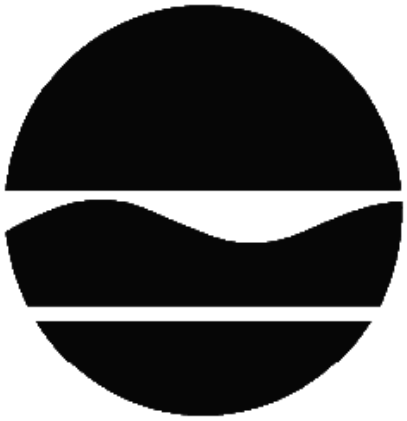
PROPOSED DECISION DOCUMENT

Fashion Outlets of Niagara Falls Expansion
Brownfield Cleanup Program
Niagara, Niagara County
Site No. C932162
October 2013



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Decision Document (PDD). The disposal or release of contaminants at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all Proposed Decision Documents. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Niagara Town Hall
7105 Lockport Road
Niagara Falls, NY 14305
Phone: 716-297-2150

A public comment period has been set from: November 6th to December 20th, 2013

Written comments may be sent through to:

Glenn May
NYS Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Ave
Buffalo, NY 14203-2915
gmmay@gw.dec.state.ny.us

The proposed remedy may be modified based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:

The site is located in an urban area in the Town of Niagara. The site is bordered by Factory Outlet Boulevard and Route 190 to the west, the existing Fashion Outlets of Niagara Falls Mall to the north, Wal-Mart to the east, and National Grid power lines, vacant land and the City of Niagara Falls to the south.

Site Features:

The site encompasses approximately 48.6-acres and includes the 34-acre former Sabre Park Mobile Home Community located at 1705 Factory Outlet Boulevard, a 10.35-acre parcel located on the southern portion of the Fashion Outlets of Niagara Falls property, and a 3.45-acre parcel on the western side of the site located at 1755 Factory Outlet Boulevard. The majority of the Sabre Park property consists of asphalt/gravel parking areas, asphalt driveways, and vegetated areas. The Fashion Outlets parcel consists of an asphalt parking lot and associated roadways. The 1755 Factory Outlet Boulevard parcel is improved with a Secure Storage facility and associated asphalt parking.

Current Zoning and Land Use:

All three parcels are currently zoned for commercial use. The Fashion Outlets of Niagara Falls property is currently improved with an asphalt parking lot, the 1755 Factory Outlet Boulevard property is currently improved with a Secure Storage facility and associated asphalt parking, and the Sabre Park property is currently vacant.

Past Use of the Site:

Sabre Park Property: This property was owned by the Union Carbide Corporation from 1949 until 1969. The exact use of this property by Union Carbide is unknown. Use of the property for a mobile home community began in 1972. During an expansion to the south in 1978, fill material with elevated levels of chlorinated solvents, mercury and heating oil was discovered. The fill material was subsequently excavated by the Hooker Chemical Company and disposed off-site at a permitted facility.

Soil sampling by the United States Environmental Protection Agency (USEPA) in November 1986 and May 1988 identified the presence of elevated concentrations of mercury. As a result, a portion of the property was listed in the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites (Registry) in 1989 (Site No. 932104). Also in 1989, the USEPA excavated approximately 1,200 cubic-yards of mercury contaminated fill from the southern portion of the property and disposed of the material as hazardous waste (D009-mercury) at an off-site permitted facility. The site was delisted from the NYSDEC's Registry in 1995.

Fashion Outlets of Niagara Falls Property: During construction of a mall expansion in November 1994, a white powder waste was encountered while drilling caissons for the mall's foundation. A sample of the waste was collected for analysis and found to exceed the TCLP regulatory limit for vinyl chloride. In February 1995 approximately 3,037 cubic yards of material was excavated and staged on-site. This material was subsequently screened on-site to separate drums, wood and other debris. The drums and debris were disposed off-site at permitted facilities. Analysis of the screened soils did not exceed TCLP limits for vinyl chloride, so the soils were backfilled on-site and covered with an asphalt parking lot. The backfill area is within the BCP site.

1755 Factory Outlet Boulevard Property: This property was owned by the Union Carbide Corporation from 1949 until 1969. The exact use of this property by Union Carbide is unknown.

Site Geology and Hydrogeology:

The geology of the site consists of fill material underlain by native silty sand and clay. The fill material, ranging to 15 feet depth, consists of reworked soil with varying amounts of silt, clay, gravel, roots, brick, concrete, wood, glass, rubber, slag, plastic and metal. The underlying native soils are continuous across the site. Bedrock was encountered from 10.5 to 16 feet below grade.

Shallow overburden groundwater is located within the fill material at the site, and ranges in depth from 1.80 to 4.39 feet below ground surface. This water is perched (located) on top of the native silty sand and clay deposit because of this unit's low permeability and flows generally to the north. Bedrock groundwater was not evaluated during the Remedial Investigation.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the Remedial Investigation (RI) Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) does/do not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil

- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

POLYCHLORINATED BIPHENYLS (PCB)
CHROMIUM
Polycyclic Aromatic Hydrocarbons (PAHs), Total
DICHLOROETHYLENE
TRICHLOROETHENE (TCE)
TETRACHLOROETHYLENE (PCE)
VINYL CHLORIDE

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure

pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

The remedial investigation determined that the primary contaminants of concern include volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and chromium. These contaminants were detected in soil, fill, groundwater and/or soil vapor.

PAHs were detected in 16 of 295 soil and fill samples at concentrations exceeding the commercial soil cleanup objectives (SCOs). PCBs were detected in 5 samples at concentrations (1.07 to 23.0 ppm) exceeding the commercial SCO of 1 ppm. Total chromium was detected in 20 samples at concentrations (1,500 to 6,560 ppm) exceeding the commercial SCO of 1,500 ppm, while hexavalent chromium exceeded the commercial SCO of 400 ppm in 2 samples (486 and 506 ppm).

Slag was observed in the historic fill at many locations throughout the site, but did not exhibit radioactivity.

Total chromium was detected in four groundwater samples at concentrations (884 to 1,260 ppb) exceeding the groundwater standard of 50 ppb, while hexavalent chromium was detected in four samples at concentrations (818 to 1,230 ppb) exceeding the groundwater standard of 50 ppb. Chlorinated solvents were detected in one groundwater sample at concentrations exceeding groundwater standards. These compounds included (cis) 1,2-dichloroethylene (59 ppb; standard 5 ppb), trichloroethylene (19 ppb; standard 5 ppb) and vinyl chloride (13 ppb; standard 2 ppb). Groundwater pH ranged from 6.29 to 12.2. Contaminated overburden groundwater is not migrating from the site.

Soil vapor contained VOCs at elevated concentrations.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

The site is not fenced and persons who enter the site could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil. People are not expected to come into direct contact with contaminated groundwater unless they dig below the ground surface, and the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy. Sampling indicates soil vapor intrusion is not a concern for offsite buildings.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE PROPOSED REMEDY

The alternatives developed for the site and evaluation of the remedial criteria are presented in the alternative analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The remedy proposed is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The proposed remedy is referred to as the Hot-Spot Removal, Cover System, and Vapor Mitigation remedy.

The elements of the proposed remedy, as shown in Figure 2, are as follows:

1. Remedial Design - A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation - Excavation and off-site disposal of contaminant source areas, including:

- Soil exceeding 6NYCRR Part 371 hazardous criterion for chromium; and
- An area of PCB-impacted soils that exceed the Track 4 SCO of 1 ppm at the surface and 10 ppm in the subsurface.

Approximately 9,500 cubic yards of soil will be removed from the site. On-site soil that does not exceed commercial SCOs may be used to backfill the excavations to the extent that a sufficient volume of on-site soil is available to establish the designed grades at the site below the cover system described in remedy element 3. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavations and to establish the designed grades at the site. Site soils excavated from the detention ponds may also be used for backfilling and regrading if they meet the requirements of 6 NYCRR Part 375-6.7(d). The site will be re-graded to accommodate installation of the cover system described in remedy element 3 below. Soil derived from the re-grading may be used to backfill the excavations.

3. Cover System - A site cover will be required to allow for commercial use of the site. The cover will consist of structures, such as buildings, pavement, and sidewalks comprising the site development; a soil cover in landscaped areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs); and three, clay lined detention ponds required for storm water management. Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d)

for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- Requires compliance with the Department approved Site Management Plan.

6. Site Management Plan - A Site Management Plan is required, which includes the following:

- An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and engineering controls remain in place and effective:

(a) Institutional Controls: The environmental easement discussed in remedy element 4; and

(b) Engineering Controls: The cover system discussed in remedy element 3 and vapor mitigation systems installed in any buildings constructed within the boundaries of the BCP site to prevent the migration of vapors into the building from soil and/or groundwater.

This plan includes, but may not be limited to:

(a) An Excavation Plan that details the provisions for management of future excavations in areas of remaining contamination;

(b) Descriptions of the provisions of the environmental easement including any land use and groundwater restrictions;

(c) A provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

(d) Provisions for the management and inspection of the identified engineering controls;

(e) Maintaining site access controls and Department notification; and

(f) The steps necessary for the periodic reviews and certification of the institutional and engineering controls.

- A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

(a) Monitoring of soil vapor to assess the performance and effectiveness of the remedy;

(b) A schedule of monitoring and frequency of submittals to the Department; and

(c) Monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.