FACT SHEET

Brownfield Cleanup Program

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Site Name: BMS Syracuse North Campus Restoration Area
DEC Site #: C734138
Address: 6000 Thompson Road
East Syracuse, NY 13221

Have questions? See "Who to Contact" Below

Draft Investigation Work Plan for Brownfield Site Available for Public Comment

The public is invited to comment on a draft work plan being reviewed by the New York State Department of Environmental Conservation (NYSDEC) to investigate the BMS Syracuse North Campus Restoration Area site ("site") located at 6000 Thompson Road, East Syracuse, Onondaga County. Please see the map for the site location. Documents related to the cleanup of this site can be found at the location(s) identified below under "Where to Find Information."

Draft Investigation Work Plan

The draft investigation work plan, called a "Remedial Investigation Work Plan," was submitted to NYSDEC under New York's Brownfield Cleanup Program. The investigation will be performed by Bristol-Myers Squibb Company ("applicant(s)") with oversight by NYSDEC and the New York State Department of Health (NYSDOH).

How to Comment

NYSDEC is accepting written comments about the draft investigation work plan for 30 days, from **January 22, 2013** through **February 21, 2013**. The proposed plan is available for review at the location(s) identified below under "Where to Find Information." Please submit comments to the NYSDEC project manager listed under Project Related Questions in the "Who to Contact" area below.

Highlights of the Proposed Site Investigation

The investigation will define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected.

Data collected at the site previously identified contaminated soil, groundwater and soil vapor. Historical sampling also identified that contaminants were discharged by Bristol-Myers Squibb to surface water in the South Branch of Ley Creek and Headson's Brook. More information on past sampling and remedial activities are described in the "Background" section of this fact sheet.

The investigation will be conducted in several phases. Phase One will include two steps. The first step will include:

- Installation of over 100 soil borings across the site,
- Installation of approximately 85 temporary groundwater monitoring wells,
- Installation of permanent groundwater monitoring wells in certain locations where contamination was identified previously, and
- Collection of soil and groundwater samples.

The next step will include the activities described below. Specific sampling locations and specific contaminants to be analyzed will be determined, in part, by the results of the soil and groundwater sampling described above.

- Collection of soil vapor samples,
- Collection of sediment samples from Headson's Brook and the South Branch of Ley Creek, which are located at the eastern boundary of the Bristol-Myers Squibb facility,
- Installation of permanent groundwater monitoring wells.

Phase Two of the investigation will expand on Phase One in order to determine the extent of any contamination that is found, and to collect any additional data necessary to help develop an appropriate remedy for the site.

Bristol-Myers Squibb is required to investigate and remediate on-site contamination and off-site contamination that has migrated or emanated from the site.

If deemed appropriate, certain interim remedial measures (IRMs) may be conducted during the investigation. An IRM is a cleanup activity that may be performed when a source of contamination or exposure pathway (the way in which a person may contact contamination) can be effectively addressed without extensive investigation and evaluation.

It is estimated the investigation will take approximately 24 months to complete. Field activities for the first step are expected to take approximately 8 to 12 weeks to complete. Field activities for the second step are expected to begin approximately 6 to 9 months after completion of field activities for step one, and are expected to take approximately 4 to 6 weeks to complete. It is expected that Phase Two activities will begin approximately 9 to 12 months after completion of the field activities for step one.

Additional Details
Bristol-Myers Squibb (BMS) is in the process of demolishing several buildings on the site. The buildings being demolished were formerly used in the production of penicillin and other pharmaceutical products, or were used in support of those processes, and are indicated by green coloring on the attached figure. Building demolition activities are expected to continue through March 2013. BMS will also be completing site restoration work after the buildings are removed, which is expected to continue through July 2013. Restoration will include re-grading the site and establishing vegetation over much of the area. Certain areas will be paved or will remain as paved areas for parking and/or roadways.

Next Steps
NYSDEC will consider public comments, revise the plan as necessary, and approve the work plan. NYSDOH must concur with the plan. The approved work plan will be made available to the public (see "Where to Find Information" below). After the work plan is approved, the activities

detailed in the work plan will be implemented.

When the investigation is completed, a report will be prepared and submitted to the NYSDEC that summarizes the results. NYSDEC will review the report, make any necessary revisions and, if appropriate, approve the report.

After the investigation, a cleanup plan, called a "Remedial Work Plan" will be developed and a Decision Document will be proposed. The cleanup plan will include an evaluation of the proposed site remedy, or recommend a no action or no further action alternative. The goal of the cleanup plan is to ensure the protection of public health and the environment. NYSDEC will present the proposed cleanup plan to the public for its review and comment during a 45-day comment period. NYSDEC will keep the public informed throughout the investigation and cleanup of the site.

Background

Location: The Bristol-Myers Squibb Restoration Area site (the site) is located at 6000 Thompson Road in an urban/suburban area of the Village of East Syracuse, Town of DeWitt. The site is an approximately 23.8-acre portion of the Bristol-Myers Squibb (BMS) facility, located along the western side of the facility.

Site Features: The main site features include several large, abandoned buildings formerly utilized to develop and manufacture penicillin and other pharmaceutical products. There are also several buildings within the site boundary which are still utilized by BMS. The buildings are surrounded by parking areas and roadways, with some landscaped areas.

Current Zoning and Land Use: The site is zoned for industrial purposes and is used primarily for administration and support for the rest of the BMS facility. Many of the buildings within the site are currently idle. The surrounding area is of mixed use, with the area to the west of the site being predominantly residential and the areas adjoining the facility to the east, north and south being a mix of commercial and industrial. Further to the east are more residential properties.

Past Use of the Site: The site has been used for pharmaceutical research and development and for the production of penicillin and other pharmaceuticals since approximately 1943. The associated usage and storage of chemicals has resulted in contamination of the site. Chemicals used and stored in significant quantities at the site include the following: acetone; methylene chloride; dicyclohexylamine (DCHA); methyl isobutyl ketone (MIBK); several alcohols; and many others. There is also an unloading area for petroleum products located on the BCP site. The petroleum is stored off the BCP site for use in a boiler house, which is also located off the BCP site. The boiler house and petroleum storage area are located in an area immediately adjacent to the northeast portion of the BCP site. There are also several smaller petroleum storage tanks located on the BCP site.

Several environmental investigations were performed at the site prior to application to the Brownfield Cleanup Program. In some instances the investigations resulted in remedial action being taken. Many chemical bulk storage tank closures have been performed, which often included some investigation work as part of the closure. Numerous chemical spills have occurred at the BMS facility. Some of the investigation and remediation efforts performed are discussed below.

In October 1990 an investigation was performed around the area referred to as the Chapa tank farm (east-central portion of the site) for the purpose of closing the tank farm as a chemical storage area. Chemicals stored at the Chapa tank farm (also referred to as the CHT tank farm) included methanol, methylene chloride and MIBK. Methylene chloride and methanol were detected at elevated levels in groundwater during the October 1990 investigation. Methylene chloride was also detected in soil samples. As a result, a dual-phase vacuum extraction system (VES) was installed in 1991. The VES extracted water and vapor from the subsurface, which were separated and discharged. Until 1993, water removed by the system was collected and treated off-site. Beginning in 1993 the water was discharged to the sanitary sewer. Until 1992, the vapor extracted by the system was treated by a carbon treatment system prior to discharge to the atmosphere. Beginning in 1992 the vapor was discharged directly to the atmosphere without treatment. The dual-phase extraction system was shut down by BMS in November 1995. Sampling conducted subsequent to the system being shut down showed methylene chloride remained in groundwater significantly above its groundwater standard of 5 parts per billion.

On May 14, 1992 BMS entered into an Order on Consent (a legal agreement) with the New York State Department of Environmental Conservation (Department). This action required BMS to address contamination associated with storm sewer discharges from their facility. An investigation was also undertaken to determine the source of contaminants in the storm sewer discharges. It determined that leaks from the sanitary sewer were a significant contributor to contamination in the storm sewer. As a result, portions of the sanitary sewer across the facility were rehabilitated.

On July 8, 1993 BMS entered into an Order on Consent with the Department. This action required an investigation to determine if contamination was present at the BMS facility. The July 1993 Order required the completion of two reports: a Site Contamination Study Report and a Site Investigation and Remediation Study Report. The reports identified contaminants were present at the site in several locations. Contaminants were detected in some areas in the soil surrounding the sanitary sewer lines that had been rehabilitated. Methylene chloride, MIBK, DCHA and acetone were found at elevated levels in an area referred to as the Building 4/5/8 alleyway, located in the north-central portion of the site.

A number of soil vapor samples were collected in 2010 in the vicinity of, and downgradient of, the former Chapa tank farm and analyzed for methylene chloride. Methylene chloride was detected at elevated levels in many of the samples, up to 4,100 micrograms per cubic meter (ug/m3).

Site Geology and Hydrogeology: Based on information provided in the application to the Brownfield Cleanup Program, five geologic units have been identified in borings installed at, or adjacent to, the site. These units include (from top to bottom): fill, marsh deposits, glaciolacustrine deposits, glacial till, and bedrock.

The uppermost unit consists of fill. Fill has been encountered throughout the site and varies in thickness from two to nine feet. The fill material consists primarily of brown gravel with varying amounts of sand, silt, and clay. Wood, asphalt, cinders, ash, brick, and concrete fragments were occasionally present within this unit.

Marsh deposits were not encountered in borings installed on-site. Borings to the east of the site, on the BMS facility, encountered a thin, dark, organic-rich silty-clay which has been interpreted

as a marsh deposit

Glaciolacustrine deposits, consisting of medium- to fine-grained sands, silts, and clays, were encountered in several borings. This unit is thin or non-existent on-site, but was much thicker in off-site portions of the BMS facility (up to 20 feet thick). This unit was encountered in borings on the eastern edge of the site, but not on the western side of the site.

Glacial till, composed of a very dense, red-brown silty-clay and gravel with some fine to coarse sand was encountered across the site. The top of the till varies in depth from about five feet below the ground surface along the western portion of the site to approximately 29 feet below grade off-site on the eastern portion of the BMS facility. The till is approximately 25 to 30 feet thick in the vicinity of the Chapa tank farm.

Bedrock was encountered along the western side of the site at approximately 34 feet below grade. Bedrock consists of a weathered, olive-green shale with interbeds of gypsum.

The South Branch of Ley Creek flows generally from south to north along the eastern boundary of the BMS facility. Shallow groundwater flow at the site is generally from west to east

Two water bearing units are present at the site: (1) fill/glaciolacustrine and (2) glacial till. In 2010 the depth to groundwater in the shallow water bearing unit within the site varied from approximately 3.7 feet to 8.3 ft below the ground surface. Water levels in the glacial till unit are typically lower. Shallow groundwater appears to discharge to the South Branch of Ley Creek.

September 6, 2011 - The Department signed the Brownfield Cleanup Program Acceptance Letter for this site.

October 18, 2011 - The Department signed the Brownfield Cleanup Agreement for this site.

Additional site details, including environmental and health assessment summaries, are available on NYSDEC's website at:
http://www.dec.ny.gov/cfmx/extapps/derexternal/haz/details.cfm?pageid=3&progno=C734138

Brownfield Cleanup Program: New York's Brownfield Cleanup Program (BCP) encourages the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and redeveloped. These uses may include recreation, housing, business or other uses.

A **brownfield** is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination.

For more information about the BCP, visit: **http://www.dec.ny.gov/chemical/8450.html**

FOR MORE INFORMATION

Where to Find Information

Project documents are available at the following location(s) to help the public stay informed.

East Syracuse Free Library
Attn: Ms. Laurie Rachetta
4990 James Street
East Syracuse, NY 13057-2200
phone: 315-437-4841

NYSDEC
Attn: Joshua Cook
615 Erie Blvd West
Syracuse, NY 13204
phone: 315-426-7411
(jpcook@gw.dec.state.ny.us)

Who to Contact
Comments and questions are always welcome and should be directed as follows:

Project Related Questions
Joshua Cook
Department of Environmental Conservation
Division of Environmental Remediation
615 Erie Blvd W
Syracuse, NY 13204
315-426-7411
jpcook@gw.dec.state.ny.us

Site-Related Health Questions
Richard Jones
New York State Department of Health
217 South Salina Street
Syracuse, NY 13202
315-477-8148
BEEI@health.state.ny.us

We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Receive Site Fact Sheets by Email
Have site information such as this fact sheet sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page: http://www.dec.ny.gov/chemical/61092.html. It's quick, it's free, and it will help keep you *better informed*.

As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you already have signed up and received this fact sheet electronically.

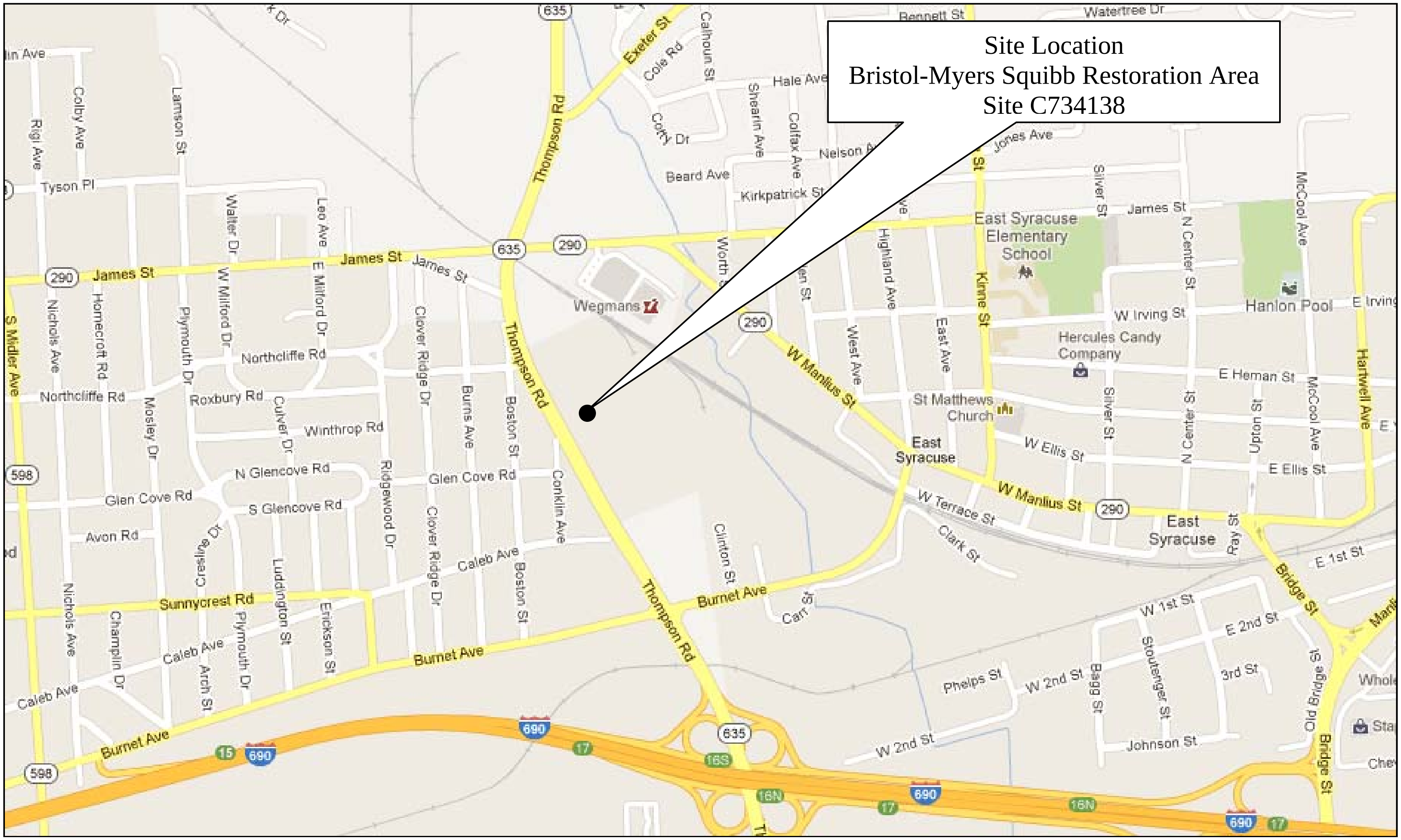
Site Location
Bristol-Myers Squibb Restoration Area
Site C734138
Thompson Rd
James St
W Manlius St
Burnet Ave
Wegmans
East Syracuse Elementary School
Hercules Candy Company
St Matthews Church
Hanlon Pool
East Syracuse
Northcliffe Rd
Glen Cove Rd
Sunnycrest Rd
Caleb Ave
Bridge St
Kinne St
Exeter St
Nichols Ave
S Midler Ave
Clinton St
Winthrop Rd
Roxbury Rd
Ridgewood Dr
Clover Ridge Dr
Burns Ave
Boston St
Conklin Ave
W Terrace St
E Heman St
E Ellis St
W Irving St
N Center St
Silver St
Phelps St
W 2nd St
Johnson St
690
635
290
598

FIGURE 1-2

LEGEND

- BROWNFIELD AREA BOUNDARY

STATUS AFTER PHASE 1 TRANSFORMATION

- BUILDING TO REMAIN
- BUILDING TO BE REMOVED
- BROOK / CREEK

BRISTOL-MYERS SQUIBB
SYRACUSE, NEW YORK

BROWNFIELD AREA

0 100 200 400
Feet

NOVEMBER 2012
2874

O'BRIEN & GERE

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