



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 9781
(SEVENTH REVISION)

JUN 10 2003

EXPIRATION DATE: March 31, 2005

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. **GRANTEE:** Persons represented by their agent, The Chlorine Institute, Inc., Washington, DC. (See Appendix A)

(See Appendix B to this document for a list of additional grantees)
2. **PURPOSE AND LIMITATION:**
 - a. This exemption authorizes the transportation in commerce of non-DOT specification full opening head, steel salvage cylinders for overpacking damaged or leaking chlorine cylinders. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
3. **REGULATORY SYSTEM AFFECTED:** 49 CFR Parts 106, 107 and 171-180.
4. **REGULATIONS FROM WHICH EXEMPTED:** 49 CFR § 173.301(f) and 180.209, § 173.304a(a)(2).
5. **BASIS:** This exemption is based on the application of Chlorine Institute, Incorporated dated May 20, 2003, submitted in accordance with § 107.109. and supplemental information dated May 29, 2003.
6. **HAZARDOUS MATERIALS (49 CFR § 172.101):**

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Chlorine	2.3	UN1017	N/A

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7. **SAFETY CONTROL MEASURES:** Packaging prescribed is a non-DOT specification full opening head, steel salvage cylinder of welded construction, with provisions for securely positioning the damaged cylinder contained within. The salvage cylinder must conform with the Chlorine Institute's drawing 188 dated March 19, 1987 on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA); must be designed, constructed and stamped in accordance with Section VIII of the ASME Code for a working pressure of 250 psig at 300°F and as follows:

Volume.....	31 gallon water capacity (nominal).
Material.....	ASTM A 283, A 53 Gr. B, or equivalent carbon steel.
Outside diameter.....	12 inches, nominal.
Length.....	64 inches, nominal.
Sidewall thickness.....	0.250 inch, nominal (.230 inch, min.)
Design Service pressure (MAWP).....	250 psig at 70°F
Test pressure.....	375 psig.
Openings - Sidewall.....	3/4 inch threaded outlet inside a valve protective cap.
Openings - head.....	Full opening head, hinged to cylinder sidewall.
Pressure relief devices.....	None.
Welded attachments.....	2-lifting rails 2-supports

8. **SPECIAL PROVISIONS:**

- a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.
- b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

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c. Drivers and other persons who load/unload or transport the salvage cylinder must be trained in the handling, loading and unloading of the salvage cylinder. The loaded salvage cylinder must be delivered to the consignor or the consignee as soon as practicable.

d. Each salvage cylinder must be cleaned and purged after each use and must be visually inspected (internally and externally) and hydrostatically retested once every 5 years at a test pressure of at least 375 psig. The visual inspections must be in accordance with the Compressed Gas Association's Pamphlet C-6.

e. Salvage cylinders are authorized for overpacking leaking 100 and 150 pound capacity DOT 3A 480X or 3AA 480X chlorine cylinders.

f. Each salvage cylinder must be secured to the motor vehicle by a securement system that conforms with the requirements contained in § 393.100 through § 393.106.

g. Each salvage cylinder must be plainly marked on the cylinder sidewall, 180 degrees apart, in letters at least 2 inches high on a contrasting background, "DOT-E 9781" and "SALVAGE CYLINDER".

h. Each salvage cylinder must be labeled as prescribed for a chlorine cylinder.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
 - o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Registration required by § 107.601 et seq., when applicable.

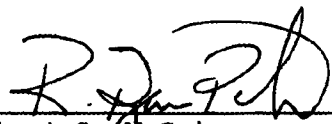
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Each "Hazmat Employee", as defined in § 171.8 who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by § 172.700 through § 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. **REPORTING REQUIREMENTS:** The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



Robert A. McGuire
Associate Administrator
for Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: sln

Chlorine Institute Membership List

Wednesday, May 28, 2003

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North American Producer Members (22)

Company	Year Joined	Official Correspondent
ASHTA Chemicals, Inc.	1996	John Reese, Jr., V.P. Technical, Environmental
Bayer Corporation	1987	Neil L. Maxson, HES Consultant
Dow Chemical North America	1950	Sally Kokke-Hall, Global Product Stewardship Leader
E. I. Du Pont de Nemours & Company	1971	F. E. (Eddie) Johnston, Safety, Health & Environment
ERCO Worldwide	1997	W. D. R. (Bill) Compton, Plant Manager
Formosa Plastics Corporation, U.S.A.	1984	Phillip P. Chen, Sr. Business Director
GE Plastics	1976	Larry O. Bowler, Manager - Risk Assessment
Georgia Gulf Corporation	1985	Michael L. Joiner, Manager, Quality Systems
Industria Quimica del Istmo, S.A. (IQUISA)	1976	Hector Vaca Esparza, Superintendent of Operations
Mexichem, S. A. De C. V.	1985	Felix Guajardo
Nexen, Inc.	1958	David Gosse, Plant Manager
Occidental Chemical Corporation	1924	Victor F. Pisani, Vice President
Olin Corporation	1924	William C. Rankin, Mngr. Olin Responsible Care
Pioneer	1924	Ralston Maloney, Engineering Manager
PPG Canada, Inc.	1960	Georges Banoub, Plant Manager
PPG Industries, Inc.	1960	Terry P. Smith, Technology Manager
St. Anne Chemical Company, Ltd.	1989	Rick Dwyer, Plant Superintendent
US Magnesium LLC	1996	G. Thomas Tripp, Technical Services Manager
Vulcan Materials Company	1952	Vito Fiore
Westlake CA&O	1997	Wendell Tinsley, Plant Manager

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Packager Members (16)

Company	Year Joined	Official Correspondent
Alexander Chemical Corporation	1983	Gillman J. Leavitt
Allied Universal Corporation	1973	Robert M. Namoff, President/CEO
ALTIVIA Corporation	1997	Hern Lorraine, General Manager - Manufacturing
Brenntag	1973	David Garner, Vice President of Operations
Brenntag Canada	1989	L.G. (Jimmy) Lai-Tyam, Operations & Project Engineer
ClearTech Industries, Inc.	1986	Jerry J. Hastie, Manager, Operations
DPC Industries, Inc.	1982	J. R. (Ric) Massie, Jr., National Operations Manager
Harcros Chemicals, Inc.	1986	Cliff Wiksten, Mgr. Compressed Gas Operations
Hawkins Chemicals, Inc.	1989	Todd Mathiason, Operations Manager
Hill Brothers Chemical Company	1985	Rusty Mosher, AZ Division Manager
Hydrite Chemical Company	1973	Richard W. Strand, Regional Operations Manager
JCI Jones Chemical Company	1996	Tim Gaffney, Executive Vice President
Kuehne Chemical Company	1976	Manuel Cunha, Plant Manager
Rowell Chemical Corporation	1991	Matthew C. Koupal, Vice President- Operations
Ulrich Chemical, Inc.	1976	Stephen J. Hiatt, Executive Vice President
Univar USA Inc.	1996	Mark Kirkdand

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Associate Members (147)

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Company	Year Joined	Official Correspondent
Aegis Flow Technologies, L.L.C.	2003	Kevin Crochet, President
Akzo Nobel Chemicals, Inc.	1981	Edmund A. Stec, Manager, Commerical Servic
Alkali Manufacturers' Association of India	1997	Y. R. Singh, Executive Director
American Railcar Industries	1925	William L. Willis, Manager-Marketing
AMRI, Inc.	1987	William A. Leech, President
Aqua Clear Pools, Inc.	1993	Douglas A. Latta, President
Armstrong Engineering Associates, Inc.	1998	A. Joseph Armstrong, Vice President
Asahi Kasei Corp.	1998	Takayasu Watanabe, Manager Membrane Sal
ATOFINA Chemicals, Inc.	1924	Thomas E. Werkema, Vice-President - Regula
Australian Paper	2000	Peter Berryman, Batch Mill Superintendent
BASF Corporation	1986	Roger Lehman, EHS Coordinator
Bay Area Pools & Spa, Inc.	1996	Gary F. Crayton III, President
BMD Enterprises, Inc.	1981	Todd Yingling, President
California International Chemical Co.	2002	Karen Lowell, Corporate Counsel and Govern
Central Arkansas Water	1998	James T. Harvey, Chief Executive Officer
Ceodeux, Inc.	1993	Doug Dunlope,
CEP Associates	1989	Peter DeAngellis,
Charleston Commissioners of Public Works	1998	Andrew W. Fairey, Director of Water Resource
Chemetics	1989	Charles J. Kotzo, Business Development Man
ChemValve, Inc.	2001	Albert H. Klopfenstein, President
Chlorine Engineers Corporation, Ltd.	1985	Susumu Kobayashi, Director & General Manag
City of Corpus Christi Water Department	1998	Mucio Garza, Assistant Water Superintendent
City of Glendale, AZ Utilities Administration	1999	Roger Bailey, Director of Utilities
City of Grand Rapids Water System	1999	Donald R. Spencer, Water System Manager
City of Lancaster Bureau of Water	1999	Charlotte Katzenmoyer,
City of Modesto(WQC)	2000	Dennis Moniz, WQC Operations Supervisor
City of Phoenix, Water Services Dept.	2002	Carlos Padilla, Asst. Water Services Dir.
City of Scottsdale	1999	Art Nunez, Asst. W&WW Manager
City of Shreveport	2002	Darin Fortenberry, Chief Operations Superviso
City of Stockton	1998	Ava Langston-Kenney, Regulatory Compliance
Cleveland Division of Water	1998	Robin L. Phillips-Halperin, Environmental Prog
CLOSUR	1998	Martim Afonso Penna, Executive Director
Clorox Company	1983	Joe Dionne, Manager, Corporate H,S & E
Colgate-Palmolive Canada, Inc.	1985	John Menecola,
Columbiana Boiler Company LLC	1939	Charles Moore, Vice President
Compressed Gas Association	1984	Carl T. Johnson, President
Conve & AVS Inc,	2000	Alberto Gonzalez, Business Development Man
County Sanitation District of LA County	1994	Phillip L. Friess, Division Engineer II
Crane Resistoflex	1995	Jack L. Wisdom, Flexible Products Manager
D.C. Water and Sewer Authority	1998	Walter F. Bailey, Chief, Dept. of Wastewater Tr

Company	Year Joined	Official Correspondent	JUN 10 2003
DE NORA ELETTRODI SpA	1961	Aldo Cigognini, Electrodes & Applied Systems	
De Nora N.A.	1993	David Francis, Business Manager	
Denver Water	1998	Tom Mountfort, Environmental Compliance Off	
Detroit Water and Sewage Department	1999	C. Joshi, Water Production Manager	
Dow Corning Corporation	1998	Brian T. Klouse, Operations Leader	
EAGLE Construction & Environmental Services, Inc.	2000	Tracy Clark, ER Manager	
EKK Eagle America, Inc.	1997	Raymond F. Grandchamp, Jr.	
El Paso Water Utilities	1998	John E. Ballew, P.E., Water Systems Manager	
ELTECH Systems Corporation	1983	Donald J. Groszek, Business Manager-Chlor-A	
Flexitallic L.P.	2002	Alan Human, Vice President - Sales	
Flowsolve Corporation	1995	Dick Medvid, Product Manager	
Fluor Daniel	2002	Bert Nagy, Director, Process Technology	
FMC Corporation	1994	Arturo Seyffert,	
GAC Chemical Corporation	2000	Timothy J. Poure, President	
Gainesville Regional Utilities	1999	Douglas Prentiss, Utility Training Officer	
Garlock Sealing Technologies	1997	Matt Tones, Applications Engineering Manager	
Gasket Resources Inc.	2001	Jim Lingenfelder, Durlon Technical Services	
GE Railcar Services	1997	John Byrne, Director, Regulatory Compliance	
General American Transportation Corp.	1949	John Swezey, Vice President Engineering	
Groth Equipment Corporation	2002	Gregg Gautreau, Valve Product Manager	
Groupe Lavo, Inc.	1990	Guy Bouthillier	
H. Krevit & Company, Inc.	1984	Thomas Ross	
Halliburton KBR	1990	James L. Mays, Sr. Technical Advisor	
Halocarbon Products Corporation	1989	Ronald Epstein, Asst Mgr - Sales/Marketing	
Halogen Valve Systems, Inc.	1998	Tom Kincaid, VP and General Manager	
HASA, Inc.	1995	Mark S. Wilson, President	
Honeywell International	2001	Chad Marks, 245fa Production Engineer	
Huffmaster Crisis Response, LLC	2002	Wade Pinnell, Vice-President	
Hulcher Services Inc.	2000	Charles D. "Chip" Day, Senior Director of Oper	
Indian Springs Manufacturing Company, Inc.	1968	Maurice J. Ferguson, President	
Indian Sugar and General Engineering Corp.	1996	Sanjay Gulati, Manager (Exports)	
Ineos Chlor	1966	Malcolm Cook, Manager of Business Develop	
Inertech, Inc./YMT	1996	Charles C. Miskell, Vice President	
Infineum USA L.P	1990	Tom Devine, Risk Assessment Manager	
International Salt Company, LLC	2001	William D. Kohlsaat, VP Chemical Sales & Op	
Irvine Ranch Water District	2000	Mark B. Gingras, Operations Manager	
J.C. & Sons, Inc. / Swim Chem	1994	Jerry Wallace, Vice President	
Jamesbury, Inc.	1977	Francis P. O'Brien, Industry Mgr, Chlorine/Cau	
Jones-Hamilton Co.	1997	Victor Haas, Technical Service Representative	
K.A. Steel Chemicals, Inc.	1972	Dave Celovsky, Health & Safety Manager	
Kerr-McGee Chemical LLC	1997	Al Dooley, Director-Safety and Health	
KIK International		Palle Josefsen, V.P. Operations	
Koch Knight LLC	1999	Mark W. Martin, Sales Manager	
Krupp Uhde Corporation of America	1968	Kolambur "Samba" Sambamurthy, Director, Bu	

Company	Year Joined	Official Correspondent
LEM High Current Systems	1993	David Shepard, Marketing Manager
Lonza Group	1996	Ron DeFeo, Plant Manager
M. Rodrigue & Son, Inc.	1989	Wayne Rodrigue, Secretary / Treasurer
Marsh Rail Car Services, Inc.	1986	Larry L. Richardson, President
MESSO AG	1976	Claus Gerrath, Senior Project Manager
Metro Water Services	2000	Joseph A. Estes, Sr., Departmental Safety Coo
Metropolitan Sewer District of	2002	Kenneth Wegenhart, Treatment Supervisor
Metropolitan Water District of S. Calif.	1991	Richard (Rick) F. Ford, Chlorine Specialist
Miami Products & Chemical Co.	1999	Chris Kohr, Production Supervisor
Millennium Chemicals Inc.	1995	Steve Siegmann, Director of Process Safety
Misco Service Advantage	2000	Norman Clow, Owner
Monsanto Company	1986	Roy A. Breaud, Jr., Plant Manager
MONTEC - Montagem Tecnica Ltda	1999	Saeed Pervaiz, Technical Adviser
Newport News Waterworks	1998	Chris Harbin, Plants Manager
NORAM Engineering and Constructors Ltd.	2000	Jose Cardona, Sr. Project Mgr, La. Amer. Busi
OPW Fluid Transfer Group	1984	John F. Anderson, President
Pall Corporation	2002	Richard D. Range, Jr., Sales Manager
Permascand AB	2001	Bo E. Mewen, Export Manager
Petroclean, Inc.	2001	Drew McCarty, VP, Quality & Emergency Resp
Philadelphia Water Department	1993	William Wankoff, Water Treatment Plants Mgr.
Philip Services Corporation	2001	Farouk A. Mian, Executive Director
Phonix/Pov	1991	Gunter Wodara, Director Techniques
Poly Processing Company	2000	Marshall Lampson, Vice President
Polymeric Protective Linings	2000	Larry DeLashmit, Regional Sales Manager
Pool-Chem, Inc.	1993	David L. Shumaka, President
Poolchlor Companies	1978	Kim Skinner, President
Poolman/Spear Pool Co.	1993	John Quatrini, President
Powell Fabrication & Manufacturing, Inc.	1983	Duane Powell, CEO
Prince Rubber & Plastics Company, Inc.	1974	S. Warren Prince, Jr., CFO
Procor Limited	1987	John McKechnie, Director of Engineering
PVS Chemicals, Inc.	1993	Dennis Rutkowski, President
Rapid Power Corporation	2003	Stan Popp, Sr. Sales Engineer
Regional Water Authority	1998	Gary Huntley, Water Treatment Manager
RemTec International	2001	Scott Warner, Sales Manager
Rescar, Inc.	1997	Thomas E. DeLafosse, Director, AllTranstek, L
ROBO-CONTROL	2000	Gary Slaydon, President
Rubber Lining Specialists, LLC	2002	Rene Naquin, President
Sabara Industria e Comercio Ltda.	1991	Marco Antonio M. Sabara, General Manager
Sacramento Regional Wastewater Treatment Plant	1992	Ramzi N. Salameh, Maintenance Engineer
Saint-Gobain Performance Plastics	1997	George Carpenter, Senior Product Manager
Salco Products, Inc.	1997	Alex Degutis, Director of Product Development
San Antonio Water Systems	1998	John J. Byrum, II, Director of Production/Treat
Sentry Industries, Inc.	1994	Gary L. Koen, Director of Manufacturing
Severn Trent Services	1972	Bill Fehrman, Senior Product Specialist

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Company	Year Joined	Official Correspondent
Shaw Valves/Hytec	1997	Greg J. Leumas,
Sherwood-Harsco Corporation	1997	Stephen L. Sokol, Design & Regulatory Engine
Spartanburg Water System	1998	Rebecca West, Director of Technical Services
Specialized Response Solutions, LP	2001	Bobby Breed, V.P. Operations
Texas Brine Corporation	1988	Lawrence F. Becnel, Jr., Manager of Engineeri
Trinity Industries, Inc.	1984	Greg McRae, Director
Trinity River Authority of Texas	1993	Mike Young
Tyco Valves & Controls, Inc.	1985	Mark S. Fucich, Executive Vice-President Sale
U.S. Filter Corporation	1996	Gregory E. Stockinger, Director, Development
Union Tank Car Company	1956	Phil Daum, Director of Engineering
Universal Dynamics America Corporation	1994	Donald G. Elliott, Vice President
Vallecitos Water District	1996	Jerome Janus, Compliance Program Coordina
Velan Valve Corporation	1994	Roch Daigle,
Vertex Chemical Corporation	1984	Lee F. Moisl, Vice President
W. L. Gore & Associates, Inc.	1991	Dennis Dion, Sales Associate
Wah Chang	2001	Scott Coffin, Process Engineer
Water Corporation	1990	N. G. (Neil) Herbert, Senior Chemical Engineer
Water District No. 1 of Johnson County	1999	Chuck Weber, Superintendent of Treatment &
Young-Do Ind. Co., Ltd.	2002	Chung Mu Park, President

Chlorine Institute Membership List

Wednesday, May 28, 2003

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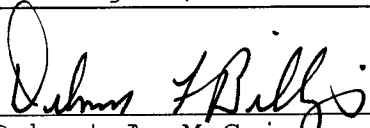
Overseas Producer Members (21)

Company	Year Joined	Official Correspondent	Country
Albion Inorganic Chemicals	1968	J. A. Clarke, Quality Manager	UNITED KINGD
Ansa McAl Chemicals Ltd.	1993	Derek deCaires	WEST INDIES
Asahi Glass Co., Ltd.	1985	Akinori Noda, General Mgr., Fluoroproducts	JAPAN
Basic Chemical Industries, Inc.	1995	Ismail A.R. Atwi, Plant Manager	SAUDI ARABIA
Carbochloro S.A. Industrias Quimicas	1981	Mario A. Cilento, Executive Vice President	BRAZIL
Chemical Industries (FE) Ltd.	1990	Soo Peng Lim, Managing Director	SINGAPORE
Dead Sea Bromine Company, Ltd.	1975	Andre Silam	ISRAEL
Efice Cloro Soda S.A.	1995	Nestor Gomez Alcorta, President	URUGUAY
Hanwha Chemical Corporation	2000	Won Ill Son, Production Manager	SOUTH KOREA
Makhteshim Chemical Works, Ltd	1991	David Ben Simon, Production Manager	ISRAEL
Nirou Chlor Co.	1998	H. Amirpour, Managing Director	IRAN
Nufarm Limited	1987	Bruce Cadee, Plant Manager	WESTERN AUS
Orica Australia Pty. Ltd.	1971	Stuart A. Newman, Manufacturing Manager	AUSTRALIA
Petroquimica de Venezuela S.A.	1980	Jorge Yanez, Chlorine & Vinyls General Mgr.	VENEZUELA
Prodesal S.A.	1986	Mauricio Megia, Production Manager	COLUMBIA
Quimpac S.A.	1993	Marcos S. Fishman, President	PERU
Refinadora de Sal S.A. (REFISAL)	1996	Eduardo Campillo, Plant Manager	COLOMBIA
Sasol Polymers	1973	Hannes Malan, Technical Manager	SOUTH AFRICA
Solvay S.A.	1968	Andre Daene, Electrolytic Processes & Halogenated	BELGIUM
Tosoh Corporation	1980	Hiroshi Yamato, Mgr., Environment & Safety Control	JAPAN
Trikem S.A.	1998	Manoel Carnauba, Industrial Director	BRAZIL

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The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Application Date	Issue Date	Expiration Date
Integrated Environmental Services, Inc. Atlanta, GA	Jun 10, 2004	JUN 2 8 2004	Mar 31, 2005
Linde Gas, LLC (Former Grantee: AGA Gas Inc. Member of the Linde Gas Group) Cleveland, OH	Dec 15, 2003	May 7, 2004	Mar 31, 2005
Middlesex County Health Department Sayreville, NJ	Sep 11, 2003	Sep 25, 2003	Mar 31, 2005
Olin Corporation Charleston, TN	May 30, 2003	Jul 14, 2003	Mar 31, 2005
Pioneer Americas LLC Henderson, NV	Jul 30, 2003	Jul 30, 2003	Mar 31, 2005
The Chlorine Institute, Inc. Arlington, VA	May 20, 2003	Jun 10, 2003	Mar 31, 2005


 Robert A. McGuire

JA Associate Administrator for
Hazardous Materials Safety