04/07 16:51
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**Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

**QC Batch: 7I28026**      **Air Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Duplicate (7I28026-DUP1)</b>		<b>QC Source: BQI0635-01      Extracted: 09/28/07 10:00</b>												
Gasoline Range Hydrocarbons	NWTPH Modified	96.4	---	10.0	mg/m <sup>3</sup> Air	1x	106	--	--	--	9.58% (30)		09/28/07 15:30	
Gasoline Range Hydrocarbons (v/v)	"	22.7	---	2.36	ppmv	"	25.0	--	--	--	9.58% "		"	
Benzene (v/v)	"	0.202	---	0.0308	"	"	0.209	--	--	--	3.54% "		"	
Toluene (v/v)	"	0.0721	---	0.0261	"	"	0.0657	--	--	--	9.25% "		"	
Ethylbenzene (v/v)	"	0.0297	---	0.0227	"	"	0.0332	--	--	--	11.3% "		"	
Xylenes, total (v/v)	"	0.204	---	0.0454	"	"	0.208	--	--	--	1.94% "		"	
Benzene	"	0.654	---	0.100	mg/m <sup>3</sup> Air	"	0.678	--	--	--	3.54% "		"	
Toluene	"	0.276	---	0.100	"	"	0.252	--	--	--	9.25% "		"	
Ethylbenzene	"	0.131	---	0.100	"	"	0.146	--	--	--	11.3% "		"	
Xylenes (total)	"	0.898	---	0.200	"	"	0.916	--	--	--	1.94% "		"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 100%</i>		<i>Limits: 70-150%</i>								<i>09/28/07 15:30</i>		
<i>4-BFB (PID)</i>		<i>107%</i>		<i>75-125%</i>								<i>"</i>		

**QC Batch: 7J02017**      **Air Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7J02017-BLK1)</b>		<b>Extracted: 10/02/07 09:10</b>												
Gasoline Range Hydrocarbons (v/v)	NWTPH Modified	ND	---	2.36	ppmv	1x	--	--	--	--	--	--	10/02/07 10:38	
Gasoline Range Hydrocarbons	"	ND	---	10.0	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Benzene (v/v)	"	ND	---	0.0308	ppmv	"	--	--	--	--	--	--	"	
Toluene (v/v)	"	ND	---	0.0261	"	"	--	--	--	--	--	--	"	
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	--	--	--	--	--	--	"	
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.100	mg/m <sup>3</sup> Air	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 87.4%</i>		<i>Limits: 70-150%</i>								<i>10/02/07 10:38</i>		
<i>4-BFB (PID)</i>		<i>104%</i>		<i>75-125%</i>								<i>"</i>		

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*Sandra Yakamavich*  
 Sandra Yakamavich, Project Manager

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<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	<b>Project Name:</b> 0960 Auburn <b>Project Number:</b> WAZ096619-1 <b>Project Manager:</b> Elisabeth Silver	<b>Report Created:</b> 10/04/07 16:51
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

**QC Batch:** 7J02017      **Air Preparation Method:** EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**LCS (7J02017-BS1)** Extracted: 10/02/07 09:10

Gasoline Range Hydrocarbons	NWTPH Modified	71.0	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	71.0%	(50-150)	--	--	10/02/07 12:08	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.6%</i>		<i>Limits: 70-150%</i>										10/02/07 12:08

**LCS (7J02017-BS2)** Extracted: 10/02/07 09:10

Benzene	NWTPH Modified	1.72	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	85.8%	(50-150)	--	--	10/02/07 13:09	
Toluene	"	1.62	---	0.100	"	"	--	"	81.0%	"	--	--	"	
Ethylbenzene	"	1.60	---	0.100	"	"	--	"	80.0%	"	--	--	"	
Xylenes (total)	"	4.88	---	0.200	"	"	--	6.00	81.4%	"	--	--	"	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 105%</i>		<i>Limits: 75-125%</i>										10/02/07 13:09

**LCS Dup (7J02017-BSD1)** Extracted: 10/02/07 09:10


Gasoline Range Hydrocarbons	NWTPH Modified	71.1	---	10.0	mg/m <sup>3</sup> Air	1x	--	100	71.1%	(50-150)	0.180%	(50)	10/02/07 12:39	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 99.2%</i>		<i>Limits: 70-150%</i>										10/02/07 12:39

**LCS Dup (7J02017-BSD2)** Extracted: 10/02/07 09:10

Benzene	NWTPH Modified	1.65	---	0.100	mg/m <sup>3</sup> Air	1x	--	2.00	82.4%	(50-150)	3.96%	(50)	10/02/07 13:39	
Toluene	"	1.51	---	0.100	"	"	--	"	75.7%	"	6.72%	"	"	
Ethylbenzene	"	1.55	---	0.100	"	"	--	"	77.5%	"	3.10%	"	"	
Xylenes (total)	"	4.71	---	0.200	"	"	--	6.00	78.5%	"	3.64%	"	"	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 106%</i>		<i>Limits: 75-125%</i>										10/02/07 13:39

**Duplicate (7J02017-DUP1)** QC Source: BQJ0019-01      Extracted: 10/02/07 09:10

Gasoline Range Hydrocarbons (v/v)	NWTPH Modified	ND	---	2.36	ppmv	1x	ND	--	--	--	9.08%	(30)	10/02/07 15:22	R4
Gasoline Range Hydrocarbons	"	ND	---	10.0	mg/m <sup>3</sup> Air	"	ND	--	--	--	9.08%	"	"	R4
Benzene (v/v)	"	ND	---	0.0308	ppmv	"	ND	--	--	--	NR	"	"	R4
Toluene (v/v)	"	ND	---	0.0261	"	"	ND	--	--	--	32.7%	"	"	R4
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	ND	--	--	--	50.0%	"	"	R4
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	ND	--	--	--	34.9%	"	"	R4
Benzene	"	ND	---	0.100	mg/m <sup>3</sup> Air	"	ND	--	--	--	NR	"	"	R4
Toluene	"	ND	---	0.100	"	"	ND	--	--	--	32.7%	"	"	R4
Ethylbenzene	"	ND	---	0.100	"	"	ND	--	--	--	50.0%	"	"	R4
Xylenes (total)	"	ND	---	0.200	"	"	ND	--	--	--	34.9%	"	"	R4
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 83.6%</i>		<i>Limits: 70-150%</i>										10/02/07 15:22
<i>4-BFB (PID)</i>		<i>105%</i>		<i>75-125%</i>										"

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 Sandra Yakamavich, Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

<b>Delta Environmental</b> 4006 148th Ave NE Redmond, WA/USA 98052	Project Name: <b>0960 Auburn</b> Project Number: <b>WAZ096619-1</b> Project Manager: <b>Elisabeth Silver</b>	Report Created: <b>10/04/07 16:51</b>
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**Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

QC Batch: **7J02017**      Air Preparation Method: **EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Duplicate (7J02017-DUP2)</b>		QC Source: <b>BQJ0019-02</b>				Extracted: <b>10/02/07 09:10</b>								
Gasoline Range Hydrocarbons	NWTPH Modified	27.4	---	10.0	mg/m <sup>3</sup> Air	1x	25.3	--	--	--	8.11% (30)		10/02/07 18:24	
Gasoline Range Hydrocarbons (v/v)	"	6.46	---	2.36	ppmv	"	5.96	--	--	--	8.11% "	"	"	
Benzene (v/v)	"	0.0348	---	0.0308	"	"	0.0330	--	--	--	5.45% "	"	"	
Toluene (v/v)	"	ND	---	0.0261	"	"	ND	--	--	--	4.04% "	"	"	R4
Ethylbenzene (v/v)	"	ND	---	0.0227	"	"	ND	--	--	--	3.51% "	"	"	R4
Xylenes, total (v/v)	"	ND	---	0.0454	"	"	ND	--	--	--	1.90% "	"	"	R4
Benzene	"	0.113	---	0.100	mg/m <sup>3</sup> Air	"	0.107	--	--	--	5.43% "	"	"	R4
Toluene	"	ND	---	0.100	"	"	ND	--	--	--	4.04% "	"	"	R4
Ethylbenzene	"	ND	---	0.100	"	"	ND	--	--	--	3.51% "	"	"	R4
Xylenes (total)	"	ND	---	0.200	"	"	ND	--	--	--	1.90% "	"	"	R4
Surrogate(s): <b>4-BFB (FID)</b>		Recovery: <b>86.3%</b>		Limits: <b>70-150%</b>		"						10/02/07 18:24		
<b>4-BFB (PID)</b>		<b>108%</b>		<b>75-125%</b>		"						"		

TestAmerica - Seattle, WA

*Sandra Yakamavich*

Sandra Yakamavich, Project Manager

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**Delta Environmental**

4006 148th Ave NE  
Redmond, WA/USA 98052

Project Name: **0960 Auburn**  
Project Number: WAZ096619-1  
Project Manager: Elisabeth Silver

Report Created:  
10/04/07 16:51

## Notes and Definitions

### Report Specific Notes:

- H2 - Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

### Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Sandra Yakamavich, Project Manager

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## CHAIN OF CUSTODY REPORT

Work Order #: **DOI 0633**

CLIENT: <b>Delta Consultants</b>				INVOICE TO: <b>Delta Consultants</b>				<b>TURNAROUND REQUEST</b> In Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 STD. Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 STD. OTHER Specify: _____ * Turnaround Requests less than standard may incur Rush Charges.							
REPORT TO: <b>Elisabeth Silver</b>				ATTN: <b>Elisabeth Silver</b>											
ADDRESS: <b>4006 148th Ave. Redmond, WA</b>				P.O. NUMBER:											
PHONE: <b>425-498-7736</b> FAX:															
PROJECT NAME: <b>0960 Auburn</b>				PRESERVATIVE											
PROJECT NUMBER: <b>WA2096619-1</b>				REQUESTED ANALYSES											
SAMPLED BY: <b>AF</b>															
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME		MUTPH-GIX	BTEX					MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID		
1 Influent		9-26-07/15:45		X	X					A	1		01		
2 Effluent		9-26-07/16:25		X	X					A	1		02		
3															
4															
5															
6															
7															
8															
9															
10															
RELEASED BY: <b>[Signature]</b>				DATE: <b>9/27/07</b>				RECEIVED BY: <b>[Signature]</b>				DATE: <b>9/27/07</b>			
PRINT NAME: <b>Arie Fuhrman</b>				FIRM: <b>Delta</b>				PRINT NAME: <b>Tom [Signature]</b>				FIRM: <b>TA</b>			
RELEASED BY:				DATE:				RECEIVED BY:				DATE:			
PRINT NAME:				FIRM:				PRINT NAME:				FIRM:			
ADDITIONAL REMARKS:				TIME:				TIME:				TIME:			