October 2014 Progress Report
Former Vogue Cleaners
Columbia Square Shopping Center
Martinez, Columbia County, Georgia
HSI No. 10394

Submitted to:

Georgia Environmental Protection Division
Hazardous Sites Response Program
2 Martin Luther King Jr. Drive, Suite 1462
Atlanta, Georgia 30334

Prepared for:

The AXA Equitable Life Insurance Company

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Genesis Project, Inc.

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SIGNED AND SEALED PE/PG CERTIFICATION:

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Mark D Mitchell PG# 761
Printed Name and GA PE/PG Number

10/31/2014
Date

Signature and Stamp

1.0 Introduction

Genesis Project, Inc. has prepared this Progress Report in fulfillment of the criteria set forth by the Voluntary Investigation and Remediation Program (VIRP) application approved on March 21, 2011. This progress report presents the activities performed since the State of Georgia, Environmental Protection Division (EPD) May 30, 2014 Compliance Status Report – Comments Letter.

1.1 Background

The former Vogue Cleaners facility is located in the Columbia Square Shopping Center – Phase II in Martinez, Columbia County, Georgia (Figure 1). The site was previously listed on the Georgia Hazardous Site Inventory (HSI No.10394), pursuant to the Hazardous Site Response Act (HSRA) program administered by the Georgia Environmental Protection Division (GAEPD), due to a release of tetrachloroethene (PCE) along with its associated degradation products (constituents of concern [COCs]). Several investigations were conducted and culminated in the submittal to GAEPD of a HSRA Compliance Status Report in April 1999.

The AXA Equitable Life Insurance Company (AKA The Equitable Life Assurance Society of the United States) sold the site on September 14, 2001, retaining the right of access and with express permission for performance of corrective action.

In February 2007, Genesis Project Inc. submitted to GAEPD a Corrective Action Plan Addendum, which presented the results of a pilot test and recommended the use of ART technology as an appropriate remedial alternative. The approved ART remediation technology was fully implemented in October 2007.

In March 2011, the property was approved for inclusion into the Voluntary Remediation Program (VRP) and the Voluntary Compliance Status Report (VCSR) was submitted on December 4, 2013.

This progress report presents the activities performed following EPD's May 30, 2014 Compliance Status Report – Comments Letter.

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2.0 Groundwater Sampling

In order to respond in part to EPD comments to the VCSR, an additional groundwater quality investigation was performed at the property. The investigation included the evaluation of localized groundwater flow and resampling of the existing groundwater monitor wells.

2.1 Groundwater Flow

On August 28, 2014, water level measurements were collected from each of the on-site monitor wells. It should be noted that no water level measurement was collected from monitor well MW-12D since it appears to have silted in since the last sampling event (depth to the bottom of well was 3").

The general direction of groundwater flow remains primarily to the north-northeast, with a hydraulic gradient of 0.003 with an average depth to water of 5.7 feet below top of casing (over the last seven years of data in gauged wells). The gradient was calculated via a three-point problem using monitor wells MW-8R, MW-22 and POD-1. It should be noted that a limited number of wells were used in the preparation of the potentiometric surface due to inconsistencies in the water table readings. These inconsistencies are considered a result of degradation in well efficiency due to the age of many of the on-site monitor wells. Only those wells that were installed within the last five (5) years were used to evaluate the direction of groundwater flow. This localized groundwater flow direction is consistent with historic potentiometric surface maps. Current potentiometric surface data is presented in Appendix 1 - Figure 1 and Appendix II - Table 1.

2.2 Groundwater Sampling

On August 28-29, 2014, groundwater samples were collected from designated wells utilizing low-flow sampling techniques. Low-flow sampling techniques are utilized in order to minimize the loss of volatile components during the groundwater sample collection. In accordance with the USEPA, Region IV, Science and Ecosystem Support Division standard operating procedure dated November 1, 2007, water quality parameters such as pH, conductivity, temperature, dissolved oxygen and groundwater drawdown rate were evaluated during purging. Stabilization criterion is based on dissolved oxygen (DO) concentrations as well as three successive readings ranging within +/- 0.10 for pH, +/- 0.30 (S/cm) conductivity, and < 10 ntu for turbidity. Once the parameters have stabilized, the groundwater sample is collected within the laboratory provided containers and placed in an ice-filled cooler and submitted to Analytical Environmental Services, AES for VOCs analysis via EPA method 8260B.

2.3 Groundwater Analysis Results

Groundwater analytical results from the August 2014 sampling event revealed the following constituents above the laboratory reporting limits:

- Cis-1,2-Dichloroethene;
- Tetrachloroethene; and
- Trichloroethene.

The results confirm that impacts to groundwater were consistent with, or lower than, results from August 2013 sampling event, with the exception of monitor well MW-8R. In this source area monitor well, a rebound in the concentration of COCs was reported. The result from this location was considered suspect since groundwater purging from monitor well MW-8R could not meet stabilization criteria for turbidity. This resulted in an abnormal analysis result, which is considered due to matrix interference and/or a suspected dilution error during laboratory sample preparation. As a result, monitor well MW-8R was redeveloped and resampled on September 30, 2014. During this sampling event, all stabilization criteria were met.

A summary of recent confirmatory and historic groundwater analytical results are provided in Appendix II - Table 2. The results for each of the COCs are presented in Appendix I - Figures 2, 3, and 4. The laboratory analytical reports will be presented in the revised VCSR along with results of the post-injection confirmation sampling event as discussed below.

3.0 Compliance Status Report

The following activities are being completed at the site to finalize the VCSR.

3.1 Chemical Injection

To address the localized rebound in the area around monitor well MW-8R, a chemical injection event will be completed at this site. The chemical, PersulfOx™, an "in-situ chemical oxidation reagent", will be injected into the water table to chemically oxidize the constituents of concern.

3.2 Groundwater Sampling

Each of the onsite groundwater monitor wells will be resampled at least 45 days after the chemical injection event. The results of this sampling event will be included in the final VCSR.

3.3 Preparation of Compliance Status Report

A final VCSR will be prepared for this site within 60 days of the completion of all site activities described in this report. The VCSR will specifically address the comments presented in EPD's May 30, 2014 letter as necessary to "demonstrate compliance with the provisions, purposes, standards and policies" of the VRP Act.

APPENDIX I
Figures

MONTEREY MEXICAN RESTAURANT BUILDING

PARCEL 079088

END OF CURB

MW-6*
350.52

PARCEL 079133

350.55
MW-7
350.53

PARCEL 079087

350.60

POD-1
350.52

MW-5
350.57

MW-12D
NA

350.65

350.70

MW-8D*
350.74

MW-13*
350.38

MW-22
350.64

SYSTEM ENCLOSURE

350.75

FORMER VOGUE CLEANERS

MW-2R
350.76

MW-8R
350.71

MW-4
350.79

MW-1
351.55

RETENTION WALL

PROPERTY LINE

COLUMBIA SQUARE SHOPPING CENTER

SAFELITE AUTO GLAS
AND DUNLOP TIRES
(COLUMBIA CAR CARE

LEGEND

PROPERTY LINE

EXISTING MONITOR WELL LOCATION

MW-5
350.57
WELL ID
GROUNDWATER ELEVATION

POTENTIOMETRIC CONTOUR

GROUNDWATER FLOW DIRECTION

*NOTE-NOT USED IN CALCULATING POTENTIOMETRIC CONTOURS DUE TO CONDITION OR DEPTH OF WELL

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0	--	--	--	--	--	--

SCALE 0 25 scale feet

Potentiometric Surface Map August 28, 2014
Vogue Cleaners
Martinez, Georgia

Genesis Project, Inc.
ENVIRONMENTAL SERVICES.
Smyrna, GA

PROJECT No.	--	FILE No.	--
DESIGN	JAT	10/27/14	SCALE AS SHOWN / REV. MDM
CADD	JAT	10/27/14	Figure 1
CHECK	MDM	10/27/14	
REVIEW	MDM	10/27/14	

MONTEREY MEXICAN RESTAURANT BUILDING

PARCEL 079088

END OF CURB

MW-6
<5

PARCEL 079133

MW-7
<5

PARCEL 079087

POD-1
<5

MW-5
110

MW-12D
NS

SAFELITE AUTO GLAS
AND DUNLOP TIRES
(COLUMBIA CAR CARE

MW-8D
<5

MW-13
NS

MW-22
<5

SYSTEM ENCLOSURE

FORMER VOGUE CLEANERS

MW-2R
49

MW-8R
1,000

MW-4
<5

RETENTION WALL

PROPERTY LINE

MW-1
<5

COLUMBIA SQUARE
SHOPPING CENTER

LEGEND

PROPERTY LINE

EXISTING MONITOR WELL LOCATION

MW-4 WELL ID

<5 PCE RESULT (ug/L)

*NOTE – SAMPLED ON SEPTEMBER 30, 2014

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0	--	--	--	JAT	MDM	MDM

SCALE 0 25 scale feet

Groundwater Analytical Map for PCE
August 28, 2014
Vogue Cleaners
Martinez, Georgia

Genesis Project, Inc.
ENVIRONMENTAL SERVICES.
Smyrna, GA

PROJECT No.	--	FILE No.	--
DESIGN	JAT 10/27/14	SCALE	AS SHOWN REV. MDM
CADD	JAT 10/27/14		
CHECK	MDM 10/27/14		
REVIEW	MDM 10/27/14		

Figure 2

MONTEREY MEXICAN RESTAURANT BUILDING

PARCEL 079088

END OF CURB

MW-6 <5

PARCEL 079133

MW-7 <5

PARCEL 079087

POD-1 <5

MW-5 <5

MW-12D NS

SAFELITE AUTO GLAS
AND DUNLOP TIRES
(COLUMBIA CAR CARE

MW-8D <5

MW-13 NS

MW-22 <5

SYSTEM ENCLOSURE

FORMER VOGUE CLEANERS

MW-2R 22

MW-8R 340

MW-4 <5

RETENTION WALL

PROPERTY LINE

MW-1 <5

COLUMBIA SQUARE SHOPPING CENTER

LEGEND

PROPERTY LINE

EXISTING MONITOR WELL LOCATION

MW-4 WELL ID

<5 TCE RESULT (ug/L)

*NOTE – SAMPLED ON SEPTEMBER 30, 2014

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0	--	--	--	JAT	MDM	MDM

SCALE 0 25 scale feet

Groundwater Analytical Map for TCE
August 28, 2014
Vogue Cleaners
Martinez, Georgia

Genesis Project, Inc.
ENVIRONMENTAL SERVICES.
Smyrna, GA

PROJECT No.		--
DESIGN	JAT	10/27/14
CADD	JAT	10/27/14
CHECK	MDM	10/27/14
REVIEW	MDM	10/27/14

FILE No. --
SCALE AS SHOWN | REV. MDM

Figure 3

MONTEREY MEXICAN RESTAURANT BUILDING

PARCEL 079088

END OF CURB

MW-6 <5

PARCEL 079133

MW-7 <5

PARCEL 079087

POD-1 <5

MW-5 <5

MW-12D NS

SAFELITE AUTO GLAS
AND DUNLOP TIRES
(COLUMBIA CAR CARE

MW-8D <5

MW-13 NS

MW-22 <5

SYSTEM ENCLOSURE

FORMER VOGUE CLEANERS

MW-2R 36

MW-8R 73

MW-4 <5

RETENTION WALL

PROPERTY LINE

MW-1 <5

COLUMBIA SQUARE SHOPPING CENTER

LEGEND

PROPERTY LINE

EXISTING MONITOR WELL LOCATION

MW-4 WELL ID

<5 cis-1,2 DCE RESULT (ug/L)

*NOTE - SAMPLED ON SEPTEMBER 30, 2014

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0	--	--	--	JAT	MDM	MDM

SCALE 0 25 scale feet

Groundwater Analytical Map for cis-1,2 DCE
August 28, 2014
Vogue Cleaners
Martinez, Georgia

Genesis Project, Inc.
ENVIRONMENTAL SERVICES.
Smyrna, GA

PROJECT No.		--
DESIGN	JAT	10/27/14
CADD	JAT	10/27/14
CHECK	MDM	10/27/14
REVIEW	MDM	10/27/14

FILE No. --
SCALE AS SHOWN | REV. MDM

Figure 4

APPENDIX II
Tables

Table 1.
Summary of Groundwater Elevations
Vogue Cleaners
Martinez, Georgia

Sample ID	Sample Date	Top of Casing Elevation	Depth to Water (feet bls)	Corrected Groundwater Elevation
MW-1	08/15/12	363.61	5.53	358.08
	02/26/13		5.49	358.12
	08/07/13	356.91	5.21	351.70
	08/28/14		5.36	351.55
MW-2R	02/26/12	363.50	5.67	357.83
	08/08/13	356.39	5.63	350.76
	08/28/14		5.63	350.76
MW-4	08/15/12	362.89	5.04	357.85
	02/26/13		5.00	357.89
	08/07/13	355.74	4.90	350.84
	08/28/14		4.95	350.79
MW-5	08/15/12	362.89	5.82	357.55
	02/26/13		5.77	357.60
	08/07/13	356.26	5.71	350.55
	08/28/14		5.69	350.57
MW-6	02/22/12	363.71	6.08	357.63
	08/15/12		6.07	357.64
	02/26/13		6.00	357.71
	08/07/13	356.53	5.86	350.67
	08/28/14		6.01	350.52
MW-7	08/15/12	364.43	5.76	358.67
	02/26/13		5.72	358.71
	08/07/13	356.26	5.64	350.62
	08/28/14		5.73	350.53
MW-8R	02/26/13	363.1	6.52	356.58
	08/08/13	360.93	5.87	355.06
	08/28/14		10.22	350.71
MW-8D	08/15/12	363.9	6.23	357.67
	02/26/13		6.52	357.38
	08/08/13	356.75	5.87	350.88
	08/28/14		6.01	350.74
MW-12D	08/15/12	363.58	10.18	353.40
	02/26/13		0.15	363.43
	08/07/13	356.45	14.50	341.95
	08/28/14		NA	NA
MW-13	08/15/12	363.99	6.16	357.83
	02/26/13		5.91	358.08
	08/08/13	356.99	5.97	351.02
	08/28/14		6.61	350.38
MW-22	08/15/12	363.1	5.55	357.55
	02/26/13		5.50	357.60
	08/07/13	356.05	5.41	350.64
	08/28/14		5.41	350.64
POD-1	08/15/12	362.86	5.59	357.27
	02/26/13		5.60	357.26
	08/07/14	356.06	5.45	350.61
	08/28/14		5.54	350.52

Notes:
NA Not Accessible
ft bls: Feet Below Land Surface

Table 2.
Summary of Groundwater Analytical Results
Vogue Cleaners
Martinez, Georgia

Sample ID	Sample Date	Screened Interval (ft bls)	VOCs (ug/L) cis-1,2-DCE	PCE	TCE
MW-1	08/15/12	2.05 - 12.05	<5	<5	<5
	02/28/13	2.05 - 12.05	<5	<5	<5
	08/07/13	2.05 - 12.05	<5	<5	<5
	08/28/14	2.05 - 12.05	<5	<5	<5
MW-2R	02/28/13	2.00-22.05	<5	<5	<5
	08/07/13	2.00-22.05	5	25	16
	08/28/14	2.00-22.05	36	49	22
MW-4	08/16/12	2.6 - 13.12	< 5	< 5	< 5
	02/27/13	2.6 - 13.12	< 5	< 5	< 5
	08/07/13	2.6 - 13.12	< 5	< 5	< 5
	08/28/14	2.6 - 13.12	< 5	< 5	< 5
MW-5	08/15/12	3.08 - 13.08	< 5	< 5	< 5
	02/27/13	3.08 - 13.08	< 5	< 5	< 5
	08/07/13	3.08 - 13.08	9	820	180
	08/28/14	3.08 - 13.08	< 5	110	< 5
MW-6	08/15/12	3.15 - 13.15	< 5	< 5	< 5
	02/28/13	3.15 - 13.15	< 5	< 5	< 5
	08/07/13	3.15 - 13.15	< 5	< 5	< 5
	08/29/14	3.15 - 13.15	< 5	< 5	< 5
MW-7	08/15/12	2.95 - 12.95	< 5	< 5	< 5
	02/28/13	2.95 - 12.95	< 5	< 5	< 5
	08/07/13	2.95 - 12.95	< 5	< 5	< 5
	08/29/14	2.95 - 12.95	< 5	< 5	< 5
MW-8R	02/28/13	2.00-19.05	17	2,600	840
	08/07/13	2.00-19.05	43	1,800	1,300
	08/23/13	2.00-19.05	< 5	16	< 5
	09/30/14	2.00-19.05	73	1,000	340
MW-8D	07/27/11	29.42 - 39.42	< 5	< 5	< 5
	02/23/13	29.42 - 39.42	< 5	< 5	< 5
	08/07/13	29.42 - 39.42	< 5	< 5	< 5
	08/29/14	29.42 - 39.42	< 5	< 5	< 5
MW-12D	08/15/12	28.47 - 38.47	13	12	< 5
	02/27/13	28.47 - 38.47	11	<5	< 5
	08/07/13	28.47 - 38.47	< 5	19	< 5
	08/29/14	28.47 - 38.47	N/S	N/S	N/S
MW-22	08/16/12	3.6 - 13.6	< 5	< 5	< 5
	02/27/13	3.6 - 13.6	< 5	< 5	< 5
	08/07/13	3.6 - 13.6	< 5	< 5	< 5
	08/29/14	3.6 - 13.6	< 5	< 5	< 5
POD-1	08/15/12	3.1 - 13.1	< 5	12	< 5
	10/29/12	3.1 - 13.1	< 5	6	< 5
	02/27/13	3.1 - 13.1	< 5	< 5	< 5
	08/07/13	3.1 - 13.1	< 5	< 5	< 5
	08/28/14	3.1 - 13.1	< 5	< 5	< 5

Notes:

VOCs	Volatile Organic Compounds
ug/L	micrograms per Liter
ft bls	feet below land surface
DCE	dichloroethene
PCE	tetrachloroethene
TCE	trichloroethene
<5	Below Laboratory Detection Limit