



**HAZARDOUS MATERIAL SPILLS INFORMATION REQUEST**

**BRANDED EXXON STATION**

69-02 QUEENS BOULEVARD

WOODSIDE, NY 11377

**Spill Number: 9304343**

**Close Date:**

ADDRESS CHANGE INFORMATION  
 Revised street: 6902 QUEENS BOULEVARD  
 Revised zip code: NO CHANGE

Source of Spill: GASOLINE STATION OR PBS FACILITY

Spiller: ANGELA PIMENTAL – CUMBERLAND FARMS, INC.

Spiller Phone: (781) 828-4900  
 ext: x3416

Notifier Type: Responsible Party  
 Caller Name: CHRIS PARGAGLIA  
 DEC Investigator: VXBREVDO

Notifier Name:  
 Caller Agency: EXXON  
 Contact for more spill info:

Notifier Phone:  
 Caller Phone: (516) 876-4671  
 Contact Person Phone:

Category: Known release which created a fire/explosion hazards (inside or outdoors), drinking water supply contamination, or significant releases to surface waters.

Class: Willing RP – DEC Field Response – Corrective Action Initiated, Taken Over, or Completed by RP or Other Agency

Spill Date	Date Cleanup Ceased	Cause of Spill	PBS # Involved	Meets Cleanup Standards	Penalty Recommended
07/07/1993		EQUIPMENT FAILURE	2-192171	NO	NO

Material Spilled	Material Class	Quantity Spilled		Quantity Recovered		Resource(s) Affected
		Units		Units		
GASOLINE MTBE (METHYL-TERT-BUTYL ETHER)	PETROLEUM	0.00	GALLONS	0.00	GALLONS	SOIL, GROUNDWATER
	HAZARDOUS MATERIAL	0.00	UNKNOWN	0.00	UNKNOWN	

Caller Remarks:

EXCAV. TO INSTALL NEW TANKS – EXCAV / STOCKPILING TESTED

DEC Investigator Remarks:

Site remediation is being tracked under spill no. 93-04343. For additional information, see spill nos. 97-01296, 98-11087, 03-12172, 04-04766, and 04-04768.

8/4/2003: Transferred from Sigona to Harrington as per Letter from P. David Smith, Bureau Director, Remedial Bureau B. (Harrington)

1/15/2004: Approved UST closure plan in a letter to Cumberland Farms. (Harrington)

3/30/2004: STIP executed with Cumberland Farms. CAP calls for UST closure, off-site investigation, and a RAP for both on-site

and off-site contamination. (Harrington)

5/7/2004: Sent letter to Cumberland Farms approving the UST closure report. (Harrington)

5/14/2004: Sent letter to Cumberland Farms approving the off-site investigation work plan. (Harrington)

7/7/2004: Sent letter to Cumberland Farms approving the RAP. RAP calls for installation of SVE/AS system, quarterly monitoring reports (SVE/AS system performance and groundwater sampling results), a remedial system evaluation report 6 months after start-up, and a post-remedial sampling plan with 3 years of remedy implementation. (Harrington)

10/18/2004: Sent letter to Cumberland Farms approving the SVE/AS pilot test report. (Harrington)

5/26/2005: Sent letter to Cumberland Farms approving the design report for the SVE/AS system. (Harrington)

10/27/2005: SVE/AS system is operational. Minor piping issues to be addressed. (Harrington)

11/14/2005: Sent comments on draft O & M plan to Cumberland Farms consultant (LBG). Final plan is due in January 2006. (Harrington)

2/8/2006: Sent letter to Cumberland Farms approving O & M plan with modifications: requested monthly gauging of SVE-2 (due to history of free product in this well), and new monitoring well installations adjacent to SVE-2 and SVE-6 (due to history of free product and elevated BTEX concentrations respectively), and difficulty in sampling SVE wells with SVE/AS system operational). (Harrington)

6/15/2006: PM conducted site visit with LBG personnel. Off-site well installation activities were underway. ADT was the driller. (Harrington)

6/19/2006: Approved the SVE system start-up report in an e-mail to Cumberland Farms. AS will be started once free product is no longer observed beneath the site. (Harrington)

8/21/2006: Sent e-mail to Cumberland Farms approving the off-site SI report. Requested that a follow-up letter to be sent in one (1) month in order to document the weekly passive product recovery efforts to be conducted at newly-installed on-site well MW-7. (Harrington)

6/18/2007 – Haggerty – Assumed project management from Dave Harrington

7/20/07 – Haggerty – SVE/AS system has been running for 2 years with slow progress. PM requested all documents concerning the SVE/AS design and spoke with consultant concerning it's progress. Although the system has only recovered 2.43lbs of mass to date, consultant is satisfied. Groundwater still heavily contaminated. 110,000ppb MTBE, 28,000ppb BTEX although free product has not been encountered in last 2 quarters.

11/9/07 – Haggerty – sent comment letter to Chris Johnson, PM for Cumberland Farms (letter in edocs). SVE/AS system is not sufficient to remediate groundwater. For the past 6 months, no mass has been recovered. Even if system was working well, MTBE 1/10 as volatile as Benzene once dissolved in water and may never achieve remedial goals with SVE/AS. Remedial alternatives must be accessed.

2/27/08 – Aversa – tel call with Chris Johnson, Cumberland Farms. Told him Mike Haggerty had temporarily left the Dept, and to send correspondence to my attention. Also requested electronic copy of 4th quarter 2007 report, which has been received in hard copy. Confirmed via email.

7/8/08 – Haggerty: spoke with Dave Morelli from LBG to discuss the most recent Quarterly and Additional Subsurface Report which was prepared in response to my comment letter dated 11/9/07. All SVE and AS legs shut down but SVE-2 and AS-2. System now recovering some mass although not much. Also, LBG installed a well on the 69th Street side (MW-12) per my instruction. **This well had 7-8in of product.** LBG has been bailing weekly but product thickness has not lower substantially. Mr. Morelli didn't have the most recent product thickness data on hand, but he will forward it ASAP. PM informed him more wells will have to be installed and depending on the amount of product, a product removal system may be needed. The additional wells would be installed to determine whether product is under the street.

7/16/08 – Haggerty: required 3 wells surrounding MW-12 to delineate LPH

3/26/09 – Haggerty: Sent email to LBG. LBG has been bailing product on a weekly to bi-weekly basis. Product thickness has decreased but still remains. Required EFR events for the next 3 consecutive months. At that point, we will evaluate whether EFR events should continue. If product is gone, PM will discuss extending the SVE/AS system to this area or whether an injection would be more beneficial.

7/30/09 – Haggerty: spoke with Dave Morelli from LBG. He informed me that since the EFR event, LPH thickness down to .05ft. EFR will be discontinued from now on. Informed him that since the LPH is nearly gone, LBG and Cumberland must come up with a remedial strategy to address the dissolved phase contamination on the southeast portion of the site. Either the SVE/AS system must be expanded to this area or some form of injection (or both). LBG has until September to submit a workplan

April 2010 – Free product (.6 feet) discovered in the newly installed well. Consultant has been bailing product weekly with limited success (product thickness is not decreasing after 2 months of weekly bailing). Sent email requiring a minimum of 3 MW's be installed to determine extent of LPH. System now recovering some mass but very little. 3 wells installed, product found in 1 in sidewalk. Consultant performing monthly EFR events. LBG will submit a work plan for a Dual-Phase Extraction since Sparging doesn't appear to work. PM approved Dual-Phase Extraction Pilot test work plan. Reviewed Dual-Phase Extraction report and agreed that the technology isn't feasible at this property. No recovery of vapors and relatively small volume of groundwater recovered. Surfactant-Flood Pilot test work plan will be submitted by the end of May

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May 2010 – Surfactant Flood Pilot test work plan to May 31

July 2010 – LBG asked for more time to submit the Surfactant Flood Pilot test work plan. Due at the end of August

August 2010 – Approved Surfactant Flood Remedial Action Work Plan

February 2011 – SSUR overdue

March 2011 – reviewed SSUR. Dissolved conc appear to have increased since the Surfactant injections. Additional monitoring is required to evaluate effectiveness

July 2011 – SSUR/Surfactant MPE Feasibility Report due August 9, 2011

Sept. 2011 – sent the following email to Cumberland farms and their consultant:

Based on the lithology of the property and the nature of the contamination (limited to the smear zone, no unsaturated contamination), a new remedial strategy must be developed. Even if the SVE/AS operated effectively and the current contamination was inside the influence of the system, I believe the tight silt in the saturated zone would limit the AS effectiveness. It appears that the SVE/AS, MPE, and injections are ineffective.

Please discuss the site internally with your technical staff and contact me within 1 month with a new remedial alternative to completely remediate the property. At that point, the Dept. will require a new Remedial Action Plan.

November 2011 – Work plan under review

December 2011 – Consultant injected water in several wells to determine whether injections are possible. Based on the data, it appears injections are possible and a RAP will be submitted.

February 2012 – RAP due 3/9/12. Consultant planning sodium persulfate injections and since the remaining contamination is far enough away from any infrastructure, PM will likely approve

April 2012 – RAP submitted late. Currently under review

May 2012 – RAP approved. Since we already have a Consent Order with a CAP from 6 years ago. The schedule provided in the RAP will serve as a CAP

June 2012 – 7 injection wells installed this month

December 2012 – Sodium Persulfate injections conducted in late September. Report due next month

May 2013 – waiting on RAR from persulfate injections

October 2013 – persulfate injections appear to have reduced dissolved concentrations but additional round(s) are required to meet No Further Action

July 22, 2014 – V. Brevdo. Spill Case reassigned to Remedial Section B Region 2 as per discussion between R. Cozzy and V. Brevdo (discussion was both verbally and via e-mails). VB

8/13/2014 – Received July 18, 2014 Quarterly Monitoring Report. Completed Review of the Quarterly Monitoring Report.

The summary of the project is as follows:

Cumberland Farms/Gulf Service Station (Former Exxon Mobil), 69-02 Queens Blvd., Woodside (Spill No. 9304343) The site is a gasoline filling station with five (5) active USTs. The area surrounding the site is primarily residential and commercial. Spill case was opened when petroleum contaminated soil was discovered during installation of new USTs at the site. Stipulation Agreement and CAP were executed between the Department and Cumberland Farms on March 30, 2004 for USTs closure, off-site investigation, and remediation of both on-site and off-site contamination. Investigation and Remediation of the site under the STIP has been conducted since 2005 and included AS/SVE system operation, installation of on-site and off-site groundwater monitoring wells, bailing of free product discovered in one of the monitoring wells, Enhanced Fluid Recovery (EFR). Remediation

was partially successful in reducing thickness of free product and dissolved contaminant concentrations in the groundwater, however, in April 2010, the Department determined that further remedial efforts were warranted. RAWP proposing Surfactant Application was approved in August 2010. Surfactant application was conducted from September 2010 throughout September 2011. In May 2012 additional RAWP proposing sodium persulfate injections (a.k.a. ISCO ~ in-situ chemical oxidation) was approved by the Department. Seven (7) injection wells were installed in June 2012. Sodium Persulfate Injection remediation has been implemented at the site beginning Summer 2012 throughout August 2013, which further reduced dissolved contaminant concentrations. Four High Vacuum Extraction (HVE) events were conducted on wells where free-phase product was observed from February through April 2013. A total of 450 gallons of product-water mixture was removed during these HVE events. Free-phase petroleum product was not observed at the site during the second quarter 2014. The site is undergoing quarterly monitoring and groundwater sampling with the latest round conducted on May 27-28, 2014. Next round of groundwater sampling is scheduled for August 2014. LBG, consultant for Cumberland Farms, will evaluate and submit additional remedial alternatives at the time of third quarter 2014 monitoring report submittal. VB

10/22/2014 – V Brevdo LBG submitted Quarterly Report dated October 22, 2014. VB

10/24/2014 Project Status Synopsis: Cumberland Farms/Gulf Service Station (Former Exxon Mobil), 69-02 Queens Blvd., Woodside (Spill No. 9304343) Remediation was partially successful in reducing thickness of free product and dissolved contaminant concentrations in the groundwater, however, in April 2010, the Department determined that further remedial efforts were warranted. RAWP proposing Surfactant Application was approved in August 2010. Surfactant application was conducted from September 2010 throughout September 2011. In May 2012 additional RAWP proposing sodium persulfate injections (a.k.a. ISCO ~ in-situ chemical oxidation) was approved by the Department. Seven (7) injection wells were installed in June 2012. Sodium Persulfate Injection remediation has been implemented at the site beginning Summer 2012 throughout August 2013, which further reduced dissolved contaminant concentrations. Four High Vacuum Extraction (HVE) events were conducted on wells where free-phase product was observed from February through April 2013. A total of 450 gallons of product-water mixture was removed during these HVE events. Free-phase petroleum product was not observed at the site during the second and third quarter 2014. The site is undergoing additional In-Situ Chemical Oxidation Injections and quarterly groundwater monitoring with the latest round conducted on August 26, 2014. LBG (Environmental Engineering Consultant for Cumberland Farms) intend to collect the fourth quarter groundwater samples in early December and conduct injections in the seven injection wells in mid-December 2014. The site continues to be an active gas filling station. There is no longer free product present on-site, no off-site migration, and no exposure potential as long as site remains gas station.

VOCs concentrations in groundwater, however, remain at fairly high levels and need to be further reduced to accomplish closure of this spill case. The Department had a discussion with LBG on October 24, 2014 and requested that LBG be proactive in advancing the remedial approaches that will further reduce groundwater concentrations to the acceptable levels so that the spill case can be closed. VB

01/13/2015 – V. Brevdo Current Project Status Cumberland Farms/Gulf Service Station (Former Exxon Mobil), 69-02 Queens Blvd., Woodside (Spill No. 9304343) Remediation was partially successful in reducing thickness of free product and dissolved contaminant concentrations in the groundwater, however, in April 2010, the Department determined that further remedial efforts were warranted. RAWP proposing Surfactant Application was approved in August 2010. Surfactant application was conducted from September 2010 throughout September 2011. In May 2012 additional RAWP proposing sodium persulfate injections (a.k.a. ISCO ~ in-situ chemical oxidation) was approved by the Department. Seven (7) injection wells were installed in June 2012. Sodium Persulfate Injection remediation has been implemented at the site beginning Summer 2012 throughout August 2013, which further reduced dissolved contaminant concentrations. Four High Vacuum Extraction (HVE) events were conducted on wells where free-phase product was observed from February through April 2013. A total of 450 gallons of product-water mixture was removed during these HVE events. Free-phase petroleum product was not observed at the site during the fourth quarter of 2014. The site is undergoing additional In-Situ Chemical Oxidation Injections and quarterly groundwater monitoring with the latest round conducted on August

26, 2014. LBG (Environmental Engineering Consultant for Cumberland Farms) intend to collect the fourth quarter groundwater samples in early December and conduct injections in the seven injection wells in mid-December 2014. The site continues to be an active gas filling station. There is no longer free product present on-site, no off-site migration, and no exposure potential as long as site remains gas station.

VOCs concentrations in groundwater, however, remain at fairly high levels and need to be reduced further to accomplish closure of this spill case. The Department communicated to LBG on January 9, 2015 and requested that LBG be proactive in advancing the remedial approaches that will further reduce groundwater concentrations to the acceptable levels, so that the remediation can be completed and the spill case can be closed. From January 12 to January 16, 2015, LBG is conducting a third round of previously planned In-Site Chemical Oxidation remediation program. Seven injection wells are believed to be located in the source zone of petroleum contamination. The plan going forward is to collect groundwater samples from all of the onsite wells in March and June 2015. After reviewing the March and June groundwater data, LBG will make a recommendation to either continue the ISCO program or to discontinue the program and determine an alternative remedial action. VB

03-20-2015 – V. Brevdo Received telephone call from Mr. Shaminder Chawla of NYCOER. It appears that the RP approached OER and advised them they want to redevelop the property and remove tanks. OER inquired if NYSDEC approved the work plan. I informed the OER that while LBG communicated with the NYSDEC on March 5, 2015 via e-mail and inquired about potential air monitoring and engineering controls requirements in case if site gets redeveloped, however, no additional remedial action work plan have been submitted to date in addition to previously approved In-Situ Chemical Oxidation to reduce contaminant levels in the groundwater. Provided project status description to NYCOER and forwarded e-mail communications of 3/5/15 to OER. VB

03-20-2015 – V. Brevdo LBG submitted letter containing Remedial Action Event Summary. Letter is dated March 20, 2015. VB

03-20-2015 – V. Brevdo Project Summary: Cumberland Farms/Gulf Service Station (Former Exxon Mobil), 69-02 Queens Blvd., Woodside (Spill No. 9304343) Remediation was partially successful in reducing thickness of free product and dissolved contaminant concentrations in the groundwater, however, in April 2010, the Department determined that further remedial efforts were warranted. RAWP proposing Surfactant Application was approved in August 2010. Surfactant application was conducted from September 2010 throughout September 2011. In May 2012 additional RAWP proposing sodium persulfate injections (a.k.a. ISCO in-situ chemical oxidation) was approved by the Department. Seven (7) injection wells were installed in June 2012. Sodium Persulfate Injection remediation has been implemented at the site beginning Summer 2012 throughout August 2013, which further reduced dissolved contaminant concentrations. Four High Vacuum Extraction (HVE) events were conducted on wells where free-phase product was observed from February through April 2013. A total of 450 gallons of product-water mixture was removed during these HVE events. Free-phase petroleum product was not observed at the site during the fourth quarter of 2014. The site is undergoing additional In-Situ Chemical Oxidation Injections and quarterly groundwater monitoring with the latest round conducted on August 26, 2014. LBG (Environmental Engineering Consultant for Cumberland Farms) intend to collect the fourth quarter groundwater samples in early December and conduct injections in the seven injection wells in mid-December 2014. The site continues to be an active gas filling station. There is no longer free product present on-site, no off-site migration, and no exposure potential as long as site remains gas station.

VOCs concentrations in groundwater, however, remain at fairly high levels and need to be reduced further to accomplish closure of this spill case. The Department communicated to LBG on January 9, 2015 and requested that LBG be proactive in advancing the remedial approaches that will further reduce groundwater concentrations to the acceptable levels, so that the remediation can be completed and the spill case can be closed. From January 12 to January 19, 2015, LBG conducted a third round of previously planned In-Site Chemical Oxidation remediation program. The effects of the chemical injections on the petroleum contamination onsite will be monitored through the quarterly groundwater monitoring already in place. The first monitoring report is scheduled for submission in April 2015. After reviewing March and June 2015 groundwater data, LBG will make a recommendation to either continue the ISCO program or to discontinue the program and determine an alternative remedial action. On March 5, 2015, LBG

advised the Department that the site owner plans to redevelop the property, and asked questions about future potential air monitoring requirements and engineering controls, such as vapor membrane and Sub Slab Depressurization System. The Department advised LBG that in case of property redevelopment the property owner/ developer is strongly encouraged to incorporate Vapor Membrane and SSDS/Enhanced Ventilation system into the new building construction design. On March 20, 2015 the Department received a telephone inquiry from NYCOER regarding the status of the project. NYCOER informed the Department that the site owner approached NYCOER with plans to remove USTs and gas dispensers prior to site redevelopment. The Department and NYCOER will be coordinating further course of action on this project.

VB

03–26–2015 – V. Brevdo A conference call was held (initiated by OER and DEC) among the following parties:

Shaminder Chawla and Sarah Peng (NYCOER), Vadim Brevdo(NYSDEC), Justin Philips and Andrew Stewart (HPENG – consultant for Cumberland Farms on permitting issues), Jorma Weber (LBG – environmental engineering consultant for Cumberland Farms).

OER and DEC advised all attendees that before OER can issue a Notice of No Objecton to tank and soil removal work, a work plan describing the nature and scope of work must be submitted to both NYSDEC and NYCOER. Both agencies will review the work plan expeditiously, and if acceptable, the NYSDEC will issue a formal approval of the work plan. Following the approval of the work plan for tank and soil excavation by NYSDEC, NYCOER will issue a Notice of No Objection. The tentative time frame for submission of the work plan is within two weeks of today's date. VB

04–03–2015 V. Brevdo LBG submitted UST Closure Work Plan dated 4/3/15.

04–07–2015 – V. Brevdo The Department has coordinated review and approval of the UST Closure Work Plan with the NYCOER. The Department approved UST Closure Work Plan on April 7, 2015.

Current Site Status Update: Cumberland Farms/Gulf Service Station (Former ExxonMobil), 69–02 Queens Boulevard, Woodside (Spill No. 9304343) Remediation has reduced free product thicknesses and dissolved contaminant levels in groundwater at this active gas station; however, in April 2010, DEC determined that further remedial efforts were warranted. A RAWP proposing surfactant application was approved in August 2010. Surfactant application was conducted from 2010 through 2011. In May 2012, DEC approved an additional RAWP proposing in–situ chemical oxidation (ISCO) using sodium persulfate injections. The ISCO injections were implemented from 2012 throughout 2013, further reducing contaminant levels. High vacuum extraction (HVE) events were conducted on wells with free product from February through April 2013, removing about 450 gallons of a product–water mixture. Free product was not observed during the fourth quarter of 2014. The site is undergoing additional ISCO injections and quarterly groundwater monitoring. There is no longer any free product in on–site wells, no off–site contaminant migration, and no exposure potential as long as the site remains a gas station. **However, high VOC levels remain in groundwater.** DEC contacted the environmental engineering consultant for Cumberland Farms (LBG) in January 2015 to request that they take aggressive steps to further reduce contaminant levels, so that the spill can be closed. A third round of ISCO injections was performed in January 2015. Based on post–injection groundwater data, LBG will either recommend continuing the ISCO program or propose an alternative remedial action.

On March 5, 2015, LBG contacted DEC to inquire about requirements for air monitoring and engineering controls, such as installation of a vapor barrier and sub–slab depressurization system, in the event this property is redeveloped. The Department advised LBG that if the property is redeveloped, the owner or developer is strongly encouraged to incorporate engineering controls into the new building design, and any soil disturbing activities must be conducted under a Health and Safety Plan with a Community Air Monitoring Plan. On March 20, 2015, DEC provided a project status update to NYCOER in response to their inquiry. On March 23, 2015, NYCOER informed DEC that a permitting consultant for Cumberland Farms (High Point Engineering) approached OER with a proposal to remove USTs and impacted soil from the site. NYCOER asked if DEC had any objections to OER issuing a Notice of No Objection for tank and soil removal at this site. On March 26, 2015, NYCOER and NYSDEC held a conference call with Cumberland

Farms' consultants, who explained that the UST removal activities are precipitated by Cumberland Farms' efforts to divest from its gas station sites. NYCOER and NYSDEC advised the consultants that a UST Closure Work Plan describing the UST and soil removal work must be submitted before OER can issue a Notice of No Objection. LBG submitted UST Closure Work Plan on April 3, 2015. Work Plan describes an upcoming closure of five (5) existing 4,000-gallon double walled fiberglass gasoline USTs and also the associated piping, as well as associated soil removal. During all field activities a Community Air Monitoring Plan (CAMP) will be implemented involving real-time air monitoring for VOCs and particulate levels at the perimeter of the work area throughout ground-intrusive field activities. Cumberland Farms has indicated that the UST Closure activities are proposed for April 2015 pending approval of the work plan by the Department. The Department completed review of the work plan on April 6, 2015 and has coordinated review and approval of the plan with the NYCOER. The Department approved UST Closure Work Plan on April 7, 2015. VB

04-15-2015 – V. Brevdo On April 8, 2015 NYCOER issued a letter/notice of No Objection to the issuance of permits by NYCDOB related to the proposed excavation and tank pull work. A letter/notice of No Objection is addressed from Assistant Director of NYCOER to NYCDOB, Queens Borough Commissioner. VB

04-21-2015 – V. Brevdo LBG submitted Quarterly Report for the 1st Quarter of 2015. VB

04-23-2015 – V. Brevdo LBG submitted the First Quarter 2015 quarterly monitoring report on April 21, 2015. LBG will evaluate and discuss the effects of the January 2015 PersulfOx injections in the Second Quarter 2015 quarterly monitoring report. In addition, USTs will be removed during the Second Quarter 2015. The Department approved separate work plan for the UST removal in April 2015. V.B.

06-15-2015 – V. Brevdo UST will be removed during the Third Quarter 2015. LBG submitted the Second Quarter 2015 quarterly monitoring report on June 11, 2015. All monitoring wells were gauged on May 5, 2015. Groundwater samples were collected on May 5, 6, and 7, 2015. Quarterly groundwater monitoring and sampling will continue. On June 15, 2015 LBG advised the Department that the UST removal is imminent and pending some New York City permits. It was supposed to begin earlier in the month, but got delayed. LBG are hopeful of removing the majority of the petroleum contaminated soil from the site during the UST closure work. Once the majority of source material is removed, the groundwater quality should improve toward closure concentrations much faster than is happening now. LBG will give the Department advance notice once they have the start date for the UST closure/Soil excavation activities. VB

07-28-2015 – V. Brevdo Current Project Status: Cumberland Farms/Gulf Service Station (Former ExxonMobil), 69-02 Queens Boulevard, Woodside (Spill No. 9304343) Remediation has reduced free product thicknesses and dissolved contaminant levels in groundwater at this active gas station; however, in April 2010, DEC determined that further remedial efforts were warranted. A RAWP proposing surfactant application was approved in August 2010. Surfactant application was conducted from 2010 through 2011. In May 2012, DEC approved an additional RAWP proposing in-situ chemical oxidation (ISCO) using sodium persulfate injections. The ISCO injections were implemented from 2012 throughout 2013, further reducing contaminant levels. High vacuum extraction (HVE) events were conducted on wells with free product from February through April 2013, removing about 450 gallons of a product-water mixture. The site is undergoing additional ISCO injections and quarterly groundwater monitoring. There is no longer any free product in on-site wells, no off-site contaminant migration, and no exposure potential as long as the site remains a gas station. However, high VOC levels remain in groundwater. DEC contacted the environmental engineering consultant for Cumberland Farms (LBG) in January 2015 to request that they take aggressive steps to further reduce contaminant levels, so that the spill can be closed. A third round of ISCO injections was performed in January 2015. The Department approved separate work plan for the UST removal on April 7, 2015. UST is scheduled to be removed during the Third Quarter 2015. LBG submitted the Second Quarter 2015 quarterly monitoring report on June 11, 2015. All monitoring wells were gauged on May 5, 2015. Groundwater samples were collected on May 5, 6, and 7, 2015. Quarterly groundwater monitoring and sampling will continue. On June 15, 2015 LBG advised the Department that the UST removal is imminent and pending some New York City permits. It was supposed to begin earlier in the



month, but got delayed. LBG are hopeful of removing the majority of the petroleum contaminated soil from the site during the UST closure work. Once the majority of source material is removed, the groundwater quality should improve toward closure concentrations much faster than is happening now. LBG will give the Department advance notice once they have the start date for the UST closure/Soil excavation activities. On July 28, 2015, LBG informed the Department that all the permits have been obtained and UST closure work is scheduled to begin next week. Thursday this week, the canopy is slated to be removed, and UST removal is most likely to commence on Tuesday, August 4, 2015 or Wednesday, August 5, 2015. LBG plans to be on-site for all site activities and will follow the approved work plan, inclusive of Community Air Monitoring. VB

September 23, 2015 On September 23, 2015, LBG informed the Department that they finished the majority of the field work. Just under 5,000 tons of contaminated soil was excavated from the site and properly disposed. The backfilling activities are scheduled to begin next week. LBG will continue to be onsite for Community Air Monitoring during the backfilling activities. LBG intends to provide a report documenting all of the field activities within 45 days. VB

January 4, 2016 – V. Brevdo UST was removed on August 13 and 14, 2015. A total of 4,861 tons of petroleum-contaminated soil was excavated and disposed from the site as part of the UST Closure Activities. LBG submitted UST Closure Report on December 18, 2015. LBG advised the Department that Cumberland Farms is in the process of selling the property. As of December 2015, the future intended use of the property is unknown. Cumberland Farms has requested from the potential buyer to supply their intended use, however, they have not done so. Petroleum impacted soil remain on the property which is a threat to groundwater quality.

If the future use of the property entails removal of the site structures, i.e. the service building, car wash, etc., then the amended RAWP would be to excavate and dispose of the feasible remaining contaminated soil; if the future use of the property does not include removal on-site buildings, then the amended RAWP would include further subsurface investigation to delineate extent of the impacts and in-situ remedial alternative would be proposed. LBG expects that the future use of the property will be known in the 60 day time frame. On January 4, 2016, the Department approved UST Closure report and required that the amended RAWP be submitted to the Department within 90 days so that the progress continues towards completion of the site remediation and accomplishing closure of the spill case. VB

March 31, 2016 – V. Brevdo UST Closure Report dated December 18, 2015 documented the excavation and disposal of 4,860.89 tons of petroleum contaminated soil from the site. The Report also documented that that several areas beneath the site contain petroleum contaminated soil that was not removed due to the presence of site buildings and building on an adjacent property. Cumberland Farms, Inc. (CFI) has sold the property to Venetian Management, LLC (Venetian).

Venetian intends to remove all site buildings and buildings on the adjacent property which it purchased as well. LBG believes that the most effective method of remediation at the site has been soil excavation, and proposed that the remaining petroleum contaminated soil beneath the site be excavated and disposed after Venetian removes the respective buildings. It is LBG's understanding that Venetian plans these activities during 2016. The investigative and remedial work proposed by LBG consists of two phases. Phase 1 is the subsurface investigation in order to determine the vertical extent of petroleum contaminated soil. The Phase 2 is remediation via excavation and disposal of petroleum contaminated soil. Phase 1 (Investigation) consists of Drilling and Soil Sampling, Monitor Well Installation, Sop of Casing Elevation Survey, and Groundwater Sampling. Phase 2 (Remediation) consists of Soil Excavation and Disposal from Area A (Figure 1 of the work plan) and Remediation at Area B. Specific Remediation Technique at Area B is yet to be determined. Schedule of the proposed Investigation and Remediation activities is proposed on Page 4 of the work plan. The Department approved Remedial Work Plan on March 31, 2016. VB

April 14, 2016 – V. Brevdo E-mail from LBG: Mr. Brevdo:

We are scheduled to complete the drilling and monitor well installation activities beginning Wednesday April 20th. We expect to be onsite for 3 to 4 days.

===== Jorma Weber Hydrogeologist ~ Sr. Associate Leggette, Brashears & Graham, Inc.

4 Westchester Park Drive, Suite 175 White Plains, NY 10604 Tel: (914) 694-5711 Fax: (914) 694-5744 <http://www.lbgweb.com>

April 20, 2016 – V. Brevdo Visited the site at 11:00 a.m. Met Mr. Jorma Weber of LBG on site. Discussed upcoming work, requested that Mr. Weber take photos of work. Based on conversation it appears that the remedy may be completed and spill case may be closed before the end of 2016. V.B.

May 10, 2016 – V. Brevdo Six new monitoring wells were installed at the site in April 2016, and a Subsurface Investigation Report is scheduled for submission to the Department during the second quarter 2016. VB

August 5, 2016 – V. Brevdo Subsurface Investigation Report was submitted to the Department on August 5, 2016. Based on the results of investigation conducted in April 2016 and previous post excavation sampling results, the remaining petroleum contaminated soil in the vicinity of monitoring wells MW-D and MW-E is feasible to remediate via direct excavation. The soil in the vicinity of monitoring wells MW-A and MW-B did not contain VOCs above CP-51 standards, however, the soil to the north of MW-A is likely contaminated based on previous post-excitation results. This soil is also feasible to remediate via direct excavation.

Petroleum contaminated soil in the vicinity of MW-C and MW-F is limited in vertical and horizontal extent and LBG recommends leaving it in place. LBG expects that the current site owner will be developing the property beginning in 2016. Therefore, LBS recommended that all of the petroleum contaminated soil which is feasible to excavate and dispose be completed at that time. Excavation activities would occur subsequent to the removal of the current site buildings. LBG also recommended that the current quarterly groundwater monitoring program continue until a trend of significant groundwater quality improvement is demonstrated. The Department concurred with LBG's recommendations on August 8, 2016. VB

December 15, 2016 – V. Brevdo Cumberland Farms/Gulf Service Station (Former ExxonMobil), 69-02 Queens Boulevard, Woodside (Spill No. 9304343) Subsurface Investigation Report was submitted to the Department on August 5, 2016. Based on the results of investigation conducted in April 2016 and previous post excavation sampling results, the remaining petroleum contaminated soil in the vicinity of monitoring wells MW-D and MW-E is feasible to remediate via direct excavation. The soil in the vicinity of monitoring wells MW-A and MW-B did not contain VOCs above CP-51 standards, however, the soil to the north of MW-A is likely contaminated based on previous post-excitation results. This soil is also feasible to remediate via direct excavation. Petroleum contaminated soil in the vicinity of MW-C and MW-F is limited in vertical and horizontal extent and LBG recommends leaving it in place. LBG expects that the current site owner will be developing the property beginning in 2016. Therefore, LBS recommended that all of the petroleum contaminated soil which is feasible to excavate and dispose be completed at that time. Excavation activities would occur subsequent to the removal of the current site buildings. LBG also recommended that the current quarterly groundwater monitoring program continue until a trend of significant groundwater quality improvement is demonstrated. The Department concurred with LBG's recommendations on August 8, 2016. On December 15, 2016, LBG submitted Third Quarter 2016 Progress Report. All monitoring wells were gauged and sampled on August 16 and 17, 2016. Free-phase petroleum was not observed at the site during the Third Quarter 2016. Free-phase petroleum has not been detected at the site since November 2013. Six new monitor wells (MW-A through MW-F) were installed at the site in April 2016 and a Subsurface investigation Report was submitted to the Department during the Second Quarter 2016. The next quarterly monitoring report covering October, November and December will be submitted to NYSDEC in February 2017. VB

02-17-2017 – V. Brevdo Cumberland Farms/Gulf Service Station (Former ExxonMobil), 69-02 Queens Boulevard, Woodside (Spill No. 9304343) Subsurface Investigation Report was submitted to the Department on August 5, 2016. Based on the results of investigation conducted in April 2016 and previous post excavation sampling results, the remaining petroleum contaminated soil in the vicinity of monitoring wells MW-D and MW-E is feasible to remediate via direct excavation. The soil in the vicinity of monitoring wells MW-A and MW-B did not contain VOCs above CP-51 standards, however, the soil to the north of MW-A is likely

contaminated based on previous post-excitation results. This soil is also feasible to remediate via direct excavation. Petroleum contaminated soil in the vicinity of MW-C and MW-F is limited in vertical and horizontal extent and LBG recommends leaving it in place. LBG informed the Department that they expected that the current site owner would be developing the property beginning in 2016. Therefore, LBG recommended that all of the petroleum contaminated soil which is feasible to excavate and dispose be completed at that time. Excavation activities would occur subsequent to the removal of the current site buildings. LBG also recommended that the current quarterly groundwater monitoring program continue until a trend of significant groundwater quality improvement is demonstrated. The Department concurred with LBG's recommendations on August 8, 2016. On February 16, 2017, LBG submitted Fourth Quarter 2016 Progress Report. All monitoring wells were gauged and sampled on November 15 and 16, 2016. Free-phase petroleum was not observed at the site during the Fourth Quarter 2016. Free-phase petroleum has not been detected at the site since November 2013. Six new monitor wells (MW-A through MW-F) were installed at the site in April 2016 and a Subsurface Investigation Report was submitted to the Department during the Second Quarter 2016. The next quarterly monitoring report covering January, February and March will be submitted to the Department in April 2017. The Department completed review of the 4 Q 2016 Progress Report and requested LBG to inform the Department of the status of site redevelopment which was expected to commence in 2016. The Department advised LBG that if property development does not commence shortly, the Department wants the remediation / excavation of the remaining contaminated soils to proceed with no further delay and within appropriate time frame. VB