Kaiser Refractories is a clay/alumina brick plant on the northern side of Route 36 in Zihlman, MD. The plant office is a 1½ story brick structure. It rests on a cement foundation and has a hipped roof with a gabled dormer.
**NAME**

HISTORIC

Big Savage Fire Brick Company

AND/OR COMMON

Kaiser Refractories

**LOCATION**

STREET & NUMBER

Rt. 36

CITY, TOWN

Zihlman

VICINITY OF

6th

STATE

Maryland

CITY, TOWN STATE

**CLASSIFICATION**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>OWNERSHIP</th>
<th>STATUS</th>
<th>PRESENT USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING(S)</td>
<td>PUBLIC</td>
<td>OCCUPIED</td>
<td>AGRICULTURE</td>
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<tr>
<td>STRUCTURE</td>
<td>PRIVATE</td>
<td>UNOCCUPIED</td>
<td>COMMERCIAL</td>
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<tr>
<td>SITE</td>
<td>BOTH</td>
<td>WORK IN PROGRESS</td>
<td>EDUCATIONAL</td>
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<tr>
<td>OBJECT</td>
<td>PUBLIC ACQUISITION</td>
<td>ACCESSIBLE</td>
<td>PRIVATE RESIDENCE</td>
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<td>IN PROCESS</td>
<td>YES RESTRICTED</td>
<td>ENTERTAINMENT</td>
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<td>BEING CONSIDERED</td>
<td>YES UNRESTRICTED</td>
<td>RELIGIOUS</td>
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<td>OTHER</td>
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</tbody>
</table>

**OWNER OF PROPERTY**

NAME

Telephone #: 

STREET & NUMBER

CITY, TOWN

VICINITY OF

STATE, zip code

**LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE

Allegany County Courthouse

REGISTRY OF DEEDS, ETC.

STREET & NUMBER

30 Washington Street

CITY, TOWN

Cumberland

STATE

Maryland

**REPRESENTATION IN EXISTING SURVEYS**

TITLE

DATE

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN

STATE
Kaiser Refractories is a clay/alumina brick plant on the northern side of Route 36 in Zihlman, Md. Recent expansion and modernization of the plant have drastically altered its appearance. The plant office is a 1½ story brick structure. It rests on a cement foundation and has a hipped roof with a gabled dormer. A similar plant in Mount Savage, the Mount Savage Refractories, has retained more of its original appearance.
The Kaiser Refractories plant at Zihlman "was built in 1902 by the Big Savage Fire Brick Company to take advantage of proven and valuable clay reserves on the property."

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA
ACREAGE OF NOMINATED PROPERTY

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

<table>
<thead>
<tr>
<th>STATE</th>
<th>COUNTY</th>
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</tbody>
</table>

FORM PREPARED BY
NAME: TITLE

David A. Dorsey, Historic Sites Surveyor

ORGANIZATION
Maryland Historical Trust/Bureau of Mines

STREET & NUMBER
21 State Circle, Shaw House

CITY OR TOWN
Annapolis

STATE
Maryland

PHONE
(301) 269-2438

DATE
May 1982

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature, to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 Supplement.

The Survey and Inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

RETURN TO: Maryland Historical Trust
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438
The Frostburg plant was built in 1902 by the Big Savage Fire Brick Company to take advantage of proven and valuable clay reserves on the property. In 1938 the plant was purchased by National Refractories, a subsidiary of Mexico Refractories, and was managed by that company until 1959 when Kaiser Refractories merged with Mexico Refractories. In 1967 new facilities were added by Kaiser Refractories, supplementing the plant's production of fireclay brick products with a complete line of specialty refractories.

$6.7 million.

Clay/alumina brick plant; clay/alumina specialties plant.

63,000 tons of clay/alumina brick; 29,000 tons of clay/alumina specialties.

Steel, glass, cement.

The plant has a year-round work force of approximately 165 employees, and an annual payroll, including fringe benefits, of about $3 million.

Extensive mining properties; and 48 acres of plant area, of which 225,000 square feet is under roof.

Approximately $6.8 million (including salaries and benefits to employees; the purchase of supplies, utilities, and services; freight charges; and state and local taxes).

Kaiser Refractories is a division of Kaiser Aluminum & Chemical Corporation, Oakland, California.

The Frostburg plant is one of eight manufacturing facilities in the United States operated by Kaiser Refractories. The company also owns, either in whole or in part, six additional plants outside the U.S.
Raw Materials Processing

The primary raw materials used at Frostburg are high-grade refractory clays (most of which are mined at the plant's Ohiopyle mine, about 45 miles from the plant site), and imported bauxite. Both enter the plant here, where they are crushed and sized to specification.

Dry Presses and Dryers

Here mixtures of clays and bauxite are formed into brick by one of seven Boyd presses. Each press exerts up to 500 tons of pressure and can make up to 28 brick a minute. After the brick are formed they move through continuous tunnel dryers where moisture is removed.

Tunnel Kilns

Leaving the dryers, all brick at Frostburg are then sent through one of the plant's two 400-foot-long tunnel kilns. Firing in kilns eliminates chemically combined water and develops a ceramic bond between the refractory aggregates which contributes to such physical properties as density, porosity, and strength. Temperatures inside the kilns – in which the brick stay for up to three days – peak at about 2500 degrees Fahrenheit.

Stiff Mud and Hand Mold Area

In stiff mud refractory production varying mixtures of clays are tempered and then extruded. The column of clay produced is then sliced with wire into desired lengths and formed by one of three presses. Brick produced in this manner are dried for 48 hours in adjacent dryers and fired in a tunnel kiln small percentage of refractory shapes at Frostburg are made by the hand mold process. These shapes are also dried and then fired in a tunnel kiln. Stiff mud brick are denser than those made on dry presses, while hand molding is used where particularly intricate shapes are required, or for especially small orders.

Specialties Area

Refractory specialties are non-brick products – plastics, ramming mixes, castables, mortars, and gunning mixes, as examples – which may be used for initial furnace linings, for maintenance purposes, and to bond brick. Specialty materials are sacked in granular form or otherwise packaged for application at the customer's plant. In addition to supplying packaged specialties, Frostburg sells and rents equipment for applying specialties and trains customers in application technology.

Packaging and Shipping

Using standard procedures set forth by the Refractories Institute, brick are palletized according to specified counts, and then wrapped in a shrink film or a cardboard-banded package based on customer preference. In addition to normal domestic procedures, stringent export packaging requirements also must be met. All refractory products leaving Frostburg are protected in transit to prevent breakage or contamination.
WORLD HEADQUARTERS
300 Lakeside Drive, Oakland, CA 94643, U.S.A.
Cable: KAISEREF Telex: 333315

DISTRICT SALES OFFICES (U.S.A.)

ALABAMA
Birmingham
ARIZONA
Tempe
CALIFORNIA
Newark
Los Angeles (Mira Loma)
COLORADO
Denver (Englewood)
FLORIDA
Tampa
ILLINOIS
Chicago (Bridgeview)
INDIANA
Indianapolis
IOWA
Bettendorf
KANSAS
Kansas City
LOUISIANA
Baton Rouge
MARYLAND
Severna Park
MASSACHUSETTS
MICHIGAN
Wayland
MISSOURI
Detroit (Dearborn)
NEW JERSEY
Cranford
NEW YORK
Buffalo
NORTH CAROLINA
Charlotte
OHIO
Cleveland (Rocky River)
Columbiana
Marietta
Toledo
Youngstown
OKLAHOMA
Tulsa
OREGON
Portland
 PENNSYLVANIA
Pittsburgh
Plymouth Meeting
TEXAS
Houston
UTAH
Springville
WASHINGTON
Tacoma

EUROPE & MIDDLE EAST
Kaiser Refractories International
London, England

PUERTO RICO
Kaiser Refractories International
Santurce, Puerto Rico

SUBSIDIARIES
AUSTRALIA
Kaiser Refractories, Division of Kaiser Aluminum & Chemical Corporation
(Australia) Limited, Unanderra, N.S.W.

CANADA
Kaiser Refractories, Division of Kaiser Aluminum & Chemical of Canada Limited, Oakville, Ontario

LICENSEES
ARGENTINA
KICSA Industrial y Comercial S.A., Buenos Aires
FRANCE
KER France S.A., Paris
SWEDEN
Bohlin & Lofgren AB, Goteborg
UNITED KINGDOM
KER (U.K.) Limited, Leeds
JAPAN
Nippon Reona Company, Ltd.

©1979 Kaiser Aluminum & Chemical Corporation
**Account Identifier:** District - 30  Account Number - 002806

**Owner Information**

- **Owner Name:** MT SAVAGE REFRACTORIES CO A DEL CORP
- **Use:** INDUSTRIAL
- **Principal Residence:** NO
- **Mailing Address:** 5741 CENTRE AVE PITTSBURGH PA 15206-3707
- **Deed Reference:** 1) / 559/ 595  2)

**Location & Structure Information**

- **Premises Address:** ROUTE 36 ROAD FROSTBURG 21532
- **Zoning:** RT 36 COR SUGAR ROW RD ZIHLMAN
- **Legal Description:** 28.608A
- **Map Grid:** 13 19  330
- **Parcel:** 330
- **Sub District:**
- **Subdivision:**
- **Section:**
- **Block:**
- **Lot:**
- **Group:** 81
- **Plat No:**
- **Plat Ref:**

**Special Tax Areas**

- **Primary Structure Built:** 0000
- **Enclosed Area:**
- **Property Land Area:** 28.60 AC
- **County Use:**

**Value Information**

- **Base Value**
- **Value As Of** 01/01/2002 07/01/2003 07/01/2004
- **Land:**
- **Improvements:**
- **Total:**
- **Base Value As Of:** 65,300 65,300
- **Value As Of:** 449,400 449,400
- **Value As Of:** 514,700 514,700 514,700

**Transfer Information**

- **Seller:** KAISER ALUMINUM & CHEMICAL CORP
- **Type:** NOT ARMS-LENGTH
- **Date:** 10/09/1986
- **Price:** $100,000
- **Deed1:** / 559/ 595
- **Deed2:**

**Exemption Information**

- **Partial Exempt Assessments:**
- **Class:**
- **County:** 000 0 0
- **State:** 0 0
- **Municipal:** 0 0

- **Tax Exempt:** NO
- **Exempt Class:**
- **Special Tax Recapture:** *NONE*

Property maps provided courtesy of the Maryland Department of Planning ©2001 - 2002. For more information on electronic mapping applications, visit the Maryland Department of Planning web site at www.mdp.state.md.us/webcom/index.html

AL-V-A-274
Kaiser Refractories (Big Savage Fire Brick Company)
Mt. Savage Road (MD 36) & Sugar Row Road
Frostburg Quadrangle
AL-V-A-274
Kaiser Refractories
Allegany Co., MD
David A. Dorsey  10/80
Looking West