

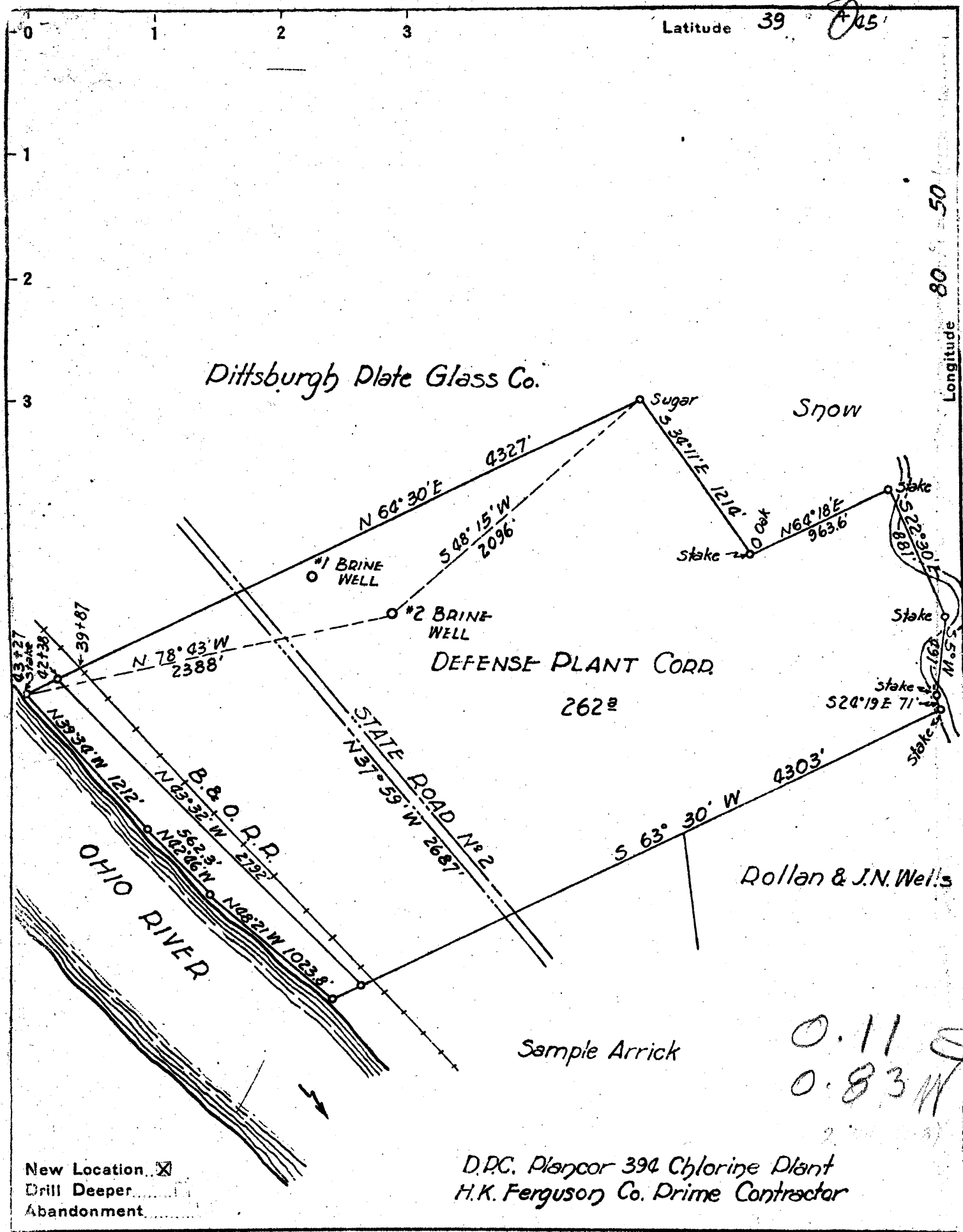
Company P.P.G. Industries, Inc. 654
 Address PO Box 191, New Martinsville, W. 26155
 Farm DEFENSE PLANT CORP. (PPG)
 Tract _____ Acres 262 Lease No. _____
 Well (Farm) No. 2 Serial No. _____
 Elevation (Spirit Level) 719'
 Quadrangle NEW MARTINSVILLE 15° 7.5'
 County MARSHALL District FRANKLIN 3
 Engineer W.M. Cowen
 Engineer's Registration No. 900
 File No. _____ Drawing No. _____
 Date AUGUST 28, 1942 Scale 1" = 800'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. MARS-135-LI

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown. OCT 30 1990

- Denotes one inch spaces on border line of original tracing. 47-051



D.P.C. Plancon 394 Chlorine Plant
 H.K. Ferguson Co. Prime Contractor

Company PITTSBURGH PLATE GLASS Co.
 Address ENGINEERS & LESSEES
NEW MARTINSVILLE WEST VA.
 Farm DEFENSE PLANT CORP.
 Tract _____ Acres 262 Lease No. _____
 Well (Farm) No. 2 Serial No. _____
 Elevation (Spirit Level) 719'
 Quadrangle NEW MARTINSVILLE-NC
 County MARSHALL District FRANKLIN
 Engineer W.M. Bowers
 Engineer's Registration No. 900
 File No. _____ Drawing No. _____
 Date AUGUST 28, 1902 Scale 1" = 800'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. MARS-135

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

Samples 1200-2700 9-0 23 deep well

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Mars 135
New Martinsville Quad.
Company
Address
Farm
Location
Well No
District
Surface
Mineral
Commenced
Completed

Salt Well
CASING & TUBING

Pittsburgh Plate Glass Company
New Martinsville, W.Va. 11 $\frac{1}{2}$ 892
Defense Plant Corp. Acres 225 8 5/8 6495
East Bank of Ohio River near Proctor 4 $\frac{1}{2}$ 6859
2 Elev. 710.0
Franklin Marshall County
Defense Plant Corp., Washington, D.C.
-- Casing cemented:
Oct. 3, 1942 8 5/8 2,000'
Dec. 21, 1942 Coal at 242' 0"

Rotary Table	A	12.5	Hard Sand	H	6254	6262
Clay	S	12.5	Hard Shale & Sandy Lime	H	6262	6704
Sand & Gravel	S	28	Anhydrite & Shale	S	6704	6751
Shale & Shells	S	80	Anhydrite & Salt	S	6751	6755
Coal	S	242	Salt	S	6755	6865
Shale	S	247	Anhydrite	S	6865	6875
Shale & Shells	S	270				
Shale	H	370				
Shale & Shells	H	580				
Red Bed & Sand	H	640				
Shale	H	700				
Sand & Sandy Shale	H	809				
Sand & Shells	H	842				
Shale	H	880				
Sandy Shale & Lime	H	920				
Sandy Shale & Sand	H	946				
Sandy Shale & Lime	H	980				
Sandy Lime	H	1055				
Shale with Sandy Lime	H	1075				
Sandy Lime	H	1095				
Sandy Lime with Shale	H	1135				
Sand	H	1315				
Sandy Shale with Lime	H	1323				
Lime with Hard Sand	H	1350				
Sandy Lime	H	1456				
Hard Sand with Lime	H	1545				
Shale with Lime	H	1670				
Sandy Shale & Lime	H	1695				
Shale	H	1860				
Shale & Lime	H	1878				
Hard Sand with Lime	H	2360				
Shale & Lime	H	2388				
Hard Sand & Lime	H	2410				
Sandy Lime & Shale	H	2486				
Shale & Lime	H	2510				
Shale & Shells	H	2538				
Hard Sandy Lime with Shale	H	2996				
Hard Sand & Lime	H	3360				
Sandy Shale & Lime	H	3375				
Shale & Lime	H	3515				
Hard Lime & Shale	H	4110				
Shale & Lime	H	4169				
Shale & Sand	H	5395				
Shale & Lime	H	5410				
Chert	H	5860				
Cherty Lime & Chert	H	5867				
Chert	H	5880				
Chert & Sand	H	6072				
Hard Sand	H	6076				
Shale & Sandy Lime	H	6134				
Anhydrite & Lime	H	6188				
Shale with Cherty Lime	H	6200				
Shale & Lime	H	6213				
Shale & Cherty Lime	H	6231				
		6254				

NOTE: The above is a copy of driller's log. Color of formation not reported.

1) Date: September 21, 19 90
 2) Operator's Well No. 2
 3) SIC Code 2812
 4) API Well NO. 47 - 051 - 0135 - LI
State County Permit
 5) UIC Permit No. 3S05101AP

7/8 **RECEIVED**
 Division of Energy
 Oil and Gas
 SEPT 26 90
 JIC Section



STATE OF WEST VIRGINIA
 NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
 for the
 DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

*Issued 10/26/90
 Expired 10/26/92*

*New Martinsville
 7.5*

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) / Waste disposal
- 7) LOCATION: Elevation: 718.07 Watershed: Ohio River Ohio
 District: Franklin 656 County: Marshall Quadrangle: Powhatan Point, WV
- 8) WELL OPERATOR PPG Industries, Inc. 39600 9) DESIGNATED AGENT K. S. Walborn
 Address P.O. Box 191 Address P.O. Box 191
New Martinsville, WV 26155 New Martinsville, WV 26155
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Mike Underwood Don Ellis 11) DRILLING CONTRACTOR:
 Address Rt. 2, Box 135, 2604 CRAB APPLE LANE Name I.L. Morris, Well Service, Inc.
Salem, WV 26426 FAIRMONT, W.V. Address 1297 N. Lewis St.
26554 Glenville, WV 26351
- 12) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation / Convert TO MUD DISPOSAL
 Other physical change in well (specify) Replace casing to 4390 ft.
- 13) GEOLOGICAL TARGET FORMATION, Salina 519 Depth 6760 feet(top) to 6869 feet(bottom)
- 14) Estimated depth of completed well, (or actual depth of existing well) 6319 ft.
- 15) Approximate water strata depths; Fresh, 70 feet; salt, _____ feet.
- 16) Approximate coal seam depths: 240 ft - 245 ft., 1300 ft - 1305 ft.
- 17) Is coal being mined in the area? Yes / No
- 18) Virgin reservoir pressure in target formation _____ psig. Source _____
- 19) Estimated reservoir fracture pressure _____ psig (BHFP)
- 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 6,000 Bottom hole pressure 3800 psi
- 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Injection fluid, 5-10% Solids-Calcium Carbonate & Magnesium Hydroxide, Liquid - 25% NaCl, 74% H₂O, 1900 ppm NaOH,
- 22) FILTERS (IF ANY): N/A 520 ppm Na₂O₂, 5600 ppm sodium sulfate.
- 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: N/A

24) CASING AND TUBING PROGRAM *Existing ** Proposed

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	** New	* Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	11 3/4"	47#			X		894'	300 sacks	
Coal									Sizes
Intermediate									
Production	8 5/8"	38#			X		6319'	500 sacks	Depths set
Tubing	7"	26#		X			4390'	4390'-1415'	
Liners									Perforations:
									Top Bottom

25) APPLICANT'S OPERATING RIGHTS were acquired from Defense Plant Corporation
 by deed / lease / other contract / dated June 30, 19 45, of record in the
Marshall County Clerk's office in Moundsville, WV Book 244 at page 76

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

OFFICE USE ONLY
RECEIVED
OCT 25 1990

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-051-0135-LI

October 25th. 1990
Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and (if required) construction and reclamation plan, subject to any modifications and conditions specified below.

Permit expires 10-25-92 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: ✓	Agent: ✓	Plat: ✓	Casing: ✓	Fee: ✓
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Michael W. Jones
Director, Oil and Gas Division

NOTE: Keep one copy of this permit posted at the drilling location.

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

OFFICE USE ONLY

This part of Form IV-3(b) is to record the dates of certain occurrences and any follow-up inspections.

	Date	Follow-up inspection(s)	Date(s)
Application received			
Well work started		" "	
Total depth reached		" "	
Well Record received		" "	
Reclamation completed		" "	

OTHER INSPECTIONS

Reason: _____
Reason: _____

FORM WW-3(A) Division of Energy
Reverse Oil and Gas
SEPT 26 90
JIC Section

1) Date September 21, 1990
Operator's _____
2) Well No. 2
3) SIC Code 2812
4) API Well No. 47 - 051 - 0135
State County Permit

STATE OF WEST VIRGINIA

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DIVISION OF OIL AND GAS, DEPARTMENT OF ENERGY

- 7 (i) COAL OPERATOR _____
Address _____
- 7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name PPG Industries, Inc.
Address P. O. Box 191
New Martinsville, WV 26155
- 7 (iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work, and
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is October 15, 19 90.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION FORM WW-3(B)) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22B of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Director of the Division of Oil and Gas, West Virginia Department of Energy, with respect to a well at the location described on the attached Application and depicted on attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Director.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

PPG Industries, Inc.
Well Operator
By K.S. Walborn
Its Agent
Telephone 304-455-2200