



## **PERIODIC REVIEW**

**Brand – X Station  
F/S ID #: 521**

**1705 West Lincoln Avenue  
Yakima, Washington 98902**

**Central Region Office**

**TOXICS CLEANUP PROGRAM**

**July 18, 2008**

<b>PERIODIC REVIEW .....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b>2.0 SUMMARY OF SITE CONDITIONS.....</b>	<b>2</b>
2.1 Site History .....	2
<b>3.0 PERIODIC REVIEW .....</b>	<b>4</b>
3.1 Effectiveness of completed cleanup actions .....	4
3.2 New scientific information for individual hazardous substances for mixtures present at the site. ....	4
3.3 New applicable state and federal laws for hazardous substances present at the Site .....	4
3.4 Current and projected site use.....	5
3.5 Availability and practicability of higher preference technologies .....	5
3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels. ....	5
<b>4.0 CONCLUSIONS .....</b>	<b>6</b>
<b>5.0 REFERENCES.....</b>	<b>7</b>
<b>6.0 APPENDICIES .....</b>	<b>8</b>
6.1 Vicinity Map .....	9
6.2 Site Plan .....	10
6.3 Environmental Covenant .....	11
6.4 Photo log .....	16
6.5 Laboratory Report.....	18

## 1.0 INTRODUCTION

This document is the Department of Ecology's review of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the Brand X Station property (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 WAC.

Cleanup actions at this Site were completed under the Voluntary Cleanup Program. The cleanup actions resulted in residual concentrations of gasoline range petroleum hydrocarbons (TPH-G) exceeding MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). WAC 173-340-420 (1) requires that "if the department selects or approves a cleanup action that results in hazardous substances remaining at a site at concentrations which exceed Method A or Method B cleanup levels established under WAC 173-340-700 through 173-340-760 or if conditional points of compliance have been established, the department shall review the cleanup action no less frequently than every five years after the initiation of such cleanup action to ensure that human health and the environment are being protected".

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(2)]:

- (a) The effectiveness of ongoing or completed cleanup actions;
- (b) New scientific information for individual hazardous substances of mixtures present at the site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the site register and provide an opportunity for public comment.

## **2.0 SUMMARY OF SITE CONDITIONS**

### **2.1 Site History**

The Brand X Station Site is located in the City of Yakima, Yakima County, Washington. A vicinity map is available as Appendix 6.1 and a Site plan is available as Appendix 6.2. Following remedial activity in 1992 and 1993, a restrictive covenant (Appendix 6.3) was recorded for the property and the Site received a No Further Action determination in 2001.

In 1988, a leaking flange on a submersible pump resulted in a release of 1,200 to 1,500 gallons of gasohol from an underground storage tank (UST) at the Site. This release resulted in vapor intrusion into the basement of a nearby residence.

Interim remedial actions including repair of the leaking flange and the installation and operation of a groundwater pump and treat remediation system were implemented. The groundwater treatment system consisted of a recovery well, granular activated carbon units (GACs), and a soil vapor extraction system (SVE). The groundwater treatment system pumped water from the recovery well at approximately 40 gallons per minute. The recovered groundwater was passed through the GAC units and discharged to the city sewer system. The SVE system created a vacuum on the recovery well and discharge soil vapors directly to the atmosphere. The groundwater remediation system was operated until 1990 when contaminants were no longer detectable in the discharge from the groundwater extraction well. Approximately 6.4 million gallons of groundwater were extracted and treated with this system.

Groundwater monitoring continued until 1991 when it was halted due to insufficient funding and bankruptcy of the R.H. Bowles Company. The three remaining USTs were closed in the fall of 1992. Following the UST closure, remedial activities were restarted. A total of 3,900 cubic yards of petroleum hydrocarbon contaminated soils (PCS) were removed from the site and disposed of at the Anderson Landfill in Yakima, Washington. Additional groundwater recovery and treatment was conducted directly from the excavation. Confirmational soil samples collected from the limits of the excavation indicated minor exceedances of TPH-G at the lower south and east sidewalls.

Following the remedial excavation, continued groundwater monitoring did not indicate the presence of contamination exceeding MTCA Method A cleanup levels at the site or in surrounding groundwater monitoring wells. One sample collected directly from the water in the excavation indicated the presence of xylenes at 89 parts per million. Due to the lack of a pathway for human contact to this contamination, no further remedial activities were conducted.

Following remedial activities, the site was repaved with asphalt. The Site was returned to commercial use and was eventually used as a fast food restaurant. One monitoring well was left intact at the Site.

After entering the Voluntary Cleanup Program in 1999, a restrictive covenant was recorded for the property, and a No Further Action determination was issued in August 2001.

In 2008, as part of this periodic review, the remaining monitoring well at east edge of the Site was sampled and analyzed for TPH-G and benzene, toluene, ethylbenzene and xylenes (BTEX). Contaminants were not detected in the sample above laboratory detection limits.

## **3.0 PERIODIC REVIEW**

### **3.1 Effectiveness of completed cleanup actions**

The excavation conducted during the interim action eliminated the human exposure pathways (ingestion, contact) to highly contaminated soils and free product at the Site. The asphalt cap on the Site continues to prevent direct contact with the contaminated soils. Based upon the site visit conducted on July 11, 2008, no repair, maintenance or contingency actions have been required. A photo log is available as Appendix 6.4.

The Restrictive Covenant for the Site was recorded and is in place. Appendix 6.3 is a copy of the Restrictive Covenant for the Site. This Restrictive Covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Restrictive Covenant serves to assure the long term integrity of the cap.

A groundwater sample was collected from the remaining monitoring well on the east edge of the Site during the site visit on July 11, 2008. TPH-G and BTEX were not detected in the sample above laboratory detection limits.

#### **Conclusions:**

Soils with TPH concentrations higher than the 100 mg/Kg Method A cleanup level are still present at the Site. However, the asphalt cap and the clean soil cap prevent the human exposure of the TPH by ingestion and direct contact with soils. The Restrictive Covenant for the property will ensure that the integrity of the caps will be protected through maintaining the current use of the Site.

### **3.2 New scientific information for individual hazardous substances for mixtures present at the site**

There is no new scientific information for the petroleum contaminants related to the Site.

### **3.3 New applicable state and federal laws for hazardous substances present at the Site**

The cleanup at the Site was governed by Chapter 173-340 WAC (1996 ed.). WAC 173-340-702(12)(c) [2001 ed.] provides that,

---

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

Although cleanup levels changed for gasoline, diesel, and volatile organic compounds as a result of modifications to MTCA in 2001, contamination remains at the Site above MTCA Method A cleanup levels and the cleanup action is still protective of human health and the environment.

### **3.4 Current and projected site use**

The Site is currently used for commercial purposes. There have been no changes in current or projected future site or resource uses.

### **3.5 Availability and practicability of higher preference technologies**

The remedy implemented included removal/recycling of hazardous substances as well as containment, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

### **3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels**

The analytical methods used at the time of the remedial action were capable of detection well below MTCA Method A cleanup levels for the contaminants of concern. The presence of improved analytical techniques would not effect decisions or recommendations made for the Site.

## 4.0 CONCLUSIONS

- The cleanup actions completed at the Site is protective of human health and the environment.
- Soils cleanup levels have not been met at the Site; however, under WAC 173-340-740(6)(d), the cleanup action is determined to comply with cleanup standards, since the long-term integrity of the containment system is ensured and the requirements for containment technologies in WAC 173-340-360(8) have been met.
- The Restrictive Covenant for the property is in place and will be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant have been satisfactorily completed. No additional actions are required by the property owner. It is the property owner's responsibility to continue to inspect the site to assure that the integrity of the cap is maintained.

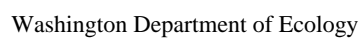
## **5.0 REFERENCES**

- Delta Environmental Consultants, Inc., 1988, Preliminary Hydrogeologic Assessment
- Delta Environmental Consultants, Inc., 1988, Phase II Hydrogeologic Assessment
- Delta Environmental Consultants, Inc., 1989, Remedial Action Report
- Delta Environmental Consultants, Inc., 1989, Remedial Action Report
- Delta Environmental Consultants, Inc., 1989, Quarterly Monitoring/Remediation Report
- Delta Environmental Consultants, Inc., 1990, Quarterly Monitoring Report
- Seacor, 1990, Quarterly Monitoring Report
- Seacor, 1991, Semi-Annual Monitoring Report
- Seacor, 1993, Final Status Report
- Seacor, 1993, Final Status Report
- Chen Northern, 1993, Phase II Environmental Assessment
- GN Northern, 1996, Quarterly Groundwater Monitoring Report
- GN Northern, 1996, Quarterly Groundwater Monitoring Report
- GN Northern, 1996, Quarterly Groundwater Monitoring Report
- GN Northern, 1997, Quarterly Groundwater Monitoring Report
- Pacific Southwest Group, 1998, Phase I Environmental Site Assessment and Limited  
Phase II Subsurface Investigation
- Pacific Southwest Group, 1998, Supplemental Phase II Subsurface Soil and Groundwater  
Investigation
- GN Northern, 1999, Groundwater Monitoring Status Report

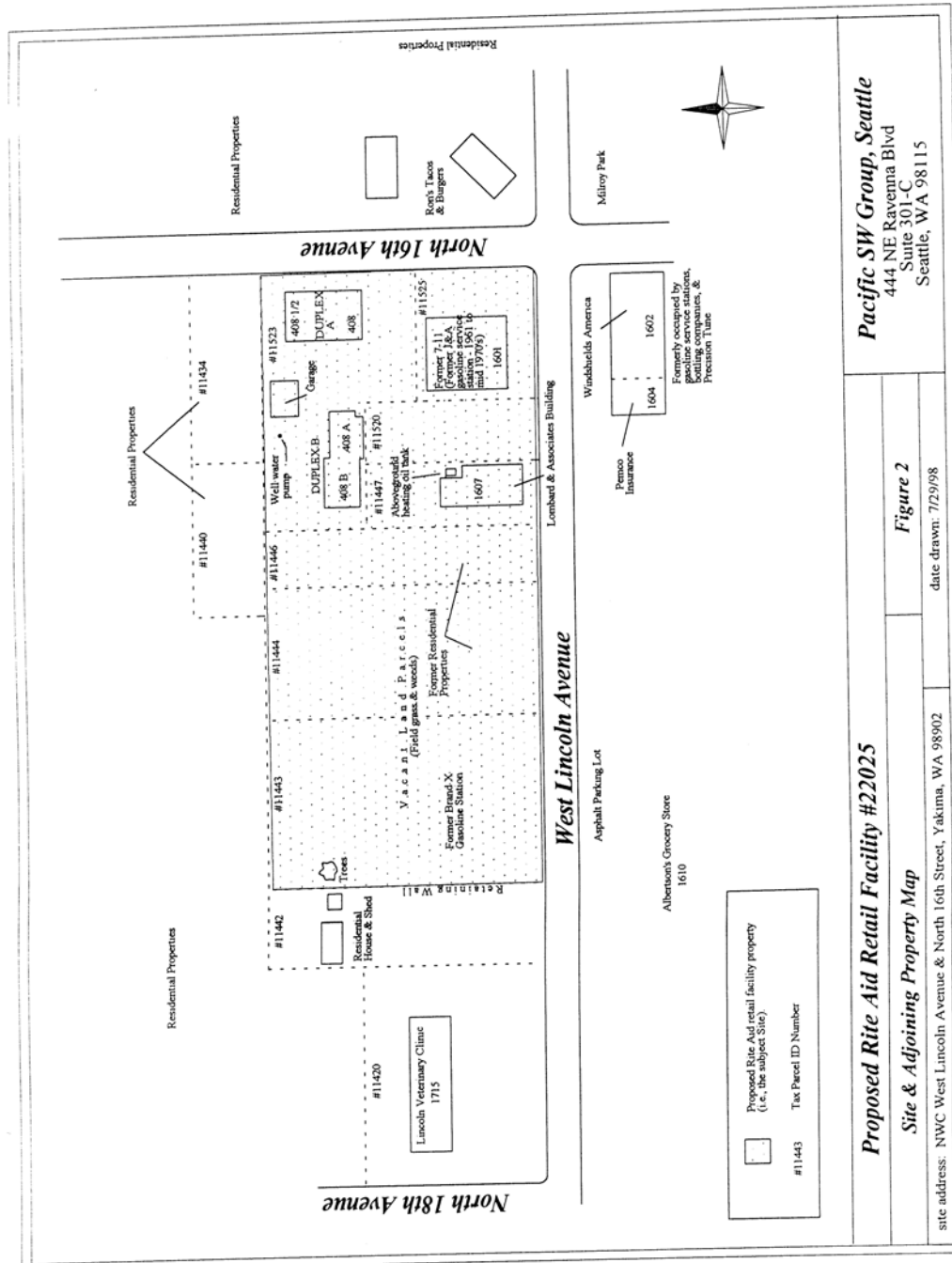
---

## **6.0 APPENDICIES**

## Brand-X Station



## 6.2 Site Plan



## 6.3 Environmental Covenant

Return Address

Herbert L. Ritter  
P.O. Box 8514  
Spokane, WA 99203

Please print neatly or type information

Document Title: Restrictive Covenant

Reference #s: \_\_\_\_\_

Additional reference #s on page \_\_\_\_\_

Grantors:

Mr. Herbert L. Ritter

Grantees:

The Public

Additional grantors on page \_\_\_\_\_

Additional grantees on page \_\_\_\_\_

Legal Description (abbreviated form: i.e. lot, blk, plat or S, L, R, quarter/quarter)  
Portion of Lot 40, Lewis-Terry Garden Tracts  
Additional legal is on page \_\_\_\_\_

Legal Description (abbreviated form: i.e. lot, blk, plat or S, L, R, quarter/quarter)

Portion of Lot 40, Lewis-Terry Garden Tracts

Additional legal is on page \_\_\_\_\_

Assessor's Property Tax Parcel/Account Number

81323-1443

☐ Emergency nonstandard document recording: I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.

Signature: \_\_\_\_\_

The Auditor/Recorder will rely on the information provided on this form. The Clerk will not read the document to verify the accuracy or completeness of the recording information provided herein.



7211448  
Page: 1 of 5  
04/18/2008 08:47P  
Yakima Co. WA

### RESTRICTIVE COVENANT

Herbert L. Ritter, owner, 115 W. Lincoln Avenue, Yakima, Washington.

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Herbert L. Ritter, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology")

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

1. Site Plan, Index & General Notes-Drawing, Written by The Southland Corporation, dated July 2, 1980
2. Preliminary Hydrogeological Assessment, written by Delta Environmental Consultants, Inc. (Delta), dated June 29, 1988.
3. Phase II Hydrogeological Assessment, written by Delta, dated October 13, 1988.
4. Remedial Action Report, written by Delta, dated January 5, 1989.
5. Remedial Action Report written by Delta, dated April 5, 1989.
6. Quarterly Monitoring/Remedial Action Report, written by Delta, dated July 7, 1989.
7. Quarterly Monitoring/Remedial Action Report, written by Delta, dated October 6, 1989 Phase II environmental Site Assessment, written by Chen-Northern, Inc., dated June, 1993.
8. Phase II Environmental Site Assessment, written by Chen-Northern, Inc., dated June, 1993.
9. Final Status Report, written by Seacor, dated July 7, 1993.
10. Letters written by Underwood, Campbell, Brock & Cerulli, dates November 3, and December 8, 1993.
11. Status Letter & Quarterly Groundwater Monitoring Reports, written by CN Northern, Inc. dated May 6, 1996 and February 3, 1997
12. Phase I ESA & Limited Phase II subsurface Investigation, written by Pacific S W Group, dated July 31, 1998.



GERALD R. KELLEN

CJ

8.2.00

7211448  
Page: 2 of 2  
30/15/2001 02:47P  
Yakima Co, WA

- 13 Supplemental Phase II Subsurface Investigation, written by Pacific SW Group, dated October 30, 1998
14. Groundwater Sampling Status Letter Report, written by Pacific SW Group, dated January 15, 1999
- 15 Groundwater Sampling Activity Report, written by White Shield, Inc., dated April 9, 2001.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of petroleum contaminated soils which exceed the Model Toxics Control Act.

The undersigned, Herbert L. Ritter, is the fee owner of real property (hereafter "Property") in the County of Yakima County, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described as: That portion of Lot 40, the Lewis-Terry Garden Tracts, as recorded in Volume "F" of Plats, Page 15, described as follows:

Beginning at a point on the South line of said lot 330 Feet West of the SE Corner thereof; thence Northerly parallel with the East line of said lot, 215 Feet, more or less, to the North line of the S  $\frac{1}{2}$  of said Lot 40; thence Westerly along said line 200 Feet, more or less, to the West line of said Lot; thence Southerly along said West line 215 Feet, more or less, to the South line of said Lot; thence East along the South line of said Lot, 200 Feet, more or less, to the point of beginning. Except the West 65 Feet thereof; and except the South 7 Feet conveyed to the City of Yakima by instrument recorded June 8, 1984 under Auditor's File No. 2705736

Herbert L. Ritter makes the following declaration as to limitations, restrictions and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

**Section 1:** "The Southern most portion of the Property contains contaminated soil located under the sidewalk. The Owner shall not alter, modify or remove the contaminated soil area in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without properly written approval from Ecology."

**Section 2:** Any activity on the Property that may interfere with continued protection of human health and the environment is prohibited.

**Section 3:** Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without properly written approval from Ecology



**Section 4:** The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation and maintenance of the Remedial Action.

**Section 5:** The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

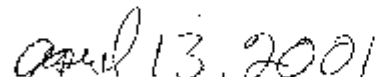
**Section 6:** The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 7:** The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect Remedial Actions conducted at the Property, and to inspect records that are related to the Remedial Action.

**Section 8:** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.



Herbert L. Ritter, Owner

  
Date Signed



3



7211448  
Page: 4 of 5  
54/16/2001 02:47P  
Yakima Co, WA

State of Washington  
County of Spokane

I certify that I know or have satisfactory evidence that  
Wendy R. Heron is the person who appeared before  
me, and said person acknowledged that (he/she) signed this  
instrument and acknowledged it to be (his/her) free and voluntary  
act for the uses and purposes mentioned in the instrument  
Dated 07-13-08

  
(Signature)

(Seal or Stamp)



Theresa Mouser  
Title

My appointment  
Expires 07-13-2011



7211448  
Page: 5 of 5  
04/16/2008 02:42P  
Velira Co. WA

## 6.4 Photo log

**Photo 1: Northeast Corner of Store with Monitoring well in Forefront – from the northeast**



**Photo 2: North Side of store – from the northeast**



**Photo 3: North Side of Store – from the northwest**



**Photo 4: Monitoring Well East of Store**



## 6.5 Laboratory Report



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

July 18, 2008

Bob Swackhamer  
WA Department of Ecology - Yakima  
15 W Yakima Ave, Suite 200  
Yakima, WA/USA 98902

RE: Brand X Station

Enclosed are the results of analyses for samples received by the laboratory on 07/16/08 09:40.  
The following list is a summary of the Work Orders contained in this report, generated on 07/18/08 14:00.

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

<u>Work Order</u>	<u>Project</u>	<u>Project Number</u>
BRG0203	Brand X Station	J1G07

TestAmerica Seattle

Curtis D. Armstrong, 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.*

www.testamericainc.com



Page 1 of 6



SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400  
BOTHELL, WA 98011-6244  
PH: (425) 420-9200 FAX: (425) 420-9210

<b>WA Department of Ecology - Yakima</b> 15 W Yakima Ave, Suite 200 Yakima, WA/USA 98902	<b>Project Name:</b> Brand X Station <b>Project Number:</b> J1G07 <b>Project Manager:</b> Bob Swackhamer	<b>Report Created:</b> 07/18/08 14:00
--	--	--

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Brand-X-071108	BRG0203-01	Water	07/11/08 14:35	07/16/08 09:40

TestAmerica Seattle

Curtis D. Armstrong, 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.*

www.testamericainc.com



Page 2 of 6



SEATTLE, WA 11730 NORTH CREEK PKWY N, SUITE 400  
BOTHELL, WA 98011-6244  
PH: (425) 430.9200 FAX: (425) 430.9210

<b>WA Department of Ecology - Yakima</b> 15 W Yakima Ave, Suite 200 Yakima, WA/USA 98902	Project Name: <b>Brand X Station</b> Project Number: J1G07 Project Manager: Bob Swackhamer	Report Created: 07/18/08 14:00
--	--	-----------------------------------

**Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B**  
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>BRG0203-01 (Brand-X-071108)</b>		<b>Water</b>		<b>Sampled: 07/11/08 14:35</b>						
Gasoline Range Hydrocarbons	NWTPH-Gs802 1B	ND	---	50.0	ug/l	1x	8016050	07/16/08 16:07	07/17/08 03:18	
Benzene	*	ND	---	0.500	*	*	*	*	*	
Toluene	*	ND	---	0.500	*	*	*	*	*	
Ethylbenzene	*	ND	---	0.500	*	*	*	*	*	
Xylenes (total)	*	ND	---	1.00	*	*	*	*	*	
Surrogate(s): 4-BFB (FID)		90.0%		50 - 140 %	*				*	
4-BFB (PID)		100%		60 - 140 %	*				*	

TestAmerica Seattle

Curtis D. Armstrong, 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.*





SEATTLE, WA 11730 NORTH CREEK PKWY N, SUITE 400  
BOTHELL, WA 98011-8244  
PH: (425) 430.9200 FAX: (425) 430.9210

<b>WA Department of Ecology - Yakima</b>	<b>Project Name: Brand X Station</b>	
15 W Yakima Ave, Suite 200	<b>Project Number: J1G07</b>	<b>Report Created:</b>
Yakima, WA/USA 98902	<b>Project Manager: Bob Swackhamer</b>	07/18/08 14:00

**Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
TestAmerica Seattle

**QC Batch: 8G16050 Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limit)	to RFD	(Limit)	Analyzed	Notes
Blank (8G16050-BLK1)														
Extracted: 07/16/08 16:07														
Gasoline Range Hydrocarbons	NWTPH-G/ E021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	07/16/08 18:02	
Benzene	*	ND	---	0.500	*	*	--	--	--	--	--	--	*	
Toluene	*	ND	---	0.500	*	*	--	--	--	--	--	--	*	
Ethylbenzene	*	ND	---	0.500	*	*	--	--	--	--	--	--	*	
Xylenes (total)	*	ND	---	1.00	*	*	--	--	--	--	--	--	*	
Surrogate(s): 4-BFB (P/D)		Recovery: 90.3%		Limits: 58-140%		*						07/16/08 18:02		
4-BFB (P/D)		100%		68-140%		*						*		
LCS (8G16050-BS1)														
Extracted: 07/16/08 16:07														
Gasoline Range Hydrocarbons	NWTPH-G/ E021B	964	---	50.0	ug/l	1x	--	1000	96.4%	(80-120)	--	--	07/16/08 18:34	
Surrogate(s): 4-BFB (P/D)		Recovery: 100%		Limits: 58-140%		*						07/16/08 18:34		
LCS (8G16050-BS2)														
Extracted: 07/16/08 16:07														
Benzene	NWTPH-G/ E021B	30.2	---	0.500	ug/l	1x	--	30.0	101%	(80-120)	--	--	07/16/08 19:07	
Toluene	*	30.6	---	0.500	*	*	--	*	102%	*	--	--	*	
Ethylbenzene	*	30.9	---	0.500	*	*	--	*	103%	*	--	--	*	
Xylenes (total)	*	92.4	---	1.00	*	*	--	90.0	103%	*	--	--	*	
Surrogate(s): 4-BFB (P/D)		Recovery: 102%		Limits: 68-140%		*						07/16/08 19:07		
Duplicate (8G16050-DUP1)														
QC Source: BRG0196-01 Extracted: 07/16/08 16:07														
Gasoline Range Hydrocarbons	NWTPH-G/ E021B	ND	---	50.0	ug/l	1x	ND	--	--	--	41.3%	(25)	07/17/08 10:22	
Benzene	*	ND	---	0.500	*	*	ND	--	--	--	NR	*	*	
Toluene	*	ND	---	0.500	*	*	ND	--	--	--	*	*	*	
Ethylbenzene	*	ND	---	0.500	*	*	ND	--	--	--	*	*	*	
Xylenes (total)	*	ND	---	1.00	*	*	ND	--	--	--	*	*	*	
Surrogate(s): 4-BFB (P/D)		Recovery: 88.2%		Limits: 58-140%		*						07/17/08 10:22		
4-BFB (P/D)		99.4%		68-140%		*						*		
Matrix Spike (8G16050-MS1)														
QC Source: BRG0196-01 Extracted: 07/16/08 16:07														
Gasoline Range Hydrocarbons	NWTPH-G/ E021B	977	---	50.0	ug/l	1x	20.9	1000	95.6%	(75-131)	--	--	07/16/08 21:18	
Surrogate(s): 4-BFB (P/D)		Recovery: 99.8%		Limits: 58-140%		*						07/16/08 21:18		
Matrix Spike (8G16050-MS2)														
QC Source: BRG0203-01 Extracted: 07/16/08 16:07														
Benzene	NWTPH-G/ E021B	32.9	---	0.500	ug/l	1x	ND	30.0	110%	(46-130)	--	--	07/16/08 21:51	
Toluene	*	33.4	---	0.500	*	*	ND	*	111%	(60-124)	--	--	*	
Ethylbenzene	*	33.9	---	0.500	*	*	ND	*	113%	(56-141)	--	--	*	
Xylenes (total)	*	101	---	1.00	*	*	ND	90.0	112%	(66-132)	--	--	*	

TestAmerica Seattle

Curtis D. Armstrong, 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.*





SEATTLE, WA 11730 NORTH CREEK PKWY N, SUITE 400  
BOTHELL, WA 98011-8244  
PH: (425) 430.9200 FAX: (425) 430.9210

<b>WA Department of Ecology - Yakima</b> 15 W Yakima Ave, Suite 200 Yakima, WA/USA 98902	<b>Project Name:</b> Brand X Station <b>Project Number:</b> J1G07 <b>Project Manager:</b> Bob Swackhamer	<b>Report Created:</b> 07/18/08 14:00
--	--	--

**Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results**  
TestAmerica Seattle

<b>QC Batch:</b> 8G16050	<b>Water Preparation Method:</b> EPA 5030B (P/T)
--------------------------	--

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	to RFD	(Limits)	Analyzed	Notes
<b>Matrix Spike (8G16050-MS2)</b>			<b>QC Source:</b> BRG0283-01			<b>Extracted:</b> 07/16/08 16:07								
Surrogate(s): 4-BPB (P/D)		Recovery: 103%		Limit: 68-140%	1x								07/16/08 21:51	
<b>Matrix Spike Dup (8G16050-MSD1)</b>			<b>QC Source:</b> BRG0196-01			<b>Extracted:</b> 07/16/08 16:07								
Gasoline Range Hydrocarbons	NWTPH-G/ 8021B	776	---	50.0	ug/l	1x	20.9	1000	75.9%	(75-131)	22.9%	(25)	07/17/08 10:55	
Surrogate(s): 4-BPB (P/D)		Recovery: 97.3%		Limit: 58-144%	*								07/17/08 10:55	

TestAmerica Seattle

Curtis D. Armstrong, 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.*





SEATTLE, WA 11730 NORTH CREEK PKWY N, SUITE 400  
BOTHELL, WA 98011-6244  
PH: (425) 430.9200 FAX: (425) 430.9210

**WA Department of Ecology - Yakima**  
15 W Yakima Ave, Suite 200  
Yakima, WA/USA 98902

Project Name: **Brand X Station**  
Project Number: J1G07  
Project Manager: Bob Swackhamer

Report Created:  
07/18/08 14:00

#### 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

Curtis D. Armstrong, 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.*

www.testamericainc.com



Page 6 of 6

## THE LEADER IN ENVIRONMENTAL TESTING

Washington Department of Ecology