

## **Bristol-Myers Squibb Manufacturing Company – Humacao**

EPA Identification Number: PRD090021056

### **Other (Former) Names of Site**

Squibb Manufacturing, Inc.

### **Site Description**

The facility is located in Humacao, Puerto Rico, within an industrially zoned region about one mile east of the town. Land adjacent to the plant on the east and west is zoned for industrial use and is presently being used by other industries. Land immediately north of the site is undeveloped. A small stream, Frontera Creek, runs southeasterly along the northern boundary of the plant. Pineapple groves lie to the south of the facility.

Manufacturing processes at the Bristol-Myers facility include chemical synthesis and formulation of products. Major products include anti-hypertensives, fungicides, antibiotics and creams and ointments. The facility has been in operation since 1970. The Resource Conservation and Recovery Act (RCRA) Permit was renewed in 2000 for the operation of three hazardous waste incinerators and a tank storage system.

### **Site Responsibility**

The cleanup at this facility is being addressed by Bristol-Myers with oversight from the U.S. Environmental Protection Agency (EPA), under the authority of the Resource Conservation and Recovery Act (RCRA). However, the Puerto Rico Environmental Quality Board (EQB) also participates with EPA in cleanup decision-making and oversight.

### **Threats and Contaminants:**

There are three areas at Squibb's facility that are targeted for investigation for releases of hazardous wastes and hazardous constituents (methylene chloride, methyl iso-butyl ketone -MIBK, toluene, and chlorobenzene). They are former Brule incinerator concrete pad area, Building 5 Area, and Former Underground Tank Farm area. An interim measure action has been performed at the former Brule incinerator concrete pad area. The work plan for interim corrective measure (ICM) at "Building 5 Area," located at the eastern part of the facility, is presently under review by EPA. A Corrective Measure Study (CMS) for Former Underground Tank Farm which is located at the western part of the facility is under review.

## **Cleanup Approach**

### **Cleanup Status/Corrective Action**

The site is being addressed by Bristol-Myers Squibb, under EPA oversight, through various measures including Interim Corrective Measures (ICM), Corrective Measure Study (CMS) and long-term corrective measures directed at cleanup of the entire site.

## **Response Action Status**

### Interim Corrective Measures

This facility has performed an Interim Corrective Measure (ICM) at the former Brule incinerator concrete pad area, and now the work plan is under review by EPA for an ICM at the Building 5 Area. The intent of the ICM proposed for the Building 5 Area is to excavate then treat significantly impacted soil which is a potential source of groundwater contamination at the Building 5 Area. As a contingent portion of the ICM, Bristol-Myers Squibb is also committed to the implementation of a barrier system should further sampling results indicate that the groundwater plume in the Building 5 area is migrating.

### Entire Site

Bristol-Myers Squibb has been subject to several investigations over the years, culminating in the completion of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). Based upon data presented in the 1997 RFI report, Bristol-Myers Squibb was asked to initiate the Corrective Measure Study (CMS) process for both Former Underground Storage Farm and the Building 5 Areas to evaluate possible methods of remediation regarding the groundwater plume. While Corrective Measure (ICM) activities are being proposed for the Building 5 Areas, the CMS for the entire site is still in development.

## **Cleanup Progress**

A Corrective Measure Study (CMS) was initially proposed in 1999, and include a combination of source removal and natural attenuation. However, it appeared that after the installation of an additional well at the Building 5 Area in 2000, the plume, previously thought to be stable, is apparently moving toward facility boundary. As a result, it was agreed by both EPA and Squibb that, since the groundwater plume must be clearly delineated before a CMS could be meaningfully proposed, the CMS stage would temporarily suspended until information and a firm determination is made regarding the size or stability of the plume.

At the Building 5 Area, EPA initially approved in 2003 an Interim Corrective Measure (ICM) to construct and operate a down-gradient groundwater migration barrier system to prevent possible migration of the dissolved groundwater plume. The barrier system was to consist of a steel sheet piling roughly 150 feet in length driven into the dense clay layer to a depth of 20 feet below grade, a 7-well groundwater extraction system on the up-gradient side of the barrier, and an 8-well groundwater performance monitoring system to evaluate the effectiveness of the ICM. However, several rounds of groundwater monitoring data indicated the plume was stable (as of second quarter of 2004, the plume remains stable). Therefore, Bristol-Myers has decided to propose an alternative ICM consisting of an active remedial option while remaining committed to the implementation of previously proposed barrier system should further sampling results indicate that the groundwater plume is migrating. EPA and Bristol-Myers are in agreement with this ICM approach.

The active remediation portion the Interim Corrective Measure (ICM) includes excavation, then treatment of the significantly impacted soil which is a potential source of groundwater contamination at the Building 5 Area. After the ICM to remove the contaminated soil is completed, contamination levels in the groundwater are expected to improve over time. The groundwater monitoring network installed to monitor the chlorinated solvents plume is sampled quarterly. The monitoring data is also used to evaluate the contaminant plume itself, to see if it is indeed improving or getting worse over time. ICM activities that have been, or will be, performed at both the Building 5 Area, as well as at the former Brule incinerator concrete pad area, will be fully taken into consideration and incorporated into the Corrective Measure Study (CMS) report.

## **Permit Status**

On March 1, 1990, Bristol-Myers was granted a Resource Conservation and Recovery Act (RCRA) Permit to operate its hazardous waste management facilities. Under the terms of this Permit Bristol-Myers was allowed to operate six above-ground hazardous waste storage tanks as well as two hazardous waste incinerators (the "Trane" unit and the "Brule" Unit). The Trane unit is permitted to incinerate hazardous

process wastewater while the Brule unit is permitted to incinerate only ignitable waste with insignificant concentrations of hazardous constituents listed in 40 CFR 261 Appendix VIII. Squibb also operates a third hazardous waste incinerator, the Caloric 1 unit, under interim status. The Caloric 1 unit was limited to incineration of ignitable wastes with insignificant [less than 100 ppm] concentrations of hazardous constituents. This permit expired on March 1, 1995.

On September 1, 1994, Bristol-Myers submitted a permit renewal application which included three (3) liquid-injection incinerators: the Caloric 1 and 2 units, as well as the previously-permitted Trane incinerator, and a 7-unit hazardous waste storage tank system. The formerly permitted Brule incinerator was closed. Therefore it was not included in the renewal permit application. The permit renewal application was approved in September 30, 1999 and is effective for a period of 10 years. **Currently the permit is under permit modification process to meet Maximum Achievable Control Technology (MACT) requirements, EPA's National Emission Standards for Hazardous Air Pollutants.**

### **Site Repository**

Copies of supporting technical documents and correspondences cited in this fact sheet are available for public viewing at the following location.

U.S. Environmental Protection Agency, Region 2  
RCRA Records Center, 15<sup>th</sup> floor, Room 1538  
290 Broadway, NY, NY, 10007-1866  
Telephone: (212) 637-3043