

DECISION MEMORANDUM

DATE: July 20, 2017

FROM: Sharon Eckard, PG

TO: BF Assessment File

RE: Townsend – Siler City
1100, 1101, & 1200 East Third Street, 1240 & 1314 East Eleventh Street
Siler City, Chatham County
Brownfields Project # 20060-16-019

Based on the following information, it has been determined that the above referenced site, whose intended use is for no uses other than as a chicken processing plant, warehousing, office, medical facility open to employees and their dependents, and associated parking, can be made suitable for its intended reuse.

Introduction:

The Property was formerly divided into five tax parcels and addressed as 1100, 1101, and 1200 East Third Street; and 1240 and 1314 East Eleventh Street in Siler City, Chatham County, NC. Effective June 27, 2017 the Brownfields Property was combined into two tax parcels and addressed as 1101 East Third Street and 1200 East Third Street. The original parcel identification numbers were: 0016850 (1100 E 3rd St), 0061441 (E 3rd St.), 0016852 (1200 E 3rd St.), 0016770 (1240 E 11th St.), and 0016658 (1314 E. 11th St.). On June 27, 2017, the Prospective Developer combined the five parcels into two existing parcel identification numbers: Parcel ID 16852 and Parcel ID 61441. Parcel ID 16852 is the result of combining the parcels located at 1100 and 1200 East Third Street, which are now both addressed as 1200 East Third Street. Parcel ID 61441 is the result of combining the parcels located at 1101 East Third Street and 1240 and 1314 East Eleventh Street, which are now all addressed as 1101 East Third Street.

The Brownfields Property totals 34.3 acres that were primarily used for industrial purposes including chicken processing and textile operations, but also include parcels that were formerly residential or were used for commercial purposes such as office space, a motel, or church.

The Property is bordered to the north by Highway 64 with an Acme-McCrary operation (warehouse) and other commercial property beyond; to the east by an Express Care autowash and gasoline station to the northeast of the Brownfield Property, and by a jewelry store (which formerly was operated as a gasoline station) on the southeastern end of the Brownfields Property; to the south by E. Raleigh Street with undeveloped and residential land, and one industrial operation, Engineered Plastic Components (EPC) beyond; and to the west by a former garage, drycleaner, and residential properties along E. 10th St.

Redevelopment Plans:

The Prospective Developer is Mountaire Farms Inc., which also does business in North Carolina under the dba of Mountaire Farms of North Carolina Corp (Mountaire). Both of these entities share common principals and personnel.

PD wishes to redevelop the property into a chicken processing plant, offices, warehouse, and a medical facility for their employees and their dependents. The current structures will be demolished and/or renovated to make way for the redevelopment. Mountaire plans to hire over 700 workers, return the former industrial property to productive use, and increase the productivity of the non-industrial parcels. Mountaire is planning on using two of the three onsite water supply wells (WSW), which are pumping from fractured bedrock zones at depths ranging from 66 to 384 ft below ground surface, and may apply to drill additional wells for non-contact, cooling water only.

Site History:

The Brownfields Property consists of five parcels, each with a different history regarding use and ownership. Two of the parcels were used for industrial purposes. The property at 1101 E Third Street was originally occupied by 1961 with a single building, which was owned and operated by Carolina Poultry, Inc., until Townsend Inc. purchased the plant in 1986. Over time additions to the building and other infrastructure occurred from the 1960s through at least 2005. Historical data indicate that Townsend operated a chicken processing plant, offices and a laboratory at this property from 1986 to 2011.

The property at 1200 E Third St. was formerly used for textile processing by Glendale Hosiery Company initially from 1955, and then from at least 2008 for both Glendale Hosiery Company and Acme-McClary Corp. for warehousing purposes until sometime prior to 2013, when the only occupant was the Glendale Hosiery Outlet Store. Prior to that time, the two industrial lots were undeveloped.

The 1100 E Third St property was originally residential but was used for office space by 1995 by Townsend Inc., and after 2011, was leased to multiple commercial tenants, including most recently Realty World. A non-perennial surface water stream flows across a portion of this property.

The two commercial properties, 1240 and 1314 E Eleventh St. have most recently been used for a motel, the Relax Inn, and the Rey de Gloria Pentecostal Church, respectively. The motel parcel was most recently owned by Sunshine Lodge, LLC and the church property by Sherwood Holdings, LLC. The Relax Inn site prior to 2006 was known as Bill's Motor Inn, which began its operations by at least 1999. It had been used for a motel site since 1973, although it may have been vacant for portions of time including the early 1990s. Historical records indicate the motel site was undeveloped in 1965, but it is unclear if it remained undeveloped from 1965 to 1973.

The building on the church site was first constructed in 1955. It has been occupied by the church since about 2006. Prior to that time, this building was used for a variety of retail or services purposes including, a boots and merchandise/fruit store, a thrift store, a formal

wear store, and a fitness gym. The Siler City Fire Department responded to reports of a petroleum odor that they believed resembled diesel or kerosene in August 2014; the cause of the odor was not identified, but may have been related to an incident at the adjacent or nearby automotive service or gasoline station sites.

Summary of Environmental Conditions:

Historical chemical use at the BFs property is generally associated with the former textile operations and chicken processing conducted on the warehouse and plant parcels, respectively. It is uncertain which chemicals were used by Glendale Hosiery or Acme-McCrary prior to the use of the warehouse parcel strictly for warehousing purposes. There was an indication that aniline may have been used historically at the property, but this was not detected in onsite groundwater during recent sampling. Chemicals involved in the chicken processing operations are related more to refrigerants, food-grade solvents, and petroleum hydrocarbons. An offal pit was located on the eastern side of the plant building, but was removed as part of the redevelopment. New offal pit(s) will be constructed for future production use.

Four underground storage tanks (USTs) were formerly present at the former warehouse site, two on the east side of the building for the boilers and two on the southwestern side of the building near the loading bays. The USTs on the eastern side of the building had floated due to a high water table and broke through the asphalt pavement. Hence they were removed in 1991 along with about 3,000 gallons of contaminated groundwater and 200 tons of contaminated soil from the two boiler-related USTs, and five cubic yards of contaminated soil from the diesel UST location near the loading bays.

There is likely migration of chemicals from off-site onto the property from surrounding gasoline service stations, automotive, and drycleaning services in the area. A source of PCE found in the water supply wells pumping from depths of up to about 385 ft bgs in fractured bedrock was not determined; due to the prior pumping of these wells for production purposes, the PCE could have entered the water supply wells from any direction along the fractures in response to the production pumping. Solvent use was noted in regulatory documents associated with the automotive repair shop just west of the office parcel and south of the drycleaner.

Recent groundwater data from shallow monitoring wells indicates primarily low concentrations of petroleum hydrocarbon contaminants, with elevated concentrations of MTBE. PCE is found in the onsite water supply wells at depth, but not in the shallow monitoring wells. Shallow soil across the property contains low concentrations of arsenic and petroleum hydrocarbons, and sediment from the stream contains only arsenic in excess of industrial preliminary site remedial goals. The arsenic concentrations range from about 3 mg/kg to 7.5 mg/kg; hence, they are consistent with background concentrations in NC soils although exceeding the industrial PRG for arsenic of 3 mg/kg.

Site soil was sampled near a former transformer at the warehouse parcel. While PCB congeners and Arochlors were detected, the detections did not trigger an unacceptable environmental risk at the property due to site soils. Similarly, white crystal-coated soil

encountered in the northwestern area of the plant parcel was analyzed and not found to contain contaminants in excess of industrial screening levels.

Environmental investigations at the brownfields property consisted of soil, stream sediment, and groundwater assessments in 2016 and 2017. An EMP required by the BFA will address handling impacted soil or unexpected conditions if encountered.

The DEQ UST Section issued a NOV in 2014, an NORR in 2015 and one in 2016 for UST violations at the chicken processing plant parcel. The USTs were removed but residual petroleum hydrocarbons remain at the plant site. DEQ UST Section issued a No Further Action letter for the property after a NORP was filed at the Chatham Co. Register of Deeds on September 20, 2016. Based on activities conducted in relation to this incident, the DEQ UST Section issued a *Conditional Notice of No Further Action* on September 19, 2016, which required the filing of a *Notice of Residual Petroleum* (NORP) on the property before a *Notice of No Further Action* (NFA) could be issued. A NORP was filed for this portion of the Brownfields Property on September 20, 2016 at the Chatham County register of deeds (Book 01881, Page 0230). This recorded NORP contains perpetual land use restrictions for the chicken plant parcel as follows verbatim:

Soil: The Site shall be used for industrial/commercial use only. Industrial/commercial use means a use where exposure to soil contamination is limited in time and does not involve exposure to children or other sensitive populations such as the elderly or sick. The real property shall not be developed or utilized for residential purposes, including but not limited to: primary or secondary residences (permanent or temporary), schools, daycare centers, nursing homes, playgrounds, parks, recreation areas and/or picnic areas.

Groundwater: New or replacement water supply wells of any kind shall not be installed or operated on the site without prior notification to DEQ.

A NFA was issued in response to the NORP by the DEQ UST Section on November 29, 2016 for the chicken processing parcel at 1101 East Third Street. The land use restrictions of the Brownfields Agreement are consistent with the NORP land use restrictions in that they prohibit residential and sensitive population use for the former industrial areas of the BF Property (poultry processing/textile parcels), and require notice to DEQ of the installation or operation of additional water supply wells at the property; however, the land use restriction re: water supply wells places additional restrictions on this use, and therefore the BF LURs will supersede the NORP LURs when the BF documents are recorded.

A NOV was issued to Glendale Hosiery Mills for the textile/warehouse parcel on January 22, 1992 by the NC DEHNR Groundwater Section related to an identified release of petroleum hydrocarbons beneath one of the USTs at this parcel. In response Glendale Hosiery Company conducted additional investigations of subsurface conditions from 1992 through at least 1994.

Potential Receptors:

Potential receptors are construction workers, workers, visitors, and trespassers.

Contaminated Media Summary:

DEQ has evaluated data collected from the following media at the subject property: groundwater, soil, and stream sediment. DEQ relies on the following data to base its conclusions regarding the subject property and its suitability for its intended reuse.

Soil

Soil was found to have detections of certain petroleum hydrocarbon compounds at the brownfields property near an old fuel line, PCBs associated with a former transformer, and arsenic in concentrations in excess of industrial PSRGs. No soil contaminant yielded risk results that exceeded an acceptable risk range or a hazard index of 1. PCBs were detected in surface soil samples near an old transformer location; however, the concentrations did not yield environmental risk values that exceeded acceptable non-residential exposure scenarios nor a hazard index of 1.

Groundwater

Available shallow groundwater results indicated primarily low concentrations of volatile organic compounds (VOCs), including benzene, chloromethane, 1,2-dichloroethane; and elevated concentrations of MTBE up to 608 ug/L. Two out of three onsite water supply wells (WSW-2 and WSW-3) previously installed in bedrock with intermittent fractured zones from as shallow as 66 ft bgs to 384 ft bgs were found to contain PCE ranging from 4.66-17.5 ug/L; however, these water supply wells were only used for non-contact, cooling water. Fractured intervals were evaluated in the water supply wells through video logging conducted on October 3, 2016. The deepest fractured interval (299-384 ft bgs) was the most highly fractured. The water supply well pumps were set at a depth of 370 ft btoc in WSW-1 and at 380 ft BTOC in WSW-2. Well WSW-3 was not used by the previous plant occupant due to low well yields.

Mountaire plans to use the two higher yield existing groundwater production wells, and potentially additional groundwater wells, for the same purpose, and does not plan to use this source for potable purposes on site; however, these wells will be prohibited for potable water supply purposes in the BFA.

Surface Water

Surface water at the property is in the form of an ephemeral stream and was not sampled at the brownfields property; only stream sediment was sampled.

Sediment

Stream sediment was sampled in two locations; only SED-1 contained one constituent, arsenic, that exceeded its non-residential human health PSRG. PAH compounds were also detected in this sample; however, the specific compounds (benzo(g,h,i) perylene, and phenanthrene) do not have established screening levels and are reported on the data table for informational purposes only.

Soil Vapor

Soil gas sampling was not conducted at the brownfields property due to the limited VOCs in groundwater, and that for those contaminants detected, the concentrations did not exceed the applicable non-residential vapor intrusion screening level (VISL).

Sub-Slab Vapor

Sub-slab vapor data were not collected because VOCs were not detected in site groundwater above non-residential VISLs.

Indoor Air

Indoor air data were not collected due to the low concentrations of VOCs in site groundwater.

Risk Calculations

The available soil, stream sediment, and groundwater data were evaluated using the DEQ groundwater risk calculator (March 2017) provided by Sandy Mort, BF Toxicologist. The resulting calculated risk ranges for cancer effects and non-cancer effects indicate lifetime incremental cancer risk within an acceptable cumulative risk range, and hazard index values below the threshold criterion of 1 for both residential and non-residential groundwater concentrations in both the water supply wells and in the shallow monitoring wells, and for site soil and sediment (see table below). Site soil calculations include an analysis of PCB congeners in soil collected from an area where an old transformer was formerly located, and an area where surface soil was observed to have a coating of a white, crystalline substance at the Brownfields Property.

DEQ Risk Calculator Summary				
Townsend, Siler City (Mountaire)				
27-Mar-17				
	Residential		Non-Residential	
Media	LICR	HI	LICR	HI
Stream sediment	2.00E-05	0.17	2.30E-06	0.013
Transformer soil	4.00E-05	0.024	9.60E-06	0.0019
Soil-white Xtal coating	4.60E-11	0.066	4.40E-12	0.0044
Soil	1.10E-05	0.29	2.40E-06	0.02
Groundwater - shallow	7.20E-05	0.41	1.60E-05	0.09
Non-potable water supply wells	3.70E-06	0.77	8.10E-07	1.80E-01
Groundwater to indoor air	8.90E-06	0.23	2.00E-06	0.055

Required Land Use Restrictions –

Land use restrictions will include the standard Environmental Management Plan and reporting, demolition, groundwater, soil disturbance, known contaminants, and LURU reporting. Use of the existing water supply wells and installation of additional water supply wells will be based on a DEQ-approved workplan and are addressed as a separate

LUR. The NORP language will be superseded by the BFA LURs as the BFA LURs are consistent with, but go beyond that of the UST NORP language.

Based on the site-specific data provided to the Brownfield program, the site reuse is suitable for the site as long as the agreed upon land use restrictions in the BFA are abided by.