NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

APPLICATION FOR PERMIT TO CONSTRUCT AND/OR USE A WELL(S) FOR INJECTION

Class 5I Wells

In Accordance with the provisions of NCAC Title 15A: 02C.0200
Complete application and mail to address on the back page.

TO: DIRECTOR, NORTH CAROLINA DIVISION OF WATER QUALITY
DATE: **November 3, 2000**

A. PERMIT APPLICANT

Name: **Saint-Gobain Corporation**
Address: **750 E. Swedesford Road, PO Box 860**
City: **Valley Forge** State: **PA** Zip Code: **19482-0101**
County: **Moore** Telephone: **James Smith 610-341-7321**

B. PROPERTY OWNER (if different from applicant)

Name: **SAME AS ABOVE**
Address: _____
City: _____ State: _____ Zip Code: _____
County: _____ Telephone: _____

C. STATUS OF APPLICANT

Private: _____ Commercial: **X** Federal: _____ State: _____
County: _____ Municipal: _____ Native American Lands: _____

D. FACILITY (SITE) DATA
(Fill out ONLY if the Status is Federal, State, County, Municipal or Commercial).

Name of Business or Facility: **Segro/Colonial Abrasive Products**
Address: **312 South Pine Street**
City: **Aberdeen** Zip Code: **28315** County: **Moore**
Telephone: **917-944-7631** Contact Person: **Joseph Meacci**

E. INJECTION PROCEDURE

Provide a detailed description of all planned activities relating to the proposed injection facility including but not limited to:
(1) construction plans and materials;
(2) operation procedures; and
(3) a planned injection schedule.
(SEE ATTACHMENT 1)

F. DESCRIPTION OF SITE

Provide a brief description of the contamination incident and the incident number assigned by the Division of Water Quality staff in the Department's Regional Office:
(SEE ATTACHMENT 2)

G. HYDROGEOLOGIC DESCRIPTION

SECTION (G) MUST BE ORIGINALLY SEALED AND SIGNED BY A LICENSED GEOLOGIST

Provide a hydrogeologic description, soils description, and cross section of the subsurface to a depth that included the known or projected depth of contamination. The number of borings shall be sufficient to determine the following:

(1) the regional geologic setting;
(2) significant changes in lithology;
(3) the hydraulic conductivity of the saturated zone;
(4) the depth to the mean seasonal high water table; and
(5) a determination of transmissivity and specific yield of the aquifer to be used for injection (showing calculations).

(SEE ATTACHMENT 3)

H. MONITORING PROCEDURE

Provide plans for proposed location and construction details of groundwater monitoring well network, including a schedule for sampling and analytical methods. Include any modeling/testing performed to investigate injectant's potential or susceptibility to change (biological, chemical or physical) in the subsurface.
(SEE ATTACHMENT 4)

I. WELL USE Will the injection well(s) also be used as the supply well(s) for the following?

(1) The injection operation? YES _____ NO **X**
(2) Personal consumption? YES _____ NO **X**

J. CONSTRUCTION DATA (check one)

NA EXISTING WELL being proposed for use as an injection well. Provide the data in (1) through (7) below to the best of your knowledge. Attach a copy of Form GW-1 (Well Construction Record) if available.

NA PROPOSED WELL to be constructed for use as an injection well. Provide the data in (1) through (7) below as PROPOSED construction specifications. Submit Form GW-1 after construction.

(1) Well Drilling Contractor's Name: _____
NC Contractor Certification number: _____

(2) Date to be constructed: **January 2001** Number of borings: **56**
Approximate depth of each boring (feet): **20 feet**

(3) Well casing: **(NOT APPLICABLE)**
Type: Galvanized steel____ Black steel____ Plastic____ Other (specify)_____
Casing depth: From _____to_____ ft. (reference to land surface)
Casing extends above ground _____ inches

(4) Grout:
Grout type: Cement____ Bentonite __**X**__ Other (specify) _____
Grouted surface and grout depth (reference to land surface):
__**NA**__ around closed loop piping; from _____ to _____ (feet).
__**NA**__ around well casing; from _____ to _____ (feet).

(5) Screens: **(NOT APPLICABLE)**
Depth: From _____ to _____ feet below ground surface.

(6) N.C. State Regulations (Title 15A NCAC 2C .0200) require the permittee to make provisions for monitoring wellhead processes. A faucet on both influent (recovered groundwater) and effluent (fluid being injected into the well) lines is generally required.

Will there be a faucet on the influent line? yes_____ no_**NA**_
Will there be a faucet on the effluent line? yes_____ no_**NA**_

(7) SOURCE WELL CONSTRUCTION INFORMATION (if different from injection well). Attach a copy of Form GW-1 (Well Construction Record). If Form GW-1 is not available, provide the data in part G of this application form to the best of your knowledge. **(NOT APPLICABLE)**

NOTE: THE WELL DRILLING CONTRACTOR CAN SUPPLY THE DATA FOR EITHER EXISTING OR PROPOSED WELLS IF THIS INFORMATION IS UNAVAILABLE BY OTHER MEANS.

K. OTHER WELL DATA

Provide a tabulation of data on all wells within ¼ mile of the injection well(s), excepting water supply wells serving a single-family residence, which penetrate the proposed injection zone. Such data shall include a description of each well's type, depth, record of abandonment or completion, and additional information the Director may require.
(SEE ATTACHMENT 5)

L. PROPOSED OPERATING DATA

(1) Injection rate: Average (daily) __**NA**__ gallons per minute (gpm)
(2) Injection volume: Average (~~daily~~) __**4.9 gallons per borehole** ~~gallons per day (gpd)~~
(3) Injection pressure: Average (daily) _____ pounds/square inch (psi)
(4) Injection temperature: Average (~~January~~) _**80-100**_ ° F, ~~Average (July) ____ ° F~~
(5) Hydraulic capacity of the well: _____
(6) Expected lifetime of the injection facility: ___**1**____ year
(7) Give a description of how the above data will be measured and controlled: _____
pump stroke counter, temperature gauge, pump on/off switch

M. INJECTION-RELATED EQUIPMENT

Attach a diagram showing the detailed plans and specifications of the surface and subsurface construction details of the system. **(SEE ATTACHMENT 6)**

N. LOCATION OF WELL(S)

Attach a scaled, site-specific map(s) showing the location(s) of the following:

(1) the proposed injection well(s);
(2) all property boundaries;
(3) contour intervals not exceeding two feet;
(4) the direction and distance from the injection well or well system to two nearby, permanent reference points (such as roads, streams, and highway intersections);
(5) all buildings within the property boundary;
(6) any other existing or abandoned wells, including water supply and monitoring wells, within the area of review of the injection well or wells system;
(7) potentiometric surface showing direction of groundwater movement;
(8) the horizontal and vertical extent of the contaminant plume (including isoconcentration lines and plume cross sections);
(9) any existing sources of potential or known groundwater contamination, including waste storage, treatment or disposal systems within the area of review of the injection well or well system; and
(10) all surface water bodies within 1000 feet of the injection well or well system.

(SEE ATTACHMENT 7)

O. INJECTION FLUID DATA

(1) Fluid source, if underground, from what depth, formation and type of rock/sediment unit will the fluid be drawn (e.g., granite, limestone, sand, etc.).
Depth: **3 ft. to 13 ft.**
Formation: **medium to course sand**
Rock/sediment unit: **cretaceous middendorf formation, composed primarily of sandstone or mudstone**

(2) Provide the chemical, physical, biological and radiological characteristics of the fluid to be injected. **(SEE ATTACHMENT 8)**

P. PERMIT LIST

Attach a list of all permits or construction approvals that are related to the site, including but not limited to:

(1) Hazardous Waste Management program permits under RCRA
(2) NC Division of Water Quality Non-Discharge permits
(3) Sewage Treatment and Disposal Permits
(4) Other environmental permits required by state or federal law.

(NOT APPLICABLE)