# Appendix E

# Tank Closure Documentation

# Closure Documentation for AOC 114-4A: UST-impacted Soil in Site 114, IRM #1, in Grid B1B and Grids E3B/E4B

AECOM
AECOM
30 Knightsbridge Road, Suite 520
Piscataway, NJ 08854
732.564.3600 tel
732.369.0122 fax

April 4, 2011

Bureau of Case Assignment & Initial Notice
New Jersey Department of Environmental Protection
Site Remediation Program
401 East State Street, PO Box 434
Trenton, NJ 08625

**Subject: PPG Industries, Inc., Site 114, 900 Garfield Avenue, Jersey City, NJ; Program Interest # 527871, 530369**

Dear Bureau of Case Assignment & Initial Notice,

AECOM has been retained by PPG Industries, Inc. ("PPG") for Licensed Site Remediation Professional ("LSRP") services related to the closure of two unregistered, regulated underground storage tanks ("USTs") discovered during Interim Remedial Measures being conducted at Site 114. The following completed/signed original forms are attached to this cover letter:

- UST Questionnaire;
- LSRP Notification of Retention or Dismissal Form; and,
- Closure Notification / Extension Request of an UST System Form.

Based on Christopher Martell's (AECOM) conversation with Sarah Mihalik of the NJDEP Billing and Registration Unit on March 25, 2011, it is our understanding that the NJDEP will invoice AECOM for the cost of UST registration. If you have any questions or concerns regarding the attached forms, please contact me at AECOM via email kathy.whooley@aecom.com or by calling 732-564-3644.

Yours sincerely,

Kathleen Whooley

Kathleen Whooley
LSRP No. 509371

cc: S. Mikaelian, AECOM
C. Martell, AECOM
B. McGuire, PPG
M. Terril, PPG
D. Claassen, PPG
P. Sorge, JM Sorge on behalf of Hampshire Group
B. Delisle, JC
T. Cozzi, NJDEP
P. Amin, Weston
B. McPeak, PP
M. McCabe, SA

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF REMEDIATION SUPPORT
UST Program • Registration and Billing Unit
PO Box 028, Trenton, N.J. 08625-0028
1-609-633-1464 • www.state.nj.us/dep/srp/bust

**STATE USE ONLY**
Check In ☐ Yes ☐ No

# UNDERGROUND STORAGE TANK FACILITY CERTIFICATION QUESTIONNAIRE

FACILITY UST # (PROGRAM INTEREST ID): ____________

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq., and the Underground Storage Tank Rules N.J.A.C. 7:14B et. seq.

*Check appropriate box*

A. ☐ This is a registration of a proposed or newly installed underground storage tank. (This form must be filed at least 30 days prior to operation)
B. ☒ This is a registration of an existing underground storage tank not presently registered.
C. ☐ This is a correction or amendment to an existing facility registration. (Check type of change below)
D. ☐ There have been no changes to the facility registration since last submittal. (Complete Section A, C & E)

*If "C" is checked above, please check the appropriate type of change(s) below*

- ☐ Facility Name and/or Address Change
- ☐ Owner Name and/or Address Change
- ☐ Facility Operator and/or Address Change
- ☐ Owner Contact Person Change
- ☐ Type of Product(s) Stored
- ☐ Substantial Modification(s) (see 14B)
- ☐ Tank(s) and/or Piping Changes
- ☐ Closure (Complete Section B Questions 1, 4, 5, 12C)
- ☐ Financial Responsibility Change (Including Policy Renewal)
- ☐ Sale or Transfer (Complete entire form)
- ☐ Other *(please specify)* ____________

## SECTION A - GENERAL FACILITY INFORMATION

1. Facility Name: HUDSON COUNTY CHROME SITE 114
2. Facility Location
   Address Line 1: 900 GARFIELD AVE
   Address Line 2:
   City or Municipality: JERSEY CITY
   HUDSON (COUNTY) NJ (STATE) 07305- (ZIP CODE) (BLOCK) (LOT)
3. Facility Operator: PPG INDUSTRIES INC
   ORGANIZATION (If applicable, e.g. Company) or INDIVIDUAL
   Contact Person: BRIAN MCGUIRE (PERSON) PROJECT MANAGER (TITLE)
   412 492 5512 (PHONE NUMBER (INCLUDE AREA CODE & EXT)) BMCGUIRE@PPG.COM (E-MAIL ADDRESS)
   Operator Address (if different than #2): 4325 ROSANNA DRIVE (ADDRESS LINE 1 (NUMBER AND STREET))
   PO BOX 2009 (ADDRESS LINE 2 (e.g. PO BOX, SUITE))
   ALLISON PARK (CITY OR MUNICIPALITY) PA (STATE) 15101-2009 (ZIP CODE)
4. Tank Owner (Organization): PPG INDUSTRIES INC
   Contact Person: BRIAN MCGUIRE (PERSON) PROJECT MANAGER (TITLE)
   412 492 5512 (PHONE NUMBER (INCLUDE AREA CODE & EXT)) BMCGUIRE@PPG.COM (E-MAIL ADDRESS)
   Tank Owner Address: 4325 ROSANNA DRIVE (ADDRESS LINE 1 (NUMBER AND STREET))
   PO BOX 2009 (ADDRESS LINE 2 (e.g. PO BOX, SUITE))
   ALLISON PARK (CITY OR MUNICIPALITY) PA (STATE) 15101-2009 (ZIP CODE)

5. **Billing Address:** Check one below
☐ Same as Tank Owner address listed in Section A4. ☒ Same as Facility Operator address listed in Section A3. ☐ Other and attach billing address.

6. **Total number of regulated underground storage tanks at facility** 0 0 2 (Complete Section B for each tank unless there has been no change since last submittal)

7. **Total regulated underground storage capacity at facility (gallons)** 0 0 3 0 0 0

8. **Facility Type:** A ☐ State B ☒ Commercial/ Industrial C ☐ County/Municipal D ☐ Federal E ☐ Charitable / Public School F ☐ Residential G ☐ Farm (as defined in N.J.S.A. 54:4-23.1 et seq.)

**NOTE: The facility site plan must be submitted when registering any underground storage tank pursuant to N.J.A.C. 7:14B 2.2.**

## SECTION B - SPECIFIC TANK INFORMATION

ALL regulated underground storage tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes. ***DO NOT MARK SHADED AREAS***

| | TANK NO. | | TANK NO. | | TANK NO. | | TANK NO. | | TANK NO. | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Tank Identification Number | 0001 | | 0002 | | | | | | | |
| 2. CAS Number (Hazardous substances only) | | | | | | | | | | |
| 3. Date Tank Installed | UNKNOWN | | UNKNOWN | | | | | | | |
| 4. Tank Size (gallons) - Please note that each compartment is considered a separate Tank System | 2000 | | 1000 | | | | | | | |
| 5. Tank Contents (Mark one "X" for each tank) | | | | | | | | | | |
| A. Leaded Gasoline | | | | | | | | | | |
| B. Unleaded Gasoline | | | | | | | | | | |
| C. Alcohol Enriched Gasoline | | | | | | | | | | |
| D. Light Diesel Fuel (No. 1-D) | | | | | | | | | | |
| E. Medium Diesel Fuel (No. 2-D) | | | | | | | | | | |
| F. Waste Oil | | | | | | | | | | |
| G. Kerosene (No. 1) | | | | | | | | | | |
| H. Heating Oil (No. 2) Complete 13C | | | | | | | | | | |
| I. Heating Oil (No. 4) Complete 13C | | | | | | | | | | |
| J. Heating Oil (No. 6) Complete 13C | | | | | | | | | | |
| K. Aviation Fuel | | | | | | | | | | |
| L. Motor Oil | | | | | | | | | | |
| M. Lubricating Oil | | | | | | | | | | |
| N. Automatic Transmission Fluid | | | | | | | | | | |
| O. Hazardous Waste (Specify ID Number) | | | | | | | | | | |
| P. Coolant/Antifreeze | | | | | | | | | | |
| Q. Other (please specify) | UNKNOWN | | UNKNOWN | | | | | | | |
| 6. Tank & Piping Construction (Mark at least one each for Tank and Piping) | Tank | Piping | Tank | Piping | Tank | Piping | Tank | Piping | Tank | Piping |
| A. Bare steel | X | NA | X | NA | | | | | | |
| B. Cathodically Protected Metal (Mark SA or IC) | | | | | | | | | | |
| 1. Sacrificial Anode (SA) *Date Sacrificial Anode Installed (TANK ONLY) | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| 2. Impressed Current (IC) *Date Impressed Current Installed (TANK ONLY) | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| C. Fiberglass-Coated Steel (TANK ONLY) | | | | | | | | | | |
| D. Fiberglass-Reinforced Plastic | | | | | | | | | | |
| E. Internally Lined (TANK ONLY) *Date Internal Lining Installed | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| F. Other (Please specify) (Include Brand Name) | | | | | | | | | | |
| 7. Piping Operation (Mark one for each tank system) | | | | | | | | | | |
| A. Pressurized Piping (PIPING ONLY) | | | | | | | | | | |
| B. American Suction Piping (PIPING ONLY) | | | | | | | | | | |
| C. European Suction Piping (PIPING ONLY) | | | | | | | | | | |
| D. Supply/Return (Heating Oil Piping Only) | | | | | | | | | | |
| 8. Tank & Piping Structure (Mark one for each TANK & PIPING) | | | | | | | | | | |
| A. Single Wall | X | NA | X | NA | | | | | | |
| B. Double Wall | | | | | | | | | | |
| C. Secondary Containment (e.g. Externally Lined) | | | | | | | | | | |
| 9. Type of Monitoring/Detection (Mark all that apply for TANK & PIPING) | | | | | | | | | | |
| A. Statistical Inventory Reconciliation Vendor Name & Phone Number | | | | | | | | | | |
| B. Manual Tank Gauging (TANK ONLY) | | | | | | | | | | |
| C. Inventory Control (TANK ONLY) | | | | | | | | | | |
| D. Interstitial | | | | | | | | | | |
| E. Tightness Test | | | | | | | | | | |
| F. Ground Water Observation Wells | | | | | | | | | | |
| G. Vapor Observation Wells | | | | | | | | | | |
| H. In-Tank (Auto Monitoring Gauge) (TANK ONLY) | | | | | | | | | | |
| I. In-Line Electronic Pressure Monitor (PIPING ONLY) See Definition Page 4 | | | | | | | | | | |
| J. Automatic Line Leak Detector (PIPING ONLY) See Definition Page 4 | | | | | | | | | | |
| K. None (TANK & PIPING) | X | NA | x | NA | | | | | | |

| Tank Identification Number | TANK NO. 0001 | TANK NO. 0002 | TANK NO. | TANK NO. | TANK NO. |
|---|---|---|---|---|---|
| **10. Overfill Protection** (Mark one X for each tank) | | | | | |
| A. Yes | | | | | |
| B. No | X | X | | | |
| **11. Spill Containment Around Fill Pipe** (Mark one X for each tank) | | | | | |
| A. Yes | | | | | |
| B. No | X | X | | | |
| **12. Tank Status Information** (Mark appropriate choice for each tank) | | | | | |
| A. In-Use | | | | | |
| B. Out of Service (See Definition Page 4) | | | | | |
| Date Taken Out of Service | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| C. Closed | | | | | |
| 1. Removed | | | | | |
| Date Removed | Mo. Day Year 12/16/2010 | Mo. Day Year 01/25/2011 | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| ~~Closure #~~ | | | | | |
| 2. Abandoned-In-Place | | | | | |
| Date Abandoned-In-Place | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| Closure # | | | | | |
| **13. Tank Use Information** (Mark if applicable) | | | | | |
| A. Emergency Back-up Generator | | | | | |
| B. Sump (See Definition Page 4) | | | | | |
| C. Heating Oil Tanks If you checked H, I or J under item B5 on Page 2, check one of the following | | | | | |
| 1. Product for on-site consumption use | | | | | |
| 2. Product for sale or distribution | | | | | |
| **14. Other Information** (Mark if applicable) | | | | | |
| A. Date of Sale or Transfer | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| B. Substantial Modification # | | | | | |
| C. ISRA # | | | | | |
| **15. Is the tank within a wellhead protection area as defined on Page 4** (Mark for each tank) | | | | | |
| A. Yes | | | | | |
| B. No | X | X | | | |

## SECTION C - FINANCIAL RESPONSIBILITY

**Please note:** In addition to new submittals, any change in the Financial Responsibility Assurance Mechanism as per N.J.A.C. 7:14B 2.2 (including policy renewal date) for an existing facility shall be listed below.

Financial Assurance Requirements have been satisfied under the terms an Administrative Consent Order between NJDEP and PPG Industries dated July 19, 1990.

Type of Mechanism (i.e. Insurance) Carrier/Issuing Agency

___/___/___ Effective Date ___/___/___ Expiration Date ____________ Policy Number $____________ Amount of Aggregate Coverage

## SECTION D - GENERAL GUIDANCE

| | |
|---|---|
| FEE: | (If applicable) Please make check payable to: "Treasurer, State of New Jersey". Registration and Billing Fee Schedule can be found in N.J.A.C. 7:14B-3. |
| PENALTY: | Failure by owner or operator of a regulated underground storage tank to comply with any requirement of 7:14B et. seq. may result in penalties set forth in N.J.S.A. 58:10A-12. |
| EMERGENCY: | If a discharge or spill occurs, the NJDEP Hotline at (877) 927-6337 must be called **IMMEDIATELY** - 24 hours a day. |
| EXEMPTION: | Residential heating oil underground storage tanks are exempt from the rules as per by N.J.S.A. 58:10A-21 et. seq. Please see N.J.A.C. 7:14B.-1.4(b) for other exemptions. |
| PUBLICATIONS: | Operation and maintenance / record keeping / compliance publications are available on line at **www.state.nj.us/dep/srp/bust** Suggested Publications: "Underground and Storage Tank Owner's Self-inspection Checklist" and "Tank Care". |
| QUESTIONNAIRE: | Initial facility registrations can be submitted online at www.njdeponline.com (Renewal and modifications need prior DEP pin code approval to submit online). |
| MAILING: | UST Registration Certificates are mailed directly to the facility to be displayed prominently as per N.J.A.C. 7:14B-2.6 |

## SECTION E - CERTIFICATION

Must be signed as follows:

- For a corporation, by a person authorized by resolution of the Board of Directors to sign the document.
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
- For persons other than indicated above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

John C. Richter — *(Typed / Printed Name)*

John C. Richter — *(Signature)*

Vice President, Envir, Health and Safety — *(Title)*

3/10/11 — *(Date)*

*Facility UST #*

## SECTION F - DEFINITIONS

Section B7 C. **"European" Suction Piping** - Suction piping which has enough slope so that the product in the pipe can drain back into the tank when the suction is released, and which has only one check valve, located directly beneath the pump in the dispensing unit. Any underground storage tank equipped with "European" Suction Piping has no monitoring detection requirements for piping.

Section B9 I. **In-Line Electronic Pressure Monitor** - (Used with pressurized piping only) A monitor which checks for loss of pressure within piping when no product is dispensed. This method may be used once every 30 days or every time the dispenser turns off.

Section B9 J. **Automatic Line Leak Detectors** - (Used with pressurized piping - Must be able to detect a 3 gph leak within 1 hour of its occurrence). Types of detectors are:

1. Flow restrictors and flow shut offs which monitor pressure within piping. When a suspected leak is detected, either restricts the flow of product through the piping well below the 3 gph leak rate it detects, or completely cuts off product flow and shuts down the pump.
2. Continuous alarm systems which constantly monitor piping conditions and trigger an audible or visual alarm if a leak is suspected.

Section B12 B. **Out of Service Storage Tank** - Any underground storage tank system in which hazardous substances are contained or have been contained, but from which hazardous substances are not or have not been introduced or dispensed pending a decision to close the system or begin reuse of the system.

**Please Note:** Underground storage tank systems which are out of service shall comply with the provisions of N.J.A.C. 7:14B-9-1. The owner or operator of an underground storage tank system which is out of service for a period greater than three months shall follow the guidelines in the current American Petroleum Institute Bulletin #1604. The owner or operator may request that the underground storage tank system remain out of service for a period of more than 12 months without having to permanently close the tank system by complying with the provisions of N.J.A.C. 7:14B-9.1(b) by submitting a Site Investigation (SI) Report at least 30 days before expiration of the 12 month period.

Section B13 B. **Sump** - Any underground storage tank used to collect or contain a hazardous substance for no more than 48 hours.

Section B15 **Wellhead Protection Area** -

1. The area within a 2,000 ft. radius surrounding a public community or public non-community water system well when there is an underground storage tank containing gasoline or non-petroleum hazardous substances located within that area.
2. The area within a 750 ft. radius surrounding a public community or public non-community water system well when there is an underground storage tank containing petroleum products other than gasoline located within that area.

**New Jersey Department of Environmental Protection**
Site Remediation Program

# LSRP NOTIFICATION OF RETENTION OR DISMISSAL

Date Stamp
(For Department use only)

## SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chrome Site 114

List all AKAs:

Street Address: 900 Garfield Avenue

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07305

Program Interest (PI) Number(s): 527871, 530369 Case Tracking Number(s):

## SECTION B. RETENTION INFORMATION

I was retained by PPG Industries, Inc. to serve as the licensed site remediation professional for the remediation at the site on 02/01/2011.

I replaced another LSRP:........ ☐ Yes ☒ No

Provide name of LSRP:

I have been hired to address (check one): ☒ an area(s) of concern ☐ a full site

## SECTION C. RELEASE INFORMATION

I was released by ______ from service as the licensed site remediation professional for remediation at the site on ______.

**Note:** The release notification is only required if it occurs prior to the issuance of the response action outcome for the site by the LSRP.

## SECTION D. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 509371

First Name: Kathleen Last Name: Whooley

Phone Number: (732) 564-3644 Ext: Fax: (732) 369-0122

Mailing Address: AECOM, 30 Knightsbridge Road, Suite 520

City/Town: Piscataway State: NJ Zip Code: 08854

Email Address: kathy.whooley@aecom.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

*I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.*

LSRP Signature: Kathleen Whooley Date: 3/25/11

LSRP Name/Title: Kathleen Whooley **No Changes Since Last Submittal** ☐

Company Name: AECOM

## SECTION E. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: PPG Industries, Inc.

Representative First Name: Brian    Representative Last Name: McGuire

Title: Manager, Environmental Projects

Phone Number: (412) 492-5512    Ext: ______    Fax: ______

Mailing Address: PPG Industries, Inc., 4325 Rosanna Drive

City/Town: Allison Park    State: PA    Zip Code: 15101

Email Address: bmcguire@ppg.com

Indicate relationship to the site (check all that apply):

- ☐ ISRA Owner/Operator
- ☒ UST Owner/Operator
- ☐ Spill Act Liable Party
- ☐ Prospective Purchaser
- ☐ Innocent Purchaser pursuant to N.J.S.A. 58:10-23.11gd
- ☐ Child Care Center (☐ Property Owner or ☐ Tenant)

I am taking over remediation from the Department or another party ............ ☐ Yes ☒ No

If "Yes," indicate name of party that was previously conducting remediation: ______

If "Yes," the party who I am taking over from agrees that I will conduct the remediation. ............ ☐ Yes ☐ No

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

*I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and that to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.*

Signature: Brian McGuire    Date: 03/22/2011

Name/Title: Manager, Environmental Projects

## SECTION F. "OPT IN" REQUEST

Is a Case Manager assigned? ... ☐ Yes ☐ No    If "Yes," provide name: ______

Current oversight mechanism:

- ☐ UST Rule
- ☐ ISRA Rule
- ☐ ACO/MOU/RA
- ☐ MOA
- ☐ None

Does the site involve or potentially impact a childcare center, school or residence? ............ ☐ Yes ☐ No

In accordance with N.J.A.C. 7:26C-2.3(b), I hereby request that the Department allow the remediation at the site identified in Section A, above, to be conducted in accordance with N.J.A.C. 7:26C-2.4. I certify that I have paid all invoiced uncontested oversight costs and applicable fees and that, if applicable, my remediation funding source has been established and maintained in an amount that reflects the estimated cost of remediation and that all applicable surcharges have been paid. I further certify that I agree to pay oversight costs incurred by the Department but not yet invoiced and, if applicable, to maintain my remediation funding source in an amount that equals the estimated cost of the remediation and to pay any required surcharge.

I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

I understand that my submittal of this certification provides an automatic approval of this request, provided that I am eligible for approval and that the Department finds the certification to be truthful and accurate.

Signature: ______    Date: ______

Typed/Printed Name: ______

Title: ______

New Jersey Department of Environmental Protection
Site Remediation Program

# CLOSURE NOTIFICATION / EXTENSION REQUEST OF AN UNDERGROUND STORAGE TANK SYSTEM

Date Stamp
(For Department use only)

## SECTION A. SITE NAME, LOCATION, AND INFORMATION

Site Name: Hudson County Chrome Site 114

List all AKAs:

Street Address: 900 Garfield Avenue

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07305

Mailing Address if different than street address: PPG Industries, Inc., 4325 Rosanna Drive, Allison Park, PA 15101-2009

Incident Number(s)/Com. Center Number(s): Case Tracking Number(s):

Program Interest (PI) Number(s): 527871, 530369

Municipal Block(s) and Lot(s):

| Block # | Lot # | Block # | Lot # |
|---|---|---|---|
| 2026.A | 1 | | |
| 2026.1 | 2A | | |
| | | | |
| | | | |

## SECTION B. CURRENT OWNER OF THE SITE

Full Legal Name of the Owner: PPG Industries, Inc.

First Name of Contact: Brian Last Name of Contact: McGuire

Title: Project Manager

Phone Number: (412) 492-5512 Ext: Fax:

Mailing Address: PPG Industries, Inc., 4325 Rosanna Drive

City/Town: Allison Park State: PA Zip Code: 15101

Email Address: bmcguire@ppg.com

☒ Check if same as Operator

## SECTION C. CURRENT OPERATOR OF THE SITE

Full Legal Name of the Operator:

First Name of Contact: Last Name of Contact:

Title:

Phone Number: Ext: Fax:

Mailing Address:

City/Town: State: Zip Code:

Email Address:

## SECTION D. NOTIFICATION TYPE

☒ Notice of Closure of an UST System(s); or

☐ Out of Service UST Extension Request for more than 12 months, and ☐ Site Investigation Report Submitted

Has closure occurred prior to this submittal? ........ ☒ Yes ☐ No

If "Yes," date of closure: 01/25/2011

Name of Company/Individual who performed the closure without approval.

Entact Environmental Services, Latrobe, PA

## SECTION E. CLOSURE INFORMATION

Complete the following information concerning UST system closure.

If piping is being closed without associated tank, please include associated Tank No., Tank Size, and Tank Contents fields and check **PIPING ONLY**.

**Tank Closure**

| **Tank No.** (i.e., E1) | **Length of Piping (ft)** | **Tank Size (gallons)** | **Tank Contents*** | **PIPING ONLY** |
|---|---|---|---|---|
| 0001 | NA | 2,000 | Unknown | ☐ |
| 0002 | NA | 1,000 | Unknown | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |

* If material is a hazardous substance but not a petroleum product, use chemical name and CAS number to identify tank's content. (Brand or trade names are unacceptable).

## SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 509371

First Name: Kathleen Last Name: Whooley

Phone Number: (732) 564-3644 Ext: Fax: (732) 369-0122

Mailing Address: AECOM, 30 Knightsbridge Road, Suite 520

City/Town: Piscataway State: NJ Zip Code: 08854

Email Address: kathy.whooley@aecom.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

*I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:*

**[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:**

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

*I believe that the information contained herein, and including all attached documents, is true, accurate and complete.*

*It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.*

*My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.*

*I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.*

LSRP Signature: Kathleen Whooley Date: 4/4/11

LSRP Name/Title: Kathleen Whooley **No Changes Since Last Submittal** ☐

Company Name: AECOM

## SECTION G. CLOSURE CERTIFICATE MAILING ADDRESS

Mail the Closure Certificate to: ☒ *Check if same as above*

Name (print or type):

Title:

Organization:

Address:

City: State: Zip Code:

Phone Number: Ext: Fax:

Email Address:

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
New Jersey Department of Environmental Protection
Site Remediation Program
401 East State Street, PO Box 434
Trenton, NJ 08625

**Division of Remediation Support**
**Bureau of Case Assignment and Initial Notice**
**PO Box 435**
**Trenton, NJ 08625-0435**
**(609) 633-0708**

# CLOSURE - Notice of Intent
# Underground Storage Tank System

**DEP Received Date:** 05/10/2011
**Expiration Date:** 05/10/2012

**TMS #:** N11-7757
**Facility ID #**: 554479
**Activity #:** UCL110001

**Facility Name:**
HUDSON COUNTY CHRDME SITE 114

**Facility Address:**
900 GARFIELD AVE
Jersey City
Hudson County

Decommission, close and conduct a site investigation for the UST(s) and all associated piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in N.J.A.C. 7:14B-8.2.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

**Contact Person:** Kathleen Whooley **Telephone #:** 732-564-3644

**This Permit must be displayed at the Site during the Approved Activity and must be made available for inspections at all times.**

The above listed facility is hereby granted approval to perform the attached activities in accordance with N.J.A.C. 7:14B-1 et. seq..

__RAFAEL RIVERA____________________
Rafael Rivera, Supervisor
**Bureau of Case Assignment and Initial Notice**

This Permit consists of 2 pages.

## The closure of the following:

One-1000 gallon UNKNOWN underground storage tank, and appurtenant piping.
One-2000 gallon UNKNOWN underground storage tank, and appurtenant piping.

**STATE OF NEW JERSEY**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**
**DIVISION OF REMEDIATION SUPPORT**
**REGISTRATION & BILLING UNIT**
**P.O. BOX 028**
**TRENTON, NEW JERSEY 08625-0028**
**Phone: (609) 633-1464**

BRIAN MCGUIRE
PPG INDUSTRIES INC
4325 RUSANNA DR
PO BOX 2009
ALLISON PARK, PA 15101-2009

04/07/2011

Re: **Notice of Deficiency**
Facility: HUDSON COUNTY CHRDME SITE 114
Facility ID: 554479

Dear UST Registrant:

The New Jersey Department of Environmental Protection has determined that your recent submission of a Registration Certificate Questionnaire for the above referenced facility is deficient for the following reason(s).

☑ Required Fee Not Submitted Pursuant to N.J.A.C. 7:14B-3

Amount Due $ __1,550.00________

☑ Financial Responsibility Information Incomplete Pursuant to N.J.A.C. 7:14B-15

☐ Signature & Certification Missing Pursuant to N.J.A.C. 7:14B-1.7

☑ Site Plan Not Submitted Pursuant to N.J.A.C. 7:14B-2.2d

☐ Required Facility Certification Questionnaire Not Submitted (correct form enclosed)

☑ Tank Information Incomplete Pursuant to N.J.A.C. 7:14B-2.2

☑ Other - Explanation Below:

Dear Sir, the department has received and processed your recent submittal however a first time registration fee was not provided as well as a site plan. Also the form indicates that the tank product is unknown however they were recently removed, a product should be known. Under Section C please provide a copy of the administrative consent order to verify the insurance information. Please address the outstanding issues and return. Thank you

Please submit the delinquent information, with a copy of this letter, to this office within 15 days. Failure to do so may result in your facility being referred to Enforcement and your Registration Certificate revoked.

If you have any questions, please don't hesitate to contact me at (609) 292-2817.

Sincerely,

Sarah Mihalik, Principal Tech MIS
Registration & Billing Unit
Bureau of Risk Management, Initial Notice and Case Assignment

AECOM
30 Knightsbridge Road, Suite 520
Piscataway, NJ 08854

732.564.3600 tel
732.369.0122 fax

April 22, 2011

Via FEDEX Standard

NJDEP
Division of Remediation Support
Registration & Billing Unit
PO Box 028
Trenton, New Jersey 08625-0028
609-633-1464

Attn: Sarah Mihalik

**Subject: Notice of Deficiency, HUDSON COUNTY CHROME SITE 114, Facility ID: 554479**

Dear Sarah Mihalik,

On behalf of PPG Industries, Inc. (PPG), AECOM is submitting this letter in response to a Notice of Deficiency dated April 7, 2011 concerning the recent submission of an Underground Storage Tank (UST) Registration Certificate Questionnaire for the above referenced facility.

**Required Fee Not Submitted Pursuant to N.J.A.C. 7:14B-3**

Chris Martell of AECOM contacted you by phone on March 25, 2011 to explain that AECOM needed an invoice from NJDEP in order to process and issue a check to cover the UST registration. Based on this telephone conversation, it was AECOM's prior understanding that the UST Notification submittal could be submitted to NJDEP, and NJDEP indicated they would issue an invoice to AECOM for the cost of the UST registration, so that the check could be processed.

It was later clarified in the April 7, 2011 Notice of Deficiency letter that the UST submittal could not be processed without the check. To rectify this situation, a check in the amount of $1,550.00 payable to the New Jersey State Treasurer is attached (AECOM Check # 014115171).

**Financial Responsibility Information Incomplete Pursuant to N.J.A.C. 7:14B-15**

In accordance with the 1990 Administrative Consent Order, *VIII. Financial Assurance Requirements*, PPG is required to maintain financial assurance in the amount of eighty million dollars ($80,000,000.00) in the form of either an irrevocable letter of credit or performance bond, and the Standby Trusts identified in the ACO. As requested in the NOD letter under *Other – Explanation Below,* a copy of the 1990 ACO is provided in Attachment 1.

Section C of the UST Facility Certification Questionnaire requires proof of insurance, including type of mechanism, carrier, effective date, expiration date, policy number and amount of aggregate coverage. It is our understanding that financial responsibility assurance may be demonstrated through the self-guarantee in accordance with N.J.A.C. 7:26C-5.2(f)5. A copy of PPG's Self-Guarantee Renewal Application along with a copy of the company's Annual Report to the Shareholders in the amount of $50,000,000.00 is provided in Attachment 2. PPG is in the process of completing the *Financial Responsibility for Regulated Underground Storage Tanks (USTs) Certification: Financial Test of Self-Insurance Form* and will submit this to the Department under separate cover.

**Site Plan Not Submitted Pursuant to N.J.A.C. 7:14B-2.2d**

As requested, a copy of a site plan that depicts the location of the USTs where they were discovered is provided in Attachment 3.

**Other – Explanation Below:**

The dates of operation of the USTs are unknown. When discovered, the USTs were observed and found to contain contaminated groundwater. Due to the age of the tanks and the lack of documentation of tank usage, tank contents were identified as unknown since facility records concerning the usage of the tanks are unavailable.

If you require additional information to satisfy the April 7, 2011 NOD letter, please contact me at AECOM by calling 732-564-3644 or via email (email provided below).

Yours sincerely,

Kathleen Whooley
kathy.whooley@aecom.com

Christopher Martell
christopher.martell@aecom.com

Attachments

cc: S. Mikaelian, AECOM
B. McGuire, PPG
M. Terril, PPG
D. Claassen, PPG
P. Sorge, JM Sorge on behalf of Hampshire Group
B. Delisle, JC
T. Cozzi, NJDEP
P. Amin, Weston
B. McPeak, PP
M. McCabe, SA

**AECOM TECHNOLOGY CORPORATION** **NO. 014115171**

DATE 20-APR-2011 VENDOR NAME NEW JERSEY STATE VENDOR NO 3882

| INVOICE NO. | DESCRIPTION | INVOICE DATE | VOUCHER NO. | DISCOUNT | NET AMOUNT |
|---|---|---|---|---|---|
| CR0418111550 | FEE NOT SUBMITED PURSUANT | 18-APR-11 | 852100036 | 0.00 | 1,550.00 |

COPY

PLEASE DETACH AND RETAIN THIS STATEMENT AS YOUR RECORD OF PAYMENT 0.00 1,550.00

FOLD FOLD

WLPSZ8511VBL26 (8100)

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND ON WHITE PAPER. THERMOCHROMIC INK ON BACK.

AECOM TECHNOLOGY CORPORATION
4840 Cox Road
Glen Allen, VA 23060-6292
804-515-8300

WELLS FARGO BANK
115 Hospital Drive
Van Wert, OH 45891

56-382
412

**NO. 014115171**

| CHECK DATE | CHECK NUMBER |
|---|---|
| 20-APR-2011 | 014115171 |

CHECK AMOUNT

PAY: One Thousand Five Hundred Fifty Dollars And 00 Cents**************

$1,550.00

TO THE ORDER OF: NEW JERSEY STATE
TREASURER
PO BOX 028
TRENTON, NJ 08625

COPY

M. Burke

AUTHORIZED SIGNATURES

Security features included. Details on back.

⑈014115171⑈ ⑆041203824⑆9600047953⑈

*See Other Side For Opening Instructions*

FROM: AECOM TECHNOLOGY CORPORATION
4840 Cox Road
Glen Allen, VA 23060-6292
804-515-8300

COPY

TO: NEW JERSEY STATE
TREASURER
PO BOX 028
TRENTON, NJ 08625

# Attachment 1

# 1990 ACO

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-1408
Fax # (609) 633-1454

| | | |
|---|---|---|
| IN THE MATTER OF | : | ADMINISTRATIVE |
| HUDSON COUNTY CHROMATE CHEMICAL | : | CONSENT |
| PRODUCTION WASTE SITES | : | ORDER |
| AND | : | |
| PPG INDUSTRIES, INC. | : | |

This Administrative Consent Order is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP" or the "Department") by N.J.S.A. 13:1D-1 et seq. and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the Spill Compensation and Control Act ("Spill Act"), N.J.S.A. 58:10-23.11a et seq., and duly delegated to the Assistant Director for the Division of Hazardous Waste Management pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. PPG Industries, Inc. is a Pennsylvania corporation with its principal place of business at One PPG Place, Pittsburgh, Pennsylvania, 15272. PPG is the successor to Pittsburgh Plate Glass Company, Natural Products Refining Company, Southern Alkali Corporation, and Columbia Southern Chemical Corporation.

2. PPG Industries, Inc., its predecessors and their subsidiaries (collectively hereinafter "PPG") owned and operated a chromate chemical production facility encompassing approximately 16.6 acres located on Garfield Avenue in the City of Jersey City, County of Hudson, State of New Jersey, on the site designated on the City of Jersey City 1987 municipal tax map as Block 2025.A, Lot 2.1, and Block 2026.A, Lots 1, 2.A, and 3.B (hereinafter "the Garfield Avenue Site"). On or about September 1, 1963, PPG ceased operations of the chromate chemical production facility at the Garfield Avenue Site.

3. The operations referenced in paragraph 2 above, resulted in the generation of chromite ore processing residue, which contains chromium and its compounds and may contain hexavalent chromium, which are hazardous substances as defined by the Spill Compensation and Control Act, specifically, N.J.S.A. 58:10-23.11bk, and the regulation promulgated pursuant thereto, N.J.A.C. 7:1E-1 et seq., and are pollutants as defined in the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.,

specifically N.J.S.A. 58:10A-3n, and the regulations promulgated pursuant thereto, N.J.A.C. 7:14A-1.2(c).

4. The Department has determined that chromite ore processing residue from PPG's operations referenced in paragraph 2 above, was distributed by third parties as fill material for use in certain construction and development projects in Hudson County, New Jersey. The chromite ore processing residue was used for the backfilling of demolition sites, preparation for building foundations, construction of tank berms, roadway construction, the filling of wetlands and other construction and development related purposes.

5. The Department has found chromite ore processing residue contamination on the walls and floors of buildings, both interior and exterior, on the surfaces of driveways and parking lots and on the surfaces of unpaved areas at certain locations in Hudson County, New Jersey. These locations include residential lots, active work sites, publicly owned lands, industrial and commercial establishments and other populated and environmentally sensitive areas in Hudson County, New Jersey.

6. The Department has determined that PPG's chromate chemical production facility referenced in paragraph 2 above, and those of Allied-Signal Incorporated (hereinafter "Allied-Signal"), located in the City of Jersey City, and Diamond Shamrock Chemicals Company, (hereinafter "Diamond"), located in the Town of Kearny, were the only chromate chemical production facilities in New Jersey and were the only such facilities within an approximately one-hundred and fifty mile radius of Hudson County. The Department has found no evidence that any of the chromite ore processing residue from facilities outside such radius was deposited in, or was taken to Hudson County.

7. On January 22, 1985, the Department directed PPG, among others, to arrange for the removal of hazardous substances, including chromium and chromium compounds, at forty-two (42) sites in Hudson County, by paying for the Department's costs of a Remedial Investigation and Feasibility Study (hereinafter "RI/FS") at those sites.

8. On or about August 5, 1985, the State of New Jersey awarded a contract to Environmental Science and Engineering, Inc. to implement the RI/FS.

9. On July 22, 1986, PPG and the Department executed an Administrative Consent Order concerning the RI/FS. Pursuant to the Administrative Consent Order, PPG arranged in part for the removal of chromite ore processing residue by agreeing to reimburse the Department for the part of the Department's costs of conducting the RI/FS and PPG participated in the Chromium Sites Study Committee the Department created to oversee and manage the RI/FS.

10. On December 2, 1988, the Department issued a Directive (hereinafter "the December 2, 1988 Directive") to PPG, among others, pursuant to the Spill Act, directing it to undertake interim remedial actions at eighty-six (86) sites in Hudson County, including some of the Residential Sites listed in Attachment Two and the Non-Residential Sites

listed in Attachment One. Each of these attachments are attached hereto and made a part hereof. Except as incorporated herein, the December 2, 1988 Directive remains in full force and effect.

11. In response to the December 2, 1988 Directive identified in paragraph 10 above, PPG agreed to implement interim remedial measures (IRMs) at ten high priority and five medium priority sites. A draft IRM work plan for the ten high priority sites, dated February 14, 1989 prepared pursuant to the December 2, 1988 Directive was submitted by PPG to the Department for Sites numbered 1, 13, 28, 29, 37, 74, 75, 89, 102 and 137 (previously designated as part of site 114). On May 8, 1989 PPG received Department approval of the work plan and began implementation of the IRM at the ten high priority sites. Subsequent to May 8, 1989, PPG agreed to a Department request to perform the IRM at one additional high priority site, (Site 123) consistent with the procedures in the work plan previously approved on May 8, 1989. On October 6, 1989, PPG submitted IRM work plans for Sites 2 (exterior only), 3, 4, 5, and 112. On October 26, 1989, the Department determined that the October 6, 1989 PPG IRM Work Plan was unacceptable. On December 1, 1989, PPG submitted a revised IRM Work Plan to incorporate revisions to the Work Plan. The Department in correspondence dated December 19, 1989 and January 16, 1990 provided conditional acceptance of the work plan. On May 4, and May 9, 1990 PPG submitted draft interior and exterior sampling plans to the Department for Site 114 and Site 137. On May 23, 1990 the Department accepted the sampling plan conditional upon PPG acceptance of certain modifications to which PPG agreed in a June 7, 1990 letter to the Department. On May 11, 1990 PPG submitted draft IRM work plans for sites 2 (interior only), 89 (interior only), and 133 (interior only), which were conditionally accepted on June 13, 1990. All IRM work plans and sampling plans approved by the Department prior to the effective date of this Administrative Consent Order for compliance with the December 2, 1988 Directive shall be deemed approved under this Administrative Consent Order. Similarly, all IRM work plans and sampling plans conditionally approved by the Department prior to the effective date of the Administrative Consent Order for compliance with the December 2, 1988 Directive shall be deemed conditionally approved under this Administrative Consent Order.

12. On May 25, 1989, the Chromium Sites Study Committee reviewed and approved the RI reports which concluded that thirty (30) of the sites studied were confirmed as containing chromite ore processing residue and had chromium concentrations in soil/fill materials and that chromite ore processing residue present adjacent to a building can lead to contamination of both outside and inside surfaces of such buildings.

13. On November 15, 1989, the Chromium Sites Study Committee approved the Feasibility Study Report (hereinafter "FS Report") which identified a number of viable remedial alternatives for the cleanup of chromium contamination from chromite ore processing residue.

14. On December 12, 1989, the Department issued its recommendation for remedial action for the soil remediation at residential sites, in a document entitled "Proposed Plan, Hudson County Chromium, Residential Sites" (hereinafter "the Proposed Plan"). The recommended remedial action included excavation, solidification/stabilization and disposal of chromium contamination in a commercial hazardous waste facility.

15. During December 1989, and January and part of February 1990, the Department solicited public comments on the Proposed Plan by mailing it to interested parties, including PPG, and made the Proposed Plan available for public review at repositories in Hudson County, New Jersey.

16. On April 17, 1990, the Department issued a Record of Decision containing the Department's final decision on the selection of a remedial action for the contaminated Residential Sites, its response to public comments on the Proposed Plan, and a cost estimate for the selected remedial action of twenty-nine million nine hundred thirty-eight thousand dollars ($29,938,000).

17. On May 16, 1990, the Department issued a Directive (hereinafter "the May 16, 1990 Directive") to PPG pursuant to the Spill Act, directing PPG to arrange for the removal of hazardous substances at the Residential Sites by paying the Department its costs of implementing the remedial action alternative the Department selected in its April 17, 1990 Record of Decision.

18. The Department has determined that chromite ore processing residue has been discharged and is present at each of the sites listed in Attachment One (hereinafter "the Non-Residential Sites") and each of the sites listed in Attachment Two (hereinafter "the Residential Sites"). The Department has determined that the chromite ore processing residue, which contains chromium and its compounds, and other hazardous substances, at the Residential Sites and the Non-Residential Sites, including the Garfield Avenue Site, has been discharged into the waters and/or onto the lands of the State of New Jersey in violation of Section 4 of the Spill Act, N.J.S.A. 58:10-23.11c.

19. The Department has determined that the chromite ore processing residue at the Sites and the Garfield Avenue Site is identifiable by virtue of its chemical and physical characteristics, but is chemically and physically indistinguishable from the chromite ore processing residue generated by Allied-Signal's or Diamond's chromate chemical production facilities referenced above.

20. The Department has determined that uncontrolled discharges of hazardous substances from the chromite ore processing residue at the Sites and the Garfield Avenue Site are within an area of high population density in the State of New Jersey and that the risk of human exposure to chromite ore processing residue at the Sites and the Garfield Avenue Site is ongoing. Chromium and its compounds contained in the chromite ore processing residue, are potentially toxic to humans and may include demonstrated human carcinogens. The Department has determined that these conditions create a substantial risk of imminent danger to human health and the environment.

21. Pursuant to N.J.S.A. 58:10-23.11fa, whenever any hazardous substance is discharged, the Department may, in its discretion, act to remove or arrange for the removal of such discharge or may direct the discharger to remove, or arrange for the removal of, such discharge.

22. The Department has determined that the pollutants referenced in these FINDINGS discharged onto the lands and into the water of the State of New Jersey without a valid New Jersey Pollutant Discharge Elimination System

Permit in violation of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., specifically N.J.S.A. 58:10A-6.

23. The Department has determined that pursuant to N.J.S.A. 58:10-23.11gc, PPG is strictly liable, jointly and severally, without regard to fault, for all costs of the cleanup and removal of the hazardous substances discharged at the Sites and the Garfield Avenue Site and other locations in Hudson County at which chromite ore processing residue and chromium and its compounds from the Sites and/or the Garfield Avenue Site have been discharged.

24. The Department has determined that the hazardous substances referenced in these FINDINGS have discharged into the waters and onto the lands of the State of New Jersey in violation of the Spill Compensation and Control Act, specifically N.J.S.A. 58:10-23.11c.

25. PPG disagrees with and does not admit the Department's determination of PPG's responsibility for the remediation of the sites described herein. PPG filed a challenge to the Department's Record of Decision on May 31, 1990, reflecting PPG's firmly held belief that the Department's ROD and cleanup levels are scientifically unjustified and that cleanup levels proposed by PPG and the other former chrome manufacturers, which were the result of a significant study effort by recognized experts, are fully protective of human health and the environment. For the same reasons, on July 2, 1990, PPG also challenged the Department's May 16, 1990 residential site cleanup directive to PPG. Although PPG remains convinced of the moral and legal correctness of its position, in order to resolve this matter without the necessity for litigation, and in order to work with the Department to expedite investigation and remediation of chromium contaminated sites in and around Hudson County, PPG has agreed to:

a. Implement the remedy selected by the Department in its April 17, 1990 Record of Decision for the Residential Sites listed in Attachment Two and all other residential sites in Hudson County to be identified, pursuant to this Administrative Consent Order;

b. Implement IRMs, conduct a remedial investigation and a feasibility study, and to design and implement remedial action selected by the Department to remedy the problems associated with the hazardous substances as defined by the Spill Act and pollutants as defined in the Water Pollution Control Act, discharged at the Garfield Avenue Site, emanating from the Garfield Avenue Site, or which have emanated from the Garfield Avenue Site;

c. Implement interim remedial measures and conduct a remedial investigation and a feasibility study, and to design and implement the remedial action selected by the Department to remedy the problems associated with chromite ore processing residue, chromium and its compounds whether or not any other hazardous substances or pollutants are intermingled therewith, at, emanating from or which have emanated from the Non-Residential Sites listed in Attachment One, and all Non-Residential Sites in Hudson County to be identified, pursuant to this Administrative Consent Order;

d. Withdraw all suits that PPG has pending, filed or otherwise commenced against the Department and withdraw PPG's January 23, 1990 petition to the Department;

e. Pay the Department for all its past and subsequent costs incurred in connection with the investigation and response to, the matters described hereinabove, including the costs associated with the preparation of this Administrative Consent Order;

f. Pay the Department for all its past and subsequent costs incurred in connection with implementing IRMs at Residential Sites listed in paragraphs 29 and 30 below; and

g. Pay the Department for all of its costs as set forth in paragraph 31 below in full satisfaction of the Department's August 23, 1989 Spill Act Directive for Non-Residential Site 122.

h. Pay the Department a civil penalty as set forth in paragraph 26 below.

## ORDER

**NOW THEREFORE IT IS HEREBY ORDERED AND AGREED THAT:**

I. Penalties and Reimbursement of Prior Costs

26. PPG agrees to pay to the Department as provided for in this paragraph, a civil penalty of two million five hundred thousand dollars ($2,500,000.00) for all violations of the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11a et seq., and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., for all discharges of chromate ore processing residue from the Garfield Avenue Site. Within thirty (30) calendar days after the effective date of this Administrative Consent Order, PPG shall pay one million five hundred thousand dollars ($1,500,00.00), the first of three (3) penalty payments. Within three hundred sixty-five (365) calendar days after the effective date of this Administrative Consent Order, PPG shall pay, five hundred thousand dollars ($500,000.00), the second of three (3) penalty payments. Within seven hundred thirty (730) calendar days after the effective date of this Administrative Consent Order, PPG shall pay five hundred thousand dollars ($500,000.00), the third of three (3) penalty payments. If PPG fails to make any of these payments in the time frames specified above, PPG expressly agrees that the Department may withdraw any remaining unpaid penalty payment amounts from the financial assurance established pursuant to paragraph 84 below in accordance with paragraph 85 below. The Department shall not seek, demand, or otherwise claim any civil or civil administrative fines or penalties from, or initiate any action for civil or civil administrative fines or penalties against PPG, its present or former parents, subsidiaries, predecessors or affiliates or the officers, directors, or employees of PPG, their present or former parents, subsidiaries, predecessors or affiliates, or any of them, based upon their alleged acts or omissions (including, without limitation, failure to report), or any continuing releases, migration or discharges of hazardous substances or pollutants, in connection with or arising in any way out of the disposal, discharge, handling, treatment or transportation, occurring

prior to the effective date of this Administrative Consent Order, of hazardous substances or pollutants at or from the Garfield Avenue Site. Although it agrees to pay this civil penalty, PPG denies any violation of statute, rule, regulation or ordinance and payment of this penalty is without admission of fact, fault, liability or obligation. The provisions of this paragraph shall survive any termination of this Administrative Consent Order.

27. Within thirty (30) calendar days after PPG's receipt from the Department of a summary of costs, PPG shall submit the amount of thirty thousand three hundred seventy-six and forty-four cents ($30,376.44) to the Department as payment for all costs incurred by the Department up until April 6, 1990, in connection with the investigation of, and response to, the matters described in the FINDINGS hereinabove, including the costs associated with the preparation of this Administrative Consent Order.

28. Within thirty (30) calendar days after receipt of a written summary of all additional costs incurred by the Department, in connection with the investigation of, and response to, the matter described in the FINDINGS hereinabove, PPG shall submit to the Department payment of all such costs.

29. Within thirty (30) calendar days after PPG's receipt from the Department of a summary of costs, PPG shall submit the amount of six hundred thirty-six thousand four hundred fifty-two dollars and thirty-two cents ($636,542.32) to the Department as payment for all costs incurred by the Department in connection with the costs of implementing IRMs at Residential Sites 6, 10, 11, 14, 18, 23, 24, 38, 39, 82 and 85.

30. Within thirty (30) calendar days after receipt of a written summary of all subsequent costs incurred by the Department in performing IRMs at Residential Sites 12, 22, 80, 81, 83, 84, 142 and at 409-411 Halladay Street in Jersey City, PPG shall submit to the Department payment of all such costs.

31. Within thirty (30) calendar days after PPG's receipt from the Department of a summary of costs, PPG shall submit the amount of two hundred fifty-one thousand and five hundred dollars ($251,500) to the Department as payment in full satisfaction of the Department's August 23, 1989 Spill Act Directive for Non-Residential Site 122.

32. Within thirty (30) calendar days after the effective date of this Administrative Consent Order, as referenced in paragraph 128 below, PPG shall withdraw all suits that PPG has pending, filed or otherwise commenced against the Department and PPG shall withdraw its rule petition of January 23, 1990.

33. Payment of the amounts in paragraphs 26 through 31 above, shall be made by a cashier's or certified check payable to the "Treasurer, State of New Jersey". Payment shall be submitted to the Department contact listed in paragraph 82 below.

## II. Interim Remedial Measures

34a. PPG shall complete implementation of all IRMs at the sites on Attachment One pursuant to IRM Work Plans approved by the Department as of the effective date of this Administrative Consent Order.

34b. Within sixty (60) calendar days after the effective date of this Administrative Consent Order, PPG shall submit to the Department a draft IRM Grouping and Scheduling Plan which describes PPG's proposal for the organization of the Non-Residential Sites and the Garfield Avenue Site into groups and the scheduling of those groups for the submission of Interim Remedial Measures Work Plans required by this Administrative Consent Order.

34c. Within five (5) calendar days after PPG's receipt of the Department's written comments on the draft IRM Grouping and Scheduling Plan, PPG shall modify the IRM Grouping and Scheduling Plan to conform to the Department's comments and shall submit the modified IRM Grouping and Scheduling Plan to the Department. The determination as to whether or not the modified IRM Grouping and Scheduling Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable shall be made solely by the Department.

35. Within one hundred and thirty-five (135) calendar days after the effective date of this Administrative Consent Order, PPG shall submit to the Department a detailed draft Interim Remedial Measures Work Plan (hereinafter "IRM Work Plan"), in accordance with the scope of work set forth in Appendix A which is attached hereto and made a part hereof, for the initial group and at thirty day intervals thereafter for the subsequent groups identified in the approved IRM Grouping and Scheduling Plan.

36. Within forty-five (45) calendar days after receipt of the Department's written comments on the draft IRM Work Plan(s) for each group, PPG shall modify the draft IRM Work Plan(s) for each group to conform to the Department's comments and shall submit the modified IRM Work Plan(s) to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified IRM Work Plan(s), as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

37. Upon receipt of the Department's written final approval of the IRM Work Plan(s) for each group, PPG shall implement the approved IRM Work Plan(s) for each group in accordance with the approved schedule therein. Within thirty (30) calendar days after completion of the interim remedial actions at each site grouping, PPG shall submit to the Department a report detailing the measures taken by PPG to implement the IRM Work Plan(s) for each group, including site map(s) showing the location(s) at the site(s) where such measures were taken.

## III. Non-Residential Sites Remedial Investigation and Cleanup

### A. Remedial Investigation

38a. Within one hundred and twenty (120) calendar days after the effective date of this Administrative Consent Order, PPG shall submit to the Department a draft Remedial Investigation Grouping and Scheduling Plan which describes PPG's proposal for the organization of the Non-Residential Sites and the Garfield Avenue Site into groups and for the scheduling of those groups for the submission of Remedial Investigation Work Plans required by this Administrative Consent Order.

38b. Within five (5) calendar days after PPG's receipt of the Department's written comments on the draft Remedial Investigation Grouping and Scheduling Plan, PPG shall modify the Remedial Investigations Grouping and Scheduling Plan to conform to the Department's comments and shall submit the modified Remedial Investigation Grouping and Scheduling Plan to the Department. The determination as to whether or not the modified Remedial Investigation Grouping and Scheduling Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable shall be made solely by the Department in writing.

38c. Within two hundred and forty (240) calendar days after the effective date of this Administrative Consent Order, PPG shall submit to the Department a detailed draft Remedial Investigation Work Plan (hereinafter the "RI Work Plan") for the initial group identified in the approved Remedial Investigation Grouping and Scheduling Plan and in accordance with the schedule contained in the approved Remedial Investigation Grouping and Scheduling Plan. All draft RI Work Plans shall be drafted in accordance with the scope of work set forth in Appendices B, C and D, which are attached hereto and made a part hereof.

39. Within forty-five (45) calendar days after PPG's receipt of the Department's written comments on the draft RI Work Plan(s) for each group, PPG shall modify the draft RI Work Plan to conform to the Department's comments and shall submit the modified RI Work Plan(s) to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified RI Work Plan(s), as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

40. Upon PPG's receipt of the Department's written approval of the RI Work Plan(s) for each group, PPG shall conduct the remedial investigation in accordance with the approved RI Work Plan(s) and the schedule(s) therein.

41. PPG shall submit to the Department draft Remedial Investigation Report(s) (hereinafter "RI Report") for each group identified in the approved Remedial Investigation Grouping and Scheduling Plan in accordance

with the approved RI Work Plan developed in accordance with Appendix B, and the schedule therein.

42. If upon review of any draft RI Report(s) the Department determines that additional remedial investigation is required, PPG shall conduct such additional remedial investigation pursuant to Appendix B, as required by the Department in writing and submit supplemental draft RI Report(s).

43. Within forty-five (45) calendar days after PPG's receipt of the Department's written comments on each draft or second draft (if applicable pursuant to the preceding paragraph) RI Report, PPG shall modify the draft or second draft RI Report to conform to the Department's comments and shall submit the modified RI Report to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified RI Report, as resubmitted, conforms with the Department's comments and is otherwise acceptable by the Department shall be made solely by the Department in writing.

B. Feasibility Study

44. Within one-hundred and eighty (180) calendar days after PPG's receipt of either the Department's written final approval of any RI Report, or the Department's written notice to proceed, PPG shall submit to the Department a detailed draft Feasibility Study Work Plan (hereinafter, "FS Work Plan") for the site(s) which is (are) the subject of the approved RI Report or notice to proceed in accordance with the scope of work set forth in Appendix E, which is attached hereto and made a part hereof.

45. Within forty-five (45) calendar days after PPG's receipt of the Department's written comments on any draft FS Work Plan, PPG shall modify the draft FS Work Plan to conform to the Department's comments and shall submit the modified FS Work Plan to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified FS Work Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

46. Upon PPG's receipt of the Department's written approval of any FS Work Plan, PPG shall conduct the feasibility study which is the subject of said approval in accordance with the approved FS Work Plan and the schedule therein.

47. PPG shall submit to the Department a draft Feasibility Study Report (hereinafter "FS Report") for the site(s) for which the Department has given written approval of the FS Work Plan in accordance with Section III of Appendix E and the approved FS Work Plan developed in accordance with Appendix E, and the schedule therein.

48. Within forty-five (45) calendar days after PPG's receipt of the Department's written comments on any draft FS Report, PPG shall modify the draft FS Report to conform to the Department's comments and shall submit the modified FS Report to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified FS Report, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

C. Remedial Action

49. The Department will make each selection of the remedial action alternative based upon any final FS Report submitted in accordance with paragraph 48 above, and on the criteria set forth in Appendix E, Section I.D. If PPG fails to submit any final FS Report in compliance with paragraph 48 above, then the Department will make selection of remedial action alternative(s) based on the criteria set forth in Appendix E, Section I.D.

50. Within one hundred and twenty (120) calendar days after PPG's receipt of the Department's written notification of its selection of any remedial action alternative(s), PPG shall submit to the Department a detailed draft Remedial Action Plan for those sites which are the subject of the Department's notification in accordance with the scope of work set forth in Appendix F, which is attached hereto and made a part hereof. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG disagrees with the Department's selected remedial action alternative(s). Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its selection of the remedial action alternative(s). If the Department has determined that more than one alternative for the Garfield Avenue Site and/or one or more of the Non-Residential Sites meets the criteria set forth in Appendix E, Section I.D., PPG may decide which of these alternatives it will implement.

51. Within ninety (90) calendar days after PPG's receipt of the Department's written comments on any draft Remedial Action Plan, PPG shall modify the draft Remedial Action Plan to conform to the Department's comments and shall submit the modified Remedial Action Plan to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified Remedial Action Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

52. In accordance with the schedule contained in each approved Remedial Action Plans referenced in paragraph 51 above, PPG shall submit to the Department detailed engineering design(s) and cost estimate(s) for the selected remedial action alternative(s).

53. Within ninety (90) calendar days after PPG's receipt of the Department's written comments on the detailed engineering design(s) and cost estimate(s), PPG shall modify the detailed engineering design and cost estimates to conform to the Department's comments and shall submit the modified detailed engineering design and cost estimates to the Department. Within this timeframe, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss its comments. The determination as to whether or not the modified detailed engineering design and cost estimates as resubmitted, conform to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

54. Upon PPG's receipt of the Department's written approval of any detailed design specifications and cost estimates, PPG shall implement the approved Remedial Action Alternative(s) which is (are) the subject of said approval in accordance with the schedule therein and in accordance with the approved detailed engineering design.

D. Additional Remedial Investigation and Remedial Action

55. If at any time prior to PPG's receipt of written notice from the Department pursuant to paragraph 134 below the Department determines that the criteria set forth in Appendix E, Section I.D. for Non-Residential Sites are not being achieved, or that additional remedial investigation and/or remedial action is required to protect human health or the environment from any chromite ore processing residue, chromium and its compounds, whether or not any hazardous substances or pollutants are intermingled therewith, at, emanating from or which have emanated from the Sites, PPG shall conduct such additional activities as directed by the Department and in accordance with this Administrative Consent Order. If at any time prior to PPG's receipt of written notice from the Department pursuant to paragraph 134 below the Department determines that the criteria set forth in Appendix E, Section I.D. for Non-Residential Sites are not being achieved, or that additional remedial investigation and/or remedial action is required to protect human health or the environment from any hazardous substances and pollutants at, emanating from or which have emanated from the Garfield Avenue Site, PPG shall conduct such additional activities as directed by the Department in accordance with this Administrative Consent Order.

E. Additional Sites

56. For each additional site, identified by the Department, contaminated with chromite ore processing residue and chromium and its compounds from the Garfield Avenue Site, or which is adjacent to the Garfield Avenue Site or any of the Non-Residential Sites, and is contaminated by chromite ore processing residue, chromium and its compounds, emanating or which has emanated from the Garfield Avenue Site or any of the Non-Residential Sites, PPG shall conduct, in accordance with the provisions of this Administrative Consent Order for such Non-Residential Sites interim remedial measures and a RI/FS, and shall design and implement a remedial action to remedy the problem associated with the chromite ore processing

residue, chromium and its compounds whether or not any hazardous substances or pollutants are intermingled therewith.

57. PPG shall conduct for such Non-Residential Sites, in accordance with the provisions of this Administrative Consent Order, interim remedial measures and delineation and remediation of chromite ore processing residue, chromium and its compounds whether or not any hazardous substances or pollutants are intermingled therewith.

58. Upon PPG's receipt of written notice from the Department of the existence of any additional Non-Residential Site or Non-Residential Sites identified pursuant to paragraphs 56 and 57 above, PPG shall undertake the obligations set forth in paragraphs 34 through 55, above, regarding such additional Non-Residential Site or Non-Residential Sites and in accordance with the time periods set forth therein.

## IV. Remedial Action for Residential Sites

### A. Site Specific Delineation

59. PPG shall design and implement the remedial action for the Residential Sites which the Department selected in its April 17, 1990 Record of Decision (hereinafter the "ROD"), in accordance with the paragraphs 60 through 71 below.

59a. Within sixty (60) days after the effective date of this Administrative Consent Order, PPG shall submit a written Residential Sites Grouping and Scheduling Plan which describes PPG's proposal for the organization of the Residential Sites into groups and for the scheduling of those groups for the remedial actions to be performed by PPG pursuant to this Administrative Consent Order. PPG shall include in the Residential Sites Grouping and Scheduling Plan a detailed schedule of each of the remedial activities called for in paragraphs 60 through 71, inclusive, (including the submission, revision and implementation of FSP-QAPPs in accordance with Appendix J, submission and revision of Preliminary Designs and the submission, revision and implementation of Final Designs in accordance with Appendices K and L) for each of the groups of sites identified and provide both graphical and narrative descriptions of the scheduling of those activities and their chronological relationship. PPG shall draft the schedule submitted in the Residential Sites Grouping and Scheduling Plan to provide for completion of all remedial actions called for in paragraphs 60 through 71 inclusive at each of the Residential Sites within eight hundred (800) days after the effective date of this Administrative Consent Order.

59b. Within five (5) calendar days after PPG's receipt of the Department's written comments on the Residential Sites Grouping and Scheduling Plan, PPG shall modify the Residential Sites Grouping and Scheduling Plan to conform to the Department's comments and shall submit the modified Grouping and Scheduling Plan to the Department. The determination as to whether or not the modified Residential Sites Grouping and Scheduling Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable shall be made solely by the Department in writing.

59c. As part of the Residential Sites Grouping and Scheduling Plan, PPG may petition the Department to allow Preliminary and Final Designs described herein below, to be submitted concurrently with the FSP-QAPPs for those Residential Sites where only a minimal amount of additional delineation may be required and where such delineation can be effectively carried out concurrently with removal of chromium contamination from the site. The petition must be submitted by PPG in writing to the Department. The determination as to whether or not the petition is granted shall be made solely by the Department in writing.

59d. All reports, plans or other submissions required in paragraphs 59 through 72 of this Administrative Consent Order shall be submitted for the groups designated in the Residential Sites Grouping and Scheduling Plan.

60. Within ninety (90) calendar days after the effective date of this Administrative Consent Order, PPG shall submit to the Department a detailed draft Field Sampling Plan - Quality Assurance Project Plan (hereinafter the "FSP-QAPP") for the initial group of sites identified within the approved Residential Sites Grouping and Scheduling Plan and for all other groups in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan. PPG shall prepare each FSP-QAPP in accordance with Appendix J which is attached hereto and made a part hereof.

61. PPG shall modify each draft FSP-QAPP to conform to the Department's comments and shall submit each modified FSP-QAPP to the Department in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan. The determination as to whether or not the modified FSP-QAPP, as resubmitted, conforms to the Department's comments and is otherwise acceptable shall be made solely by the Department in writing.

62. PPG shall complete the implementation of the FSP-QAPP in accordance with the approved FSP-QAPP and the approved Residential Sites Grouping and Scheduling Plan.

63. PPG shall submit to the Department draft Field Sampling Reports containing data and documentation required in Appendix J and the approved FSP-QAPP in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan.

64. If upon review of any draft Field Sampling Report, the Department determines that additional site specific sampling is required, PPG shall conduct such additional site specific sampling as required by the Department in writing and submit a supplemental Field Sampling Report.

65. PPG shall modify each draft or supplemental draft Field Sampling Report to conform to the Department's comments and shall submit a modified Field Sampling Report to the Department in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan or in accordance with a schedule otherwise specified by the Department. The determination as to whether or not any modified Field Sampling Report as resubmitted, conforms with the Department's comments and is otherwise acceptable shall be made solely by the Department in writing.

B. Preliminary Design

66. PPG shall submit to the Department a draft Preliminary Design for each group of sites for which the Field Sampling Report has been approved in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan and in accordance with Appendix K, including: a) the Preliminary Design Report; b) Construction Operations Plan; c) Preliminary Engineering Plans; d) Specifications; and e) Permit documents.

67. PPG shall modify each draft Preliminary Design to conform to the Department's comments and shall submit the modified Preliminary Design to the Department in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan. The determination as to whether or not the modified Preliminary Design, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

C. Final Design

68. PPG shall submit to the Department a draft Final Design for the group of sites for which the Preliminary Design has been approved and in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan and in accordance with Appendix K, including: a) the Final Design Report; b) Final Engineering Design and Construction Drawings; c) Final Construction Specifications; d) Final Construction Operations Plan; and e) Specifications.

69. PPG shall modify each draft Final Design to conform to the Department's comments and shall submit the modified Final Design to the Department in accordance with the schedule contained in the approved Residential Sites Grouping and Scheduling Plan. The determination as to whether or not the modified Final Design, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

D. Construction

70. Within fifteen (15) calendar days after PPG's receipt of the Department's written approval of any Final Design, PPG shall submit a schedule for implementation of the Final Design for the group of sites for which the Final Design has been approved. The schedule shall provide for completion of the implementation of the Final Design in accordance with the approved Residential Sites Grouping and Scheduling Plan and specify the groupings and order of implementation for each of the Residential Sites.

71. PPG shall complete implementation of each Final Design in accordance with the approved schedule and all the requirements of Appendix L.

E. Additional Residential Sites

72. For each additional Residential Site, identified by the Department, contaminated with chromite ore processing residue and chromium and its compounds from the Garfield Avenue Site, or which is adjacent to the Garfield Avenue Site, a Non-Residential Site or a Residential Site, and is

contaminated by chromite ore processing residue, chromium and its compounds, emanating or which has emanated from Garfield Avenue Site, or any of the Non-Residential or Residential Sites or which is adjacent to the Garfield Avenue Site or any of the Non-Residential or Residential Sites, PPG shall conduct, in accordance with the provisions of this Administrative Consent Order, interim remedial measures and the remedial action the Department selected in the ROD for the Residential Sites, to remedy the problem associated with the chromite ore processing residue, chromium and its compounds whether or not any hazardous substances or pollutants are intermingled therewith. Upon PPG's receipt of written notice from the Department of the existence of any additional Residential Site(s) identified pursuant to the preceding paragraph, PPG shall undertake the obligations set forth in paragraph 59 through 71 above, regarding such additional site(s) and in accordance with the time periods set forth therein.

F. Additional Remedial Investigation and Remedial Action for Residential Sites

73. If at any time prior to PPG's receipt of written notice from the Department pursuant to paragraph 134 below the Department determines that additional remedial investigation and/or remedial action is required to protect human health or the environment from any chromite ore processing residue, chromium and its compounds, whether or not any hazardous substances or pollutants are intermingled therewith, at, emanating from or which have emanated from the Residential Sites including but not limited to the groundwater migration route, PPG shall conduct such additional activities as directed by the Department.

## V. Progress Reports

74. PPG shall submit to the Department quarterly progress reports; the first progress report shall be submitted on or before the thirtieth (30th) calendar day of the month following the first full quarter after the effective date of this Administrative Consent Order. Each progress report thereafter shall be submitted on or before the thirtieth (30th) calendar day of the month following the quarter being reported. Each progress report shall detail the status of PPG's compliance with this Administrative Consent Order and shall:

a. Identify the site grouping and refer to this Administrative Consent Order, including signatory parties and effective date;

b. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) which were initiated during the reporting period;

c. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) which were initiated in a previous reporting period, which are still in progress and which will continue to be carried out during the next reporting period;

d. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) which were completed during the reporting period;

e. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph numbers or schedule) which should have been completed during the scheduled reporting period and were not;

f. Explain any potential non-compliance with any approved work plan(s), schedule(s) or Remedial Action Plan(s), and actions taken or to be taken to rectify any scheduled requirement not achieved; and

g. Identify the specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) that will be initiated during the next reporting period.

## VI. Permits

75. This Administrative Consent Order shall not be construed to be a permit or in lieu of a permit for future activities which require permits and it shall not relieve PPG from obtaining and complying with all applicable Federal, State and local permits necessary for any future activities which PPG must perform pursuant to this Administrative Consent Order.

76. PPG shall submit complete applications for all Federal, State and local permits required to carry out its obligations under this Administrative Consent Order in accordance with the approved time schedules.

77. Within forty-five (45) calendar days after PPG's receipt of written comments from the permitting agency concerning any permit application to a Federal, State or local agency, or within a time period extended in writing by the Department, PPG shall modify the permit application to conform to the permitting agency's comments and resubmit the permit application to the agency. Within this timeframe for a Departmental permit, PPG may explain verbally or in writing to the Department, the reason(s) why PPG believes the Department's comments should not be incorporated. Representatives of the Department may meet with representatives of PPG within this timeframe to discuss PPG's comments. The determination as to whether or not the permit application, as resubmitted, conforms with the agency's comments or is otherwise acceptable to the agency shall be made solely by the agency in writing.

78. The terms and conditions of any Federal, State or local permit or permit modification issued to PPG shall not be preempted by the terms and conditions of this Administrative Consent Order even if the terms and conditions of any such permit or permit modification are more stringent than the terms and conditions of this Administrative Consent Order. To the extent that the terms and conditions of any such permit or permit modification are substantially equivalent to the terms and conditions of this Administrative Consent Order, PPG hereby waives any rights it may have

to a hearing on such terms and conditions; under all other circumstances, such hearing rights are specifically preserved.

79. PPG shall be responsible for obtaining all necessary Federal, State and local permits, licenses and other authorizations for existing or former activities at the Garfield Avenue Site necessary for compliance with this Administrative Consent Order. This Administrative Consent Order shall not be construed to be a permit or permit modification for existing or former activities which require permits or permit modifications, nor shall it preclude the Department from requiring that PPG apply for such permit or permit modification.

## VII. Project Coordination

80. PPG shall submit to the Department all documents required by this Administrative Consent Order, including correspondence relating to force majeure issues, by certified mail, return receipt requested or by hand delivery with an acknowledgement of receipt form for the Department's signature. The date that the Department executes the receipt or acknowledgement will be the date the Department uses to determine PPG's compliance with the requirements of this Administrative Consent Order and the applicability of stipulated penalties and any other remedies available to the Department.

81. The following individual shall be the PPG contact for the Department for all matters concerning this Administrative Consent Order, and shall be the agent for the purpose of service for all matters concerning this Administrative Consent Order:

Leonard S. Bryant
Manager, Environmental Projects
Chemicals Group
PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
(412) 434-2811

82. PPG shall submit three (3) copies of all documents required by this Administrative Consent Order, unless otherwise directed by the Department, to:

Tom McKee, Section Chief
New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
Responsible Party Cleanup Element, 5th Floor
CN-028
401 East State Street
Trenton, New Jersey 08625-0028

83. PPG shall notify, both verbally and in writing, the contact person listed above at least two weeks prior to the initiation of any field activities, other than IRM field activities, and 48 hours prior to initiation of any IRM field activities.

## VIII. Financial Assurance Requirements

84. PPG shall submit to the Department as provided in this paragraph, financial assurance for the work to be performed pursuant to this Administrative Consent Order of eighty million dollars ($80,000,000.00). PPG shall within ten (10) business days after the effective date of this Administrative Consent Order, provide a total of forty million dollars ($40,000,000.00), of which ten million dollars ($10,000,000.00) will be in the form of either an irrevocable letter of credit or performance bond designated for the Non-Residential sites, and thirty million dollars ($30,000,000.00) will be in the form of either an irrevocable letter of credit or performance bond designated for the Residential Sites. Within three hundred sixty five (365) calendar days after the effective date of this Administrative Consent Order, PPG shall modify the irrevocable letter of credit or performance bond described above for the Non-Residential Sites to provide a total of twenty-five million dollars ($25,000,000.00). Within seven hundred thirty (730) calendar days after the effective date of this Administrative Consent Order, PPG shall modify the irrevocable letter of credit or performance bond described above for the Non-Residential Sites to provide a total of fifty million dollars ($50,000,000.00). Within three (3) business day after the execution of this Administrative Consent Order, PPG shall establish two (2) irrevocable standby trust funds, one (1) for the Residential Sites financial assurance and one (1) for the Non-Residential Sites financial assurance, each with an initial deposit of One Thousand Dollars ($1,000) or an amount required by the issuing institution. The irrevocable letter(s) of credit, the performance bond(s), and the Standby Trusts shall meet the following requirements:

i. Irrevocable Letter of Credit

a. Is identical to the wording specified in Appendix G for letters of credit, which is attached hereto and made a part hereof;

b. Is issued by a Federally chartered bank, savings bank, or New Jersey State chartered bank, savings bank, or savings and loan association, which has its principal office in New Jersey; and

c. Is accompanied by a letter from PPG referring to the letter of credit by number, issuing institution and date and providing the following information: the name and address of the facility and/or site which is the subject of the Administrative Consent Order and the amount of funds securing the PPG's performance of all its obligations under the Administrative Consent Order.

ii. Performance Bond

a. Is identical to the wording specified in Appendix G for performance bonds, which is attached hereto and made a part hereof;

b. The surety company issuing the performance bond shall be among those listed as acceptable sureties on Federal bonds in the most recent version of Circular 570 issued by the U.S. Department of the Treasury, which is published annually on July 1 in the Federal Register; and

c. Is accompanied by a letter from PPG referring to the performance bond by number, issuing institution and date and providing the following information: the name and address of the facility and/or site which is the subject of the Administrative Consent Order and the amount of funds securing PPG's performance of all its obligations under the Administrative Consent Order.

iii. Standby Trust

a. Is identical to the wording specified in Appendix H, which is attached hereto and made a part hereof;

b. At the discretion of the Department, the irrevocable standby trust fund shall be the depository for all funds paid pursuant to a draft by the Department against the letter of credit or payments made under the performance bond as directed by the Department;

c. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or New Jersey agency; and

d. Is accompanied by an executed certification of acknowledgement that is identical to the wording specified in Appendix H.

85. PPG shall establish and maintain each of the standby trust funds until terminated by the written agreement of the Department, the trustee and PPG, or of the trustee and the Department if PPG ceases to exist. PPG shall maintain each of the letter(s) of credit or performance bond(s) until the Department provides written notification to PPG that the financial assurance is no longer required for compliance with this Administrative Consent Order. In the event that the Department determines that PPG has failed to perform any of its obligations under this Administrative Consent Order, the Department may proceed to have the financial assurance deposited into the standby trusts; provided, however, that before the Department takes this action, the Department shall notify PPG in writing of the obligation(s) which it has not performed, and PPG shall have thirty (30) calendar days after receipt of such notice, unless extended in writing by the Department, to remedy the failure to perform such obligation(s). In the event that the Department draws down on PPG's letter(s) of credit or performance bond(s) or other financial assurance, it is agreed that nothing in this Administrative Consent Order shall preclude the PPG from exercising whatever rights it may have, if any, to challenge the Department's action as provided for in paragraph 109 below.

86. At any time, PPG may apply to the Department to substitute other financial assurances in a form, manner and amount acceptable to the Department.

87. PPG agrees that for the purposes of complying with the financial assurance requirements of this Administrative Consent Order, PPG shall select a financial institution or surety, and a trustee, that shall agree in writing to be subject to the jurisdiction of New Jersey courts for all claims made by the Department against the financial assurance.

B. Further Financial Assurance

88. No further financial assurance shall be required of PPG under this Administrative Consent Order. However, PPG hereby expressly agrees that the financial assurance as provided for above, is not a limit on spending or liability.

C. Project Cost Review

89. Beginning three hundred sixty-five (365) calendar days after the effective date of this Administrative Consent Order and annually thereafter on that same calendar day, PPG shall submit to the Department a detailed review of all costs required for PPG compliance with this Administrative Consent Order.

90. PPG shall also submit a detailed cost review within fourteen (14) calendar days after its award of a contract or contract modification for the implementation of the remedial alternate for the Garfield Avenue Site and each of the Non-Residential and Residential Sites.

91. The project cost review referenced in the two preceding paragraphs shall include a detailed summary of all monies spent to date pursuant to this Administrative Consent Order for such site, the estimated cost of all future expenditures required to comply with this Administrative Consent Order (including any operation and maintenance costs) for such site, and the reason for any changes from the previous cost review submitted by PPG for the Garfield Avenue Site and each of the Non-Residential and Residential Sites.

92. Simultaneous with the submission of any cost review required above, PPG may request the Department's approval to reduce the amount of the financial assurance to reflect the remaining costs of performing its obligations under this Administrative Consent Order.

93. Upon PPG's receipt of the Department's written response to PPG's request, PPG shall either maintain compliance with the then existing financial assurance requirement or amend the financial assurance in accordance with the Department's written response. If the Department grants written approval of PPG's cost review request, PPG may amend the amount of the then existing financial assurance so that it is equal to or greater than the estimated remaining costs of performing the obligations required by this Administrative Consent Order.

D. Oversight Cost Reimbursement

94. Within thirty (30) calendar days after PPG's receipt from the Department of a summary of the costs, including cost documentation that verifies that the claimed costs were incurred and that the amount of the costs was properly calculated, and will include the amount, date, entity or person to whom the costs were paid or by whom the costs were incurred in connection with its oversight functions of this Administrative Consent Order for a fiscal year, or any part thereof, PPG shall submit to the Department a cashier's or certified check payable to the "Treasurer, State of New Jersey" for the full amount of the Department's oversight costs.

E. Stipulated Penalties

95. Within thirty (30) calendar days after PPG's receipt of a written demand made by the Department, PPG shall pay stipulated penalties to the Department for PPG's failure to comply with any of the deadlines or schedules applicable to it and required by this Administrative Consent Order including those established and approved by the Department in writing pursuant to this Administrative Consent Order. Each deadline or schedule not complied with shall be considered a separate violation and stipulated penalties shall begin to accrue on the first calendar day following the day that performance is due or noncompliance accrue and shall continue to accrue through the final day of correction of the non-compliance. The Department may determine that a submittal of insufficient quality constitutes a non-compliance. Stipulated penalties for such violations shall only accrue for sixty (60) calendar days unless the Department provides PPG written notice that stipulated penalties continue to accrue from the date of receipt by PPG until PPG corrects the non-compliance. Interest shall accrue on any unpaid stipulated penalties commencing on the first day following the end of the thirty (30) day pay period. The interest rate shall be that rate set forth in the New Jersey Court Rules, R. 4:42-11(a)i. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Administrative Consent Order. In addition, failure to pay a stipulated penalty on time shall be an additional violation of this Administrative Consent Order subject to stipulated penalties.

96. PPG's payment of stipulated penalties for PPG's failure to comply with the deadlines and schedules associated Remedial Action for Residential Sites required by this Administrative Consent Order, as identified below, shall be made according to the following schedule, unless the Department has modified the compliance date pursuant to the force majeure provisions set forth herein:

| Calendar Days for Due Date | Stipulated Penalties for Residential Sites |
|---|---|
| 1 - 7 | $ 2,000 per calendar day |
| 8 - 14 | $ 4,000 per calendar day |
| 15 - 21 | $ 6,000 per calendar day |
| 22 - 28 | $ 10,000 per calendar day |
| 29 - over | $ 20,000 per calendar day |

97. PPG's payment of stipulated penalties for PPG's failure to comply with the deadlines and schedules associated with the major deliverables and tasks for the Garfield Avenue Site, and the Non-Residential Sites required by this Administrative Consent Order, as identified below, shall be made according to the following schedule, unless the Department has modified the compliance date pursuant to the force majeure provisions set forth herein:

Major Deliverables and Tasks

- timely delivery of all draft and final workplans
- timely delivery of all draft and final reports and designs

- performance of remedial activities including interim remedial measures
- implementation of all approved workplans
- compliance with financial assurance requirements
- payments of penalty settlements and timely reimbursement of prior costs
- timely payment of oversight costs

| Calendar Days After Due Date | Stipulated Penalties for Non-Residential Sites and Garfield Avenue Site |
|---|---|
| 1 - 7 | $ 1,000 per calendar day |
| 8 - 14 | $ 2,000 per calendar day |
| 15 - 21 | $ 3,000 per calendar day |
| 22 - 28 | $ 5,000 per calendar day |
| 29 - over | $ 10,000 per calendar day |

98. Payment of stipulated penalties for all violations for the Garfield Avenue Site and Non-Residential Sites other than set out in paragraph 97 above, shall be made according to the following schedule unless the Department has modified the compliance date pursuant to the force majeure provisions set forth herein:

| Calendar Days After Due Date | Stipulated Penalties for Non-Residential Sites and Garfield Avenue Site |
|---|---|
| 1 - 7 | $ 100 per calendar day |
| 8 - 14 | $ 500 per calendar day |
| 15 - 21 | $ 1,000 per calendar day |
| 22 - 28 | $ 2,500 per calendar day |
| 29 - over | $ 5,000 per calendar day |

99. Payment of stipulated penalties shall be made by a cashier's or certified check payable to the "Treasurer, State of New Jersey" and shall be accompanied by a letter referencing this Administrative Consent Order and the alleged violations for which the penalty is submitted.

100. PPG agrees that it shall not seek to take as a tax deduction any payments submitted pursuant to the above paragraphs.

101. PPG's failure to pay stipulated penalties pursuant to a written demand issued by the Department in accordance with paragraphs 95 thru 98 above, shall constitute a violation of this Administrative Consent Order.

102. The payment of stipulated penalties does not alter the responsibility of PPG to complete any requirement of this Administrative Consent Order.

## IX. Force Majeure

103. If any event as specified in the following paragraph occurs which PPG believes or should believe will or may cause delay in the compliance with any provision of this Administrative Consent Order, PPG shall notify the Department in writing within seven (7) calendar days of the delay or anticipated delay, as appropriate, referencing this paragraph and describing the anticipated length of the delay, the precise cause or causes of the delay, any measures taken or to be taken to minimize the delay, and the time required to take any such measures to minimize the delay. PPG shall take all necessary action to prevent or minimize any such delay.

104. If the Department finds that: (i) PPG has complied with the notice requirements of the preceding paragraph; (ii) any delay or anticipated delay has been or will be caused by fire, flood, riot, strike or other circumstances beyond the control of PPG; and, (iii) PPG has taken all actions that were reasonably necessary to prevent or minimize any such delay, the Department shall extend the time for performance hereunder for a period no longer than the delay resulting from such circumstances. If the Department determines that (a) PPG has not complied with the notice requirements of the preceding paragraph; (b) the event causing the delay is not beyond the control of PPG; or (c) PPG has not taken all necessary actions that were reasonable to prevent or minimize the delay, this paragraph shall not be applicable and failure to comply with the provisions of this Administrative Consent Order shall constitute a breach of the requirements of this Administrative Consent Order. The burden of proving that any delay is caused by circumstances beyond the control of PPG and the length of any such delay attributable to those circumstances shall rest with PPG. Delay in an interim requirement shall not automatically constitute *force majeure* with respect to the attainment of subsequent requirements. *Force majeure* shall not include the following: nonattainment of the goals, standards, guidelines and requirements set forth in the appendices attached hereto or otherwise applicable to the site; increases in the costs or expenses incurred by PPG in fulfilling the requirements of this Administrative Consent Order; and, contractor's breach, unless such breach falls within the requirements of (i), (ii) and (iii) of this paragraph.

## X. Reservation of Rights

105. The Department reserves the right to unilaterally terminate this Administrative Consent Order in the event PPG violates the terms or fails to meet the obligations of this Administrative Consent Order.

106. Except as provided for in paragraph 26 above, nothing in this Administrative Consent Order shall preclude the Department from seeking civil or administrative penalties or any other legal or equitable relief against PPG for matters not set forth in the FINDINGS of this Administrative Consent Order.

107. This Administrative Consent Order shall not be construed to affect or waive the claims of federal or State natural resource trustees

against any party for damages or injury to, destruction of, or loss of natural resources.

108. The Department reserves the right to require PPG to take or arrange for the taking of, any and all additional measures should the Department determine that such actions are necessary to protect human health or the environment. Nothing in this Administrative Consent Order shall constitute a waiver of any statutory or common law right of the Department to require PPG to undertake such additional measures should the Department determine that such measures are necessary; nor shall anything in this Administrative Consent Order constitute a waiver by PPG of any statutory or common law defenses, if any, to any attempted action by the Department as to such additional measures.

109. Nothing in this Administrative Consent Order, including PPG's payment of stipulated penalties, shall preclude the Department from seeking civil or civil administrative penalties or any other legal or equitable relief against PPG for violations of this Administrative Consent Order. In any action brought by the Department under this Administrative Consent Order, PPG may raise, inter alia, a defense that PPG failed to comply with a decision of the Department, made pursuant to this Administrative Consent Order, on the basis that the Department's decision was arbitrary, capricious or unreasonable. If PPG is successful in establishing such a defense, then PPG shall not be liable for stipulated penalties for failure to comply with that particular Department decision. Similarly, in the event that PPG prevails in any proceeding in which PPG alleges that the Department acted arbitrarily, capriciously or unreasonably in exercising its right under paragraph 85, above, to draw on the financial assurance, the Department agrees to refund, to the account of the financial assurance, the funds so drawn relative to the contested enforcement action. This provision shall not be construed to provide for reimbursement of the account of the financial assurance for monies drawn for any activity other than that which is the subject of the contested enforcement proceeding in which PPG prevails. PPG shall not seek pre-enforcement review of any decision made or to be made by the Department pursuant to this Administrative Consent Order. Without otherwise affecting any rights which the PPG may have, it is agreed that nothing in this Administrative Consent Order shall preclude PPG from exercising whatever rights it may have, if any, to challenge any determination by the Department which results in the draw down by the Department of PPG's financial assurance under paragraph 85 above, after correction by the Department of the alleged violation(s) which led the Department to draw down the financial assurance and to use such monies to correct the alleged violation(s).

## XI. General Provisions

110. This Administrative Consent Order shall be binding on PPG's respective agents, successors, assignees and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.

111. PPG shall perform all work conducted pursuant to this Administrative Consent Order in accordance with prevailing professional standards.

112. All site operations shall be conducted by PPG in accordance with the Health and Safety plan developed as set forth in Appendix B. All site activities shall be conducted in accordance with all general industry (29 CFR 1910) and construction (29 CFR 1926) standards of the federal Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, as well as any other State or municipal codes or ordinances that may apply. PPG shall comply with those requirements set forth in OSHA's final rule entitled "Hazardous Waste Operations and Emergency Response", Section 1910.120 of Subpart H of 29 CFR (published March 6, 1989, Volume 54, Number 42, Federal Register).

113. In accordance with N.J.S.A. 45:8-45, all plans or specifications involving professional engineering, submitted pursuant to this Administrative Consent Order, shall be submitted affixed with the seal of a professional engineer licensed pursuant to the provisions of N.J.S.A. 45:8-1 et seq.

114. All appendices referenced in this Administrative Consent Order, as well as all reports, work plans and documents required under the terms of this Administrative Consent Order that have received approval from the Department, are incorporated into and made a part of this Administrative Consent Order.

115. Each field activity to be conducted pursuant to this Administrative Consent Order shall be coordinated by an on-site professional(s) with experience relative to the particular activity being conducted at the site each day, such as experience in the area of hydrogeology, geology, environmental controls, risk analysis, health and safety or soils.

116. Upon the receipt of a written request from the Department, PPG shall submit to the Department all data and information developed pursuant to this Administrative Consent Order in PPG's possession or control, or which PPG can reasonably bring under their control, concerning pollution at and/or emanating from the Garfield Avenue Site or the Non-Residential Sites or the Residential Sites, or which has emanated from the Garfield Avenue Site and the Non-Residential Sites or the Residential Sites, including raw sampling and monitoring data, whether or not such data and information was developed pursuant to this Administrative Consent Order. PPG reserves whatever rights if any, to assert a privilege regarding such documents.

117. PPG shall make available to the Department all technical records and contractual documents maintained or created by PPG or its agents in connection with this Administrative Consent Order. PPG reserves whatever rights if any, to assert a privilege regarding such documents. The Department shall hold confidential the commercial terms, including rates and payment terms, of any contractual documents made available pursuant to this paragraph; and PPG may delete such commercial terms from any copies supplied to the Department.

118. Except as provided for in the previous paragraph, in order to assert a claim of confidentiality or privilege for any information submitted

by the PPG pursuant to this Administrative Consent Order, PPG asserting such a claim PPG shall follow the Department's procedures in N.J.A.C. 7:14A-11.

119. PPG shall preserve, during the pendency of this Administrative Consent Order and for a minimum of six (6) years after its termination, all data, records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the implementation of work under this Administrative Consent Order, despite any document retention policy to the contrary. After this six (6) year period, PPG may make a written request to the Department to discard any such documents. Such a request shall be accompanied by a description of the documents involved. The Department will respond in writing to PPG within ninety (90) calendar days after such request, as to its determination and with the specific basis for any denial. Upon written approval by the Department, PPG may discard only those documents that the Department specifically determines are not required to be preserved for a longer time period. Upon receipt of a written request by the Department, PPG shall submit to the Department all records or copies of any such records. PPG reserves whatever rights if any, to assert a privilege regarding such documents. In any event PPG may deliver to the Department any or all records required to be kept longer than six (6) years.

120. Except as provided otherwise in schedules expressly set forth in this Administrative Consent Order or in approved workplans hereunder, upon a written request from the Department, PPG shall submit, according to a time schedule established by the Department, any information necessary for the implementation of this Administrative Consent Order. PPG reserves whatever rights if any, to assert a privilege regarding such documents.

121. Obligations of this Administrative Consent Order are imposed pursuant to the police powers of the State of New Jersey for the enforcement of law and the protection of the public health, safety and welfare and are not intended to constitute debt or debts which may be limited or discharged in a bankruptcy proceeding.

122. In addition to the Department's statutory and regulatory rights to enter and inspect, PPG shall provide the Department and its authorized representatives access to all sites under this Administrative Consent Order at all times under the same conditions under PPG has access for the purpose of monitoring PPG's compliance with this Administrative Consent Order and/or to perform any remedial activities PPG fails to perform as required by this Administrative Consent Order. The Department's and its authorized representatives' access hereunder shall be conditioned upon their compliance with the applicable site's Health and Safety Plan to the maximum extent practicable as determined by the Department.

123. PPG shall not construe any informal advice, guidance, suggestions, or comments by the Department, or by persons acting on behalf of the Department, as relieving PPG of its obligations to obtain written approvals as required herein, unless the Department specifically relieves PPG of such obligations in writing.

124. No modification or waiver of this Administrative Consent Order shall be valid except by written amendment to this Administrative Consent Order duly executed by PPG and the Department.

125. PPG hereby consents to and agrees to comply with the provisions of this Administrative Consent Order applicable to it, which shall be fully enforceable as an Order in the New Jersey Superior Court upon the filing of a summary action for compliance pursuant to N.J.S.A. 13:1D-1 et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

126. PPG waives its rights to an administrative hearing concerning the entry of this Administrative Consent Order.

127. PPG agrees not to contest the authority or jurisdiction of the Department to issue this Administrative Consent Order; PPG further agrees not to contest the terms or conditions of this Administrative Consent Order except as to interpretation or application of such terms and conditions in any action brought by the Department to enforce the provisions of this Administrative Consent Order.

128. Within thirty (30) calendar days after the effective date of this Administrative Consent Order, PPG will withdraw its January 23, 1990 petition to the Department without prejudice, and take the necessary steps to dismiss with prejudice all civil cases against the Department, including but not limited to the following civil cases in the Superior Court of New Jersey, Appellate Division:

(1) Ultramar Petroleum, Inc. and PPG Industries, Inc. v. New Jersey Department of Environmental Protection, Docket No. A-3389-89T5, filed March 13, 1990;

(2) Ultramar Petroleum, Inc. and PPG Industries, Inc. v. New Jersey Department of Environmental Protection, Docket No. A-4988-89T5, filed May 30, 1990;

(3) PPG Industries, Inc. v. New Jersey Department of Environmental Protection, Docket No. A-5054-89T2, filed May 31, 1990 (ROD challenge); and

(4) PPG Industries, Inc. v. New Jersey Department of Environmental Protection, Docket No. (not assigned), filed July 2, 1990 (Residential Sites Directive challenge).

In no event shall PPG's dismissal of these actions bar PPG from raising any legal or technical challenges to any legal or technical challenges to any future actions of the Department not otherwise prohibited by this Administrative Consent Order that rely on the information or conclusions contained in the administrative records of the prior actions challenged in the above-mentioned civil cases.

129. In the event that the Department determines that a public meeting concerning the cleanup of any of the sites under this Administrative Consent Order is necessary at any time, PPG shall ensure that its appropriate representatives are prepared, available, and participate in any

such meeting upon reasonable notification from the Department of the date, time and place of any such meeting.

130. PPG shall provide a copy of this Administrative Consent Order to each chief contractor and chief subcontractor retained to perform the work required by this Administrative Consent Order. Chief contractor or subcontractor shall be those whose contracts hereunder have a total planned or actual value exceeding $25,000. PPG shall be responsible to the Department for ensuring that their contractors and subcontractors perform the work herein in accordance with this Administrative Consent Order.

131. PPG agrees not to bring an action or maintain any existing or future claim or demand upon any State fund(s), established for the purpose of remediating or responding to environmental contamination, including the New Jersey Spill Compensation Fund, N.J.S.A. 58:10-23.11i and the Sanitary Landfill Facility Contingency Fund, N.J.S.A. 13:1E-100 et seq., for the cost of investigation and remediation or any other actions required by this Administrative Consent Order and for damages sustained by PPG, its predecessor's or its successors and assigns as a result of contamination attributable to PPG or its predecessors' at sites under this Administrative Consent Order provided however, PPG does not release or waive any right it may have to seek damages otherwise from any other responsible party for such costs or damages.

132. PPG shall provide to the Department written notice of a dissolution of its corporate identity or liquidation of its assets at least thirty (30) calendar days prior to such dissolution or liquidation. PPG shall also provide written notice to the Department of a filing of a petition for bankruptcy no later than the time for giving notice of such filing to creditors or as otherwise required by law. Upon receipt of notice of dissolution of corporate identity, or liquidation of assets, except in the case of a bankruptcy filing, the Department may require that PPG apply to obtain additional financial assurance and thereafter submit to the Department additional financial assurance.

133. As soon as reasonably possible, but not greater than thirty (30) calendar days following the execution of this Administrative Consent Order, PPG shall submit to the Department, along with the executed original Administrative Consent Order, the appropriate documentary evidence (such as a corporate resolution) that the signatory for PPG has the authority to bind PPG, to the terms of this Administrative Consent Order. PPG's representative, however, certifies that he or she is fully authorized by PPG to enter into the terms and conditions of this Administrative Consent Order and to bind that entity to it.

134. Except as to paragraph 117, and the December 2, 1988 Directive to the extent that the Department notified PPG in writing that PPG completed the IRMs in satisfaction of the December 2, 1988 Directive, the requirements of this Administrative Consent Order shall be deemed satisfied upon the receipt by PPG of written notice from the Department that PPG has demonstrated, to the satisfaction of the Department, that the obligations imposed by this Administrative Consent Order have been completed by PPG.

135. Except as provided for in paragraph 26 above, by entering into this Administrative Consent Order, the Department does not waive its right to assess or collect civil or civil administrative penalties for past, present and future violations by the PPG of any New Jersey environmental statutes or regulations.

136. The obligations and liabilities of any non-signatories to this Administrative Consent Order shall not be discharged or extinguished by this Administrative Consent Order.

137. PPG admits that it has agreed to comply with the terms of this Administrative Consent Order. Neither the entry into this Administrative Consent Order nor the conduct of PPG hereunder, shall be construed as any admission of fact, fault or liability by PPG under any applicable laws or regulations.

138. This Administrative Consent Order shall become effective upon the execution by all parties hereto.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date: July 19, 90

By: ______________________
Ronald T. Corcory, Assistant Director
Responsible Party Cleanup Element
Division of Hazardous Waste Management

Date: ______________

PPG INDUSTRIES, INC.

By: ______________________

Name: ______________________

Title: ______________________

138. This Administrative Consent Order shall become effective upon the execution by all parties hereto.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date: ______________

By: ______________________
Ronald T. Corcory, Assistant Director
Responsible Party Cleanup Element
Division of Hazardous Waste Management

Date: July 19, 1990

PPG INDUSTRIES, INC.

By: ______________________
Richard M. Rompala
Group Vice President, Chemicals

# Attachment 2

# Proof of Insurance

# PPG Industries

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Telephone: (412) 434-2415
Fax: (412) 434-4291
jkaras@ppg.com

**Joseph M. Karas**
Assistant Counsel


August 20, 2010

Via Certified Mail

Site Remediation Program
Bureau of Enforcement & Investigations
401 East State Street – 5th Floor West
P.O. Box 028
Trenton, NJ 08625-0028

Attn: Tina Layre, Supervisor
Bureau of Enforcement and Investigations

Re: Hudson County, PPG
Various Locations, Jersey City, Hudson County, New Jersey

Enclosed is PPG Industries, Inc.'s Self-Guarantee Renewal Application along with a copy of the company's 2009 Annual Report to Shareholders (which includes PPG's 2009 Form 10-K) which constitutes an audited financial statement for the 2009 fiscal year. The enclosed Self-Guarantee Renewal Application is in the amount of $50,000,000.00 in accordance with the 1990 Administrative Consent Order.

If you have any questions, please contact me.

Regards,

Joseph M. Karas
Joseph M. Karas
Assistant Counsel

JMK:vlc

Enclosures

7009 0080 0000 1111 1603

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City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

# SELF-GUARANTEE APPLICATION

**Please send the completed form to:**
Site Remediation Program
Bureau of Enforcement and Investigations
401 East State Street, 5th Floor West
P.O. Box 028
Trenton, NJ 08625-0028
Fax (609) 633-1439
Attn: Remediation Funding Source Coordinator

## SECTION A. SITE INFORMATION AND DEP OVERSIGHT

NJDEP PI # and/or ISRA Case #: PI #G000008791

NJDEP Program Site Name: Jersey City, Hudson County, Non-Residential Chrome Sites - PPG

Site location: Not Applicable (Multiple Locations)

NJDEP Oversight Document Type and Date Executed: Administrative Consent Order July 19, 1990

(ACO/Remediation Agreement/Remediation Certification/Directive/Order/Court Order)

Identify any amendment(s) to Original Oversight Document and date(s) executed:

______________________________________________________

Responsible Party/Obligated Party who executed Oversight Document(s): PPG Industries, Inc.

## SECTION B. SELF-GUARANTEE APPLICANT INFORMATION

Only persons responsible for conducting the remediation may Self Guarantee in accordance with N.J.A.C. 7:26C-5.

Company: PPG Industries, Inc.

Contact Person: Brian G. McGuire, PPG Industries, Inc.

Address: 4325 Rosanna Drive, Building E; Allison Park, PA 15101

Telephone number: 412-492-5512

Fax number: 412-492-5377

E-mail address: bmcguire@ppg.com

**Does the person responsible for the remediation produce its own audited financial statements prepared in accordance with the American Institute for Certified Public Accountants**

**guidelines, including but not limited to: <u>income statement</u>, <u>balance sheet</u> and <u>statement of cash flow</u> (example: Annual Report or 10-K Form)?** Yes

**If no, is there a direct Parent Company that produces audited financials statements prepared in accordance with the American Institute for Certified Public Accountants guidelines, including but not limited to: <u>income statement</u>, <u>balance sheet</u> and <u>statement of cash flow</u> (example: Annual Report or 10-K Form)?** N/A

**<u>Parent Company Information (if applicable)</u>:**

Company: ______________________________

Contact Person: ______________________________

Address: ______________________________

Telephone number: ______________________________

Fax number: ______________________________

E-mail address: ______________________________

## SECTION C. <u>RFS AMOUNT</u> - <u>REQUIRED AMOUNT OF RFS TO BE POSTED</u>

**This is the amount required in a Remediation Certification, Remediation Agreement, Administrative Consent Order, Directive, Order or ISRA Remedial Action Work Plan approval <u>or</u> an amount greater than or equal to the estimated cost of remediation approved by DEP Case Manager (attach approval by assigned case manager) or Licensed Site Remediation Professional (attached estimate and required certifications)**

<u>$50,000,000.00</u>

## SECTION D. <u>ESTIMATED COST OF REMEDIATION</u>

***NOTE: The estimated cost of remediation is to be evaluated on an annual basis. Attach a copy hereto.***

1.) Current estimated cost of remediation (amount calculated includes the estimated cost of the implementation of the remediation, including the DEP fees and oversight costs, but excluding the estimated cost to operate, maintain and inspect engineering controls as part of a remedial action permit):

<u>$ Cannot be determined at this time*</u>

* Remedial measures for these multiple sites are the subject of ongoing evaluation by the New Jersey Department of Environmental Protection and the Superior Court for Hudson County, New Jersey. Therefore, the costs of remediation and the projected costs for the next 12 months cannot be determined. Pursuant to the July 19, 1990 Administrative Consent Order, PPG is required to maintain financial assurance for these sites in the amount of $50,000,000.00 (Fifty Million Dollars).

**If the estimated cost of remediation is greater than the required RFS total to be posted (Section C above), the required RFS total to be posted must be increased to equal at least the estimated cost of remediation.**

2.) Estimated cost of remediation for the next 12-month period:

$ Cannot be determined at this time, but it will not exceed $50,000,000.00*

* Remedial measures for these multiple sites are the subject of ongoing evaluation by the New Jersey Department of Environmental Protection and the Superior Court for Hudson County, New Jersey. Therefore, the remaining costs of remediation and the projected costs for the next 12 months cannot be determined. Pursuant to the July 19, 1990 Administrative Consent Order, PPG is required to maintain financial assurance for these sites in the amount of $50,000,000.00 (Fifty Million Dollars).

## SECTION E. FINANCIAL DOCUMENTATION

- **ATTACH - Audited** financial statements FOR THE MOST CURRENT FISCAL YEAR END prepared in accordance with the American Institute for Certified Public Accountants guidelines, including but not limited to: **income statement, balance sheet** and **statement of cash flow**.

**PLEASE COMPLETE STATEMENT AND FILL IN ITEMS 1-3 BELOW USING THE AUDITED FINANCIAL STATEMENTS. NEXT TO EACH VALUE, PLEASE INDICATE THE PAGE ON WHICH THE INFORMATION CAN BE FOUND.**

The following statements are to be made from the chief financial officer or similar officer of PPG Industries, Inc. (Name of Party Self Guaranteeing) and that the information provided in the written statements is true to the best of the officer's information, knowledge and belief and meets the requirements of N.J.S.A. 58:10B-3(f) and N.J.A.C. 7:26C-5.8:

1.) Does the required remediation funding source amount exceed one-third of the applicant's net worth?
_____ YES __X__ NO

Self Guarantor's Net Worth (pg. 31) $$3,753 (in millions)

One-third of above $$1,251(in millions)

2.) Is cash flow sufficient to assure the availability of sufficient monies for the remediation?
__X__ YES _____ NO

Self Guarantor's Net Cash provided by (used in) operating activities (pg.33) $1,345 (in millions)

3.) Do the gross receipts (revenues) exceed gross payments (expenses) in an amount at least equal to or greater than the estimated cost of remediation to be performed in the next 12-month period?

_X_ YES _____ NO

Gross Receipts (revenues) (pg.30) $12,239 (in millions)

Gross Payments* (expenses) (pg. 30) $11,423 (in millions) calculated by removing depreciation and amortization expense from gross payments

Gross Receipts less Gross Payments $816 (in millions)

*Non cash items may be removed from the calculation of gross payments. These include amortization, goodwill, depreciation and impairments. Please note if these items have been removed from your calculation

Certification page must be signed, dated and **notarized**!

**The aforementioned statement should be certified and notarized in accordance with N.J.A.C. 7:26C-1.5(b)2.**

## CERTIFICATION

I certify under penalty of law that I am fully aware of the requirements of N.J.S.A. 58:10B-3 as they pertain to remediation funding sources. Specifically, I am aware of the responsibilities to establish and maintain the remediation funding source. Additionally, I acknowledge that the remediation funding source as required by N.J.A.C. 7:26C-5 shall be maintained in the appropriate amount and form until such time as an alternative remediation funding source is submitted to the Department and it has been approved by the Department in writing or the Department determines that it is no longer necessary to maintain a remediation funding source. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for all resulting penalties.

Date: August 18, 2010

By: Robert J Dellinger
Signature

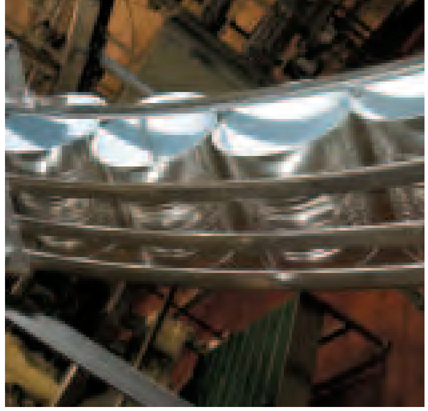
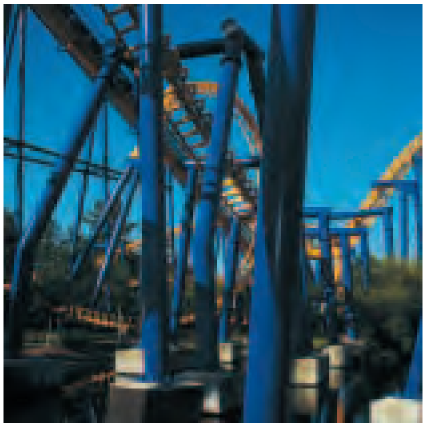
Subscribed and sworn before me this 18th day of August, 2010.

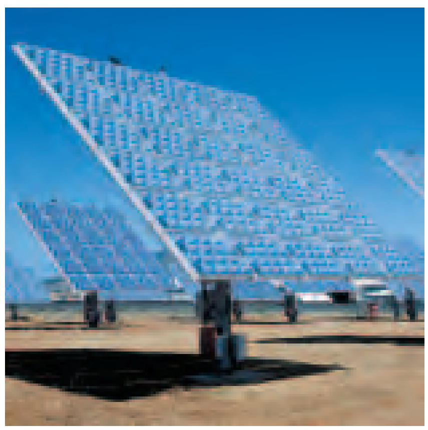
Joan E. Goyke
Notary Public

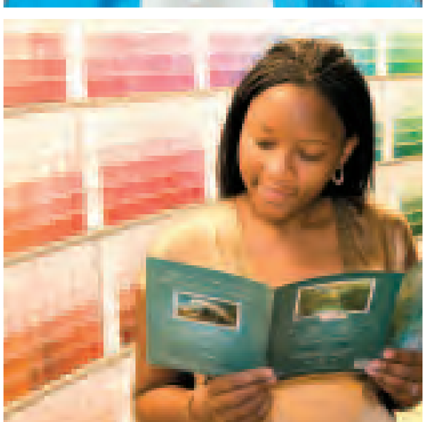
COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Joan E. Goyke, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires June 15, 2012
Member, Pennsylvania Association of Notaries

Robert J. Dellinger
Print Full Name Signed Above

Sr. Vice President, Finance & Chief Financial Officer
Title

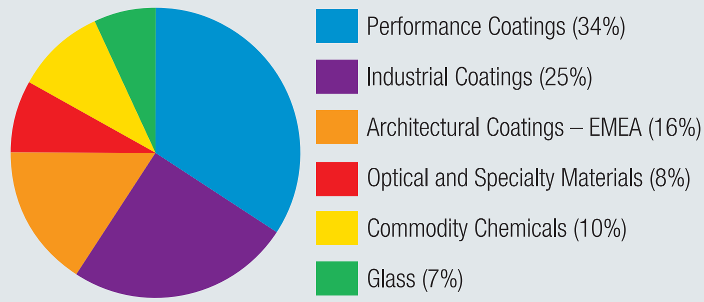

# 2009 Annual Report

and Form 10-K

# COMPANY PROFILE

PPG Industries' vision is to continue to be the world's leading coatings and specialty products company. Founded in 1883, the company serves customers in industrial, transportation, consumer products, and construction markets and aftermarkets. With headquarters in Pittsburgh, Pa., PPG operates in more than 60 countries around the globe.

## 2009 Segment Net Sales




## PERFORMANCE COATINGS

**AEROSPACE.** Leading supplier of transparencies, sealants, coatings and surface solutions, packaging, and chemical management services, serving original equipment manufacturers and maintenance providers for the commercial, military, regional jet and general aviation industries. Also supplies transparent armor for military markets.

**ARCHITECTURAL COATINGS AMERICAS AND ASIA/PACIFIC.** Produces paints, stains and specialty coatings for the commercial, maintenance and residential markets under brands such as *Pittsburgh®*, *PPG*, *Renner®*, *Lucite®*, *Olympic®*, *Taubmans®* and *Ivy®*.

**AUTOMOTIVE REFINISH.** Produces and markets a full line of coatings products and related services for automotive and commercial transport/fleet repair and refurbishing, light industrial coatings and specialty coatings for signs.

**PROTECTIVE AND MARINE COATINGS.** Leading supplier of corrosion-resistant, appearance-enhancing coatings for the marine, infrastructure, petrochemical, offshore and power industries. Produces the *Amercoat®*, *Freitag®*, *PPG High Performance Coatings* and *Sigma Coatings®* brands.

## INDUSTRIAL COATINGS

**AUTOMOTIVE COATINGS.** Leading supplier of automotive coatings and services to auto and truck manufacturers. Products include electrocoats, primer surfacers, base coats, clearcoats, bedliner, pretreatment chemicals, adhesives and sealants.

**INDUSTRIAL COATINGS.** Produces coatings for appliances, agricultural and construction equipment, consumer products, electronics, automotive parts, residential and commercial construction, wood flooring, joinery (windows and doors) and other finished products.

**PACKAGING COATINGS.** Supplier of coatings, inks, compounds, pretreatment chemicals and lubricants for metal, glass and plastic containers for the beverage, food, general line and specialty packaging industries.

## Contents



## ARCHITECTURAL COATINGS – EMEA

**ARCHITECTURAL COATINGS – EMEA (Europe, Middle East and Africa).** Supplier of market-leading paint brands for the trade and retail markets such as *Sigma Coatings®*, *Histor®*, *Seigneurie®*, *Ripolin®*, *Johnstone's®*, *Leyland®*, *Dekoral®*, *Trilak®*, *Primalex®*, *Prominent Paints®* and *Freitag®*.

## OPTICAL AND SPECIALTY MATERIALS

**OPTICAL PRODUCTS.** Produces optical monomers, including *CR-39®* and *Trivex®* lens materials, photochromic dyes and *Transitions®* photochromic ophthalmic plastic lenses.

**SILICAS.** Produces amorphous precipitated silicas for tire, battery separator and other end-use applications and *Teslin®* synthetic printing sheet used in applications such as radio frequency identification (RFID) tags and labels, e-passports, driver's licenses and identification cards.

## COMMODITY CHEMICALS

**CHLOR-ALKALI AND DERIVATIVES.** Producer of chlorine, caustic soda and related chemicals for use in chemical manufacturing, pulp and paper production, water treatment, plastics production, agricultural products and many other applications.

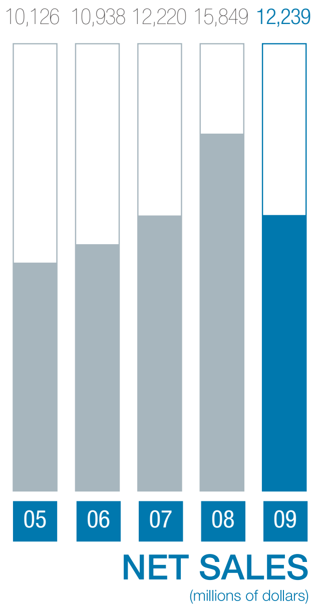
## GLASS

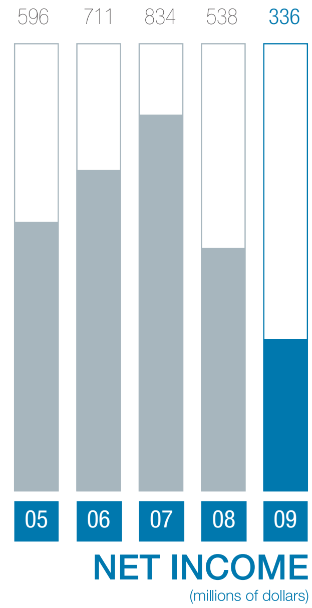
**FIBER GLASS.** Manufacturer of fiber glass reinforcement materials for thermoset and thermoplastic composite applications, serving markets such as wind energy, energy infrastructure and transportation. Produces fiber glass yarns for electronic printed circuit boards and other specialty applications.

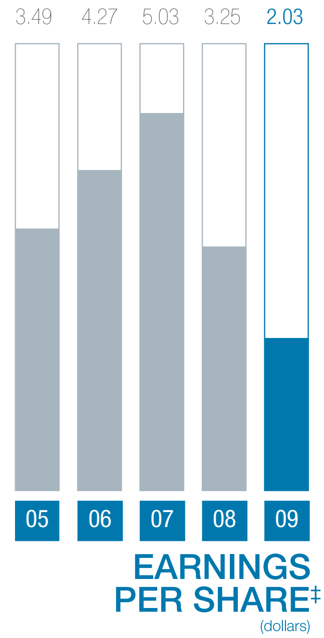
**PERFORMANCE GLAZINGS.** Produces glass that is fabricated into products primarily for commercial construction and residential markets, as well as the solar energy, appliance, mirror and transportation industries.

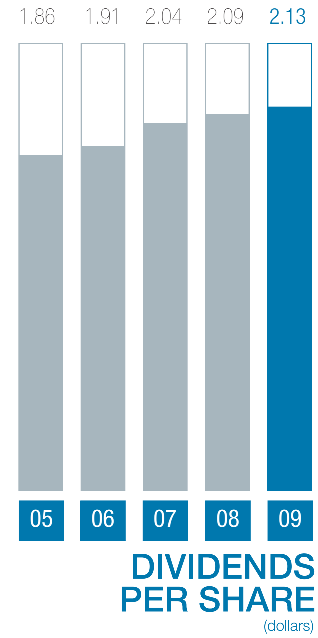
# 2009 Financial Highlights

Average shares outstanding and all dollar amounts except per share data are in millions.




| FOR THE YEAR | 2009 | CHANGE | 2008 |
|---|---|---|---|
| Net Sales | $ 12,239 | -23 % | $ 15,849 |
| Net Income* | $ 336 | -38 % | $ 538 |
| Earnings Per Share*‡ | $ 2.03 | -38 % | $ 3.25 |
| Dividends Per Share | $ 2.13 | 2 % | $ 2.09 |
| Return on Average Capital | 6.6 % | -23 % | 8.6 % |
| Operating Cash Flow | $ 1,345 | -6 % | $ 1,437 |
| Capital Spending | $ 265 | -87 % | $ 2,056 |
| Research and Development | $ 403 | -14 % | $ 468 |
| Average Shares Outstanding‡ | 165.5 | — % | 165.4 |
| Average Number of Employees | 39,900 | -11 % | 44,900 |

| AT YEAR END | 2009 | CHANGE | 2008 |
|---|---|---|---|
| PPG Shareholders' Equity | $ 3,753 | 13 % | $ 3,333 |

*Includes in 2009 aftertax charges of $149 million, or 91 cents per share, representing business restructuring and the net increase in the value of the company's obligation under its asbestos settlement agreement. Includes in 2008 aftertax charges of $224 million, or $1.36 per share, representing business restructuring, acquisition-related costs, catch-up of depreciation, divestiture-related benefit costs and the net increase in the value of the company's obligations under its asbestos settlement agreement, and aftertax earnings of $3 million, or 2 cents per share, for the gain on divestiture of a majority interest in the automotive glass and services business.

‡Assumes dilution.

## Board of Directors

**Charles E. Bunch**
Chairman and Chief Executive Officer, PPG Industries

**James G. Berges**
Partner, Clayton, Dubilier & Rice, and retired President, Emerson Electric Co.
*Audit Committee; Nominating and Governance Committee*

**Hugh Grant**
Chairman, President and Chief Executive Officer, Monsanto Company
*Nominating and Governance Committee; Technology and Environment Committee*

**Victoria F. Haynes**
President and Chief Executive Officer, RTI International
*Nominating and Governance Committee; Technology and Environment Committee*

**Michele J. Hooper**
President and Chief Executive Officer, The Directors' Council
*Audit Committee; Nominating and Governance Committee*

**Robert Mehrabian**
Chairman, President and CEO, Teledyne Technologies Incorporated
*Officers-Directors Compensation Committee; Technology and Environment Committee*

**Martin H. Richenhagen**
Chairman, President and Chief Executive Officer, AGCO Corporation
*Audit Committee; Technology and Environment Committee*

**Robert Ripp**
Chairman, Lightpath Technologies, and former Chairman and CEO, AMP Inc.
*Audit Committee; Officers-Directors Compensation Committee*

**Thomas J. Usher**
Non-executive Chairman of the Board, Marathon Oil Corporation
*Officers-Directors Compensation Committee; Technology and Environment Committee*

**David R. Whitwam**
Retired Chairman and CEO, Whirlpool Corporation
*Nominating and Governance Committee; Officers-Directors Compensation Committee*

## Operating Committee

**Charles E. Bunch**
Chairman and Chief Executive Officer

**Robert J. Dellinger**
Sr. Vice President, Finance, and Chief Financial Officer

**James C. Diggs**
Sr. Vice President and General Counsel

**J. Rich Alexander**
Sr. Vice President, Performance Coatings

**Pierre-Marie De Leener**
Sr. Vice President, Architectural Coatings – EMEA, and President, PPG Europe

**Richard C. Elias**
Sr. Vice President, Optical and Specialty Materials

**Victoria M. Holt**
Sr. Vice President, Glass and Fiber Glass

**Michael H. McGarry**
Sr. Vice President, Commodity Chemicals

**William A. Wulfsohn**
Sr. Vice President, Industrial Coatings

**Aziz S. Giga**
Vice President, Strategic Planning and Treasurer

**Charles F. Kahle**
Chief Technology Officer and Vice President, Research & Development, Coatings

**David B. Navikas**
Vice President and Controller

**Charles W. Wise**
Vice President, Human Resources

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# Letter from the Chairman

Clearly, the state of the global economy in 2009 created uncertainty and posed significant challenges for many companies. PPG was not immune to the global recession, which was both steep and broad. What's more, many of our end-use markets, such as automotive and construction, were significantly and adversely affected by the deterioration of the economy and the global financial crisis that began at the end of 2008 and continued through the year in 2009.

At PPG, we responded to this heavy turbulence quickly and decisively. And, as our 2009 financial results confirm, we responded correctly.

First, we shifted our priorities to respond to the difficult economic conditions. We placed greater emphasis on operating discipline. We worked to leverage our global technological and manufacturing capabilities to the most efficient use of the entire company. And, we keyed in on costs, margins, working capital and cash flow.

Second, we embarked on several aggressive restructuring initiatives to reshape our business to be more aligned with fundamental structural changes occurring in the marketplace. PPG announced two programs – one in September 2008 and one in March 2009 – that combined are expected to result in approximately $250 million in annual cost savings. These initiatives included the closure of several PPG manufacturing and distribution facilities and the elimination of approximately 3,800 positions. We also accelerated some of the integration activities identified upon the acquisition of SigmaKalon in 2008.

Third, PPG implemented other interim cost-saving measures to cope with the downturn. We traveled less, made temporary reductions in certain compensation and benefits costs and focused only on essential spending in our businesses and staff functions. In addition, we reined in capital spending for 2009 across all of our businesses, while ensuring that projects critical to sustaining production capability were funded.

In all, by implementing these steps, PPG is now a leaner, more efficient company that is not only better able to weather difficult circumstances, but is also positioned to succeed in more favorable conditions. As such, we are poised to benefit from recoveries – regardless of how large or small – in world economies.

In 2009, PPG posted sales of $12.2 billion and net income of $336 million. And while both sales and earnings were down versus the prior year, I believe these results are admirable given the circumstances. In addition, these results exceeded our early year expectations. More importantly, this performance validates the soundness of our strategic direction and the quality of our execution.

PPG benefitted from actions it has taken over the past several years to broaden the geographic reach of our business and grow the coatings and optical and specialty materials components of our portfolio. These businesses saw continuously improving positive momentum throughout the year, and by the end of 2009 were delivering higher year-over-year earnings. This performance was aided by our expanding footprint in the Asia / Pacific region, which posted record earnings for the year and now represents about 18 percent of our coatings portfolio. Overall, our efforts to transform our company have served us well in this downturn.

We entered 2009 with just over $1 billion of cash, and we delivered near-record cash flow from operations in 2009 of over $1.3 billion. As a result, we ended the year with a strong cash position of just over $1 billion to support future earnings growth opportunities, which could include bolt-on acquisitions or share repurchases.

PPG paid down about $650 million of debt in 2009. More importantly, we again raised our annual dividend payout for the 38th consecutive year, even in these challenging times. This increase not only demonstrates the confidence we have in PPG's business portfolio to consistently generate cash, but it also underscores the value we place on returning cash to our shareholders.

Going into 2010, we know that this year will not provide us with a quick return to more favorable economic conditions. But at PPG, we will remain vigilant in maintaining the operating discipline we displayed in 2009 in order to capitalize on gradual demand improvements as they occur this year. That said, we will also stay the course and continue to implement key strategies to transform our company into a more focused enterprise with strong geographic and end-use market diversity. Supported by PPG's longstanding fiscal prudence and proven track record of cash generation, I believe that PPG remains well-positioned for success in 2010 and the years to follow.

C Bunch

**Charles E. Bunch**
Chairman and Chief Executive Officer

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

## FORM 10-K
## ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2009 — Commission File Number 1-1687

# PPG INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Pennsylvania<br>(State or other jurisdiction of incorporation or organization) | 25-0730780<br>(I.R.S. Employer Identification No.) |
| One PPG Place, Pittsburgh, Pennsylvania<br>(Address of principal executive offices) | 15272<br>(Zip code) |
| Registrant's telephone number, including area code: | 412-434-3131 |

**Securities Registered Pursuant to Section 12(b) of the Act:**

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common Stock – Par Value $1.66⅔ | New York Stock Exchange |

**Securities Registered Pursuant to Section 12(g) of the Act: None**

Indicate by check mark if the Registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐
Indicate by checkmark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Date File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceeding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

| | |
|---|---|
| Large accelerated filer ☒ | Accelerated filer ☐ |
| Non-accelerated filer ☐<br>(Do not check if a smaller reporting company) | Smaller reporting company ☐ |

Indicate by check mark whether the Registrant is a shell company (as defined by Rule 12b-2 of the Act). YES ☐ NO ☒

The aggregate market value of common stock held by non-affiliates as of June 30, 2009, was $7,224 million.

As of January 31, 2010, 165,857,383 shares of the Registrant's common stock, with a par value of $1.66⅔ per share, were outstanding. As of that date, the aggregate market value of common stock held by non-affiliates was $9,716 million.

**DOCUMENTS INCORPORATED BY REFERENCE**

| Document | Incorporated By Reference In Part No. |
|---|---|
| Portions of PPG Industries, Inc. Proxy Statement for its 2010 Annual Meeting of Shareholders | III |

## PPG INDUSTRIES, INC.
## AND CONSOLIDATED SUBSIDIARIES

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As used in this report, the terms "PPG," "Company," "Registrant," "we," "us" and "our" refer to PPG Industries, Inc., and its subsidiaries, taken as a whole, unless the context indicates otherwise.

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### Note on Incorporation by Reference

Throughout this report, various information and data are incorporated by reference from the Company's 2009 Annual Report (hereinafter referred to as "the Annual Report"). Any reference in this report to disclosures in the Annual Report shall constitute incorporation by reference only of that specific information and data into this Form 10-K.

# Part I

## Item 1. Business

PPG Industries, Inc., incorporated in Pennsylvania in 1883, is comprised of six reportable business segments: Performance Coatings, Industrial Coatings, Architectural Coatings – EMEA (Europe, Middle East and Africa), Optical and Specialty Materials, Commodity Chemicals and Glass. Each of the business segments in which PPG is engaged is highly competitive. However, the diversification of product lines and worldwide markets served tend to minimize the impact on PPG's total sales and earnings from changes in demand for a particular product line or in a particular geographic area. Refer to Note 25, "Reportable Business Segment Information" under Item 8 of this Form 10-K for financial information relating to our reportable business segments.

### *Performance Coatings, Industrial Coatings and Architectural Coatings - EMEA*

PPG is a major global supplier of protective and decorative coatings. The Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA reportable segments supply protective and decorative finishes for customers in a wide array of end use markets, including industrial equipment, appliances and packaging; factory-finished aluminum extrusions and steel and aluminum coils; marine and aircraft equipment; automotive original equipment; and other industrial and consumer products. In addition to supplying finishes to the automotive original equipment market, PPG supplies refinishes to the automotive aftermarket. PPG also supplies coatings to painting and maintenance contractors and directly to consumers for decoration and maintenance. The coatings industry is highly competitive and consists of a few large firms with global presence and many smaller firms serving local or regional markets. PPG competes in its primary markets with the world's largest coatings companies, most of which have global operations, and many smaller regional coatings companies. Product development, innovation, quality and technical and customer service have been stressed by PPG and have been significant factors in developing an important supplier position by PPG's coatings businesses comprising the Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA reportable segments.

On January 2, 2008, PPG completed the acquisition of SigmaKalon Group ("SigmaKalon"), a worldwide coatings producer based in Uithoorn, Netherlands. The results of operations of SigmaKalon are included in PPG's consolidated financial statements from the acquisition date onward. The businesses acquired from SigmaKalon produce architectural, protective and marine and industrial coatings. The protective and marine and industrial coatings businesses of SigmaKalon are managed as part of PPG's previously existing coatings businesses. The SigmaKalon architectural coatings business in Europe, the Middle East and Africa was reported as a separate reportable business segment known as Architectural Coatings – EMEA beginning in 2008. This business represented about 70% of SigmaKalon's preacquisition sales.

The Performance Coatings reportable segment is comprised of the refinish, aerospace, protective and marine and architectural – Americas and Asia Pacific coatings businesses.

The refinish coatings business supplies coatings products for automotive and commercial transport/fleet repair and refurbishing, light industrial coatings for a wide array of markets and specialty coatings for signs. These products are sold primarily through distributors.

The aerospace coatings business supplies sealants, coatings, technical cleaners and transparencies for commercial, military, regional jet and general aviation aircraft and transparent armor for military land vehicles. PPG supplies products to aircraft manufacturers, maintenance and aftermarket customers around the world both on a direct basis and through a company-owned distribution network.

The protective and marine coatings business supplies coatings and finishes for the protection of metals and structures to metal fabricators, heavy duty maintenance contractors and manufacturers of ships, bridges, rail cars and shipping containers. These products are sold through the company-owned architectural coatings stores, independent distributors and directly to customers.

Product performance, technology, quality, distribution and technical and customer service are major competitive factors in these three coatings businesses.

The architectural coatings-Americas and Asia Pacific business primarily produces coatings used by painting and maintenance contractors and by consumers for decoration and maintenance. These coatings are sold under a number of brands. Architectural coatings – Americas and Asia Pacific products are sold through a combination of company-owned stores, home centers, paint dealers, independent distributors and directly to customers. Price, product performance, quality, distribution and brand recognition are key competitive factors for the architectural coatings business. The architectural coatings-Americas and Asia Pacific business operates about 400 company-owned stores in North America and about 50 company-owned stores in Australia.

The major global competitors of the Performance Coatings reportable segment are Akzo Nobel NV, BASF Corporation, the DuPont Company, the Sherwin-Williams Company and Valspar Corporation. The average number of persons employed by the Performance Coatings reportable segment during 2009 was 12,700.

The Industrial Coatings reportable segment is comprised of the automotive, industrial and packaging coatings businesses. Industrial, automotive and packaging coatings are formulated specifically for the customers' needs and application methods.

The industrial and automotive coatings businesses sell directly to a variety of manufacturing companies. PPG also supplies adhesives and sealants for the automotive industry and metal pretreatments and related chemicals for industrial and automotive applications. PPG has established alliances with Kansai Paint, Helios Group and Asian Paints Ltd. to serve certain automotive original equipment manufacturers in various regions of the world. PPG owns a 60% interest in PPG Kansai Finishes to serve Japanese-based automotive customers in North America and Europe. PPG owns a 60% interest in PPG Helios Ltd. to serve Russian-based automotive customers in Russia and the Ukraine. PPG owns a 50% interest in Asian PPG Paints to serve global and domestic-based automotive customers in India.

The packaging coatings business supplies coatings and inks to the manufacturers of aerosol, food and beverage containers.

Product performance, technology, quality and technical and customer service are major competitive factors in the industrial coatings businesses. The major global competitors of the Industrial Coatings reportable segment are Akzo Nobel NV, BASF Corporation, the DuPont Company, Valspar Corporation and Nippon Paint. The average number of persons employed by the Industrial Coatings reportable segment during 2009 was 8,900.

The Architectural Coatings – EMEA business supplies a variety of coatings under a number of brands and purchased sundries to painting contractors and consumers in Europe, the Middle East and Africa. Architectural Coatings – EMEA products are sold through a combination of about 560 company-owned stores, home centers, paint dealers, independent distributors and directly to customers. Price, product performance, quality, distribution and brand recognition are key competitive factors for this business. The major competitors of the Architectural Coatings – EMEA reportable segment are Akzo Nobel NV and Materis Paints. The average number of persons employed by the Architectural Coatings – EMEA reportable segment during 2009 was 8,500.

### *Optical and Specialty Materials*

PPG's Optical and Specialty Materials reportable segment is comprised of the optical products and silicas businesses. The primary Optical and Specialty Materials products are *Transitions*® lenses, sunlenses and optical lens materials; amorphous precipitated silicas for tire, battery separator and other end-use markets; and *Teslin*® synthetic printing sheet used in such applications as waterproof labels, e-passports, drivers' licenses and identification cards. *Transitions*® lenses are processed and distributed by PPG's 51%-owned joint venture with Essilor International. In the Optical and Specialty Materials businesses, product quality and performance, branding, distribution and technical service are the most critical competitive factors. The average number of persons employed by the Optical and Specialty Materials reportable business segment during 2009 was 3,000.

Historically, the Optical and Specialty Materials reportable segment included the fine chemicals business. PPG sold the fine chemicals business in the fourth quarter of 2007. As such, the results of operations and cash flows of this business have been classified as discontinued operations in the consolidated financial statements under Item 8 of this Form 10-K. Refer to Note 1, "Summary of Significant Accounting Policies" under Item 8 for further information.

### *Commodity Chemicals*

PPG is a producer and supplier of basic chemicals. The Commodity Chemicals reportable segment produces chlor-alkali and derivative products including chlorine, caustic soda, vinyl chloride monomer, chlorinated solvents, calcium hypochlorite, ethylene dichloride, hydrochloric acid and phosgene derivatives. Most of these products are sold directly to manufacturing companies in the chemical processing, rubber and plastics, paper, minerals, metals and water treatment industries. PPG competes with six other major producers of chlor-alkali products, including The Dow Chemical Company, Formosa Plastics Corporation, U.S.A., Georgia Gulf Corporation, Olin Corporation, Occidental Chemical Corporation and Shintech. Price, product availability, product quality and customer service are the key competitive factors. The average number of persons employed by the Commodity Chemicals reportable business segment during 2009 was 2,000.

### *Glass*

PPG is a producer of flat glass in North America and a global producer of continuous-strand fiber glass. The Glass reportable business segment is comprised of the performance glazings and fiber glass businesses. PPG's major markets are commercial and residential construction and the wind energy, energy infrastructure, transportation and electronics industries. Most glass products are sold directly to manufacturing companies. PPG manufactures flat glass by the float process and fiber glass by the continuous-strand process.

The bases for competition in the Glass businesses are price, quality, technology and customer service. The Company competes with four major producers of flat glass including Asahi Glass Company, Cardinal Glass Industries, Guardian Industries and NSG Pilkington, and six major producers of fiber glass throughout the world, including Owens Corning-Vetrotex, Jushi Group, Johns

Manville Corporation, CPIC Fiberglass, AGY and Taishan Fiberglass. The average number of persons employed by the Glass reportable business segment during 2009 was 3,100.

Historically, the Glass reportable segment included the automotive glass and services business. In September 2008, PPG completed a transaction by which it divested a majority interest in the automotive glass and services business. The results of this business through September 30, 2008 are reported as part of the Glass reportable segment in the consolidated financial statements under Item 8 of this Form 10-K. See Note 3, "Divestiture of Automotive Glass and Services Business" under Item 8 for additional information.

### *Raw Materials and Energy*

The effective management of raw materials and energy is important to PPG's continued success. Our primary energy cost is natural gas used in our Commodity Chemicals and Glass businesses. In 2009, our natural gas costs continued to be volatile and on average decreased almost 33 percent in the U.S. compared to 2008 levels. The decrease can be linked to year-over-year weak consumption, favorable weather and inflated inventories.

During 2009, the benefit of lower coatings raw material costs totaled $150 million globally, recovering a portion of the raw material cost increases that occurred over the prior three years of $150 million in 2008, $40 million in 2007 and $75 million in 2006. Many of our coatings raw materials are petroleum based and changes in pricing for these raw materials traditionally lag oil price fluctuations by several months. Our costs are also dependent on global supply and demand for these materials, which can vary by geographic region. Sluggish global demand resulting from the economic recession combined with overcapacity and high inventory levels caused our raw material costs to decline in 2009, particularly in the first half of the year. During the fourth quarter of 2009, we experienced some cost increases as demand improved gradually and supplier inventories contracted.

The Company's most significant raw materials are titanium dioxide and epoxy and other resins in the Coatings businesses; lenses, sand and soda ash in the Optical and Specialty Materials businesses; brine and ethylene in the Commodity Chemicals business; and sand and soda ash in the Glass businesses. Energy is a significant production cost in the Commodity Chemicals and Glass businesses. Most of the raw materials and energy used in production are purchased from outside sources, and the Company has made, and plans to continue to make, supply arrangements to meet the planned operating requirements for the future. Supply of critical raw materials and energy is managed by establishing contracts, multiple sources, and identifying alternative materials or technology, whenever possible.

The Company has aggressive sourcing initiatives underway to support its continuous efforts to find the lowest total material costs. These initiatives include reformulation of certain of our products using both petroleum derived and bio-based materials as part of a product renewal strategy. Another initiative is to qualify multiple sources of supply, including suppliers from Asia and other lower cost regions of the world.

We are subject to existing and evolving standards relating to the registration of chemicals that impact or could potentially impact the availability and viability of some of the raw materials we use in our production processes. Our ongoing global product stewardship efforts are directed at maintaining our compliance with these standards.

In December 2006, the European Union ("EU") member states adopted a new comprehensive chemical management legislation known as "REACH" (Registration, Evaluation, and Authorization of Chemicals). REACH applies to all chemical substances manufactured or imported into the EU in quantities of one metric ton or more annually and will require the registration of approximately 30,000 chemical substances with the European Chemicals Agency. PPG met the requirements for pre-registration of such chemicals that ended on December 1, 2008. Additionally, REACH requires the registration of these substances, entailing the filing of extensive data on their potential risks to human health and the environment. Registration activities will occur in three phases over an 11-year period, based on tonnage and level of concern, with the first registration deadline set for December 1, 2010. Subsequent phases end in 2013 and 2018. In the case of chemicals with a high level of concern, the regulation calls for progressive substitution unless no alternative can be found; in these cases, authorization of the chemicals will be required.

PPG has established a dedicated organization to manage REACH implementation. We have continued review of our product portfolio, worked closely with our suppliers to assure their commitment to register substances in our key raw materials and begun preparation for registration of substances in PPG manufactured or imported raw materials. We will continue to work with our suppliers to understand the future availability and viability of the raw materials we use in our production processes.

Compliance with the REACH legislation will result in increased costs due to registration costs, product testing and reformulation, risk characterization and participation in Substance Information Exchange Forums ("SIEFs") required to coordinate registration dossier preparation. PPG has identified a number of substances that may require 2010 registration and is engaged with other key companies through SIEFs to develop the required registration dossiers. The costs for 2013 and 2018 registrations and potential additional future testing in support of 2010 registrations are currently unclear; however, our preliminary estimate, in total, is in the range of $30 million to $45 million. We anticipate that some current raw materials and products will be subject to the REACH authorization process and believe that we will be able to demonstrate adequate risk management for the use and application of the majority of such substances.

The U.S. Environmental Protection Agency ("USEPA") has formally withdrawn their previously-announced program called "ChAMP" (Chemical Assessment and Management Program). This program had been intended to address hazard and risk characterization of chemicals imported or manufactured in the U.S. in quantities above 25,000 pounds annually. Further, the USEPA announced that ChAMP will be superseded by a comprehensive approach to enhancing the Agency's current chemicals management program.

At this time, it is not possible to quantify the financial impact of these regulatory initiatives on PPG's businesses.

### *Research and Development*

Technology innovation has been a hallmark of PPG's success throughout its history. Research and development costs, including depreciation of research facilities, were $403 million, $468 million and $363 million during 2009, 2008 and 2007, respectively. These costs totaled approximately 3% of sales in each of these years, representing a level of expenditure that is expected to continue in 2010. PPG owns and operates several facilities to conduct research and development relating to new and improved products and processes. Additional process and product research and development work is also undertaken at many of the Company's manufacturing plants. As part of our ongoing efforts to manage our costs effectively, we operate a global competitive sourcing laboratory in China, have outsourcing arrangements with several laboratories and have been actively pursuing government funding of a small, but growing portion of the Company's research efforts. Because of the Company's broad array of products and customers, PPG is not materially dependent upon any single technology platform.

### *Patents*

PPG considers patent protection to be important. The Company's reportable business segments are not materially dependent upon any single patent or group of related patents. PPG earned $45 million in 2009, $52 million in 2008 and $48 million in 2007 from royalties and the sale of technical know-how.

### *Backlog*

In general, PPG does not manufacture its products against a backlog of orders. Production and inventory levels are geared primarily to projections of future demand and the level of incoming orders.

### *Non-U.S. Operations*

PPG has a significant investment in non-U.S. operations, and as a result we are subject to certain inherent risks, including economic and political conditions in international markets and fluctuations in foreign currency exchange rates. While approximately 75% of sales and operating income is generated by products sold in the United States, Canada and Western Europe, our remaining sales and operating income are generated in developing regions, such as Asia, Eastern Europe and Latin America.

### *Employee Relations*

The average number of persons employed worldwide by PPG during 2009 was 39,900. The Company has numerous collective bargaining agreements throughout the world. While we have experienced occasional work stoppages as a result of the collective bargaining process and may experience some work stoppages in the future, we believe we will be able to negotiate all labor agreements on satisfactory terms. To date, these work stoppages have not had a significant impact on PPG's operating results. Overall, the Company believes it has good relationships with its employees.

### *Environmental Matters*

PPG is subject to existing and evolving standards relating to protection of the environment. Capital expenditures for environmental control projects were $27 million, $15 million and $16 million in 2009, 2008 and 2007, respectively. It is expected that expenditures for such projects in 2010 will be in the range of $20-$25 million. Although future capital expenditures are difficult to estimate accurately because of constantly changing regulatory standards and policies, it can be anticipated that environmental control standards will become increasingly stringent and the cost of compliance will increase.

PPG completed the conversion of its Lake Charles, La., mercury cell chlor-alkali unit to membrane cell technology in 2007. PPG currently operates one remaining mercury cell production unit located in Natrium, W.Va. This unit constitutes approximately 4% of PPG's total chlor-alkali production capacity.

PPG is negotiating with various government agencies concerning 104 current and former manufacturing sites and offsite waste disposal locations, including 22 sites on the National Priority List. While PPG is not generally a major contributor of wastes to these offsite waste disposal locations, each potentially responsible party may face governmental agency assertions of joint and several liability. Generally, however, a final allocation of costs is made based on relative contributions of wastes to the site. There is a wide range of cost estimates for cleanup of these sites, due largely to uncertainties as to the nature and extent of their condition and the methods that may have to be employed for their remediation. The Company has established reserves for onsite and offsite remediation of those sites where it is probable that a liability has been incurred and the amount can be reasonably estimated. As of December 31, 2009 and 2008, PPG had reserves for environmental contingencies totaling $287 million and $299 million, respectively, of which $59 million and $44 million, respectively, were classified as current liabilities. Pretax charges against income for environmental remediation costs in 2009, 2008 and 2007 totaled $11 million, $15 million and $12 million, respectively. Cash outlays related to such environmental remediation aggregated $24 million, $24 million and $19 million in 2009, 2008 and 2007, respectively. As part of the allocation of the SigmaKalon purchase price to the assets acquired and liabilities assumed, the reserve for environmental contingencies was increased by $37 million in 2008. The impact of foreign currency translation increased the liability by $1 million in 2009 and decreased the liability by $5 million in 2008. Environmental remediation of a former chromium manufacturing plant site and associated sites in Jersey City, N.J., represents the major part of our existing reserves. Included in the amounts mentioned above were $188 million and $193 million in reserves at December 31, 2009 and 2008, respectively, associated with all New Jersey chromium sites.

The Company's experience to date regarding environmental matters leads PPG to believe that it will have continuing expenditures for compliance with provisions regulating the protection of the environment and for present and future remediation efforts at waste and plant sites. Management anticipates that such expenditures will occur over an extended period of time.

Our continuing efforts to analyze and assess the environmental issues associated with a former chromium manufacturing plant site located in Jersey City, N.J., and the Calcasieu River Estuary located near our Lake Charles, La. chlor-alkali plant resulted in a pre-tax charge of $173 million in the third quarter of 2006 for the estimated costs of remediating these sites. These charges for estimated environmental remediation costs in 2006 were significantly higher than PPG's historical range. Excluding 2006, pre-tax charges against income have ranged between $10 million and $49 million per year for the past 15 years. We anticipate that charges against income in 2010 for environmental remediation costs will be within this historical range.

In management's opinion, the Company operates in an environmentally sound manner, is well positioned, relative to environmental matters, within the industries in which it operates, and the outcome of these environmental contingencies will not have a material adverse effect on PPG's financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. See Note 16, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K for additional information related to environmental matters.

Public and governmental concerns related to climate change continue to grow, leading to efforts to limit the greenhouse gas ("GHG") emissions believed to be responsible. These concerns were reflected in the 2005 framework for GHG reduction under the Kyoto Protocol to the United Nations Framework Convention on Climate Change ("UNFCCC"). The Kyoto Protocol was adopted by many countries where PPG operates, including the European Union and Canada, though not in the U.S. The European Union implemented a cap and trade approach with a mandatory emissions trading scheme for GHGs. In December 2007, delegates to the UNFCCC reached agreement on development of a plan for the second phase of Kyoto, which culminated in the Copenhagen Accord in December 2009. The Copenhagen Accord requires Annex I Parties (economically developed countries) to further strengthen the emission reductions initiated by the Kyoto Protocol by submitting economy-wide emission targets for 2020. PPG has operations in many of these countries. However, there are indications that some influential Annex 1 and Non-Annex 1 countries may decide to reduce their emission targets or forego signing the Accord thereby putting the future of the entire Climate Change Convention into question.

A substantial portion of PPG's GHG emissions are generated by locations in the U.S., where considerable legislative and regulatory activity has taken place during 2009. As a result of a U.S. Supreme Court ruling in April 2007 declaring that GHGs are air pollutants covered by the Clean Air Act, the USEPA proposed and later finalized in December 2009 an Endangerment Finding that GHG emissions "threaten public health and welfare of current and future generations." Based on the Endangerment Finding, the USEPA proposed new, "tailored" thresholds for GHG emissions that define when Clean Air Act New Source Review and title V operating permit programs would be required for new or existing industrial facilities. As proposed, the rules would impose new permit requirements on PPG facilities emitting more than 25,000 tons of GHGs per year. The U.S. federal government has committed to a 17% economy-wide emission reduction target below 2005 levels by 2020. The potential impact of these proposed regulations on PPG will not be known until they are finalized.

PPG is a member of the U.S.-based Climate Registry, an organization that sets standards to calculate, verify and publicly report greenhouse gas emissions into a single registry. The Registry assists in verification of current and future PPG GHG reduction achievements in preparation for potential imposition in the U.S. of GHG reduction goals. PPG is also a member of the USEPA's Climate Leaders program, which works with companies to develop comprehensive climate-change strategies. In addition, PPG has been recognized by the Climate Disclosure Project as a leader in emissions disclosure and reduction.

Energy prices and supply continue to be a concern for major energy users. Since PPG's GHG emissions arise principally from combustion of fossil fuels, PPG has for some time recognized the desirability of reducing energy consumption and GHG generation. We committed under the Business Roundtable's Climate RESOLVE program to reduce our GHG intensity (GHGs produced per million dollars of revenue) by 18% between 2002 and 2012. PPG achieved this target in 2006, six years ahead of schedule. Additionally, in 2007 PPG announced new corporate targets, namely (i) a reduction in energy intensity by 25% from 2006 to 2016 and (ii) a 10% absolute reduction in GHG emissions from 2006 to 2011. PPG has joined the U.S. Department of Energy Save Energy Now LEADER Program reinforcing the company's voluntary efforts to significantly reduce its industrial energy intensity. Recognizing the continuing importance of this matter, PPG has a senior management group with a mandate to guide the Company's progress in this area.

PPG's public disclosure on energy security and climate change can be viewed in our Sustainability Report *http://corporateportal.ppg.com/ppg/csr* or at the Carbon Disclosure Project *www.cdproject.net*.

### *Available Information*

The Company's website address is *www.ppg.com*. The Company posts, and shareholders may access without charge, the Company's recent filings and any amendments thereto of its annual reports on Form 10-K, quarterly reports on Form 10-Q and its proxy statements as soon as reasonably practicable after such reports are filed with the Securities and Exchange Commission ("SEC"). The Company also posts all financial press releases and earnings releases to its website. All other reports filed or furnished to the SEC, including reports on Form 8-K, are available via direct link on PPG's website to the SEC's website, *www.sec.gov*. Reference to the Company's and SEC's websites herein does not incorporate by reference any information contained on those websites and such information should not be considered part of this Form 10-K.

## Item 1A. Risk Factors

As a global manufacturer of coatings, glass and chemicals products, we operate in a business environment that includes risks. These risks are not unlike the risks we have faced in the recent past. Each of the risks described in this section could adversely affect our operating results, financial position and liquidity. While the factors listed here are considered to be the more significant factors, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles which may adversely affect our business.

### *The global recession and credit crisis could continue to have negative impact on our results of operations and cash flows.*

During the fourth quarter of 2008, the demand for many of our products in Europe, Asia and Latin America declined significantly as the impact of the recession, which had impacted demand throughout 2008 in the U.S. and U.K. economies, spread globally. Many global industrial end-markets remained depressed for most of 2009. The impact of the recession was felt by all of our businesses but most noticeably by those businesses serving the automotive original equipment, construction, housing and general industrial markets. Entering 2010, the global economic outlook reflects expectations of gradual year-over-year improvement in many industrial sectors, but the breadth and pace of the recovery is uncertain. Anticipation is for growth to continue in most Asian economies driven by these global demand improvements. Modest recovery is expected to continue in the North American economy, with some offsets due to later economic cycle sectors such as commercial construction, which is projected to continue to decline. The recovery rate of the European economy is expected to lag both Asia and North America. A source of concern is the anticipation that various government stimulus programs will gradually be removed without a consensus conviction that consumer spending in these countries will provide an offset to support the recovery. Continued weakness in the global economy would be expected to result in lower demand for many of our products and increase our exposure to credit risk from customers in the industries most impacted by the weak economy. How strongly the rebound of the global economy takes hold or if the signs of recovery will last is not known.

### *Increases in prices and declines in the availability of raw materials could negatively impact our financial results.*

Our operating results are significantly affected by the cost of raw materials and energy, including natural gas. Changes in natural gas prices have a significant impact on the operating performance of our Commodity Chemicals and Glass businesses. Each one-dollar change in our unit cost of natural gas per million British Thermal Units ("mmbtu") has a direct impact of approximately $60 million to $70 million on our annual operating costs. In 2009, our natural gas costs on average decreased almost 33% in the U.S. compared to 2008 levels. Year-over-year coatings raw material costs declined by approximately $150 million in 2009 following a rise of approximately $150 million in 2008. This increase in costs, which was partially linked to increased oil prices, occurred in all regions of the world, with the most significant impact in the U.S. Whether oil prices and our raw material costs will increase in 2010 is not known.

We also import raw materials, particularly for use at our manufacturing facilities in the emerging regions of the world. In most cases, those imports are priced in the currency of the supplier and, therefore, our margins are at risk of being lowered if those foreign currencies strengthen against the local currencies of our manufacturing facilities.

Additionally, certain raw materials are critical to our production processes. These include titanium dioxide and epoxy and other resins in the Coatings businesses; lenses, photochromic dye, sand and soda ash in the Optical and Specialty Materials businesses; brine and ethylene in the Commodity Chemicals business; and sand and soda ash in the Glass businesses. We have made, and plan to continue to make, supply arrangements to meet the planned operating requirements for the future. However, an inability to obtain these critical raw materials would adversely impact our ability to produce products.

*We experience substantial competition from certain low-cost regions.*

Growing competition from companies in certain regions of the world, including Asia, Eastern Europe and Latin America, where energy and labor costs are lower than those in the U.S., could result in lower selling prices or reduced demand for some of our glass and fiber glass products.

*We are subject to existing and evolving standards relating to the protection of the environment.*

We have accrued $287 million for estimated environmental remediation costs that are probable at December 31, 2009. Our assessment of the potential impact of these environmental contingencies is subject to considerable uncertainty due to the complex, ongoing and evolving process of investigation and remediation, if necessary, of such environmental contingencies, and the potential for technological and regulatory developments. As such, in addition to the amounts currently reserved, we may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $300 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence.

*We are involved in a number of lawsuits and claims, both actual and potential, in which substantial monetary damages are sought.*

The results of any future litigation or settlement of such lawsuits and claims are inherently unpredictable, but such outcomes could be adverse and material in amount.

*For over 30 years, we have been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos.*

Most of our potential exposure relates to allegations by plaintiffs that PPG should be liable for injuries involving asbestos containing thermal insulation products manufactured by Pittsburgh Corning Corporation ("PC"). PPG is a 50% shareholder of PC. Although we have entered into a settlement arrangement with several parties concerning these asbestos claims as discussed in Note 16, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K, the arrangement remains subject to court proceedings and, if not approved, the outcome could be material to the results of operations of any particular period.

*Our products are subject to existing and evolving regulations.*

Regulations concerning the composition and use of chemical products continue to evolve. Developments concerning these regulations could potentially impact (i) the availability or viability of some of the raw materials we use in our product formulations and/or (ii) our ability to supply certain products to some customers or markets.

*Our international operations expose us to additional risks and uncertainties that could affect our financial results.*

Because we are a global company, our results are subject to certain inherent risks, including economic and political conditions in international markets and fluctuations in foreign currency exchange rates. While approximately 75% of sales and operating income in 2009 was generated by products sold in the United States, Canada and Western Europe, our remaining sales and operating income are generated in developing regions, such as Asia, Eastern Europe and Latin America.

*As a producer of chemicals, we manufacture and transport certain materials that are inherently hazardous due to their toxic nature.*

We have significant experience in handling these materials and take precautions to handle and transport them in a safe manner. However, these materials, if mishandled or released into the environment, could cause substantial property damage or personal injuries resulting in significant legal claims against us. In addition, evolving regulations concerning the security of chemical production facilities and the transportation of hazardous chemicals could result in increased future capital or operating costs.

*We sell products to global and regional automotive original equipment manufacturers and their suppliers.*

The economic downturn caused declines in global production of automobiles and light trucks, which adversely impacted our sales volumes. While the automotive market experienced higher and more consistent production and sales levels in the second half of 2009, the overall market still remained at a very low activity level.

The North American automotive industry continues to experience structural change, including the loss of U.S. market share by General Motors and Chrysler. During 2009, both companies emerged from bankruptcy with the assistance of equity infusions by the U.S. government. These developments have mitigated any potential credit exposure we may face. However, we remain focused on the continual management of automotive customer credit risk as further deterioration of market conditions could cause additional liquidity problems, potentially resulting in the write-off of amounts due from these customers and cost impacts of changing suppliers.

Additionally, the same economic conditions that are impacting our continuing businesses that serve the automotive original equipment manufacturer ("OEM") market are affecting the divested automotive glass and services business, in which PPG maintains an approximate 40 percent interest.

*Business disruptions could have a negative impact on our results of operations and financial condition.*

Unexpected events, including supply disruptions, temporary plant and/or power outages, natural disasters and severe weather events, fires, war or terrorist activities, could increase the cost of doing business or otherwise harm the operations of PPG, our customers and our suppliers. It is not possible for us to predict the occurrence or consequence of any such events. However, such events could reduce demand for our products or make it difficult or impossible for us to receive raw materials from suppliers or to deliver products to customers.

## Item 1B. Unresolved Staff Comments

None.

## Item 2. Properties

The Company's corporate headquarters is located in Pittsburgh, Pa. The Company's manufacturing facilities, sales offices, research and development centers and distribution centers are located throughout the world. The Company operates 121 manufacturing facilities in 41 countries. The Company's principal manufacturing and distribution facilities are as follows:

| | |
|---|---|
| Performance Coatings: | Clayton, Australia; Delaware, Ohio; Dover, Del.; Huntsville, Ala.; Kunshan, China; Stowmarket, United Kingdom; Sylmar, Calif.; about 400 company-owned stores in the United States and about 50 company-owned stores in Australia |
| Industrial Coatings: | Cieszyn, Poland; Cleveland, Ohio; Oak Creek, Wis.; Tianjin, China; Quattordio, Italy; San Juan del Rio, Mexico and Busan, South Korea |
| Architectural Coatings—EMEA: | Ruitz, France; Budapest, Hungary; Amsterdam, Netherlands; Wroclaw, Poland; Birstall, United Kingdom and about 560 company-owned stores, including 175 stores each in France and the United Kingdom |
| Optical and Specialty Materials: | Barberton, Ohio; Bangkok, Thailand; Lake Charles, La.; and Manila, Philippines |
| Commodity Chemicals: | Lake Charles, La. and Natrium, W. Va. |
| Glass: | Carlisle, Pa.; Hoogezand, Netherlands; Shelby, N.C. and Wichita Falls, Texas |

Including the principal manufacturing facilities noted above, the Company has manufacturing facilities in the following geographic areas:

| | |
|---|---|
| United States: | 35 manufacturing facilities in 21 states. |
| Other Americas: | 10 manufacturing facilities in 6 countries. |
| EMEA: | 51 manufacturing facilities in 25 countries. |
| Asia: | 25 manufacturing facilities in 9 countries. |

The Company's principal research and development centers are located in Allison Park, Pa.; Harmarville, Pa.; and Monroeville, Pa.

The Company's headquarters and company-owned paint stores are located in facilities that are leased while the Company's other facilities are generally owned. Our facilities are considered to be suitable and adequate for the purposes for which they are intended and overall have sufficient capacity to conduct business in the upcoming year.

## Item 3. Legal Proceedings

PPG is involved in a number of lawsuits and claims, both actual and potential, including some that it has asserted against others, in which substantial monetary damages are sought. These lawsuits and claims, the most significant of which are described below, relate to contract, patent, environmental, product liability, antitrust and other matters arising out of the conduct of PPG's current and past business activities. To the extent that these lawsuits and claims involve personal injury and property damage, PPG believes it has adequate insurance; however, certain of PPG's insurers are contesting coverage with respect to some of these claims, and other insurers, as they had prior to the asbestos settlement described below, may contest coverage with respect to some of the asbestos claims if the settlement is not implemented. PPG's lawsuits and claims against others include claims against insurers and other third parties with respect to actual and contingent losses related to environmental, asbestos and other matters.

The result of any future litigation of such lawsuits and claims is inherently unpredictable. However, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG, including asbestos-related claims in the event the settlement described below does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized.

For over 30 years, PPG has been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos. For a description of asbestos litigation affecting the Company and the terms and status of the proposed asbestos settlement arrangement, see Note 16, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K.

Over the past several years, the Company and others have been named as defendants in several cases in various jurisdictions claiming damages related to exposure to lead and remediation of lead-based coatings applications. PPG has been dismissed as a defendant from most of these lawsuits and has never been found liable in any of these cases.

A Notice of Intent ("NOI") to file a Citizen Suit under the federal Clean Water Act has been received by PPG from the West Virginia Rivers Coalition and Oceana. The NOI alleges that PPG exceeded permitted discharge limits at its Natrium, West Virginia plant. The West Virginia Department of Environmental Protection filed suit in State Court for the permit exceedances covered by the NOI and informed PPG that it intended to seek a civil penalty. Prior to the expiration of the 60-day notice period, a lawsuit was filed in state court by the West Virginia Department of Environmental Protection ("WVDEP") for the same alleged violations described in the Citizen Suit NOI, blocking the Citizen Suit for the time being. PPG is in the process of negotiating with WVDEP in an attempt to settle this matter. In PPG's experience, resolution of matters such as these is difficult to predict.

PPG has received a Consolidated Compliance Order and Notice of Proposed Penalty ("CO/NOPP") from the Louisiana Department of Environmental Quality ("DEQ") alleging violation of various requirements of its Lake Charles, La. facility's air permit based largely upon permit deviations self-reported by PPG. The CO/NOPP did not contain a proposed civil penalty. PPG filed a request for hearing and has engaged DEQ in settlement discussions. In PPG's experience, resolution of such matters is difficult to predict.

## Item 4. Submission of Matters to a Vote of Security Holders

None.

## Executive Officers of the Company

Set forth below is information related to the Company's executive officers as of February 18, 2010.

| *Name* | *Age* | *Title* |
|---|---|---|
| Charles E. Bunch (a) | 60 | Chairman of the Board and Chief Executive Officer since July 2005 |
| James C. Diggs (b) | 61 | Senior Vice President and General Counsel since July 1997 |
| Robert J. Dellinger (c) | 49 | Senior Vice President, Finance and Chief Financial Officer since October 2009 |
| J. Rich Alexander (d) | 54 | Senior Vice President, Performance Coatings since May 2005 |
| Pierre-Marie De Leener (e) | 52 | Senior Vice President, Architectural Coatings, Europe, Middle East and Africa since January 2008 and President, PPG Europe since July 2008 |
| Richard C. Elias (f) | 56 | Senior Vice President, Optical and Specialty Materials since July 2008 |
| Victoria M. Holt (g) | 52 | Senior Vice President, Glass and Fiber Glass since May 2005 |
| Michael H. McGarry (h) | 51 | Senior Vice President, Commodity Chemicals since July 2008 |
| William A. Wulfsohn (i) | 47 | Senior Vice President, Industrial Coatings since May 2005 |

(a) *Mr. Bunch held the position of President and Chief Operating Officer from July 2002 until July 2005.*

(b) *Mr. Diggs also held the position of Secretary from September 2004 through July 16, 2009.*

(c) *Mr. Dellinger held the position of Senior Vice President, Finance and Chief Financial Officer Designate from September 2009 through October 2009. Prior to joining PPG, he held the position of Executive Vice President and Chief Financial Officer from October 2005 to September 2008 at Delphi Corporation and Executive Vice President and Chief Financial Officer from June 2002 through September 2005 at Sprint Corporation.*

(d) *Mr. Alexander held the position of Vice President, Industrial Coatings from July 2002 until April 2005.*

(e) *Mr. De Leener was appointed to Senior Vice President, Architectural Coatings, Europe, Middle East and Africa upon PPG's acquisition of SigmaKalon Group on January 2, 2008. He previously served as Chief Executive Officer of SigmaKalon Group from 1999 until January 2008.*

(f) *Mr. Elias held the position of Vice President, Optical Products from April 2000 until June 2008.*

(g) *Ms. Holt held the position of Vice President, Fiber Glass from February 2003 until April 2005.*

(h) *Mr. McGarry held the positions of Vice President, Coatings, Europe and Managing Director, PPG Europe from July 2006 through June 2008; and the position of Vice President, Chlor-Alkali and Derivatives from March 2004 through June 2006.*

(i) *Mr. Wulfsohn also held the position of Managing Director, PPG Europe from May 2005 until June 2006; and the position of Vice President, Coatings, Europe, and Managing Director, PPG Europe from February 2003 until April 2005.*

# Part II

## Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The information required by Item 5 regarding market information, including stock exchange listings and quarterly stock market prices, dividends and holders of common stock is included in Exhibit 13.1 filed with this Form 10-K and is incorporated herein by reference. This information is also included in the PPG Shareholder Information on page 81 of the Annual Report to shareholders.

Directors who are not also officers of the Company receive common stock equivalents pursuant to the PPG Industries, Inc., Deferred Compensation Plan for Directors ("PPG Deferred Compensation Plan for Directors"). Common stock equivalents are hypothetical shares of common stock having a value on any given date equal to the value of a share of common stock. Common stock equivalents earn dividend equivalents that are converted into additional common stock equivalents but carry no voting rights or other rights afforded to a holder of common stock. The common stock equivalents credited to directors under this plan are exempt from registration under Section 4(2) of the Securities Act of 1933 as private offerings made only to directors of the Company in accordance with the provisions of the plan.

Under the PPG Deferred Compensation Plan for Directors, each director may elect to defer the receipt of all or any portion of the compensation paid to such director for serving as a PPG director. All deferred payments are held in the form of common stock equivalents. Payments out of the deferred accounts are made in the form of common stock of the Company (and cash as to any fractional common stock equivalent). The directors, as a group, were credited with 22,103; 9,751; and 9,742 common stock equivalents in 2009, 2008 and 2007, respectively, under this plan. The values of the common stock equivalents, when credited, ranged from $34.34 to $58.51 in 2009, $43.89 to $67.77 in 2008 and $68.71 to $75.50 in 2007.

### *Issuer Purchases of Equity Securities*

The following table summarizes the Company's stock repurchase activity for the three months ended December 31, 2009:

| *Month* | *Total Number of Shares Purchased* | *Average Price Paid per Share* | *Total Number of Shares Purchased as Part of Publicly Announced Programs*[1] | *Maximum Number of Shares that May Yet Be Purchased Under the Programs*[2] |
|---|---|---|---|---|
| October 2009 | | | | |
| Repurchase program | — | $ — | — | 3,850,009 |
| November 2009 | | | | |
| Repurchase program | — | — | — | 3,850,009 |
| December 2009 | | | | |
| Repurchase programs | 1,500,000 | 39.53 | 1,500,000 | 7,350,009 |
| *Total quarter ended December 31, 2009* | | | | |
| Repurchase programs | 1,500,000 | $39.53 | 1,500,000 | 7,350,009 |

*(1) These shares were repurchased under a 10 million share repurchase program approved by PPG's Board of Directors in October 2005. This program does not have an expiration date.*

*(2) In December 2009, the Board of Directors authorized the repurchase of an additional 5 million shares of outstanding stock. This program does not have an expiration date.*

### *Equity Compensation Plan Information*

The equity compensation plan documents described in the footnotes below are included as Exhibits to this Form 10-K, and are incorporated herein by reference in their entirety. The following table provides information as of December 31, 2009 regarding the number of shares of PPG common stock that may be issued under PPG's equity compensation plans. For additional information on the Company's equity compensation program, see Note 21, "Stock-Based Compensation," under Item 8 of this Form 10-K.

| *Plan category* | *Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)* | *Weighted-average exercise price of outstanding options, warrants and rights (b)* | *Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)* |
|---|---|---|---|
| Equity compensation plans approved by security holders[1] | 8,850,408 | $57.51 | 6,205,472 |
| Equity compensation plans not approved by security holders[2] | — | — | — |
| *Total* | 8,850,408 | $57.51 | 6,205,472 |

*(1) Equity compensation plans approved by security holders include the PPG Industries, Inc., Stock Plan, the PPG Industries, Inc., Omnibus Incentive Plan, the PPG Industries, Inc., Executive Officers' Long Term Incentive Plan and the PPG Industries Inc., Long Term Incentive Plan.*

(2) *Excluded from the information presented here are common stock equivalents held under the PPG Industries, Inc., Deferred Compensation Plan and the PPG Industries, Inc., Deferred Compensation Plan for Directors, neither of which are equity compensation plans. As supplemental information, there were 548,816 common stock equivalents held under such plans as of December 31, 2009.*

## Item 6. Selected Financial Data

The information required by Item 6 regarding the selected financial data for the five years ended December 31, 2009 is included in Exhibit 13.2 filed with this Form 10-K and is incorporated herein by reference. This information is also reported in the Five-Year Digest on page 80 of the Annual Report to shareholders.

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

## Performance in 2009 compared with 2008

### *Performance Overview*

Our sales in 2009 totaled $12.2 billion compared to $15.8 billion in 2008. The sales decrease totaled 23%. Sales decreased 13% due to lower sales volumes in all reportable segments reflecting the adverse impact of the global recession on demand, 4% due to weaker foreign currency, 5% due to the absence of sales from the divested automotive glass and services business and 1% due to lower selling prices.

Cost of sales, exclusive of depreciation and amortization, decreased by $2,616 million in 2009 to $7,539 million compared to $10,155 million in 2008. Cost of sales as a percentage of sales was 61.6% in 2009 compared to 64.1% in 2008. Cost of sales in 2008 includes $94 million for the flow through cost of sales of the step up to fair value of acquired inventory. The reduction in cost of sales as a percentage of sales was due to our higher margin coatings businesses being a larger portion of our total 2009 results, favorable manufacturing cost efficiency and favorable price net of inflation.

Selling, general and administrative expenses decreased by $496 million in 2009 compared to 2008 due to lower sales volumes, specific overhead cost reduction actions taken in response to the decline in the global economy, the impact of foreign currency translation and the absence of the 2008 charge of $19 million for special termination benefits and a pension curtailment loss relating to the sale of the automotive glass and services business.

Depreciation expense decreased by $74 million in 2009 due to the impact of foreign currency translation, our restructuring actions and the divestiture of the automotive glass and services business. Research and development costs decreased by $63 million in 2009 largely due to cost reduction efforts and the impact of foreign currency translation. Interest expense decreased by $61 million in 2009, reflective of the lower debt balances and lower interest rates in 2009.

During the first quarter of 2009, the Company finalized a restructuring plan that is focused on further reducing PPG's global cost structure. The Company recorded a charge of $186 million for the cost of this restructuring. During the third quarter of 2008, the Company finalized a restructuring plan that is part of implementing PPG's global transformation strategy and the integration of its acquisition of SigmaKalon. The Company recorded a charge of $163 million for the cost of this restructuring.

Other earnings increased by $13 million in 2009 due primarily to the impact of gains on non-operating asset sales.

The effective tax rate on pretax earnings in 2009 was 31.0% compared to 31.3% in 2008. The 2009 rate includes a tax benefit of $2 million related to audit settlements. The 2009 rate also includes a tax benefit of 24.5% related to the business restructuring charge and a tax benefit of 38.5% related to the adjustment to increase the current value of the Company's obligation relating to asbestos claims under the proposed asbestos settlement, as discussed in Note 16, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K. The tax rate was approximately 30% on the remaining pretax earnings in 2009.

The 2008 rate includes a tax benefit of $14 million related to the settlement with the Internal Revenue Service of our U.S. tax returns for tax years 2004, 2005 and 2006. The 2008 rate also includes a total net tax benefit of 26.5% on costs related to the acquisition of SigmaKalon, the charges for the catch-up of depreciation expense and the impact of benefit changes related to the divestiture of the automotive glass and services business, the business restructuring charge, the adjustment to increase the current value of the Company's obligation under the proposed asbestos settlement and the gain on divestiture of the automotive glass and services business. The tax rate was approximately 31% on the remaining pretax earnings in 2008.

Net income (attributable to PPG) and earnings per share – assuming dilution (attributable to PPG) for 2009 and 2008 are summarized below:

| *(Millions, except per share amounts)* | | |
|---|---|---|
| *Year ended December 31, 2009* | *Net Income* | |
| | *$* | *EPS* |
| Net income (attributable to PPG) | $336 | $2.03 |
| Net income (attributable to PPG) includes: | | |
| Charges related to: | | |
| Business restructuring | 141 | 0.86 |
| Asbestos settlement – net[1] | 8 | 0.05 |

# Management's Discussion and Analysis

| *(Millions, except per share amounts)* | | |
|---|---|---|
| *Year ended December 31, 2008* | *Net Income* | |
| | *$* | *EPS* |
| Net income (attributable to PPG) | $538 | $ 3.25 |
| Net income (attributable to PPG) includes: | | |
| Charges related to: | | |
| Business restructuring | 110 | 0.67 |
| Asbestos settlement – net(1) | 2 | 0.01 |
| Acquisition-related costs(2) | 89 | 0.54 |
| Depreciation catch-up (3) | 11 | 0.07 |
| Divestiture related benefit costs(4) | 12 | 0.07 |
| Gain on divestiture of automotive glass and services business | (3) | (0.02) |

*(1) Net increase in the current value of the Company's obligation relating to asbestos claims under the proposed asbestos settlement.*

*(2) Costs related to SigmaKalon acquisition, including $66 million aftertax for the flow-through cost of sales of the step up to fair value of acquired inventory and $23 million aftertax for the write-off of in-process research and development.*

*(3) Represents the catch-up of depreciation expense, which was suspended when the automotive glass and services business was classified previously as a discontinued operation.*

*(4) Represents special termination benefits and a pension curtailment loss relating to the impact of benefit changes, including accelerated vesting, negotiated as part of the sale of the automotive glass and services business.*

### *Results of Reportable Business Segments*

| | *Net sales* | | *Segment income (loss)* | |
|---|---|---|---|---|
| *(Millions)* | 2009 | 2008 | 2009 | 2008 |
| Performance Coatings | $4,095 | $4,716 | $551 | $582 |
| Industrial Coatings | 3,068 | 3,999 | 159 | 212 |
| Architectural Coatings – EMEA | 1,952 | 2,249 | 128 | 141 |
| Optical and Specialty Materials | 1,002 | 1,134 | 235 | 244 |
| Commodity Chemicals | 1,273 | 1,837 | 152 | 340 |
| Glass | 849 | 1,914 | (39) | 70 |

Performance Coatings sales decreased $621 million or 13% in 2009. Sales declined 13% as a result of lower sales volumes, particularly in the automotive refinish business and architectural coatings – Americas and Asia/Pacific businesses. The volume decline in automotive refinish was most pronounced in the U.S. and Europe, while the decline in architectural coatings was mainly in the U.S. and Latin America. Weaker foreign currency also reduced sales by 3%. Sales increased 3% due to improved pricing. Segment income in 2009 decreased $31 million, including a decline of $24 million due to currency. The earnings impact of lower sales volume was largely offset by favorable pricing and lower overhead, manufacturing and input costs.

Industrial Coatings sales decreased $931 million or 23% in 2009. Sales decreased 21% due to lower sales volumes, most notably in the automotive and industrial businesses, reflecting the severe decline in demand resulting from the global recession. Volume declines in the segment occurred in all major regions. Sales also declined 3% due to the negative impact of foreign currency translation. Sales increased 1% due to increased selling prices. Segment income declined $53 million in 2009. The decline in earnings due to lower volumes was about $320 million. Factors increasing segment income were lower overhead, manufacturing and input costs and improved selling prices.

Architectural Coatings - EMEA sales decreased $297 million or 13% in 2009. Sales decreased 9% due to the negative impact of foreign currency translation and 7% from lower sales volumes. Sales increased 3% due to increased selling prices. Segment income decreased $13 million in 2009, including $19 million due to currency. The earnings impact of lower sales volumes and inflation were more than offset by lower overhead costs and higher selling prices and other income.

Optical and Specialty Materials sales decreased $132 million or 12% in 2009. Sales decreased 10% due to volume, in part reflecting strong 2008 volumes associated with the launch of Transitions Optical's next generation lens product in North America. Volumes were also lower in the silicas business as a result of the slowdown in the automotive OEM market. Sales declined 2% due to the negative impact of foreign currency translation. Segment income decreased $9 million in 2009. The decrease in segment income was primarily the result of lower sales volumes, which was partially offset by lower manufacturing and overhead costs.

Commodity Chemicals sales decreased $564 million or 31% in 2009. Sales declined 21% due to lower selling prices, 9% due to lower sales volumes and 1% due to currency. Segment income decreased $188 million in 2009 due to the negative impact of lower selling prices and volumes. Factors that contributed to offsetting some of the earnings decline were lower input costs, particularly energy, lower overhead costs and higher other income.

Glass sales decreased $1,065 million or 56% in 2009. About $725 million of the sales decrease was due to the divestiture of a majority interest in the automotive glass and services business, which was completed in September 2008. The remaining decrease in sales was due mainly to lower sales volumes in the performance glazings and fiber glass businesses, reflecting reduced construction and general industrial demand and, to a lesser extent, weaker foreign currency and lower selling prices. Segment income decreased $109 million in 2009, with $16 million

# Management's Discussion and Analysis

due to the absence of earnings from the divested automotive glass and services business. The remaining decline in segment earnings was due to the negative impact of lower sales volumes and lower selling prices. Lower overhead, manufacturing and input costs positively impacted segment income.

### *Outlook*

In 2009, the global economy was mired in a severe recession which began during 2008. The severity of the recession prompted intervention by many governments to introduce a variety of stimulus measures to stabilize economies and various industries or sectors, including the banking sector due to intense global liquidity concerns. Global industrial end-markets experienced rapid declines in the fourth quarter of 2008, and many of these markets remained depressed throughout 2009. In addition, in late 2008 and early 2009, many industries destocked inventory levels which further reduced manufacturing demand. In the latter half of 2009, the majority of this inventory destocking was completed, and some end-markets began to experience gradual demand improvements from what were extremely low levels in comparison with recent history. In recognition of the global economic slowdown, prices of energy and many related commodities dramatically declined in late 2008 and early 2009, from what were, in many cases, historically high price levels directly preceding the recession.

The North American economy began 2009 at very low activity levels, with some industries, such as automotive OEM, down 40-50 percent versus the prior year level. As a result, the U.S. automotive industry experienced a significant retrenchment early in the year, and two major auto companies emerged from bankruptcy with the help of extensive government financial aid. In the second half of 2009, the automotive market experienced higher and more consistent production and sales levels, although the overall market still remained at a very low activity level. Construction markets continued to weaken as residential construction experienced a third consecutive year of slower demand, and commercial construction, which grew in 2008, declined swiftly in 2009. This overall declining economic environment resulted in a continued upward shift of the U.S. unemployment rate and further declines in consumer confidence levels. Toward the end of the year, some sectors began to experience a gradual recovery in demand but still remained at levels well below those of 2008 or 2007.

The European economy in 2009 experienced similar industrial inventory destocking and demand declines. These declines were offset somewhat with strong government stimulus programs targeted at manufacturing, including automotive production.

The primary Asian economies in which we participate started 2009 with low GDP growth largely due to fewer exports as a result of the weak global economy. Growth levels accelerated toward the middle of 2009 due largely to a variety of focused government stimulus programs in China aimed at increasing local consumption. As a result of the success of these programs, China's GDP grew at just below 9 percent for the year despite lower year-over-year exports. Also in Asia/Pacific, India experienced solid GDP growth exceeding 6 percent and Australia grew, but at less than 1 percent. For the year in total, the economies of this region well outperformed those of the other major regions of the world.

Entering 2010, the overall global economic outlook is cautiously optimistic, with expectations of gradual year-over-year improvement in many industrial sectors. It is also anticipated that growth will continue in most Asian economies driven by these global demand improvements. Modest recovery is expected to continue in the North American economy, with some offsets due to later economic cycle sectors such as commercial construction, which is projected to continue to decline, and aerospace. The recovery rate in Europe in 2010 is expected to lag that of both Asia and North America.

PPG typically experiences fluctuating prices for energy and raw materials used in many of our businesses. Price inflation has resulted from global industrial expansion, supply/demand imbalance and increases in supplier feedstock costs. Price deflation stemmed from lower economic activity and resulting supply/demand imbalances from our suppliers as was the case in 2009 when our coatings raw material costs declined about \$150 million following increases of \$150 million and \$40 million in 2008 and 2007, respectively. Our current forecast for the early portion of 2010 is for moderate raw material inflation stemming from higher global energy prices in comparison to the full year of 2009 and moderate global economic growth. Given the volatile supply/demand, energy cost and currency environment, it is not feasible to project full year raw material pricing, but the main drivers will continue to be overall economic conditions and resulting supply and demand factors.

Changes in natural gas pricing have a significant impact on the operating performance of our Commodity Chemicals and Glass businesses. Each one dollar change in our price of natural gas per million British thermal units ("mmbtu") has a direct impact of \$60 million to \$70 million on our annual operating costs. Our 2009 natural gas costs averaged over \$6.00 per mmbtu for the year, while our 2008 costs averaged about \$9.00 per unit. We currently estimate our cost for natural gas in the first quarter of 2010 will be \$7.00 per mmbtu, which is roughly equal to the first quarter of 2009. We currently have about 30% of our first quarter

# Management's Discussion and Analysis

2010 U.S. natural gas purchases hedged at a price of about \$8.50 per unit, and about 25% of the remainder of 2010 at a price of about \$7.75 per unit. The current spot price for natural gas is just below \$6.00 per unit. While it remains difficult to predict future natural gas prices, in order to reduce the risks associated with volatile prices, we will continue to use a variety of techniques, which include reducing consumption through improved manufacturing processes, switching to alternative fuels and hedging.

Consistent with deflation in energy costs and because of lower end-market demand, the selling prices and profitability of our Commodity Chemicals segment dropped severely during 2009 following near all-time high levels in the fourth quarter of 2008 and first quarter of 2009. U.S. caustic demand weakened because of falling industrial production. At the end of the year, as customer inventory destocking began to diminish, demand and selling prices began to modestly recover.

Our ongoing pension and postretirement benefit costs were \$327 million in 2009, an increase of about \$100 million from 2008. These costs are expected to decline in 2010 by about \$50 million. During 2009, PPG contributions to our pension plans totaled about \$450 million, and we anticipate 2010 contributions will be about \$240 million.

The Company announced significant restructuring actions in both the third quarter of 2008 and the first quarter of 2009, in recognition of lower demand levels, that focused on reducing our cost structure, including actions associated with achieving the synergies from the integration of the acquired SigmaKalon business. The total annual savings from these actions are expected to be about \$250 million upon full implementation, including incremental savings in 2010 of about \$100 million.

We expect our tax rate in 2010 to be 30%, including a tax benefit of approximately 2% associated with the federal subsidy under Medicare Part D as described in Note 15, "Pensions and Other Postretirement Benefits," under Item 8 of this Form 10-K. The tax benefit associated with the Medicare Part D subsidy could be changed by the healthcare reform legislation currently being considered by Congress.

The current global economic outlook for 2010 reflects a gradual recovery, but that outlook remains somewhat fragile due in part to the uncertainty of whether consumer spending is expected to rise enough to offset the impact of removal of government stimulus spending. As such, PPG expects to see some recovery in demand in 2010 compared with 2009 and will remain focused on continued effective cost management. The Company also entered 2010 with \$1 billion of cash on hand, which is a historically high level for the company, and follows an exemplary year of cash generation in 2009, our second highest year of cash generation on record. This strong cash performance is a direct result of lower 2009 activity levels, a management focus on lowering our working capital and the impact of several years of portfolio changes that diversified our geographic sales mix and broadened our end-markets served resulting in lower exposure to any individual end-market or region. This ability to generate high levels of cash, our prudent deployment of this cash to continuously strengthen the Company, the expected full year benefit of our recent cost restructuring actions and the expectation of a gradual economic recovery gives us optimism regarding the Company's prospects for 2010.

### *Accounting Standards Adopted in 2009*

Note 1, "Summary of Significant Accounting Policies," under Item 8 describes the Company's recently adopted accounting pronouncements.

### *Accounting Standards to be Adopted in Future Years*

Note 1, "Summary of Significant Accounting Policies," under Item 8 describes the potential impact on PPG of accounting standards that are not yet effective.

## Performance in 2008 compared with 2007

### *Divestiture of Automotive Glass and Services Business*

During the third quarter of 2007, the Company entered into an agreement to sell its automotive glass and services business to Platinum Equity ("Platinum") for approximately \$500 million. Accordingly, the assets and liabilities of this business were classified as held for sale and the results of operations and cash flows of this business were classified as discontinued operations as of September 30, 2007. In the fourth quarter of 2007, PPG was notified that affiliates of Platinum had filed suit in the Supreme Court of the State of New York, County of New York, alleging that Platinum was not obligated to consummate the agreement. Platinum also terminated the agreement. PPG has sued Platinum and certain of its affiliates for damages, including the \$25 million breakup fee stipulated by the terms of the agreement, based on various alleged actions of the Platinum parties. While the transaction with Platinum was terminated, PPG management remained committed to a sale of the automotive glass and services business and continued to classify its assets and liabilities as held for sale and report its results of operations and cash flows as discontinued operations through the first quarter of 2008.

# Management's Discussion and Analysis

In July 2008, PPG entered into an agreement with affiliates of Kohlberg & Company, LLC, under which PPG would divest the automotive glass and services business to a new company formed by affiliates of Kohlberg. Under the agreement, PPG would receive a noncontrolling interest in the new company, and, as such, the accounting requirements for classifying the business as assets held for sale and reporting its results of operations and cash flows as discontinued operations had no longer been met. The assets and liabilities of the business were classified as held for use in the consolidated balance sheet as of December 31, 2007, and the results of operations and cash flows of the business through September 30, 2008 have been classified as continuing operations in the Glass reportable segment in the consolidated statements of income and cash flows under Item 8 of this Form 10-K for the three years ended December 31, 2009.

In the second quarter of 2008, as a result of the reclassification of the automotive glass and services business to continuing operations, PPG recorded a one-time, non-cash charge of $17 million ($11 million aftertax) to reflect a catch-up of depreciation expense, which was suspended when the business was classified as a discontinued operation. Additionally, in the second quarter of 2008, PPG recorded a charge of $19 million ($12 million aftertax) for special termination benefits and a pension curtailment loss relating to the impact of benefit changes, including accelerated vesting, negotiated as part of the sale.

The transaction with affiliates of Kohlberg was completed on September 30, 2008, with PPG receiving total proceeds of $315 million, including $225 million in cash and two 6-year notes totaling $90 million ($60 million at 8.5% interest and $30 million at 10% interest). Both notes, which may be prepaid at any time without penalty, are senior to the equity of the new company. In addition, PPG has received a noncontrolling interest of approximately 40 percent in the new company, Pittsburgh Glass Works LLC. This transaction resulted in a third quarter 2008 gain of $15 million pretax, net of transaction costs, and is included in "Other income" in the consolidated statement of income for the year ended December 31, 2008 under Item 8. The aftertax gain on the transaction was $3 million, reflective of tax expense of $12 million. Tax expense on the gain includes the tax cost of repatriating certain transaction proceeds from Canada to the U.S. and the impact of certain permanent book/tax differences which resulted in a larger taxable gain. PPG accounts for its interest in Pittsburgh Glass Works LLC under the equity method of accounting from October 1, 2008 onward. PPG has retained certain liabilities for pension and post-employment benefits earned for service up to September 30, 2008.

### *Divestiture of Fine Chemicals Business*

In the third quarter of 2007, PPG entered into an agreement to sell its fine chemicals business to ZaCh System S.p.A., a subsidiary of Zambon Company S.p.A., for approximately $65 million. The sale of this business was completed in November 2007. The results of operations and cash flows of this business, which had previously been included in the Optical and Specialty Materials reportable segment, have been classified as discontinued operations in the consolidated statements of income and cash flows under Item 8 for the year ended December 31, 2007. PPG recorded a pretax loss on sale of the fine chemicals business of $25 million ($19 million aftertax) in 2007.

### *Performance Overview*

Our sales increased 30% to $15.8 billion in 2008 compared to $12.2 billion in 2007. Sales increased 28% due to the impact of acquisitions, 4% due to increased selling prices and 2% due to the positive effects of foreign currency translation. These sales increases were offset by a 2% decline due to lower sales volumes and by a 2% decline related to the automotive glass and services business divestiture.

Cost of sales, exclusive of depreciation and amortization, increased by $2,327 million in 2008 to $10,155 million compared to $7,828 million in 2007. This increase corresponds with the increase in sales. Cost of sales as a percentage of sales was 64.1% in both 2008 and 2007. Cost of sales in 2008 includes $94 million for the flow through cost of sales of the step up to fair value of acquired inventory related to the SigmaKalon acquisition.

Selling, general and administrative expenses increased by $1,122 million in 2008 due principally to the impact of the acquisition of SigmaKalon. Selling, general and administrative expenses as a percentage of sales were 21.7% for 2008 compared to 18.9% for 2007. The increase in selling, general and administrative expenses as a percentage of sales was due largely to the addition of SigmaKalon and reflects the distribution nature of these businesses, which requires higher selling, distribution, advertising and regional management costs to serve their broad customer profile. Selling, general and administrative expenses as a percent of sales in the Architectural Coatings - EMEA reportable segment are in line with PPG's other architectural coatings businesses. Other factors causing the increase in these expenses were higher levels of cost to support growth in our coatings and optical businesses, higher bad debt expense associated with the impact of the weakening economy on our customers, a second quarter charge of $19 million for special termination benefits and foreign currency translation.

# Management's Discussion and Analysis

Depreciation expense increased by $83 million due primarily to the acquisition of SigmaKalon. Research and development costs increased by $103 million and amortization increased by $77 million compared to 2007. These increases were primarily due to the acquisition of SigmaKalon. Interest expense increased by $161 million in 2008 due to debt incurred to finance the acquisition of SigmaKalon.

During the third quarter of 2008, the Company finalized a restructuring plan that is part of implementing PPG's global transformation strategy and the integration of its acquisition of SigmaKalon. The Company recorded a charge of $163 million for the cost of this restructuring.

The effective tax rate on pretax earnings from continuing operations in 2008 was 31.3% compared to 29.1% in 2007. The 2008 rate includes a tax benefit of $14 million related to the settlement with the Internal Revenue Service of our U.S. tax returns for tax years 2004, 2005 and 2006. The 2008 rate also includes a total net tax benefit of 26.5% on costs related to the acquisition of SigmaKalon, the charges for the catch-up of depreciation expense and the impact of benefit changes related to the divestiture of the automotive glass and services business, the business restructuring charge, the adjustment to increase the current value of the Company's obligation under the proposed asbestos settlement and the gain on divestiture of the automotive glass and services business. The tax rate was approximately 31% on the remaining pretax earnings in 2008.

The rate in 2007 includes the benefit of $15 million for the reversal of a valuation allowance previously recorded against the benefit of a tax net operating loss carryforward, the benefit associated with an enacted reduction in the Canadian federal corporate income tax rate and a tax benefit of 39% on the adjustment to increase the current value of the Company's obligation under the proposed asbestos settlement. The tax rate was 30.5% on the remaining pretax earnings from continuing operations in 2007.

The effective tax rate on pretax earnings from discontinued operations in 2007 was 25.2%. The rate in 2007 included a tax benefit of 24% on the loss on the sale of the fine chemicals business. The tax rate was 36.5% on the remaining pretax earnings from discontinued operations in 2007.

Net income and earnings per share – assuming dilution for 2008 and 2007 are summarized below:

| *(Millions, except per share amounts)* | | |
|---|---|---|
| *Year ended December 31, 2008* | *Net Income* | |
| | *$* | *EPS* |
| Net income | $538 | $3.25 |
| Net income includes: | | |
| Charges related to: | | |
| Business restructuring | 110 | 0.67 |
| Acquisition-related costs(1) | 89 | 0.54 |
| Depreciation catch-up(2) | 11 | 0.07 |
| Divestiture-related benefit costs(3) | 12 | 0.07 |
| Asbestos settlement – net(4) | 2 | 0.01 |
| Gain on divestiture of automotive glass and services business | (3) | (0.02) |

| *(Millions, except per share amounts)* | | |
|---|---|---|
| *Year ended December 31, 2007* | *Net Income* | |
| | *$* | *EPS* |
| Net income | $834 | $5.03 |
| Net income includes: | | |
| Charges related to: | | |
| Asbestos settlement – net(4) | 15 | 0.09 |
| Acquisition-related costs(5) | 4 | 0.03 |
| Divestiture-related benefit costs(6) | 11 | 0.06 |
| Loss on divestiture of fine chemicals business | 19 | 0.11 |

(1) *Costs related to SigmaKalon acquisition, including $66 million aftertax for the flow-through cost of sales of the step up to fair value of acquired inventory and $23 million aftertax for the write-off of in-process research and development.*

(2) *Represents the catch-up of depreciation expense, which was suspended when the automotive glass and services business was classified previously as a discontinued operation.*

(3) *Represents special termination benefits and a pension curtailment loss relating to the impact of benefit changes, including accelerated vesting, negotiated as part of the sale of the automotive glass and services business.*

(4) *Net increase in the current value of the Company's obligation under the proposed asbestos settlement.*

(5) *Costs related to Barloworld Coatings Australia acquisition for the flow-through cost of sales of the step up to fair value of acquired inventory.*

(6) *Represents curtailment losses on certain defined benefit plans of the automotive glass and services business.*

### *Results of Reportable Business Segments*

| | *Net sales* | | *Segment income* | |
|---|---|---|---|---|
| *(Millions)* | **2008** | **2007** | **2008** | **2007** |
| Performance Coatings | $4,716 | $3,811 | $582 | $563 |
| Industrial Coatings | 3,999 | 3,646 | 212 | 370 |
| Architectural Coatings – EMEA | 2,249 | — | 141 | — |
| Optical and Specialty Materials | 1,134 | 1,029 | 244 | 235 |
| Commodity Chemicals | 1,837 | 1,539 | 340 | 243 |
| Glass | 1,914 | 2,195 | 70 | 138 |

# Management's Discussion and Analysis

Performance Coatings sales increased $905 million or 24% in 2008. Sales increased 21% due to acquisitions, largely due to the impact of the SigmaKalon protective and marine coatings business. Sales also grew by 3% due to higher selling prices and 2% due to the positive impact of foreign currency translation. Sales volumes declined 2% as reduced volumes in architectural coatings – Americas and Asia Pacific and automotive refinish were not fully offset by improved volumes in the aerospace and protective and marine businesses. Volume growth in the aerospace businesses occurred throughout the world, while the volume growth in protective and marine coatings occurred primarily in Asia. Segment income increased $19 million in 2008. Factors increasing segment income were the positive impact of acquisitions, lower overhead costs and the positive impact of foreign currency translation. The benefit of higher selling prices more than offset the negative impact of inflation, including higher raw materials and benefit costs. Segment income was reduced by the impact of the lower sales volumes in architectural coatings and automotive refinish, which more than offset the benefit of volume gains in the aerospace and protective and marine coatings businesses.

Industrial Coatings sales increased $353 million or 10% in 2008. Sales increased 11% due to acquisitions, including the impact of the SigmaKalon industrial coatings business. Sales also grew 3% due to the positive impact of foreign currency translation, and 1% from higher selling prices. Sales volumes declined 5% as reduced volumes were experienced in all three businesses, reflecting the substantial declines in global demand. Volume declines in the automotive and industrial businesses were primarily in the U.S. and Canada. Additional volume declines in the European and Asian regions were experienced by the industrial coatings business. In packaging coatings, volume declines in Europe were only partially offset by gains in Asia and North America. Segment income declined $158 million in 2008 due to the lower volumes and inflation, including higher raw material and freight costs, the impact of which was only partially mitigated by the increased selling prices. Segment income also declined due to higher selling and distribution costs, including higher bad debt expense. Factors increasing segment income were the earnings of acquired businesses, the positive impact of foreign currency translation and lower manufacturing costs.

Architectural Coatings - EMEA sales for the year were $2,249 million. This business was acquired in the SigmaKalon acquisition. Segment income was $141 million, which included amortization expense of $63 million related to acquired intangible assets and depreciation expense of $58 million.

Optical and Specialty Materials sales increased $105 million or 10% in 2008. Sales increased 5% due to higher volumes in our optical products business resulting from the launch of Transitions Optical's next generation lens product, 3% due to the positive impact of foreign currency translation and 2% due to increased selling prices. Segment income increased $9 million in 2008. The increase in segment income was the result of increased sales volumes and the favorable impact of currency partially offset by increased selling and marketing costs in the optical products business related to the Transitions Optical product launch mentioned above. Increased selling prices only partially offset higher raw material costs, primarily in our silicas business.

Commodity Chemicals sales increased $298 million or 19% in 2008. Sales increased 18% due to higher selling prices and 1% due to improved sales volumes. Segment income increased $97 million in 2008. Segment income increased in large part due to higher selling prices, which more than offset the negative impact of inflation, primarily higher raw material and energy costs. Segment income also improved due to lower manufacturing costs, while lower margin mix and equity earnings reduced segment income.

Glass sales decreased $281 million or 13% in 2008. Sales decreased 11% due to the divestiture of the automotive glass and services business in September 2008 and 4% due to lower sales volumes. Sales increased 2% due to higher selling prices. Segment income decreased $68 million in 2008. Segment income decreased due to the divestiture of the automotive glass and services business, lower volumes, the negative impact of inflation and lower equity earnings from our Asian fiber glass joint ventures. Factors increasing segment income were lower manufacturing costs, higher selling prices and stronger foreign currency.

See Note 25, "Reportable Business Segment Information," under Item 8 of this Form 10-K for further information related to the Company's operating segments and reportable business segments.

## Commitments and Contingent Liabilities, including Environmental Matters

PPG is involved in a number of lawsuits and claims, both actual and potential, including some that it has asserted against others, in which substantial monetary damages are sought. See Item 3, "Legal Proceedings" and Note 16, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K for a description of certain of these lawsuits, including a description of the proposed asbestos settlement and a description of the antitrust suits against PPG related to the flat glass and automotive refinish industries. As discussed in Item 3 and Note 16, although the result of any future litigation of such lawsuits and claims is inherently unpredictable, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG, including asbestos-related claims in the event the proposed asbestos settlement described in Note 16 does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized.

It is PPG's policy to accrue expenses for environmental contingencies when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Reserves for environmental contingencies are exclusive of claims against third parties and are generally not discounted. Management anticipates that the resolution of the Company's environmental contingencies will occur over an extended period of time. As of December 31, 2009 and 2008, PPG had reserves for environmental contingencies totaling $287 million and $299 million, respectively, of which $59 million and $44 million, respectively, were classified as current liabilities. Pretax charges against income for environmental remediation costs in 2009, 2008 and 2007 totaled $11 million, $15 million and $12 million, respectively, and are included in "Other charges" in the consolidated statement of income. Cash outlays related to such environmental remediation aggregated $24 million, $24 million and $19 million, in 2009, 2008 and 2007, respectively. As part of the allocation of the SigmaKalon purchase price to the assets acquired and liabilities assumed, the reserve for environmental contingencies was increased by $37 million in 2008. The impact of foreign currency translation increased the liability by $1 million in 2009 and decreased the liability by $5 million in 2008.

In addition to the amounts currently reserved for environmental remediation, the Company may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $300 million, which range is unchanged since December 31, 2008. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence.

Our continuing efforts to analyze and assess the environmental issues associated with a former chromium manufacturing plant site located in Jersey City, N.J., and at the Calcasieu River Estuary located near our Lake Charles, La., chlor-alkali plant resulted in a pre-tax charge of $173 million in the third quarter of 2006 for the estimated costs of remediating these sites. These charges for estimated environmental remediation costs in 2006 were significantly higher than PPG's historical range. Excluding 2006, pretax charges against income have ranged between $10 million and $49 million per year for the past 15 years. We anticipate that charges against income in 2010 for environmental remediation costs will be within this historical range.

Management expects cash outlays for environmental remediation costs to be approximately $70 million in 2010 and to range from $50 million to $70 million annually through 2014. It is possible that technological, regulatory and enforcement developments, the results of environmental studies and other factors could alter our expectations with respect to charges against income and future cash outlays. Specifically, the level of expected cash outlays is highly dependent upon activity related to the former chromium manufacturing plant site in New Jersey, as PPG awaits approval of workplans that have been submitted to the applicable regulatory agencies.

### Impact of Inflation

In 2009, PPG experienced a reduction in our energy and raw material costs, following the significant increases in these costs experienced in 2008 and 2007, which was driven by lower global demand as a result of the recession and the delayed impact of lower oil prices. This impact was largely offset by reductions in our selling prices. The impact of inflation net of price was negative in our Commodity Chemicals and Glass reportable segments and was positive in our three Coatings and the Optical and Specialty Materials reportable segments.

In 2008, PPG was able to more than offset the increase in our costs due to the negative effects of inflation, including the impact of higher raw materials and energy costs, with increased selling prices. In our Commodity Chemicals reportable segment, the increase in our costs due to inflation was more than offset by higher selling prices. In our Performance Coatings and Optical and Specialty Materials reportable segments, the increase in our costs due to the negative effects of inflation was offset by higher selling prices. However, in our Industrial Coatings and Glass reportable segments, the increase in our costs due to the negative effects of inflation was not offset by higher selling prices.

In 2007, the increase in our costs due to the negative effects of inflation, including the impact of higher raw material costs in our Industrial Coatings, Commodity Chemicals and Glass reportable segments, were not offset by higher selling prices. Higher selling prices did offset the negative impact of inflation in our Performance Coatings and Optical and Specialty Materials reportable segments.

In 2010, we expect the costs in all our businesses to increase due to the negative effects of inflation, including the cost of certain raw materials as a result of increases in global demand. We will continue our efforts to manage our energy efficiency and our material costs through product reformulation and qualification of additional suppliers, particularly those from lower cost regions of the world. We expect those efforts, combined with increases in our selling prices and manufacturing cost efficiencies, will offset the negative impact of inflation in 2010.

### Liquidity and Capital Resources

During the past three years, we had sufficient financial resources to meet our operating requirements, to fund our capital spending, share repurchases and pension plans and to pay increasing dividends to our shareholders.

Cash from operating activities was $1,345 million, $1,437 million and $1,063 million in 2009, 2008 and 2007, respectively. The decrease in cash from operations in 2009 compared to 2008 of $92 million was due in large part to lower earnings, higher pension contributions and higher cash spending on restructuring in 2009 offset by an increase in cash from a reduction in our working capital. We used the 2009 cash from operating activities to fund our capital spending, pay dividends and repay $646 million of debt during the year and still have over $1 billion of cash on hand at December 31, 2009.

The change in working capital elements, excluding the impact of currency, included in cash from operating activities was a source of cash of $377 million during the year ended December 31, 2009. Accounts receivable as a percentage of fourth quarter sales, annualized, for 2009 was 21.1%, down from 22% for 2008. Days sales outstanding decreased to 65 days in 2009 from 71 days in 2008. Inventories as a percentage of fourth quarter sales, annualized, for 2009 was 12.4%, down from 13.3% for 2008. Inventory turnover was 4 times in 2009 and 2008.

Total capital spending was $265 million, $2,056 million and $597 million in 2009, 2008 and 2007, respectively. Spending related to modernization and productivity improvements, expansion of existing businesses and environmental control projects was $239 million, $383 million and $364 million in 2009, 2008 and 2007, respectively, and is expected to be approximately $350 million during 2010. Capital spending related to business acquisitions amounted to $26 million, $1,673 million and $233 million in 2009, 2008 and 2007, respectively.

Dividends paid to shareholders totaled $353 million, $343 million and $335 million in 2009, 2008 and 2007, respectively. PPG has paid uninterrupted dividends since 1899, and 2009 marked the 38th consecutive year of increased annual dividend payments to shareholders. Over time, our goal is to sustain our dividends at approximately one-third of our earnings per share.

We did not have a mandatory contribution to our U.S. defined benefit pension plans in 2009; however, due in large part to the negative investment return on pension plan assets in 2008, we made voluntary contributions to these plans in 2009 totaling $360 million. In 2008 and 2007, we made voluntary contributions to our U.S. defined benefit pension plans of $50 million and $100 million, respectively. Contributions were made to our non-U.S. defined benefit pension plans of $90 million, $69 million and $49 million for 2009, 2008 and 2007, respectively, some of which were required by local funding requirements. Of the total 2009 contributions of $450 million, approximately $120 million was made in the form of PPG stock. We expect to make voluntary contributions to our U.S. plans in 2010 of approximately $150 million, and we expect to make mandatory contributions to our non-U.S. plans in 2010 of approximately $90 million.

In December of 2008, the Company entered into an agreement with a counterparty to repurchase 1.5 million shares of the Company's stock. Under the terms of the agreement, the counterparty purchased the shares in the open market in January of 2009 and held the shares until December of 2009 when the Company paid the agreed upon price of $39.53 per share and took possession of these shares. The total cost of this share repurchase was approximately $59 million.

In 2008, the Company purchased 0.1 million shares of PPG common stock at a cost of $7 million, and during 2007, the Company repurchased 3.7 million shares of PPG common stock at a cost of $274 million.

On January 2, 2008, PPG completed the acquisition of SigmaKalon, a worldwide coatings producer based in Uithoorn, Netherlands, from global private investment firm Bain Capital ("the seller"). The acquired business produces architectural, protective and marine and industrial coatings and is a leading coatings supplier in Europe and other key markets across the globe, with an increasing presence in Africa and Asia. The total transaction value was approximately $3.2 billion, consisting of cash paid to the seller of $1,673 million and debt assumed of $1,517 million.

In order to provide financing for the SigmaKalon acquisition, in December 2007, PPG and certain of its subsidiaries entered into a three year €650 million revolving credit facility with several banks and financial institutions and Societe Generale, as facility agent for the lenders. In addition, PPG and a subsidiary entered into two bridge loan agreements, one in the amount of €1 billion with multiple lenders and Credit Suisse as administrative agent for those lenders and the other in the amount of $500 million with Credit Suisse as the lender.

In December 2007, PPG issued $617 million of commercial paper and borrowed $1,056 million (€717 million) under the €1 billion bridge loan agreement. The proceeds from these borrowings were deposited into escrow in December 2007. Upon closing of the acquisition on January 2, 2008, these amounts were released from escrow and paid to the seller. Also, in January 2008, PPG borrowed $1,143 million, representing the remaining $417 million (€283 million) available under the €1 billion bridge loan agreement and $726 million (€493 million) under the €650 million revolving credit facility. The proceeds from these borrowings and cash on hand of $116 million were used to refinance $1,259 million of the $1,517 million of SigmaKalon debt outstanding on the date of acquisition. No amounts were borrowed under the $500 million bridge loan agreement and, due to the passage of time and the specific purpose of this agreement, PPG can no longer make borrowings under this agreement.

On March 18, 2008, PPG completed a public offering of $600 million in aggregate principal amount of its 5.75% Notes due 2013 (the "2013 Notes"), $700 million in aggregate principal amount of its 6.65% Notes due 2018 (the "2018 Notes") and $250 million in aggregate principal amount of its 7.70% Notes due 2038 (the "2038 Notes" and, together with the 2013 Notes and the 2018 Notes, the "Notes"). The Notes were offered by the Company pursuant to its existing shelf registration statement. The proceeds of this offering of $1,538 million (net of discount and issuance costs) and additional borrowings of $195 million under the €650 million revolving credit facility were used to repay existing debt, including certain short-term debt and the amounts outstanding under the €1 billion bridge loan. No further amounts can be borrowed under the €1 billion bridge loan. The discount and issuance costs related to the Notes, which totaled $12 million, will be amortized to interest expense over the respective lives of the Notes.

In July 2008, the Company entered into an agreement to divest its automotive OEM glass and automotive replacement glass and services businesses ("automotive glass and services business"). Under the agreement, PPG received a noncontrolling ownership interest in the new company formed by the buyer. The transaction was completed on September 30, 2008. The Company received cash proceeds of $225 million at closing and two six-year notes totaling $90 million from this transaction.

In the fourth quarter 2008, the Company monetized certain cross currency foreign exchange swap contracts, which had been designated as hedges of our Euro denominated net investment in SigmaKalon, and replaced them with new swap contracts. As a result of these swap monetizations, the Company received $208 million in cash proceeds. See Item 7A of this Form 10-K for further information regarding these instruments.

In June 2009, PPG entered into a $400 million three year unsecured term loan. We used $116 million of the proceeds from this term loan to retire our 7.05% Notes due 2009; the remainder of the loan proceeds of approximately $284 million were used to retire outstanding amounts under our €650 million revolving credit facility. The principal amount of this term loan is due in three years, and the interest rate is variable based on a spread over LIBOR.

The ratio of total debt, including capital leases, to total debt and equity was 47% at December 31, 2009 and 54% at December 31, 2008. The decrease at year end 2009 is primarily due to the reduction of the Company's debt during 2009.

We continue to believe that our cash on hand, cash from operations and the Company's available debt capacity will continue to be sufficient to fund operating activities, capital spending, including acquisitions, dividend payments, debt service, amounts due under the proposed asbestos settlement, share repurchases, contributions to pension plans, and PPG's significant contractual obligations. These significant contractual obligations, along with amounts due under the proposed asbestos settlement are presented in the following table.

| | | *Obligations Due In:* | | | |
|---|---|---|---|---|---|
| *(Millions)* | *Total* | *2010* | *2011-2012* | *2013-2014* | *Thereafter* |
| ***Contractual Obligations*** | | | | | |
| Long-term debt | $3,046 | $ 2 | $ 484 | $ 604 | $1,956 |
| Short-term debt | 268 | 268 | — | — | — |
| Capital lease obligations | 32 | 2 | 3 | 3 | 24 |
| Operating leases | 646 | 129 | 185 | 118 | 214 |
| Interest payments(1) | 1,619 | 177 | 338 | 265 | 839 |
| Pension contributions(2) | 240 | 240 | — | — | — |
| Unconditional purchase obligations | 971 | 314 | 303 | 94 | 260 |
| ***Total*** | $6,822 | $1,132 | $1,313 | $1,084 | $3,293 |
| ***Asbestos Settlement(3)*** | | | | | |
| Aggregate cash payments | $ 825 | $ 437 | $ 24 | $ 23 | $ 341 |
| PPG stock and other | 97 | 97 | — | — | — |
| ***Total*** | $ 922 | $ 534 | $ 24 | $ 23 | $ 341 |

*(1) Includes interest on all outstanding debt. Interest for variable-rate debt instruments is based on effective rates at December 31, 2009. Interest for fixed-rate debt instruments have been adjusted for the impact of interest rate swaps using the effective rate at December 31, 2009.*

*(2) Includes the estimated pension contribution for 2010 only, as PPG is unable to estimate the pension contributions beyond 2010.*

*(3) We have recorded an obligation equal to the net present value of the aggregate cash payments, along with the PPG stock and other assets to be contributed to a trust under the proposed asbestos settlement. However, PPG has no obligation to pay any amounts under this settlement until the Funding Effective Date, as more fully discussed in Note 16, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K.*

The unconditional purchase commitments are principally take-or-pay obligations related to the purchase of certain materials, including industrial gases, natural gas, coal and electricity, consistent with customary industry practice. These amounts also include PPG's commitment to purchase electricity and steam from the RS Cogen joint venture discussed in Note 6, "Investments," under Item 8 of this Form 10-K.

See Note 9, "Debt and Bank Credit Agreements and Leases," under Item 8 of this Form 10-K for details regarding the use and availability of committed and uncommitted lines of credit, letters of credit, guarantees and debt covenants.

In addition to the amounts available under the lines of credit, the Company has an automatic shelf registration on file with the SEC pursuant to which it may issue, offer and sell from time to time on a continuous or delayed basis any combination of securities in one or more offerings.

### Off-Balance Sheet Arrangements

The Company's off-balance sheet arrangements include the operating leases and unconditional purchase obligations disclosed in the "Liquidity and Capital Resources" section in the contractual obligations table as well as letters of credit and guarantees as discussed in Note 9, "Debt and Bank Credit Agreements and Leases," under Item 8 of this Form 10-K.

### Critical Accounting Estimates

Management has evaluated the accounting policies used in the preparation of the financial statements and related notes presented under Item 8 of this Form 10-K and believes those policies to be reasonable and appropriate. We believe that the most critical accounting estimates made in the preparation of our financial statements are those related to accounting for contingencies, under which we accrue a loss when it is probable that a liability has been incurred and the amount can be reasonably estimated, and to accounting for pensions, other postretirement benefits, goodwill and other identifiable intangible assets with indefinite lives because of the importance of management judgment in making the estimates necessary to apply these policies.

Contingencies, by their nature, relate to uncertainties that require management to exercise judgment both in assessing the likelihood that a liability has been incurred as well as in estimating the amount of potential loss. The most important contingencies impacting our financial statements are those related to the collectibility of accounts receivable, to environmental remediation, to pending, impending or overtly threatened litigation against the Company and to the resolution of matters related to open tax years. For more information on these matters, see Note 4, "Working Capital Detail," Note 14, "Income Taxes" and Note 16, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K.

Accounting for pensions and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about inflation, investment returns, mortality, turnover, medical costs and discount rates. These assumptions are reviewed annually. See Note 15, "Pensions and Other Postretirement Benefits," under Item 8 for information on these plans and the assumptions used.

The discount rate used in accounting for pensions and other postretirement benefits is determined by reference to a current yield curve and by considering the timing and amount of projected future benefit payments. The discount rate assumption for 2010 is 5.90% for our U.S. defined benefit pension and other postretirement benefit plans. A change in the discount rate of 75 basis points, with all other assumptions held constant, would impact 2010 net periodic benefit expense for our defined benefit pension and other postretirement benefit plans by approximately $12 million and $9 million, respectively.

The expected return on plan assets assumption used in accounting for our pension plans is determined by evaluating the mix of investments that comprise plan assets and external forecasts of future long-term investment returns. For 2009, the return on plan assets assumption for our U.S. defined benefit pension plans was 8.5%. We will use the same assumption for 2010. A change in the rate of return of 75 basis points, with other assumptions held constant, would impact 2010 net periodic pension expense by approximately $18 million.

As discussed in Note 1, "Summary of Significant Accounting Policies," under Item 8 of this Form 10-K, the Company tests goodwill and identifiable intangible assets with indefinite lives for impairment at least annually by comparing the fair value of the reporting units to their carrying values. Fair values are estimated using discounted cash flow methodologies that are based on projections of the amounts and timing of future revenues and cash flows. Based on this testing, none of our goodwill or identifiable intangible assets with indefinite lives was impaired as of December 31, 2009.

As part of our ongoing financial reporting process, a collaborative effort is undertaken involving PPG managers with functional responsibility for financial, credit, environmental, legal, tax and benefit matters. The results of this effort provide management with the necessary information on which to base their judgments on these contingencies and to develop the estimates and assumptions used to prepare the financial statements.

We believe that the amounts recorded in the financial statements under Item 8 of this Form 10-K related to these contingencies, pensions, other postretirement benefits, goodwill and other identifiable intangible assets with indefinite lives are based on the best estimates and judgments of the appropriate PPG management, although actual outcomes could differ from our estimates.

### Currency

From December 31, 2008 to December 31, 2009, the U.S. dollar weakened against the currencies of most of the countries in which PPG operates, most notably against the euro, the Canadian dollar, the British pound sterling, the Polish zloty, the Brazilian real, the South Korean won and the Australian dollar. As a result, the effects of translating the net assets of PPG's operations denominated in non-U.S. currencies to the U.S. dollar increased consolidated net assets at December 31, 2009 by $173 million compared to December 31, 2008. During much of the year, the U.S. dollar was stronger against the currencies of many countries in which PPG operates than it was in 2008, which had an unfavorable impact on 2009 pretax earnings of $29 million from the translation of these foreign earnings into U.S. dollars.

From December 31, 2007 to December 31, 2008, the U.S. dollar strengthened against the currencies of most of the countries in which PPG operates, most notably against the euro, the British pound sterling, the Polish zloty, the Brazilian real, the South Korean won and the Australian dollar. As a result, the effects of translating the net assets of PPG's operations denominated in non-U.S. currencies to the U.S. dollar decreased consolidated net assets at December 31, 2008 by $499 million compared to December 31, 2007. During much of the year, the U.S. dollar was weaker against the currencies of many countries in which PPG operates than it was in 2007, which had a favorable impact on 2008 pretax earnings of $45 million from the translation of these foreign earnings into U.S. dollars.

During 2007, the U.S. dollar weakened against certain of the currencies in the countries in which PPG operates, most notably against the euro, the Canadian dollar and the Brazilian real. The effects of translating the net assets of PPG's operations denominated in non-U.S. currencies to the U.S. dollar increased consolidated net assets at December 31, 2007 by $260 million compared to December 31, 2006. In addition, the weaker U.S. dollar had a favorable impact on 2007 pretax earnings of $47 million.

### Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by or on behalf of the Company. Management's Discussion and Analysis and other sections of this Annual Report contain forward-looking statements that reflect the Company's current views with respect to future events and financial performance.

Forward-looking statements are identified by the use of the words "aim," "believe," "expect," "anticipate," "intend," "estimate" and other expressions that indicate future events and trends. Any forward-looking statement speaks only as of the date on which such statement is made and the Company undertakes no obligation to update any forward looking statement, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our reports to the Securities and Exchange Commission. Also, note the following cautionary statements.

Many factors could cause actual results to differ materially from the Company's forward-looking statements. Such factors include global economic conditions, increasing price and product competition by foreign and domestic competitors, fluctuations in cost and availability of raw materials, the ability to maintain favorable supplier relationships and arrangements, the realization of anticipated cost savings from restructuring initiatives, difficulties in integrating acquired businesses and achieving expected synergies therefrom, economic and political conditions in international markets, the ability to penetrate existing, developing and emerging foreign and domestic markets, which also depends on economic and political conditions, foreign exchange rates and fluctuations in such rates, the impact of environmental regulations, unexpected business disruptions and the unpredictability of existing and possible future litigation, including litigation that could result if the proposed asbestos settlement does not become effective. However, it is not possible to predict or identify all such factors. Consequently, while the list of factors presented here and under Item 1A is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements.

Consequences of material differences in the results compared with those anticipated in the forward-looking statements could include, among other things, business disruption, operational problems, financial loss, legal liability to third parties, other factors set forth in Item 1A of this Form 10-K and similar risks, any of which could have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

### Item 7A. Quantitative and Qualitative Disclosures About Market Risk

PPG is exposed to market risks related to changes in foreign currency exchange rates, interest rates, and natural gas prices and to changes in PPG's stock price. The Company may enter into derivative financial instrument transactions in order to manage or reduce these market risks. A detailed description of these exposures and the

Company's risk management policies are provided in Note 12, "Derivative Financial Instruments and Hedge Activities," under Item 8 of this Form 10-K.

The following disclosures summarize PPG's exposure to market risks and information regarding the use of and fair value of derivatives employed to manage its exposure to such risks. Quantitative sensitivity analyses have been provided to reflect how reasonably possible, unfavorable changes in market rates can impact PPG's consolidated results of operations, cash flows and financial position.

Foreign currency forward and option contracts outstanding during 2009 and 2008 were used to hedge PPG's exposure to foreign currency transaction risk. The fair value of these contracts as of December 31, 2009 and 2008 were liabilities of $3 million and $17 million, respectively. The potential reduction in PPG's earnings resulting from the impact of adverse changes in exchange rates on the fair value of its outstanding foreign currency hedge contracts of 10% for European currencies and 20% for Asian and South American currencies for the years ended December 31, 2009 and 2008 would have been $17 million and $27 million, respectively.

Concurrent with the March 18, 2008 completion of the $1.55 billion public debt offering, PPG entered into ten U.S. dollar to euro cross currency swap contracts with a total notional amount of $1.3 billion, of which $600 million were to settle on March 15, 2013 and $700 million were to settle on March 15, 2018. On March 18, 2008, PPG paid the counterparties to the contracts a total of $1.3 billion and received euros, which were used to repay most of the €1 billion bridge loan, which the Company employed to finance the acquisition of SigmaKalon. During the fourth quarter of 2008, PPG converted $1.16 billion of these contracts to $208 million of cash and replaced them with new cross currency swap contracts. On settlement of the contracts, PPG will receive $1.3 billion and pay euros to the counterparties to the contracts. The Company has designated these swaps as hedges of its net investment in the acquired SigmaKalon businesses and, as a result, mark to fair value adjustments of the swaps have been and will be recorded as a component of other comprehensive income. As of December 31, 2009 and 2008, the aggregate fair value of these swaps was a liability of $308 million and $130 million, respectively. A 10% increase in the value of the euro to the U.S. dollar would have had an unfavorable effect on the fair value of these swap contracts and increase the liability by $182 million and $181 million at December 31, 2009 and 2008, respectively.

PPG had non-U.S. dollar denominated debt outstanding of $723 million as of December 31, 2009 and $1,373 million as of December 31, 2008. A weakening of the U.S. dollar by 10% against European currencies and by 20% against Asian and South American currencies would have resulted in unrealized translation losses of approximately $81 million and $118 million as of December 31, 2009 and 2008, respectively.

Interest rate swaps are used to manage a portion of PPG's interest rate risk. The fair value of the interest rate swaps was an asset of $10 million and $3 million as of December 31, 2009 and 2008, respectively. The fair value of these swaps would have changed unfavorably by $3 million and $0.5 million as of December 31, 2009 and 2008, respectively, if variable interest rates increased by 10%. A 10% increase in interest rates in the U.S., Canada, Mexico and Europe and a 20% increase in interest rates in Asia and South America would have affected PPG's variable rate debt obligations by increasing interest expense approximately $1 million as of December 31, 2009 and $3 million as of December 31, 2008. Further, a 10% reduction in interest rates would have increased the present value of the Company's fixed rate debt by approximately $91 million and $118 million as of December 31, 2009 and 2008, respectively; however, such changes would not have had an effect on PPG's annual earnings or cash flows.

The Company entered into forward starting swaps in the third quarter of 2009 to effectively lock-in a fixed interest rate based on the 10-year swap rate, to which will be added a corporate spread, related to future debt refinancings. The notional amount of these swaps totaled $250 million. As of December 31, 2009, the fair value of these swaps was an asset of $3 million. A 10% decline in interest rates would unfavorably affect the fair value of these swaps by $10 million.

The fair value of natural gas swap contracts in place as of December 31, 2009 and 2008 was a liability of $50 million and $85 million, respectively. These contracts were entered into to reduce PPG's exposure to higher prices of natural gas. A 10% reduction in the price of natural gas would have had an unfavorable effect on the fair value of these contracts and increased the liability by $14 million and $27 million at December 31, 2009 and 2008, respectively.

An equity forward arrangement was entered into to hedge the Company's exposure to changes in fair value of its future obligation to contribute PPG stock into an asbestos settlement trust (see Note 12 "Derivative Financial Instruments and Hedge Activities" and Note 16, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K). The fair value of this instrument as of December 31, 2009 and 2008 was an asset of $18 million and a liability of $6 million, respectively. A 10% decrease in PPG's stock price would have had an unfavorable effect on the fair value of this instrument of $8 million and $6 million at December 31, 2009 and 2008, respectively.

## Item 8. Financial Statements and Supplementary Data

## Internal Controls – Report of Independent Registered Public Accounting Firm

*To the Board of Directors and Shareholders of PPG Industries, Inc.*

We have audited the internal control over financial reporting of PPG Industries, Inc. and subsidiaries (the "Company") as of December 31, 2009, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedule as of and for the year ended December 31, 2009 of the Company and our report dated February 18, 2010 expressed an unqualified opinion on those financial statements and financial statement schedule and included an explanatory paragraph regarding the Company's adoption of accounting guidance on consolidations.

**Deloitte & Touche LLP**
Pittsburgh, Pennsylvania
February 18, 2010

## Management Report

*Responsibility for Preparation of the Financial Statements and Establishing and Maintaining Adequate Internal Control Over Financial Reporting*

We are responsible for the preparation of the financial statements included in this Annual Report. The financial statements were prepared in accordance with accounting principles generally accepted in the United States of America and include amounts that are based on the best estimates and judgments of management.

We are also responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control system is designed to provide reasonable assurance concerning the reliability of the financial data used in the preparation of PPG's financial statements, as well as to safeguard the Company's assets from unauthorized use or disposition.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. In addition, because of changing conditions, there is risk in projecting any evaluation of internal controls to future periods.

We conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2009. In making this evaluation, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control - Integrated Framework*. Our evaluation included reviewing the documentation of our controls, evaluating the design effectiveness of our controls and testing their operating effectiveness. Based on this evaluation we believe that, as of December 31, 2009, the Company's internal controls over financial reporting were effective and provide reasonable assurance that the accompanying financial statements do not contain any material misstatement.

Deloitte & Touche LLP, an independent registered public accounting firm, has issued their report, included on page 28 of this Form 10-K, regarding the Company's internal control over financial reporting.

**Charles E. Bunch**
Chairman of the Board
and Chief Executive Officer
February 18, 2010

**Robert J. Dellinger**
Senior Vice President, Finance and
Chief Financial Officer

## Consolidated Financial Statements – Report of Independent Registered Public Accounting Firm

*To the Board of Directors and Shareholders of PPG Industries, Inc.*

We have audited the accompanying consolidated balance sheets of PPG Industries, Inc. and subsidiaries (the "Company") as of December 31, 2009 and 2008, and the related consolidated statements of income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2009. Our audits also included the financial statement schedule listed in the Index at Item 15(a)(2). These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and the financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of PPG Industries, Inc. and subsidiaries as of December 31, 2009 and 2008, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2009, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

As discussed in Note 1 to the consolidated financial statements, on January 1, 2007 the Company adopted the provisions of accounting guidance which was issued to clarify the accounting for uncertainty in income taxes.

As discussed in Note 1 to the consolidated financial statements, on January 1, 2009 the Company adopted the provisions of accounting guidance on consolidations, and applied the new guidance to all periods presented in the accompanying consolidated financial statements.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 18, 2010 expressed an unqualified opinion on the Company's internal control over financial reporting.

**Deloitte & Touche LLP**
Pittsburgh, Pennsylvania
February 18, 2010

# Consolidated Statement of Income

| *(Millions, except per share amounts)* | *For the Year* 2009 | 2008 | 2007 |
|---|---|---|---|
| Net sales | $12,239 | $15,849 | $12,220 |
| Cost of sales, exclusive of depreciation and amortization (See Note 2) | 7,539 | 10,155 | 7,828 |
| Selling, general and administrative (See Note 3) | 2,936 | 3,432 | 2,310 |
| Depreciation (See Note 3) | 354 | 428 | 345 |
| Amortization (See Note 7) | 126 | 135 | 58 |
| Research and development – net (See Note 23) | 388 | 451 | 348 |
| Interest | 193 | 254 | 93 |
| Asbestos settlement – net (See Notes 12 and 16) | 13 | 4 | 24 |
| In-process research and development (See Note 2) | — | 23 | — |
| Business restructuring (See Note 8) | 186 | 163 | — |
| Other charges (See Note 16) | 65 | 61 | 59 |
| Other earnings (See Note 20) | (178) | (165) | (160) |
| ***Income from continuing operations before income taxes*** | 617 | 908 | 1,315 |
| Income tax expense (See Note 14) | 191 | 284 | 383 |
| Income from continuing operations, net of tax | 426 | 624 | 932 |
| Loss from discontinued operations, net of tax (See Note 1) | — | — | 22 |
| ***Net income attributable to the controlling and noncontrolling interests (See Note 1)*** | 426 | 624 | 910 |
| Less: net income attributable to noncontrolling interests (See Note 1) | 90 | 86 | 76 |
| ***Net income (attributable to PPG)*** | $ 336 | $ 538 | $ 834 |
| ***Amounts attributable to PPG*** | | | |
| Income from continuing operations, net of tax | $ 336 | $ 538 | $ 856 |
| Loss from discontinued operations, net of tax (See Note 1) | — | — | 22 |
| ***Net income (attributable to PPG)*** | $ 336 | $ 538 | $ 834 |
| ***Earnings per common share (See Note 13)*** | | | |
| Income from continuing operations | $ 2.04 | $ 3.27 | $ 5.20 |
| Loss from discontinued operations (See Note 1) | — | — | 0.13 |
| ***Net income (attributable to PPG)*** | $ 2.04 | $ 3.27 | $ 5.07 |
| ***Earnings per common share – assuming dilution (See Note 13)*** | | | |
| Income from continuing operations | $ 2.03 | $ 3.25 | $ 5.16 |
| Loss from discontinued operations (See Note 1) | — | — | 0.13 |
| ***Net Income (attributable to PPG)*** | $ 2.03 | $ 3.25 | $ 5.03 |

*The accompanying notes to the consolidated financial statements are an integral part of this consolidated statement.*

# Consolidated Balance Sheet

| (Millions) | December 31 2009 | 2008 |
|---|---|---|
| **Assets** | | |
| Current assets | | |
| Cash and cash equivalents | $ 1,057 | $ 1,021 |
| Receivables (See Note 4) | 2,628 | 2,804 |
| Inventories (See Note 4) | 1,548 | 1,702 |
| Deferred income taxes (See Note 14) | 485 | 515 |
| Other | 263 | 306 |
| ***Total current assets*** | 5,981 | 6,348 |
| Property (See Note 5) | 8,313 | 8,043 |
| Less accumulated depreciation | 5,559 | 5,245 |
| ***Property – net*** | 2,754 | 2,798 |
| Investments (See Note 6) | 499 | 509 |
| Goodwill (See Note 7) | 2,784 | 2,641 |
| Identifiable intangible assets – net (See Note 7) | 1,416 | 1,472 |
| Other assets (See Note 14) | 806 | 930 |
| ***Total*** | $14,240 | $14,698 |
| **Liabilities and Shareholders' Equity** | | |
| Current liabilities | | |
| Short-term debt and current portion of long-term debt (See Note 9) | $ 272 | $ 903 |
| Asbestos settlement (See Note 16) | 534 | 491 |
| Accounts payable and accrued liabilities (See Note 4) | 2,648 | 2,724 |
| Business restructuring (See Note 8) | 123 | 92 |
| ***Total current liabilities*** | 3,577 | 4,210 |
| Long-term debt (See Note 9) | 3,074 | 3,009 |
| Asbestos settlement (See Note 16) | 238 | 244 |
| Deferred income taxes (See Note 14) | 328 | 425 |
| Accrued pensions (See Note 15) | 944 | 1,250 |
| Other postretirement benefits (See Note 15) | 1,010 | 1,072 |
| Other liabilities (See Note 15) | 1,147 | 999 |
| ***Total liabilities*** | 10,318 | 11,209 |
| Commitments and contingent liabilities (See Note 16) | | |
| Shareholders' equity (See Note 17) | | |
| Common stock | 484 | 484 |
| Additional paid-in capital | 609 | 580 |
| Retained earnings | 8,139 | 8,156 |
| Treasury stock, at cost | (4,218) | (4,259) |
| Accumulated other comprehensive loss (See Note 18) | (1,261) | (1,628) |
| ***Total PPG shareholders' equity*** | 3,753 | 3,333 |
| Noncontrolling interests (Note 1) | 169 | 156 |
| ***Total shareholders' equity*** | 3,922 | 3,489 |
| ***Total*** | $14,240 | $14,698 |

*Shares outstanding were 165,667,659 and 164,198,633 as of December 31, 2009 and 2008, respectively.*
*The accompanying notes to the consolidated financial statements are an integral part of this consolidated statement.*

# Consolidated Statement of Shareholders' Equity

| *(Millions)* | *Common Stock* | *Additional Paid-In Capital* | *Retained Earnings* | *Treasury Stock* | *Unearned Compensation (See Note 1)* | *Accumulated Other Comprehensive (Loss) Income (See Note 18)* | *Total PPG* | *Non-controlling Interests* | *Total* |
|---|---|---|---|---|---|---|---|---|---|
| *Balance, January 1, 2007* | $484 | $408 | $7,453 | $(4,101) | $(25) | $ (939) | $3,280 | $148 | $3,428 |
| Net income attributable to the controlling and noncontrolling interests | — | — | 834 | — | — | — | 834 | 76 | 910 |
| Other comprehensive income, net of tax | — | — | — | — | — | 357 | 357 | 4 | 361 |
| Cash dividends | — | — | (335) | — | — | — | (335) | — | (335) |
| Purchase of treasury stock | — | — | — | (274) | — | — | (274) | — | (274) |
| Issuance of treasury stock | — | 102 | — | 108 | — | — | 210 | — | 210 |
| Stock option activity | — | 43 | — | — | — | — | 43 | — | 43 |
| Repayment of loans by ESOP | — | — | — | — | 25 | — | 25 | — | 25 |
| Transition adjustment from adopting new accounting guidance (See Note 1) | — | — | 11 | — | — | — | 11 | — | 11 |
| Dividends paid on subsidiary common stock to noncontrolling interests | — | — | — | — | — | — | — | (67) | (67) |
| *Balance, December 31, 2007* | $484 | $553 | $7,963 | $(4,267) | $ — | $ (582) | $4,151 | $161 | $4,312 |
| Net income attributable to the controlling and noncontrolling interests | — | — | 538 | — | — | — | 538 | 86 | 624 |
| Other comprehensive (loss), net of tax | — | — | — | — | — | (1,046) | (1,046) | (7) | (1,053) |
| Cash dividends | — | — | (343) | — | — | — | (343) | — | (343) |
| Purchase of treasury stock | — | — | — | (7) | — | — | (7) | — | (7) |
| Issuance of treasury stock | — | 18 | — | 15 | — | — | 33 | — | 33 |
| Stock option activity | — | 9 | — | — | — | — | 9 | — | 9 |
| Transition adjustment from adopting new accounting guidance (See Note 1) | — | — | (2) | — | — | — | (2) | — | (2) |
| Increase through acquisition | — | — | — | — | — | — | — | 23 | 23 |
| Decrease through divestiture | — | — | — | — | — | — | — | (27) | (27) |
| Dividends paid on subsidiary common stock to noncontrolling interests | — | — | — | — | — | — | — | (79) | (79) |
| Other | — | — | — | — | — | — | — | (1) | (1) |
| *Balance, December 31, 2008* | $484 | $580 | $8,156 | $(4,259) | $ — | $(1,628) | $3,333 | $156 | $3,489 |
| Net income attributable to the controlling and noncontrolling interests | — | — | 336 | — | — | — | 336 | 90 | 426 |
| Other comprehensive income, net of tax | — | — | — | — | — | 367 | 367 | — | 367 |
| Cash dividends | — | — | (353) | — | — | — | (353) | — | (353) |
| Purchase of treasury stock | — | — | — | (59) | — | — | (59) | — | (59) |
| Issuance of treasury stock | — | 50 | — | 100 | — | — | 150 | — | 150 |
| Stock option activity | — | 6 | — | — | — | — | 6 | — | 6 |
| Equity forward arrangement | — | (27) | — | — | — | — | (27) | — | (27) |
| Dividends paid on subsidiary common stock to noncontrolling interests | — | — | — | — | — | — | — | (77) | (77) |
| ***Balance, December 31, 2009*** | $484 | $609 | $8,139 | $(4,218) | $ — | $(1,261) | $3,753 | $169 | $3,922 |

# Consolidated Statement of Comprehensive Income (Loss)

| *(Millions)* | *For the Year* 2009 | 2008 | 2007 |
|---|---|---|---|
| Net income attributable to the controlling and noncontrolling interests | $ 426 | $ 624 | $ 910 |
| Other comprehensive income (loss), net of tax (See Note 18) | | | |
| Unrealized currency translation adjustment | 173 | (506) | 264 |
| Defined benefit pension and other postretirement benefit adjustments (See Note 15) | 169 | (494) | 90 |
| Unrealized (losses) gains on marketable equity securities | — | (4) | — |
| Net change – derivatives (See Note 12) | 25 | (49) | 7 |
| Other comprehensive income (loss), net of tax | 367 | (1,053) | 361 |
| Total comprehensive income (loss) | $ 793 | $ (429) | $1,271 |
| Less: amounts attributable to noncontrolling interests: | | | |
| Net income | (90) | (86) | (76) |
| Unrealized currency translation adjustment | — | 7 | (4) |
| ***Comprehensive income (loss) attributable to PPG*** | $ 703 | $ (508) | $1,191 |

*The accompanying notes to the consolidated financial statements are an integral part of these consolidated statements.*

# Consolidated Statement of Cash Flows

| | For the Year | | |
|---|---|---|---|
| *(Millions)* | 2009 | 2008 | 2007 |
| **Operating activities** | | | |
| Net income attributable to the controlling and noncontrolling interests | $ 426 | $ 624 | $ 910 |
| Loss from discontinued operations, net of tax | — | — | 22 |
| Income from continuing operations, net of tax | 426 | 624 | 932 |
| Adjustments to reconcile to cash from operations | | | |
| Depreciation and amortization | 480 | 563 | 403 |
| Asbestos settlement, net of tax | 8 | 2 | 15 |
| Business restructuring | 186 | 163 | — |
| Write-off of in-process research and development | — | 23 | — |
| Restructuring cash spending | (142) | (27) | (15) |
| Bad debt expense | 59 | 52 | 16 |
| Equity affiliate loss (earnings) net of dividends | 17 | 15 | (11) |
| (Decrease) increase in net accrued pension benefit costs | (22) | 78 | (7) |
| Decrease (increase) in receivables | 235 | (4) | (224) |
| Decrease (increase) in inventories | 232 | 79 | (49) |
| Decrease (increase) in other current assets | 62 | (123) | (24) |
| (Decrease) increase in accounts payable and accrued liabilities | (152) | 15 | 72 |
| Decrease (increase) in noncurrent assets | 12 | 21 | (100) |
| (Decrease) increase in noncurrent liabilities | (61) | (132) | 3 |
| Other | 5 | 88 | 51 |
| ***Cash from operating activities – continuing operations*** | 1,345 | 1,437 | 1,062 |
| ***Cash from operating activities – discontinued operations*** | — | — | 1 |
| ***Cash from operating activities*** | 1,345 | 1,437 | 1,063 |
| **Investing activities** | | | |
| Capital spending | | | |
| Additions to property and investments | (239) | (383) | (364) |
| Business acquisitions, net of cash balances acquired (See Note 2) | (26) | (1,673) | (233) |
| Deposits held in escrow (See Note 2) | — | (37) | (1,718) |
| Release of deposits held in escrow (See Note 2) | 22 | 1,740 | 2 |
| Proceeds from sale of automotive glass and services business (See Note 3) | — | 225 | — |
| Proceeds from termination of currency swap contracts (See Note 12) | — | 208 | — |
| Reductions of other property and investments | 43 | 45 | 68 |
| Payments on cross currency swap contract (See Note 12) | (3) | — | — |
| ***Cash (used for) from investing activities – continuing operations*** | (203) | 125 | (2,245) |
| ***Cash from investing activities – discontinued operations*** | — | — | 38 |
| ***Cash (used for) from investing activities*** | (203) | 125 | (2,207) |
| **Financing activities** | | | |
| Debt: | | | |
| Borrowings to refinance acquired SigmaKalon debt (See Note 9) | — | 1,143 | — |
| Repayment of acquired SigmaKalon debt (See Note 9) | — | (1,259) | — |
| Proceeds from issuance of notes (net of discount and issuance costs) (See Note 9) | — | 1,538 | — |
| Repayment of bridge loan (See Note 9) | — | (1,557) | — |
| Net change in borrowings with maturities of three months or less | (431) | (392) | 698 |
| Proceeds from term loan (See Note 9) | 400 | — | — |
| Proceeds from other short-term debt | 1 | 329 | 1,129 |
| Repayment of other short-term debt | (517) | (442) | (83) |
| Repayment of 7.05% Notes due 2009 (See Note 9) | (116) | — | — |
| Proceeds from other long-term debt | 29 | — | — |
| Repayment of other long-term debt | (12) | (41) | (71) |
| Net change in cash related to debt transactions | (646) | (681) | 1,673 |
| Other financing activities: | | | |
| Proceeds from termination of interest rate swaps | — | 40 | — |
| Repayment of loans by employee stock ownership plan | — | — | 25 |
| Purchase of treasury stock | (59) | (7) | (274) |
| Issuance of treasury stock | 12 | 13 | 194 |
| Dividends paid on subsidiary common stock to noncontrolling interests (See Note 1) | (77) | (79) | (67) |
| Dividends paid | (353) | (343) | (335) |
| ***Cash (used for) from financing activities – continuing operations*** | (1,123) | (1,057) | 1,216 |
| ***Cash (used for) from financing activities – discontinued operations*** | — | — | — |
| ***Cash (used for) from financing activities*** | (1,123) | (1,057) | 1,216 |
| Effect of currency exchange rate changes on cash and cash equivalents | 17 | (10) | 11 |
| Net increase in cash and cash equivalents | 36 | 495 | 83 |
| Cash and cash equivalents, beginning of year | 1,021 | 526 | 443 |
| ***Cash and cash equivalents, end of year*** | $ 1,057 | $ 1,021 | $ 526 |

*The accompanying notes to the consolidated financial statements are an integral part of this consolidated statement.*

# Notes to the Consolidated Financial Statements

## 1. Summary of Significant Accounting Policies

### *Principles of Consolidation*

The accompanying consolidated financial statements include the accounts of PPG Industries, Inc. ("PPG" or the "Company"), and all subsidiaries, both U.S. and non-U.S., that it controls. PPG owns more than 50% of the voting stock of the subsidiaries that it controls. Investments in companies in which PPG owns 20% to 50% of the voting stock and has the ability to exercise significant influence over operating and financial policies of the investee are accounted for using the equity method of accounting. As a result, PPG's share of the earnings or losses of such equity affiliates is included in the accompanying consolidated statement of income and PPG's share of these companies' shareholders' equity is included in investments in the accompanying consolidated balance sheet. Transactions between PPG and its subsidiaries are eliminated in consolidation.

### *Use of Estimates in the Preparation of Financial Statements*

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of income and expenses during the reporting period. Actual outcomes could differ from those estimates.

### *Basis of Presentation*

In the third quarter of 2007, PPG entered into an agreement to sell its fine chemicals business to ZaCh System S.p.A., a subsidiary of Zambon Company S.p.A., for approximately $65 million. The sale of this business was completed in November 2007. The results of operations and cash flows of this business, which had previously been included in the Optical and Specialty Materials reportable segment, have been classified as discontinued operations in the accompanying consolidated statements of income and of cash flows for the year ended December 31, 2007. Net sales of the fine chemicals business were $79 million for the year ended December 31, 2007. For the year ended December 31, 2007 the fine chemicals business had a loss from discontinued operations of $22 million, which included a pretax charge of $25 million ($19 million aftertax) related to the divestiture of the fine chemicals business.

### *Revenue Recognition*

Revenue from sales is recognized by all operating segments when goods are shipped and title to inventory and risk of loss passes to the customer or when services have been rendered.

### *Shipping and Handling Costs*

Amounts billed to customers for shipping and handling are reported in "Net sales" in the accompanying consolidated statement of income. Shipping and handling costs incurred by the Company for the delivery of goods to customers are included in "Cost of sales, exclusive of depreciation and amortization" in the accompanying consolidated statement of income.

### *Selling, General and Administrative Costs*

Amounts presented as "Selling, general and administrative" in the accompanying consolidated statement of income are comprised of selling, customer service, distribution and advertising costs, as well as the costs of providing corporate-wide functional support in such areas as finance, law, human resources and planning. Distribution costs pertain to the movement and storage of finished goods inventory at company-owned and leased warehouses, terminals and other distribution facilities. Certain of these costs may be included in cost of sales by other companies, resulting in a lack of comparability with other companies.

### *Legal Costs*

Legal costs are expensed as incurred.

### *Foreign Currency Translation*

For all significant non-U.S. operations, their functional currency is their local currency. Assets and liabilities of those operations are translated into U.S. dollars using year-end exchange rates; income and expenses are translated using the average exchange rates for the reporting period. Unrealized currency translation adjustments are deferred in accumulated other comprehensive (loss) income, a separate component of shareholders' equity.

### *Cash Equivalents*

Cash equivalents are highly liquid investments (valued at cost, which approximates fair value) acquired with an original maturity of three months or less.

### *Short-term Investments*

Short-term investments are highly liquid investments that have stated maturities of three months to one year. The purchases and sales of these investments are classified as investing activities in the consolidated statement of cash flows.

### *Inventories*

Most U.S. inventories are stated at cost, using the last-in, first-out ("LIFO") method of accounting, which does not exceed market. All other inventories are stated at cost, using the first-in, first-out ("FIFO") method of accounting, which does not exceed market. PPG determines cost using either average or standard factory costs, which approximate actual costs, excluding certain fixed costs such as depreciation and property taxes.

### *Marketable Equity Securities*

The Company's investment in marketable equity securities is recorded at fair market value and reported in "Other current assets" and "Investments" in the accompanying consolidated balance sheet with changes in fair market value recorded in income for those securities designated as trading securities and in other comprehensive (loss) income, net of tax, for those designated as available for sale securities.

### *Property*

Property is recorded at cost. PPG computes depreciation by the straight-line method based on the estimated useful lives of depreciable assets. Additional expense is recorded when facilities or equipment are subject to abnormal economic conditions or obsolescence. Significant improvements that add to productive capacity or extend the lives of properties are capitalized. Costs for repairs and maintenance are charged to expense as incurred. When property is retired or otherwise disposed of, the original cost and related accumulated depreciation balance are removed from the accounts and any related gain or loss is included in income. Amortization of the cost of capitalized leased assets is included in depreciation expense. Property and other long-lived assets are reviewed for impairment whenever events or circumstances indicate that their carrying amounts may not be recoverable.

### *Goodwill and Identifiable Intangible Assets*

Goodwill represents the excess of the cost over the fair value of acquired identifiable tangible and intangible assets less liabilities assumed from acquired businesses. Identifiable intangible assets acquired in business combinations are recorded based upon their fair value at the date of acquisition.

The Company tests goodwill of each reporting unit for impairment at least annually in connection with PPG's strategic planning process in the third quarter. The goodwill impairment test is performed by comparing the fair value of the associated reporting unit to its carrying value. The Company's reporting units are its operating segments. (See Note 25, "Reportable Business Segment Information" for further information concerning the Company's operating segments.) Fair value is estimated using discounted cash flow methodologies.

The Company has determined that certain acquired trademarks have indefinite useful lives. The Company tests the carrying value of these trademarks for impairment at least annually in the third quarter by comparing the fair value of each trademark to its carrying value. Fair value is estimated by using the relief from royalty method (a discounted cash flow methodology).

Identifiable intangible assets with finite lives are amortized on a straight-line basis over their estimated useful lives (2 to 25 years) and are reviewed for impairment whenever events or circumstances indicate that their carrying amount may not be recoverable.

### *Allowance for Doubtful Accounts*

The Company provides an allowance for doubtful accounts to reduce receivables to their estimated net realizable value. Those estimates are based on historical collection experience, current economic and market conditions, a review of the aging of accounts receivable and the assessments of current creditworthiness of customers.

### *Employee Stock Ownership Plan*

The accounting for the PPG employee stock ownership plan ("ESOP") is dependent upon when the ESOP purchased its unallocated shares of PPG common stock. PPG common stock purchased after December 31, 1992 ("new ESOP shares") is permitted by accounting guidance to be accounted for differently than shares purchased prior to December 31, 1992 ("old ESOP shares"). ESOP shares were released for allocation to participants based on the ratio of debt service paid during the year on loans used by the ESOP to purchase the shares to the remaining debt service on those loans. Those loans were a combination of borrowings guaranteed by PPG and borrowings by the ESOP directly from PPG. All ESOP loan balances were repaid and all unallocated shares of PPG common stock were allocated to ESOP participants prior to December 31, 2007. Unearned compensation, which principally represented the unpaid balance of all of the ESOP's loans was reflected as a reduction of shareholders' equity as of December 31, 2006. Dividends received by the ESOP were primarily used to pay debt service.

When old ESOP shares were released, PPG compensation expense related to the Company's match of certain employee contributions was equal to the cash contributed to the ESOP by the Company less the appreciation on the allocated old ESOP shares. Cash contributions to the ESOP were reduced by $30 million in 2007 for the appreciation on the old shares allocated to participants' accounts in 2007. Compensation expense related to the ESOP was equal to the Company's matching contribution in 2009 and 2008.

Dividends paid on old ESOP shares were deducted from retained earnings. Old ESOP shares were considered to be outstanding in computing earnings per common share. For new ESOP shares, compensation expense was equal to the Company's matching contribution (see Note 19, "Employee Stock Ownership Plan"). Dividends paid on released new ESOP shares were deducted from retained earnings, and dividends on unreleased shares were reported as a reduction of debt or accrued interest. New ESOP shares that were released were considered outstanding in computing earnings per common share. Unreleased new ESOP shares were not considered to be outstanding.

### *Product Warranties*

The Company accrues for product warranties at the time the associated products are sold based on historical claims experience. As of December 31, 2009 and 2008, the reserve for product warranties was $8 million and $10 million, respectively. Pretax charges against income for product warranties in 2009, 2008 and 2007 totaled $6 million, $7 million and $5 million, respectively. Cash outlays related to product warranties were $7 million, $7 million and $6 million in 2009, 2008 and 2007, respectively. In addition, $1 million of warranty obligations were assumed as part of the Company's 2008 business acquisitions.

### *Asset Retirement Obligations*

An asset retirement obligation represents a legal obligation associated with the retirement of a tangible long-lived asset that is incurred upon the acquisition, construction, development or normal operation of that long-lived asset. PPG recognizes asset retirement obligations in the period in which they are incurred, if a reasonable estimate of fair value can be made. The asset retirement obligation is subsequently adjusted for changes in fair value. The associated estimated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset and depreciated over its useful life. PPG's asset retirement obligations are primarily associated with closure of certain assets used in the chemicals manufacturing process.

The accrued asset retirement obligation was $13 million and $14 million as of December 31, 2009 and 2008, respectively.

PPG's only conditional asset retirement obligation relates to the possible future abatement of asbestos contained in certain PPG production facilities. The asbestos in PPG's production facilities arises from the application of normal and customary building practices in the past when the facilities were constructed. This asbestos is encapsulated in place and, as a result, there is no current legal requirement to abate it. Inasmuch as there is no requirement to abate, the Company does not have any current plans or an intention to abate and therefore the timing, method and cost of future abatement, if any, are not known. The Company has not recorded an asset retirement obligation associated with asbestos abatement, given the uncertainty concerning the timing of future abatement, if any.

### *Subsequent Events*

PPG has determined that there were no subsequent events that would require disclosure in or adjustment to the accompanying consolidated financial statements through February 18, 2010, the date the financial statements were issued.

### *Accounting Standards Adopted Prior to 2009*

Due to accounting guidance issued in 2007, an employer is required to recognize a liability for the postretirement benefit related to a collateral assignment split-dollar life insurance arrangement if the employer has agreed to maintain a life insurance policy during the employee's retirement or provide the employee with a death benefit based on the substantive arrangement with the employee. An employer must also recognize and measure an asset in a collateral assignment split-dollar life insurance arrangement based on the nature and substance of the arrangement. This guidance was effective as of January 1, 2008. PPG has collateral assignment split-dollar life insurance arrangements within the scope of this accounting guidance.

As a result of the adoption of this guidance, the Company recognized a liability of $2 million in 2008, representing the present value of the future premium payments to be made under the existing policies. In accordance with the transition provisions, this amount was recorded as a direct decrease to retained earnings. No adjustment to the recorded asset value was required.

On January 1, 2008, PPG adopted accounting guidance related to fair value measurements for financial assets and liabilities. The guidance defines fair value, establishes a framework for measuring fair value under U.S. Generally Accepted Accounting Principles ("GAAP"), and expands disclosures about fair value measurements. Refer to Note 10, "Fair Value Measurement" for additional information regarding our fair value measurements. Adoption of the guidance applicable to financial assets and liabilities did not have a significant effect on PPG's consolidated results of operations or financial position.

In June 2006, accounting guidance was issued to clarify the accounting for uncertainty in income taxes recognized in an enterprise's financial statements and prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company adopted the provisions of this guidance as of January 1, 2007. As a result of the implementation, the Company reduced its liability for unrecognized tax benefits by $11 million, which was recorded as a direct increase in retained earnings. Refer to Note 14, "Income Taxes" for additional information.

### *Accounting Standards Adopted in 2009*

In June 2009, the Financial Accounting Standards Board ("FASB") issued new accounting guidance entitled, "The FASB Accounting Standards Codification and the Hierarchy of Generally Accepted Accounting Principles – a replacement of FASB Statement No. 162" ("ASC"), which identifies the sources of accounting principles and the framework for selecting the principles used in the preparation of financial statements of nongovernmental entities that are presented in conformity with GAAP. This new guidance was implemented at September 30, 2009 when it became effective. The adoption of this guidance has changed how we reference various elements of GAAP when preparing our financial statement disclosures, but did not have an impact on PPG's consolidated financial position, results of operations or cash flows.

In May 2009, the FASB issued new accounting guidance on subsequent events. The objective of this guidance is to establish general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. This new accounting guidance was adopted as of June 30, 2009, when it became effective. Adopting this new guidance did not have a material impact on the accompanying consolidated financial statements.

In April 2009, the FASB issued new accounting guidance concerning fair value measurement and related disclosures when the volume of market activity has significantly decreased. The impact of adopting this new guidance as of June 30, 2009, when it became effective, did not have a material effect on PPG's consolidated results of operations or financial position.

In December 2008, the FASB issued new accounting guidance related to pension and other postretirement benefits, which provides guidance on an employer's disclosures about plan assets of a defined benefit pension or other postretirement plan. This new accounting guidance is effective for annual periods ending after December 15, 2009. The impact of adoption of this guidance has changed PPG's disclosures about plan assets, but did not have an impact on its financial position, results of operations or cash flows.

In December 2007, the FASB issued new accounting guidance on business combinations. The new guidance retains the underlying concepts of previously issued accounting guidance in that all business combinations are still required to be accounted for at fair value under the acquisition method of accounting (formerly known as the purchase method of accounting), but this new guidance changes the method of applying the acquisition method in a number of significant aspects. Under the new guidance, acquisition costs are generally to be expensed as incurred; noncontrolling interests are valued at fair value at the acquisition date; in-process research and development is recorded at fair value as an indefinite-lived intangible asset at the acquisition date; restructuring costs associated with a business combination are generally expensed subsequent to the acquisition date; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally affect income tax expense. These changes are effective on a prospective basis for all business combinations for which the acquisition date is on or after January 1, 2009, with an exception related to the accounting for valuation allowances on deferred taxes and acquired tax contingencies related to acquisitions completed before that date. This new guidance amends the accounting guidance for income taxes to require adjustments, made after the effective date of this statement, to valuation allowances for acquired deferred tax assets and uncertain income tax positions to be recognized as income tax expense. The adoption of this new guidance as of January 1, 2009 did not have a material impact on the accompanying consolidated financial statements.

In December 2007, the FASB issued new accounting guidance on consolidations. This new guidance was effective for PPG as of January 1, 2009, and requires the presentation of a noncontrolling interest (formerly known as minority interest) as equity in the consolidated balance sheet and separate from the parent's equity. The new guidance also requires that the amount of net income attributable to the noncontrolling interest be included in consolidated net income on the face of the income statement and that any dividends paid to noncontrolling interests be reported as a financing activity in the statement of cash flows. This new guidance requires changes in the parent's ownership interest in consolidated subsidiaries to be accounted for as equity transactions. This new guidance also includes expanded disclosure requirements regarding the interests of the parent and related noncontrolling interests. Beginning January 1, 2009, PPG applied the new guidance to its accounting for noncontrolling interests and its financial statement disclosures. The provisions of the new guidance have been applied to all periods presented in the accompanying consolidated financial statements.

In November 2007, the Emerging Issues Task Force ("EITF") issued new accounting guidance that defined collaborative arrangements and established reporting and disclosure requirements for such arrangements. This new guidance was effective for PPG as of January 1, 2009, and its adoption did not have an effect on PPG's consolidated results of operations or financial position.

# Notes to the Consolidated Financial Statements

On January 1, 2009, PPG adopted new accounting guidance on fair value measurements for nonfinancial assets and liabilities disclosed on a nonrecurring basis. The Company has applied the provisions of this new guidance to its financial statement disclosures beginning in the first quarter of 2009. Adoption of the new guidance did not have an effect on PPG's consolidated results of operations or financial position. Refer to Note 10, "Fair Value Measurement" for additional information regarding our fair value measurements.

In March 2008, the FASB issued new accounting guidance on derivatives and hedging, which changes the disclosure requirements for derivative instruments and hedging activities. This new guidance requires enhanced disclosures about (a) how and why an entity uses derivative instruments, (b) how derivative instruments and related hedged items are accounted for and (c) how derivative instruments and related hedged items affect an entity's financial position, financial performance and cash flows. PPG has applied the provisions of this new guidance to its financial statement disclosures beginning in the first quarter of 2009.

### *Accounting Standards to be Adopted in Future Years*

In June 2009, the FASB issued new accounting guidance on consolidation of variable interest entities, which include: (1) the elimination of the exemption for qualifying special purpose entities, (2) a new approach for determining who should consolidate a variable-interest entity, and (3) changes to when it is necessary to reassess who should consolidate a variable-interest entity. This new guidance is effective for fiscal years beginning after November 15, 2009, and for interim periods within that first annual reporting period. PPG is currently evaluating the effects that this new guidance may have on its consolidated financial statements and does not believe that it will have a material effect on its consolidated results of operations or financial position upon adoption.

## 2. Acquisitions

The Company spent $26 million on acquisitions (net of cash acquired of $1 million) in 2009, including purchase price adjustments related to acquisitions that were completed prior to December 31, 2008.

The Company spent $1,673 million on acquisitions (net of cash acquired of $136 million) in 2008, including purchase price adjustments related to 2007 acquisitions. Most of this spending was related to the January 2, 2008 acquisition of SigmaKalon, a worldwide coatings producer based in Uithoorn, Netherlands, from global private investment firm Bain Capital ("the seller"). The acquired business produces architectural, protective and marine and industrial coatings and is a leading coatings supplier in Europe and other key markets across the globe, with an increasing presence in Africa and Asia. The results of these businesses have been included in PPG's consolidated results of operations from January 2, 2008 onward. The 2008 sales of the acquired SigmaKalon businesses were $3.2 billion.

The total transaction value was approximately $3.2 billion, consisting of cash paid to the seller of $1,673 million and debt assumed of $1,517 million. The cash paid to the seller consisted of €717 million ($1,056 million) and $617 million. In 2007, PPG issued $617 million of commercial paper and borrowed $1,056 million (€717 million) under the €1 billion bridge loan agreement established in December 2007 in anticipation of completing the SigmaKalon acquisition. The proceeds from these borrowings were deposited into escrow in December 2007. Upon closing of the transaction on January 2, 2008, these amounts were released from escrow and paid to the seller.

The following table summarizes the final purchase price allocation for the SigmaKalon acquisition.

| *(Millions)* | |
|---|---|
| Current assets (including cash of $136) | $ 1,415 |
| Property, plant, and equipment | 635 |
| Customer-related intangibles | 685 |
| Trade names | 277 |
| Acquired technology | 122 |
| Goodwill (non-deductible) | 1,353 |
| Other | 172 |
| ***Total assets*** | 4,659 |
| Short-term debt | (1,507) |
| Current liabilities | (798) |
| Long-term debt | (10) |
| Deferred taxes | (389) |
| Other long-term liabilities | (305) |
| ***Net assets*** | 1,650 |
| In-process research and development | 23 |
| ***Total purchase price*** | $ 1,673 |

Identifiable intangible assets with finite lives are subject to amortization over their estimated useful lives. The identifiable intangible assets acquired in the SigmaKalon transaction will be amortized over an estimated weighted-average amortization period of 11 years. Customer-related intangibles will be amortized over an estimated weighted-average amortization period of 12 years, acquired technology will be amortized over an estimated weighted-average amortization period of seven years and trade names will be amortized over an estimated weighted-average amortization period of 15 years. Estimated future amortization expense related to these identifiable intangible assets is approximately $75 million in each of the next five years.

# Notes to the Consolidated Financial Statements

Goodwill related to the SigmaKalon acquisition has been recorded by PPG's reportable segments as follows: $1,045 million by Architectural Coatings – EMEA, $112 million by Performance Coatings (protective and marine operating segment) and $196 million by Industrial Coatings (industrial operating segment).

The step up to fair value of acquired inventory as part of the purchase price allocation totaled $94 million. This amount was included in cost of sales, exclusive of depreciation and amortization, in the accompanying consolidated statement of income for the year ended December 31, 2008 as the related inventory was sold to customers in the first quarter of 2008. The amount allocated to in-process research and development was charged to expense in the first quarter of 2008.

The following information reflects the results of PPG's operations for the year ended December 31, 2007 on a pro forma basis as if the acquisition of SigmaKalon had been completed on January 1, 2007. The unaudited pro forma financial information was prepared to give pro forma effect to events that are 1) directly attributable to the acquisition, 2) factually supportable and 3) expected to have a continuing impact on the combined results. Pro forma adjustments have been made to illustrate the incremental impact on earnings of interest costs on the borrowings to acquire SigmaKalon, amortization expense related to acquired intangible assets of SigmaKalon, and the tax benefit associated with the incremental interest costs and amortization expense. The following unaudited pro forma information does not include certain cost savings or operating synergies (or costs associated with realizing such savings or synergies) that may result from the acquisition.

*(Millions, except per share amounts)*

| *Condensed Consolidated Pro Forma Information (unaudited)* | *Year Ended Dec. 31, 2007* |
|---|---|
| Net sales | $15,140 |
| Net income | $ 795 |
| Earnings per common share | $ 4.83 |
| Earnings per common share – assuming dilution | $ 4.79 |

The unaudited pro forma information is provided for illustrative purposes only and does not purport to represent what PPG's consolidated results of operations would have been had the transaction actually occurred as of January 1, 2007, and does not purport to project PPG's future consolidated results of operations.

During 2008, the Company made several other acquisitions in the coatings businesses. The following table summarizes the estimated fair value of assets acquired and liabilities assumed as a result of these acquisitions and reflected in the purchase price allocations and adjustments recorded as of December 31, 2008. There were no significant adjustments to these amounts subsequent to December 31, 2008.

| *(Millions)* | |
|---|---|
| Current assets | $ 38 |
| Property, plant, and equipment | 6 |
| Goodwill | 21 |
| Other current assets | 38 |
| Other non-current assets | 34 |
| ***Total assets*** | 137 |
| Long-term liabilities | (1) |
| ***Net assets*** | $136 |

The Company spent $233 million on several acquisitions in 2007, including purchase price adjustments related to 2006 acquisitions. The 2007 results of the acquired businesses have been included in PPG's consolidated results of operations for the period since the acquisitions were completed. Sales in 2007 increased by approximately $592 million due to acquisitions and the acquired businesses were accretive to earnings in 2007. The largest of the transactions completed in 2007 were the acquisition of Barloworld Coatings Australia and the acquisition of the architectural and industrial coatings businesses of Renner Sayerlack, S.A.

In the third quarter of 2007, PPG acquired Barloworld Coatings Australia, the architectural paint unit of South African-based Barloworld, Ltd., a multinational industrial brand management company. Barloworld Coatings Australia, a leading Australian architectural paint manufacturer, produces *Taubmans, Bristol* and *White Knight* brands of architectural coatings. The acquisition includes a production facility in Villawood, New South Wales. Barloworld Coatings Australia distributes products through approximately 50 company-owned stores, a network of sole-brand distributors and numerous independent dealers. In addition, the company's paints are sold through Bunnings, Australia's largest home-improvement retailer, and exported to New Zealand.

During the first quarter of 2007, the Company acquired the architectural and industrial coatings businesses of Renner Sayerlack, S.A., Gravatai, Brazil, to expand its coatings businesses in Latin America. The acquired business operates manufacturing plants in Brazil, Chile, and Uruguay and each plant also serves as a distribution center. The purchase price allocation resulted in an excess of purchase price over the fair value of net assets acquired, which has been reflected as an addition to goodwill.

The following table summarizes the fair value of assets acquired and liabilities assumed as a result of the acquisitions completed in 2007 and reflected in the purchase price allocations and adjustments recorded as of

December 31, 2007. There were no significant adjustments to these amounts subsequent to December 31, 2007.

| *(Millions)* | |
|---|---|
| Current assets | $124 |
| Property, plant, and equipment | 38 |
| Goodwill | 59 |
| Other non-current assets | 67 |
| ***Total assets*** | 288 |
| Current liabilities | (48) |
| Long-term liabilities | (7) |
| ***Net assets*** | $233 |

## 3. Divestiture of Automotive Glass and Services Business

During the third quarter of 2007, the Company entered into an agreement to sell its automotive glass and services business to Platinum Equity ("Platinum") for approximately $500 million. Accordingly, the assets and liabilities of this business were classified as held for sale and the results of operations and cash flows of this business were classified as discontinued operations in the third quarter of 2007. In the fourth quarter of 2007, PPG was notified that affiliates of Platinum had filed suit in the Supreme Court of the State of New York, County of New York, alleging that Platinum was not obligated to consummate the agreement. Platinum also terminated the agreement. PPG has sued Platinum and certain of its affiliates for damages, including the $25 million breakup fee stipulated by the terms of the agreement, based on various alleged actions of the Platinum parties. While the transaction with Platinum was terminated, PPG management remained committed to a sale of the automotive glass and services business and continued to classify its assets and liabilities as held for sale and report its results of operations and cash flows as discontinued operations through the first quarter of 2008.

In July 2008, PPG entered into an agreement with affiliates of Kohlberg & Company, LLC, under which PPG would divest the automotive glass and services business to a new company formed by affiliates of Kohlberg. Under the agreement, PPG would receive a noncontrolling interest in the new company, and, as such, the accounting requirements for classifying the business as assets held for sale and reporting its results of operations and cash flows as discontinued operations had no longer been met.

In the second quarter of 2008, the automotive glass and services business was reclassified to continuing operations and, as a result, PPG recorded a one-time, non-cash charge of $17 million ($11 million aftertax) to reflect a catch-up of depreciation expense, which was suspended during the period the business was classified as a discontinued operation. Additionally, in the second quarter of 2008, PPG recorded a charge of $19 million ($12 million aftertax) for special termination benefits and a pension curtailment loss relating to the impact of benefit changes, including accelerated vesting, negotiated as part of the sale. This charge is included in selling, general and administrative expenses in the accompanying consolidated statement of income for the year ended December 31, 2008.

The transaction with affiliates of Kohlberg was completed on September 30, 2008, with PPG receiving total proceeds of $315 million, including $225 million in cash and two 6-year notes totaling $90 million ($60 million at 8.5% interest and $30 million at 10% interest). Both notes, which may be prepaid at any time without penalty, are senior to the equity of the new company. In addition, PPG received a noncontrolling interest of approximately 40 percent in the new company, Pittsburgh Glass Works LLC. This transaction resulted in a third quarter 2008 gain of $15 million pretax, net of transaction costs, and is included in "Other income" in the accompanying consolidated statement of income for the year ended December 31, 2008. The aftertax gain on the transaction was $3 million, reflective of tax expense of $12 million. Tax expense on the gain includes the tax cost of repatriating certain transaction proceeds from Canada to the U.S. and the impact of certain permanent book/tax differences which resulted in a larger taxable gain. PPG accounts for its interest in Pittsburgh Glass Works LLC under the equity method of accounting from October 1, 2008 onward.

The results of operations and cash flows of the automotive glass and services business through September 30, 2008 have been classified as continuing operations in the Glass reportable segment in the accompanying consolidated financial statements. This business had net sales of $724 million and earnings of $16 million during the nine months ended September 30, 2008.

PPG has retained certain liabilities for pension and post-employment benefits earned for service up to September 30, 2008, totaling approximately $850 million and $800 million at December 31, 2009 and 2008, respectively, for employees who were active as of the divestiture date and for individuals who were retirees of the business as of the divestiture date. PPG recognized expense of approximately $40 million related to these obligations in 2009. In addition, PPG is providing certain transition services, including information technology and accounting services, to Pittsburgh Glass Works LLC for a period of up to two years after the transaction date.

In 2009, Pittsburgh Glass Works LLC ceased production at its Oshawa, Canada manufacturing plant and has also announced that it will close its Hawkesbury, Canada plant in 2010. Under Canadian pension regulations, these plant closures will result in partial wind-ups of the pension plans for former employees in Canada that were retained by PPG. This will result in settlement charges against PPG earnings and required cash contributions to the plans in amounts that will be determined following the required review of the partial wind-ups by the Canadian pension authorities. The amount of each pretax charge and the cash contribution is currently estimated to be in the range of $20-$30 million and $10-$15 million, respectively. The deficits can be funded over the five year period following the effective date of the partial wind ups. The settlement charges will be recorded following the approval of the partial wind-ups by the Canadian pension authorities and when the related cash contributions are completed.

## 4. Working Capital Detail

| *(Millions)* | 2009 | 2008 |
|---|---|---|
| ***Receivables*** | | |
| Customers | $ 2,405 | $2,640 |
| Equity affiliates | 28 | 22 |
| Other | 317 | 245 |
| Allowance for doubtful accounts | (122) | (103) |
| ***Total*** | $ 2,628 | $2,804 |
| ***Inventories***[1] | | |
| Finished products | $ 918 | $1,045 |
| Work in process | 125 | 134 |
| Raw materials | 390 | 412 |
| Supplies | 115 | 111 |
| ***Total*** | $ 1,548 | $1,702 |
| ***Accounts payable and accrued liabilities*** | | |
| Trade creditors | $ 1,384 | $1,402 |
| Accrued payroll | 355 | 378 |
| Customer rebates | 207 | 208 |
| Other postretirement and pension benefits | 103 | 102 |
| Income taxes | 33 | 62 |
| Other | 566 | 572 |
| ***Total*** | $ 2,648 | $2,724 |

*(1) Inventories valued using the LIFO method of inventory valuation comprised 35% of total gross inventory values as of December 31, 2009 and 2008. If the FIFO method of inventory valuation had been used, inventories would have been $224 million and $213 million higher as of December 31, 2009 and 2008, respectively. During the year ended December 31, 2009 and 2008, certain inventories accounted for on the LIFO method of accounting were reduced, which resulted in the liquidation of certain quantities carried at costs prevailing in prior years. The effect on earnings was income of $12 million and $4 million for the years ended December 31, 2009 and 2008, respectively.*

## 5. Property

| *(Millions)* | *Useful Lives (years)* | 2009 | 2008 |
|---|---|---|---|
| Land and land improvements | 5-30 | $ 478 | $ 453 |
| Buildings | 20-40 | 1,476 | 1,416 |
| Machinery and equipment | 5-25 | 5,507 | 5,338 |
| Other | 3-20 | 689 | 604 |
| Construction in progress | | 163 | 232 |
| ***Total***[1] | | $8,313 | $8,043 |

*(1) Interest capitalized in 2009, 2008 and 2007 was $9 million, $8 million and $11 million, respectively.*

## 6. Investments

| *(Millions)* | 2009 | 2008 |
|---|---|---|
| Investments in and advances to equity affiliates | $365 | $381 |
| Marketable equity securities | | |
| Trading (See Note 15) | 56 | 47 |
| Available for sale | 5 | 4 |
| Other | 73 | 77 |
| ***Total*** | $499 | $509 |

The Company's investments in and advances to equity affiliates include its approximately 40 percent interest in Pittsburgh Glass Works LLC, which had a carrying value, including $92 million in notes receivable, of $184 million at December 31, 2009 (see Note 3, "Divestiture of Automotive Glass and Services Business"). The carrying value of this investment at December 31, 2008 was $183 million. The Company's investments in and advances to equity affiliates also include 50 percent ownership interests in a number of joint ventures that manufacture and sell coatings, glass and chemicals products, the most significant of which produce fiber glass products and are located in Asia.

In addition, PPG has a 50 percent ownership interest in RS Cogen, L.L.C., which toll produces electricity and steam primarily for PPG and its joint venture partner. The joint venture was formed with a wholly-owned subsidiary of Entergy Corporation in 2000 for the construction and operation of a $300 million process steam, natural gas-fired cogeneration facility in Lake Charles, La., the majority of which was financed by a syndicate of banks. PPG's future commitment to purchase electricity and steam from the joint venture approximates $23 million per year subject to contractually defined inflation adjustments for the next 13 years. The purchases for the years ended December 31, 2009, 2008 and 2007 were $23 million, $24 million and $25 million, respectively.

# Notes to the Consolidated Financial Statements

Summarized financial information of PPG's equity affiliates on a 100 percent basis, in the aggregate, is as follows:

| *(Millions)* | 2009 | 2008 |
|---|---|---|
| Working capital | $ 243 | $ 284 |
| Property, net | 957 | 958 |
| Short-term debt | (165) | (133) |
| Long-term debt | (502) | (565) |
| Other, net | 187 | 229 |
| ***Net assets*** | $ 720 | $ 773 |

| *(Millions)* | 2009 | 2008 | 2007 |
|---|---|---|---|
| Revenues | $1,320 | $ 885 | $ 674 |
| Net (loss) earnings | $ (4) | $ 14 | $ 66 |

PPG's share of undistributed net earnings of equity affiliates was $44 million and $60 million as of December 31, 2009 and 2008, respectively. Dividends received from equity affiliates were $11 million, $18 million and $21 million in 2009, 2008 and 2007, respectively.

As of December 31, 2009 and 2008, there were unrealized pretax losses of $1 million, recorded in "Accumulated other comprehensive loss" in the accompanying consolidated balance sheet related to marketable equity securities available for sale. During 2009, PPG sold certain of these investments resulting in recognition of pretax gains of $0.1 million and proceeds of $0.1 million. During 2008, PPG sold certain of these investments resulting in recognition of a pretax gain of $0.1 million and proceeds of $1 million.

## 7. Goodwill and Other Identifiable Intangible Assets

The change in the carrying amount of goodwill attributable to each reportable business segment for the years ended December 31, 2009 and 2008 was as follows:

| *(Millions)* | *Performance Coatings* | *Industrial Coatings* | *Architectural Coatings—EMEA* | *Optical and Specialty Materials* | *Glass* | *Commodity Chemicals* | *Total* |
|---|---|---|---|---|---|---|---|
| Balance, Jan. 1, 2008 | $1,051 | $310 | $ — | $57 | $ 89 | $— | $1,507 |
| Goodwill from acquisitions | 122 | 209 | 1,047 | (4) | — | — | 1,374 |
| Impact of divestiture (See Note 3) | — | — | — | — | (29) | — | (29) |
| Currency translation | (95) | (37) | (71) | (3) | (5) | — | (211) |
| Balance, Dec. 31, 2008 | $1,078 | $482 | $ 976 | $50 | $ 55 | $— | $2,641 |
| Goodwill from acquisitions | — | 9 | 5 | — | — | 3 | 17 |
| Currency translation | 65 | 18 | 40 | 1 | 2 | — | 126 |
| ***Balance, Dec. 31, 2009*** | $1,143 | $509 | $1,021 | $51 | $ 57 | $ 3 | $2,784 |

The carrying amount of acquired trademarks with indefinite lives as of December 31, 2009 and 2008 totaled $334 million and $339 million, respectively.

The Company's identifiable intangible assets with finite lives are being amortized over their estimated useful lives and are detailed below.

| | Dec. 31, 2009 | | | Dec. 31, 2008 | | |
|---|---|---|---|---|---|---|
| *(Millions)* | *Gross Carrying Amount* | *Accumulated Amortization* | *Net* | *Gross Carrying Amount* | *Accumulated Amortization* | *Net* |
| Acquired technology | $ 519 | $(234) | $ 285 | $ 520 | $(201) | $ 319 |
| Customer-related intangibles | 990 | (286) | 704 | 927 | (195) | 732 |
| Tradenames | 122 | (35) | 87 | 97 | (23) | 74 |
| Other | 28 | (22) | 6 | 26 | (18) | 8 |
| ***Balance*** | $1,659 | $(577) | $1,082 | $1,570 | $(437) | $1,133 |

Aggregate amortization expense was $126 million, $135 million and $58 million in 2009, 2008 and 2007, respectively. The estimated future amortization expense of identifiable intangible assets during each of the next five years is approximately $130 million.

## 8. Business Restructuring

In March of 2009, the Company finalized a restructuring plan focused on further reducing its global cost structure, driven by global economic conditions, low end-market demand and acceleration of cost-savings from the integration of the 2008 acquisition of SigmaKalon. As part of the restructuring, PPG closed the paint manufacturing portion of its facility in Saultain, France at the end of 2009, as well as several smaller production, laboratory, warehouse and distribution facilities across PPG's businesses and regions, and has reduced staffing across the company globally.

As a result of this restructuring plan, in March of 2009 the Company recorded a charge of $186 million for business restructuring, including severance and other costs of $154 million and asset write-offs of $32 million.

The Company will also incur additional costs directly associated with the restructuring actions for demolition, dismantling, relocation and training, which will be charged to expense as incurred. To date, approximately $9 million of these expenses have been incurred. The company expects to incur additional expenses of approximately $2 million in the first quarter of 2010.

In the fourth quarter of 2009, adjustments of approximately $10 million were recorded to reduce the restructuring reserves established in 2008 and 2009 to reflect the current estimate of the costs to complete these actions. Also in the fourth quarter of 2009, some additional restructuring actions were approved and charges of approximately $10 million were recorded. At December 31, 2009, substantially all of the actions included in the 2008 and 2009 restructuring plans were

# Notes to the Consolidated Financial Statements

completed and the remaining actions will be completed in early 2010. In certain cases, the severance costs associated with these actions will be paid out over time.

The following table summarizes the activity through December 31, 2009, related to the 2009 restructuring actions:

| (Millions, except no. of employees) | Severance and Other Costs | Asset Write-offs | Total Reserve | Employees Impacted |
|---|---|---|---|---|
| Performance Coatings | $ 35 | $ 4 | $ 39 | 764 |
| Industrial Coatings | 75 | 16 | 91 | 935 |
| Architectural Coatings - EMEA | 17 | — | 17 | 130 |
| Optical & Specialty Materials | 3 | 9 | 12 | 219 |
| Commodity Chemicals | 6 | — | 6 | 42 |
| Glass | 11 | 2 | 13 | 247 |
| Corporate | 7 | 1 | 8 | 91 |
| *Total* | $154 | $ 32 | $ 186 | 2,428 |
| 2009 activity | (77) | (32) | (109) | (1,902) |
| Currency impact | 11 | — | 11 | — |
| *Balance as of Dec. 31, 2009* | $ 88 | $ — | $ 88 | 526 |

During the third quarter of 2008, the Company finalized a restructuring plan as part of implementing PPG's global transformation strategy and the integration of its 2008 acquisition of SigmaKalon. As part of the restructuring, PPG closed its coatings manufacturing facilities in Clarkson, Ont., Canada, and Geldermalsen, the Netherlands. Other staffing reductions in PPG's coatings businesses in North America and Europe occurred in 2009. PPG also closed its Owen Sound, Ont., Canada, glass manufacturing facility, and idled one float glass production line at its Mt. Zion, Ill., facility in the fourth quarter of 2008. Other actions included writing off idle production assets in PPG's fiber glass and chemicals businesses.

In the third quarter of 2008, the Company recorded a charge of $163 million for business restructuring, including severance and other costs of $73 million, pension curtailments of $21 million and asset write-offs of $69 million. Severance and other restructuring costs related to the SigmaKalon acquisition totaling $33 million have been recorded as part of the purchase price allocation, effectively increasing goodwill. The restructuring reserve recorded in 2008 totaled $196 million.

The company will incur additional costs directly associated with the restructuring actions for demolition, dismantling, relocation and training, which will be charged to expense as incurred. To date, approximately $5 million of these expenses have been incurred. The company expects to incur additional expenses of approximately $3 million in the first quarter of 2010.

The following table summarizes the activity through December 31, 2009, related to the 2008 restructuring actions:

| (Millions, except no. of employees) | Severance and Other Costs | Pension Curtailment Losses | Asset Write-offs | Total Reserve | Employees Impacted |
|---|---|---|---|---|---|
| Performance Coatings | $ 30 | $ — | $ 15 | $ 45 | 270 |
| Industrial Coatings | 45 | 9 | 10 | 64 | 577 |
| Architectural Coatings - EMEA | 19 | — | — | 19 | 215 |
| Commodity Chemicals | — | — | 13 | 13 | 10 |
| Glass | 12 | 12 | 31 | 55 | 285 |
| *Total* | $106 | $ 21 | $ 69 | $ 196 | 1,357 |
| 2008 activity | (12) | (21) | (69) | (102) | (249) |
| Currency impact | (6) | — | — | (6) | — |
| *Balance as of Dec. 31, 2008* | $ 88 | $ — | $ — | $ 88 | 1,108 |
| 2009 activity | (56) | — | — | (56) | (951) |
| Currency impact | 2 | — | — | 2 | — |
| *Balance as of Dec. 31, 2009* | $ 34 | $ — | $ — | $ 34 | 157 |

## 9. Debt and Bank Credit Agreements and Leases

| (Millions) | 2009 | 2008 |
|---|---|---|
| 7.05% notes, due 2009(1) | $ — | $ 116 |
| 6 7⁄8% notes, due 2012(1) | 71 | 71 |
| 5.75% notes, due 2013(1) | 600 | 600 |
| 3 7⁄8% notes, due 2015 (€300) | 432 | 418 |
| 7 3⁄8% notes, due 2016 | 146 | 146 |
| 6 7⁄8% notes, due 2017 | 74 | 74 |
| 6.65% notes, due 2018 | 700 | 700 |
| 7.4% notes, due 2019 | 198 | 198 |
| 9% non-callable debentures, due 2021 | 149 | 149 |
| 7.70% notes, due 2038 | 249 | 249 |
| €650 revolving credit facility(2) | — | 368 |
| Unsecured term loan, due 2012 | 400 | — |
| Impact of derivatives on debt(1) | 16 | 15 |
| Various other non-U.S. debt, weighted average 7.0% as of December 31, 2009 | 11 | 18 |
| Capital lease obligations | 32 | 6 |
| ***Total*** | 3,078 | 3,128 |
| Less payments due within one year | 4 | 119 |
| ***Long-term debt*** | $3,074 | $3,009 |

*(1) PPG entered into several interest rate swaps which have the effect of converting $450 million and $125 million as of December 31, 2009 and 2008, respectively, of these fixed rate notes to variable rates, based on the three-month London Interbank Offered Rate (LIBOR). The fair values of these interest rate swaps are based on Level 2 inputs as described in Note 10. The weighted average effective interest rate for these borrowings, including the effects of the outstanding swaps was 5.1% and 5.4% for the years ended December 31, 2009 and 2008, respectively. Refer to Notes 1 and 12 for additional information.*

*(2) This borrowing was effectively due in 2010 because PPG had the intent and ability to rollover this amount until 2010. PPG classified this amount as long-term debt as of December 31, 2008. Amounts outstanding at December 31, 2009 are included in short-term borrowings.*

# Notes to the Consolidated Financial Statements

Aggregate maturities of long-term debt during the next five years are (in millions) $4 in 2010, $10 in 2011, $477 in 2012, $605 in 2013 and $2 in 2014.

In order to provide financing for the SigmaKalon acquisition, in December 2007, PPG and certain of its subsidiaries entered into a three year €650 million revolving credit facility with several banks and financial institutions and Societe Generale, as facility agent for the lenders. The facility has an annual fee of 8 basis points. In addition, PPG and a subsidiary entered into two bridge loan agreements, one in the amount of €1 billion with multiple lenders and Credit Suisse as administrative agent for those lenders and the other in the amount of $500 million with Credit Suisse as the lender. Each bridge loan had a term of 364 days.

In December 2007, PPG issued $617 million of commercial paper and borrowed $1,056 million (€717 million) under the €1 billion bridge loan agreement. The proceeds from these borrowings were deposited into escrow in December 2007. Upon closing of the acquisition on January 2, 2008, these amounts were released from escrow and paid to the seller. Also, in January 2008, PPG borrowed $1,143 million, representing the remaining $417 million (€283 million) available under the €1 billion bridge loan agreement and $726 million (€493 million) under the €650 million revolving credit facility. The proceeds from these borrowings and cash on hand of $116 million were used to repay $1,259 million of the $1,517 million SigmaKalon debt assumed in the acquisition. No amounts were borrowed under the $500 million bridge loan agreement, and it has expired.

On March 18, 2008, PPG completed a public offering of $600 million in aggregate principal amount of its 5.75% Notes due 2013 (the "2013 Notes"), $700 million in aggregate principal amount of its 6.65% Notes due 2018 (the "2018 Notes") and $250 million in aggregate principal amount of its 7.70% Notes due 2038 (the "2038 Notes" and, together with the 2013 Notes and the 2018 Notes, the "Notes"). The Notes were offered by the Company pursuant to its existing shelf registration statement. The proceeds of this offering of $1,538 million (net of discount and issuance costs) and additional borrowings of $195 million under the €650 million revolving credit facility were used to repay existing debt, including certain short-term debt and the amounts outstanding under the €1 billion bridge loan. No further amounts can be borrowed under the €1 billion bridge loan. The discount and issuance costs related to the Notes, which totaled $12 million, will be amortized to interest expense over the respective lives of the Notes.

In June 2009, PPG entered into a $400 million three year unsecured term loan. We used $116 million of the proceeds from this term loan to retire our 7.05% Notes due 2009; the remainder of the loan proceeds of approximately $284 million were used to retire outstanding amounts under our €650 million revolving credit facility. The principal amount of this term loan is due in three years and the interest rate is variable based on a spread over LIBOR.

The Company has in place a $1 billion revolving credit facility that expires in 2011. The annual facility fee payable on the committed amount is 8 basis points. This facility is available for general corporate purposes and also to support PPG's commercial paper programs in the U.S. and Europe. As of December 31, 2009, no amounts were outstanding under this facility.

PPG's non-U.S. operations have uncommitted lines of credit totaling $881 million of which $92 million was used as of December 31, 2009. These uncommitted lines of credit are subject to cancellation at any time and are generally not subject to any commitment fees.

Short-term debt outstanding as of December 31, 2009 and 2008, was as follows:

| *(Millions)* | 2009 | 2008 |
|---|---|---|
| U.S. commercial paper, 5.3% as of Dec. 31, 2008 | $ — | $222 |
| €650 million revolving credit facility, 0.8% as of Dec. 31, 2009(1) | 110 | 200 |
| Other, weighted average 2.2% as of Dec. 31, 2009 | 158 | 362 |
| ***Total*** | $268 | $784 |

*(1) Borrowings under this facility have a term of 30 days and can be rolled over monthly until the facility expires in 2010.*

PPG is in compliance with the restrictive covenants under its various credit agreements, loan agreements and indentures. The Company's revolving credit agreements include a financial ratio covenant. The covenant requires that the amount of total indebtedness not exceed 60% of the Company's total capitalization excluding the portion of accumulated other comprehensive income (loss) related to pensions and other postretirement benefit adjustments. As of December 31, 2009, total indebtedness was 40% of the Company's total capitalization excluding the portion of accumulated other comprehensive income (loss) related to pensions and other postretirement benefit adjustments. Additionally, substantially all of the Company's debt agreements contain customary cross-default provisions. Those provisions generally provide that a default on a debt service payment of $10 million or more for longer than the grace period provided (usually 10 days) under one agreement may result in an event of default under other agreements. None of the Company's primary debt obligations are secured or guaranteed by the Company's affiliates.

Interest payments in 2009, 2008 and 2007 totaled $201 million, $228 million and $102 million, respectively.

In December 2008, the Company entered into an agreement with a counterparty to repurchase 1.5 million shares of the Company's stock. Under the terms of the agreement, the counterparty purchased the shares in the open market in January of 2009 and held the shares until December of 2009 when the Company paid the agreed upon price of $39.53 per share and took possession of these shares. The total cost of this share repurchase was approximately $59 million.

In October 2009, the Company entered into an agreement with a counterparty to repurchase 1.2 million shares of the Company's stock. As of December 31, 2009, the counterparty has purchased 465,006 shares at a weighted average price of $56.66 per share. These shares are not considered outstanding for basic and diluted earnings per share calculations and total shareholders' equity at December 31, 2009 has been reduced by approximately $27 million, representing the amount that will be paid by PPG to the counterparty upon settlement.

Rental expense for operating leases was $241 million, $267 million and $188 million in 2009, 2008 and 2007, respectively. The primary leased assets include paint stores, transportation equipment, warehouses and other distribution facilities, and office space, including the Company's corporate headquarters located in Pittsburgh, Pa. Minimum lease commitments for operating leases that have initial or remaining lease terms in excess of one year as of December 31, 2009, are (in millions) $129 in 2010, $103 in 2011, $82 in 2012, $64 in 2013, $54 in 2014 and $214 thereafter.

The Company had outstanding letters of credit and surety bonds of $163 million as of December 31, 2009. The letters of credit secure the Company's performance to third parties under certain self-insurance programs and other commitments made in the ordinary course of business. As of December 31, 2009 and 2008 guarantees outstanding were $80 million and $70 million, respectively. The guarantees relate primarily to debt of certain entities in which PPG has an ownership interest and selected customers of certain of the Company's businesses. A portion of such debt is secured by the assets of the related entities. The carrying values of these guarantees were $7 million and $9 million as of December 31, 2009 and 2008, respectively, and the fair values were $15 million and $40 million, as of December 31, 2009 and 2008, respectively. The Company does not believe any loss related to these letters of credit, surety bonds or guarantees is likely.

### 10. Fair Value Measurement

Accounting guidance on fair value measurements establishes a hierarchy of inputs employed to determine fair value measurements which has three levels. Level 1 inputs are quoted prices in active markets for identical assets and liabilities, are considered to be the most reliable evidence of fair value, and should be used whenever available. Level 2 inputs are observable prices that are not quoted on active exchanges. Level 3 inputs are unobservable inputs employed for measuring the fair value of assets or liabilities.

*Assets and liabilities reported at fair value on a recurring basis:*

| | December 31, 2009 | | | |
|---|---|---|---|---|
| *(Millions)* | *Level 1* | *Level 2* | *Level 3* | *Total* |
| Other current assets: | | | | |
| Foreign currency contracts[2] | $ — | $ 3 | $ — | $ 3 |
| Equity forward arrangement[1] | — | 18 | — | 18 |
| Marketable equity securities | 4 | — | — | 4 |
| Investments: | | | | |
| Marketable equity securities | 60 | 1 | — | 61 |
| Other assets: | | | | |
| Interest rate swaps[1] | — | 10 | — | 10 |
| Forward starting swaps[1] | — | 3 | — | 3 |
| Accounts payable and accrued liabilities: | | | | |
| Foreign currency contracts[1] | — | 8 | — | 8 |
| Natural gas swap contracts[1] | — | 37 | — | 37 |
| Other liabilities: | | | | |
| Cross currency swaps[1] | — | 308 | — | 308 |
| Natural gas swap contracts[1] | — | 13 | — | 13 |

*(1) This entire balance is designated as a hedging instrument under GAAP.*
*(2) The majority of this balance is designated as a hedging instrument under GAAP.*

| | December 31, 2008 | | | |
|---|---|---|---|---|
| *(Millions)* | *Level 1* | *Level 2* | *Level 3* | *Total* |
| Other current assets: | | | | |
| Foreign currency contracts | $ — | $ 7 | $ — | $ 7 |
| Marketable equity securities | 4 | — | — | 4 |
| Investments: | | | | |
| Marketable equity securities | 48 | 2 | — | 50 |
| Other assets: | | | | |
| Natural gas swap contracts | — | 1 | — | 1 |
| Interest rate swaps | — | 3 | — | 3 |
| Cross currency swaps | — | 21 | — | 21 |
| Accounts payable and accrued liabilities: | | | | |
| Foreign currency contracts | — | 16 | — | 16 |
| Equity forward arrangement | — | 6 | — | 6 |
| Natural gas swap contracts | — | 62 | — | 62 |
| Other liabilities: | | | | |
| Foreign currency contracts | — | 6 | — | 6 |
| Natural gas swap contracts | — | 24 | — | 24 |
| Cross currency swaps | — | 151 | — | 151 |

*Assets and liabilities reported at fair value on a nonrecurring basis:*

As a result of finalizing a restructuring plan, as discussed in Note 8, "Business Restructuring," long-lived assets with a carrying amount of $36 million were written-down to their fair value of $4 million, resulting in a charge of $32 million, which was included within the business restructuring charge in March 2009. These long-lived assets were valued using Level 3 inputs.

## 11. Financial Instruments, Excluding Derivative Financial Instruments

Included in PPG's financial instrument portfolio are cash and cash equivalents, cash held in escrow, marketable equity securities, company-owned life insurance and short and long-term debt instruments. The fair values of these financial instruments approximated their carrying values, in the aggregate, except for long-term debt.

Long-term debt (excluding capital lease obligations), had carrying and fair values totaling $3,046 million and $3,313 million, respectively, as of December 31, 2009. The corresponding amounts as of December 31, 2008, were $3,122 million and $3,035 million, respectively. The fair values of the debt instruments were based on discounted cash flows and interest rates currently available to the Company for instruments of the same remaining maturities.

## 12. Derivative Financial Instruments and Hedge Activities

The Company recognizes all derivative financial instruments as either assets or liabilities at fair value on the balance sheet. The accounting for changes in the fair value of a derivative depends on the use of the instrument. To the extent that a derivative is effective as a cash flow hedge of an exposure to future changes in value, the change in fair value of the instrument is deferred in accumulated other comprehensive (loss) income ("AOCI"). Any portion considered to be ineffective is reported in earnings immediately, including changes in value related to credit risk. To the extent that a derivative is effective as a hedge of an exposure to future changes in fair value, the change in the derivative's fair value is offset in the consolidated statement of income by the change in fair value of the item being hedged. To the extent that a derivative or a financial instrument is effective as a hedge of a net investment in a foreign operation, the change in the derivative's fair value is deferred as an unrealized currency translation adjustment in AOCI.

PPG's policies do not permit speculative use of derivative financial instruments. PPG uses derivative instruments to manage its exposure to fluctuating natural gas prices through the use of natural gas swap contracts. PPG also uses forward currency and option contracts as hedges against its exposure to variability in exchange rates on short-term intercompany borrowings, unrecognized firm sales commitments and cash flows denominated in foreign currencies. PPG uses foreign denominated debt and cross currency swap contracts to hedge net investments in foreign operations. Interest rate swaps are used to manage the Company's exposure to changing interest rates as such rate changes affect the fair value of fixed rate borrowings. Forward starting swaps are used to lock-in a fixed interest rate, to which will be added a corporate spread, related to future long-term debt refinancings. PPG also uses an equity forward arrangement to hedge the Company's exposure to changes in the fair value of PPG stock that is to be contributed to the asbestos settlement trust as discussed in Note 16, "Commitments and Contingent Liabilities."

PPG enters into derivative financial instruments with high credit quality counterparties and diversifies its positions among such counterparties in order to reduce its exposure to credit losses. The Company did not realize a credit loss on derivatives during the three-year period ended December 31, 2009.

PPG centrally manages its foreign currency transaction risk to minimize the volatility in cash flows caused by currency fluctuations. Decisions on whether to use derivative financial instruments to hedge the net transaction exposures related to all regions of the world are made based on the amount of those exposures by currency and, in certain situations, an assessment of the near-term outlook for certain currencies. This net hedging strategy does not qualify for hedge accounting; therefore, the change in the fair value of these instruments is recorded in "Other charges" in the accompanying consolidated statement of income in the period of change. As of December 31, 2009 and 2008, the fair value of these contracts were assets of less than $0.5 million and $1 million, respectively.

PPG designates forward currency contracts as hedges against the Company's exposure to variability in exchange rates on short-term intercompany borrowings denominated in foreign currencies. To the extent effective, changes in the fair value of these instruments are deferred in AOCI and subsequently reclassified to "Other charges" in the accompanying consolidated statement of income as foreign exchange gains and losses are recognized on the related intercompany borrowings. The portion of the change in fair value considered to be ineffective is recognized immediately in "Other charges" in the accompanying consolidated statement of income. All amounts related to these instruments deferred in AOCI as of December 31, 2009 will be reclassified to earnings within the next twelve months. As of December 31, 2009 and 2008, the fair value of these instruments was a net liability of $2 million and a net asset of $2 million, respectively.

# Notes to the Consolidated Financial Statements

PPG designates forward currency contracts as hedges against the Company's exposure to future changes in fair value related to certain firm sales commitments denominated in foreign currencies. These contracts are designated as fair value hedges. As such, they are reported at fair value in the Company's consolidated balance sheet, with changes in the fair value of these contracts and that of the related firm sales commitments reported in net sales. These contracts convert $87 million to the South Korean won over the 18 month period ended June 30, 2011. As of December 31, 2009 and 2008, the fair value of the contracts was a net liability of $3 million and $18 million, respectively.

PPG entered into ten U.S. dollar to euro cross currency swap contracts with a total notional amount of $1.3 billion, of which $600 million will settle on March 15, 2013 and $700 million will settle on March 15, 2018. On settlement of all of the outstanding contracts, PPG will receive $1.3 billion U.S. dollars and pay euros to the counterparties to the contracts. During the term of these contracts, PPG will receive semiannual payments in March and September of each year based on U.S. dollar, long-term fixed interest rates, and PPG will make annual payments in March of each year to the counterparties based on euro, long-term fixed interest rates. The Company has designated these swaps as hedges of its net investment in the acquired SigmaKalon businesses and, as a result, the mark to market fair value adjustments of the swaps have been and will be recorded as a component of AOCI, and the cash flow impact of these swaps has been and will be classified as investing activities in the consolidated statement of cash flows. As of December 31, 2009 and 2008, the fair value of these contracts was a net liability of $308 million and $130 million, respectively.

As of December 31, 2009 and 2008, PPG designated €300 million euro-denominated borrowings as a hedge of a portion of PPG's net investment in the Company's European operations. Also, during 2008 and 2009, certain portions of PPG's various other euro-denominated borrowings were designated as hedges of PPG's investments in its European operations. As a result, the change in book value from adjusting these foreign-denominated borrowings to current spot rates was deferred in AOCI.

As of December 31, 2009 and 2008, the Company had accumulated pretax unrealized translation losses in AOCI of $210 million and $6 million, respectively, related to both the euro-denominated borrowings and the cross currency swaps that have been designated as hedges of net investments.

Deferrals in AOCI related to hedges of the Company's net investments in European operations would be reclassified and recognized in earnings upon a substantial liquidation, sale or partial sale of such investments or upon impairment of all or a portion of such investments.

The Company manages its interest rate risk by balancing its exposure to fixed and variable rates while attempting to minimize its interest costs. Generally, the Company maintains variable interest rate debt at a level of approximately 25% to 50% of total borrowings. PPG principally manages its fixed and variable interest rate risk by retiring and issuing debt from time to time and through the use of interest rate swaps. As of December 31, 2009 and 2008, these swaps converted $450 million and $125 million, respectively, of fixed rate debt to variable rate debt. The swaps are designated as fair value hedges. As such, these swaps are carried at fair value. Changes in the fair value of these swaps and that of the related debt are recorded in "Interest expense" in the accompanying consolidated statement of income. As of December 31, 2009 and 2008, the fair value of these contracts was an asset of $10 million and $3 million, respectively.

The Company has entered into forward starting swaps to effectively lock-in a fixed interest rate based on the ten year swap rate, to which will be added a corporate spread, related to future debt refinancings, with an anticipated term of ten years. All of the swap contracts are required to be settled in July 2012. As of December 31, 2009, the notional amount of the swaps outstanding totaled $250 million. To the extent that the swaps are effective, changes in the fair values of the swap contracts are deferred in AOCI. The portion of the change in fair value considered to be ineffective is recognized immediately in "Other charges" in the accompanying consolidated statement of income. Amounts deferred in AOCI will be reclassified to interest expense over the same period of time that interest expense is recognized on the future borrowings. As of December 31, 2009, the fair value of these swaps was a $3 million asset.

The Company uses derivative instruments to manage its exposure to fluctuating natural gas prices through the use of natural gas swap contracts. These instruments mature over the next 32 months. To the extent that these instruments are effective in hedging PPG's exposure to price changes, changes in the fair values of the hedge contracts are deferred in AOCI and reclassified to "Cost of sales, exclusive of depreciation and amortization" as the natural gas is purchased. The amount of ineffectiveness is reported in "Other charges" in the accompanying consolidated statement of income immediately. As of December 31, 2009 and 2008, the fair value of these contracts was a liability of $50 million and $85 million, respectively. This pretax loss was deferred in AOCI, of which $37 million related to contracts that mature within the twelve-month period ending December 31, 2010.

PPG entered into a one-year renewable equity forward arrangement with a bank in order to mitigate the impact of changes in the fair value of 1,388,889 shares of PPG stock that is to be contributed to the asbestos settlement trust as discussed in Note 16, "Commitments and Contingent Liabilities." This instrument, which has been renewed, is recorded at fair value as an asset or liability and changes in the fair value of this instrument are reflected in the "Asbestos settlement – net" caption of the accompanying consolidated statement of income. The total principal amount payable for these shares is $62 million. PPG will pay to the bank interest based on the principal amount and the bank will pay to PPG an amount equal to the dividends paid on these shares during the period this instrument is outstanding. The difference between the principal amount and any amounts related to unpaid interest or dividends and the current market price for these shares, adjusted for credit risk, represents the fair value of the instrument as well as the amount that PPG would pay or receive if the bank chose to net settle the instrument. Alternatively, the bank may, at its option, require PPG to purchase the shares covered by the arrangement at the market price on the date of settlement. As of December 31, 2009 and 2008, the fair value of this contract was an asset of $18 million and a liability of $6 million, respectively.

No derivative instrument initially designated as a hedge instrument was undesignated or discontinued as a hedging instrument during 2009 or 2008. Nor were any amounts deferred in AOCI reclassified to earnings during the three-year period ended December 31, 2009 related to hedges of anticipated transactions that were no longer expected to occur.

All of the outstanding derivative instruments are subject to accelerated settlement in the event of PPG's failure to meet its debt obligations or payment obligations under the terms of the instruments' contractual provisions. In addition, should the Company be acquired and its payment obligations under the derivative instruments' contractual arrangements not be assumed by the acquirer, or should PPG enter into bankruptcy, receivership or reorganization proceedings, the instruments would also be subject to accelerated settlement.

For the year ended December 31, 2009, other comprehensive income included a net pretax gain due to cash flow hedge derivatives of $41 million ($25 million, net of tax). This gain was comprised of realized losses of $159 million and unrealized losses of $118 million. The realized losses related to the settlement during the period of natural gas contracts, interest rate swaps owned by one of the Company's investees accounted for under the equity method of accounting and foreign currency contracts. The unrealized losses related to the change in fair value of the natural gas and foreign currency contracts, offset in part by the change in fair value on forward starting swaps and interest rate swaps owned by one of the Company's investees accounted for under the equity method of accounting.

For the year ended December 31, 2008, other comprehensive (loss) income included a net pretax loss due to cash flow hedge derivatives of $79 million ($49 million, net of tax). This loss was comprised of realized gains of $15 million and unrealized losses of $64 million. The realized gains related to the settlement during the period of natural gas contracts, offset in part by realized losses related to the settlement of foreign currency contracts and interest rate swaps that were owned by one of the Company's investees accounted for under the equity method of accounting. The unrealized losses related to the change in fair value of the natural gas contracts and of interest rate swaps owned by one of the Company's investees accounted for under the equity method of accounting, offset in part by the change in fair value on foreign currency contracts.

Refer to Note 10, "Fair Value Measurement," for additional disclosures related to the Company's derivative instruments outstanding as of December 31, 2009 and 2008.

The following table provides details related to fair value, cash flow and net investment hedges, by type of derivative and financial instrument. All dollar amounts are pretax and relate to the year ended December 31, 2009.

| Hedge Type (Millions) | Gain (Loss) Deferred in OCI | Gain (Loss) Recognized Amount | Gain (Loss) Recognized Caption |
|---|---|---|---|
| **Fair Value** | | | |
| Interest rate swaps[a] | Not applicable | $ 6 | Interest expense |
| Foreign currency contracts[a] | Not applicable | (10) | Sales |
| Equity forward arrangements[a] | Not applicable | 24 | Asbestos - net |
| Total Fair Value | | $ 20 | |
| **Cash Flow** | | | |
| Natural gas swaps[a] | $ (87) | $(122) | Cost of sales |
| Interest rate swaps of an equity method investee | 1 | (2) | Other earnings |
| Forward starting swaps[a] | 3 | — | |
| Foreign currency contracts[a] | (35) | (35) | Other charges |
| Total Cash Flow | $(118) | $(159) | |
| **Net Investment** | | | |
| Cross currency swaps[a] | $(187) | $ — | Other charges |
| Foreign denominated debt | (17) | Not applicable | |
| Total Net Investment | $(204) | $ — | |
| **Non-Hedge** | | | |
| Foreign currency contracts | Not applicable | $ (4) | Other charges |
| Total Non-Hedge | | $ (4) | |

*(a) The ineffective portion related to each of these items was not significant and the earnings impact from ineffectiveness related to all of these items in the aggregate was net pretax income of less than $0.5 million for the year ended December 31, 2009.*

# Notes to the Consolidated Financial Statements

## 13. Earnings Per Common Share

The earnings per common share calculations for the three years ended December 31, 2009, are as follows:

| *(Millions, except per share amounts)* | 2009 | 2008 | 2007 |
|---|---|---|---|
| ***Earnings per common share (attributable to PPG)*** | | | |
| Income from continuing operations, net of tax | $336 | $538 | $856 |
| (Loss) income from discontinued operations | — | — | (22) |
| Net Income (attributable to PPG) | $336 | $538 | $834 |
| Weighted average common shares outstanding | 164.8 | 164.6 | 164.5 |
| ***Earnings per common share (attributable to PPG):*** | | | |
| Income from continuing operations | $2.04 | $3.27 | $5.20 |
| (Loss) income from discontinued operations | — | — | (0.13) |
| Net Income (attributable to PPG) | $2.04 | $3.27 | $5.07 |
| ***Earnings per common share - assuming dilution (attributable to PPG)*** | | | |
| Income from continuing operations, net of tax | $336 | $538 | $856 |
| (Loss) income from discontinued operations | — | — | (22) |
| Net Income (attributable to PPG) | $336 | $538 | $834 |
| Weighted average common shares outstanding | 164.8 | 164.6 | 164.5 |
| Effect of dilutive securities: | | | |
| Stock options | 0.1 | 0.2 | 0.9 |
| Other stock compensation plans | 0.6 | 0.6 | 0.5 |
| Potentially dilutive common shares | 0.7 | 0.8 | 1.4 |
| Adjusted weighted average common shares outstanding | 165.5 | 165.4 | 165.9 |
| ***Earnings per common share - assuming dilution (attributable to PPG):*** | | | |
| Income from continuing operations | $2.03 | $3.25 | $5.16 |
| (Loss) income from discontinued operations | — | — | (0.13) |
| Net Income (attributable to PPG) | $2.03 | $3.25 | $5.03 |

There were 6.2 million, 5.1 million and 1.1 million outstanding stock options excluded in 2009, 2008 and 2007, respectively, from the computation of diluted earnings per common share due to their anti-dilutive effect.

## 14. Income Taxes

The following table presents a reconciliation of the statutory U.S. corporate federal income tax rate to the Company's effective income tax rate:

| | 2009 | 2008 | 2007 |
|---|---|---|---|
| U.S. federal income tax rate | 35.00% | 35.00% | 35.00% |
| Changes in rate due to: | | | |
| State and local taxes – U.S. | 1.99 | 2.47 | 1.12 |
| U.S. (benefit) tax on foreign dividends | (3.05) | 0.38 | 0.20 |
| Taxes on non-U.S. earnings | (0.59) | (3.75) | (4.92) |
| PPG dividends paid to the ESOP | (1.61) | (1.13) | (0.76) |
| U.S. federal audit settlements | (0.28) | (1.59) | (0.64) |
| Other | (0.56) | (0.10) | (0.85) |
| ***Effective income tax rate*** | 30.90% | 31.28% | 29.15% |

The change in the impact on the effective income tax rate for 2009 compared with 2008 due to taxes on non-US earnings was largely the result of lower European earnings, partly as a result of the first quarter restructuring charge. The filing of our 2008 U.S. federal income tax return in September 2009 increased our 2008 foreign sourced income for U.S. tax purposes which, in turn, led to a decision in the fourth quarter to pay dividends from several foreign subsidiaries prior to year end. The benefit of the U.S. foreign tax credits associated with those dividends lowered our 2009 effective tax rate.

The change in the impact on the effective income tax rate for 2008 compared with 2007 due to state and local taxes and taxes on non-U.S. earnings was largely the result of the increase in U.S. earnings as a percentage of total earnings.

The 2007 effective income tax rate includes the tax benefit of $15 million for the reversal of a valuation allowance previously recorded against the benefit of a tax net operating loss carryforward of a non-U.S. subsidiary and the tax benefit associated with an enacted reduction in the Canadian federal corporate income tax rate. The impact of these items is presented as "Taxes on non-U.S. earnings" in the above rate reconciliation and accounted for most of the increase in the benefit that taxes on non-U.S. earnings had on the 2007 effective income tax rate.

Income before income taxes of the Company's non-U.S. operations for 2009, 2008 and 2007 was $342 million, $219 million and $495 million, respectively.

# Notes to the Consolidated Financial Statements

The following table gives details of income tax expense reported in the accompanying consolidated statement of income.

| (Millions) | 2009 | 2008 | 2007 |
|---|---|---|---|
| ***Current income taxes*** | | | |
| U.S. federal | $ 3 | $ 140 | $ 294 |
| Non-U.S. | 129 | 141 | 156 |
| State and local – U.S. | 15 | 29 | 31 |
| ***Total current*** | 147 | 310 | 481 |
| ***Deferred income taxes*** | | | |
| U.S. federal | 53 | 54 | (66) |
| Non-U.S. | (13) | (86) | (25) |
| State and local – U.S. | 4 | 6 | (7) |
| ***Total deferred*** | 44 | (26) | (98) |
| ***Total*** | $ 191 | $ 284 | $ 383 |

Income tax payments in 2009, 2008 and 2007 totaled $197 million, $300 million and $475 million, respectively.

Net deferred income tax assets and liabilities as of December 31, 2009 and 2008, were as follows:

| (Millions) | 2009 | 2008 |
|---|---|---|
| ***Deferred income tax assets related to*** | | |
| Employee benefits | $ 873 | $ 890 |
| Contingent and accrued liabilities | 557 | 529 |
| Operating loss and other carryforwards | 132 | 130 |
| Inventories | 13 | 20 |
| Property | 6 | 35 |
| Derivatives | 126 | 88 |
| Other | 129 | 121 |
| Valuation allowance | (78) | (58) |
| ***Total*** | 1,758 | 1,755 |
| ***Deferred income tax liabilities related to*** | | |
| Property | 441 | 460 |
| Intangibles | 516 | 505 |
| Employee benefits | 46 | 44 |
| Other | 55 | 49 |
| ***Total*** | 1,058 | 1,058 |
| ***Deferred income tax assets – net*** | $ 700 | $ 697 |

As of December 31, 2009, subsidiaries of the Company had available net operating loss carryforwards of approximately $415 million for income tax purposes, of which approximately $321 million has an indefinite expiration. The remaining $94 million expires between the years 2010 and 2024. The tax effected amount of the net operating loss carryforwards is $131 million. A valuation allowance has been established for carry-forwards at December 31, 2009, when the ability to utilize them is not likely.

No deferred U.S. income taxes have been provided on certain undistributed earnings of non-U.S. subsidiaries, which amounted to $2,005 million as of December 31, 2009 and $2,461 million as of December 31, 2008. These earnings are considered to be reinvested for an indefinite period of time or will be repatriated when it is tax effective to do so. It is not practicable to determine the deferred tax liability on these undistributed earnings.

The Company files federal, state and local income tax returns in numerous domestic and foreign jurisdictions. In most tax jurisdictions, returns are subject to examination by the relevant tax authorities for a number of years after the returns have been filed. The Company is no longer subject to examinations by tax authorities in any major tax jurisdiction for years before 2002. Additionally, the Internal Revenue Service ("IRS") has completed its examination of the Company's U.S. federal income tax returns filed for years through 2007.

The activity in the accrued liability for unrecognized tax benefits for the three years ended December 31, 2009 was as follows:

| (Millions) | 2009 | 2008 | 2007 |
|---|---|---|---|
| Balance at January 1 | $ 99 | $110 | $ 77 |
| Additions based on tax positions related to the current year | 19 | 12 | 21 |
| Additions for tax positions of prior years | 13 | 5 | 19 |
| Reductions for tax positions of prior years | (8) | (17) | (5) |
| Pre-acquisition unrecognized tax benefits | — | 20 | — |
| Reductions for expiration of the applicable statute of limitations | (9) | (6) | (5) |
| Settlements | (11) | (21) | (1) |
| Currency | 5 | (4) | 4 |
| ***Balance at December 31*** | $108 | $ 99 | $110 |

The amount of unrecognized tax benefits was $108 million, $99 million and $110 million as of December 31, 2009, 2008 and 2007, respectively. If recognized, $99 million, $89 million and $88 million would impact the effective rate as of December 31, 2009, 2008 and 2007, respectively. The Company recognizes accrued interest and penalties related to unrecognized tax benefits in income tax expense. The Company had accrued $13 million, $10 million and $9 million for estimated interest and penalties on unrecognized tax benefits as of December 31, 2009, 2008 and 2007, respectively. The Company recognized $3 million, $1 million and $3 million of expense for estimated interest and penalties during the years ended December 31, 2009, 2008 and 2007, respectively.

While it is expected that the amount of unrecognized tax benefits will change in the next 12 months, quantification of an estimated range cannot be made at this time. The Company does not expect this change to have a significant impact on the results of operations or financial position of the Company, however, actual settlements may differ from amounts accrued.

# Notes to the Consolidated Financial Statements

## 15. Pensions and Other Postretirement Benefits

### *Defined Benefit Plans*

PPG has defined benefit pension plans that cover certain employees worldwide. The principal defined benefit pension plans are those in the U.S., Canada, the Netherlands and the U.K. which, in the aggregate, represent 99% of the market value of plan assets at December 31, 2009. PPG also sponsors welfare benefit plans that provide postretirement medical and life insurance benefits for certain U.S. and Canadian employees and their dependents. These programs require retiree contributions based on retiree-selected coverage levels for certain retirees and their dependents and provide for sharing of future benefit cost increases between PPG and participants based on management discretion. The Company has the right to modify or terminate certain of these benefit plans in the future. Salaried and certain hourly employees hired on or after October 1, 2004, are not eligible for postretirement medical benefits. Salaried employees hired, rehired or transferred to salaried status on or after January 1, 2006, and certain hourly employees hired in 2006 or thereafter are eligible to participate in a defined contribution retirement plan. These employees are not eligible for defined benefit pension plan benefits.

The Medicare Act of 2003 introduced a prescription drug benefit under Medicare ("Medicare Part D") that provides several options for Medicare eligible participants and employers, including a federal subsidy payable to companies that elect to provide a retiree prescription drug benefit which is at least actuarially equivalent to Medicare Part D. During the third quarter of 2004, PPG concluded its evaluation of the provisions of the Medicare Act and decided to maintain its retiree prescription drug program and to take the subsidy available under the Medicare Act. The impact of the Medicare Act was accounted for in accordance with applicable accounting guidance, effective January 1, 2004. In addition, the plan was amended September 1, 2004, to provide that PPG management will determine the extent to which future increases in the cost of its retiree medical and prescription drug programs will be shared by certain retirees. The federal subsidy related to providing a retiree prescription drug benefit is not subject to U.S. federal income tax and is recorded as a reduction in annual net periodic benefit cost of other postretirement benefits.

In August 2007, the Company's U.S. other postretirement benefit plan was amended to consolidate the number of retiree health care options available for certain retirees and their dependents. The amendment was effective January 1, 2008. The amended plan also offered a fully-insured Medicare Part D prescription drug plan for certain retirees and their dependents. As such, beginning in 2008 PPG was no longer eligible to receive the subsidy provided under the Medicare Act of 2003 for these retirees and their dependents.

In October 2009, the Company decided, effective January 1, 2010, to return to a self-insured Medicare Part D prescription drug plan for certain retirees and their dependents that is at least actuarially equivalent to Medicare Part D. As such, effective January 1, 2010, PPG will be eligible to receive the subsidy provided under the Medicare Act of 2003 for these retirees and their dependents.

The following table sets forth the changes in projected benefit obligations ("PBO") (as calculated as of December 31), plan assets, the funded status and the amounts recognized in the accompanying consolidated balance sheet for the Company's defined benefit pension and other postretirement benefit plans:

| | *Pensions* | | *Other Postretirement Benefits* | |
|---|---|---|---|---|
| *(Millions)* | 2009 | 2008 | 2009 | 2008 |
| Projected benefit obligation, January 1 | $4,096 | $ 3,744 | $ 1,150 | $ 1,072 |
| Service cost | 67 | 72 | 20 | 21 |
| Interest cost | 244 | 258 | 68 | 66 |
| Plan amendments | 1 | 4 | 31 | — |
| Actuarial (losses) gains | 280 | (33) | (121) | 71 |
| Benefits paid | (253) | (241) | (70) | (69) |
| Foreign currency translation adjustments | 113 | (229) | 11 | (15) |
| Curtailment and special termination benefits | — | 4 | — | (1) |
| Acquisition | — | 528 | — | 5 |
| Divestiture | — | (12) | — | — |
| Other | (3) | 1 | — | — |
| ***Projected benefit obligation, December 31*** | $4,545 | $ 4,096 | $ 1,089 | $ 1,150 |
| Market value of plan assets, January 1 | $2,837 | $ 3,403 | | |
| Actual return on plan assets | 459 | (679) | | |
| Company contributions | 452 | 128 | | |
| Participant contributions | 4 | 5 | | |
| Benefits paid | (236) | (230) | | |
| Plan expenses and other-net | (9) | (10) | | |
| Foreign currency translation adjustments | 87 | (181) | | |
| Acquisition | — | 411 | | |
| Divestiture | — | (10) | | |
| ***Market value of plan assets, December 31*** | $3,594 | $ 2,837 | | |
| Funded Status | $ (951) | $(1,259) | $(1,089) | $(1,150) |
| Amounts recognized in the Consolidated Balance Sheet: | | | | |
| Accounts payable and accrued liabilities | (14) | (14) | (79) | (78) |
| Accrued pensions | (937) | (1,245) | — | — |
| Other postretirement benefits | — | — | (1,010) | (1,072) |
| ***Net liability recognized*** | $ (951) | $(1,259) | $(1,089) | $(1,150) |

# Notes to the Consolidated Financial Statements

The PBO is the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future pay increases. The accumulated benefit obligation ("ABO") is the actuarial present value of benefits attributable to employee service rendered to date, but does not include the effects of estimated future pay increases. The ABO for all defined benefit pension plans as of December 31, 2009 and 2008 was $4,245 million and $3,773 million, respectively.

The aggregate PBO and fair value of plan assets (in millions) for the pension plans with PBO in excess of plan assets were $4,544 and $3,594, respectively, as of December 31, 2009, and $4,096 and $2,837, respectively, as of December 31, 2008. The aggregate ABO and fair value of plan assets (in millions) for the pension plans with ABO in excess of plan assets were $4,061 and $3,386, respectively, as of December 31, 2009, and $3,772 and $2,835, respectively, as of December 31, 2008.

Amounts (pretax) not yet reflected in net periodic benefit cost and included in accumulated other comprehensive loss include the following:

| *(Millions)* | *Pensions* | | *Other Postretirement Benefits* | |
|---|---|---|---|---|
| | 2009 | 2008 | 2009 | 2008 |
| Accumulated net actuarial losses | $1,824 | $1,860 | $ 311 | $ 465 |
| Accumulated prior service cost (credit) | 3 | 9 | (22) | (67) |
| ***Total*** | $1,827 | $1,869 | $ 289 | $ 398 |

The accumulated net actuarial losses for pensions relate primarily to the actual return on plan assets being less than the expected return on plan assets in 2000-2002 and 2008 and a decline in the discount rate since 1999. The accumulated net actuarial losses for other postretirement benefits relate primarily to actual healthcare costs increasing at a higher rate than assumed during the 2001-2003 period and the decline in the discount rate. Since the accumulated net actuarial losses exceed 10% of the higher of the market value of plan assets or the PBO at the beginning of the year, amortization of such excess over the average remaining service period of active employees expected to receive benefits has been included in net periodic benefit costs for pension and other postretirement benefits in each of the last three years. Accumulated prior service cost (credit) is amortized over the future service periods of those employees who are active at the dates of the plan amendments and who are expected to receive benefits.

The increase (decrease) in accumulated other comprehensive loss (pretax) in 2009 relating to defined benefit pension and other postretirement benefits consists of:

| *(Millions)* | *Pensions* | *Other Postretirement Benefits* |
|---|---|---|
| Net actuarial loss (gain) arising during the year | $ 51 | $ (121) |
| New prior service cost | — | 31 |
| Amortization of actuarial loss | (129) | (34) |
| Amortization of prior service (cost) credit | (6) | 13 |
| Foreign currency translation adjustments and other | 42 | 2 |
| ***Net change*** | $ (42) | $ (109) |

The net actuarial loss arising during 2009 related to the Company's pension plans was primarily due to a decrease in the discount rate partially offset by greater than expected plan asset returns. The net actuarial gain arising during 2009 related to the Company's other postretirement benefit plans resulted from the decision to return to a self-insured program in 2010, partially offset by higher than expected benefit costs, an extension in the time period to reach the ultimate cost trend rate and a decrease in the discount rate.

The estimated amounts of accumulated net actuarial loss and prior service cost for the defined benefit pension plans that will be amortized from accumulated other comprehensive (loss) income into net periodic benefit cost in 2010 are $121 million and $4 million, respectively. The estimated amounts of accumulated net actuarial loss and prior service (credit) for the other postretirement benefit plans that will be amortized from accumulated other comprehensive (loss) income into net periodic benefit cost in 2010 are $20 million and $(6) million, respectively.

Net periodic benefit cost for the three years ended December 31, 2009, includes the following:

| | *Pensions* | | | *Other Postretirement Benefits* | | |
|---|---|---|---|---|---|---|
| *(Millions)* | 2009 | 2008 | 2007 | 2009 | 2008 | 2007 |
| Service cost | $ 67 | $ 72 | $ 69 | $ 20 | $ 21 | $ 24 |
| Interest cost | 244 | 258 | 214 | 68 | 66 | 64 |
| Expected return on plan assets | (228) | (283) | (267) | — | — | — |
| Amortization of prior service cost (credit) | 6 | 11 | 14 | (13) | (16) | (12) |
| Amortization of actuarial losses | 129 | 69 | 77 | 34 | 26 | 33 |
| Curtailments and special termination benefits | — | 39 | 12 | — | (5) | 5 |
| ***Net periodic benefit cost*** | $ 218 | $ 166 | $ 119 | $ 109 | $ 92 | $ 114 |

Net periodic benefit cost is included in "Cost of sales, exclusive of depreciation and amortization," "Selling, general and administrative" and "Research and development" in the accompanying consolidated statement of income.

*Assumptions*

The following weighted average assumptions were used to determine the benefit obligation for the Company's defined benefit pension and other postretirement plans as of December 31, 2009 and 2008:

| | 2009 | 2008 |
|---|---|---|
| Discount rate | 5.7% | 6.1% |
| Rate of compensation increase | 3.9% | 3.9% |

The following weighted average assumptions were used to determine the net periodic benefit cost for the Company's defined benefit pension and other postretirement benefit plans for the three years ended December 31, 2009:

| | 2009 | 2008 | 2007 |
|---|---|---|---|
| Discount rate | 6.1% | 6.2% | 5.7% |
| Expected return on assets | 7.9% | 8.0% | 8.3% |
| Rate of compensation increase | 3.9% | 4.1% | 4.0% |

These assumptions for each plan are reviewed on an annual basis. In determining the expected return on plan asset assumption, the Company evaluates the mix of investments that comprise each plan's assets and external forecasts of future long-term investment returns. The Company compares the expected return on plan asset assumption to actual historic returns to ensure reasonability. The expected return on plan assets weighted average assumption to be used in determining 2010 net periodic pension expense will be 7.9% (8.5% for the U.S. plans, which is the same rate used for 2009).

The weighted-average healthcare cost trend rate used was 7.3% for 2009 declining to 5.0% in the year 2017. For 2010, the weighted-average healthcare cost trend rate used will be 7.6% declining to 4.5% in the year 2024. These assumptions are reviewed on an annual basis. In selecting rates for current and long-term health care cost assumptions, the Company takes into consideration a number of factors including the Company's actual health care cost increases, the design of the Company's benefit programs, the demographics of the Company's active and retiree populations and expectations of future medical cost inflation rates. If these 2010 health care cost trend rates were increased or decreased by one percentage point per year, such increase or decrease would have the following effects:

| | *One-Percentage Point* | |
|---|---|---|
| *(Millions)* | *Increase* | *Decrease* |
| Increase (decrease) in the aggregate of service and interest cost components of annual expense | $11 | $ (9) |
| Increase (decrease) in the benefit obligation | $97 | $(81) |

*Contributions*

On August 17, 2006, the Pension Protection Act of 2006 ("PPA") was signed into law, changing the funding requirements for the Company's U.S. defined benefit pension plans beginning in 2008. Under the requirements of PPA, PPG did not have to make a mandatory contribution to these plans in 2009 and does not expect to have a mandatory contribution to these plans in 2010 because of management's intent to make voluntary contributions.

PPG made in 2009 and 2008 voluntary contributions to its U.S. defined benefit pension plans of approximately $360 million and $50 million, respectively. PPG expects to make voluntary contributions to its U.S. plans in 2010 of approximately $150 million. PPG also made in 2009 and 2008 contributions to its non-U.S. defined benefit pension plans of approximately $90 million and $69 million, respectively, some of which were required by local funding requirements. PPG expects to make mandatory contributions to its non-U.S. plans in 2010 of approximately $90 million.

*Benefit Payments*

The estimated pension benefits to be paid under the Company's defined benefit pension plans during the next five years are (in millions) $249 in 2010, $249 in 2011, $251 in 2012, $252 in 2013 and $336 in 2014 and are expected to aggregate $1,496 million for the five years thereafter. The estimated other postretirement benefits to be paid during the next five years are (in millions) $79 in 2010, $79 in 2011, $77 in 2012, $77 in 2013 and $77 in 2014 and are expected to aggregate $403 million for the five years thereafter. The Company expects to receive between $9 million and $12 million of subsidy under the Medicare Act of 2003 during each of the next five years and an aggregate amount of $76 million for the five years thereafter. The 2009 subsidy under the Medicare Act of 2003 of $1 million was received as of December 31, 2009.

*Plan Assets*

Each PPG sponsored defined benefit pension plan is managed in accordance with the requirements of local laws and regulations governing defined benefit pension plans for the exclusive purpose of providing pension benefits to participants and their beneficiaries. Investment committees comprised of PPG managers have fiduciary responsibility to oversee the management of pension plan assets by third party asset managers. Pension plan assets are held in trust by financial institutions and managed on a day-to-day basis by the asset managers. The asset managers receive a mandate from each investment committee that is aligned with the asset allocation targets established by each investment committee to achieve the plan's investment strategies. The performance of the asset managers is monitored and evaluated by the investment committees throughout the year.

Pension plan assets are invested to generate investment earnings over an extended time horizon to help fund the cost of benefits promised under the plans while mitigating investment risk. The assets allocation targets established for each pension plan are intended to diversify the investments among a variety of asset categories and among a variety of individual securities within each asset category to mitigate investment risk and provide each plan with sufficient liquidity to fund the payment of pension benefits to current retirees.

The following summarizes the weighted average target pension plan asset allocation as of December 31, 2009:

| *Asset Category* | *Target Asset Allocation as of Dec. 31, 2009* |
|---|---|
| Equity securities | 40–75% |
| Debt securities | 25–60% |
| Real estate | 0–10% |
| Other | 0–10% |

The fair values of the Company's pension plan assets at December 31, 2009, by asset category, are as follows:

| *(Millions)* | *Level 1*[1] | *Level 2*[1] | *Level 3*[1] | *Total* |
|---|---|---|---|---|
| *Asset Category* | | | | |
| Equity securities: | | | | |
| U.S. | | | | |
| Large cap | $ 80 | $ 596 | $ — | $ 676 |
| Small cap | 76 | 70 | — | 146 |
| PPG common stock | 155 | — | — | 155 |
| Non-U.S. | | | | |
| Developed markets | 75 | 562 | — | 637 |
| Debt securities: | | | | |
| Money market | 127 | — | — | 127 |
| Corporate[2] | | | | |
| U.S. | 629 | — | — | 629 |
| Western Europe | — | 208 | — | 208 |
| Diversified[3] | — | 242 | — | 242 |
| Government | | | | |
| U.S. | 341 | — | — | 341 |
| Western Europe | — | 186 | — | 186 |
| Other[4] | 120 | — | 40 | 160 |
| Real estate | — | — | 87 | 87 |
| ***Total*** | $1,603 | $1,864 | $127 | $3,594 |

(1) *These levels refer to the accounting guidance on fair value measurement described in Note 10, "Fair Value Measurement."*
(2) *This category represents investment grade debt securities from a diverse set of industry issuers.*
(3) *This category represents commingled funds invested in diverse portfolios of debt securities.*
(4) *This category includes mortgage-backed and asset backed debt securities, municipal bonds and other debt securities.*

The change in the fair value of the Company's Level 3 pension assets for the years ended December 31, 2009 was as follows:

| *(Millions)* | *Real Estate* | *Other Debt Securities* | *Total* |
|---|---|---|---|
| Balance, January 1, 2009 | $127 | $25 | $152 |
| Realized gain/(loss) | 6 | 2 | 8 |
| Unrealized gain/(loss) for positions still held | (45) | — | (45) |
| Transfers in/(out) | (1) | 12 | 11 |
| Currency | — | 1 | 1 |
| ***Balance, December 31, 2009*** | $ 87 | $40 | $127 |

Real Estate properties are externally appraised at least annually and conducted by reputable, independent appraisal firms. Property valuations are also reviewed on a regular basis and are adjusted if there has been a significant change in circumstances related to the property since the last valuation. Value adjustments for interim capital expenditures are only recognized to the extent that the valuation process acknowledges a corresponding increase in fair value.

Other debt securities consist of insurance contracts, which are externally valued by insurance companies based on the present value of the expected future cash flows.

### *Other Plans*

The Company incurred costs for multi-employer pension plans of $1 million in 2008 and 2007. Multi-employer healthcare costs totaled $1 million in 2008 and 2007. PPG's obligations under these plans were transferred as part of the sale of the automotive glass and services business (see Note 3, "Divestiture of Automotive Glass and Services Business").

The Company recognized expense for defined contribution pension plans in 2009, 2008 and 2007 of $25 million, $22 million and $14 million, respectively. As of December 31, 2009 and 2008, the Company's liability related to defined contribution pension plans was $17 million and $15 million, respectively.

The Company has a deferred compensation plan for certain key managers which allows them to defer a portion of their compensation in a phantom PPG stock account or other phantom investment accounts. The amount deferred earns a return based on the investment options selected by the participant. The amount owed to participants is an unfunded and unsecured general obligation of the Company. Upon retirement, death, disability, termination of employment, scheduled payment or unforeseen emergency the compensation deferred and related accumulated earnings are distributed in accordance with the participant's election in cash or in PPG stock, based on the accounts selected by the participant.

The plan provides participants with investment alternatives and the ability to transfer amounts between the phantom non-PPG stock investment accounts. To mitigate the impact on compensation expense of changes in the market value of the liability, the Company has purchased a portfolio of marketable securities that mirror the phantom non-PPG stock investment accounts selected by the participants except the money market accounts. The changes in market value of these securities are also included in earnings. Trading will occur in this portfolio to align the securities held with the participant's phantom non-PPG stock investment accounts except the money market accounts.

The cost of the deferred compensation plan, comprised of dividend equivalents accrued on the phantom PPG stock account, investment income and the change in market value of the liability, was expense in 2009 of $15 million, income in 2008 of $25 million and expense in 2007 of $12 million. These amounts are included in "Selling, general and administrative" in the accompanying consolidated statement of income. The change in market value of the investment portfolio was income in 2009 of $13 million, expense in 2008 of $27 million and income in 2007 of $9 million, of which $0.4 million, $1 million and $2 million was realized gains, respectively, and is also included in "Selling, general and administrative."

The Company's obligations under this plan, which are included in "Accounts payable and accrued liabilities" and "Other liabilities" in the accompanying consolidated balance sheet, totaled $96 million and $90 million as of December 31, 2009 and 2008, respectively, and the investments in marketable securities, which are included in "Investments" and "Other current assets" in the accompanying consolidated balance sheet, were $60 million and $51 million as of December 31, 2009 and 2008, respectively.

## 16. Commitments and Contingent Liabilities

PPG is involved in a number of lawsuits and claims, both actual and potential, including some that it has asserted against others, in which substantial monetary damages are sought. These lawsuits and claims, the most significant of which are described below, relate to contract, patent, environmental, product liability, antitrust and other matters arising out of the conduct of PPG's current and past business activities. To the extent that these lawsuits and claims involve personal injury and property damage, PPG believes it has adequate insurance; however, certain of PPG's insurers are contesting coverage with respect to some of these claims, and other insurers, as they had prior to the asbestos settlement described below, may contest coverage with respect to some of the asbestos claims if the settlement is not implemented. PPG's lawsuits and claims against others include claims against insurers and other third parties with respect to actual and contingent losses related to environmental, asbestos and other matters.

The result of any future litigation of such lawsuits and claims is inherently unpredictable. However, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG, including asbestos-related claims in the event the settlement described below does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized.

### *Legacy Antitrust Matters*

Twenty-nine glass antitrust cases were filed in federal courts, all of which were consolidated as a class action in the U.S. District Court for the Western District of Pennsylvania located in Pittsburgh, Pa. On October 19, 2005, PPG entered into a settlement agreement to settle the federal glass class action antitrust case. Pursuant to the settlement agreement, PPG agreed to pay $60 million and to bear up to $500,000 in settlement administration costs. As a result of the settlement, PPG also paid $900,000 pursuant to a pre-existing contractual obligation to a plaintiff that did not participate in the federal glass class action antitrust case. Separately, PPG entered into settlement agreements to resolve all claims of indirect purchasers of flat glass in California and Tennessee. Notwithstanding that PPG has settled these glass class action antitrust cases, PPG continues to believe that there was no wrongdoing on the part of the Company.

Approximately 60 cases alleging antitrust violations in the automotive refinish industry were filed in various state and federal jurisdictions. Approximately 55 federal cases were consolidated as a class action in the U.S. District Court for the Eastern District of Pennsylvania located in Philadelphia, Pa. On September 14, 2006, PPG agreed to settle the federal class action for $23 million. Neither PPG's investigation conducted through its counsel of the allegations in these cases nor the discovery conducted in the case has identified a basis for the plaintiffs' allegations that PPG participated in a price-fixing conspiracy in the U.S. automotive refinish industry.

Class action lawsuits that mimic the federal class action were filed in five states (California, Maine, Massachusetts, Tennessee and Vermont) pursuant to state statutes on behalf of indirect purchasers of automotive refinish products. A similar suit brought in a federal court in New York City was dismissed on May 8, 2007. In the fourth quarter of 2007, the case in Tennessee was dismissed. PPG believes that there was no wrongdoing on its part, and believes it had meritorious defenses to the independent state court cases. Notwithstanding the foregoing, PPG has settled the cases in California, Maine, Massachusetts and Vermont.

# Notes to the Consolidated Financial Statements

*Current Antitrust Matters*

Several complaints were filed in late 2007 and early 2008 in different federal courts naming PPG and other flat glass producers as defendants in purported antitrust class actions. The complaints allege that the defendants conspired to fix, raise, maintain and stabilize the price and the terms and conditions of sale of flat glass in the United States in violation of federal antitrust laws. In June 2008, these cases were consolidated into one federal court class action in Pittsburgh, Pa. Many allegations in the complaints are similar to those raised in ongoing proceedings by the European Commission in which fines were levied against other flat glass producers arising out of alleged antitrust violations. PPG is not involved in any of the proceedings in Europe. PPG divested its European flat glass business in 1998. A complaint containing allegations substantially similar to the U.S. litigation was filed in the Superior Court in Windsor, Ontario, Canada in August 2008 regarding the sale of flat glass in Canada. PPG is aware of no wrongdoing or conduct on its part in the operation of its flat glass businesses that violated any antitrust laws, and it intends to vigorously defend its position.

*Asbestos Matters*

For over 30 years, PPG has been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos. Most of PPG's potential exposure relates to allegations by plaintiffs that PPG should be liable for injuries involving asbestos-containing thermal insulation products, known as Unibestos, manufactured and distributed by Pittsburgh Corning Corporation ("PC"). PPG and Corning Incorporated are each 50% shareholders of PC. PPG has denied responsibility for, and has defended, all claims for any injuries caused by PC products. As of the April 16, 2000 order which stayed and enjoined asbestos claims against PPG (as discussed below), PPG was one of many defendants in numerous asbestos-related lawsuits involving approximately 114,000 claims served on PPG. During the period of the stay, PPG generally has not been aware of the dispositions, if any, of these asbestos claims.

*Background of PC Bankruptcy Plan of Reorganization*

On April 16, 2000, PC filed for Chapter 11 Bankruptcy in the U.S. Bankruptcy Court for the Western District of Pennsylvania located in Pittsburgh, Pa. Accordingly, in the first quarter of 2000, PPG recorded an after-tax charge of $35 million for the write-off of all of its investment in PC. As a consequence of the bankruptcy filing and various motions and orders in that proceeding, the asbestos litigation against PPG (as well as against PC) has been stayed and the filing of additional asbestos suits against them has been enjoined, until 30 days after the effective date of a confirmed plan of reorganization for PC substantially in accordance with the settlement arrangement among PPG and several other parties discussed below. The stay may be terminated if the Bankruptcy Court determines that such a plan will not be confirmed, or the settlement arrangement set forth below is not likely to be consummated.

On May 14, 2002, PPG announced that it had agreed with several other parties, including certain of its insurance carriers, the official committee representing asbestos claimants in the PC bankruptcy, and the legal representatives of future asbestos claimants appointed in the PC bankruptcy, on the terms of a settlement arrangement relating to certain asbestos claims against PPG and PC (the "2002 PPG Settlement Arrangement").

On March 28, 2003, Corning Incorporated announced that it had separately reached its own arrangement with the representatives of asbestos claimants for the settlement of certain asbestos claims against Corning and PC (the "2003 Corning Settlement Arrangement").

The terms of the 2002 PPG Settlement Arrangement and the 2003 Corning Settlement Arrangement were incorporated into a bankruptcy reorganization plan for PC along with a disclosure statement describing the plan, which PC filed with the Bankruptcy Court on April 30, 2003. Amendments to the plan and disclosure statement were subsequently filed. On November 26, 2003, after considering objections to the second amended disclosure statement and plan of reorganization, the Bankruptcy Court entered an order approving such disclosure statement and directing that it be sent to creditors, including asbestos claimants, for voting. In March 2004, the second amended PC plan of reorganization (the "second amended PC plan of reorganization") received the required votes to approve the plan with a channeling injunction for present and future asbestos claimants under §524(g) of the Bankruptcy Code. After voting results for the second amended PC plan of reorganization were received, the Bankruptcy Court judge conducted a hearing regarding the fairness of the settlement, including whether the plan would be fair with respect to present and future claimants, whether such claimants would be treated in substantially the same manner, and whether the protection provided to PPG and its participating insurers would be fair in view of the assets they would convey to the asbestos settlement trust (the "Trust") to be established as part of the second amended PC plan of reorganization. At that hearing, creditors and other parties in interest raised objections to the second amended PC plan of reorganization. Following that hearing, the Bankruptcy Court scheduled oral arguments for the contested items.

The Bankruptcy Court heard oral arguments on the contested items on November 17-18, 2004. At the conclusion of the hearing, the Bankruptcy Court agreed to consider certain post-hearing written submissions. In a further development, on February 2, 2005, the Bankruptcy Court established a briefing schedule to address whether certain aspects of a decision of the U.S. Third Circuit Court of Appeals in an unrelated case have any applicability to the PC plan of reorganization. Oral arguments on these matters were subsequently held in March 2005. During an omnibus hearing on February 28, 2006, the Bankruptcy Court judge stated that she was prepared to rule on the PC plan of reorganization in the near future, provided certain amendments were made to the plan. Those amendments were filed, as directed, on March 17, 2006. After further conferences and supplemental briefings, in December 2006, the court denied confirmation of the second amended PC plan of reorganization, on the basis that the plan was too broad in the treatment of allegedly independent asbestos claims not associated with PC.

*Terms of 2002 PPG Settlement Arrangement*

PPG had no obligation to pay any amounts under the 2002 PPG Settlement Arrangement until 30 days after the second amended PC plan of reorganization was finally approved by an appropriate court order that was no longer subject to appellate review (the "Effective Date"). If the second amended PC plan of reorganization had been approved as proposed, PPG and certain of its insurers (along with PC) would have made payments on the Effective Date to the Trust, which would have provided the sole source of payment for all present and future asbestos bodily injury claims against PPG, its subsidiaries or PC alleged to be caused by the manufacture, distribution or sale of asbestos products by these companies. PPG would have conveyed the following assets to the Trust: (i) the stock it owns in PC and Pittsburgh Corning Europe, (ii) 1,388,889 shares of PPG's common stock and (iii) aggregate cash payments to the Trust of approximately $998 million, payable according to a fixed payment schedule over 21 years, beginning on June 30, 2003, or, if later, the Effective Date. PPG would have had the right, in its sole discretion, to prepay these cash payments to the Trust at any time at a discount rate of 5.5% per annum as of the prepayment date. In addition to the conveyance of these assets, PPG would have paid $30 million in legal fees and expenses on behalf of the Trust to recover proceeds from certain historical insurance assets, including policies issued by certain insurance carriers that were not participating in the settlement, the rights to which would have been assigned to the Trust by PPG.

Under the proposed 2002 PPG Settlement Arrangement, PPG's participating historical insurance carriers would have made cash payments to the Trust of approximately $1.7 billion between the Effective Date and 2023. These payments could also have been prepaid to the Trust at any time at a discount rate of 5.5% per annum as of the prepayment date. In addition, as referenced above, PPG would have assigned to the Trust its rights, insofar as they related to the asbestos claims to have been resolved by the Trust, to the proceeds of policies issued by certain insurance carriers that were not participating in the 2002 PPG Settlement Arrangement and from the estates of insolvent insurers and state insurance guaranty funds.

Under the proposed 2002 PPG Settlement Arrangement, PPG would have granted asbestos releases to all participating insurers, subject to a coverage-in-place agreement with certain insurers for the continuing coverage of premises claims (discussed below). PPG would have granted certain participating insurers full policy releases on primary policies and full product liability releases on excess coverage policies. PPG would have also granted certain other participating excess insurers credit against their product liability coverage limits.

If the second amended PC plan of reorganization incorporating the terms of the 2002 PPG Settlement Arrangement and the 2003 Corning Settlement Arrangement had been approved by the Bankruptcy Court, the Court would have entered a channeling injunction under §524(g) and other provisions of the Bankruptcy Code, prohibiting present and future claimants from asserting bodily injury claims after the Effective Date against PPG or its subsidiaries or PC relating to the manufacture, distribution or sale of asbestos-containing products by PC or PPG or its subsidiaries. The injunction would have also prohibited codefendants in those cases from asserting claims against PPG for contribution, indemnification or other recovery. All such claims would have been filed with the Trust and only paid from the assets of the Trust.

*Modified Third Amended PC Plan of Reorganization*

To address the issues raised by the Bankruptcy Court in its December 2006 ruling, the interested parties engaged in extensive negotiations regarding the terms of a third amended PC plan of reorganization, including modifications to the 2002 PPG Settlement Arrangement. A modified third amended PC plan of reorganization (the "third amended PC plan of reorganization"), including a modified PPG settlement arrangement (the "2009 PPG Settlement Arrangement"), was filed with the Bankruptcy Court on January 29, 2009. The parties also filed a disclosure statement describing the third amended PC plan of reorganization with the court. The third amended PC plan of reorganization also includes a modified settlement arrangement of Corning Incorporated.

Several creditors and other interested parties filed objections to the disclosure statement. Those objections were overruled by the Bankruptcy Court by order dated July 6, 2009 approving the disclosure statement. The third amended PC plan of reorganization and disclosure statement have been sent to creditors, including asbestos claimants, for voting. In 2004, creditors and claimants voted overwhelmingly in favor of the second amended PC plan of reorganization, which included the 2002 PPG Settlement Arrangement. Assuming a favorable vote by creditors and claimants on the third amended PC plan of reorganization, the Bankruptcy Court would then conduct a hearing regarding the fairness of the proposed plan, including whether (i) the plan would be fair with respect to present and future claimants, (ii) such claimants would be treated in substantially the same manner, and (iii) the protection provided to PPG and its participating insurers would be fair in view of the assets they would convey to the Trust to be established as part of the third amended PC plan of reorganization. At that hearing, creditors and parties in interest could raise objections to the third amended PC plan of reorganization. The hearing is now scheduled for April 2010. Following that hearing, the Bankruptcy Court, after considering objections to the third amended PC plan of reorganization, will enter a confirmation order if all requirements to confirm a plan of reorganization under the Bankruptcy Code have been satisfied. Such an order could be appealed to the U.S. District Court for the Western District of Pennsylvania. Assuming that the District Court approves a confirmation order, interested parties could appeal the order to the U.S. Third Circuit Court of Appeals and subsequently could seek review by the U.S. Supreme Court.

The 2009 PPG Settlement Arrangement will not become effective until the third amended PC plan of reorganization is finally approved by an appropriate court order that is no longer subject to appellate review, and PPG's initial contributions will not be due until 30 business days thereafter (the "Funding Effective Date").

*Asbestos Claims Subject to Bankruptcy Court's Channeling Injunction*

If the third amended PC plan of reorganization is approved by the Bankruptcy Court and becomes effective, a channeling injunction will be entered under §524(g) of the Bankruptcy Code prohibiting present and future claimants from asserting asbestos claims against PC. With regard to PPG, the channeling injunction will prohibit present and future claimants from asserting claims against PPG that arise, in whole or in part, out of exposure to Unibestos, or any other asbestos or asbestos-containing products actually or allegedly manufactured, sold and/or distributed by PC, or asbestos on or emanating from any PC premises. The injunction will also prohibit codefendants in these cases that are subject to the channeling injunction from asserting claims against PPG for contribution, indemnification or other recovery. The channeling injunction will also preclude the prosecution of claims against PPG arising from alleged exposure to asbestos or asbestos-containing products to the extent that a claimant is alleging or seeking to impose liability, directly or indirectly, for the conduct of, claims against or demands on PC by reason of PPG's: (i) ownership of a financial interest in PC; (ii) involvement in the management of PC, or service as an officer, director or employee of PC or a related party; (iii) provision of insurance to PC or a related party; or (iv) involvement in a financial transaction affecting the financial condition of PC or a related party. The foregoing PC related claims are referred to as "PC Relationship Claims" and constitute, in PPG management's opinion, the vast majority of the pending asbestos personal injury claims against PPG. All claims channeled to the Trust will be paid only from the assets of the Trust.

*Asbestos Claims Retained by PPG*

The channeling injunction provided for under the third amended PC plan of reorganization will not extend to any claim against PPG that arises out of exposure to any asbestos or asbestos-containing products actually or allegedly manufactured, sold and/or distributed by PPG or its subsidiaries that is not a PC Relationship Claim, and in this respect differs from the channeling injunction contemplated by the second amended PC plan of reorganization filed in 2003. While management believes that the vast majority of the approximately 114,000 claims against PPG alleging personal injury from exposure to asbestos relate to products manufactured, distributed or sold by PC, the potential liability for any non-PC Relationship Claims will be retained by PPG. Because a determination of whether an asbestos claim is a non-PC Relationship Claim would typically not be known until shortly before trial and because the filing and prosecution of asbestos claims (other than certain premises claims) against PPG has been enjoined since April 2000, the actual number of non-PC Relationship Claims that may be pending at the expiration of the stay or the number of additional claims that may be filed against PPG in the future cannot be determined at this time. PPG does not expect the Bankruptcy Court to lift the stay until after confirmation or rejection of the third amended PC plan of reorganization. PPG intends to defend against all such claims vigorously and their ultimate resolution in the court system is expected to occur over a period of years.

In addition, similar to what was contemplated by the second amended PC plan of reorganization, the channeling injunction will not extend to claims against PPG alleging personal injury caused by asbestos on premises owned, leased or occupied by PPG (so called "premises claims"), which generally have been subject to the stay imposed by the Bankruptcy Court. Historically, a small proportion of the claims against PPG and its subsidiaries have been premises claims, and based upon review and analysis, PPG believes that the number of premises claims currently comprises less than 2% of the total asbestos related claims against PPG. Beginning in late 2006, the Bankruptcy Court lifted the stay with respect to certain premises claims against PPG. As a result, PPG and its primary insurers have settled approximately 500 premises claims. PPG's insurers agreed to provide insurance coverage for a major portion of the payments made in connection with the settled claims, and PPG accrued the portion of the settlement amounts not covered by insurance. PPG and its primary insurers are evaluating the voluminous factual, medical, and other relevant information pertaining to approximately 560 additional claims that are being considered for potential settlement. Premises claims remain subject to the stay, as outlined above, although certain claimants have requested the Court to lift the stay with respect to these claims and the stay has been lifted as to some claims. PPG believes that any financial exposure resulting from such premises claims, taking into account available insurance coverage, will not have a material adverse effect on PPG's consolidated financial position, liquidity or results of operations.

*PPG's Funding Obligations*

PPG has no obligation to pay any amounts under the third amended PC plan of reorganization until the Funding Effective Date. If the third amended PC plan of reorganization is approved, PPG and certain of its insurers will make the following contributions to the Trust. On the Funding Effective Date, PPG will relinquish any claim to its equity interest in PC, convey the stock it owns in Pittsburgh Corning Europe and transfer 1,388,889 shares of PPG's common stock or cash equal to the fair value of such shares as defined in the 2009 PPG Settlement Arrangement. PPG will make aggregate cash payments to the Trust of approximately $825 million, payable according to a fixed payment schedule over the period ending in 2023. The first payment is due on the Funding Effective Date. PPG would have the right, in its sole discretion, to prepay these cash payments to the Trust at any time at a discount rate of 5.5% per annum as of the prepayment date. In addition, PPG will contribute to the Trust any net proceeds it recovers from claims against certain non-participating insurers that previously were participating insurers, and will use reasonable efforts to pursue such claims. PPG's historical insurance carriers participating in the third amended PC plan of reorganization will also make cash payments to the Trust of approximately $1.6 billion between the Funding Effective Date and 2027. These payments could also be prepaid to the Trust at any time at a discount rate of 5.5% per annum as of the prepayment date. PPG will grant asbestos releases and indemnifications to all participating insurers, subject to amended coverage-in-place arrangements with certain insurers for remaining coverage of premises claims. PPG will grant certain participating insurers full policy releases on primary policies and full product liability releases on excess coverage policies. PPG will also grant certain other participating excess insurers credit against their product liability coverage limits.

PPG's obligation under the 2009 PPG Settlement Arrangement at December 31, 2008 was $162 million less than the amount that would have been due under the 2002 PPG Settlement Arrangement. This reduction is attributable to a number of negotiated provisions in the 2009 PPG Settlement Arrangement, including the provisions relating to the channeling injunction under which PPG retains liability for any non-PC Relationship Claims. PPG will retain such amount as a reserve for asbestos-related claims that will not be channeled to the Trust, as this amount represents PPG's best estimate of its liability for these claims. PPG does not have sufficient current claim information or settlement history on which to base a better estimate of this liability, in light of the fact that the Bankruptcy Court's stay has been in effect since 2000. As a result, PPG's reserve at December 31, 2009 for asbestos-related claims that will not be channeled to the Trust is $162 million. In addition, under the 2009 PPG Settlement Arrangement, PPG will retain for its own account rights to recover proceeds from certain historical insurance assets, including policies issued by certain insurance carriers that never were participating insurers. Rights to recover these proceeds would have been assigned to the Trust by PPG under the 2002 PPG Settlement Arrangement.

Following the effective date of the third amended PC plan of reorganization and the lifting of the Bankruptcy Court stay, PPG will monitor the activity associated with asbestos claims which are not channeled to the Trust pursuant to the third amended PC plan of reorganization, and evaluate its estimated liability for such claims and related insurance assets then available to the Company as well as underlying assumptions on a periodic basis to determine whether any adjustment to its reserve for these claims is required.

Of the total obligation of $772 million under the 2009 PPG Settlement Arrangement at December 31, 2009, $534 million is reported as a current liability and the present value of the payments due in the years 2011 to 2023 totaling $238 million is reported as a non-current liability in the accompanying consolidated balance sheet as of December 31, 2009. The future accretion of the non-current portion of the liability will total $150 million and be reported as expense in the consolidated statement of income over the period through 2023, as follows (in millions):

| | |
|---|---|
| 2010 | $ 14 |
| 2011 | 14 |
| 2012 – 2023 | 122 |
| Total | $150 |

# Notes to the Consolidated Financial Statements

The following table summarizes the impact on PPG's financial statements for the three years ended December 31, 2009 resulting from the 2002 and 2009 PPG Settlement Arrangements including the change in fair value of the stock to be transferred to the Trust and the equity forward instrument (see Note 12, "Derivative Financial Instruments and Hedge Activities") and the increase in the net present value of the future payments to be made to the Trust.

| | *Consolidated Balance Sheet* | | | |
|---|---|---|---|---|
| | *Asbestos Settlement Liability* | | *Equity Forward (Asset) Liability* | *Pretax Charge* |
| *(Millions)* | *Current* | *Long-term* | | |
| *Balance as of January 1, 2007* | $ 557 | $332 | $(14) | $ 28 |
| Change in fair value: PPG stock | 8 | — | — | 8 |
| Equity forward instrument | — | — | (4) | (4) |
| Accretion of asbestos liability | — | 20 | — | 20 |
| Reclassification | 28 | (28) | — | — |
| *Balance as of and Activity for the year ended December 31, 2007* | $ 593 | $324 | $(18) | $ 24 |
| Change in fair value: PPG stock | (39) | — | — | (39) |
| Equity forward instrument | — | — | 24 | 24 |
| Accretion of asbestos liability | — | 19 | — | 19 |
| Reclassification | 38 | (38) | — | — |
| Impact of 2009 PPG Settlement Arrangement[1] | (101) | (61) | — | — |
| *Balance as of and Activity for the year ended December 31, 2008* | $ 491 | $244 | $ 6 | $ 4 |
| Change in fair value: PPG stock | 23 | — | — | 23 |
| Equity forward instrument | — | — | (24) | (24) |
| Accretion of asbestos liability | — | 14 | — | 14 |
| Reclassification | 20 | (20) | — | — |
| ***Balance as of and Activity for the year ended December 31, 2009*** | $ 534 | $238 | $(18) | $ 13 |

*(1) Amounts have been reclassified to Other liabilities and retained as a reserve for asbestos-related claims that will not be channeled to the Trust. The balance in this reserve at December 31, 2009 remains $162 million.*

The fair value of the equity forward instrument is included as an other current asset as of December 31, 2009 and an other current liability as of December 31, 2008 in the accompanying consolidated balance sheet. Payments under the fixed payment schedule require annual payments that are due each June. The current portion of the asbestos settlement liability included in the accompanying consolidated balance sheet as of December 31, 2009, consists of all such payments required through June 2010, the fair value of PPG's common stock and the value of PPG's investment in Pittsburgh Corning Europe. The amount due June 30, 2011, of $9 million and the net present value of the remaining payments is included in the long-term asbestos settlement liability in the accompanying consolidated balance sheet as of December 31, 2009.

### *Enjoined Claims*

If the 2009 PPG Settlement Arrangement is not implemented, for any reason, and the Bankruptcy Court stay expires, PPG intends to defend vigorously the pending and any future asbestos claims, including PC Relationship Claims, asserted against it and its subsidiaries. PPG continues to assert that it is not responsible for any injuries caused by PC products, which it believes account for the vast majority of the pending claims against PPG. Prior to 2000, PPG had never been found liable for any PC-related claims. In numerous cases, PPG was dismissed on motions prior to trial, and in others PPG was released as part of settlements by PC. PPG was found not responsible for PC-related claims at trial in two cases. In January 2000, one jury found PPG, for the first time, partly responsible for injuries to five plaintiffs alleged to be caused by PC products. PPG intends to appeal that adverse verdict in the event the 2009 PPG Settlement Arrangement does not become effective, or the stay is lifted as to these claims, which are the subject of a motion to lift the stay. Although PPG has successfully defended asbestos claims brought against it in the past, in view of the number of claims, and the significant verdicts that other companies have experienced in asbestos litigation, the result of any future litigation of such claims is inherently unpredictable.

### *Environmental Matters*

It is PPG's policy to accrue expenses for environmental contingencies when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Reserves for environmental contingencies are exclusive of claims against third parties and are generally not discounted. In management's opinion, the Company operates in an environmentally sound manner and the outcome of the Company's environmental contingencies will not have a material effect on PPG's financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. Management anticipates that the resolution of the Company's environmental contingencies will occur over an extended period of time.

As of December 31, 2009 and 2008, PPG had reserves for environmental contingencies totaling $287 million and $299 million, respectively, of which $59 million and $44 million, respectively, were classified as current liabilities. The reserve at December 31, 2009 included $188 million for environmental contingencies associated with PPG's former chromium manufacturing plant in Jersey City, N.J. ("Jersey City"), $44 million for environmental contingencies associated with the Calcasieu River estuary and three operating plant sites in PPG's chemicals business, $29 million for environmental contingencies related to former SigmaKalon operations and $26 million for other environmental contingencies, including PPG's estimated obligations related to sites on the National Priority List. The reserve at December 31, 2008 included $193 million for environmental contingencies associated with the former chromium manufacturing plant in Jersey City, $48 million for environmental contingencies associated with the Calcasieu River estuary and three operating plant sites in PPG's chemical business, $31 million for environmental contingencies related to former SigmaKalon operations, and $27 million for other environmental contingencies, including National Priority List sites. Pretax charges against income for environmental remediation costs in 2009, 2008 and 2007 totaled $11 million, $15 million and $12 million, respectively, and are included in "Other charges" in the accompanying consolidated statement of income. Cash outlays related to such environmental remediation aggregated $24 million, $24 million, and $19 million in 2009, 2008 and 2007, respectively. The impact of foreign currency increased the liability by $1 million in 2009 and decreased the liability by $5 million in 2008.

The Company's continuing efforts to analyze and assess the environmental issues associated with a former chromium manufacturing plant site located in Jersey City, and at the Calcasieu River Estuary located near the Lake Charles, La., chlor-alkali plant resulted in a pre-tax charge of $173 million in the third quarter of 2006 for the estimated costs of remediating these sites. These charges for estimated environmental remediation costs in 2006 were significantly higher than PPG's historical range. Excluding 2006, pretax charges against income have ranged between $10 million and $49 million per year for the past 15 years. PPG anticipates that charges against income in 2010 for environmental remediation costs will be within this historical range.

Management expects cash outlays for environmental remediation costs to be approximately $70 million in 2010 and to range from $50 million to $70 million annually through 2014. It is possible that technological, regulatory and enforcement developments, the results of environmental studies and other factors could alter the Company's expectations with respect to charges against income and future cash outlays. Specifically, the level of expected cash outlays is highly dependent upon activity related to the former chromium manufacturing plant site in New Jersey as discussed below.

Since 1990, PPG has remediated 47 of 61 residential and nonresidential sites under the 1990 Administrative Consent Order ("ACO"). The most significant of the 14 remaining sites is the former chromium manufacturing location in Jersey City. The principal contaminant of concern is hexavalent chromium. Based on current estimates, at least 500,000 tons of soil may be potentially impacted for all remaining sites. The Company submitted a feasibility study work plan to the New Jersey Department of Environmental Protection ("NJDEP") in October 2006 that includes a review of the available remediation technology alternatives for the former chromium manufacturing location. Under the feasibility study work plan, remedial alternatives which will be assessed include, but are not limited to, soil excavation and offsite disposal in a licensed disposal facility, in situ chemical stabilization of soil and groundwater, and in situ solidification of soils. PPG has submitted a Remedial Action Work Plan for one other of the remaining sites under the ACO. This proposal has been submitted to the NJDEP for approval. In addition, investigation activities are ongoing for an additional six sites covered by the ACO adjacent to the former manufacturing site with completion expected in 2010 to 2011. Investigation activities have not yet begun for the remaining six sites covered by the ACO, but PPG believes the results of the study at the former chromium manufacturing location will also provide the Company with relevant information concerning remediation alternatives at these sites.

As a result of the extensive analysis undertaken in connection with the preparation and submission of the feasibility study work plan for the former chromium manufacturing location described above, the Company recorded a pretax charge of $165 million in the third quarter of 2006. The charge included estimated costs for remediation at the 14 remaining ACO sites, including the former manufacturing site, and for the resolution of litigation filed by NJDEP in May 2005 as discussed below. The principal estimated cost elements of the third quarter 2006 charge and of the remaining reserve at December 31, 2009 were based on competitively derived or readily available remediation industry cost data for representative remedial options, e.g., excavation and in situ stabilization/solidification. The major cost components are (i) in place soil treatment and transportation and disposal of excavated soil and (ii) construction services (related to soil excavation, groundwater management and site security), which account for approximately 50% and 30% of the reserve, respectively, as of December 31, 2009. The reserve also includes estimated costs for remedial investigation, interim remedial measures, engineering and project management. The most significant assumptions underlying the reserve are those related to the extent and concentration of chromium impacts in the soil, as these will determine the quantity of soil that must be treated in place, the quantity that will have to be excavated and transported for offsite disposal, and the nature of disposal required. The charges are exclusive of any third party indemnification, as management does not expect to receive any such amounts.

# Notes to the Consolidated Financial Statements

In May 2005, the NJDEP filed a complaint against PPG and two other former chromium producers seeking to hold the parties responsible for a further 53 sites where the source of chromium contamination is not known and to recover costs incurred by the agency in connection with its response activities at certain of those sites. During the third quarter of 2008, the parties reached an agreement in principle on all claims relating to these 53 sites (the "Orphan Sites Settlement"). Under the terms of the proposed Orphan Sites Settlement, PPG would, among other things, accept responsibility for remediation of 6 of the 53 sites, one half of the cost for remediating 9 sites where chrome ore processing residue was used as fill in connection with the installation or repair of sewer pipes owned by the City, reimburse the NJDEP for a portion of past costs in the amount of $5 million and be responsible for the NJDEP's oversight costs associated with the sites for which PPG is wholly or partially responsible. The proposed Orphan Sites Settlement would not affect PPG's responsibilities for the 14 remaining unremediated sites covered by PPG's ACO. However, a settlement agreement among PPG, NJDEP and Jersey City has been reached and memorialized in the form of a Judicial Consent Order (the "JCO") that was entered by the Court on June 26, 2009. PPG's remedial obligations under the ACO with NJDEP have been incorporated into the JCO. Pursuant to the JCO, a new process has been established for the review of the technical reports PPG must submit for the investigation and remedy selection for the 14 ACO sites and the 6 sites for which PPG has accepted sole responsibility under the terms of the proposed Orphan Sites Settlement (i.e. 20 PPG Sites). The JCO also provides for the appointment of a court-approved Site Administrator who will be responsible for establishing a master schedule for the remediation of the 20 PPG sites. The JCO establishes a goal, based on currently applicable remedial provisions, to remediate soils and sources of contamination at the PPG sites as expeditiously as possible with a five year goal for completion in accordance with a master schedule to be developed by the Site Administrator. On July 6, 2009, former United States Environmental Protection Agency Deputy Administrator, Michael McCabe, was appointed as Site Administrator under the JCO. The JCO also resolves reparation claims by the City of Jersey City with the payment of $1.5 million over a 5 year time period. The JCO does not otherwise affect PPG's responsibility for the remediation of the 14 ACO sites. PPG's estimated costs under the proposed Orphan Sites Settlement and the JCO are included in the December 31, 2009 reserve for New Jersey chrome environmental remediation matters.

Multiple future events, including completion of feasibility studies, remedy selection, remedy design and remedy implementation involving governmental agency action or approvals will be required, and considerable uncertainty exists regarding the timing of these future events for the remaining 14 sites covered by the ACO and the six orphan sites for which PPG has accepted responsibility under the terms of a proposed Orphan Sites Settlement. Final resolution of these events is expected to occur over an extended period of time. However, based on current information, it is expected that feasibility study approval and remedy selection could occur during 2010 to 2011 for the former chromium plant and six adjacent sites, while remedy design and approval could occur during 2010 to 2011, and remedy implementation could occur during 2012 to 2014, with some period of long-term monitoring for remedy effectiveness to follow related to these seven sites. One other site is expected to be remediated during 2010 to 2011. Activities at the six other ACO sites and the six orphan sites have not yet begun and the timing of future events related to these sites cannot be predicted at this time. As these events occur and to the extent that the cost estimates of the environmental remediation remedies change, the existing reserve for this environmental remediation will be adjusted. Based on current information, PPG expects cash outlays related to remediation efforts in New Jersey to range from $30 million to $40 million in 2010 and $30 million to $50 million annually from 2011 through 2014.

In Lake Charles, the U.S. Environmental Protection Agency ("USEPA") completed an investigation of contamination levels in the Calcasieu River Estuary and issued a Final Remedial Investigation Report in September 2003, which incorporates the Human Health and Ecological Risk Assessments, indicating that elevated levels of risk exist in the estuary. PPG and other potentially responsible parties are performing a feasibility study under the authority of the Louisiana Department of Environmental Quality ("LDEQ"). PPG's exposure with respect to the Calcasieu Estuary is focused on the lower few miles of Bayou d'Inde, a small tributary to the Calcasieu Estuary near PPG's Lake Charles facility, and about 150 to 200 acres of adjacent marshes. The Company and three other potentially responsible parties submitted a draft remediation feasibility study report to the LDEQ in October 2006. The proposed remedial alternatives include sediment dredging, sediment capping, and biomonitoring of fish and shellfish. Principal contaminants of concern which may require remediation include various metals, dioxins and furans, and polychlorinated biphenyls. In response to agency comments on the draft study, the companies conducted additional investigations and submitted a revised feasibility report to the agencies in the third quarter of 2008. Government officials have indicated that a U.S. Army Corps of Engineers' study has concluded that the proposed remedy will not adversely affect drainage in communities adjacent to Bayou d'Inde. Consequently, the government and potentially responsible parties are in the process of resolving final comments on the feasibility report, which could be issued for public comment in early 2010.

Multiple future events, such as feasibility study approval, remedy selection, remedy design and remedy implementation involving agency action or approvals related to the Calcasieu River estuary will be required and considerable uncertainty exists regarding the timing of these future events. Final resolution of these events is expected to occur over an extended period of time. However, based on currently available information it is expected that feasibility study approval and remedy selection could occur in 2010, remedy design and approval could occur during 2010 to 2011, and remedy implementation could occur during 2011 to 2014, with some period of long-term monitoring for remedy effectiveness to follow. In addition, PPG's obligation related to any potential remediation will be dependent in part upon the final allocation of responsibility among the potentially responsible parties. Negotiations with respect to this allocation are ongoing, but the outcome is uncertain.

In addition to the amounts currently reserved for environmental remediation, the Company may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $300 million, which range is unchanged since December 31, 2008. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence. This range of reasonably possible unreserved loss relates to environmental matters at a number of sites; however, about 50% of this range relates to additional costs at the former chromium manufacturing plant site and related sites in Jersey City, N.J., and about 30% relates to the Calcasieu River Estuary and the three operating PPG plant sites in the Company's chemicals businesses. The loss contingencies related to these sites include significant unresolved issues such as the nature and extent of contamination at these sites and the methods that may have to be employed to remediate them.

The status of the remediation activity at the sites in New Jersey and at the Calcasieu River Estuary in Louisiana and the factors that could result in the need for additional environmental remediation reserves at those sites are described above. Initial remedial actions are occurring at the three operating plant sites in the chemicals businesses. These three operating plant sites are in Barberton, Ohio, Lake Charles, La., and Natrium, W.Va. At Barberton, PPG has completed a Facility Investigation and Corrective Measure Study ("CMS") under USEPA's Resource Conservation and Recycling Act ("RCRA") Corrective Action Program. Currently, PPG is implementing the remediation alternatives recommended in the CMS using a performance-based approach with USEPA Region V oversight. However, USEPA V is transferring its oversight authority to the Ohio Environmental Protection Agency (OEPA) which should be completed in early 2010. Similarly, the Company has completed a Facility Investigation and CMS for the Lake Charles facility under the oversight of the LDEQ. The LDEQ has accepted the proposed remedial alternatives which are expected to be incorporated into the facility's RCRA operating permit during 2010. Planning for or implementation of these proposed alternatives is in progress. At Natrium, a facility investigation has been completed and initial interim remedial measures have been implemented to mitigate soil impacts. There is additional investigation of groundwater contamination ongoing which may indicate the need for further remedial actions to address specific areas of the facility.

With respect to certain waste sites, the financial condition of any other potentially responsible parties also contributes to the uncertainty of estimating PPG's final costs. Although contributors of waste to sites involving other potentially responsible parties may face governmental agency assertions of joint and several liability, in general, final allocations of costs are made based on the relative contributions of wastes to such sites. PPG is generally not a major contributor to such sites.

The impact of evolving programs, such as natural resource damage claims, industrial site reuse initiatives and state remediation programs, also adds to the present uncertainties with regard to the ultimate resolution of this unreserved exposure to future loss. The Company's assessment of the potential impact of these environmental contingencies is subject to considerable uncertainty due to the complex, ongoing and evolving process of investigation and remediation, if necessary, of such environmental contingencies, and the potential for technological and regulatory developments.

### *Other Matters*

The U.S. Department of Commerce's Bureau of Industry and Security and the U.S. Department of Justice are conducting an ongoing investigation into potential violations of U.S. export control laws related to the exportation of small quantities (approximately 1,000 gallons) of protective coatings for potential use in Pakistan in 2006. The Company is cooperating in this matter. The Company, with the assistance of outside counsel, has conducted an investigation into these potential violations of the U.S. export control laws, and has responded to administrative and federal grand jury subpoenas. The Company has also made a disclosure of certain U.S. export control violations to the U.S. Department of Commerce related to this matter. Violations of the export control laws may result in civil, administrative or criminal fines or penalties, loss of export privileges, debarment or a combination of these penalties. At this time, the Company is unable to determine the outcome of the government's investigation or its possible effect on the Company.

PPG is a defendant in a matter in the California State Court in San Francisco in which plaintiffs claim that PPG and other defendants manufactured a defective product, the dry cleaning solvent perchloroethylene ("PCE"), and failed to provide adequate warnings regarding the environmental risks associated with the use of PCE. The plaintiffs claim the defendants are responsible for remediation of soil and groundwater contamination at numerous dry cleaner sites in Modesto, California. In 2006, a Phase 1 trial was conducted as to four sites. The jury returned a verdict against PPG, The Dow Chemical Company, Vulcan, Oxy, and R.R. Street. The verdict was not apportioned. Subsequent to the Phase 1 verdict, Vulcan and Oxy settled. In 2008, trial commenced on 18 Phase 2 Sites. Prior to submission of the case to the jury, the Court granted non-suit motions filed by all the defendants that limited PPG's potential liability to one of the 18 sites. The damages sought at this one site totaled $27 million. A jury verdict in the amount of $18 million was returned against PPG and The Dow Chemical Company on May 18, 2009. The verdict was not apportioned. The jury was not able to reach a verdict on the statute of limitations issue on the site in question. PPG and Dow appealed the trial court's refusal to decide the statute of limitations issue and to set the issue for re-trial. In July 2009, the Superior Court ordered the trial court to decide the issue without re-trial. On August 24, 2009, the trial court issued an opinion finding that the City's claims were barred by the statute of limitations. The effect of the ruling is to nullify the jury's Phase 2 damage award. In October 2009, the trial court held a non-jury trial of the Redevelopment Authority's damage claims under the "Polanco Act" for certain remediation and investigative costs incurred to date. The court has not yet issued a decision. The Redevelopment Authority's claims under this California statute relate to four sites and total approximately $1 million. After the issuance of the Polanco Act decision, the Court will combine the Phase 1 verdict with any verdicts on the Polanco Act claims. The Court will then decide what amount of prior settlements will be applied to the verdict. The allocation of prior settlements will be the subject of briefing and a Court decision prior to the entry of a final judgment. It is likely that the parties will appeal the Court's decision.

On April 30, 2009, Chrysler's U.S. operations filed for bankruptcy. General Motor's U.S. operations filed for bankruptcy on June 1, 2009. PPG collected substantially all amounts that were due from Chrysler and General Motors as of the dates of the respective bankruptcy filings. As such, there were no material charges to earnings in 2009 as a result of these customer bankruptcies. Chrysler and General Motors have subsequently emerged from bankruptcy; however, we remain focused on the continual management of this automotive customer credit risk. The economic downturn caused declines in 2009 global production of automobiles and light trucks, which adversely impacted our sales volumes. Additionally, the same economic conditions that are impacting our continuing businesses that serve the automotive OEM market are affecting the divested automotive glass and services business, in which PPG maintains an approximate 40 percent interest.

## 17. Shareholders' Equity

A class of 10 million shares of preferred stock, without par value, is authorized but unissued. Common stock has a par value of $1.66⅔ per share; 600 million shares are authorized.

The following table summarizes the shares outstanding for the three years ended December 31, 2009:

| | *Common Stock* | *Treasury Stock* | *ESOP Shares* | *Shares Outstanding* |
|---|---|---|---|---|
| Balance, January 1, 2007 | 290,573,068 | (126,373,907) | (117,408) | 164,081,753 |
| Purchases | — | (3,682,791) | — | (3,682,791) |
| Issuances/releases | — | 3,284,298 | 117,408 | 3,401,706 |
| Balance, December 31, 2007 | 290,573,068 | (126,772,400) | — | 163,800,668 |
| Purchases | — | (128,600) | — | (128,600) |
| Issuances/releases | — | 526,565 | — | 526,565 |
| Balance, December 31, 2008 | 290,573,068 | (126,374,435) | — | 164,198,633 |
| Purchases | — | (1,500,000) | — | (1,500,000) |
| Issuances/releases | — | 2,969,026 | — | 2,969,026 |
| ***Balance, December 31, 2009*** | 290,573,068 | (124,905,409) | — | 165,667,659 |

ESOP shares represented the unreleased new shares held by the ESOP that were not considered outstanding under GAAP (see Note 1, "Summary of Significant Accounting Policies" and Note 19, "Employee Stock Ownership Plan"). The number of ESOP shares changed in 2007 as a result of the release of shares to participant accounts by the ESOP.

Per share cash dividends paid were $2.13 in 2009, $2.09 in 2008 and $2.04 in 2007.

## 18. Accumulated Other Comprehensive Loss

| *(Millions)* | *Unrealized Currency Translation Adjustments* | *Pension and Other Postretirement Benefit Adjustments* | *Unrealized Gain (Loss) on Marketable Securities* | *Unrealized Gain (Loss) on Derivatives* | *Accumulated Other Comprehensive (Loss) Income* |
|---|---|---|---|---|---|
| Balance, January 1, 2007 | $ 132 | $(1,057) | $ 3 | $(17) | $ (939) |
| Net Change | 260 | 90 | — | 7 | 357 |
| Balance, December 31, 2007 | $ 392 | $ (967) | $ 3 | $(10) | $ (582) |
| Net change | (499) | (494) | (4) | (49) | (1,046) |
| Balance, December 31, 2008 | $(107) | $(1,461) | $(1) | $(59) | $(1,628) |
| Net change | 173 | 169 | — | 25 | 367 |
| ***Balance, December 31, 2009*** | $ 66 | $(1,292) | $(1) | $(34) | $(1,261) |

Unrealized currency translation adjustments related to translation of foreign denominated balance sheets exclude income tax expense (benefit) given that the earnings of non-U.S. subsidiaries are deemed to be reinvested for an indefinite period of time.

The tax benefit related to unrealized currency translation adjustments other than translation of foreign denominated balance sheets, for the years ended December 31, 2009, 2008, and 2007 was $62 million, $22 million and zero, respectively.

The tax benefit (cost) related to the adjustment for pension and other postretirement benefits for the years ended December 31, 2009, 2008 and 2007 was $18 million, $315 million and $(211) million, respectively. The cumulative tax benefit related to the adjustment for pension and other postretirement benefits at December 31, 2009 and 2008 was $824 million and $806 million, respectively. The tax benefit (cost) related to the change in the unrealized gain (loss) on marketable securities for the years ended December 31, 2009, 2008 and 2007 was $0.1 million, $2 million and $(0.3) million, respectively. The tax benefit (cost) related to the change in the unrealized gain (loss) on derivatives for the years ended December 31, 2009, 2008 and 2007 was $(16) million, $30 million and $(5) million, respectively.

## 19. Employee Stock Ownership Plan

PPG's ESOP covers substantially all U.S. employees. The Company makes matching contributions to the ESOP based upon participants' savings, subject to certain limitations. For most participants not covered by a collective bargaining agreement, Company-matching contributions are established each year at the discretion of the Company and are applied to a maximum of 6% of eligible participant compensation. The Company-matching contribution was 100% for the first two months of 2009, and it was then suspended for the remainder of the year as a cost savings measure in recognition of the adverse impact of the global recession. For 2008 and 2007 the Company-match was 100%. For those participants whose employment is covered by a collective bargaining agreement, the level of Company-matching contribution, if any, is determined by the collective bargaining agreement. In accordance with these agreements, the Company-matching contributions were suspended after the first two months of 2009.

Compensation expense related to the ESOP for 2009, 2008 and 2007 totaled $7 million, $42 million and $16 million, respectively. Cash contributions by the Company to the ESOP for 2009, 2008 and 2007 totaled $7 million, $42 million and $14 million, respectively. Interest expense totaled $1 million for 2007. The tax deductible dividends on PPG shares held by the ESOP were $28 million, $29 million and $29 million for 2009, 2008 and 2007, respectively.

## 20. Other Earnings

| *(Millions)* | 2009 | 2008 | 2007 |
|---|---|---|---|
| Interest income | $ 28 | $ 26 | $ 20 |
| Royalty income | 45 | 52 | 48 |
| Share of net (loss) earnings of equity affiliates (See Note 6) | (5) | 3 | 32 |
| Gain on sale of assets | 36 | 23 | 14 |
| Other | 74 | 61 | 46 |
| ***Total*** | $ 178 | $ 165 | $ 160 |

## 21. Stock-Based Compensation

The Company's stock-based compensation includes stock options, restricted stock units ("RSUs") and grants of contingent shares that are earned based on achieving targeted levels of total shareholder return. All current grants of stock options, RSUs and contingent shares are made under the PPG Industries, Inc., Omnibus Incentive Plan ("PPG Omnibus Plan"). Shares available for future grants under the PPG Omnibus Plan were 5.6 million as of December 31, 2009.

Total stock-based compensation cost was $34 million, $33 million and $46 million in 2009, 2008 and 2007, respectively. The total income tax benefit recognized in the accompanying consolidated statement of income related to the stock-based compensation was $12 million, $12 million and $17 million in 2009, 2008 and 2007, respectively.

### *Stock Options*

PPG has outstanding stock option awards that have been granted under two stock option plans: the PPG Industries, Inc. Stock Plan ("PPG Stock Plan") and the PPG Omnibus Plan. Under the PPG Omnibus Plan and the PPG Stock Plan, certain employees of the Company have been granted options to purchase shares of common stock at prices equal to the fair market value of the shares on the date the options were granted. The options are generally exercisable beginning from six to 48 months after being granted and have a maximum term of 10 years. Upon exercise of a stock option, shares of Company stock are issued from treasury stock. The PPG Stock Plan includes a restored option provision for options originally granted prior to January 1, 2003 that allows an optionee to exercise options and satisfy the option price by certifying ownership of mature shares of PPG common stock with equivalent market value.

On July 1, 1998, under the PPG Industries, Inc., Challenge 2000 Stock Plan, the Company granted to substantially all active employees of the Company and its majority owned subsidiaries the option to purchase 100 shares of common stock at its then fair market value of $70 per share. The options became exercisable on July 1, 2003 and expired on June 30, 2008. A total of 1.2 million options expired on that date.

The fair value of stock options issued to employees is measured on the date of grant and is recognized as expense over the requisite service period. PPG estimates the fair value of stock options using the Black-Scholes option pricing model. The risk-free interest rate is determined by using the U.S. Treasury yield curve at the date of the grant and using a maturity equal to the expected life of the option. The expected life of options is calculated using the average of the vesting term and the maximum term, as prescribed by accounting guidance on the use of the simplified method for determining the expected term of an employee stock option. This method is used as the vesting terms of stock options were changed in 2004 to a three year vesting term, and as a result, the historical exercise data does not provide a reasonable basis upon which to estimate the expected life of options. The expected dividend yield and volatility are based on historical stock prices and dividend amounts over past time periods equal in length to the expected life of the options. The fair value of each grant was calculated with the following weighted average assumptions:

| | 2009 | 2008 | 2007 |
|---|---|---|---|
| Risk free interest rate | 2.8% | 3.5% | 4.5% |
| Expected life of option in years | 6.5 | 6.5 | 5.5 |
| Expected dividend yield | 3.2% | 3.1% | 3.1% |
| Expected volatility | 25.7% | 24.2% | 22.6% |

The weighted average fair value of options granted was $7.02 per share, $13.21 per share, and $14.08 per share for the years ended December 31, 2009, 2008, and 2007, respectively.

A summary of stock options outstanding and exercisable and activity for the year ended December 31, 2009 is presented below:

| | *Number of Shares* | *Weighted Average Exercise Price* | *Weighted Average Remaining Contractual Life (in years)* | *Intrinsic Value (in millions)* |
|---|---|---|---|---|
| Outstanding, January 1, 2009 | 7,441,633 | $60.28 | 4.8 | $— |
| Granted | 968,619 | $35.13 | | |
| Exercised | (242,428) | $53.03 | | |
| Forfeited/Expired | (447,087) | $57.50 | | |
| ***Outstanding, December 31, 2009*** | 7,720,737 | $57.51 | 4.8 | $38 |
| ***Vested or expected to vest, December 31, 2009*** | 7,691,876 | $57.57 | 4.8 | $38 |
| ***Exercisable, December 31, 2009*** | 5,346,558 | $59.12 | 3.3 | $16 |

At December 31, 2009, there was $6 million of total unrecognized compensation cost related to outstanding stock options that have not yet vested. This cost is expected to be recognized as expense over a weighted average period of 1.5 years.

The following table presents stock option activity for the years ended December 31, 2009, 2008 and 2007:

| *(Millions)* | 2009 | 2008 | 2007 |
|---|---|---|---|
| Total intrinsic value of stock options exercised | $ 2 | $ 2 | $ 47 |
| Cash received from stock option exercises | 12 | 13 | 194 |
| Income tax benefit from the exercise of stock options | 1 | 1 | 17 |
| Total fair value of stock options vested | 10 | 15 | 29 |

### *Restricted Stock Units*

Long-term incentive value is delivered to selected key management employees by granting RSUs, which have either time or performance-based vesting features. The fair value of an RSU is equal to the market value of a share of stock on the date of grant. Time-based RSUs vest over the three-year period following the date of grant, unless forfeited, and will be paid out in the form of stock, cash or a combination of both at the Company's discretion at the end of the three-year vesting period. Performance-based RSUs vest based on achieving specific annual performance targets for earnings per share growth and cash flow return on capital over the three-year period following the date of grant. Unless forfeited, the performance-based RSUs will be paid out in the form of stock, cash or a combination of both at the Company's discretion at the end of the three-year vesting period if PPG meets the performance targets. For awards granted in 2007, the actual amount paid for performance-based awards may range from 0% to 150% of the original grant, as 50% of the grant vests in each year that one of the two targets is met during the three-year period. If the designated performance targets are not met in any of the three years in an award period, no payout will be made on the performance-based RSUs. For awards granted in 2008 and 2009, the amount paid for performance-based awards may range from 0% to 180% of the original grant, based upon the frequency with which the earnings per share growth and cash flow return on capital performance targets are met over the three-year period. The performance-based RSUs granted in 2007 vested at the 150% level. For the purposes of expense recognition, PPG has assumed that performance-based RSUs granted in 2008 and 2009 will vest at the 100% level. The performance targets for 2007, 2008 and 2009 were achieved as it relates to the 2007 grant. With respect to the 2008 grant, two of the four performance targets were met in 2008 and 2009. With respect to the 2009 grant, one of the two performance targets was met in 2009.

# Notes to the Consolidated Financial Statements

The following table summarizes RSU activity for the year ended December 31, 2009:

| | Number of Shares | Weighted Average Fair Value | Intrinsic Value (in millions) |
|---|---|---|---|
| Outstanding, January 1, 2009 | 767,940 | $57.96 | $33 |
| Granted | 468,371 | $30.70 | |
| Additional Shares Vested | 122,477 | $61.49 | |
| Released from restrictions | (327,491) | $54.24 | |
| Forfeited | (27,557) | $48.24 | |
| ***Outstanding, December 31, 2009*** | 1,003,740 | $47.15 | $59 |
| ***Vested or expected to vest, December 31, 2009*** | 981,913 | $47.41 | $57 |

There was $10 million of total unrecognized compensation cost related to nonvested RSUs outstanding as of December 31, 2009. This cost is expected to be recognized as expense over a weighted average period of 1.6 years.

### *Contingent Share Grants*

The Company also provides grants of contingent shares to selected key executives that may be earned based on PPG total shareholder return over the three-year period following the date of grant. Contingent share grants (referred to as "TSR awards") are made annually and may be paid out at the end of each three-year period based on the Company's performance. For awards granted in 2007, performance is measured by determining the percentile rank of the total shareholder return of PPG common stock (stock price plus accumulated dividends) in relation to the total shareholder return of the S&P 500 and of the S&P 500 Materials sector for the three-year period following the date of grant. For awards granted in 2008 and 2009, performance is measured by determining the percentile rank of the total shareholder return of PPG common stock in relation to the total shareholder return of the S&P 500 for the three-year period following the date of grant. The payment of awards following the three-year award period will be based on performance achieved in accordance with the scale set forth in the plan agreement and may range from 0% to 220% of the initial grant. A payout of 100% is earned if the target performance is achieved. Contingent share awards earn dividend equivalents during the three-year award period, which are credited to participants in the form of common stock equivalents. Any payments made at the end of the award period may be in the form of stock, cash or a combination of both. The TSR awards qualify as liability awards, and compensation expense is recognized over the three-year award period based on the fair value of the awards (giving consideration to the Company's percentile rank of total shareholder return) remeasured in each reporting period until settlement of the awards.

As of December 31, 2009, there was $5 million of total unrecognized compensation cost related to outstanding TSR awards based on the current estimate of fair value. This cost is expected to be recognized as expense over a weighted average period of 1.7 years.

## 22. Advertising Costs

Advertising costs are expensed in the year incurred and totaled $268 million, $310 million and $157 million in 2009, 2008 and 2007, respectively.

## 23. Research and Development

| *(Millions)* | 2009 | 2008 | 2007 |
|---|---|---|---|
| Research and development – total | $ 403 | $ 468 | $ 363 |
| Less depreciation on research facilities | 15 | 17 | 15 |
| ***Research and development – net*** | $ 388 | $ 451 | $ 348 |

## 24. Quarterly Financial Information (unaudited)

| *Millions (except per share amounts)* | *March 31* | *June 30* | *Sept. 30* | *Dec. 31* | *Total* |
|---|---|---|---|---|---|
| | *2009 Quarter Ended* | | | | |
| Net sales | $2,783 | $3,115 | $3,225 | $3,116 | $12,239 |
| Cost of Sales(1) | 1,718 | 1,898 | 1,989 | 1,934 | 7,539 |
| Net (loss) income (attributable to PPG) | (111) | 146 | 159 | 142 | 336 |
| (Loss) earnings per common share | (0.68) | 0.89 | 0.96 | 0.86 | 2.04 |
| (Loss) earnings per common share –assuming dilution | $ (0.68) | $ 0.89 | $ 0.96 | $ 0.85 | $ 2.03 |

| *Millions (except per share amounts)* | *March 31(2)* | *June 30(2)* | *Sept. 30(2)* | *Dec. 31* | *Total* |
|---|---|---|---|---|---|
| | *2008 Quarter Ended* | | | | |
| Net sales | $3,962 | $4,474 | $4,225 | $3,188 | $15,849 |
| Cost of Sales(1) | 2,596 | 2,829 | 2,701 | 2,029 | 10,155 |
| Net income (attributable to PPG) | 100 | 250 | 117 | 71 | 538 |
| Earnings per common share | 0.61 | 1.52 | 0.71 | 0.43 | 3.27 |
| Earnings per common share – assuming dilution | $ 0.61 | $ 1.51 | $ 0.70 | $ 0.43 | $ 3.25 |

*(1) Exclusive of depreciation and amortization.*
*(2) Inclusive of the results of operations of the automotive glass and services business.*

## 25. Reportable Business Segment Information

### *Segment Organization and Products*

PPG is a multinational manufacturer with 13 operating segments that are organized based on the Company's major products lines. These operating segments are also the Company's reporting units for purposes of testing goodwill for impairment (see Note 1, "Summary of Significant Accounting Policies"). These operating segments were expanded during the first quarter of 2008 to include the protective and marine coatings operating segment, which is included in the Performance Coatings reportable segment, and the Architectural Coatings – EMEA (Europe, Middle East and Africa) operating segment, which is also a reportable business segment. These changes were a result of the SigmaKalon acquisition. The operating segments have been aggregated based on economic similarities, the nature of their products, production processes, end-use markets and methods of distribution into six reportable business segments.

The Performance Coatings reportable segment is comprised of the refinish, aerospace, architectural coatings – Americas and Asia Pacific and protective and marine coatings operating segments. This reportable segment primarily supplies a variety of protective and decorative coatings, sealants and finishes along with paint strippers, stains and related chemicals, as well as transparencies and transparent armor.

The Industrial Coatings reportable segment is comprised of the automotive, industrial and packaging coatings operating segments. This reportable segment primarily supplies a variety of protective and decorative coatings and finishes along with adhesives, sealants, inks and metal pretreatment products.

The Architectural Coatings – EMEA reportable segment is comprised of the architectural coatings – EMEA operating segment. This reportable segment primarily supplies a variety of coatings under a number of brands and purchased sundries to painting contractors and consumers in Europe, the Middle East and Africa.

The Optical and Specialty Materials reportable segment is comprised of the optical products and silicas operating segments. The primary Optical and Specialty Materials products are *Transitions®* lenses, sunlenses, optical lens materials, amorphous precipitated silica products and Teslin® synthetic printing sheet. *Transitions®* lenses are processed and distributed by PPG's 51%-owned joint venture with Essilor International.

The Commodity Chemicals reportable segment is comprised of the chlor-alkali and derivatives operating segment. The primary chlor-alkali and derivative products are chlorine, caustic soda, vinyl chloride monomer, chlorinated solvents, calcium hypochlorite, ethylene dichloride, hydrochloric acid and phosgene derivatives.

The Glass reportable segment is comprised of the performance glazings and fiber glass operating segments. This reportable segment primarily supplies flat glass and continuous-strand fiber glass products.

Production facilities and markets for Performance Coatings, Industrial Coatings, Architectural Coatings – EMEA, Optical and Specialty Materials, Commodity Chemicals and Glass are significantly in North America and Europe. PPG's reportable segments continue to pursue opportunities to further develop markets in Asia, Eastern Europe and Latin America. Each of the reportable segments in which PPG is engaged is highly competitive. However, the diversification of product lines and worldwide markets served tends to minimize the impact on PPG's total sales and earnings from changes in demand in a particular market or in a particular geographic area.

The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies. The Company allocates resources to operating segments and evaluates the performance of operating segments based upon segment income, which is earnings before interest expense – net, income taxes and noncontrolling interests and which may exclude certain charges which are considered to be unusual or non-recurring. Legacy items include current costs related to former operations of the Company, including certain environmental remediation, pension and other postretirement benefit costs, and certain charges for legal and other matters which are considered to be unusual or non-recurring. These legacy costs are excluded from the segment income that is used to evaluate the performance of the operating segments. Legacy items also include equity earnings (loss) from PPG's approximately 40 percent investment in the former automotive glass and services business and $40 million of 2009 costs related to the pension and other postemployment benefit liabilities of the divested business retained by PPG. Corporate unallocated costs include the costs of corporate staff functions not directly associated with the operating segments, the cost of corporate legal cases, net of related insurance recoveries, a business process redesign project in Europe and the cost of certain insurance and employee benefit programs. Net periodic pension expense is allocated to the operating segments and a portion related to the corporate staff functions is included in the Corporate unallocated costs.

For Optical and Specialty Materials, Commodity Chemicals and Glass, intersegment sales and transfers are recorded at selling prices that approximate market prices. Product movement between Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA is limited, is accounted for as an inventory transfer and is recorded at cost plus a mark-up, the impact of which is not significant to the segment income of the three coatings reportable segments.

# Notes to the Consolidated Financial Statements

| (Millions) **Reportable Business Segments** | *Performance Coatings* | *Industrial Coatings* | *Architectural Coatings – EMEA* | *Optical and Specialty Materials* | *Commodity Chemicals* | *Glass*[1] | *Corporate / Eliminations / Non-Segment Items*[2] | *Consolidated Totals* |
|---|---|---|---|---|---|---|---|---|
| **2009** | | | | | | | | |
| Net sales to external customers | $4,095 | $3,068 | $1,952 | $1,002 | $1,273 | $ 849 | $ — | $12,239 |
| Intersegment net sales | — | — | — | 3 | 9 | — | (12) | — |
| ***Total net sales*** | $4,095 | $3,068 | $1,952 | $1,005 | $1,282 | $ 849 | $(12) | $12,239 |
| ***Segment income*** | $ 551 | $ 159 | $ 128 | $ 235 | $ 152 | $ (39) | $ — | $ 1,186 |
| Corporate unallocated | | | | | | | | (107) |
| Legacy items[3] | | | | | | | | (63) |
| Business restructuring (See Note 8) | | | | | | | | (186) |
| Asbestos settlement – net (See Note 16) | | | | | | | | (13) |
| Interest expense, net of interest income | | | | | | | | (166) |
| Unallocated stock based compensation (See Note 21)[4] | | | | | | | | (34) |
| ***Income from continuing operations before income taxes*** | | | | | | | | $ 617 |
| Depreciation and amortization (See Note 1) | $ 120 | $ 98 | $ 109 | $ 36 | $ 40 | $ 58 | $ 19 | $ 480 |
| Share of net earnings (loss) of equity affiliates | 2 | 1 | 1 | — | (3) | (5) | (1) | (5) |
| Segment assets[5] | 4,003 | 2,592 | 2,987 | 576 | 564 | 846 | 2,672 | 14,240 |
| Investment in equity affiliates | 11 | 9 | 19 | — | 2 | 117 | 207 | 365 |
| Expenditures for property | 51 | 48 | 38 | 32 | 24 | 27 | 11 | 231 |
| **2008** | | | | | | | | |
| Net sales to external customers | $4,716 | $3,999 | $2,249 | $1,134 | $1,837 | $1,914 | $ — | $15,849 |
| Intersegment net sales | — | — | — | 4 | 8 | — | (12) | — |
| ***Total net sales*** | $4,716 | $3,999 | $2,249 | $1,138 | $1,845 | $1,914 | $(12) | $15,849 |
| ***Segment income*** | $ 582 | $ 212 | $ 141 | $ 244 | $ 340 | $ 70 | $ — | $ 1,589 |
| Corporate unallocated | | | | | | | | (88) |
| Legacy items[3] | | | | | | | | (28) |
| Business restructuring (See Note 8) | | | | | | | | (163) |
| Gain on automotive glass and services divestiture (See Note 3) | | | | | | | | 15 |
| Depreciation catch-up charge (See Note 3) | | | | | | | | (17) |
| Divestiture-related benefit costs (See Note 3) | | | | | | | | (19) |
| Acquisition related costs (See Note 2) | | | | | | | | (117) |
| Asbestos settlement – net (See Note 16) | | | | | | | | (4) |
| Interest expense, net of interest income | | | | | | | | (227) |
| Unallocated stock based compensation (See Note 21)[4] | | | | | | | | (33) |
| ***Income from continuing operations before income taxes*** | | | | | | | | $ 908 |
| Depreciation and amortization (See Note 1) | $ 133 | $ 109 | $ 121 | $ 36 | $ 44 | $ 98 | $ 22 | $ 563 |
| Share of net earnings (loss) of equity affiliates | 2 | 1 | 2 | — | (8) | 14 | (8) | 3 |
| Segment assets[5] | 4,190 | 2,699 | 3,003 | 615 | 603 | 923 | 2,665 | 14,698 |
| Investment in equity affiliates | 3 | 14 | 18 | — | 3 | 137 | 206 | 381 |
| Expenditures for property | 139 | 198 | 525 | 49 | 35 | 61 | 25 | 1,032 |

# Notes to the Consolidated Financial Statements

| *(Millions)* **Reportable Business Segments** | *Performance Coatings* | *Industrial Coatings* | *Architectural Coatings – EMEA* | *Optical and Specialty Materials* | *Commodity Chemicals* | *Glass*[1] | *Corporate / Eliminations / Non-Segment Items*[2] | *Consolidated Totals* |
|---|---|---|---|---|---|---|---|---|
| **2007** | | | | | | | | |
| Net sales to external customers | $3,811 | $3,646 | $— | $1,029 | $1,539 | $2,195 | $ — | $12,220 |
| Intersegment net sales | — | — | — | 4 | 8 | 5 | (17) | — |
| ***Total net sales*** | $3,811 | $3,646 | $— | $1,033 | $1,547 | $2,200 | $(17) | $12,220 |
| ***Segment income*** | $ 563 | $ 370 | $— | $ 235 | $ 243 | $ 138 | $ — | $ 1,549 |
| Corporate unallocated | | | | | | | | (52) |
| Legacy items[3] | | | | | | | | (13) |
| Acquisition related costs | | | | | | | | (9) |
| Divestiture-related benefit costs | | | | | | | | (17) |
| Asbestos settlement – net (See Note 16) | | | | | | | | (24) |
| Interest expense, net of interest income | | | | | | | | (73) |
| Unallocated stock based compensation (See Note 21)[4] | | | | | | | | (46) |
| ***Income from continuing operations before income taxes*** | | | | | | | | $ 1,315 |
| Depreciation and amortization (See Note 1) | $ 108 | $ 94 | $— | $ 38 | $ 46 | $ 96 | $ 21 | $ 403 |
| Share of net earnings (loss) of equity affiliates | 1 | 2 | — | — | 2 | 27 | — | 32 |
| Segment assets[5] | 3,848 | 2,508 | — | 630 | 650 | 1,523 | 3,470 | 12,629 |
| Investment in equity affiliates | 3 | 15 | — | — | 4 | 153 | 15 | 190 |
| Expenditures for property | 119 | 89 | — | 46 | 61 | 51 | 21 | 387 |

| *(Millions)* **Geographic Information** | 2009 | 2008 | 2007 |
|---|---|---|---|
| **Net sales**[6] | | | |
| The Americas | | | |
| United States | $ 5,113 | $ 7,115 | $ 7,084 |
| Other Americas | 867 | 1,185 | 1,179 |
| EMEA | 4,458 | 5,677 | 2,728 |
| Asia | 1,801 | 1,872 | 1,229 |
| ***Total*** | $12,239 | $15,849 | $12,220 |
| **Segment income** | | | |
| The Americas | | | |
| United States | $ 623 | $ 899 | $ 1,027 |
| Other Americas | 61 | 72 | 58 |
| EMEA | 263 | 383 | 276 |
| Asia | 239 | 235 | 188 |
| ***Total*** | $ 1,186 | $ 1,589 | $ 1,549 |
| **Property—net** | | | |
| The Americas | | | |
| United States | $ 1,294 | $ 1,330 | $ 1,458 |
| Other Americas | 113 | 116 | 215 |
| EMEA | 997 | 1,006 | 575 |
| Asia | 350 | 346 | 330 |
| ***Total*** | $ 2,754 | $ 2,798 | $ 2,578 |

*(1) Glass net sales, intersegment sales and segment income include the results of the automotive glass and services business through September 30, 2008.*
*(2) Corporate intersegment net sales represent intersegment net sales eliminations. Corporate unallocated costs include the costs of corporate staff functions not directly associated with the operating segments and certain legal and benefit costs. Corporate/non-segment assets are principally cash and cash equivalents, cash held in escrow, deferred tax assets and the approximately 40 percent investment in the former automotive glass and services business.*
*(3) Legacy items include current costs related to former operations of the Company, including certain environmental remediation, pension and other postretirement benefit costs and certain charges which are considered to be unusual or non-recurring. Legacy items also include equity earnings (loss) from PPG's approximately 40 percent investment in the former automotive glass and services business. The increase in 2009 was due to pension and other postretirement benefit costs related to the liability for the former automotive glass and services business retained by PPG.*
*(4) Unallocated stock based compensation includes the cost of stock options, restricted stock units and contingent share grants which are not allocated to the operating segments.*
*(5) Segment assets are the total assets used in the operation of each segment. Corporate assets are principally cash and cash equivalents, cash held in escrow, deferred tax assets and the approximately 40 percent investment in the former automotive glass and services business.*
*(6) Net sales to external customers are attributed to geographic regions based upon the location of the operating unit shipping the product.*

### Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

### Item 9A. Controls and Procedures

(a) *Evaluation of disclosure controls and procedures.*

Based on their evaluation as of the end of the period covered by this Form 10-K, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

(b) *Changes in internal control.*

There were no changes in the Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

See Management Report on page 29 for management's annual report on internal control over financial reporting. See Report of Independent Registered Public Accounting Firm on page 28 for Deloitte & Touche LLP's attestation report on the Company's internal control over financial reporting.

### Item 9B. Other Information

None.

## Part III

### Item 10. Directors, Executive Officers and Corporate Governance

The information about the Company's directors required by Item 10 and not otherwise set forth below is contained under the caption "Proposal 1: To Elect Three Directors" in PPG's definitive Proxy Statement for the 2010 Annual Meeting of Shareholders (the "Proxy Statement") which the Company anticipates filing with the Securities and Exchange Commission, pursuant to Regulation 14A, not later than 120 days after the end of the Company's fiscal year, and is incorporated herein by reference.

The executive officers of the Company are elected by the Board of Directors. The information required by this item concerning the Company's executive officers is incorporated by reference herein from Part I of this report under the caption "Executive Officers of the Company."

Information regarding the Company's Audit Committee is included in the Proxy Statement under the caption "Corporate Governance – Audit Committee" and is incorporated herein by reference.

Information regarding the Company's codes of ethics is included in the Proxy Statement under the caption "Corporate Governance – Codes of Ethics" and is incorporated herein by reference.

Information about compliance with Section 16(a) of the Exchange Act is included in the Proxy Statement under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated herein by reference.

### Item 11. Executive Compensation

The information required by Item 11 is contained in the Proxy Statement under the captions "Compensation of Directors," "Compensation Discussion and Analysis," "Compensation of Executive Officers," "Potential Payments upon Termination or Change in Control," "Corporate Governance – Compensation Committee Interlocks and Insider Participation," and "Corporate Governance – Officers-Directors Compensation Committee Report to Shareholders" and is incorporated herein by reference.

### Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by Item 12 is contained in the Proxy Statement under the caption "Other Information – Beneficial Ownership Tables" and in Part II, Item 5 of this report under the caption "Equity Plan Compensation Information" and is incorporated herein by reference.

### Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Item 13 is contained in the Proxy Statement under the captions "Corporate Governance – Director Independence," "Corporate Governance – Review and Approval or Ratification of Transactions with Related Persons" and "Corporate Governance – Certain Relationships and Related Transactions" and is incorporated herein by reference.

### Item 14. Principal Accounting Fees and Services

The information required by Item 14 is contained in the Proxy Statement under the caption "Proposal 2: To Endorse Deloitte & Touche LLP as our Independent Registered Public Accounting Firm for 2010" and is incorporated herein by reference.

# Part IV

### Item 15. Exhibits, Financial Statement Schedules

(a)(1) Consolidated Financial Statements and Reports of Independent Registered Public Accounting Firm (see Part II, Item 8 of this Form 10-K).

The following information is filed as part of this Form 10-K:



(a)(2) Consolidated Financial Statement Schedule for years ended December 31, 2009, 2008 and 2007.

The following should be read in conjunction with the previously referenced financial statements:

### Schedule II – Valuation and Qualifying Accounts

#### Allowance for Doubtful Accounts for the Years Ended December 31, 2009, 2008 and 2007

| *(Millions)* | *Balance at Beginning of Year* | *Charged to Costs and Expenses*(1) | *Other Additions*(2) | *Deductions*(3) | *Balance at End of Year* |
|---|---|---|---|---|---|
| 2009 | $103 | $59 | $— | $(40) | $122 |
| 2008 | $ 51 | $52 | $38 | $(38) | $103 |
| 2007 | $ 48 | $16 | $ 2 | $(15) | $ 51 |

*(1) Bad debt expense was $11 million in 2008 for acquired businesses. The remainder of the increase in bad debt expense compared to 2007 was primarily related to the Industrial Coatings segment.*

*(2) Represents allowance for doubtful accounts of acquired businesses.*

*(3) Notes and accounts receivable written off as uncollectible, net of recoveries, amounts attributable to divestitures and changes attributable to foreign currency translation.*

All other schedules are omitted because they are not applicable.

(a)(3)

Exhibits. The following exhibits are filed as a part of, or incorporated by reference into, this Form 10-K.

3 PPG Industries, Inc., Restated Articles of Incorporation, as amended, were filed as Exhibit 3 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 1995.

3.1 Statement with Respect to Shares, amending the Restated Articles of Incorporation effective April 21, 1998, was filed as Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the period ended Dec. 31, 1998.

3.2 Amendment to Restated Articles of Incorporation of PPG Industries, Inc., as amended, effective April 27, 2007, was filed as Exhibit 3.1b to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2007.

3.3 PPG Industries, Inc., Bylaws, as amended and restated on April 19, 2007, were filed as Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2007.

4 Indenture, dated as of Aug. 1, 1982, was filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated Jan. 16, 1998.

4.1 First Supplemental Indenture, dated as of April 1, 1986, was filed as Exhibit 4.2 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated Jan. 16, 1998.

4.2 Second Supplemental Indenture, dated as of Oct. 1, 1989, was filed as Exhibit 4.3 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated Jan. 16, 1998.

4.3 Third Supplemental Indenture, dated as of Nov. 1, 1995, was filed as Exhibit 4.4 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated Jan. 16, 1998.

4.4 Indenture, dated as of June 24, 2005, was filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated June 20, 2005.

4.5 Indenture, dated as of March 18, 2008, was filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on March 18, 2008.

4.6 Supplemental Indenture, dated as of March 18, 2008, was filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on March 18, 2008.

*10 PPG Industries, Inc. Nonqualified Retirement Plan, as amended and restated September 24, 2008, was filed as Exhibit 10 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.1 Form of Change in Control Employment Agreement entered into with executives prior to January 1, 2008, as amended, was filed as Exhibit 10.2 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

*10.2 Form of Change in Control Employment Agreement entered into with executives on or after January 1, 2008 through December 31, 2009, was filed as Exhibit 10.24 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

†*10.3 Form of Change in Control Employment Agreement entered into with executives on or after January 1, 2010.

*10.4 PPG Industries, Inc. Deferred Compensation Plan for Directors related to compensation deferred prior to January 1, 2005, was filed as Exhibit 10.3 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 1997.

*10.5 PPG Industries, Inc. Deferred Compensation Plan for Directors related to compensation deferred on or after January 1, 2005, as amended February 15, 2006, was filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2006.

*10.6 PPG Industries, Inc. Deferred Compensation Plan related to compensation deferred prior to January 1, 2005, as amended effective July 14, 2004, was filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2004.

*10.7 PPG Industries, Inc. Deferred Compensation Plan related to compensation deferred on or after January 1, 2005, as amended and restated September 24, 2008, was filed as Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.8 PPG Industries, Inc. Executive Officers' Long Term Incentive Plan was filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated Feb. 16, 2005.

*10.9 PPG Industries, Inc. Incentive Compensation Plan for Key Employees, as amended April 20, 2006, was filed as Exhibit 10.8 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.10 PPG Industries, Inc. Management Award Plan, as amended April 20, 2006, was filed as Exhibit 10.9 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.11 PPG Industries, Inc. Stock Plan, dated as of April 17, 1997, as amended July 20, 2005, was filed as Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2005.

*10.12 PPG Industries, Inc. Omnibus Incentive Plan was filed as Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2006.

*10.13 Form of Non-Qualified Option Agreement for Directors was filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K dated February 15, 2005.

*10.14 Form of time-vested Restricted Stock Unit Award Agreement, was filed as Exhibit 10.13 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.15 Form of Non-Qualified Stock Option Award Agreement, was filed as Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.16 Form of Nonqualified Stock Option Award Agreement, was filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.17 Form of TSR Share Award Agreement, was filed as Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.18 Form of TSR Share Award Agreement, was filed as Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.19 Form of performance-based Restricted Stock Unit Award Agreement for Key Employees, was filed as Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.20 Form of Performance-Based Restricted Stock Unit Award Agreement for Key Employees, was filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.21 Form of performance-based Restricted Stock Unit Award Agreement, was filed as Exhibit 10.17 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.22 Form of Performance-Based Restricted Stock Unit Award Agreement, was filed as Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.23 Form of Time-Vested Restricted Stock Unit Award Agreement, was filed as Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.24 Form of letter to certain executives regarding 2008 deferred compensation plan elections, was filed as Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

10.25 €650 million credit facility dated December 3, 2007 and entered into among PPG Industries, Inc. and certain of its subsidiaries with multiple banks and financial institutions and Societe Generale, as facility agent for the lenders, was filed as Exhibit 10.23 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

*10.26 Material terms of retirement arrangement with Kevin F. Sullivan, was filed as Exhibit 10 to the Registrant's current report on Form 8-K filed on April 28, 2008.

*10.27 Material terms of retirement arrangement with William H. Hernandez, was filed as Exhibit 10 to the Registrant's Current Report on Form 8-K filed on May 21, 2009.

*10.28 Letter agreement with Robert J. Dellinger, was filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.29 Employment Agreement between PPG Industries Europe Sàrl, Rolle and Pierre-Marie DeLeener, was filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

†12 Computation of Ratio of Earnings to Fixed Charges for the Five Years Ended December 31, 2009.

†13.1 Market Information, Dividends and Holders of Common Stock.

†13.2 Selected Financial Data for the Five Years Ended December 31, 2009.

†21 Subsidiaries of the Registrant.

†23 Consent of Independent Registered Public Accounting Firm.

†24 Powers of Attorney.

†31.1 Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

†31.2 Certification of Principal Financial Officer Pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

†32.1 Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

†32.2 Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

**101.INS XBRL Instance Document

**101.SCH XBRL Taxonomy Extension Schema Document

**101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

**101.DEF XBRL Taxonomy Extension Definition Linkbase Document

**101.LAB XBRL Taxonomy Extension Label Linkbase Document

**101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

† Filed herewith.

* Management contracts, compensatory plans or arrangements required to be filed as an exhibit hereto pursuant to Item 601 of Regulation S-K.

** Attached as Exhibit 101 to this report are the following documents formatted in XBRL (Extensible Business Reporting Language) for the year ended December 31, 2009: (i) the Consolidated Statement of Income, (ii) the Consolidated Balance Sheet, (iii) the Consolidated Statement of Shareholders' Equity, (iv) the Consolidated Statement of Comprehensive Income (Loss), (v) the Consolidated Statement of Cash Flows, (vi) Notes to Consolidated Financial Statements and (vii) Financial Schedule of Valuation and Qualifying Accounts. Users of this data are advised pursuant to Rule 406T of Regulation S-T that this interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities and Exchange Act of 1934, and otherwise is not subject to liability under these sections.

# Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized on February 18, 2010.

PPG INDUSTRIES, INC.
(Registrant)

By 

R. J. Dellinger, *Senior Vice President, Finance and Chief Financial Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities indicated on February 18, 2010.

| Signature. | Capacity |
|---|---|
|  C. E. Bunch | Director, Chairman of the Board and Chief Executive Officer |
|  R. J. Dellinger | Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer) |
| J.G. Berges | Director |
| H. Grant | Director |
| V. F. Haynes | Director |
| M. J. Hooper | Director |
| R. Mehrabian | Director |
| M.H. Richenhagen | Director |
| R. Ripp | Director |
| T. J. Usher | Director |
| D. R. Whitwam | Director |

By 

R. J. Dellinger, *Attorney-in-Fact*

# Certifications

## PRINCIPAL EXECUTIVE OFFICER CERTIFICATION

I, Charles E. Bunch, certify that:

1. I have reviewed this annual report on Form 10-K of PPG Industries, Inc. (“PPG” or the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of PPG as of, and for, the periods presented in this report;
4. PPG’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for PPG and have:
   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to PPG, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) evaluated the effectiveness of PPG’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) disclosed in this report any change in PPG’s internal control over financial reporting that occurred during PPG’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, PPG’s internal control over financial reporting; and
5. PPG’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to PPG’s auditors and the audit committee of PPG’s Board of Directors:
   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect PPG’s ability to record, process, summarize and report financial information; and
   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in PPG’s internal control over financial reporting.

**Charles E. Bunch**
Chairman of the Board and Chief Executive Officer
February 18, 2010

# Certifications

## PRINCIPAL FINANCIAL OFFICER CERTIFICATION

I, Robert J. Dellinger, certify that:

1. I have reviewed this annual report on Form 10-K of PPG Industries, Inc. ("PPG" or the "registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of PPG as of, and for, the periods presented in this report;
4. PPG's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for PPG and have:
   - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to PPG, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   - (c) evaluated the effectiveness of PPG's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   - (d) disclosed in this report any change in PPG's internal control over financial reporting that occurred during PPG's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, PPG's internal control over financial reporting; and
5. PPG's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to PPG's auditors and the audit committee of PPG's Board of Directors:
   - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect PPG's ability to record, process, summarize and report financial information; and
   - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in PPG's internal control over financial reporting.

**Robert J. Dellinger**
Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)
February 18, 2010

# Certifications

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report on Form 10-K of PPG Industries, Inc. for the period ended December 31, 2009 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Charles E. Bunch, Chief Executive Officer of PPG Industries, Inc., certify to the best of my knowledge, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of PPG Industries, Inc.

**Charles E. Bunch**
Chairman of the Board and Chief Executive Officer
February 18, 2010

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report on Form 10-K of PPG Industries, Inc. for the period ended December 31, 2009 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robert J. Dellinger, Chief Financial Officer of PPG Industries, Inc., certify to the best of my knowledge, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of PPG Industries, Inc.

**Robert J. Dellinger**
Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)
February 18, 2010

# Officer Changes

The following are officer changes since March 2009:

Effective July 1, 2009, Kathleen A. McGuire, vice president, purchasing and distribution, retired. Stephen T. Lampe, previously global raw materials director was appointed to succeed McGuire effective the same date.

Effective July 16, 2009, Denise R. Cade, corporate counsel, securities and finance, and assistant secretary was appointed to the position of assistant general counsel and secretary.

Effective October 15, 2009, William H. Hernandez, senior vice president, finance and chief financial officer, relinquished his title and duties prior to retiring March 1, 2010. Robert J. Dellinger, previously senior vice president, finance and chief financial officer designate was appointed to succeed Hernandez effective the same date.

Effective November 1, 2009, Richard A. Beuke, vice president growth initiatives was appointed to the position of vice president, silica products.

Effective November 1, 2009, Patrick J. Kenny, general manager corporate marketing and construction markets was appointed to the position of vice president, corporate marketing.

Effective January 1, 2010, Reginald J. Norton, vice president, environment, health and safety was appointed to the position of vice president, global refinish and corporate supply chain.

Effective January 1, 2010, John C. Richter, director, operations, OEM coatings was appointed to the position of vice president, environment, health and safety.

Effective March 1, 2010, John R. Outcalt, vice president, automotive refinish, Americas, was appointed to the position of vice president, automotive refinish.

Effective March 1, 2010, Viktor R. Sekmakas, president, PPG Asia/Pacific, was appointed to the position of vice president, industrial coatings and president, PPG Asia/Pacific.

Effective March 1, 2010, Michael Horton, general manager, refinish, architectural, PMC Asia/Pacific, was appointed to the position of vice president, Asia/Pacific coatings and general manager, refinish, architectural, PMC Asia/Pacific.

Effective March 1, 2010, Brett H. Craig, president, Transitions Optical, was appointed to the position of vice president, PPG and president, Transitions Optical.

Effective March 1, 2010, Timothy M. Knavish, general manager, automotive coatings, Americas, was appointed to the position of vice president, automotive coatings, Americas.

# Trademarks

The following are trademarks and/or registered trademarks of PPG and its related entities and used in this report:
*Amercoat, Bristol, CR-39, Dekoral, Freitag, Histor, Ivy, Johnstone's, Leyland, Olympic, Pittsburgh, PPG High Performance Coatings, PPG logo, Primalex, Prominent Paints, Ripolin, Seigneurie, Sigma Coatings, Taubmans, Teslin, Trilak, Trivex, White Knight*.

*Transitions* is a registered trademark of Transitions Optical, Inc.

*Lucite* is a registered trademark of E.I. DU PONT DE NEMOURS AND COMPANY, used under license.

*Renner* is a registered trademark of Renner Herrmann S.A. and Renner Sayerlack S.A., used under license.

*FSC and tree logo* is a registered certification mark of Forest Stewardship Council, A.C., used under license.

Other company, product and service names used in this report may be trademarks or service marks of other parties.

# Five-Year Digest

| *All amounts are in millions of dollars except per share data and number of employees.* | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|
| **Consolidated Statement of Income** | | | | | |
| Net sales | 12,239 | 15,849 | 12,220 | 10,938 | 10,126 |
| Income before income taxes | 527 | 822 | 1,239 | 982 | 920 |
| Income tax expense | 191 | 284 | 383 | 275 | 298 |
| Income from continuing operations, net of tax | 336 | 538 | 856 | 707 | 622 |
| (Loss) income from discontinued operations, net of tax | — | — | (22) | 4 | (26) |
| Net income (attributable to PPG) | 336 | 538 | 834 | 711 | 596 |
| Return on average capital (%)(1) | 6.6 | 8.6 | 16.4 | 16.6 | 13.8 |
| Return on average equity (%) | 10.1 | 13.0 | 22.4 | 21.6 | 17.6 |
| Earnings per common share: | | | | | |
| Income from continuing operations | 2.04 | 3.27 | 5.20 | 4.27 | 3.66 |
| (Loss) income from discontinued operations | — | — | (0.13) | 0.02 | (0.15) |
| Net income (attributable to PPG) | 2.04 | 3.27 | 5.07 | 4.29 | 3.51 |
| Weighted average common shares outstanding | 164.8 | 164.6 | 164.5 | 165.7 | 169.6 |
| Earnings per common share – assuming dilution: | | | | | |
| Income from continuing operations | 2.03 | 3.25 | 5.16 | 4.25 | 3.64 |
| (Loss) income from discontinued operations | — | — | (0.13) | 0.02 | (0.15) |
| Net income (attributable to PPG) | 2.03 | 3.25 | 5.03 | 4.27 | 3.49 |
| Adjusted weighted average common shares outstanding | 165.5 | 165.4 | 165.9 | 166.5 | 170.9 |
| Dividends | 353 | 343 | 335 | 316 | 316 |
| Per share | 2.13 | 2.09 | 2.04 | 1.91 | 1.86 |
| **Consolidated Balance Sheet** | | | | | |
| Current assets | 5,981 | 6,348 | 6,941 | 4,654 | 4,078 |
| Current liabilities | 3,577 | 4,210 | 4,632 | 2,789 | 2,351 |
| Working capital | 2,404 | 2,138 | 2,309 | 1,865 | 1,727 |
| Property (net) | 2,754 | 2,798 | 2,578 | 2,466 | 2,274 |
| Total assets | 14,240 | 14,698 | 12,629 | 10,067 | 8,681 |
| Long-term debt | 3,074 | 3,009 | 1,201 | 1,155 | 1,169 |
| Total PPG shareholders' equity | 3,753 | 3,333 | 4,151 | 3,280 | 3,053 |
| Per share | 22.65 | 20.30 | 25.34 | 19.99 | 18.47 |
| **Other Data** | | | | | |
| Capital spending(2) | 265 | 2,056 | 597 | 771 | 376 |
| Depreciation expense | 354 | 428 | 345 | 332 | 330 |
| Interest expense | 193 | 254 | 93 | 83 | 81 |
| Amortization expense | 126 | 135 | 58 | 43 | 32 |
| Quoted market price | | | | | |
| High | 62.31 | 71.00 | 82.42 | 69.80 | 74.73 |
| Low | 28.16 | 35.94 | 64.01 | 56.53 | 55.64 |
| Year end | 58.54 | 42.43 | 70.23 | 64.21 | 57.90 |
| Price/earnings ratio(3) | | | | | |
| High | 31 | 22 | 16 | 16 | 21 |
| Low | 14 | 11 | 13 | 13 | 16 |
| Average number of employees | 39,900 | 44,900 | 34,900 | 32,200 | 30,800 |

(1) *Return on average capital is calculated using pre-interest, aftertax earnings and average debt and equity during the year.*
(2) *Includes the cost of businesses acquired.*
(3) *Price/earnings ratios were calculated based on high and low market prices during the year and the respective year's earnings per common share.*

# PPG Shareholder Information

## Quarterly Stock Market Price

| Quarter Ended | 2009 High | 2009 Low | 2009 Close | 2008 High | 2008 Low | 2008 Close |
|---|---|---|---|---|---|---|
| March 31 | $ 45.45 | $ 28.16 | $ 36.90 | $ 71.00 | $ 57.15 | $ 60.51 |
| June 30 | 46.91 | 35.61 | 43.90 | 66.53 | 56.39 | 57.37 |
| September 30 | 60.45 | 41.21 | 58.21 | 69.89 | 54.04 | 58.32 |
| December 31 | 62.31 | 55.27 | 58.54 | 59.10 | 35.94 | 42.43 |

The number of holders of record of PPG common stock as of Jan. 31, 2010, was 19,467, per the records of the company's transfer agent.

## Dividends

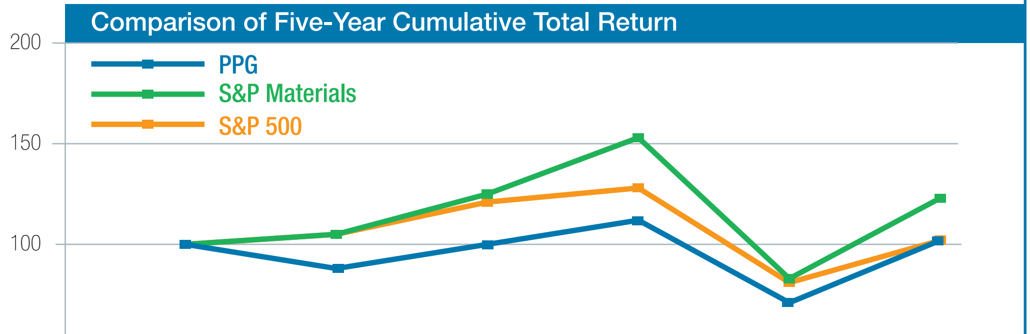
| *Month of Payment* | 2009 *Amount (Millions)* | 2009 *Per Share* | 2008 *Amount (Millions)* | 2008 *Per Share* |
|---|---|---|---|---|
| March | $ 87 | $ .53 | $ 85 | $ .52 |
| June | 87 | .53 | 86 | .52 |
| September | 88 | .53 | 85 | .52 |
| December | 91 | .54 | 87 | .53 |
| Total | $ 353 | $ 2.13 | $ 343 | $ 2.09 |

PPG has paid uninterrupted dividends since 1899. The latest quarterly dividend of 54 cents per share was approved by the board of directors on Jan. 21, 2010, payable March 12, 2010, to shareholders of record Feb. 19, 2010. The company has increased its annual dividend payment for the past 38 consecutive years. PPG's latest dividend increase was announced in October 2009.

# Shareholder Return Performance Graph

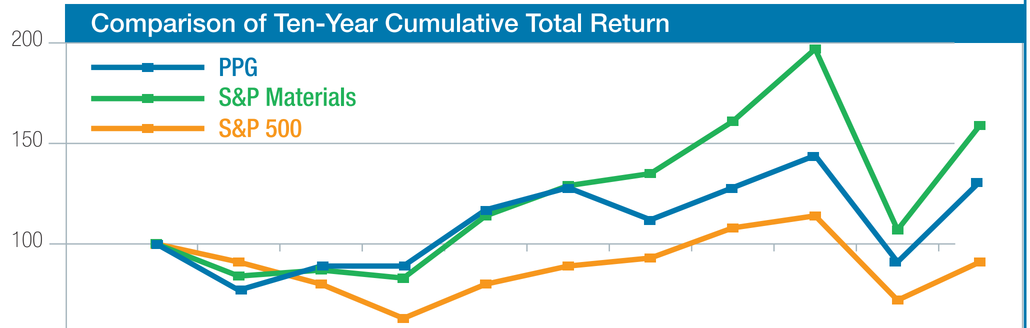
These line graphs compare the yearly percentage changes in the cumulative total shareholder value return of the company's common stock with the cumulative total return of the Standard & Poor's Composite 500 Stock Index ("S&P 500 Index") and the Standard & Poor's 500 Materials Sector Index ("S&P 500 Materials Sector Index") for the five-year and ten-year periods beginning Dec. 31, 2004, and Dec. 31, 1999, respectively, and ending Dec. 31, 2009. The information presented in these graphs assumes that the investment in the company's common stock and each index was $100 on Dec. 31, 2004, and Dec. 31, 1999, and that all dividends were reinvested.

### Comparison of Five-Year Cumulative Total Return




| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| PPG | 100 | 88 | 100 | 112 | 71 | 102 |
| S&P Mtl | 100 | 105 | 125 | 153 | 83 | 123 |
| S&P 500 | 100 | 105 | 121 | 128 | 81 | 102 |

### Comparison of Ten-Year Cumulative Total Return




| | '99 | '00 | '01 | '02 | '03 | '04 | '05 | '06 | '07 | '08 | '09 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PPG | 100 | 77 | 89 | 89 | 117 | 128 | 112 | 128 | 144 | 91 | 131 |
| S&P Mtl | 100 | 84 | 87 | 83 | 114 | 129 | 135 | 161 | 197 | 107 | 159 |
| S&P 500 | 100 | 91 | 80 | 63 | 80 | 89 | 93 | 108 | 114 | 72 | 91 |

### World Headquarters

One PPG Place
Pittsburgh, PA 15272, USA
(412) 434-3131
www.ppg.com

### Transfer Agent & Registrar

BNY Mellon Shareowner Services
480 Washington Blvd.
Jersey City, NJ 07310-1900
PPG-dedicated phone: (800) 648-8160
www.bnymellon.com/shareowner/isd

### Annual Meeting of Shareholders

Thursday, April 15, 2010, 11 a.m.
David L. Lawrence Convention Center
Spirit of Pittsburgh Ballroom B
1000 Fort Duquesne Blvd.
Pittsburgh, PA 15222

### Investor Relations

PPG Industries, Inc.
Investor Relations
One PPG Place 40E
Pittsburgh, PA 15272
(412) 434-3318

Specific questions regarding the transfer or replacement of stock certificates, dividend check replacement, dividend tax information or the direct purchase plan with dividend reinvestment option should be made to BNY Mellon Shareowner Services directly at (800) 648-8160, or by logging on to Investor Service Direct at www.bnymellon.com/shareowner/isd.

### Stock Exchange Listings

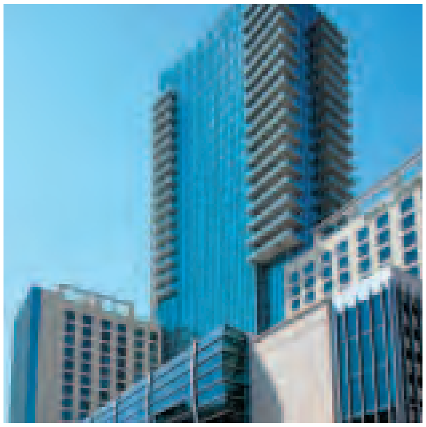
PPG common stock is listed on the New York Stock Exchange (symbol: PPG).

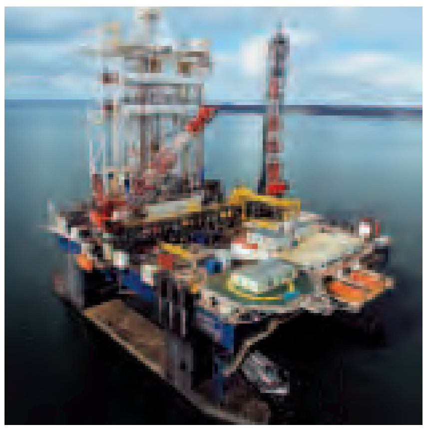
### Publications Available to Shareholders

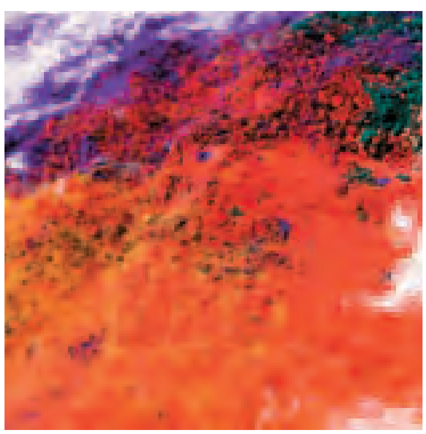
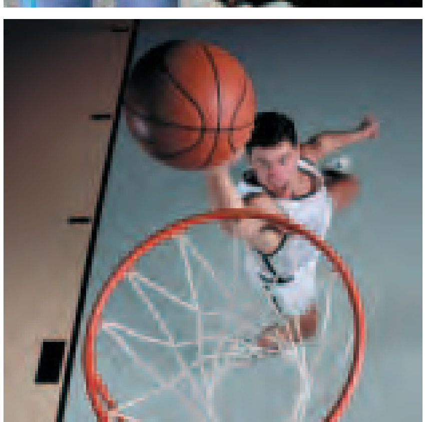
Copies of the following publications will be furnished without charge upon written request to Corporate Communications, PPG Industries, Inc., One PPG Place, Pittsburgh, PA 15272. Most of these are also available on the Internet at www.ppg.com, Investor Center, Shareholder Services. The publications include: Annual Report and Form 10-K, including the financial schedule and other exhibits; PPG Industries Blueprint; PPG's Global Code of Ethics; PPG's Code of Ethics for Senior Financial Officers; PPG's Corporate Sustainability Report; and Facts About PPG.

This annual report is printed on paper that is FSC-certified, contains 30% post-consumer recovered fiber and is manufactured with electricity in the form of renewable energy.







**PPG Industries**

One PPG Place

Pittsburgh, PA 15272, USA

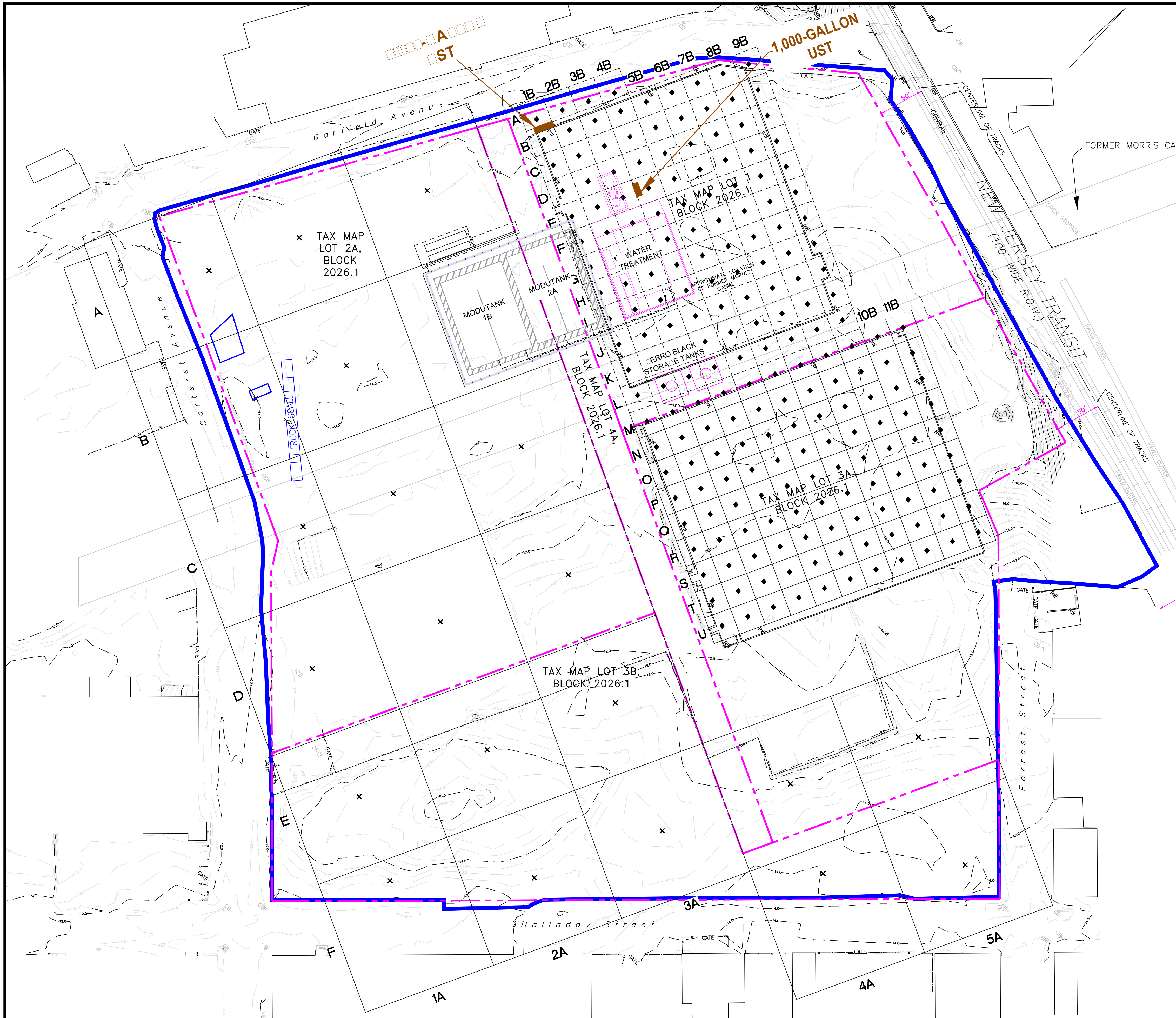
(412) 434-3131

www.ppg.com


AR-CORP-0210-ENG-20K

# Attachment 3

# Site Plan with UST Locations




THIS IS A PRELIMINARY DRAFT. IT HAS BEEN PREPARED BASED ON PRELIMINARY INFORMATION AND ON ASSUMPTIONS. NO ONE MAY RELY ON THIS DRAFT. IT IS SUBJECT TO CHANGE AS ADDITIONAL INFORMATION BECOMES AVAILABLE OR IS CLARIFIED.

## LEGEND

- FENCE
- CONTOUR WITH ELEVATION (0.5–FOOT INTERVAL)
- SITE BOUNDARY
- LOT BOUNDARY
- CATCHBASIN
- TEST PIT LOCATION
- OBSERVATION DURING EXCAVATION AND LOCATION OF LABORATORY SAMPLE
- UNDERGROUND STORAGE TANK (UST) GENERAL LOCATION

## NOTES

1) THE HORIZONTAL DATUM IS NAD 1983, BASED ON GPS OBSERVATIONS BY LYNCH, GIULIANO AND ASSOCIATES, INC., DECEMBER 7, 2002, AND REFER TO NATIONAL GEODETIC MONUMENT "JONES" (POINT IDENTIFICATION NUMBER KV5836).

2) THE VERTICAL DATUM IS NAVD88, BASED ON OBSERVATIONS BY BORBAS SURVEYING & MAPPING L.L.C. IN JUNE 2011.

50 25 0 50
Scale in Feet

| REVISIONS | | | |
|---|---|---|---|
| NO.: | DESCRIPTION: | DATE: | BY: |

DESIGNED BY: KW
DRAWN BY: K.P.B./JK
CHECKED BY:
APPROVED BY:

AECOM
30 KNIGHTSBRIDGE ROAD, SUITE 520
PISCATAWAY, NEW JERSEY 08854
PHONE: (732) 564-3600
FAX: (732) 369-0122
WEB: HTTP://WWW.AECOM.COM

PPG INDUSTRIES
SITE 114
JERSEY CITY, HUDSON COUNTY, NJ

SCALE: AS SHOWN
DATE: 04/15/2015
PROJECT NUMBER: 60314351.GA.DE.RPT.RAR

DRAWING NUMBER: B-1
SHEET NUMBER: 1

AECOM

AECOM
30 Knightsbridge Road, Suite 520
Piscataway, NJ 08854

732.564.3600 tel
732.369.0122 fax

August 14, 2012

Bureau of Case Assignment & Initial Notice
New Jersey Department of Environmental Protection
Site Remediation Program
401-05H
PO Box 420
401 East State Street
Trenton, NJ 08625-0420

**Subject: PPG Industries, Inc., Site 114, 900 Garfield Avenue, Jersey City, NJ; SRP PI #** 554479
**527871, 530369**

Dear Bureau of Case Assignment & Initial Notice,

On behalf of by PPG Industries, Inc. ("PPG"), AECOM is submitting the attached License Site Remediation Professional ("LSRP") Notification of Retention or Dismissal Form with a copy of the UST Questionnaire for the closure of two regulated underground storage tanks ("USTs") discovered during Interim Remedial Measures ("IRM #1") being conducted at Hudson County Chromate, Garfield Avenue Group, Site 114. Per direction from NJDEP, an LSRP is no longer needed for the site closure under the ACO and JCO. The tanks were closed under TMS # N11-7757, Facility # 554479. The UST closure activities are included in the IRM #1 Remedial Action Report ("RAR") to be submitted under separate cover. The Response Action Outcome ("RAO") for the USTs will be issued at a later date with the final site closure under NJDEP oversight under an Administrative Consent Order ("ACO") and Judicial Consent Order ("JCO") for Hudson County Chrome Site 114. The NJDEP Case Manager for the ACO and JCO is Tom Cozzi.

If you have any questions or concerns regarding the attached report or forms, please contact me at AECOM via email kathy.whooley@aecom.com or by calling 732-564-3644.

Yours sincerely,

Kathleen Whooley

Kathleen Whooley
LSRP No. 509371

cc: S. Mikaelian, AECOM
C. Martell, AECOM
B. McGuire, PPG
M. Terril, PPG
P. Sorge, JM Sorge on behalf of Hampshire Group
B. Delisle, JC
T. Cozzi, NJDEP
P. Amin, Weston
B. McPeak, PP
M. McCabe, SA
D. Laguzza

\\uspsw2vfp001\DATA_USPSW2VFP001\Environment\Piscataway\Project\PPG-NJCProgram\7-Deliverables\7.1B-GAGroup\2012-08-14_LSRPDismissal-USTClosure\2012-08-14-LSRP_dismissal-UST.docx

**New Jersey Department of Environmental Protection**
Site Remediation Program

## LSRP NOTIFICATION OF RETENTION OR DISMISSAL

Date Stamp
(For Department use only)

**SECTION A. SITE NAME AND LOCATION**

Site Name: Hudson County Chrome Site 114

List all AKAs: QUALEX INC

Street Address: 900 Garfield Avenue

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07305

Program Interest (PI) Number(s): 554479 Case Tracking Number(s): TMS 3 N11-7757

**SECTION B. RETENTION INFORMATION**

I was retained by ______ to serve as the licensed site remediation professional for the remediation at the site on ______.

I replaced another LSRP:........ ☐ Yes ☐ No

Provide name of replaced/released LSRP: ______

**SECTION C. RELEASE INFORMATION**

I was released by PPG Industries, Inc. from service as the licensed site remediation professional for remediation at the site on 08/10/2012.

**Note:** The release notification is only required if it occurs prior to the issuance of the response action outcome for the site by the LSRP.

**SECTION D. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT**

LSRP ID Number: 509371

First Name: Kathleen Last Name: Whooley

Phone Number: (732) 564-3644 Ext: ______ Fax: (732) 369-0122

Mailing Address: AECOM, 30 Knightsbridge Road, Suite 520

City/Town: Piscataway State: NJ Zip Code: 08854

Email Address: kathy.whooley@aecom.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-16d and N.J.S.A. 58:10B-1.3b(2).

*I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.*

LSRP Signature: Kathleen Whooley Date: 08/14/2012

LSRP Name/Title: Kathleen Whooley **No Changes Since Last Submittal** ☒

Company Name: AECOM

## SECTION E. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: PPG Industries, Inc.

Representative First Name: Brian    Representative Last Name: McGuire

Title: Manager, Environmental Projects

Phone Number: (412) 492-5512    Ext: ______    Fax: ______

Mailing Address: PPG Industries, Inc., 4325 Rosanna Drive

City/Town: Allison Park    State: PA    Zip Code: 15101

Email Address: bmcguire@ppg.com

1. I am a prospective purchaser of the subject site ........ ☐ Yes ☒ No
2. I am hiring a LSRP to address an unregulated heating oil tank(s) only ........ ☒ Yes ☐ No
3. I maintain I have a defense to spill act liability pursuant to N.J.S.A. 58:10-23.11gd because I am a (select one):
   ☐ Government Entity ☐ Lender
   ☐ Innocent Purchaser ☐ Developer
4. I am hiring a LSRP to meet licensing requirements for a child care center on this site ........ ☐ Yes ☒ No
   If "Yes," indicate if you are the ☐ property owner or ☐ tenant.
5. I am taking over remediation from the Department or another party ........ ☐ Yes ☒ No
   If "Yes," indicate name of party that was previously conducting remediation:
   ______________________
   If "Yes," the party who I am taking over from agrees that I will conduct the remediation. ........ ☐ Yes ☐ No
6. Total number of contaminated AOC(s) on site known at this time: 2
7. I have hired a LSRP to address:
   ☐ the entire site based upon a PA/SI (completed or yet to be completed);
   or
   ☐ Specific known contaminated AOC(s).
   Total number of contaminated AOC(s) that this LSRP is addressing: ______
   Total number of contaminated AOC(s) associated with the site: ______
   ☒ Regulated Tank Closure

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

*I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and that to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.*

Signature: ______________________ Date: ______

Name/Title: Brian McGuire/Manager, Environmental Projects

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF REMEDIATION SUPPORT
UST Program • Registration and Billing Unit
PO Box 420, Mail Code 401-05H, Trenton, N.J. 08625-0420
1-609-292-2943 • www.state.nj.us/dep/srp/bust

**STATE USE ONLY**
Check In ☐ Yes ☐ No

# UNDERGROUND STORAGE TANK FACILITY CERTIFICATION QUESTIONNAIRE

**FACILITY UST # (PROGRAM INTEREST ID):** SRP ID # 554479, Facility TMS # N11-7757

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq., and the Underground Storage Tank Rules N.J.A.C. 7:14B et. seq.

*Check appropriate box*

A. ☐ This is a registration of a proposed or newly installed underground storage tank. (This form must be filed at least 30 days prior to operation)
B. ☐ This is a registration of an existing underground storage tank not presently registered.
C. ☒ This is a correction or amendment to an existing facility registration. (Check type of change below)
D. ☐ There have been no changes to the facility registration since last submittal. (Complete Section A, C & E)

*If "C" is checked above, please check the appropriate type of change(s) below*

- ☐ Facility Name and/or Address Change
- ☐ Owner Name and/or Address Change
- ☐ Facility Operator and/or Address Change
- ☐ Owner Contact Person Change
- ☐ Type of Product(s) Stored
- ☐ Substantial Modification(s) (see 14B)
- ☐ Tank(s) and/or Piping Changes
- ☒ Closure (Complete Section B Questions 1, 4, 5, 12C)
- ☐ Financial Responsibility Change (Including Policy Renewal)
- ☐ Sale or Transfer (Complete entire form)
- ☐ Other *(please specify)*

## SECTION A - GENERAL FACILITY INFORMATION

1. **Facility Name** HUDSON COUNTY CHROME SITE 114
2. **Facility Location**
   Address Line 1: 900 GARFIELD AVE
   Address Line 2:
   City or Municipality: JERSEY CITY
   COUNTY: HUDSON STATE: NJ ZIP CODE: 07305- BLOCK: LOT:
3. **Facility Operator**
   ORGANIZATION (If applicable, e.g. Company) or INDIVIDUAL:
   Contact Person: PERSON: TITLE:
   PHONE NUMBER (INCLUDE AREA CODE & EXT): E-MAIL ADDRESS:
   Operator Address (if different than #2)
   ADDRESS LINE 1 (NUMBER AND STREET):
   ADDRESS LINE 2 (e.g. PO BOX, SUITE):
   CITY OR MUNICIPALITY: STATE: ZIP CODE: -
4. **Tank Owner** (Organization): PPG INDUSTRIES INC
   Contact Person: PERSON: BRIAN MCGUIRE TITLE: PROJECT MANAGER
   PHONE NUMBER (INCLUDE AREA CODE & EXT): 4144925512 E-MAIL ADDRESS: BMCGUIRE@PPG.COM
   Tank Owner Address
   ADDRESS LINE 1 (NUMBER AND STREET): 4325 ROSANNA DRIVE
   ADDRESS LINE 2 (e.g. PO BOX, SUITE): PO BOX 2009
   CITY OR MUNICIPALITY: ALLISON PARK STATE: PA ZIP CODE: 15101-2009

5 **Billing Address:** Check one below
[X] Same as Tank Owner address listed in Section A4 [ ] Same as Facility Operator address listed in Section A3 [ ] Other and attach billing address

6 **Total number of regulated underground storage tanks at facility** [ ] (Complete Section B for each tank unless there has been no change since last submittal)

7 **Total regulated underground storage capacity at facility (gallons)** [ ]

8 **Facility Type:** A [ ] State B [ ] Commercial/ Industrial C [ ] County/Municipal D [ ] Federal E [ ] Charitable / Public School F [ ] Residential G [ ] Farm (as defined in N.J.S.A. 54:4-23.1 et seq.)

**NOTE: The facility site plan must be submitted when registering any underground storage tank pursuant to N.J.A.C. 7:14B 2.2.**

## SECTION B - SPECIFIC TANK INFORMATION

ALL regulated underground storage tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes. ***DO NOT MARK SHADED AREAS***

| | TANK NO. | | TANK NO. | | TANK NO. | | TANK NO. | | TANK NO. | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. **Tank Identification Number** | 0001 | | 0002 | | | | | | | |
| 2. **CAS Number** (Hazardous substances only) | | | | | | | | | | |
| 3. **Date Tank Installed** | Unknown | | Unknown | | | | | | | |
| 4. **Tank Size** (gallons) - Please note that each compartment is considered a separate Tank System | | | | | | | | | | |
| 5. **Tank Contents** (Mark one "X" for each tank) | | | | | | | | | | |
| A. Leaded Gasoline | | | | | | | | | | |
| B. Unleaded Gasoline | | | | | | | | | | |
| C. Alcohol Enriched Gasoline | | | | | | | | | | |
| D. Light Diesel Fuel (No. 1-D) | | | | | | | | | | |
| E. Medium Diesel Fuel (No. 2-D) | | | | | | | | | | |
| F. Waste Oil | | | | | | | | | | |
| G. Kerosene (No. 1) | | | | | | | | | | |
| H. Heating Oil (No. 2) Complete 13C | | | | | | | | | | |
| I. Heating Oil (No. 4) Complete 13C | | | | | | | | | | |
| J. Heating Oil (No. 6) Complete 13C | | | | | | | | | | |
| K. Aviation Fuel | | | | | | | | | | |
| L. Motor Oil | | | | | | | | | | |
| M. Lubricating Oil | | | | | | | | | | |
| N. Automatic Transmission Fluid | | | | | | | | | | |
| O. Hazardous Waste (**Specify ID Number)** | | | | | | | | | | |
| P. Coolant/Antifreeze | | | | | | | | | | |
| Q. Other **(please specify)** | Unknown | | Unknown | | | | | | | |
| 6. **Tank & Piping Construction** (Mark at least one each for Tank and Piping) | Tank | Piping | Tank | Piping | Tank | Piping | Tank | Piping | Tank | Piping |
| A. Bare steel | X | NA | X | NA | | | | | | |
| B. Cathodically Protected Metal (Mark SA or IC) | | | | | | | | | | |
| 1. Sacrificial Anode (SA) *Date Sacrificial Anode Installed **(TANK ONLY)** | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| 2. Impressed Current (IC) *Date Impressed Current Installed **(TANK ONLY)** | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| C. Fiberglass-Coated Steel **(TANK ONLY)** | | | | | | | | | | |
| D. Fiberglass-Reinforced Plastic | | | | | | | | | | |
| E. Internally Lined **(TANK ONLY)** *Date Internal Lining Installed | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| F. Other (Please specify) (Include Brand Name) | | | | | | | | | | |
| 7. **Piping Operation** (Mark one for each tank system) | | | | | | | | | | |
| A. Pressurized Piping **(PIPING ONLY)** | | | | | | | | | | |
| B. American Suction Piping **(PIPING ONLY)** | | | | | | | | | | |
| C. European Suction Piping **(PIPING ONLY)** | | | | | | | | | | |
| D. Supply/Return **(Heating Oil Piping Only)** | | | | | | | | | | |
| 8. **Tank & Piping Structure** (Mark one for each TANK & PIPING) | | | | | | | | | | |
| A. Single Wall | X | NA | X | NA | | | | | | |
| B. Double Wall | | | | | | | | | | |
| C. Secondary Containment (e.g. Externally Lined) | | | | | | | | | | |
| 9. **Type of Monitoring/Detection** (Mark all that apply for TANK & PIPING) | | | | | | | | | | |
| A. Statistical Inventory Reconciliation Vendor Name & Phone Number | | | | | | | | | | |
| B. Manual Tank Gauging **(TANK ONLY)** | | | | | | | | | | |
| C. Inventory Control **(TANK ONLY)** | | | | | | | | | | |
| D. Interstitial | | | | | | | | | | |
| E. Tightness Test | | | | | | | | | | |
| F. Ground Water Observation Wells | | | | | | | | | | |
| G. Vapor Observation Wells | | | | | | | | | | |
| H. In-Tank (Auto Monitoring Gauge) **(TANK ONLY)** | | | | | | | | | | |
| I. In-Line Electronic Pressure Monitor **(PIPING ONLY)** See Definition Page 4 | | | | | | | | | | |
| J. Automatic Line Leak Detector **(PIPING ONLY)** See Definition Page 4 | | | | | | | | | | |
| K. None **(TANK & PIPING)** | X | NA | X | NA | | | | | | |

| Tank Identification Number | TANK NO 0001 | TANK NO 0002 | TANK NO | TANK NO | TANK NO |
|---|---|---|---|---|---|
| **10. Overfill Protection** (Mark one X for each tank) | | | | | |
| A. Yes | | | | | |
| B. No | X | X | | | |
| **11. Spill Containment Around Fill Pipe** (Mark one X for each tank) | | | | | |
| A. Yes | | | | | |
| B. No | X | X | | | |
| **12. Tank Status Information** (Mark appropriate choice for each tank) | | | | | |
| A. In-Use | | | | | |
| B. Out of Service (See Definition Page 4) | | | | | |
| Date Taken Out of Service | Mo Day Year | Mo Day Year | Mo Day Year | Mo Day Year | Mo Day Year |
| C. Closed | | | | | |
| 1. Removed | | | | | |
| Date Removed | Mo Day Year 12 16 2010 | Mo Day Year 01 25 2011 | Mo Day Year | Mo Day Year | Mo Day Year |
| Closure # TMS# N11-7757, SRP ID # | 554479 | | | | |
| 2. Abandoned-In-Place | | | | | |
| Date Abandoned-In-Place | Mo Day Year | Mo Day Year | Mo Day Year | Mo Day Year | Mo Day Year |
| Closure # | | | | | |
| **13. Tank Use Information** (Mark if applicable) | | | | | |
| A. Emergency Back-up Generator | | | | | |
| B. Sump (See Definition Page 4) | | | | | |
| C. Heating Oil Tanks If you checked H, I or J under item B5 on Page 2, check one of the following | | | | | |
| 1. Product for on-site consumption use | | | | | |
| 2. Product for sale or distribution | | | | | |
| **14. Other Information** (Mark if applicable) | | | | | |
| A. Date of Sale or Transfer | Mo Day Year | Mo Day Year | Mo Day Year | Mo Day Year | Mo Day Year |
| B. Substantial Modification # | | | | | |
| C. ISRA # | | | | | |
| **15. Is the tank within a wellhead protection area as defined on Page 4 (Mark for each tank)** | | | | | |
| A. Yes | | | | | |
| B. No | X | X | | | |

## SECTION C - FINANCIAL RESPONSIBILITY

**Please note:** In addition to new submittals, any change in the Financial Responsibility Assurance Mechanism as per N.J.A.C. 7:14B 2.2 (including policy renewal date) for an existing facility shall be listed below.

Financial Assurance Requirements have been satisfied under the terms of an Administrative Consent Order between NJDEP and PPG Industries dated July 19, 1990

Type of Mechanism (i.e. Insurance) | Carrier/Issuing Agency

___/___/___ Effective Date | ___/___/___ Expiration Date | Policy Number | $ Amount of Aggregate Coverage

## SECTION D - GENERAL GUIDANCE

FEE: (If applicable) Please make check payable to: "Treasurer, State of New Jersey". Registration and Billing Fee Schedule can be found in N.J.A.C. 7:14B-3.

PENALTY: Failure by owner or operator of a regulated undeground storage tank to comply with any requirement of 7:14B et. seqmay result in penalties set forth in N.J.S.A. 58:10A-12.

EMERGENCY: If a discharge or spill occurs, the NJDEP Hotline at (877) 927-6337 must be called **IMMEDIATELY** - 24 hours a day.

EXEMPTION: Residential heating oil underground storage tanks are exempt from the rules as per by N.J.S.A. 58:10A-21 et. seq. Please see N.J.A.C. 7:14B.-1.4(b) for other exemptions.

PUBLICATIONS: Operation and maintenance / record keeping / compliance publications are available on line at **www.state.nj.us/dep/srp/bust** Suggested Publications: "Underground and Storage Tank Owner's Self-inspection Checklist" and "Tank Care".

QUESTIONNAIRE: Initial facility registrations can be submitted online at www.njdeponline.com (Renewal and modifications need prior DEP pin code approval to submit online).

MAILING: UST Registration Certificates are mailed directly to the facility to be displayed prominently as per N.J.A.C. 7:14B-2.6

## SECTION E - CERTIFICATION

Must be signed as follows:

- For a corporation, by a person authorized by resolution of the Board of Directors to sign the document.
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
- For persons other than indicated above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

_______________________________ _______________________________

*(Typed / Printed Name)* *(Signature)*

_______________________________ _______________ _______________

*(Title)* *(Date)* *Facility UST #*

## SECTION F - DEFINITIONS

Section B7 C. **"European" Suction Piping** - Suction piping which has enough slope so that the product in the pipe can drain back into the tank when the suction is released. and which has only one check valve, located directly beneath the pump in the dispensing unitAny underground storage tank equipped with "European" Suction Piping has no monitoring detection requirements for piping.

Section B9 I. **In-Line Electronic Pressure Monitor** - (Used with pressurized piping only) A monitor which checks for loss of pressure within piping when no product is dispensed. This method may be used once every 30 days or every time the dispenser turns off.

Section B9 J. **Automatic Line Leak Detectors** - (Used with pressurized piping - Must be able to detect a 3 gph leak within 1 hour of its occurrence). Types of detectors are:

1. Flow restrictors and flow shut offs which monitor pressure within piping. When a suspected leak is detected, either restricts the flow of product through the piping well below the 3 gph leak rate it detects, or completely cuts off product flow and shuts down the pump.
2. Continuous alarm systems which constantly monitor piping conditions and trigger an audible or visual alarm if a leak is suspected.

Section B12 B. **Out of Service StorageTank** - Any underground storage tank system in which hazardous substances are contained or have been contained, but from which hazardous substances are not or have not been introduced or dispensed pending a decision to close the system or begin reuse of the system.

**Please Note:** Underground storage tank systems which are out of service shall comply with the provisions of N.J.A.C. 7:14B-9-1. The owner or operator of an underground storage tank system which is out of service for a period greater than three months shall follow the guidelines in the current American Petroleum Institute Bulletin #1604. The owner or operator may request that the underground storage tank system remain out of service for a period of more than 12 months without having to permanently close the tank system by complying with the provisions of N.J.A.C. 7:14B-9.1(b) by submitting a Site Investigation (SI) Report at least 30 days before expiration of the 12 month period.

Section B13 B. **Sump** - Any underground storage tank used to collect or contain a hazardous substance for no more than 48 hours.

Section B15 **Wellhead Protection Area -**

1. The area within a 2,000 ft. radius surrounding a public community or public non-community water system well when there is an underground storage tank containing gasoline or non-petroleum hazardous substances located within that area.

2. The area within a 750 ft. radius surrounding a public community or public non-community water system well when there is an underground storage tank containing petroleum products other than gasoline located within that area.

## HOT WORKS PERMIT

*This form shall be completed daily whenever Hot Work is being conducted.*
*The signed form shall be posted at the task location.*

| | |
|---|---|
| PROJECT NAME & NUMBER: PPG 57852 | DATE: 6-2-11 |
| COMMENCEMENT / EXPIRATION:<br>From: 0700<br>To: 1430 | ISSUED TO:<br>Welder Name: DARYL PETROSILLI<br>Spotter Name: CHRIS MUNDAMS |
| SUPERVISOR: Rizzuto/Ciccone | HEALTH AND SAFETY OFFICER: DeAmbrosio |
| TASK AND LOCATION: Torch cut tank for disposal / Chopsaw/Skilsaw | |

No welding or cutting activities shall commence without a completed and signed permit. Do not use open-flame or spark producing equipment until the following precautions have been taken and checked off on this permit. This permit is not valid for confined space entry.

| | |
|---|---|
| ☒ | 1. The location where the work is to be done has been personally examined. |
| ☒ | 2. There are no flammable dusts, vapors, liquids or unpurged tanks (empty) in the area. |
| ☒ | 3. LEL reading 0.0 % LEL (must be <10%); $O_2$ reading 20.2 % (must be <23%) |
| ☒ | 4. All combustibles moved away from the operation, or otherwise protected with fire curtains or equivalent. |
| ☒ | 5. Arrangements have been made to patrol the area for at least ½ hour after the work has been completed. RESPONSIBLE PERSON(S): ANTHONY TRUNCALE |
| ☒ | 6. Any available fire protection systems are in service. LIST: WATER TRUCK/FIREEXT. |
| ☒ | 7. Ample portable fire extinguishing equipment on hand. SIZE/TYPE: 4 VARIOUS 20B:C |
| ☒ | 8. The phone number for the local FIRE DEPARTMENT is 911 |

| BURN PROTECTION EQUIPMENT USED | | | | |
|---|---|---|---|---|
| ☒ Helmet | ☒ Shield | ☒ Boots | ☒ Goggles | ☐ Other (specify): |
| ☐ Jacket | ☒ Shirt | ☒ Gloves | ☒ Apron | |

The undersigned acknowledge their role and understand the necessary procedures to perform the permitted operations safely.

| | |
|---|---|
| Welder / Cutter: | Spotter: |

The undersigned approve this permit and authorize the work.

| | |
|---|---|
| Supervisor: | Health and Safety Officer: |

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

## *Certifies That*

**ARECON LTD**
**90 US HWY 130**
**Bordentown, NJ 08050**

*Having duly met the requirements of the*

# Underground Storage Tank Certification Program
# N.J.S.A. 58:10A-24.1-8

*Is hereby approved to perform the following services:*

| |
|---|
| CATHODIC PROTECTION SPECIALIST |
| CLOSURE |
| INSTALLATION-ENTIRE UST SYSTEM |
| SUBSURFACE EVALUATION |
| TANK TESTING |

**05/31/2013**
**EXPIRATION DATE**

**US00025**
**CERTIFICATION NUMBER**

***TO BE CONSPICUOUSLY DISPLAYED AT THE FACILITY***

arecon ltd.
Environmental Consulting
Engineering and Design
Project Management

JUNE 6, 2011

ENTACT ENVIRONMENTAL SERVICE
70 CARTERET AVENUE
JERSEY CITY, NJ 07305
ATTENTION; MS. ROBIN WHITE

RE: CLOSURE OF (2) REGULATED UST'S AND (1) UNREGULATED AST FORMERLY LOCATED AT PPG SITE 114, JERSEY CITY, NJ

DEAR MS. WHITE:

On June 2, 2011, Arecon (UST License contractor #US0025) mobilized a crew to perform closure activities on the following underground storage tanks (UST) and above ground storage tank (AST);

- (1) - 2,000 gallon registered UST (Unknown contents)
- (1) -1,000 gallon registered UST (Unknown Contents)
- (1) - 550 gallon unregulated AST (Unknown Contents)

The three (3) tanks were properly closed in accordance with all federal, state and local authorities. As indicated in Arecon phone logs, local permits were not required, due to the site having NJDEP oversight.

All tanks were scrapped cleaned and then wiped down with chemical absorbent pads. All tank bottom material was placed in (2) steel 55 gallon drums, the drum were labeled and handed off to the site for proper disposal.

Please note that during all cutting and cleaning activities the air levels were monitored in accordance with Arecon's previous submitted Health and Safety plan. All air levels were found to be below all actions limits.

Attached to this letter are copies of Arecon's phone logs and daily field reports for your files. If you should have any question or concerns, please do not hesitate to contact me.

SINCERELY,
ARECON LTD.

DINO CICCONE
UST CLOSURE CERT# 0013440

ENCL. ARECON'S PHONE LOGS
ARECON'S DAILY FIELD REPORT
COPY OF CLOSURE NOTICE OF INTENT

Arecon ltd
90 US Route 130
Bordentown, NJ 08506
Phone: 609-298-0770
Fax: 609-291-8386

Arecon Ltd.

# TELEPHONE MEMORANDUM

| | | | |
|---|---|---|---|
| **WITH:** | MR. JOSEPH MAZZONE - PLUMBING SUBCODE OFFICIAL | **PHONE:** | 201-547-5055 |
| **COMPANY:** | JERSEY CITY BUILDING/PERMIT DEPARTMENT | FAX: | |
| **BY:** | DINO CICCONE | DATE: | 4/4/11 & 4/5/11 |
| **PROJECT:** | UST CLOSURE LOCATED AT PPG JERSEY CITY NJ SITE 114 | TIME: | 3:30 & 10:30 |
| **PROJECT NO:** | 34002 | | |

SUMMARY OF DISCUSSION:

- 4/4/2011 @ 3:00: Arecon spoke with Mr. Joseph Mazzone who is the Plumbing Subcode official for Jersey City Building Department and inquired if a permit would be required for the removal of the UST's located at PPG Jersey City, Site 114. Mr. Mazzone indicated that he was not sure and would get back to us.
- 4/5/2011 @ 10:30: Mr. Mazzone contacted Arecon and indicated that since the site is conducting site remediation activities, which is under NJDEP oversight, a local permit would not be required.

Arecon ltd
90 US Route 130
Bordentown, NJ 08506
Phone: 609-298-0770
Fax: 609-291-8386

Arecon Ltd.

# TELEPHONE MEMORANDUM

| | | | |
|---|---|---|---|
| **WITH:** | MR. JOSEPH MAZZONE - PLUMBING SUBCODE OFFICIAL | **PHONE:** | 201-547-5055 |
| **COMPANY:** | JERSEY CITY BUILDING/PERMIT DEPARTMENT | **FAX:** | |
| **BY:** | DINO CICCONE | **DATE:** | 5/31/11 |
| **PROJECT:** | UST CLOSURE LOCATED AT PPG JERSEY CITY NJ SITE 114 | **TIME:** | 3:50 PM |
| **PROJECT NO:** | 34002 | | |

**SUMMARY OF DISCUSSION:**

- 5/31/11 @ 3:50: Arecon try to reach out to Mr. Joseph Mazzone (Plumbing Subcode official), as a courtesy to inform him that the UST closure activities were commencing. Mr. Mazzone was not available, so therefore Arecon left a message on his voice mail.

**Arecon ltd**
90 US Highway Route 130
Bordentown, NJ 08505
Phone: 609-298-0770
Fax: 609-291-8386

# DAILY FIELD REPORT

**PROJECT:** PPG SITE 114 / UST CLOSURE
**PROJECT LOCATION:** JERSEY CITY NJ.
**CLIENT/CONTACT:** ENTACT / ROBIN WHITE
**PRESENT AT SITE:** DINO C, CHRIS M, DARRYL P.

**PROJECT NO:** 34002
**PREPARED BY:** DINO CICCONE

**DATE:** 6/2/11
**START TIME:** 07:00 **END TIME:** 15:30 **TOTAL HOURS:** ONSITE 8HRS | TOTAL 11RS
AT OFFICE TO LOAD UP - 5:30AM
BACK AT OFFICE TO UNLOAD - 4:30 pm

**WEATHER:** ± 75°F

**EQUIPMENT:** TANK CLEANING AND CUTTING EQUIPMENT
- METERS
2-DRUMS

**OBSERVATIONS:**
07:00 - ARRIVED ON SITE AND ATTENDED ENTACT TAILGATE SAFETY MEETING.
07:15 - 07:35 - ENTACT PRESENTED THEIR H/S PLAN TO ARECON.
07:40 - AT LOCATION OF UST'S AND STARTED TO SETUP
- CHRIS M (H/S) CALIBRATED METERS
800 - CHRIS METERED TANK AND OK TO CUT (1ST UST 2000 GAL)
LEL = 0% $O_2$ 20.9%
08:10 - STARTED TO CUT 1ST UST (2000 GAL)
08:40 - COMPLETED CUTTING 1ST UST - AND NO RESIDUAL - JUST SOIL IN AREA OF VENT LINES.
08:42 - METERED AST - LEL 0-0.1% $O_2$ 21.3% (550 GAL)
- WAITING ON ENTACT / AECOM TO GIVE ANSWER ON SOIL IN UST IF IT SHOULD BE PLACED IN DRUM OR GO W/ ONSITE SOIL MATERIAL.
08:50 - ENTACT ON BREAK
09:25 - RETURN FROM BREAK AND ENTACT RELOCATING OTHER UST AND AST IN CUTTING / CLEANING AREA
09:45 - METERED 2nd UST (1000K) LEL = 2% $O_2$ = 20.8% CO = 7 VOC 177 ppm (PEAK)
10:00 - STARTED TO CUT ~~100~~ 550 AST / DRAGGER TUBE FOR BENZENE = 2PPM
10:15 - COMPLETED CUTTING AST
- METERED 1000 K GAL UST - (2nd) LEL = 0% $O_2$ = 21.1% VOC 28.4 ppm
- GAVE CLEARENCE TO CUT.
10:40 - COMPLETED CUTTING UST #2 AND SET UP FOR CLEANING.
11:40 - COMPLETED CLEANING ALL 3 TANKS. GENERATED 2 DRUM OF TANK BOTTOMS. AS DIRECTED DRUMS REMAIN ON SITE FOR GENERATOR TO DISPOSE.
- CLEANED UP AREA - MOVED TANKS TO CUTTING AREA.

**SKETCH ATTACHED:** YES ____ **NO:** X

**Arecon ltd**
90 US Highway Route 130
Bordentown, NJ 08505
Phone: 609-298-0770
Fax: 609-291-8386

# DAILY FIELD REPORT

**PROJECT:** PPG SITE 114 / UST CLOSURE
**PROJECT NO:** 34002
**PROJECT LOCATION:** JERSEY CITY N.J.
**PREPARED BY:** DINO CICCONE
**CLIENT/CONTACT:** ENTACT: ROBIN WHITE
**PRESENT AT SITE:**

**DATE:** 6/2/11 **START TIME:** **END TIME:** **TOTAL HOURS:**

**WEATHER:**

**EQUIPMENT:**

**OBSERVATIONS:**
-12:00- LUNCH BREAK.
1230 SUITED UP / ENTERED EZ TO CUT TANKS AS REQUESTED
1250: STARTED CUTTING 2000 GAL UST / USING TORCH / ENTACT STARTED
CUTTING 550 GAL AST / USING DEMO SAW
1400 COMPLETED CUTTING 2000GAL UST AND 550 GAL AST.
1415 STARTED CUTTING 1000 GAL UST / USING TORCH
1500 COMPLETED CUTTING 1000GAL UST
1505 CLEANED AND PACKED EQUIPMENT
1510 DEPARTED THE SITE.

6/2/11
DINO CICCONE

6/20/11
CHRIS MUNDNAS

**SKETCH ATTACHED: YES** ____ **NO:** X

New Jersey Department of Environmental Protection

**Division of Remediation Support**
**Bureau of Case Assignment and Initial Notice**
**PO Box 435**
**Trenton, NJ 08625-0435**
**(609) 633-0708**

# CLOSURE - Notice of Intent
# Underground Storage Tank System

**DEP Received Date:** 05/10/2011
**Expiration Date:** 05/10/2012

**TMS #:** N11-7757
**Activity #:** UCL110001

**Facility ID #:** 554479

**Facility Name:**
HUDSON COUNTY CHRDME SITE 114

**Facility Address:**
900 GARFIELD AVE
Jersey City
Hudson County

Decommission, close and conduct a site investigation for the UST(s) and all associated piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in N.J.A.C. 7:14B-8.2.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

**Contact Person:** Kathleen Whooley

**Telephone #:** 732-564-3644

**This Permit must be displayed at the Site during the Approved Activity and must be made available for inspections at all times.**

The above listed facility is hereby granted approval to perform the attached activities in accordance with N.J.A.C. 7:14B-1 et. seq..

RAFAEL RIVERA

Rafael Rivera, Supervisor
**Bureau of Case Assignment and Initial Notice**

This Permit consists of 2 pages.

## The closure of the following:

---

One-1000 gallon UNKNOWN underground storage tank, and appurtenant piping.
One-2000 gallon UNKNOWN underground storage tank, and appurtenant piping.

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF REMEDIATION SUPPORT
REGISTRATION & BILLING UNIT
P.O. BOX 028
TRENTON, NEW JERSEY 08625-0028
Phone: (609) 633-1464

BRIAN MCGUIRE
PPG INDUSTRIES INC
4325 RUSANNA DR
PO BOX 2009
ALLISON PARK, PA 15101-2009

04/07/2011

Re: **Notice of Deficiency**
Facility: HUDSON COUNTY CHRDME SITE 114
Facility ID: 554479

Dear UST Registrant:

The New Jersey Department of Environmental Protection has determined that your recent submission of a Registration Certificate Questionnaire for the above referenced facility is deficient for the following reason(s).

- [x] Required Fee Not Submitted Pursuant to N.J.A.C. 7:14B-3

  Amount Due $ __1,550.00_______

- [x] Financial Responsibility Information Incomplete Pursuant to N.J.A.C. 7:14B-15
- [ ] Signature & Certification Missing Pursuant to N.J.A.C. 7:14B-1.7
- [x] Site Plan Not Submitted Pursuant to N.J.A.C. 7:14B-2.2d
- [ ] Required Facility Certification Questionnaire Not Submitted (correct form enclosed)
- [x] Tank Information Incomplete Pursuant to N.J.A.C. 7:14B-2.2
- [x] Other - Explanation Below:

Dear Sir, the department has received and processed your recent submittal however a first time registration fee was not provided as well as a site plan. Also the form indicates that the tank product is unknown however they were recently removed, a product should be known. Under Section C please provide a copy of the administrative consent order to verify the insurance information. Please address the outstanding issues and return. Thank you

Please submit the delinquent information, with a copy of this letter, to this office within 15 days. Failure to do so may result in your facility being referred to Enforcement and your Registration Certificate revoked.

If you have any questions, please don't hesitate to contact me at (609) 292-2817.

Sincerely,

Sarah Mihalik, Principal Tech MIS

Registration & Billing Unit
Bureau of Risk Management, Initial Notice and Case Assignment

# TASK SPECIFIC HEALTH AND SAFETY PLAN
# FOR
# UNDERGROUND STORAGE TANK CLOSURE PROJECT
# AT GARFIELD & DAKOTA SITES
# JERSEY CITY, NJ

**PREPARED FOR:**

**ENTACT**
**3129 BASS PRO DRIVE**
**GRAPEVINE, TX 76051**

## PREPARED BY:


***Arecon ltd***
90 US Route 130
Bordentown, NJ 08506
Phone: 609-298-0770
Fax: 609-291-8386


**DATE: March 2011**

## TABLE OF CONTENTS

SECTION

**<u>ATTACHMENTS</u>**



**<u>APPENDICIES</u>**

## 1.0 INTRODUCTION

This Task Specific Health and Safety Plan (HASP) covers the activities that will be conducted by Arecon Ltd. (Arecon) as part of the UST Removal conducted at the Garfield and Dakota Sites in Jersey City New Jersey. The HASP details specifics related to the protection of on-site personnel during the, excavation, inerting, opening, cleaning and removal of the unknown USTs.

On-site activities to be conducted by Arecon include but are not limited to:

- UST Removal
- Inerting UST's
- Cleaning of UST
- Use of hand tools to open UST's
- Equipment and personal decontamination procedures

The activities associated with the closure of the UST provide the potential for worker exposure. The personnel involved in this project will be properly trained to perform on-site activities and to respond to emergency conditions. The objective of this health and safety plan is to assure that the working conditions at the site are protective of human health and safety, and the environment.

All on-site activities will be performed in accordance with applicable federal, state, local requirements, and Arecon's standard operating procedures. **APPENDIX A** of this HASP contains the UST closure plan that will be followed by Arecon personnel.

The following technical and regulatory documents have been used in the development of this HASP:

- <u>Guidance Document For The Remediation of Contaminated Soils</u>, the United States Environmental Protection Agency (U.S. EPA) 40 CFR
- NIOSH <u>Pocket Guide to Chemical Hazards</u>
- Other informational sources.

Employees working at the site shall participate in an annual medical monitoring program and have been properly trained in accordance with the requirements of 29 CFR 1910.120 (40 hrs. HAZWOPER) with annual 8 hour refresher training. At least one site worker will be at the OSHA supervisory level and confined space entry trained. All employees shall provide proof of current training and medical monitoring verification.

## 1.1 APPLICABILITY AND GENERAL RULES

All operations that involve a potential exposure to site-specific hazards related to the UST removal activities of this project are subject to this health and safety plan.

All Arecon workers will be responsible for continuous adherence to the safety procedures during the performance of the work. In no case may work be performed in a manner that conflicts with the intent of, or the inherent safety and environmental cautions expressed in this HASP. After due warnings, personnel or subcontractors violating safety procedures will be dismissed from the site.

The following rules are in effect for this phase of the project:

- All persons working at the site shall participate in an onsite health and safety orientation presented by health and safety or construction manager.
- One site worker must be trained at OSHA supervisory level and shall be on site during all work activities.
- All persons working at the site must be also trained, as necessary per the specifications set forth by the project manager and this HASP.
- All persons working at the site must report all accidents, incidents, and dangerous and unsafe conditions immediately to the site Health and Safety Officer.
- All personnel working at the site must be aware of the fact that there is a Site Specific HASP developed for this project, review the HASP, certify that they have reviewed the HASP and comply with its provisions by signing the HASP review certification sheet. A copy of the plan with the aforementioned review certification will be retained on site and made available to interested parties.
- The requirements specified in this HASP may be changed as work progresses. The changes will only be made with prior approval by the project manager.

Avoiding adverse health effects and injuries to the personnel is dependent on the contribution of all project participants. The person most responsible for an individual's health and safety is the worker himself.

## 1.2 ASSIGNMENT OF RESPONSIBILITY

This section presents information related to the assignment of responsibility for health and safety matters.

#### 1.2.1 Arecon's Project Manager (NJDEP Closure Certified)

The Project Manger is responsible for UST Closure over site, directing all activities related to UST closures, field implementation of the HASP, enforcement of the safety rules and regulations, and consultation with Arecon's Field Technician on regulatory or health and safety issues.

#### 1.2.2 Arecon's Field Manager/Health and Safety Supervisor

The Field Manager/Health and Safety Supervisor is responsible for conducting the activities under the Project Manager's direction. This includes assisting in the daily operations during UST closure activities as well as ensuring that the health and safety plan is adhered to and health and safety monitoring equipment is utilized and monitored.

#### 1.2.3 Arecon's Confined Space Personnel

Only personnel with confined space training shall enter an UST to perform cleaning operations. It is the responsibility of Confined Space Personnel to ensure confined space entry permit and hot works permit are obtained prior to initiation of closure activities.

### 1.3 HAZARD ANALYSIS

An evaluation of potential hazards has been conducted utilizing information supplied by the project engineer/construction managers to ensure that site activities, personnel protection, and emergency response are consistent with the levels of contaminated materials that are expected to be encountered.

Specific tasks that are covered by this plan include the following:

- Excavation
- Inerting the UST's
- Cutting/Opening the UST's
- Cleaning the UST's

The hazard analysis presented in this section considers the specific tasks identified above. If contaminants other than those anticipated during the development of this HASP are encountered, all personnel will be made fully aware of their hazardous properties and the appropriate procedures, which will be utilized to prevent exposure of the workers.

### 1.3.1 Chemical Hazards

The project involves the excavation, inerting, opening and cleaning of the UST's or any that may be encountered during the onsite remedial activities. The UST's are assumed to have contained petroleum products, gasoline, diesel, fuel oil etc. Potential hazards posed by acute exposure to contaminates' include mucous membrane irritation and skin irritation. Chronic exposure may result in central nervous system effects, GI effects, and reproductive system effects. Potential for exposure exists with activities associated with the closure of the UST. Potential pathways for exposure are inhalation, skin contact or ingestion. In order to minimize the risk for exposure proper Personnel Protection Equipment shall be utilized. In addition a contamination reduction zone (CRZ) will be designated for personnel and equipment decontamination, also a support zone (SZ) will be designated for "clean activities." The support zone will be assessed by observation during site operations where the potential exists for contact with contaminants. Measures must be taken to prevent an uncontrolled release or exposure to vapor, liquid or solid contaminants by workers and/or the general public. Assessment and prevention strategies are discussed in other sections of this HASP and must be practiced on a continuing basis by all on-site personnel throughout this project.

**TABLE 1.3.1** summarizes exposure limits and health hazards for expected contaminants. Material

**TABLE 1.3.1: PERMISSIBLE LIMITS AND HEALTH HAZARDS OF CONTAMINANTS OF CONCERN**

| CHEMICAL | OSHA PERMISSIBLE EXPOSURE LIMITS | PRIMARY HEALTH HAZARD (TARGET ORGANS) |
|---|---|---|
| Lead | 0.05 $mg/m^3$ PEL-TWA | Eyes, GI, central nervous system (CNS), kidneys, blood, gingival tissue |
| Chromium | 0.05 $mg/m^3$ PEL-TWA | Eyes, skin irritant |
| **PETROLEUM PRODUCTS** | **ACGIH THRESHOLD LIMIT VALUES** | **PRIMARY HEALTH HAZARD (TARGET ORGAN)** |
| Unleaded/ Leaded Gasoline | 300 $mg/m^3$ TWA 500 $mg/m^3$ STEL | Skin, Central Nervous System, Blood Forming Organs |
| No. 2-Diesel Fuel, No. 2 Heating Oil | 100 $mg/m^3$ TWA | Skin, Central Nervous System, Respiratory System |

### 1.3.2 Fires and Explosion Hazards

The following are site-specific examples of fire and explosion hazards:

- Petroleum Products (gasoline, diesel etc.) existing in the UST
- Use of sparking tools or open flame in presence of ignitable atmosphere.

In order to prevent fires or explosions a hot works permit shall be completed prior to initiation UST opening. A copy of the Hot Works Permit is included in **ATTACHMENT C** of this H&S Plan.

If a localized fire breaks out, dry chemical fire extinguishers will be used to bring the occurrence under control. If necessary and feasible, a fire blanket, or other inert materials will be placed on the burning area to extinguish the flames and minimize the potential for spreading. In the occurrence of a fire, local fire authorities will be contacted for assistance. The local fire department telephone number is listed below:

**Fire Department – 911 (Emergency)**

If an uncontrolled fire develops, releasing potentially toxic gases, all site workers in the immediate vicinity will be evacuated.

### 1.3.3 Physical Hazards

A number of physical safety hazards are present. The following are site-specific examples of safety hazards:

- holes, trenches, excavations and ditches
- falling objects
- sharp and or protruding objects such as nails, glass, metal shards
- slippery surfaces
- uneven terrain
- moving equipment and vehicles
- Confined Spaces

To the greatest extent possible, site work personnel shall minimize creating such hazards at the site. If a hazard cannot be minimized or eliminated it should be flagged or otherwise marked in order to provide warning for others. This is particularly the case in physical hazards (holes, trenches, projections, etc.), which shall be properly marked and/or fenced off, and removed as soon as practicably possible. Appropriate signs (e.g.: "Danger - Authorized Personnel Only") shall be used to clearly mark potentially hazardous areas. The Field Manager/Health & Safety Officer will make every effort to visually inspect the work area, in order to have a safe working environment.

### 1.3.4 Heat Stress Hazard

Protective clothing may present a heat stress hazard. Heat stress can occur rapidly; within as little as 15 minutes, and can lead to stroke or death. Heat stress can result in rashes, cramps, discomfort and drowsiness, all of which can result in impaired mobility.

The Project Manager will plan and carefully train or instruct personnel to avoid overexertion. Frequent monitoring will also be conducted. Work rest periods and duration will be adjusted as necessary. The rest periods should be outside of work areas in a cooled area. Drinks such as water Gatorade or fruit juice should be available so that fluids can be frequently replenished.

### 1.3.5 Cold Stress Hazard

Similar to the humidity levels in hot weather, "wind chill" is a dangerous condition created by a combination of cold air and wind. Wind chill can cause injury (frostnip or frostbite) to exposed body parts; especially susceptible are the hands and face. Frostnip and frostbite are usually localized injuries, confined to a small area.

Frostbite can occur at a non-exposed area of the skin if the clothing covering this area becomes wet and the individual continues to operate in cold temperatures. This is a typical injury of the feet during cold weather operations when personnel are working in and around standing water. If a large area of clothing becomes wet, heat can actually be extracted from the body and hypothermia, a life-threatening emergency, can develop.

This condition can occur subtly during decontamination activities in cold weather. Personnel working in personal protective equipment will perspire, making their undergarments wet. When their protective equipment is removed, the wet clothing and cold air will allow their bodies to cool very rapidly.

To help prevent cold weather injuries, personnel should wear layered clothing that is appropriate for both the climate and the operation. In addition, a heated rehab area (such as a nearby building or trailer) should be established early in the project phase. Personnel should be rotated through the rehab area often and should be carefully monitored for signs of the effects of cold weather and wind chill.

### 1.3.6 Noise Hazards

Noise hazards are expected to exist for workers involved in implementing this plan. Site-specific noise hazards can result in the startling of workers, physical damage and pain to ears (permanent or temporary), and restricted communication in the work area.

All workers shall wear hearing protection when applicable. Personnel exposed to noise above 85 decibels for an 8-hour workday will be required to have an annual audiometric exam. Proper planning and precautionary measures will be taken to assure that communication is not a problem in high-noise areas.

### 1.3.7 Electrical Hazards

Equipment operators shall be specifically trained in safe operating procedures while operating near electrical power lines. Workers shall take the necessary steps to protect themselves from electrocution when operating or working near overhead power lines. Workers shall assume that all power lines are energized and shall maintain the minimum clearance required by OSHA at all times:

- at least 10 feet for lines rated 50 kilovolts or below
- at least 10 feet plus 0.4 inch for each kilovolt above 50 kilovolts (or maintain twice the length of the line insulator, but never less than 10 feet).

### 1.3.8 Sloped Terrain Hazards

During the course of the project workers may be required to perform activities on sloped terrain. Activities will include heavy equipment operation as well as manual handwork. Workers shall be trained to recognize and avoid unsafe work conditions. The following practices shall be performed to minimize hazardous associated with working on sloped terrain:

- Inspect the work area for unsafe work conditions prior to commencement.
- Heavy equipment and excavators shall be equipped with a rollover protective structure and seat belts. These structures, either a roll-bar frame or an enclosed roll-protective cab, are designed to withstand the dynamic forces acting on it during a rollover. In addition, seat belt use is necessary to ensure that the operator remains within the 'zone of protection' provided by the rollover protective structure.
- Heavy equipment operation shall be performed in a perpendicular motion along the slope. A worker shall not operate heavy equipment in a manner that orientates the machine parallel to the slope, thereby increasing risk of rollover. Should it be necessary to conduct operations in this manner, further safety evaluation will be conducted prior to initiation of these operations.

### 1.3.9 Ice Hazards

During the periods of freezing weather, ice might form on work surfaces thus creating hazardous conditions for site workers. Steps to reduce ice hazards, such as application of ice melting chemicals or spreading of traction improving materials (sand, etc.) shall be taken. The workers should stop operations if ice presents unsafe conditions.

### 1.3.10 Dust Hazards

During the course of operations, workers may be exposed to nuisance dust derived from site activities and/or strong winds. Dust can be generated as a result of dry conditions and the movement of construction equipment and road trucks. In order to minimize worker exposure to dust, dust suppression techniques should be employed on the roads as necessary. The project manager or field manager/H&S Supervisor may decide to shut down operations due to dust level exceedance.

### 1.3.11 Underground Utility Hazards

NJ One Call system will be utilized before digging operations commence. Underground utilities will be clearly marked out by owner so as not to be impacted by digging operations.

### 1.3.12 Heavy Equipment Use Hazards

Heavy equipment will be utilized during the course of this project. Equipment operators must be trained in the operation of the equipment they are using. Injuries can occur from equipment hitting or running over personnel, impacts from flying objects or overturning vehicles. All equipment must be inspected before each day of use to ensure proper working order. During operation, operators must make initial eye contact with personnel working in the vicinity to ensure awareness of operations. Workers must wear high visibility clothing/vests when exposed to heavy equipment.

### 1.3.13 Excavation

Heavy equipment will be used to expose the top of tanks in order to properly inert the tanks for cutting and cleaning. During excavation activities the following tasks will be conducted prior to, during and after excavation.

- NJ One Call will be contacted and underground utilities will be marked out in accordance with the Underground Facility Protection Act

- Personnel will wear proper PPE with visibility clothing/vests when exposed to vehicular (heavy equipment) and traffic.

- No one will be permitted to enter the excavation while the equipment is in operation.

- Shoring and/or sloping of excavations will be under the control of Arecon's competent person for excavation activity.

- Prior to entry, the need for sloping/shoring will be assessed by Arecon's competent person. Sloping/shoring will be provided when the excavation walls exceed 5 feet in depth, or regardless of depth, if the competent person requires sloping/shoring for protection of personnel. Sloping/shoring will be performed in accordance with Arecon's construction health and safety programs.

- Area around the open excavation and minimum 6 feet back from edge will be barricaded before leaving

### 1.3.14 Welding/Cutting Hazards

Prior to any welding or cutting a hot works permit shall be completed. A copy of the Hot Works Permit is included in **ATTACHMENT C** of this H&S Plan. Welding activities are not anticipated during this project, however cutting will be conducted to open the tanks. The cutting will consist of utilization of a reciprocating or circular metal cutting saw or a non-sparking air chisel. All work shall be performed by qualified workers wearing appropriate face protection and flame retardant clothing. Additional requirements for cutting activities include:

- Flammable materials must be removed from the area where cutting will occur.
- Atmosphere checks must be performed using a combustible gas indicator to insure that a flammable atmosphere is not present.
- UST will be purged and inerted before any cutting is performed.
- Fire watch must be present during all cutting activities. Appropriate fire extinguisher must be accessible to the fire watch. Fire watch must remain in place one hour following all cutting activities.

### 1.3.15 Confined Space

A permit required confined space is not expected during this operation. Arecon is anticipating that the cleaning of the UST's will be performed from the tank exterior without entering the UST. However should the need to enter a confined space be required, the Field Manager/Health&Safety Supervisor will be responsible for implementation of the standard procedures for confined space operations which includes permit entry system, pre-entry monitoring, and a buddy system according to the requirements of the Arecon Health and Safety Plan and Arecon Confined Space entry Program. Only individuals who have received confined space training shall be permitted to enter a confined space. A pre-entry checklist and Confined space permit are included in **ATTACHMENT C** of this H&S Plan.

### 1.3.16 Biological Hazards

Although unlikely, employees may come in contact with biological hazards including, but not limited to: ticks, plants (poison ivy, oak and sumac), and small animals and insects. Employees should be cautious when working in areas that may support these types of hazards. The project manager should assess suspect areas and warn employees when there is a possibility of contact with these hazards.

## 1.4 CONTROLS FOR CHEMICAL HAZARDS

### 1.4.1 Engineering Controls for Chemical Hazards

Where feasible, engineering controls shall be the primary means utilized to control worker exposure to the hazards set forth in **SECTION 1.3,** namely dust suppression.

### 1.4.2 Personnel Protective Equipment

Employees will be provided with and required to wear protective equipment. The Field Manager/H&S Supervisor will make decisions regarding the upgrading or downgrading of protective clothing. Equipment for personnel protection will be referenced to the EPA levels of protection as specified in the Interim Standard Operating Safety Guides.

Workers shall be required to have proper training in the use of all equipment, and shall be medically approved and be properly fit-tested prior to using this equipment.

Based on the available data, project work will be conducted in Modified Level D protection. During the duration of the project, the Health and Safety technician will monitor work activities. Should site conditions change, the level of personnel protective equipment may be upgraded as necessary.

Modified Level D protection shall be worn by all personnel when entering the UST work area, except within designated break and office support areas. Modified

Modified Level D protection will include the following protective equipment:

- Disposable Tyvek coveralls
- Gloves – outer, leather palm
- Hard hat
- Safety glasses with side shields
- Boots, neoprene, steel toe, and shank
- High visibility vest
- Ear protection (equipment operators)

Employees are responsible for inspecting personal protective equipment prior to, during, and at the end of use. If equipment is found to be defective, it should be reported to the H&S Supervisor, and its use shall be discontinued. All reusable equipment will be properly maintained in accordance with recommendations from the manufacturer.

If necessary, during the UST cleaning activities, Level C protection shall be worn by all personnel when cleaning a UST. Level C protection will include the following protective equipment:

- Chemical resistant Disposable Tyvek coveralls
- Chemical resistant outer gloves
- Chemical resistant inner gloves
- Boots, neoprene, steel toe, and shank with chemical resistant outer boot covers
- Safety glasses with side shields
- Appropriate Full Face or Half Face Air Purifying Respirator for the hazard.
- High visibility vest

If equipment is found to be defective, it should be reported to the project manager, and its use shall be discontinued. All reusable equipment will be properly maintained in accordance with recommendations from the manufacturer.

## 1.5 TRAINING

All site workers will receive health and safety training prior to the initiation of any site activities. General site workers engaged activities that expose, or potentially expose, them to hazardous substances and health hazards shall receive a minimum of 40 hours of HAZWOPER instruction and a minimum of three days of actual field experience under direct supervision of a trained, experience supervisor. One site worker will be trained to the level of OSHA supervisor and will be on site during all work activities. One site worker will be trained in Confined Space Entry Procedures.

All employees who are assigned to work at the site shall have completed the following training. This training is designed to meet various OSHA requirements, including hazard communication and the training provisions of the Superfund Amendments and Reauthorization Act (SARA) of l986 found in 29 CFR 1910.120.

- Basic Safety Training - This course stresses the fundamentals of safety, including the causes and prevention of slip, trip, and fall hazards, confined space entry, heat stress illness, and prevention.
- Hazards and Protection - This course deals with the identification, recognition, and safe work practices with toxic materials. The use and limitations of applicable protective clothing, respirators, and decontamination procedures. Respirator fit test is provided to each employee attending the course.
- Site-Specific Safety Training - This course covers the mandates of the project health and safety plan. In particular, this stresses emergency response procedures. This course will be given to the workers by the Health and Safety Supervisor prior to commencing with the project. The training will consist of reviewing the HASP.
- Tailgate Safety Meetings - A tailgate safety meeting will be conducted at the beginning of each shift or whenever new employees arrive at the job site once the job commences. This meeting discusses the health and safety considerations for

the day's activities and outlines protective equipment necessary.

All records of training shall be kept on file at the site.

## 1.6 EMERGENCY RESPONSE AND ACCIDENT NOTIFICATION

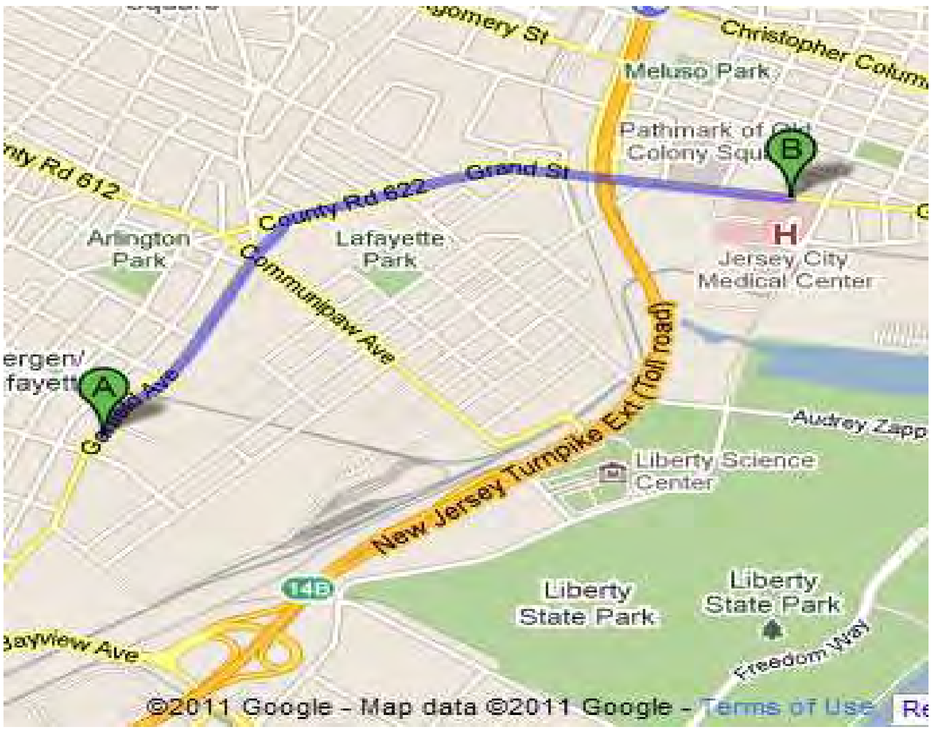
Emergency situations will be minimized by the implementation of the HASP and constant vigil by site management and workers of situations that could develop into an emergency situation. If an emergency situation develops, the initial response will be to handle it in a calm, deliberate manner so that it is controlled and the health and safety of the site workers or surrounding community are not jeopardized. All accidents shall be reported to the project manager. Directions to nearest Emergency Room are depicted below.

**Jersey City Medical Center**
355 Grand Street
Jersey City, NJ 07302
Phone: (201) 915-2000

**Directions to Robert Wood Johnson Hospital:**

Depart 880 Garfield Ave. (Site A) and Proceed North on Garfield Ave. 0.6 mi. toward Grand Ave. Bear RIGHT (EAST) onto Grand Street and proceed 0.9 mi to Jersey City Medical Center (Site B).

A copy of an area map to the nearest emergency center is included for reference:


Christopher Colum
Meluso Park
Pathmark of Old Colony Squ
B
Grand St
County Rd 622
Arlington Park
Lafayette Park
Communipaw Ave
H
Jersey City Medical Center
A
New Jersey Turnpike Ext (Toll road)
Audrey Zapp
Liberty Science Center
14B
Liberty State Park
Liberty State Park
Freedom Way
Bayview Ave
©2011 Google - Map data ©2011 Google - Terms of Use

The following is a list of important phone numbers:

# Emergency Contact List

| Emergency Contacts | |
|---|---|
| **Police** | **911 Emergencies** |
| **Fire** | **911 Emergencies** |
| **Jersey City Medical Center** | **911 –Emergencies<br>(201) 915-2000** |
| **Ambulance** | **911** |
| **NJDEP Environmental Emergency Hotline** | **1-877-WARNDEP (1-877-927-6337)** |
| **New Jersey One Call (Utility Mark Out)** | **1-800-272-1000** |
| **Arecon –Dino Ciccone, Project Manager** | **Cell: 609-298-0770** |
| **Arecon – Christopher Mundras, Field Mng/H&S** | **Cell: 609-532-5574** |
| **ENTACT - H&S Officer - Ross DeAmbrogio** | **Cell: 630-935-2977** |

If an injury or illness is the result of a site-specific exposure, this information will be immediately provided to the treating physician and the project manager.

## 1.7 SITE MONITORING

Personnel and work area monitoring will be conducted as necessary in order to assure that proper engineering controls, work practices, and personnel protection are being utilized. This will help to maintain safe working conditions in the project area. In addition, prior to entering or cutting a UST, or any work related to the USTs, the existing area and UST atmosphere shall be monitoring utilizing a properly calibrated combustible gas meter (CGI) to ensure a safe environment.

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### 1.7.1 Controls For Onsite Hazards

This section discusses the controls that will be used for site hazards. The controls are:

- PPE to protect personnel from hazards
- Site Access procedures and site security
- Emergency Equipment to minimize hazards associated with emergencies
- Employee participation in an annual medical monitoring program
- Training to assure that on site personnel know how to work in hazardous environments
- Dust Suppression techniques

### 1.7.2 Action Levels

Action levels are important in establishing specific action that will be taken at the site in response to changes in work conditions that may arise. If a change in working conditions occurs the project manager will evaluate the change, develop a monitoring plan and upgrade PPE as necessary. All work shall be performed in Modified Level D and Level C, when necessary.

## 1.8 EQUIPMENT DECONTAMINATION

All equipment that comes in contact with the contamination will be decontaminated. This equipment will be visually inspected to determine if any soils have adhered to it. Equipment that has been deemed contaminated will undergo decontamination activities prior to leaving the site.

A decontamination area will be set up in a manner, which will allow capture of waters from the decontamination activities. Contaminated equipment will be driven into the decontamination area and be either hydro blasted or steam cleaned (or both) until all visible signs of contaminated material have been removed as necessary.

# ATTACHMENT A

## HEALTH AND SAFETY REVIEW SIGNATURE PAGE

## HEALTH AND SAFETY REVIEW SIGNATURE PAGE

The signatures below indicate that the following people have read and understand the HASP.

| PRINT: | SIGN: | DATE: |
|---|---|---|
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# ATTACHMENT C
## Hot Works Permit

**Arecon ltd**
90 US Route 130
Bordentown, NJ 08506

# HOT WORK PERMIT

Date _________________Time_________________________

Name of Person(s) Performing Work
____________________________________________________

Specific Location of Work _________________________________

| Yes | No | |
|---|---|---|
| ___ | ___ | Cutting or welding permitted in an area that has been made fire safe. |
| ___ | ___ | All movable fire hazards in the vicinity have been taken to a safe place. |
| ___ | ___ | Guards used to contain the heat, sparks and slag if fire hazards cannot be removed. |
| ___ | ___ | Floor or wall openings or cracks, open doorways and windows protected or closed. |
| ___ | ___ | Fire extinguisher available for instant use. |
| ___ | ___ | Fire watch in areas where other than a minor fire might develop such as around combustible material. |
| ___ | ___ | Floors swept clean of combustible material for a radius of 35'. |
| ___ | ___ | Combustible floors have been kept wet, covered with damp sand or protected by fire resistant shields. |
| ___ | ___ | Welding/cutting done only in areas authorized by management. No welding/cutting in sprinkled building when sprinkler system is impaired or in presence of explosive atmosphere, or in area of storage of readily ignitable material. |
| ___ | ___ | Dusts and conveyor systems that might carry sparks to distant combustibles protected or shutdown. |
| ___ | ___ | Cutter/welder is trained in safe operation of equipment and the safe use of the process. |
| ___ | ___ | Any on-site contractors advised about flammable material or hazardous conditions of which they may not be aware. |
| | | Welding or cutting containers: |
| ___ | ___ | Container thoroughly cleaned and ventilated; |
| ___ | ___ | Any pipe lines or connections to containers disconnected or blanked. |
| ___ | ___ | PPE used as needed– e.g., eye protection, helmet, protective clothing, respirator, gloves. |
| ___ | ___ | Warning sign posted to warn other workers of hot metal. |
| ___ | ___ | Appropriate ventilation provided. |
| ___ | ___ | When working in confined spaces a permit has been issued as per 1910.146. |

For specific requirements refer to General Industry Standards 1910.146; 1910.252; .253;, .254 and .272and Construction Standards 1926.803; .350; .352 and .353.

_______________________________
Authorized Signature – Supervisor

# ATTACHMENT B
# Confined Space Entry Permit

## Confined Space Entry Permit (Pre-Entry/Entry Check List)

Date and Time: ____________________ Date and Time Expires: ____________________

Issued: ____________________

Job site: ____________________ Job Supervisor ____________________

Equipment to be worked on: ____________________ Work to be performed: ____________________

Pre-Entry (See Safety Procedure)

1. Atmospheric Checks: Time ____
   Oxygen ____ %
   Explosive ____ % L.F.L.
   Toxic ____ PPM

2. Source Isolation (No Entry):

| | N/A | Yes | No |
|---|---|---|---|
| Pumps or lines blinded, | ( ) | ( ) | ( ) |
| disconnected, or blocked | ( ) | ( ) | ( ) |

3. Ventilation Modification:

| | N/A | Yes | No |
|---|---|---|---|
| Mechanical | ( ) | ( ) | ( ) |
| Natural Ventilation only | ( ) | ( ) | ( ) |

4. Atmospheric check after isolation and ventilation:
   Oxygen ______ % > 19.5 %
   Explosive ____ % L.F.L. < 10 %
   Toxic ______ PPM < 10 PPM $H_2S$
   Time ______

If conditions are in compliance with the above requirements and there is no reason to believe conditions may change adversely, then proceed to the Permit Space Pre-Entry Check List. Complete and post with this permit. If conditions are not in compliance with the above requirements or there is reason to believe that conditions may change adversely, proceed to the Entry Check-List portion of this permit.

1. Entry, standby, and back up persons:

| | Yes | No |
|---|---|---|
| Successfully completed required training? | ( ) | ( ) |
| Is it current? | ( ) | ( ) |

2. Equipment:

| | N/A | Yes | No |
|---|---|---|---|
| Direct reading gas monitor - tested? | ( ) | ( ) | ( ) |
| Safety harnesses and lifelines for entry and standby persons? | ( ) | ( ) | ( ) |
| Hoisting equipment? | ( ) | ( ) | ( ) |
| Powered communications? | ( ) | ( ) | ( ) |
| SCBAs for entry and standby persons? | ( ) | ( ) | ( ) |
| Protective Clothing? | ( ) | ( ) | ( ) |
| All electric equipment listed Class I, Division I, Group D and Non-sparking tools? | ( ) | ( ) | ( ) |

3. Rescue Procedure:

____________________
____________________
____________________
____________________
____________________
____________________

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "No" column. This permit is not valid unless all appropriate items are completed.

Permit and Check List Prepared By: (Supervisor) ____________________

Approved By: (Unit Supervisor) ____________________

Reviewed By: (Confined Space Operations Personnel) ____________________
(signature)

____________________
(printed name)

## ENTRY PERMIT

_______ CONFINED SPACE _______ HAZARDOUS AREA

PERMIT VALID FOR 8 HOURS ONLY. ALL COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED.

SITE LOCATION and DESCRIPTION _______________________________

PURPOSE OF ENTRY _______________________________

SUPERVISOR(S) in charge of crews     Type of Crew     Phone #

* BOLD DENOTES MINIMUM REQUIREMENTS TO BE COMPLETED AND REVIEWED PRIOR TO ENTRY *

| REQUIREMENTS COMPLETED | DATE | TIME | REQUIREMENTS COMPLETED | DATE | TIME |
|---|---|---|---|---|---|
| **Lock Out/De-energize/Try-out** | ____ | ____ | **Full Body Harness w/ "D" ring** | ____ | ____ |
| **Line(s) Broken-Capped-Blanked** | ____ | ____ | **Emergency Escape Retrieval Equipment** | ____ | ____ |
| **Purge-Flush and Vent** | ____ | ____ | **Lifelines** | ____ | ____ |
| **Ventilation** | ____ | ____ | Fire Extinguishers | ____ | ____ |
| **Secure Area (Post and Flag)** | ____ | ____ | Lighting (Explosive Proof) | ____ | ____ |
| **Breathing Apparatus** | ____ | ____ | Protective Clothing | ____ | ____ |
| **Resuscitator - Inhalator** | ____ | ____ | Respirator(s) (Air Purifying) | ____ | ____ |
| **Standby Safety Personnel** | ____ | ____ | Burning and Welding Permit | ____ | ____ |

Note: Items that do not apply enter N/A in the blank.

** RECORD CONTINUOUS MONITORING RESULTS EVERY 2 HOURS

| CONTINUOUS MONITORING** TEST(S) TO BE TAKEN | PERMISSIBLE ENTRY LEVEL | MONITORING RESULTS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Percent of Oxygen | 19.5% to 23.5% | | | | | | | | |
| Lower Flammable Limit | Under 10% | | | | | | | | |
| Carbon Monoxide | +35 PPM | | | | | | | | |
| Aromatic Hydrocarbon | + 1 PPM * 5 PPM | | | | | | | | |
| Hydrogen Cyanide (Skin) | (Skin) * 4 PPM | | | | | | | | |
| Hydrogen Sulfide | +10 PPM *15 PPM | | | | | | | | |
| Sulfur Dioxide | + 2 PPM * 5 PPM | | | | | | | | |
| Ammonia | *35 PPM | | | | | | | | |

* Short-term exposure limit:Employee can work in the area up to 15 minutes.
+ 8 hr. Time - Weighted Avg.:Employee can work in area 8 hrs (longer with appropriate respiratory protection).

REMARKS:

| GAS TESTER NAME & CHECK # | INSTRUMENT(S) USED | MODEL &/OR TYPE | SERIAL &/OR UNIT # |
|---|---|---|---|
| | | | |
| | | | |

SAFETY STANDBY PERSON IS REQUIRED FOR ALL CONFINED SPACE WORK

| SAFETY STANDBY PERSON(S) | CHECK # | NAME OF SAFETY STANDBY PERSON(S) | CHECK # |
|---|---|---|---|
| | | | |
| | | | |

SUPERVISOR AUTHORIZING ENTRY ____________ Ambulance     Fire

ALL ABOVE CONDITIONS SATISFIED ____________ Safety     Gas Coordinator

DEPARTMENT ____________ PHONE ____________ Original to Department     Pink Copy to Safety

# APPENDIX A
# UST CLOSURE PLAN

# UST CLOSURE PLAN

**<u>PREPARED FOR:</u>**
**ENTACT**
**3129 BASS PRO DRIVE**
**GRAPEVINE, TX 76051**

**<u>PREPARED BY:</u>**


***Arecon ltd***
90 US Route 130
Bordentown, NJ 08506
Phone: 609-298-0770
Fax: 609-291-8386


**DATE: March 2011**

## TABLE OF CONTENTS

## 1.0 INTRODUCTION

This Underground Storage Tank (UST) Closure Plan (CP) has been prepared to facilitate the closure of unknown regulated UST's that may be encountered as part of the Garfield and Dakota remediation activities, located in Jersey City NJ. The CP outlines the necessary steps to properly close the UST's and associated piping.

All work associated with the removal of tanks will be performed in conformance with the site specific Health and Safety Plan (HASP) and in compliance with all Federal, State and Local laws and regulations.

### 1.1 Preparatory Activities

Prior to commencing UST Closure activities, a Notice of Intent to Close USTs will be provided to NJDEP by the engineer and local permits will be obtained by Arecon. NJ One-Call Center will be notified so all utilities will be marked out prior to excavation. Barricades will be installed around the work area and will be maintained throughout the duration of work to ensure safety and awareness.

## 2.0 UST REMOVAL ACTIVITIES

The UST's and associated apparatus will be removed in accordance with applicable Federal, State, and Local regulations and applicable American Petroleum Institute (API) guidance (using API-1604 – Closure of Underground Storage Tanks).

### 2.1 UST Piping Removal Activities

The procedure for the removal of any products that remain in the tank is summarized below:

- Excavate exploratory trenches to determine the location of the tanks and piping.

- Excavate soil above UST's to expose the top of the tanks and piping.

- Examine UST to determine if there is any product in the tank or any associated product lines.

- Drain and flush piping with water back into the tank using caution not to cause any spillage outside of the tank.

- Remove the product remaining in the tank utilizing a vacuum truck with explosion proof/air driven pumps. The truck will be operated by a trained and knowledgeable operator.

- Plug all tank openings except for the vent line.

### 2.2 UST Cleaning

The USTs will be cleaned in accordance with API-1604 and API-2015. Cleaning and removal procedures to be performed are summarized below:

- Remove vapors and oxygen from the interior of the tanks by any one of the following methods:

    - Evenly distribute crushed dry ice inside of the tank to remove any ignitable vapors. Fifteen pounds of dry ice will be used per 1,000 gallons of capacity. The UST vent must be in operation during this process. CAUTION: Do not enter tank at this point as there will not be sufficient oxygen to support life.

    - Use bottled carbon dioxide to displace the vapors. The pressure inside of the tank will not exceed 5 pounds per square inch guage. A 75 lb cylinder of carbon dioxide gass will be used per 2,000 gallons of tank volume. Static will be reduced by using a bonded or grounded nozzle and introducing the gas slowly into the tanks.

    - Purge the UST with air utilizing a venturi system.

- Remove any non-enterable tanks from the excavation in order to gain access to clean the interior of the tank.

- Screen UST atmosphere with a properly calibrated Combustable Gas Meter to ensure that it is safe to cut and open the UST.
- Use appropriate cutting tool to cut the tank and continue to check atmosphere of UST to assure it is not an explosive atmosphere. The cut will be wetted with water to reduce sparks.
- Rinse the interior of the tank with high pressure water (if necessary)

Remove water and residual liquid and debris into disposable containers. Once the containers are filled and sealed closed, they will be marked and placard in accordance with USDOT standards.

## 2.3 UST Removal

Equipment will be provided to remove the tank from the excavation. UST removal will be conducted in accordance with the UST regulations. The removal procedure is as follows:

- Remove tank from excavation and place on a level surface.
- Remove all loose gravel/soil/debris and external scale from tank surface.
- Inspect the condition of the tank and assess any physical damage that may have occurred as a result of the removal activities.

## 2.4 UST Disposal and Excavated Material Handling

The USTs will be disposed of in accordance with all state and local regulations. The method of disposal is described below:

- Label each tank with lettering at least two inches in height in accordance with NJ requirements and also as follows:
  - TANK HAS CONTAINED (name material)
  - NOT VAPOR FREE
  - NOT SUITABLE FOR STORAGE OF FOOD OR LIQUIDS INTENDED FOR HUMAN OR ANIMAL CONSUMPTION

- DATE OF REMOVAL

- Conduct a flammability test of any residual vapors remaining in the tank in accordance with API-2015 to ensure that the vapors do not contain more than 10 percent of the Lower Explosive Limit specific to tank contents.

- Drill multiple holes in all surfaces to make certain the tank is unsuitable for further use.

- Load tank onto truck for transportation using wooden blocks to prevent movement.

Photo 1 – View of 2,000-gallon UST removed from IRM #1 Grid B1B.

Photo 2 - View of 2,000-gallon UST removed from IRM #1 Grid B1B. Note open port holes on top of UST.

Photo 3 – View of 2,000-gallon UST removed from IRM # 1 Grid B1B. Note gash in side caused by excavator during removal.

Photo 4 – View of 2,000-gallon UST after tank was opened for cleaning.

Photo 5 – View of 2,000-gallon UST interior after cleaning.  Note, hole opening at seems caused by excavator during removal activities.  No corrosion holes or pitting was noted.

Photo 6 – View of 2,000-gallon UST interior after cleaning (opposite end from Photo 5).

Photo 7 – Overall view of 2,000-gallon UST after cleaning.


Photo 8 – View of end of 2,000-gallon UST. Note, UST was cut-up on-site at a later date and bulked for disposal with other metal debris excavated during IRM #1 activities.

Photo 9 – View of 2,000-gallon UST prior to being cut-up on-site for disposal.

Photo 10 – View of 2,000-gallon UST looking to the east toward Grid B1B where the UST was recovered within the IRM #1 excavation limits.

Photo 11 – View of 1,000-gallon UST recovered from IRM #1 Grids E3B / E4B.

Photo 12 – View of 1,000-gallon UST recovered from IRM #1 Grids E3B / E4B. Note, large gash in side of UST caused by excavator during removal activities. Other than the gash at the seams, no corrosion holes or pitting were noted.


Photo 13 – View of the opposite end of the 1,000-gallon UST recovered from IRM #1 Grids E3B / E4B.


Photo 14 – View of sludge and liquid remaining within the interior of the 1,000-gallon UST.

Photo 15 – View of sludge and liquid remaining within the interior of the 1,000-gallon UST. Note, two port holes were open when the UST was discovered.

Photo 16 – View of 1,000-gallon UST after cleaning.

Photo 17 – View of 1,000-gallon UST after cleaning.


Photo 18 – View of 1,000-gallon UST after cleaning prior to being cut-up and bulked on-site for off-site disposal.

Photo 19 – View of IRM #1 Area after backfilling.

**Closure Documentation for AOC 114-4B: UST-impacted Soil in Site 114, Phase 1B, in Grid G1A and Grid B10A**

# New Jersey Department of Environmental Protection
# Site Remediation Program

# CLOSURE NOTIFICATION / EXTENSION REQUEST OF AN UNDERGROUND STORAGE TANK SYSTEM

## General Instructions

1. **Applicability**. Use this form when notifying the New Jersey Department of Environmental Protection (NJDEP) of the closure of a regulated Underground Storage Tank System (UST) or to request an Out of Service Extension for a period of more than 12 months.
   - **a.** Per N.J.A.C. 7:14B-9.2, the owner or operator of an underground storage tank system is required to notify the Department and all county and municipal health departments and municipal agencies of the intent to close an underground storage tank system at least 14 calendar days prior to the anticipated closure date. The notification requires no fee.
   - **b.** The owner or operator can request an extension for an UST system to remain out of service for a period more than 12 months without having to close the tank system per N.J.A.C. 7:14B-9.1(c).
2. **Form Updates.** This form may be updated periodically. Please use the current version of this form. Download the current version of this form from the Department's Website: www.nj.gov/dep/srp/srra/forms .
3. The NJDEP On-Line *at* **www.njdeponline.com** service can be used and highly encouraged to notify the NJDEP of the closure of an underground storage tank system. Using the on-line application fulfills the requirement for closure notification and this form is not required to be submitted. However, all out of service extension request must be submitted on this form and cannot be done On-Line.
4. Pursuant to 7:14B-9.2 (d) 2 the owner or operator of an underground storage tank system shall ensure the system is closed by a licensed site remediation professional when closure is initiated on or after **November 4, 2009**.
5. UST system must be registered. If the UST system is **not registered** this form will not be processed. Additionally, an UST Facility Certification Questionnaire must be completed and submitted to the Department within seven days upon completion of all closure activities. Furthermore, Registration and Billing will require a copy of the final remediation document, when issued, to finalize the registration of the UST system(s) pursuant to 7:14B-2.4. The UST Facility Certification Questionnaire can be found at http://www.nj.gov/dep/srp/forms/ust/ust021.pdf .

## Specific Instructions

### Section A. Site Name, Location, and Information

- Site Name-provide the name of the site i.e. ABC Corporation Site;
- List all other known names for the site;
- Provide the street address for the site;
- Provide the name of the municipality and state if it is a Township, a Borough, or a City;
- Provide the name of the County and the zip code;
- Provide all NJDEP generated site identification numbers.

### Section B. Current Owner of the Site

Complete owner information. If the owner is also the operator check the box and go to Section D.

### Section C. Current Operator of the Site

Complete operator information.

### Section D. Activity Type

Check the appropriate box.

**Notice of Intent**: As per N.J.A.C. 7:14B-9, the owner or operator of an underground storage tank system is required to notify the Department and all county and municipal health departments and municipal agencies of the intent to close an underground storage tank system at least 14 calendar days prior to the anticipated closure date. This notification requires no fee. Verification from the Department will be sent to the address listed in Section F.

**Out of Service Extension:** The owner or operator can request an extension for an UST system to remain out of service for a period more than 12 months without having to close the tank system per N.J.A.C. 7:14B-9.1(c). This form along with a Site Investigation Report completed in accordance with N.J.A.C. 7:26E must be submitted at least 30 calendar days prior to the expiration of the 12-month period. The appropriate fee must be submitted for the review of the site investigation report. The fee structure can be found at http://www.nj.gov/dep/srp/regs/arrcs/arrcs_04.pdf. If a release monitoring system exists then an out of service UST extension request may be made as per N.J.A.C. 7:14B-9.1(c) 2.

**NOTE**: *A completed UST Facility Certification Questionnaire must have been previously submitted to the Bureau of Case Assignment and Initial Notice's, Registration and Billing Section indicating the UST system(s) are out of service.*

**Section E. Closure Information**

List all the underground storage tanks that will be closed. A summary of the USTs registered with the Department can be found at http://datamine2.state.nj.us/DEP_OPRA/OpraMain/categories?category=Underground+Storage+Tanks

If you know your PI # you can select: http://datamine2.state.nj.us/DEP_OPRA/OpraMain/get_long_report

You can also search by municipality: http://datamine2.state.nj.us/DEP_OPRA/OpraMain/get_long_report

If piping is being closed without the associated tank, please include associated Tank No., Tank Size, and Tank Contents fields and check the piping only box.

**Section F. Licensed Site Remediation Professional Information**

This form must be signed by the LSRP submitting the Closure Notification/Extension Request of an underground storage tank system form.

**Section G.**

Complete this section to inform the Department where to mail the approval if different from the contact in Section F.

**New Jersey Department of Environmental Protection**
Site Remediation Program

# CLOSURE NOTIFICATION / EXTENSION REQUEST OF AN UNDERGROUND STORAGE TANK SYSTEM

Date Stamp
(For Department use only)

## SECTION A. SITE NAME, LOCATION, AND INFORMATION

Site Name: Hudson County Chromate - PPG
List all AKAs: HCC Site 114; Garfield Ave Site
Street Address: 880/894/900 Garfield Ave; 70 Carteret Ave; 2 Dakota St
Municipality: Jersey City (Township, Borough or City)
County: Hudson Zip Code: 07305
Mailing Address if different than street address:
Incident Number(s)/Com. Center Number(s): Case Tracking Number(s): UST # 554479
Program Interest (PI) Number(s): G000008791, G000005480
Municipal Block(s) and Lot(s):

| Block # | Lot # | Block # | Lot # |
|---|---|---|---|
| 21501 | 16 | | |
| | | | |
| | | | |
| | | | |

## SECTION B. CURRENT OWNER OF THE SITE

Full Legal Name of the Owner: PPG Industries, Inc
First Name of Contact: Brian Last Name of Contact: McGuire
Title: Project Manager
Phone Number: 412-492-5512 Ext. Fax:
Mailing Address: 4325 Rosanna Dr
City/Town: Allison Park State: PA Zip Code: 15101
Email Address: bmcguire@ppg.com
[X] Check if same as Operator.

## SECTION C. CURRENT OPERATOR OF THE SITE

Full Legal Name of the Operator: PPG Industries, Inc.
First Name of Contact: Brian Last Name of Contact: McGuire
Title: Project Manager
Phone Number: 412-492-5512 Ext. Fax:
Mailing Address: 4325 Rosanna Dr
City/Town: Allison Park State: PA Zip Code: 15101
Email Address: bmcguire@ppg.com

## SECTION D. NOTIFICATION TYPE

1. [X] Notice of Closure of an UST System(s); or
2. [ ] Out of Service UST Extension Request for more than 12 months and [ ] Site Investigation Report Submitted
3. Has closure occurred prior to this submittal? [X] YES [ ] NO If Yes date of closure: 12/7/12; 12/12/12

Name of Company/Individual who performed the closure without approval. Arecon Ltd.
Note: USTs were closed with the prior approval from David Doyle and Stuart Friedman of the NJDEP.

**SECTION E. CLOSURE INFORMATION**

Complete the following information concerning UST system closure.
If piping is being closed without associated tank, please include associated Tank No., Tank Size, and Tank Contents fields and check **PIPING ONLY**.

**Tank Closure**

| Tank No. (i.e. E1) | Length of Piping (ft) | Tank Size (gallons) | Tank Contents* | PIPING ONLY |
|---|---|---|---|---|
| 0003 | NA | 500 | UNKNOWN | ☐ |
| 0004 | NA | 2,000 | UNKNOWN | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |
| | | | | ☐ |

*If material is a hazardous substance but not a petroleum product, use chemical name and CAS number to identify tank's content (Brand or trade names are unacceptable).

## SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION

LSRP ID Number: N/A Site is under Direct Oversight of NJDEP; Case Mgr. Tom Cozzi

First Name: ____________________ Last Name: ____________________

Phone Number: ____________________ Ext: ____________________ Fax: ____________________

Mailing Address: ____________________

City/Town: ____________________ State: ____________________ Zip Code: ____________________

Email Address: ____________________

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

*I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey.*

*I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.*

LSRP Signature: ____________________ Date: ____________________

LSRP Name/Title: ____________________

Company Name: ____________________

## SECTION G

**Mail the Closure Certificate to:** ☐ *Check if same as above*

Name (print or type) Brian McGuire.

Title Project Manager.

Organization PPG Industries, Inc..

Address 4325 Rosanna Dr..

City Allison Park State PA Zip 15101.

Telephone 412-492-5512 E-mail Address bmcguire@ppg.com

CHRISM6467
Version 5.10 ID: 554479
Facility Name: HUDSON COUNTY CHROME SITE 114 Help | My Workspace | Logout

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**New Jersey Department of Environmental Protection**
**Division of Remediation Support**
**Bureau of Risk Management, Initial Notice and Case Assignment**
**PO Box 435**
**Trenton, NJ 08625-0435**
**(609)633-0708**

# CLOSURE - Notice of Intent
# Underground Storage Tank System

**DEP Received Date:** 01/22/2013
**Earliest Start of Work Date:** 02/05/2013
**Expiration Date:** 01/22/2014

**TMS #:** N13-8760 **Facility ID:** 554479
**Activity #:** UCL130001

**Facility Name:**
HUDSON COUNTY CHROME SITE 114

**Facility Address:**
900 GARFIELD AVE
Jersey City
Hudson County

Decommission, close and conduct a site investigation for the UST(s) and all associated piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in N.J.A.C. 7:14B-8.2.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

**Contact Person:** Christopher W Martell **Telephone #:** (732) 564-3633

This Permit must be displayed at the Site during the Approved Activity and must be made available for inspections at all times.

The above listed facility is hereby granted approval to perform the attached activities in accordance with N.J.A.C. 7:14b-1 et. seq..

Rafael Rivera

17562439

Rafael Rivera, Supervisor
Bureau of Risk Management, Initial
Notice and Case Assignment

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**TMS #:** N13-8760 **Facility ID:** 554479

The closure of the following:

| Tank No. | Length of Piping (ft) | Tank Size (gallons) | Tank Contents | |
|---|---|---|---|---|
| 0003 | None | 550 | Other | UNKNOWN |
| 0004 | None | 2000 | Other | UNKNOWN |

Return

| TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE | DATE: 1/2/2013 | X New Submittal<br>☐Resubmittal |
|---|---|---|

Section 1 REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

| TO: | FROM: | CONTRACT NO. | TRANSMITTAL NO. |
|---|---|---|---|
| Brian McGuire, PPG<br>Craig McPhee, AECOM<br>Ed Bradshaw, AECOM | ENTACT, LLC<br>2401 Sharky's Drive, Suite B<br>Latrobe, PA 15650 | | ENTACT-E7852F-S050<br>PREVIOUS TRANS. NO.<br>ENTACT-E7852-S049 |

| SPECIFICATION SEC. NO. | PROJECT TITLE AND LOCATION |
|---|---|
| | Phase 1B Southwest Corner |

| ITEM NO. a. | DESCRIPTION OF ITEMS SUBMITTED (Type, size, model number, etc.) b. | MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. c. | NO. OF COPIES d. | CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. e. | CONTRACT REFERENCE DOCUMENT DRAWING SHEET NO. f. | VARIATIONS g. | FOR CM USE CODE h. |
|---|---|---|---|---|---|---|---|
| 1 | Arecon NJDEP UST Closure Report | | 1 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| REMARKS | I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.<br><br>NAME AND SIGNATURE OF CONTRACTOR |
|---|---|

Section II APPROVAL ACTION

| ENCLOSURES RETURNED (List by Item No.) | NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY | DATE |
|---|---|---|
| | | 1/2/2013 |

SHEET ___1___ OF ___1____

arecon ltd.
Environmental Consulting
Engineering and Design
Project Management

DECEMBER 21, 2012

ENTACT ENVIRONMENTAL SERVICE
70 CARTERET AVENUE
JERSEY CITY, NJ 07305
ATTENTION; MR. BRADY BONSTED

RE: CLOSURE OF (2) REGULATED UST'S FORMERLY LOCATED AT PPG SITE 114, JERSEY CITY, NJ

DEAR MR. BONSTED:

Arecon was obtained by Entact to assist on properly closing (2) underground ground storage tanks (USTs) that were encountered during ongoing remedial activities located at the above reference site. Arecon activities consist of UST removal oversight and cleaning. All post removal sampling will be conducted by AECOM in accordance with the current site approve Remedial Action Work Plan.

On December 7 and 12, 2012, Arecon (UST License contractor #US0025) mobilized a crew to perform closure activities on the following underground storage tanks (UST);

- (1) - 2,000 gallon registered UST (Unknown contents)
- (1) -550 gallon registered UST (Unknown Contents)

**550 GALLON UST ACTIVITIES:**

The 550 gallon was removed and set alongside of the excavation. The UST had holes present with very little material present. The tank was cut in half and then cleaned out. Approximately 15 gallons of bottom sludge's was drummed up for off-site disposal.

**2,000 GALLON UST ACTIVITIES:**

The initial finding of this UST was assumed to be a 1,000 gallon, however after further uncovering the tank measured to be a 2,000 gallon. The tank had approximately 1,100 gallon of liquid in it which was pumped into drums for off-site disposal. The tank was cut, cleaned and a total of 160 gallons of bottom sludge's was drummed up for off-site disposal.

arecon ltd
Environmental Consulting
Engineering and Design
Project Management

The two (2) tanks were properly closed in accordance with all federal, state and local authorities. As per previous UST site activities, it was determined that local permits were not required, due to the site having NJDEP oversight.

All tanks were scrapped cleaned, wiped down with chemical absorbent pads and then power washed. All tank contents and bottom material was placed in (23 ½) steel 55 gallon drums, the drum were labeled and handed off to the site for proper disposal. The tanks will be cut up into smaller pieces for off- site disposal by the site.

Please note that during all cutting and cleaning activities the air levels were monitored in accordance with Arecon's previous submitted Health and Safety plan. All air levels were found to be below all actions limits.

Attached to this letter are copies of Arecon's daily field reports and pictures for your files. If you should have any question or concerns, please do not hesitate to contact me.

SINCERELY,
ARECON LTD.

DINO CICCONE
UST CLOSURE CERT# 0013440

ENCL. ARECON'S DAILY FIELD REPORT
PICTURES

90 US Highway 130, Bordentown, New Jersey 08505
Phone 609-298-0770 Fax 609-291-8386 Web: ARECON-LTD.COM

**Arecon ltd**
90 US Highway Route 130
Bordentown, NJ 08505
Phone: 609-298-0770
Fax: 609-291-8386

## DAILY FIELD REPORT

PROJECT: PPG - UST Removal
PROJECT NO: 34002
PROJECT LOCATION: Jersey City, NJ
PREPARED BY: Mike Mundras
CLIENT/CONTACT: Brady
PRESENT AT SITE: Mike Mundras + Ricky Veccoo

DATE: 12/7/12

WEATHER: Light Rain, temp - 40's

EQUIPMENT: Multi Rae Gas meter + calibration gases

OBSERVATIONS: Arrived at the site and located Brady. Also met with Ross and Keith From Entact who will be working on the tanks. Calibrated MultiRAE. Donned PPE and entered exclusion zone to to monitor atmosphere in both tanks. Checked 500 gal UST that was alredy pulled out and sitting along the side of the hole. Readings of the tank indicated 0.0 ppm VOC and 20.9% $O_2$. Excavated hole also read the same. The tank was empty with several holes in the sides. Moved to the 2nd tank which was still in the ground and was 1/2 Full of liquid. The atmosphere in the tank was also 0.0 VOC and 20.9% $O_2$. Keith setting up an air diaphragm pump and ten 55 gal. drums to empty 2nd tank. Began pumping liquid to drums. Filled all ten drums and had to get 10 more. Tank was larger than the 1000 gals. it was thought to be. Turned out to be 2000 gals. Filled the second set of 10 drums. All drums sealed and the long stick was used to remove the drums and place them on skids. Checked the atmosphere again and the results were the same. When all the drums were removed (water in the drums was yellow - Chromium contaminated - with a layer of heavy fuel oil, probably #6 oil, on top) the long stick was used to dig around the tank in an effort to break the seal between the tank and its bed. The tank had steel cables around one end that had to be cut in order to remove it. The long stick moved to the outside of the excavation in order to pull the tank out and on to the upper surface to be cleaned. By the time the tank was removed, it was too late in the day to begin cutting and cleaning operations. That will be done next week.

UST Closure Lic # 474989 [signature]

SKETCH ATTACHED: YES____ NO:____

Arecon ltd
90 US Highway Route 130
Bordentown, NJ 08505
Phone: 609-298-0770
Fax: 609-291-8386

# DAILY FIELD REPORT

**PROJECT:** PPG - UST Removal + Cleaning
**PROJECT NO:** 34002
**PROJECT LOCATION:** Jersey City, NJ
**PREPARED BY:** Mike Mundras
**CLIENT/CONTACT:** Brady
**PRESENT AT SITE:** Mike Mundras, Ricky Viecco

**DATE:** 12/12/12

**WEATHER:** Clear, temp - 40's

**EQUIPMENT:** Multi RAE Gas meter with calibration gases

**OBSERVATIONS:** Arrived at the site and met with Keith from Entact. Calibrated MultiRAE and donned PPE to enter exclusion zone. Keith using a cut saw to open tank (2000gal) by cutting off the end of the tank. Filled out Hot Work permit and had it signed. Checked the tank atmosphere and had 0.0 VOC and 20.9% $O_2$ reading. Gave the ok to cut the tank. Keith began cutting the tank and Ross stood as fire watch with dry powder fire extinguishers. When end of tank was finally removed, the tank was rolled onto plastic for cleaning using an excavator. One end of the tank was evevated to allow the very thick oil sludge to ooze down to the open end to be shovelled into 55gal drums. Material filled 3 drums. A confined space entry permit was also filled out and signed and the atmosphere was check and the readings were 0.0 Tox, 0.0 $H_2$0 0.0 VOC, 0.0 LEL and 20.9% $O_2$. Tank was scaped clean and then cut in two using a cutting torch. Work the began on the 500gal. tank. Since this tank was empty to start with, the decision was made to cut the tank in two using the cutting torch to make final cleaning easier. A check of the atmosphere on this tank also yielded a 0.0 VOC, 0.0 LEL and 20.9% $O_2$ readings. Tank was cut in half and cleaned. Material went into a seperate drum and was less than 1/4 of the drum. Tanks were pressure washed as final step of the cleaning operation.

UST Closure Lic # 474989 [signature]

**SKETCH ATTACHED: YES**____ **NO:**____


VOLVO
730
53479


CATERPILLAR

# UST Tank Construction - Contents

**HUDSON COUNTY CHROME SITE 114**

**900 GARFIELD AVE**

**Jersey City NJ 07305**

| Coordinate | |
|---|---|
| X | Y |
| 611170 | 683736 |

**PI - Prefered ID : 554479**

## Terminated

**Tank No: 0003** | **Tank Status :** **Removed** | **N13-8760**

**Construction**

| | |
|---|---|
| Tank Install Date | 1/1/1944 |
| Tank Size/Units | 550 |
| Tank Contents | UNKNOWN |
| Piping Operation | Other: No Piping Exists |
| Tank Structure | Single Wall |
| Pipe Structure | Secondary Containment (Externally Lined, Vault) |

| | |
|---|---|
| Compliance? | No |
| Compliance Monitoring ? | No |
| Compliance Upgrade? | No |

| Construction & Contents.Tank/Pipe | Type |
|---|---|
| Pipe | Bare steel |
| Tank | Bare steel |

**Monitoring**

| | |
|---|---|
| Spill Cont. Fill Pipe (Tank UST) | |
| Tank Overfill Prot. | |

| Monitoring & Status.Tank/Pipe | Type |
|---|---|
| Pipe | None |
| Tank | None |

**Tank No: 0004** | **Tank Status :** **Removed** | **N13-8760**

**Construction**

| | |
|---|---|
| Tank Install Date | 1/1/1944 |
| Tank Size/Units | 2000 |
| Tank Contents | UNKNOWN |
| Piping Operation | Other: No Piping Exists |

| | |
|---|---|
| Compliance? | No |
| Compliance Monitoring ? | No |
| Compliance Upgrade? | No |

| | |
|---|---|
| Tank Structure | Single Wall |
| Pipe Structure | Secondary Containment (Externally Lined, Vault) |

| Construction & Contents.Tank/Pipe | Type |
|---|---|
| Pipe | Bare steel |
| Tank | Bare steel |

------------------------------------------------------ Monitoring ------------------------------------------------------

| | |
|---|---|
| Spill Cont. Fill Pipe (Tank UST) | |
| Tank Overfill Prot. | |

| Monitoring & Status.Tank/Pipe | Type |
|---|---|
| Pipe | None |
| Tank | None |

## Terminated

**Tank No: 0001** **Tank Status :** **Removed**

------------------------------------------------------ Construction ------------------------------------------------------

| | |
|---|---|
| Tank Install Date | 1/1/1944 |
| Tank Size/Units | 2000 |
| Tank Contents | UNKNOWN |
| Piping Operation | Other: No Piping Exists |
| Tank Structure | Single Wall |
| Pipe Structure | Other: No Piping Exists |

| | |
|---|---|
| Compliance? | No |
| Compliance Monitoring ? | No |
| Compliance Upgrade? | No |

| Construction & Contents.Tank/Pipe | Type |
|---|---|
| Pipe | Other: No Piping Exists |
| Tank | Bare steel |

------------------------------------------------------ Monitoring ------------------------------------------------------

| | |
|---|---|
| Spill Cont. Fill Pipe (Tank UST) | |
| Tank Overfill Prot. | |

| Monitoring & Status.Tank/Pipe | Type |
|---|---|
| Pipe | Other: No Piping Exists |
| Tank | None |

**Tank No: 0002** **Tank Status :** **Removed**

------------------------------------------------------ Construction ------------------------------------------------------

| | |
|---|---|
| Tank Install Date | 1/1/1944 |
| Tank Size/Units | 1000 |
| Tank Contents | UNKNOWN |
| Piping Operation | Other: No Piping Exists |
| Tank Structure | Single Wall |
| Pipe Structure | Other: No Piping Exists |

| | |
|---|---|
| Compliance? | No |
| Compliance Monitoring ? | No |
| Compliance Upgrade? | No |

| Construction & Contents.Tank/Pipe | Type |
|---|---|
| Pipe | Other: No Piping Exists |
| Tank | Bare steel |

------------------------------------------------------ Monitoring ------------------------------------------------------

| | |
|---|---|
| Spill Cont. Fill Pipe (Tank UST) | |

| Tank Overfill Prot. | |
|---|---|

| Monitoring & Status.Tank/Pipe | Type |
|---|---|
| Pipe | Other: No Piping Exists |
| Tank | None |

## Whooley, Kathy

**From:** MacPhee, Craig
**Sent:** Friday, December 07, 2012 4:09 PM
**To:** Martell, Christopher
**Subject:** RE: UST Closure

That is good, thanks.

---

**From:** Martell, Christopher
**Sent:** Friday, December 07, 2012 8:38 AM
**To:** MacPhee, Craig
**Subject:** FW: UST Closure

FYI…we'll be excavating these today.

---

**From:** Doyle, David [mailto:David.Doyle@dep.state.nj.us]
**Sent:** Friday, December 07, 2012 8:15 AM
**To:** Martell, Christopher
**Cc:** Bradshaw, Edward D.; Cozzi, Tom
**Subject:** RE: UST Closure

Chris,

Per our discussion this morning, please proceed with the UST closure activities. It is understood that both Grids (B10A and G1A) will be excavated to a greater depth (i.e., below the UST required remediation depth) as part of the chromium cleanup project. I contacted the appropriate DEP staff earlier this week regarding the UST closure application.

Dave

David S. Doyle, Case Manager
NJDEP Site Remediation Program
Office of Assistant Commissioner
Mail Code 401-06
PO Box 420
Trenton, NJ 08625-0420
Tel: (609) 292-2173
Fax: (609) 292-0848
david.doyle@dep.state.nj.us

---

**From:** Martell, Christopher [mailto:Christopher.Martell@aecom.com]
**Sent:** Friday, December 07, 2012 7:23 AM
**To:** Doyle, David
**Cc:** Bradshaw, Edward D.
**Subject:** UST Closure
**Importance:** High

Dave –

Following up on our call from Monday, can you give me an update on the status of the UST closure? ENTACT has a crew on the way to close the tanks but, as you know, this cannot be done without a closure notice or an approval email from DEP. Could you call me or Ed Bradshaw ASAP to discuss? My contact info is below. Ed's is 914-879-1759.

Thanks

**Christopher Martell, LSRP**
Project Manager II
Environment
D 732.564.3633 M 201.602.6874
**christopher.martell@aecom.com**

**AECOM**
30 Knightsbridge Road, Suite 520
Piscataway, NJ 08854
T 732.564.3600 F 732.369.0122
www.aecom.com

AECOM
30 Knightsbridge Road, Suite 520
Piscataway, NJ 08854

732.564.3600 tel
732.369.0122 fax

July 8, 2014

NJDEP Site Remediation Program
UST Program, Registration and Billing Unit
PO Box 420
Mail Code 401-05H
Trenton, NJ 08625-0420

**RE: PI # 554479**
UST Program Invoice #140387530

To Whom It May Concern,

Enclosed is a copy of Underground Storage Tanks Program Invoice (Invoice # 140387530) for a $150 UST Registration Fee. It is our understanding that the registration fee payment is not required since these tanks were previously closed in December 2012-January 2013 and do not require registration. Attached is an UST Facility Certification Questionnaire indicating the closure of Tank 0003 (550-gallon unknown contents) and Tank 0004 (2,000-gallon unknown contents) which were removed on December 7, 2012 and December 12, 2012, respectively.

Please contact me for questions via email or by calling 732-564-3644.

Yours sincerely,

Kathleen Whooley

Kathleen Whooley
LSRP # 584005
kathy.whooley@aecom.com

Attachments

cc: B. McGuire/PPG
M. Terril/PPG
R. Feinberg/PPG
K. Prins/PPG
S. Mikaelian/AECOM
H. Quan/AECOM

J:\Project\PPG-NJCProgram\3-Correspondence\3.1-Correspondence\3.1B-GAGroup\NJDEP-Weston\Site 114 - UST_Closure_Approval\2014-07-08_UST_Invoice-0003-0004.docx

Let's protect our earth

# NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

## UNDERGROUND STORAGE TANKS PROGRAM

## REGISTRATION INVOICE

INVOICE NO.
140387530

| Program Interest |
|---|
| HUDSON COUNTY CHROME SITE 114 |
| 900 GARFIELD AVE |
| Jersey City, NJ. 07305 |
| 554479 |

| Type of Notice | Amount Due |
|---|---|
| ORIGINAL(NON-INITIAL) | $ 150.00 |

| Billing Date | Due Date | NJEMS Bill ID |
|---|---|---|
| 04/16/14 | 05/16/14 | 000000124532200 |

| Summary | |
|---|---|
| Total Amount Assessed | 150.00 |
| Amount Received Before Creating Installment Plan (if installment plans is allowed) | 0.00 |
| Amount Transferred To Installment Plan | 0.00 |
| Installment Amount | 0.00 |
| Total Amount Credited | 0.00 |
| Total Amount Debited (Other Than Amounts Assessed) | 0.00 |
| **Total Amount Due** | 150.00 |

REMINDER:
* OPERATING A REGULATED UNDERGROUND STORAGE TANK WITH AN EXPIRED REGISTRATION CERTIFICATE MAY RESU LT IN FINES/PENALTIES AND/OR A DELIVERY BAN
* YOU MUST COMPLETE AND SIGN THE ENCLOSED UST FACILITY CERTIFICATION QUESTIONNAIRE (ENCLOSED WITH FIRST NOTICE). COPIES CAN BE FOUND AT WWW.STATE.NJ.US/DEP/SRP/REGS/GUIDANCE.HTM
* MAKE CHECKS PAYABLE TO: TREASURER - STATE OF NEW JERSEY
* MAIL PAYMENT, STUB, AND UST FACILITY CERTIFICATION QUESTIONNAIRE TO: NJ DEPARTMENT OF TREASURY
* ANY QUESTIONS SEE BACK OF INVOICE FOR DEP CONTACT INFORMATION

See Back Of Page for Billing Inquiries

INVOICE NO.
140387530

D9901F (R 3/14/02)

Let's protect our earth

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

UNDERGROUND STORAGE TANKS PROGRAM

REGISTRATION INVOICE

INVOICE NO.
140387530

| NJEMS Bill ID |
|---|
| 000000124532200 |

| Program Interest ID | Type of Notice | Billing Date | Due Date | Amount Due |
|---|---|---|---|---|
| 554479 | ORIGINAL(NON-INITIAL) | 04/16/14 | 05/16/14 | $ 150.00 |

For name and/or address change, check box and write corrections on the back of this invoice. ☐

DO NOT FOLD, BEND OR MARK

Enter the Amount of your payment→ $

RETURN THIS PORTION with your check made payable to:

TREASURER - STATE OF NEW JERSEY
and mail to:
NJ DEPARTMENT OF TREASURY
DIVISION OF REVENUE
PO BOX 417
TRENTON, NJ 08646-0417

51 PPG INDUSTRIES INC
ATTN: BRIAN MCGUIRE
PO BOX 2009
ALLISON PARK PA 15101

EP1010101010101010100505040407091111110000150000019841403875301519

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SITE REMEDIATION PROGRAM
UST Registration and Billing Unit
PO Box 420, Mail Code 401-05H, Trenton, N.J. 08625-0420
609-292-2943 • www.state.nj.us/dep/srp/bust

**STATE USE ONLY**

Check In ☐ Yes ☐ No

# UNDERGROUND STORAGE TANK FACILITY CERTIFICATION QUESTIONNAIRE

**FACILITY UST # (PROGRAM INTERST ID):** 554479

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq., and the Underground Storage Tank Rules N.J.A.C. 7:14B et. seq.

*Check appropriate box*

A. ☐ This is a registration of a proposed or newly installed underground storage tank. (This form must be filed at least 30 days prior to operation)
B. ☐ This is a registration of an existing underground storage tank not presently registered.
C. ☐ This is a correction or amendment to an existing facility registration (Check type of change below)
D. ☐ There have been no changes to the facility registration since last submittal. (Complete Section A, C & E)

*If "C" is checked above, please check the appropriate type of change(s) below*

- ☐ Facility Name and/or Address Change
- ☐ Owner Name and/or Address Change
- ☐ Facility Operator and/or Address Change
- ☐ Owner Contact Person Change
- ☐ Type of Product(s) Stored
- ☐ Substantial Modification(s) (see 14B)
- ☐ Tank(s) and/or Piping Changes
- ☒ Closure (Complete Section B Questions 1, 4, 5, 12C)
- ☐ Financial Responsibility Change (Including Policy Renewal)
- ☐ Sale or Transfer (Complete entire form)
- ☐ Other (please specify) ______

## SECTION A -GENERAL FACILITY INFORMATION

1. **Facility Name** HUDSON COUNTY CHROME SITE 114

2. **Facility Location**
Address Line 1
Address Line 2
City or Municipality
COUNTY ___ STATE NJ ZIP CODE ___ BLOCK ___ LOT ___

3. **Facility Operator**
ORGANIZATION (If applicable, e.g. Company) or INDIVIDUAL

Contact Person
PERSON ___ TITLE ___
PHONE NUMBER (INCLUDE AREA CODE & EXT) ___ E-MAIL ADDRESS ___

Operator Address (if different than #2)
ADDRESS LINE 1 (NUMBER AND STREET)
ADDRESS LINE 2 (e.g. PO BOX, SUITE)
CITY OR MUNICIPALITY ___ STATE ___ ZIP-CODE ___

4. **Tank Owner** (Organization) PPG INDUSTRIES INC

Contact Person BRIAN MCGUIRE
PERSON ___ TITLE ___
4124925512
PHONE NUMBER (INCLUDE AREA CODE & EXT)
bmcguire@ppg.com
E-MAIL ADDRESS

Tank Owner Address
4325 ROSANNA DR.
ADDRESS LINE 1 (NUMBER AND STREET)
ADDRESS LINE 2 (e.g. PO BOX, SUITE)
ALLISON PARK
CITY OR MUNICIPALITY
PA
STATE
15101-
ZIP- CODE

5. **Billing Address:** Check one below

[X] Same as Tank Owner address liested in Section A4. ☐ Same as Facility Operator address lised in Section A3. ☐ Other and attach billing address

6. **Total number of regulated underground storage tanks at facility** ☐☐☐ (Complete Section B for each tank unless there has been no changes since last submittal)

7. **Total regulated underground storage capacity at facility (gallons)** ☐☐☐☐☐☐

8. **Facility Type:** A ☐ State B ☐ Commercial/ Industrial C ☐ County/Municipal D ☐ Federal E ☐ Charitable / Public School F ☐ Residential G ☐ Farm (as defined in N.J.S.A.54:4-23.1 et seq.)

**NOTE: The facility site plan must be submitted when registering any underground storage tank pursuant to N.J.A.C. 7:14B 2.2**

## SECTION B - SPECIFIC TANK INFORMATION

ALL regulated underground storage tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes. ***DO NOT MARK SHADED AREAS***

| | TANK NO. | TANK NO. | TANK NO. | TANK NO. | TANK NO. |
|---|---|---|---|---|---|
| 1. **Tank Identification Number** | 0003 | 0004 | | | |
| 2. **CAS Number (Hazardous substances only)** | | | | | |
| 3. **Date Tank Installed** | | | | | |
| 4. **Tank Size (gallons) - Please note that each compartment is considered a separate Tank System** | 550 | 2,000 | | | |
| 5. **Tank Contents (Mark one "X" for each tank)** | | | | | |
| A. Leaded Gasoline | | | | | |
| B. Unleaded Gasoline | | | | | |
| C. Alcohol Enriched Gasoline (> 10%) | | | | | |
| D. Light Diesel Fuel (No. 1-D) | | | | | |
| E. Medium Diesel Fuel (No. 2-D) | | | | | |
| F. Waste Oil | | | | | |
| G. Kerosene (No. 1) | | | | | |
| H. Heating Oil (No. 2) Complete 13C | | | | | |
| I. Heating Oil (No. 4) Complete 13C | | | | | |
| J. Heating Oil (No. 6) Complete 13C | | | | | |
| K. Aviation Fuel | | | | | |
| L. Motor Oil | | | | | |
| M. Lubricating Oil | | | | | |
| N. Automatic Transmission Fluid | | | | | |
| O. Hazardous Waste (Specify ID Number) | | | | | |
| P. Coolant/Antifreeze | | | | | |
| Q. Other (please specify) | Unknown | Unknown | | | |

| | Tank | Piping | Tank | Piping | Tank | Piping | Tank | Piping | Tank | Piping |
|---|---|---|---|---|---|---|---|---|---|---|
| 6. **Tank & Piping Construction (Mark at least one each for Tank and Piping)** | | | | | | | | | | |
| A. Bare steel | | | | | | | | | | |
| B. Cathodically Protected Metal (Mark SA or IC) | | | | | | | | | | |
| 1. Sacrificial Anode (SA) *Date Sacrificial Anode Installed **(TANK ONLY)** | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| 2. Impressed Current (IC) *Date Sacrificial Anode Installed **(TANK ONLY)** | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| C. Fiberglass-Coated Steel **(TANK ONLY)** | | | | | | | | | | |
| D. Fiberglass-Reinforced Plastic | | | | | | | | | | |
| E. Internally Line **(TANK ONLY)** *Date Internal Lining Installed | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | | Mo. Day Year | |
| F. Other (Please specify) (Include Brand Name) | | | | | | | | | | |
| 7. **Piping Operation (Mark one for each tank system)** | | | | | | | | | | |
| A. Pressurized Piping **(PIPING ONLY)** | | | | | | | | | | |
| B. American Suction Piping **(PIPING ONLY)** | | | | | | | | | | |
| C. European Suction Piping **(PIPING ONLY)** | | | | | | | | | | |
| D. Supply/Return **(Heating Oil Piping Only)** | | | | | | | | | | |
| 8. **Tank & Piping Structure (Mark one for each TANK & PIPING)** | | | | | | | | | | |
| A. Single Wall | | | | | | | | | | |
| B. Double Wall | | | | | | | | | | |
| C. Secondary Containment (e.g.Externally Lined) | | | | | | | | | | |
| 9. **Type of Monitoring/Detection (Mark all that apply for TANK & PIPING)** | | | | | | | | | | |
| A. Statistical Inventory Reconciliation Vendor Name & Phone Number | | | | | | | | | | |
| B. Manual Tank Gauging **(TANK ONLY)** | | | | | | | | | | |
| C. Inventory Control **(TANK ONLY)** | | | | | | | | | | |
| D. Interstitial | | | | | | | | | | |
| E. Tightness Test | | | | | | | | | | |
| F. Ground Water Observation Wells | | | | | | | | | | |
| G. Vapor Observation Wells | | | | | | | | | | |
| H. In-Tank (Auto Monitoring Gauge) **(TANK ONLY)** | | | | | | | | | | |
| I. In-Line Electronic Pressure Monitoring **(PIPING ONLY)** See Definition Page 4 | | | | | | | | | | |
| J. Automatic Line Leak Detector **(PIPING ONLY)** See Definition Page 4 | | | | | | | | | | |
| K. None **(TANK & PIPING)** | | | | | | | | | | |

| Tank Identification Number | TANK NO. 0003 | TANK NO. 0004 | TANK NO. | TANK NO. | TANK NO. |
|---|---|---|---|---|---|
| **10. Overall Protection (Mark one X for each tank)** | | | | | |
| A. Yes | | | | | |
| B. No | | | | | |
| **11. Spill Containment Around Fill Pipe (Mark one X for each tank)** | | | | | |
| A. Yes | | | | | |
| B. No | | | | | |
| **12. Tank Status Information (Mark appropriate choice for each tank)** | | | | | |
| A. In-Use | | | | | |
| B. Out of Service (See Definition Page 4) | | | | | |
| Date Taken Out of Service | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| C. Closed | | | | | |
| 1. Removed | | | | | |
| Date Removed | Mo. Day Year 120712 | Mo. Day Year 121212 | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| Closure # | | | | | |
| 2. Abandoned-In-Place | | | | | |
| Date Abandoned-In-Place | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| Closure # | | | | | |
| **13. Tank Use Information (Mark if applicable)** | | | | | |
| A. Emergency Back -up Generator | | | | | |
| B. Sump (See Definition Page 4) | | | | | |
| C. Heating Oil Tanks If you checked H, I or J under item B5 on Page 2, check one of the following: | | | | | |
| 1. Heating Oil for on-site consumption use | | | | | |
| 2. Heating Oil for sale or distribution | | | | | |
| **14. Other Information (Mark if applicable)** | | | | | |
| A. Date of Sale or Transfer | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year | Mo. Day Year |
| B. Substantial Modification # | | | | | |
| **15. Is the tank within a wellhead protection area as defined on Page 4 (Mark fo each tank)** | | | | | |
| A. Yes | | | | | |
| B. No | | | | | |

## SECTION C - FINANCIAL RESPONSIBILITY

**Please note:** In addition to new submittals, any change in the Financial Responsibility Assurance Mechanism as per N.J.A.C. 7:14B 2.2 (including policy renewal date) for an existing facility shall be listed below.

_______________ *Type of Mechanism (i.e. Insurance)*

_______________ *Carrier/Issuing Agency*

___ / ___ / ___ *Effective Date*

___ / ___ / ___ *Expiration Date*

_______________ *Policy Number*

$_______________ *Amount of Aggregate Coverage*

## SECTION D - GENERAL GUIDANCE

**FEE:** (If applicable) Please make check payable to: "Treasurer, State of New Jersey". Registration and Billing Fee Schedule can be found in N.J.A.C. 7:14B-3.

**PENALTY:** Failure by owner or operator of a regulated underground storage tank to comply with any requirement of 7:14B et. seq. may result in penalties set forth in N.J.S.A. 58:10A-12.

**EMERGENCY**: If a discharge or spill occurs, the NJDEP Hotline at (877) 927-6337 must be called **IMMEDIATELY** - 24 hours a day.

**EXEMPTION:** Residential heating oil underground storage tanks are exempt from the rules as per N.J.S.A. 58:10A-21 et. seq. Please see N.J.A.C. 7:14B.-1.4(b) for other exemptions.

**PUBLICATIONS:** Operation and maintenance / record keeping / compliance publications are available on line at **www.state.nj.us/dep/srp/bust** Suggested publications: "Underground and Storage Tank Owner's Self-inspection Checklist" and "Tank Care".

**QUESTIONNAIRE:** Initial facility registrations can be submitted on line at www.njdeponline.com (Renewal and modifications need prior DEP pin code approval to submit on line).

**MAILING**: UST Registration Certificates are mailed directly to the facility to be displayed prominently as per N.J.A.C. 7:14B-2.6

## SECTION E - CERTIFICATION

Must be signed as follows:

- For a corporation, by a person authorized by resolution of the Board of Directors to sign the document.
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
- For persons other than indicated above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

| | |
|---|---|
| BRIAN G. MCGUIRE | [signature] |
| *(Typed / Printed Name)* | *(Signature)* |
| MANAGER, ENVIR. PROJECTS | PPG INDUSTRIES, INC |
| *(Title)* | *(Organization)* |
| 7/8/14 | 554479 |
| *(Date)* | *Facility UST #* |

## SECTION F - DEFINITIONS

Section B7 C. **"European" Suction Piping** - Suction piping which has enough slope so that the product in the pipe can drain back into the tank when the suction is released, and which has only one check valve, located directly beneath the pump in the dispensing unit. Any underground storage tank equipped with "European" Suction Piping has no monitoring detection requirements for piping.

Section B9 I. **In-Line Electronic Pressure Monitor** - (Used with pressurized piping only) A monitor which checks for loss of pressure within piping when no product is dispensed. This method may be used once every 30 days or every time the dispenser turns off.

Section B9 J. **Automatic Line Leak Detectors** - (Used with pressurized piping - Must be able to detect a 3 gph leak within 1 hour of its occurrence). Types of detectors are:

1. Flow restrictors and flow shut offs which monitor pressure within piping. When a suspected leak is detected, either restricts the flow of product through the piping well below the 3 gph leak rate it detects, or completely cuts off product flow and shuts down the pump.
2. Continuous alarm systems which constantly monitor piping conditions and trigger an audible or visual alarm if a leak is suspected.

Section B12 B. **Out of Service Storage Tank** - Any underground storage tank system in which hazardous substances are contained or have been contained, but from which hazardous substances are not or have not been introduced or dispensed pending a decision to close the system or begin reuse of the system.

**Please Note:** Underground storage tank systems which are out of service shall comply with the provisions of N.J.A.C. 7:14B-9-1. The owner or operator of an underground storage tank system which is out of service for a period greater than three months shall follow the guidelines in the current American Petroleum Institute Bulletin #1604. The owner or operator may request that the underground storage tank system remain out of service for a period of more than 12 months without having to permanently close the tank system by complying with the provisions of N.J.A.C. 7:14B-9.1(b) by submitting a Site Investigation (SI) Report at least 30 days before expiration of the 12 month period.

Section B13 B. **Sump** - Any underground storage tank used to collect or contain a hazardous substance for no more than 48 hours.

Section B15 **Wellhead Protection Area**

1. The area within a 2,000 ft radius surrounding a public community or public non-community water system well when there is an underground storage tank containing gasoline or non-petroleum hazardous substances located within that area.
2. The area within a 750 ft. radius surrounding a public community or public non-community water system well when there is an underground storage tank containing petroleum products other than gasoline located within that area.