Before the
U.S. Environmental Protection Agency

PETITION OF THE AMERICAN CHEMISTRY COUNCIL'S ETHYLENE GLYCOL ETHERS PANEL TO REMOVE ETHYLENE GLYCOL MONOBUTYL ETHER FROM THE TOXICS RELEASE INVENTORY UNDER SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986

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December 29, 2014

Petition

Pursuant to Section 313(d) & (e) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), the Ethylene Glycol Ethers Panel of the American Chemistry Council hereby petitions the United States Environmental Protection Agency (EPA) to remove ethylene glycol monobutyl ether (EGBE) from the list of chemicals subject to the Toxics Release Inventory (TRI) reporting requirements of the EPCRA Section 313.

As demonstrated below, available scientific data indicate that EGBE poses low potential hazards to human health and the environment, making an assessment of exposure appropriate under EPA's policy for making TRI listing decisions under EPCRA. Conservative estimates of exposures resulting from plant emissions of EGBE are well below Integrated Risk Information System reference values for human inhalation and ingestion health risks and are also far below conservative benchmarks for acute human health effects and ecotoxicity. When the Administrator removed EGBE from the Clean Air Act's list of Hazardous Air Pollutants in November 2004, he specifically determined, based on exposure assessments utilizing 1993 TRI data, that there is "reasonable assurance" that any potential adverse human health and environmental effects "will not occur" from EGBE facility releases (68 FR 65660). He concluded "with confidence" that releases of EGBE "may not reasonably be anticipated to cause any adverse effects to human health" or "adverse environmental effects" (69 FR 69322).

As demonstrated in this petition, there is an even stronger basis for making essentially the same statutory findings under EPCRA and removing EGBE from the TRI reporting list. Based on the most recent TRI data available, EGBE releases and exposures are significantly lower than those that formed the basis for EPA's Hazardous Air Pollutants (HAPs) determinations. Delisting under EPCRA would remove a significant disincentive to the use of EGBE, a solvent that has proven to be highly effective in a variety of important water-based coating formulations with demonstrable volatile organic compound (VOC)-reduction benefits. Delisting would also eliminate the potential for confusion and misdirected community priorities that currently exists because EGBE-using facilities are unfairly singled-out as significant sources of "toxics" despite the Administrator's findings that EGBE releases may not reasonably be anticipated to cause adverse human health or environmental effects. Accordingly, for the reasons set forth in full in this petition, the EPCRA delisting criteria are satisfied and the Panel therefore respectfully requests that EPA remove EGBE from the TRI reporting list.

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ACRONYMS

%	percent
ACGHI	American Conference of Governmental Industrial Hygienists
ADI	average daily intake
AEGL	Acute Exposure Guideline Level
A_o	oral absorption factor
AT	averaging time
ATSDR	Agency for Toxic Substances and Disease Registry
BAA	2-butoxyacetic acid
BAL	2-butoxyacetaldehyde
BCF	bioconcentration factor
BHA	butylated hydroxyanisole
BMC	benchmark concentration
BOD	biological oxygen demand
BW	body weight
CAA	Clean Air Act
CAS	Chemical Abstracts Service
C_i	concentration of EGBE in diet item *i*
CICAD	Concise International Chemical Assessment Document
cm^2	square centimeters
cm^3	cubic centimeters
CMA	Chemical Manufacturers Association
CMI	Can Manufacturers Institute
C_w	concentration of EGBE in water
DA_{event}	absorbed dose per event
DGBE	diethylene glycol butyl ether
DNA	deoxyribonucleic acid
ECETOC	European Centre for Ecotoxicology and Toxicology of Chemicals
EC_{50}	median effect concentration
ED	exposure duration
EF	exposure frequency
EGBE	ethylene glycol monobutyl ether
EGBEA	2-butoxyethyl acetate
EGEE	ethylene glycol monoethyl ether
EGME	ethylene glycol monomethyl ether
EGPE	ethylene glycol monopropyl ether
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERA	ecological risk assessment
EU	European Union
EV	event frequency

ACRONYMS

gps	grams per second
HAP	hazardous air pollutant
Hb	hemoglobin
HQ	hazard quotient
HSDB	Hazardous Substance Data Bank
IARC	International Agency for Research on Cancer
IR	ingestion rate
IR_a	inhalation rate
IR_{diet}	food ingestion rate
IRIS	Integrated Risk Information System
IR_w	water ingestion rate
kg	kilograms
kg/hr	kilograms per hour
kg/kg BW-day	kilograms per kilogram body weight per day
km	kilometers
km^2	square kilometers
K_{ow}	octanol-water partition coefficient
L/day	liter per day
LC_{50}	lethal concentration for 50% of test organisms
LD_{50}	lethal dose for 50% of test organisms
LOAEL	lowest observed adverse effect level
m	meter
m^3/kg BW-day	cubic meters per kilogram body weight per day
MCV	mean corpuscular volume
MEK	methyl ethyl ketone
mg/cm^2	milligrams per square centimeter
mg/kg	milligrams per kilogram
mg/kg BW-day	milligrams per kilogram body weight per day
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
MIBK	methyl isobutyl ketone
mM	millimolars
MOE	Margin of Exposure
$\mu g/m^3$	micrograms per cubic meter
NED	National Elevation Dataset
NEI	National Emissions Inventory
NIOSH	National Institute of Occupational Safety and Health
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration

ACRONYMS

NTP	National Toxicology Program
OEM	original equipment manufacturing
PBPK	physiologically based pharmacokinetic
P_i	proportion of organism's diet made up by diet item *i*
POTW	publicly owned treatment works
ppm	parts per million
RfC	reference concentration
RfD	reference dose
RME	reasonable maximum exposure
ROS	reactive oxygen species
SA	skin surface area exposed
SARA	Superfund Amendment and Reauthorization Act of 1986
TDI	total daily intake
TGME	triethylene glycol methyl ether
TLV	threshold limit value
TNF∞	tumor necrosis factor alpha
tpy	tons per year
TRI	Toxics Release Inventory
TRV	toxicity reference value
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
VOC	volatile organic compound
WHO	World Health Organization

EXECUTIVE SUMMARY

Ethylene glycol monobutyl ether (EGBE) (Chemical Abstract Service [CAS] number 111-76-2) is used primarily as a solvent in the manufacture of paints, coatings, metal cleaners, and household cleaners and as a chemical intermediate in the production of other chemicals. It has been used for more than 60 years because of its valuable and unique properties, especially its ability to make water-based, environmentally sound products work effectively. EGBE is regulated under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) because it is a member of the "Certain Glycol Ethers" category of compounds as currently defined on the Toxics Release Inventory (TRI).

Section 313(d) of EPCRA calls for the removal of a chemical from the TRI where "there is not sufficient evidence to establish" that the chemical "is known to cause or can reasonably be anticipated to cause" any of three types of effects:

(A) significant adverse acute human health effects;

(B) (i) cancer or teratogenic effects, or (ii) serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutations, or other chronic health effects; or

(C) a significant adverse effect on the environment of sufficient seriousness, in the judgment of the Administrator, to warrant reporting of facility releases.

As detailed in the human health and ecological hazard assessment presented in Section 3 of this petition and summarized in Table ES-1, the available evidence indicates that EGBE presents low potential hazards to human health and the environment. The scientific data support the conclusions in the current Integrated Risk Information System (IRIS) assessment (EPA 2010)[a] that EGBE is not immunotoxic, genotoxic, or teratogenic, and does not cause adverse reproductive effects. The toxic effects of EGBE are secondary to its irritant and hemolytic effects, and United States Environmental Protection Agency (EPA) has determined that prevention of hemolytic effects in humans will also protect against all other potential toxic effects (EPA 2010, 68 FR 65656, 69 FR 69322). The data show, moreover, that humans are relatively insensitive to the hemolytic effects of EGBE. Even minor prehemolytic effects are expected to occur in humans, if they occur at all, only at exposure concentrations/doses far in excess of levels that might occur near EGBE-using facilities. The human-equivalent lowest observed adverse effect level (LOAEL) is significantly above 500 milligrams per kilogram body weight per day (mg/kg BW-day), and prehemolytic effects are not predicted in humans even in EGBE-saturated atmospheres (EPA 2010, Udden 2000, 2002).

[a] Although the 1999 IRIS assessment is currently under review, the review is limited to updating the carcinogenicity evaluation to incorporate EPA's recent cancer hazard evaluation for EGBE (EPA 2005a). See 71 Federal Register [FR] 77018 (EPA 2006).

For similar reasons, the potential carcinogenicity of EGBE in humans is appropriately characterized under EPA's TRI listing criteria as low to nonexistent based on a hazard evaluation. The IRIS assessment finds "limited" animal evidence of carcinogenicity and concludes that the human carcinogenic potential of EGBE "cannot be determined" (EPA 2010). Subsequent mechanistic studies led EPA to determine that that nonlinear, nongenotoxic modes of action are likely responsible for the increased incidence of tumors observed in rodent studies (EPA 2005a). Consequently, even if the limited rodent findings are relevant to humans, the relatively low sensitivity of humans (including subpopulations such as children) to the hemolytic effects of EGBE means that, as EPA has stated, "we would not expect to find these tumors in humans following environmental exposures" (69 FR 69322).

EGBE likewise poses a very low potential ecological hazard judged by the criteria EPA has developed for making listing decisions under EPCRA. As summarized in Table ES-1, it has a relatively short residence time in the atmosphere, high water solubility, low octanol-water partition coefficient (K_{ow}), low vapor pressure, and low bioconcentration factor. Thus, EGBE has very low potential for persistence or bioaccumulation.

Consistent with the findings of a series of comprehensive ecotoxicity assessments—including the recently updated Concise International Chemical Assessment Document (CICAD) (WHO 2010), the European Union (EU) Risk Assessment (INERIS 2005); and Environment Canada (2002)—EPA determined in the Hazardous Air Pollutant (HAPs) proceeding that that EGBE causes only "very minor" effects that "are unlikely to be ecologically significant" (68 Fed. Reg. 65657). The updated ecological hazard evaluation in Section 3 of this petition supports that conclusion. Acute toxicity to most aquatic organisms has been found at concentrations in the vicinity of 1,000 milligrams per liter (mg/L) while chronic toxicity to most aquatic organisms has been found at concentrations above 100 mg/L. For the most sensitive species, acute and chronic aquatic toxicity likewise has been reported only at levels that are properly evaluated as high under EPA's TRI listing criteria (Table ES-1). No data have been found indicating that EGBE is toxic to terrestrial mammals or birds. The data indicate, in short, that EGBE is "practically non-toxic" to fish and invertebrates under established EPA criteria and, therefore, presents "a low risk to the environment" (Staples 1998).

For these reasons, the human health and ecological hazard evaluation presented here supports a determination that EGBE has "low toxicity and unrealistic exposures would be necessary for it to pose a risk to communities" (59 FR 61442). Under these circumstances, EPA's interpretation of EPCRA Section 313(d)(2) calls for the consideration of exposure levels in determining whether to delete EGBE from the TRI reporting list.

Significantly, this is an issue the Agency has addressed in a statutory setting that is virtually identical to Section 313(d) of EPCRA. On November 29, 2004, EPA Administrator Michael O. Leavitt granted the Panel's petition to remove EGBE from the list of HAPs under Section 112 of the Clean Air Act (CAA) (EPA 2004a). Section 112 authorizes the removal of a listed HAP based on a determination that "the substance may not reasonably be anticipated to cause any adverse effects to the human health or any adverse environmental effects." In assessing exposures to EGBE, EPA determined that the 1993 TRI data (on which our HAPs

petition was largely based) provided an “adequate” and “reasonable representation” of the sources and levels of EGBE emissions. Application of conservative exposure models led the Administrator to find that maximum estimated exposures from EGBE-emitting facilities are well below the IRIS reference concentration (RfC) and reference dose (RfD). He therefore concluded, “with confidence,” that releases of EGBE “may not reasonably be anticipated to cause any adverse effects to human health” (69 FR 69322). Relying on similar conservative modeling based on the 1993 TRI data, the Administrator likewise found that there are adequate data on environmental effects of EGBE to determine that ambient concentrations, bioaccumulation, or deposition of EGBE are not reasonably anticipated to cause any adverse environmental effects (68 FR 65657).

This petition updates the hazard, exposure, and ecological assessments that EPA reviewed and prepared in the HAPs delisting proceeding, consistent with the assumptions and methodologies that EPA found to be “appropriate,” “acceptable,” and “conservative.”

Section 4 reviews the bases for and substantial conservatism built into the IRIS RfC and RfD, which are used to evaluate the results of the exposure assessments prepared for this petition, as they were in the HAPs decision.

Nationwide exposure potential is assessed in Section 5 by developing an inventory of Certain Glycol Ether releases using 2009, 2010, and 2011 TRI data. Because EGBE comprises 52 percent (%) of the United States annual consumption of glycol ethers (SRI 2010), the inventory’s assumption that all releases of Certain Glycol Ether are EGBE (in the absence of facility-specific data to the contrary) generally overstates EGBE releases by a factor of two.

As described in Section 6, every facility listed in the TRI database is subjected to a screening process very similar to that used in the HAPs proceeding to determine which facilities have the potential to have maximum annual average concentrations of EGBE at or beyond the fenceline greater than the IRIS RfC of 1.6 milligrams per cubic meter (mg/m^3). In addition, an analysis of clusters of multiple facilities within the same zip code is used to evaluate the maximum potential combined exposures from closely located sources of EGBE. A comparison of annual emissions reported to TRI from 2000 through 2011 is used to demonstrate that interannual variability in reported emissions among high emitting facilities is relatively low and that the tiered modeling approach in this petition provides a sufficient margin of safety that encompasses reasonable interannual variability in facility EGBE emissions. Section 6 also includes a reasonable worst-case assessment of the potential for acute irritation effects from EGBE facility releases using the Margin of Exposure (MOE) methodology EPA has employed in prior TRI listing decisions.

Section 7 evaluates the potential health effects of EGBE posed by human surface water ingestion and dermal exposures against the IRIS RfD of 0.1 mg/kg BW-day, based on essentially the same conservative assumptions and models that EPA characterized in the HAPs evaluation, with updates to reflect the estimated surface water concentration based on 2009, 2010, and 2011 TRI data, the current RfD, and changes in EPA (2004b) guidance for dermal risk assessment.

Section 8 updates the three ecological risk assessments (ERAs) conducted in the HAPs proceeding by applying 2009, 2010, and 2011 TRI data to the Mackay Level III fugacity model, to yield updated estimates of the maximum surface water concentration. In addition, Section 7 applies an updated toxicity reference value (TRV) for aquatic organisms that was identified in a supplemental review of the ecotoxicity literature for EGBE.

The results, summarized in Table ES-2, reveal that EGBE exposures are well below the IRIS RfC and RfD for inhalation and dermal/ingestion exposures as well as appropriate ecotoxicity reference values. Consequently, the hazard quotients (HQs)—the ratio of maximum exposures to applicable health and environmental reference values—are also well below 1 indicating, in accordance with the National Contingency Plan (EPA 1990a) and EPA (1989) risk assessment guidance, that adverse health and environmental effects are unlikely. Similarly, the acute MOE for the estimated maximum hourly concentration of EGBE is above 5, which indicates no significant concern for potential acute effects because, among other things, the no observed adverse effect level (NOAEL) is based on human data.

As discussed in Section 9.2 and as summarized in Table ES-3, the exposure and risk estimates developed in this petition are likely overstated by wide margins, perhaps by as much as five orders of magnitude. EPA (2003) has acknowledged that substantial conservatism is incorporated into every primary element of the evaluation, including the IRIS and ecotoxicity reference values, the emissions inventory, and the models and assumptions used to estimate maximum exposures. The scientific evidence therefore supports a finding that “there is not sufficient evidence to establish” that EGBE satisfies any of the three listing criteria of EPCRA Section 313(d).

Delisting EGBE is also consistent with the policies and goals of the TRI program as articulated by EPA. As developed in Section 9.3, the Agency has emphasized the need to ensure that TRI listing decisions are consistent with “other EPA decisions on the same chemical, to the extent that such decisions relate to the same basic criteria for human health and the environment” (52 FR 5481). That consideration is especially important here because, as summarized in Table ES-2, human and environmental exposures are consistent with or less than those that formed the basis of the Agency’s November 2004 HAPs findings that releases of EGBE “may not reasonably be anticipated to cause any adverse effects to the human health” or “adverse environmental effects” (EPA 2004a, 69 FR 69322). By their terms, these findings encompass the health and ecotoxicity listing criteria of EPCRA Section 313(d) and, therefore, should be accorded considerable weight here.

Delisting EGBE also would promote the goals of the TRI program by focusing community risk management and pollution prevention efforts on other chemicals that EPA has determined present significant human health and environmental risks (see Section 9.4). Of special importance in this regard is the fact that delisting would remove the current disincentive to the use of EGBE in waterborne coating formulations that have demonstrable environmental benefits in the form of substantial reductions in volatile organic compound (VOC) emissions. Deleting EGBE from the TRI reporting list also would maintain the credibility of the program by eliminating the confusion that currently results because facilities are inappropriately singled out

as major sources of “toxics” on the basis of EGBE releases that, as EPA has found, may not reasonably be anticipated to cause adverse human health or environmental effects.

The case for deleting EGBE from the TRI reporting list, in sum, is straightforward and compelling. Because the delisting criteria of EPCRA Section 313(d) as interpreted by EPA are met, and because the local risk management and pollution prevention purposes of the statute would be well served by delisting, the Panel respectfully asks EPA to grant this petition.

1.0 INTRODUCTION

This petition, submitted by the American Chemistry Council's Ethylene Glycol Ethers Panel (the Panel) under Section 313(d) & (e) of the Emergency Planning and Community Right-to-Know Act (EPCRA), seeks the removal of ethylene glycol monobutyl ether (EGBE) from the list of chemicals subject to the reporting requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA) Toxics Release Inventory (TRI) program. The Chemical Abstracts Service (CAS) number for EGBE is 111-76-2, and its chemical structure is illustrated in Figure 1-1 below.

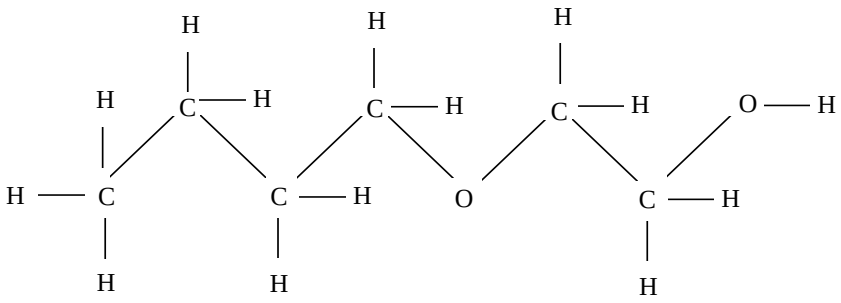

Figure 1-1. Structure of Ethylene Glycol Monobutyl Ether (EGBE)

The American Chemistry Council is a trade organization for chemical manufacturers. The American Chemistry Council's contact is Mr. Jonathon Busch, Director of the Ethylene Glycol Ethers Panel. He can be reached at the mailing address listed on the cover of this petition, by phone at 202-249-6725, or by e-mail at jon_busch@americanchemistry.com.[b]

Members of the Ethylene Glycol Ethers Panel are The Dow Chemical Company, Eastman Chemical, and LyondellBasell. Panel members Dow, Eastman, along with LyondellBasell account for all domestic manufacture of EGBE (SRI 2010).

Section 313(d) of EPCRA (42 U.S.C. §11023(d)(2)(A)-(C) & (d)(3)) calls for the delisting of a chemical where "there is not sufficient evidence to establish" that—

(A) The chemical is known to cause or can reasonably be anticipated to cause significant adverse acute human health effects at concentrations expected to exist beyond facility site boundaries as result of continuous or frequently recurring releases;

(B) The chemical is known to cause or can reasonably be anticipated to cause in humans—

(i) cancer or teratogenic effects, or

[b] There is an underscore symbol between Mr. Busch's first and last names within his email address.

(ii) serious or irreversible—
(I) reproductive dysfunctions,
(II) neurological disorders,
(III) heritable genetic mutations, or
(IV) other chronic health effects.

(C) The chemical is known to cause or can reasonably be anticipated to cause, because of—
(i) its toxicity,
(ii) its toxicity and persistence in the environment, or
(iii) its toxicity and tendency to bioaccumulate in the environment,
a significant adverse effect on the environment of sufficient seriousness, in the judgment of the Administrator, to warrant reporting under this section.

This petition evaluates EGBE based on these criteria. In accordance with United States Environmental Protection Agency's (EPA's) interpretation of the EPCRA listing criteria (59 Fed. Reg. 61432 [EPA 1994a]), the petition presents in Section 3 a qualitative assessment of the potential hazards EGBE poses to human health and the environment. Because the hazard assessment supports the conclusion that EGBE presents a low potential for adverse human health and ecological effects, we also present in Sections 4 through 8 conservative assessments of potential human and environmental exposures resulting from facility releases of EGBE and how such exposures compare to highly protective criteria for preventing adverse human health and ecological effects. Specifically, the petition is organized as follows:

Section 2 presents background information on the chemical identity of EGBE, regulatory history, current standards and guidelines, production, and use.

Section 3 presents a qualitative evaluation of the potential human health and ecological hazards posed by EGBE:

The physical and chemical properties of EGBE are reviewed, focusing on properties relevant to potential health and environmental effects including persistence and bioaccumulation.

The human health hazard evaluation reviews and updates the current Integrated Risk Information System (IRIS) toxicological assessment of EGBE (EPA 2010) and the reviews appearing in the 2004 Hazardous Air Pollutants (HAPs) delisting decision (68 Fed. Reg. 65648 [EPA 2003], 69 FR 69320 [EPA 2004a]) and in EPA's (2005a) report, *An Evaluation of the Human Carcinogenic Potential of Ethylene Glycol Butyl Ether*. Acute and chronic health effects are addressed separately in order to directly evaluate EGBE against the first two listing criteria set forth in EPCRA Section 313(d)(2)(A) & (B).

The ecological hazard evaluation likewise builds on the ecotoxicity assessments developed or approved by EPA in the HAPs rulemaking as well as a series of recent comprehensive reviews by the World Health Organization (WHO), the European Union (EU), and Environment Canada, all of which have reached similar conclusions about the low potential ecotoxicity of EGBE.

Section 3 closes with a review and application of EPA's criteria for considering exposure in making TRI listing decisions under EPCRA (59 Fed. Reg. 61432 [EPA 1994a). The next five sections of the petition evaluate potential human and environmental exposures resulting from EGBE facility releases based on conservative modeling and highly protective criteria for preventing potential health and ecological effects.

Section 4 describes the criteria used in this petition for evaluating chronic human exposures to EGBE, *viz.* the IRIS reference concentration (RfC) and reference dose (RfD).

Section 5 follows the general approach used in the HAPs delisting decision by constructing an inventory of EGBE releases based on the 2009, 2010, and 2011 TRI reports for Certain Glycol Ethers, which provide the most up-to-date data available (the HAPs assessment was based largely on 1993 TRI data).

Section 6 presents the screening approach used to evaluate both chronic and acute exposures.

Chronic exposures are assessed by applying EPA modeling guidance to develop conservative estimates of maximum annual average concentrations of EGBE at or beyond facility fencelines and comparing those estimates against the IRIS RfC. Because estimated maximum annual average concentrations for all facilities in the 2009, 2010 and 2011 inventories are below the RfC based on unrealistically conservative screening assumptions, application of more sophisticated tiered modeling is unnecessary in this case under EPA (1992a) modeling guidelines. Nevertheless, tiered modeling is used for a sample of the highest EGBE-emitting facilities in order to estimate the degree of conservatism incorporated into the screening results. It should be noted, an examination of trends in maximum TRI-reported Certain Glycol Ether emissions from for reporting years from 2000 to 2011 (see Figure 5-1) indicated there has been remarkably little variability in the Certain Glycol Ether emissions from the highest emitting facilities over the past decade.

Similar to the HAPs assessment, cumulative exposures from closely located sources of EGBE (i.e., within the same zip code) are evaluated.

Acute exposures are assessed by developing conservative estimates of maximum hourly average concentrations of EGBE at or beyond facility fencelines for the highest emitting facilities (i.e. those facilities that did not screen out in two highly conservative prescreening steps). The resulting estimates of the maximum hourly EGBE concentration in ambient air for the facilities are evaluated using the Margin of Exposure (MOE) methodology EPA has used in previous TRI listing decisions, using the no observed adverse effect level (NOAEL) derived from human data in Section 3 of the petition.

Section 7 evaluates human health exposure and risks associated with EGBE in surface water against the IRIS RfD. Again, the same models and assumptions used in the HAPs assessment are employed here, updated to reflect the surface water concentration modeled from 2010 TRI release data, the most recent version of the Mackay fugacity model (EQC v2.02; CEMC 2003), and current EPA (2004b) guidance for dermal risk assessment. Potential exposures were evaluated based on 2009, 2010, and 2011 TRI release data but the human health exposure assessment was conducted with the 2010 TRI data because they represented

the worst-case scenario from the recent TRI data. The estimated exposures based on these data are well below the RfD.

Section 8 presents an ecological risk assessment (ERA) for EGBE, based on the models and assumptions used in the HAPs assessment, EGBE releases to air, land, and water as reported in the 2009, 2010, and 2011 TRI, and a supplemental literature review to identify appropriate target species and toxicity reference values (TRVs).

Section 9 presents a summary of the hazard, exposure, and risk assessments developed in the preceding sections, identifies the elements of conservatism built into these assessments, and evaluates the results under the listing/delisting criteria of EPCRA Section 313(d)(2). In addition, EPA policies for the interpretation and administration of the TRI program are reviewed, and other considerations relevant to the question of whether to delist EGBE are discussed.

References are listed in **Section 10**, and five appendices provide detailed data and analysis that form the basis for the hazard, release inventory and exposure assessments described in Sections 3 through 8. **Appendix A** tabulates laboratory bioassay studies of EGBE, including the compilation published in the 1998 Agency for Toxic Substances and Disease Registry (ATSDR) toxicological profile of EGBE, and a table of subsequent studies. **Appendix B** is the emissions inventory. **Appendix C** presents the chronic screening results for airborne emissions. **Appendix D** provides results of a quantitative uncertainty analysis, which demonstrates the health protectiveness of the overall approach to evaluating inhalation exposures. **Appendix E** presents the acute screening results for airborne emissions. Finally, **Appendix F**, provided as electronic files on CDROM, are the model output files from both the Tier 2 and Tier 3 modeling.

2.0 BACKGROUND

This section provides background information on EGBE (CAS 111-76-2), including a list of synonyms, history of EGBE regulation, regulatory standards and guidelines, chemical and physical properties, and production and use.

2.1 Synonyms

EGBE has many synonyms (NICNAS 1996, HSDB 1997, ECETOC 1994), including:

- 2-butoxyethanol
- 2-butoxy-1-ethanol
- 2-BE
- 2-n-butoxyethanol
- 3-oxa-1-heptanol
- beta-butoxyethanol
- butoxyethanol
- butyl glycol
- butyl glycol ether
- ethanol 2-butoxy
- ethylene glycol butyl ether
- ethylene glycol monobutyl ether
- ethylene glycol mono-n-butyl ether
- ethylene glycol n-butyl ether
- glycol butyl ether
- glycol monobutyl ether
- monobutyl ethylene glycol ether
- monobutyl glycol ether
- n-butoxyethanol
- o-butyl ethylene glycol

EGBE is marketed in the United States under various trade names, including:

- Eastman® EB Solvent
- Butyl CELLOSOLVE® Solvent
- Butyl OXITOL®
- DOWANOL® EB
- Ektasolve EB
- Glycol Ether EB
- Poly-Solv EB

2.2 History of EGBE Regulation under EPCRA

EGBE is regulated under EPCRA because it is a member of the “Certain Glycol Ethers” category of chemicals as currently defined in the TRI. Regulation of glycol ethers is an outgrowth of developmental studies conducted or sponsored by industry in the late 1970s and early 1980s. Subsequently, the National Institute of Occupational Safety and Health (NIOSH) concluded that two glycol ethers—ethylene glycol monomethyl ether (EGME) and ethylene glycol monoethyl ether (EGEE)—had the potential to cause adverse reproductive, embryotoxic, and teratogenic effects in laboratory animals (NIOSH 1983). Several state regulatory agencies assumed that the effects observed in EGME and EGEE were applicable to all glycol ethers. Thus, as a result of the 1983 NIOSH findings, the Maryland Department of Environmental Protection included glycol ethers in a list of chemicals for which it planned to collect use information (Maryland 1985). Maryland’s list of chemicals was subsequently incorporated into

the Section 313 list of Title III of the Superfund Amendment and Reauthorization Act of 1986 (SARA), or EPCRA. Glycol ethers were initially defined as chemicals with the formula,

$$R\text{-}(OCH_2CH_2)_n\text{-}OR' \qquad \text{Eqn. 1}$$

where:

R = alkyl or aryl groups

R′ = R, H, or groups which, when removed, yield glycol ethers with the structure: $R\text{-}(OCH_2CH_2)_n\text{-}OH$

n = 1, 2, or 3.

In 1994, EPA redefined the glycol ether category to exclude compounds having alkyl chains of more than seven carbon members in length (59 FR 34386 [EPA 1994b]). The redefinition eliminated the need for nonionic surfactant manufacturers and users to report emissions of those chemicals to the TRI. As a result, the category, which is now called "Certain Glycol Ethers," is defined as follows (http://www.epa.gov/ttn/atw/glycol2000.pdf):

$$R\text{-}(OCH_2CH_2)_n\text{-}OR' \qquad \text{Eqn. 2}$$

where:

n = 1, 2, or 3

R = alkyl C7 or less; or

R = phenyl or alkyl substituted phenyl;

R′ = H, or alkyl C7 or less; or

OR′ consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.

2.3 Removal of EGBE from the Clean Air Act HAPs List

In the 1990 Amendments to Clean Air Act (CAA), Congress expanded the list of HAPs, based on the EPCRA Section 313 list and other compilations of chemicals, to include the glycol ether category. EGBE remained on the CAA HAPs list, as part of the glycol ethers category, until it was delisted on November 29, 2004 (69 FR 69320 [EPA 2004a]). The Administrator's HAPs delisting decision granted our 1997 petition (CMA 1997),[c] which used 1993 TRI data (and other sources of information on potential sources) and exposure modeling adapted from EPA (1992a) modeling guidance to demonstrate that maximum EGBE exposures fall below IRIS reference values. Additionally, we prepared an ERA, also in accordance with EPA guidelines, showing that EGBE releases are not reasonably anticipated to pose adverse effects on the environment.

The delisting provision of Section 112(b)(3)(C) of CAA [42 U.S.C. §7412(b)(3)(C)] is substantively at least as broad and stringent as that in EPCRA. The CAA provides that a chemical may be removed from the HAPs list if EPA finds that:

[c]At that time, the American Chemistry Council was known as the Chemical Manufacturers Association (CMA).

> there is adequate data on the health and environmental effects of the substance to determine that emissions, ambient concentrations, bioaccumulation of deposition of the substance may not reasonably be anticipated to cause any adverse effects to the human health or adverse environmental effects.

In reviewing and granting our HAPs delisting petition, EPA reevaluated the adequacy of the existing IRIS reference values by examining scientific data published after the 1999 IRIS assessment (EPA 1999a), including new toxicological studies addressing the relevance of limited rodent carcinogenicity data to humans, and conducted supplemental exposure modeling on some of the issues raised by the petition (discussed in greater detail below). The Agency's review of the scientific record included a series of findings that should weigh heavily in the evaluation of this petition to remove EGBE from EPCRA's TRI reporting list.

First, with respect to the potential human health effects of EGBE exposure, EPA reaffirmed the adequacy of the previous IRIS RfC (13 milligrams per cubic meter [mg/m^3]) and RfD (0.5 milligrams per kilogram body weight per day [mg/kg BW-day]) as protective against all known or potential human health effects of EGBE, including any potential sensitive subpopulations (68 FR 65654, 65656 [EPA 2003]). This review included a reevaluation of the 1999 IRIS carcinogenicity assessment, which had concluded, under the then-current EPA (1986a) Guidelines for Carcinogen Risk Assessment, that EGBE is a "possible human carcinogen based on limited laboratory animal evidence and a lack of human studies" (EPA 1999a). Based on post-IRIS toxicological studies testing the relevance of the limited animal findings to humans, EPA concluded that the previous IRIS "RfC and RfD values for EGBE have been set at levels that prevent … the precursor events that would lead to tumors" in rodents. The Agency found, accordingly, that even if the rodent tumor findings are relevant to humans at all, "we would not expect to find these tumors in humans following environmental exposures" (69 FR 69322).

Second, EPA found "the petition's overall approach to exposure assessment to be acceptable" (68 FR 65653), and made the following specific determinations.

The use of the 1993 TRI database to construct a complete list of emitting sources and emission levels "provides an adequate basis for dispersion modeling and the exposure assessment and is acceptable for that purpose" (68 FR 65652).

The five-tier modeling approach used in our HAPs petition to evaluate maximum inhalation exposures "followed appropriate modeling guidance" and "would tend to overestimate rather than underestimate maximum annual ambient average concentrations" (68 FR 65652).

EPA also observed that the modeling and assumptions used to assess ingestion and dermal exposures arising from surface water levels of EGBE, including supplemental analyses conducted by the Agency, were "conservative," and the exposure estimates found to be below the IRIS RfD represented a "worst-case exposure scenario" (68 FR 65653-54).

Third, EPA's evaluation of potential environmental risks included the development of its own ERA, which was based in part on the same "worst-case exposure scenario" for predicted maximum surface water concentrations used in the evaluation of human ingestion and dermal

exposures. In addition, the Agency noted that the TRVs for small mammals and aquatic species used in the ERA "were derived from very minor effects which were unlikely to be ecologically significant at the population level of ecological organization" (68 FR 65657).

Based on these and other findings, EPA concluded that maximum exposures to EGBE fall well below the IRIS RfC and RfD, as well as the TRVs developed to assess ecological risks. The Administrator (69 FR 69322) summarized the basis for the HAPs delisting of EGBE as follows:

> We can therefore conclude with confidence that emissions, ambient concentrations, bioaccumulation, or deposition of EGBE may not reasonably be anticipated to cause any adverse effects to the human health.

Likewise, EPA found, based on the ERA, that "there are adequate data on environmental effects of EGBE to determine that ambient concentrations, bioaccumulation, or deposition of EGBE are not reasonably anticipated to cause adverse environmental effects" (68 FR 65657).

2.4 Regulatory Standards and Guidelines

Federal and state regulatory standards and guidelines for EGBE are listed in Table 2-1.

2.5 Production and Use

As described by ATSDR (1998), ethylene glycol monoalkyl ethers are not manufactured as pure compounds but must be separated from the diethers and higher glycols (NTP 1993, as cited in ATSDR 1998; NIOSH 1990, as cited in ATSDR 1998). There are two common methods of producing EGBE: (1) reaction of ethylene oxide with anhydrous butyl alcohol in the presence of a catalyst, and (2) direct alkylation of ethylene chlorohydrin or ethylene glycol using sodium hydroxide and an alkylating agent such as dibutyl sulfate (HSDB 1997, as cited in ATSDR 1998; NIOSH 1990, as cited in ATSDR 1998; Rowe and Wolf 1982, as cited in ATSDR 1998). By far, the dominant method of EGBE production is treatment of butyl alcohol with ethylene oxide.

Three facilities—[redacted]—produce all domestic EGBE (SRI 2010). Between 1970 and 2009, production of EGBE in the United States increased by nearly five-fold from 53,500 tons per year (tpy) to approximately 250,000 tpy (Figure 2-1, SRI 2010). Between 1999 and 2007, however, production of EGBE has fluctuated between 254,500 and 292,000 tpy, without showing a clear increase in production from year to year (SRI 2010). There was a 14% decrease in production of EGBE between 2007 and 2009 (SRI 2010). The overall average annual growth rate in EGBE production is expected to be 2.8% between 2009 and 2014 (SRI 2010).

Because of its favorable physical, chemical, and technical characteristics, EGBE has become the largest volume glycol ether consumed in the United States (SRI 2010). In 2009, United States consumption of EGBE was 135,000 tpy, which represents approximately 52% of all ethylene glycol ethers consumed (SRI 2010). This rate of consumption of EGBE represents a

1% increase since 1990, when consumption was 132,000 tpy (SRI 2010). During the economic recession in 2008-2009, the United States EGBE consumption dropped 19% from 166,500 tpy to 133,500 tpy between 2007 and 2009. The overall average annual growth rate of domestic EGBE consumption was expected to be 3.1% between 2009 and 2014 (SRI 2010). Because this growth in consumption is predicted to outpace growth in production, a concurrent decrease in exports was expected (SRI 2010).

Despite growth in consumption since 1990, overall nationwide emissions of Certain Glycol Ethers to all media have decreased from 26,782 tpy in 1990 to 7,229 tpy in 2011, a reduction of 70% (www.epa.gov/triexplorer). The reduction in emissions is likely attributable principally to increased regulation under the CAA and state air pollution laws; corporate product stewardship programs (some no doubt in response to "right-to-know" initiatives like EPCRA itself); and the 1994 redefinition of the Certain Glycol Ethers category, which removed nonionic surfactant glycol ethers from the chemicals covered by the listing.

Of the 135,000 tpy of EGBE consumed in the United States in 2009, 68,500 tons (51%) were used as solvents in paints, coatings, and inks (SRI 2010). In addition, 20,500 tons (15%) were used as solvents in metal cleaners and liquid household cleaners and 29,000 tons (21%) were used as solvents in other products (SRI 2010). Consumption of EGBE as a chemical intermediate in the production of 2-butoxyethyl acetate (EGBEA) accounted for 9,000 tons (7%) of EGBE consumption (SRI 2010). Consumption for production of other chemicals [including tris(2-butoxyethyl)phosphate, di(2-butoxyethyl)adipate and di(2-butoxyethyl)phthalate] accounted for another 7,500 tons (6%) of EGBE consumption (SRI 2010).

Approximately 80% of EGBE consumed in surface coatings is used for industrial and specialty coatings; the remainder is used in architectural coatings (SRI 2010). Industrial coatings are defined as coatings that are factory-applied to manufactured goods as part of the production process (SRI 2004). They are also known as original equipment manufacturing (OEM) coatings. OEM coatings that contain EGBE include automotive paints, lacquers, quick drying varnishes, and enamels. Other industrial paints and coatings that employ EGBE include (1) coatings for metal cans and coils, ships, trucks, buses, and farm machinery and (2) paints and finishes for wood products, metal furniture, and fixtures (NPCA 1997, as cited in SRI 2004). Specialty coatings are those that are used primarily where durability is a key objective. Specialty coatings include high performance maintenance coatings, automotive refinishing paints, and aerosol paints (NPCA 1997, as cited in SRI 2004). Architectural coatings are paints and coatings that are applied onsite to new and existing residential, commercial, institutional, and industrial buildings. These products are generally distributed through retail and wholesale outlets and are bought by consumers, painters, contractors, builders, and government agencies (NPCA 1997, as cited in SRI 2004).

The following are source categories that use EGBE and thus are potentially affected by this petition:

- Auto and light duty truck (surface coating)
- Leather tanning and finishing operations

- Manufacture of paints, coatings, and adhesives
- Metal can (surface coating)
- Metal coil (surface coating)
- Metal furniture (surface coating)
- Printing, coating, and dyeing of fabrics
- Printing/publishing (surface coating)
- Wood furniture (surface coating)
- Synthetic organic chemical manufacturing
- Ship building and repair (surface coating)
- Semiconductor manufacturing

3.0 HAZARD ASSESSMENT

Given EGBE's (CAS 111-76-2) widespread use (as detailed in Section 2.5), it has undergone extensive toxicological testing in laboratory animals. Animal bioassay data are supplemented by information from case reports of intentional human ingestion episodes and controlled human exposure experiments, as well as ecotoxicological testing on microbes, plants, and aquatic organisms. EGBE has been tested for acute, subchronic, and chronic toxicity, reproductive and developmental toxicity, immunotoxicity, genotoxicity, and carcinogenicity. Although no toxicity data are available for terrestrial wildlife or birds, acute and chronic toxicity tests have been performed on a variety of aquatic organisms.

The extensive database on the potential adverse human health effects of EGBE is reviewed in the EGBE IRIS assessment (EPA 2010) and the ATSDR toxicological profile of EGBE (ATSDR 1998). EGBE's potential ecological hazards have been extensively reviewed in a series of assessments by WHO the Concise International Chemical Assessment Document or CICAD (WHO 1998, 2010), EU (INERIS 2006), and Environment Canada (2002). These assessments provide the starting point and primary basis for the qualitative hazard assessment presented in this section of the petition, supplemented as appropriate by descriptions of subsequently published studies.

3.1 Chemical and Physical Properties

EGBE's chemical and physical properties, excerpted from the ATSDR toxicological profile for EGBE (ATSDR 1998), are summarized in Table 3-1. Additional information and implications of these properties are discussed in this subsection.

EGBE is considered "readily" biodegradable (Price et al. 1974, as cited in ATSDR 1998) and has a relatively short residence time in the environment. Its half-life in both surface water and soil ranges from 7 days to 4 weeks, while its half-life in groundwater is 14 days to 8 weeks, and its half-life in the atmosphere is approximately 3.3 hours to 33 hours (Howard et al. 1991, as cited in ATSDR 1998).

EGBE is highly mobile in soil and unlikely to partition from the water column to organic matter contained in sediments or suspended solids (Swann et al. 1983). The volatilization of EGBE from surface water and moist soil is slow (Lyman et al. 1982, as cited in ATSDR 1998). In the atmosphere, EGBE is expected to exist almost entirely in the vapor phase, although EGBE may be physically removed from air by precipitation (Eisenreich et al. 1981, as cited in ATSDR 1998). The Hazardous Substance Data Bank (HSDB; http://toxnet.nlm.nih.gov) reports that an estimated bioconcentration factor (BCF) of 3 was calculated for EGBE, concluding that the potential for bioconcentration in aquatic organisms is low.

The most important mechanism of removal of EGBE from aerobic soil and water is microbiotic degradation (ATSDR 1998). Concentrations of EGBE of less than 500 milligrams per liter (mg/L) were readily degraded by microorganisms in bench scale degradation tests using domestic activated sludge, with reported biodegradation rates of greater than 63% after three days and 100% after five days (Assessment Technologies, Inc. 1996). A 20-day biological

oxygen demand (BOD) test and an aerobic degradability 28-day closed bottle test resulted in EGBE degradation rates of 75% and 88% respectively (NICNAS 1996).

Because EGBE does not undergo hydrolysis or direct photolysis in aquatic environments (Howard 1993, as cited in ATSDR 1998), abiotic degradation processes are assumed to play a negligible role in determining the ultimate fate of EGBE in surface water, groundwater, and soil. However, Atkinson (1987) calculated an atmospheric half-life of 17 hours for EGBE based on a second order photooxidation rate of 2.3×10^{-11} cubic centimeters (cm^3)/molecules-second. Therefore, abiotic degradation can significantly affect the fate of EGBE in air.

Limited data are available regarding degradation products of EGBE. The intermediate products of aerobic biodegradation were not identified in any of the screening tests considered by ATSDR (1998). However, as observed in human and animal studies (Johanson et al. 1989, as cited in ATSDR 1998), 2-butoxy-ethanol acetate (BAA) may enzymatically hydrolyze to EGBE and acetic acid as a result of biodegradation. By analogy to animal metabolism (Ghanayem et al. 1987, as cited in ATSDR 1998), it is possible that any EGBE formed through enzymatic hydrolysis may undergo further enzymatic oxidation (e.g., via dehydrogenase) to the butoxyacetaldehyde and finally to 2-butoxyacetic acid before being degraded to carbon dioxide and water. The reported products of photodegradation of EGBE in the atmosphere are propionaldehyde (CAS 123-38-6), butyraldehyde (CAS 123-72-8), butyl formate (CAS 592-84-7), 2-hydroxyethyl formate (CAS 628-35-3), 3-hydroxybutyl formate, 2-hydroxybutyl formate, and an organic nitrate (Tuazon et al. 1998, as cited in INERIS 2005). No data are available on the anaerobic degradation products of EGBE.

Given its relatively short residence time in the atmosphere, high water solubility, low octanol-water partition coefficient (K_{ow}), and low vapor pressure (Table 3-1), EGBE released to the atmosphere partitions to surface water and soil. The Mackay fugacity model predicts that, although approximately 99% of EGBE released to the environment is released to the air, approximately 98% of the EGBE released partitions into soil and surface water at equilibrium (Section 8.2.2, below; Cadmus 2000a).

3.2 Potential Human Health Hazards

In this section, we briefly describe the pertinent information available on the potential health effects of human exposure to EGBE, both noncancer effects from brief (acute) and repeated (subchronic and chronic) exposures, and information on the potential carcinogenicity of EGBE.

3.2.1 Noncancer Toxicity

EGBE is well absorbed via the inhalation, dermal, and oral routes of exposure and is widely distributed throughout the body and metabolized primarily via alcohol dehydrogenase to BAA, which is rapidly excreted in urine. Studies in humans and rats indicate that the metabolic pathways are similar for both species. However, in humans, unlike rats, some BAA is conjugated with glycine or glutamine prior to excretion, while rats also have a minor oxidation pathway involving O-dealkylation by a cytochrome P450 dealkylase (CYP 2E1) that is not

involved in human metabolism of EGBE (EPA 2010). The following subsections describe the acute and chronic health effects of EGBE. More detailed information on these effects is available in the ATSDR (1998) and EPA (2010) toxicology profiles.

3.2.1.1 Acute Toxicity

EGBE's acute toxicity has been evaluated in a number of studies in experimental animals, with the oral lethal dose to 50% of the test population (LD_{50}) ranging from 320 to 3,000 milligrams per kilogram (mg/kg) (ACGIH 2003). The oral LD_{50} values vary depending on the species, sex, and age of the test animals. The order of sensitivity from the most to the least sensitive is: rabbits (320 mg/kg) > adult rat (560 mg/kg) > mouse (1,230 mg/kg) > rat weanling (3,000 mg/kg). By inhalation, the lethal concentration for 50% of test organisms (LC_{50}) has been reported as 700 parts per million (ppm) in mice exposed for seven hours, and 486 ppm in rats exposed for four hours (ACGIH 2003). Severe hemolysis and hemoglobinuria are primary signs in rodents near these lethal levels, but humans are much less sensitive to the hemolytic effects of EGBE than rodents. In a series of three studies reported by Carpenter et al. (1956), small groups of humans and rats were exposed concurrently for four hours to 113 ppm (547 mg/m^3) EGBE; for two 4-hour periods separated by a 30-minute break to 195 ppm (944 mg/m^3); or for eight hours to 100 ppm (484 mg/m^3). While the rats showed increased red blood cell fragility, no increase in red blood cell fragility was seen in the humans, although they did experience nasal and ocular irritation. Increased red blood cell fragility has been reported in rats at airborne concentrations as low as 62 ppm (300 mg/m^3) (Carpenter et al. 1956). Similarly, acute ingestion of EGBE at doses as low as 32 mg/kg produced red blood cell hemolysis in adult rats (Ghanayem et al. 1987, NTP 2000, Long et al. 2000, Nyska et al. 1999, while no hemolytic effects were seen in a case of attempted suicide by ingestion of EGBE solution providing a dose of EGBE of 1,100 to 1,500 mg/kg (Gualtieri et al. 1995).

In vitro studies confirm that rat red blood cells are extremely sensitive to the hemolytic effects of EGBE's primary metabolite, BAA, particularly compared to human red blood cells. In studies with blood from rats, dogs, rabbits, and humans, hemolysis occurred in rat red blood cells at BAA concentrations of 0.05% (500 mg/L) or more in normal saline, while red blood cells from dogs, rabbits, and humans did not undergo hemolysis at BAA concentrations up to 2% or 20,000 mg/L (ICI 1985, as cited in CIR 1996). Similarly, Bartnik et al. (1987) reported complete hemolysis of rat red blood cells within one hour at 7.5 millimolar (mM) BAA or about 875 mg/L, and 20% hemolysis at 2.5 mM (about 300 mg/L). In contrast, human red blood cells showed no hemolysis at the highest concentration tested, 15 mM (1,750 mg/L), even after two hours of exposure, while rat red blood cells had 2% hemolysis at a concentration as low as 1.25 mM (about 150 mg/L). The same authors also found a more modest difference in sensitivity to the parent EGBE. Exposure of rat red blood cells to 200 mM (about 23,000 mg/L) EGBE produced 100% hemolysis within 30 minutes, but the same concentration produced no hemolysis of human red blood cells in 30 minutes, although it did cause 100% hemolysis after 2 hours of exposure, as did 30 minutes exposure of human erythrocytes to a higher concentration (250 mM or 30,000 mg/L) of EGBE (Bartnik et al. 1987). Similarly, Ghanayem and Sullivan (1993)

observed no effect on mean corpuscular volume (MCV) or hematocrit *in vitro* in human red blood cells exposed to concentrations of BAA causing 50% to 60% increases in these parameters in rat red blood cells.

Udden (2002) reported similar patterns of changes in red cell rigidity and MCV in rat and human red blood cells exposed to 100-fold different concentrations of BAA; rat red blood cells were 100-fold more sensitive than human red blood cells to these effects. Physiologically based pharmacokinetic (PBPK) modeling (Corley et al. 1994) predicts that the acute exposures necessary for such concentrations of BAA are unlikely even in consumer product or occupational settings (Udden 2002, ACGIH 2003), much less in the ambient air near EGBE-emitting facilities, where limited empirical data as well as estimates based on air quality modeling indicate that concentrations well below 1 mg/m^3 are likely (WHO 2010, INERIS 2006; EPA 2003).

Because of what the American Conference of Governmental Industrial Hygienists (ACGIH) has called the "minimal potential for 2-butoxyethanol exposures to produce red blood cell hemolysis in humans as compared to rats," assessments of acute health hazards have defined mucous membrane irritation of the nose and eye as the critical effect of short-term exposures in humans, not hemolytic effects (CalEPA 1999, ACGIH 2003). As already mentioned, Carpenter et al. (1956) found that four adult male volunteers exposed to 113 ppm (550 mg/m³) EGBE for four hours, and two men and two women exposed to 100 ppm (485 mg/m³) for eight hours reported eye, nose, and throat irritation. Erythrocyte osmotic fragility and urinalysis were normal in the subjects during and after exposure, and no other evidence of systemic toxicity was found. In another study (Johanson et al. 1986), seven healthy male adults were exposed to 20 ppm (97 mg/m³) EGBE in a chamber experiment designed to assess pulmonary uptake and metabolism of EGBE during light exercise. The authors reported that none of the subjects complained or showed any adverse effects from two hours of exposure. As described in detail in Section 6, the short-term Tier 3 modeling results indicate that ambient concentrations near EGBE-emitting facilities are at least a factor of 5 below the NOAEL in this study. Hence, no acute toxic effects due to EGBE are likely adjacent to EGBE-emitting facilities.

3.2.1.2 Subchronic and Chronic Toxicity

The 2010 IRIS assessment directly addresses the subject of the subchronic and chronic toxicity of EGBE, concluding that it is not immunotoxic, genotoxic, or teratogenic, and does not cause adverse reproductive effects of the sort that have been attributed to EGME and EGEE (EPA 2010). There was no reduction in the immune response to injected antigens in two studies in rats exposed to EGBE at up to 500 mg/kg BW-day, for up to 21 days (EPA 2010). EGBE had negative results in tests for genotoxicity in multiple studies: *Salmonella typhimurium* bacteria, Chinese hamster ovary cells (gene mutation, sister chromatid exchange, and chromosome aberration assays), and *in vivo* mouse micronucleus assay. Weakly positive, but not reproducible, responses were seen in a few *in vitro* studies, but EPA has determined in the IRIS assessment (EPA 2010) and the HAPs delisting decision (68 Fed. Reg. 65655 [EPA 2003]), that the overall weight of evidence indicates that EGBE is neither mutagenic nor clastogenic.

As summarized in the IRIS assessment (EPA 2010), EGBE has been extensively tested for reproductive and developmental effects by oral and inhalation exposure in rats, mice, and rabbits. While some generalized toxicity was seen at high exposure levels associated with EGBE's hematologic effects, there was no indication of the specific reproductive effects attributed to EGME and EGEE, and no adverse effects on reproduction or development at doses below those associated with hematologic effects (EPA 2010). These studies support the conclusion that hemolysis is the most sensitive toxicity endpoint for rodents from a variety of exposure routes (EPA 2010).

The extensive EGBE animal toxicology database lacks any indication of neurotoxicity. Human experience indicates that intentional ingestion of large amounts of EGBE (i.e., suicide attempts) can result in coma, possibly secondary to metabolic acidosis, but exposure from normal use has not resulted in any reports of potential neurotoxicity. Specific neurotoxicology studies have been performed in animals by standard testing guidelines for three other ethylene glycol ethers (diethylene glycol butyl ether [DGBE], triethylene glycol methyl ether [TGME], and ethylene glycol monopropyl ether [EGPE]) and none of these studies have indicated a concern for neurotoxicity. Any neurotoxicity testing of EGBE would be constrained by the well-known hemolytic effects in rodents that would limit the highest dose that could be tested.

As described in the IRIS assessment, intravascular red blood cell hemolysis is the primary response in sensitive species following inhalation, oral, or dermal exposure to EGBE (EPA 2010). This primary hemolytic effect may also result in secondary toxic effects in spleen, liver, kidney, bone marrow, and thymus. However, hemolysis is the effect seen at the lowest exposure levels—i.e., it is the most sensitive endpoint (EPA 2010). The IRIS assessment concludes, therefore, that prevention of hemolysis will also be protective for all other toxic effects. Review of the recent research on the hemolytic effects of EGBE has led EPA (2010) to draw the following conclusions, apart from contact-site irritant effects.

- Other effects resulting from EGBE are secondary to hemolysis.
- The primary metabolite of EGBE, BAA, is the proximate toxicant.
- Several species including humans are less sensitive than rats to the hemolytic effects of BAA.
- Groups who might be thought to be more sensitive than average (including children, the elderly, or those with congenital hemolytic diseases) do not show an increased hemolytic response to BAA.

3.2.1.3 Relative Insensitivity of Humans to EGBE's Hemolytic Effects

It is important to note that EGBE is an exception to the general default assumption that humans are as sensitive as or more sensitive than the most sensitive animal species. In the case of EGBE, substantial rigorous data exist that demonstrate that humans are much less sensitive to the critical hemolytic effects of EGBE and its metabolite, BAA. The IRIS assessment describes six published PBPK models for EGBE. Employing the Corley et al. (1994, 1997) model, which allows both EGBE and BAA to be modeled in both humans and rats, EPA (2010) calculated tissue dose (BAA in blood) as a function of EGBE dose, route, and species. The

model demonstrated that prehemolytic changes in rat red blood cells occur at less than 1% of the level at which such changes are observed in human red blood cells. In the study used as the basis for the RfC and RfD, for example, the EGBE lowest observed adverse effect level (LOAEL) for prehemolytic changes in rat red blood cells, 31 ppm, 6 hours/day, 5 days/week was predicted to produce a peak blood concentration of BAA of 0.167 mM (EPA 2010). As noted earlier, Bartnik et al. (1987) reported no hemolysis of human red blood cells exposed to BAA levels almost 100 times higher (i.e., 15 mM) for three hours *in vitro*.

Udden's (2002) comprehensive study supports a susceptibility factor for rats as compared to humans of at least 100 (i.e., humans are at least 100times less sensitive than rats). Udden (2002) used a series of more specific and sensitive indicators of subhemolytic effects to quantify the difference in susceptibility to BAA of rat and human erythrocytes. Rat red blood cells were exposed to BAA at concentrations of 0, 0.025, 0.050, 0.075 and 0.1 mM, about an order of a magnitude lower than those used in previous work by Ghanayem (1989). Heparinized blood samples obtained from healthy adult volunteers were exposed to BAA at concentrations of 0, 2.5, 5.0, 7.5 and 10 mM, concentrations 100 times greater than those used for rat erythrocytes. The indices used to evaluate subhemolytic changes caused by BAA included microhematocrit, hemoglobin, red blood cell count, percent hemolysis determined by a colorimetric procedure, MCV calculated from microhematocrit and red blood cell count, distribution of red blood cell size, red cell deformability, erythrocyte osmotic fragility, erythrocyte density and red blood cell morphology.

For each of these measures of prehemolytic effects, Udden (2002) found that human blood was at least 100 times less sensitive than rat blood. Specifically, a significant change in human erythrocyte deformability was observed at 7.5 and 10 mM while in rat a significant change was first seen at 0.05 mM. There was a comparable increase in human and rat red blood cell size at concentrations of 10 mM and 0.1 mM BAA, respectively. BAA did not significantly affect the osmotic fragility of human erythrocytes until reaching concentrations greater than 7.5 mM, while significant effects were noted in rat erythrocytes at BAA concentrations as low as 0.05 mM. Cell density was also markedly decreased in rat erythrocytes treated with 0.1 mM BAA while only slight effects were noted in human erythrocytes treated with 10 mM BAA. Finally, no changes were noted in the morphology of the human erythrocytes treated with 10 mM BAA while rat erythrocytes treated with 0.1 mM showed increased numbers of spherocytes compared to controls. Udden (2000) previously demonstrated that "[S]tomatocytes, cup-shaped cells, and spherocytes are the principal morphological features of erythrocytes from rats exposed [*in vivo*] to [EGBE], or *in vitro* exposure to BAA."

Udden (2002) also conducted investigations on the blood from 11 more healthy subjects as well as hospitalized children and adults treated with 10 mM BAA. There was a slight increase in hemolysis in the samples from hospitalized adults, but the degree was not considered physiologically significant and was no greater than the hemolysis seen in the controls of the healthy adults. No difference was seen in the degree of hemolysis of the BAA treated erythrocytes of children. These findings are consistent with previous work by Udden (1994) showing that erythrocytes from potentially sensitive populations of humans, including young and

elderly subjects as well as those suffering from sickle cell disease and hereditary spherocytosis, were resistant to the hemolytic effect of BAA.

The findings of Udden (2002) are supported by Gualtieri (1995), who reported actual data from suicide attempts by an individual whose blood concentration reached at least 4.9 mM BAA with no evidence of hemolysis. The Corley et al. (2005) PBPK model also predicts that the level of BAA in humans exposed continuously by inhalation to an EGBE-saturated atmosphere (greater than 1,000 ppm)[d] would result in maximum blood concentrations of BAA of just 2 mM, well below the level needed to produce hemolysis in human red blood cells (Udden 2002, EPA 2010).

These observation and modeling predictions imply that it would be physically impossible to achieve a blood concentration of BAA in humans high enough to cause the critical toxic effect of EGBE in rodents, hemolysis, via inhalation of EGBE vapor, further confirming its low toxicity potential in humans.

The low hemolytic potential of EGBE in humans is further supported by the limited data on the effects of ingestion of EGBE by humans. EPA (2010) summarizes several cases of suicide attempts involving ingestion of large quantities of mixtures containing EGBE. These cases rarely resulted in hemolysis, despite ingestion of doses of EGBE as high as 1,500 mg/kg in some cases. Hematuria was noted in a couple of cases, but it is unclear whether this was due to hemolysis caused by EGBE and its metabolite BAA, or if it was secondary to the metabolic acidosis that developed at these high doses.

3.2.2 Potential Carcinogenicity

The National Toxicology Program (NTP) (2000) evaluated the carcinogenicity of EGBE in rats and mice exposed by inhalation. NTP (2000) reported that its study results indicate no evidence of carcinogenic activity in male F344/N rats and equivocal evidence of carcinogenic activity in female F344/N rats, based on increased combined incidence of benign and malignant pheochromocytomas (mostly benign). NTP (2000) also reported some evidence of carcinogenic activity in male B6C3F1 mice based on increased incidence of hemangiosarcomas of the liver, and some evidence of carcinogenic activity in female B6C3F1 mice based on increased incidence of forestomach squamous cell papillomas or carcinomas.

EPA concluded in the HAPs delisting decision in 2003 (68 FR 65656) “that the available data establish a plausible nonlinear, nongenotoxic mode of action for the moderate increase observed by NTP (2000) in the incidence of forestomach tumors in female mice.” The Agency summarized the impact of this finding on its assessment of human health risk due to EGBE emissions as follows:

> … the exposure concentrations necessary to cause hyperplastic effects in humans would be much higher than the existing RfD and

[d]The theoretical EGBE maximum airborne concentration is greater than 1,100 ppm, but in recent acute studies, the highest attainable concentrations were 600 to 700 ppm.

> RfC for EGBE. Given that humans, including potentially sensitive subpopulations such as children, have no known organ for the retention of a comparable target dose of EGBE or its metabolites, we feel it is reasonable to conclude that the RfC and RfD developed for EGBE are sufficient for the prevention of hyperplasia and associate tumors in humans.

Similarly, EPA (68 FR 65656) found that the available data "establish a plausible nonlinear, nongenotoxic mode of action for the moderate increase observed by NTP (2000) in the incidence of liver tumors in male mice." Thus, given "the relatively low sensitivity of humans, including subpopulations such as children, to the hemolytic effects of EGBE, we feel it is reasonable to conclude that the [1999] EGBE RfC and RfD (EPA 1999a) are sufficient for the prevention of hemolysis and associate tumors in humans." Accordingly, the Administrator (69 FR 69322) determined that the IRIS reference values will protect against both cancer and noncancer effects:

> … it is reasonable to expect that a lack of hemolytic effects in humans would preclude the formation of liver tumors in humans and that a lack of hyperplastic effects in the region of the gastroesophogeal junction in humans would preclude the formation of gastrointestinal tumors in humans. That is, the data support the finding that we would not expect to find these tumors in humans following environmental exposures. The RfC and RfD values for EGBE have been set at levels that prevent both the precursor events that would lead to tumors and other noncancer effects …

The HAPs delisting findings are reaffirmed in the IRIS toxicological review of EGBE (EPA 2010), which concluded that the data establish a plausible nonlinear mode of action for both the forestomach and liver tumors in mice. Regarding the pheochromocytomas in female rats, EPA (2010) noted that, "given the marginal dose response, lack of tumor evidence in any other organ system of the rats, and reported difficulties in distinguishing pheochromocytomas from nonneoplastic adrenal medullary hyperplasia, this tumor type was not given significant weight in the qualitative or quantitative assessment of EGBE cancer potential."

The forestomach tumors were found to develop through sustained cytotoxicity and cell regeneration brought about by irritation and breakdown of the forestomach's gastric mucosal barrier. This mechanism has been proposed for several other chemicals that cause rodent forestomach tumors, such as butylated hydroxyanisole (BHA), propionic acid, and ethyl acrylate (Kroes and Wester 1986, Harrison 1992, Clayson et al. 1990, 1991). A recent International Agency for Research on Cancer (IARC) assessment of the mechanism of rodent forestomach tumors and their potential relevance to humans specifically finds that the same irritation-based epigenetic mode of action accepted in EPA's carcinogenicity assessment is supported for EGBE (IARC 2006).

The EPA (2010) evaluation identifies a multistep mode of action for EGBE-induced mouse forestomach tumors:

1. Deposition of EGBE/BAA in the stomach and forestomach via consumption or reingestion of EGBE laden mucus, salivary excretions, and fur material
2. Retention of EGBE/BAA in food particles of the forestomach long after being cleared from other organs
3. Metabolism of EGBE to 2-butoxyacetaldehyde (BAL), which is rapidly metabolized to BAA systemically and in the forestomach
4. Irritation of target cells by BAA leading to hyperplasia and ulceration
5. Continued injury by BAA and degeneration leading to high cell proliferation and turnover
6. High levels of cell proliferation and turnover leading to clonal growth of spontaneously initiated forestomach cells

While such a process might theoretically occur in humans exposed to a sufficiently high dose of EGBE, that dose would be substantially higher than the RfC or RfD, given that humans do not possess an anatomical equivalent to the mouse forestomach where EGBE and metabolites might be retained. Also, humans would not be expected to produce sufficiently high concentrations of BAA in other potentially sensitive tissues chronically to permit tumors to develop via this mode of action.

Similarly, EPA (2010) concluded that the mouse liver tumors arose secondary to iron-induced oxidative stress resulting from the EGBE-induced hemolysis. It presented the following nine-step summary mode of action:

1. EGBE is metabolized to BAL, which is subsequently oxidized to BAA
2. BAA causes red blood cell swelling, triggering sequestration in the spleen by resident macrophages. When the capacity of these macrophages becomes overwhelmed, the damaged red blood cells make their way into the liver
3. Excess hemoglobin (Hb) from damaged red blood cells is taken up by phagocytic (Kupffer) cells of the liver and stored as hemosiderin
4. Oxidative damage and increased synthesis of endothelial and hepatocyte deoxyribonucleic acid (DNA) are initiated by one or more of the following events:
    - Generation of reactive oxygen species (ROS) from Hb-derived iron within Kupffer cells and perhaps from within hepatocytes and sinusoidal endothelial cells
    - Activation of Kupffer cells to produce cytokines/growth factors that suppress apoptosis and promote cell proliferation
5. ROS results in oxidative DNA damage to hepatocytes and endothelial cells
6. ROS modulates hepatocyte and endothelial cell gene expression
7. ROS stimulates hepatocyte and endothelial cell proliferation
8. ROS promotes initiation of hepatocyte and endothelial cells
9. ROS promotes neoplasm formation

Support for the importance of several of these steps in the mode of action, particularly Steps 4, 5, 6, and 7, has accrued from studies performed since the initial publication of the NTP draft report in 1998. The validity of this pathway has been endorsed by independent scientific peer review of EPA's analysis (EPA 2010).

Corthals et al. (2006) addresses one previous area of uncertainty regarding EPA's mode of action and the potential involvement of the short-lived intermediate metabolite of EGBE, BAL. Because BAL has exhibited some genotoxic activity in some assay systems, EPA scientists reviewing the HAPs delisting petition noted that the possibility of a genotoxic mode of action involving BAL had not been ruled out (68 Fed. Reg. 65660). Thus, although the Agency found PBPK modeling sufficient to find "that genotoxicity is not a factor in tumor development" when it deleted EGBE as a HAP; it nevertheless called for additional research (69 Fed. Reg. 69322). The study by Corthals et al. (2006), conducted in Dr. James Klaunig's laboratory at the Indiana University School of Medicine, was specifically designed to further explore the possible BAL-genotoxicity mode of action.

Corthals et al. (2006) demonstrate that BAL does not express any genotoxic activity, as measured by the Comet assay, in mouse endothelial cells, the cell type from which hemangiosarcomas develop. EGBE and BAA also showed no genotoxic activity in this assay. DNA damage was produced in these cells, however, when treated with hemolyzed red blood cells, ferrous sulfate, or hydrogen peroxide, supporting the proposed role of reactive oxygen species generated from red blood cell hemolysis in the mode of action for mouse liver hemangiosarcomas. Hemolyzed red blood cells were also shown to activate macrophages, as evidenced by increased levels of tumor necrosis factor alpha (TNFα), and activated macrophages produced DNA damage in endothelial cells and stimulated endothelial cell proliferation (Corthals et al. 2006), providing further support for the mode of action accepted by EPA.

Subsequently, EPA (2010) concluded:

> Under the *Guidelines for Carcinogen Risk Assessment* (U.S. EPA, 2005, 086237), EGBE is deemed "not likely to be carcinogenic to humans" at environmental concentrations below or equivalent to the RfD and RfC, based on laboratory animal evidence, mode-of-action information, and limited human study information. The available data indicate that carcinogenic effects from EGBE are not likely to occur in humans in the absence of the critical noncancer effects, including hepatic hemosiderin staining and irritant effects at the portal of entry, and are not likely to be carcinogenic to humans exposed to levels at or below the RfC and RfD values derived in this assessment.

Similar considerations led IARC to conclude that EGBE is not classifiable as to its carcinogenicity to humans (Group 3) on the basis of limited evidence in experimental animals and inadequate evidence in humans (IARC 2006, Cogliano 2004).

Based on these considerations, it is reasonable to conclude that EGBE presents no cancer risk to individual living near EGBE-emitting facilities.

3.3 Ecotoxicity

The ecotoxicity of EGBE has been evaluated in five reviews, all of which conclude that EGBE poses a low potential for adverse ecological effects (WHO 1998, Staples 1998, Devillers et al. 2002, Environment Canada and Health Canada 2002, INERIS 2006). No information on the toxicity of EGBE to terrestrial organisms, including reptiles, birds, or wild mammalian species, was identified from the primary scientific literature or reviews. Acute aquatic ecotoxicity data are available for nine fish species and seven aquatic invertebrate species, while chronic ecotoxicity data are available for one amphibian species, two fish species, four aquatic invertebrate species, and eight species of algae, bacteria, and protozoans. Species tested include freshwater and marine vertebrates and invertebrates. All aquatic toxicity values listed in the five recent reviews cited above and identified in a supplemental search of the primary literature are compiled and sorted by organism, endpoint, and exposure duration in Table 3-2.

Based on acute ecotoxicity testing, the most sensitive aquatic species to EGBE are mummichog (*Fundulus heteroclitus*) and grass shrimp (*Palaeomonetes pugio*), which have 96-hour LC_{50} values of 6.7 mg/L and 5.4 mg/L, respectively (Biospherics 1981, as cited in Environment Canada and Health Canada 2002). However, both concentrations are more than an order of magnitude less than any other reported acute concentrations for EGBE. The ecotoxicity evaluation in the CICAD declined to rely on these findings because they represent "such an extreme outlier compared with the range of other data that it is difficult to justify [their] use as the basis for" selecting a toxicity criterion (WHO 2005). The primary study (Biospherics 1981, as cited in Environment Canada and Health Canada 2002) was not available. However, the EU concluded that the study was not valid in the derivation of its predicted no effect concentration because of the methods employed in the original study (INERIS 2005). Therefore, the reliability of the grass shrimp and mummichog LC_{50} values is open to question. The next most sensitive species to acute exposures is an oyster (*Crassostrea virginica*), which has an LC_{50} of 89 mg/L (EPA 1984, as cited in WHO 1998; 2010). Several other fish and invertebrate species have LC_{50} values between 100 and 200 mg/L, but most fish species tested have LC_{50} values greater than 1,000 mg/L (Table 3-2).

Relatively few aquatic chronic toxicity data are available for EGBE. The lowest reported chronic value for EGBE is from a reproduction study on a rotifer (*Brachionus calyciflorus*). Ten percent of the test population was affected at 7.2 mg/L and the median effect concentration (EC_{50}) was 164 mg/L (Devillers et al. 2002). A blue-green algae species (*Microcystis aeruginosa*) and a protozoan (*Entosiphon sulcatum*) experienced growth effects with EGBE concentrations of 35 and 91 mg/L, respectively (Bringmann and Kuhn 1980, as cited in Staples et al. 1998). Two copepods (*Daphnia magna* and *Ceriodaphnia dubia*) experienced reproduction effects at EGBE concentrations near 130 mg/L (Devillers et al. 2002, 2003). Overall, most available aquatic chronic toxicity values for EGBE are below 1,000 mg/L (Table 3-2).

3.4 Evaluation of Potential Hazards of EGBE and Implications for TRI Listing

EPA has interpreted the listing criteria of Section 313(d)(2) of EPCRA to call for a weight-of-evidence hazard assessment of the potential for a chemical to cause the three types of adverse effects specified in the statutory text: acute, chronic, and ecotoxic effects. Because "virtually any chemical substance can elicit a toxicological response at some dose level," EPA's interpretation recognizes that "the mere presence of the toxic response is not used in isolation in listing decisions under EPCRA Section 313" (59 FR 61445 [EPA 1994b]). Accordingly, EPA's interpretation of the listing criteria calls for the consideration of exposure in certain circumstances, depending on the type of hazard in question.

- In the case of adverse acute human health effects, Section 313(d)(2)(A) explicitly calls for an exposure evaluation of whether such effects occur "at concentration levels that are reasonably likely to exist beyond facility site boundaries as a result of continuous, or frequently recurring, releases" (42 U.S.C. §11023(d)(2)(A)). Thus, EPA's interpretation provides for the consideration of exposure in determining whether to list or delist based on acute health effects.
- For chronic human health hazards addressed in EPCRA Section 313(d)(2)(B), the Agency has adopted the view that exposure considerations are not appropriate in making listing determinations "for chemicals that exhibit moderately high to high human toxicity … based on a hazard assessment." Consideration of exposure is called for, however, in the case of "chemicals that exhibit low to moderately low toxicity based on a hazard assessment" (59 FR 61441). Thus, "in instances where the hazard assessment indicates that … a chemical is of low toxicity and unrealistic exposures would be necessary for it to pose a risk to communities …, EPA may use exposure considerations in its listing decisions" (59 FR 61442).
- For the adverse environmental effects subject to EPCRA Section 313(d)(2)(c), EPA reads EPCRA to call for listing solely on the basis of a hazard assessment "for chemicals that are highly ecotoxic or induce well-established adverse environmental effects" that "do not affect solely one or two species but rather cause changes across a whole ecosystem," such as chemicals that threaten the "sustainability of a fragile ecosystem such as an estuary." Exposure is an appropriate factor, however, in listing and delisting decisions on "chemicals that are low or moderately ecotoxic but do not induce well-documented serious adverse effects" on entire ecosystems (59 FR 61433, 61441).

The hazard assessment presented above indicates that EGBE poses low potential hazards to human health and the environment. Because exposure is always a relevant factor for acute human health effects, the following discussion focuses on chronic human health and ecological hazards with respect to the appropriateness of considering exposure.

3.4.1 Low Potential for Adverse Chronic Human Health Effects

The extensive data on the mode of action of EGBE as a toxicant, its limited spectrum of toxic effects, and the documentation in vitro and in vivo that humans are relatively insensitive to

its toxic effects, all show that EGBE is appropriately considered a low-toxicity chemical. The scientific evidence supports the conclusion that EGBE is not immunotoxic, genotoxic, or teratogenic, and it does not cause adverse reproductive effects. All of the toxic effects of EGBE seen in rodents are secondary to the irritant and hemolytic effects of EGBE and its primary metabolite, BAA, and EPA has determined that prevention of hemolytic effects in humans will also protect against other toxic effects (EPA 2010). The current IRIS assessment concludes that EGBE is "not likely to be carcinogenic to humans at environmental concentrations below or equivalent to the RfD and RfC" and that tumors observed in rodent studies are secondary to EGBE's noncarcinogenic toxic effects (EPA 2010).

The available data also demonstrate that the primary toxic effect of EGBE exposure—hemolysis produced by EGBE's primary metabolite BAA—can reasonably be expected to occur in humans only at doses that are unrealistically high, thus making EGBE a low-toxicity chemical for which exposure is a relevant consideration in the delisting determination. Because human red blood cells are relatively resistant to the hemolytic effects of EGBE, particularly compared to laboratory rats, based on the PBPK model used by EPA (2010) in its assessment, the daily oral dose necessary to achieve a blood BAA concentration high enough to cause even minor prehemolytic effects (≥10 mM, based on Udden [2002]) would be at least 700 mg/kg BW-day. Evaluated under EPA's TRI listing criteria (EPA 1994a, 1992c) and previous listing decisions, EGBE is clearly a low-toxicity chemical (like e.g., ethylene glycol, 62 FR 24919 [EPA 1997a]). Such ingestion exposures to EGBE, moreover, are unrealistically high in relation to expected community exposures in the vicinity of EGBE-emitting facilities. Assuming water consumption of 2 liters per day (L/day) by a 70-kilogram (kg) human, the water concentration that theoretically would be needed to achieve a hemolytic concentration of BAA in blood would be more than 4,000 times greater than the highest surface water concentration of EGBE that has been reported at a contaminated site (ATSDR 1998, Environment Canada 2002), and over 140 times previous estimates of surface water concentrations resulting from EGBE facility emissions (WHO 2010, INERIS 2006).

For the primary anticipated route of exposure to EGBE for TRI-related exposures—inhalation—the available data indicate that hemolysis is not expected to occur in humans, even if exposed continuously by inhalation to an EGBE-saturated atmosphere (greater than 1,000 ppm) (see Section 3.2.1.2 above).[e] Such concentrations are, of course, physically impossible, and in any case they are 100 to 1,000 times higher than typical occupational exposure levels, and 50 times higher than the occupational threshold limit value (TLV) (ATSDR 1998, ACGIH 2003), even farther above available (albeit limited) data on ambient air concentrations of EGBE (IPCS 1997, ECETOC 2005, WHO 2005), and much higher still—by a factor of approximately 100,000—than previous estimates of ambient air concentrations based on air dispersion modeling of emissions from EGBE-using facilities (WHO 2010, INERIS 2006).

[e]The theoretical EGBE maximum airborne concentration is greater than 1,100 ppm, but in recent acute studies, the highest attainable concentrations were 600 to 700 ppm.

The limited laboratory animal carcinogenicity data do not justify an elevated hazard evaluation for EGBE under EPA's TRI listing criteria and listing precedents. As noted in Section 3.2.2, the current IRIS assessment classifies EGBE as "not likely to be carcinogenic to humans at environmental concentrations below or equivalent to the RfD and RfC" (EPA 2010). EPA has twice determined that even the higher carcinogenicity classification (based on the former cancer classification criteria) of "possible" human carcinogen does not support listing under EPCRA §313(d)(2)(B) (titanium dioxide, 53 FR 23108 [EPA 1988]; butyl benzyl phthalate, 60 FR 9299 [EPA 1995a]). Based on these precedents, it would be inappropriate to list a chemical that is classified as "not likely to be carcinogenic to humans."

3.4.2 Low Potential for Significant Adverse Ecological Effects

EGBE's potential to cause adverse ecological effects should likewise be characterized as low under EPA's TRI listing criteria. The Agency found recently that EGBE causes only "very minor effects which were unlikely to be ecologically significant at the population level of ecological organization" (68 Fed. Reg. 65657 [EPA 2003]). EGBE therefore cannot be considered a high toxicity ecological hazard under the EPA's TRI listing criteria on the basis of "well-established adverse environmental effects" "across a whole ecosystem" (59 FR 61441 [EPA 1994b]).

Furthermore, the "very minor" ecological effects of EGBE do not occur at concentrations that are considered to be low or moderate-to-low under EPA's TRI listing guidelines. To the contrary, EGBE has low potential for persistence and bioaccumulation. LOAELs for acute toxicity to aquatic organisms are in most cases 1,000 mg/L or higher, and most chronic toxicity values are between 100 and 1,000 mg/L. The lowest LC_{50} for acute toxicity to an aquatic organism is 89 mg/L, and the lowest concentration reported to cause chronic aquatic toxicity is 7 mg/L. Under EPA's TRI listing criteria (EPA 1994a, 1992c) and previous listing decisions, EGBE meets the criteria for a low-toxicity chemical based on ecological effects. See, for example, Butyl Benzyl Phthalate (60 FR 9299 [EPA 1995a]); Diethyl Phthalate (61 FR 39356 [EPA 1996b]); Di-(2-Ethylhexyl) Adipate (61 FR 39891 [EPA 1996c]); Ethylene Glycol (62 FR 24919 [EPA 1997a]); Methyl Ethyl Ketone (63 FR 15195 [EPA 1998a]); Methyl Isobutyl Ketone (64 FR 8769 [EPA 1999c]).

It is also readily apparent that the concentrations found to cause aquatic toxicity are far above the surface water concentrations likely to be present in communities near EGBE-emitting facilities. The lowest reported aquatic toxicity level (7 mg/L for chronic effects) is greater than the highest surface water concentration of EGBE that has been reported at a contaminated site (5.7 mg/L; ATSDR 1998, Environment Canada 2002), and about a thousand times higher than available empirical and modeled estimates of surface water concentrations resulting from EGBE facility emissions (Environment Canada 2002, WHO 2010, INERIS 2006).

3.4.3 Conclusion

EPA's interpretation of the TRI listing criteria of EPCRA Section 313(d)(2) calls for the consideration of exposure levels for potential adverse chronic human health and significant

environmental effects if “a chemical is of low toxicity and unrealistic exposures would be necessary for it to pose a risk to communities” (59 FR 61442).

As discussed above, even relatively minor prehemolytic effects are not expected in humans even at exposures: (1) that are considered high under EPA’s TRI listing criteria and precedents and (2) that are far above exposures likely to occur in communities near EGBE-emitting facilities. EPA’s findings in the HAPs delisting decision and in its carcinogenicity evaluation (EPA 2010) confirm that prevention of hemolysis protects against any other potential adverse health effect of EGBE exposure. Similarly, the available ecotoxicity data continue to support EPA’s determination in the HAPs proceeding that EGBE emissions present the potential for only “very minor effects” that are “unlikely to be ecologically significant,” and indicate that such minor effects are expected to occur only at concentrations (1) that are clearly high under EPA’s TRI listing criteria and precedents and (2) that are far above exposures likely to occur in communities near EGBE-emitting facilities.

Accordingly, EGBE presents a low potential for adverse effects on human health or the environment, and an exposure assessment is warranted.

4.0 CRITERIA FOR EVALUATING ACUTE AND CHRONIC HUMAN EXPOSURES

As noted earlier, under Section 313 of EPCRA, a chemical may be added to TRI on the basis of acute toxicity in humans, chronic toxicity in humans, or significant adverse effects on the environment. The criteria for evaluating acute and chronic human exposures are addressed below as they relate to EGBE.

4.1 Acute Toxicity

As specified in Section 313(d)(2) of the statute, a chemical may be added to the list of chemicals requiring reporting under Section 313 if:

> the chemical is known to cause or can reasonably be anticipated to cause significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility site boundaries as a result of continuous or frequently recurring releases;

As discussed by EPA (2010) and ATSDR (1998), and noted in Section 3.2.1.1 of this petition, EGBE is of low acute toxicity, with the most sensitive endpoint in humans being eye and upper respiratory tract irritation at airborne concentrations above the occupational TLV of 20 ppm (97 mg/m^3). Such a concentration is far higher than anything that has been monitored or modeled near an EGBE-emitting facility (IPCS 1997, ECETOC 2005, WHO 2010, INERIS 2006), and would not, therefore be "reasonably likely to exist beyond facility site boundaries as a result of continuous, or frequently recurring, releases."

4.2 Chronic Toxicity

The EPA HAPs delisting decision used the IRIS RfC and RfD to evaluate potential chronic human health effects from facility releases of EGBE. EPA's policies and precedents under EPCRA's TRI listing provisions strongly support the use of IRIS criteria where available (59 FR 61444-45 [EPA 1994b]). Accordingly, the evaluation of chronic human exposures and risks in this petition is based on the IRIS reference levels. EPA derived the RfC and RfD[f] after a careful review of the available dose-response database for EGBE, emphasizing mechanistic information. EPA used dose-response information for EGBE-induced hematological effects as the basis for the IRIS RfC and RfD values. EPA derived both the RfC and the RfD from data on hemosiderin staining in the liver in rats in the 2-year NTP (2000) inhalation study. Using benchmark concentration (BMC) and PBPK modeling, EPA estimated that the 95% lower

[f] The RfD is defined by EPA as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime." Similarly, the RfC is defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

confidence limit on the concentration predicted to produce a 10% increase in hemosiderin staining was 16 mg/m^3. To derive the RfC, EPA applied an intraspecies uncertainty factor of 10, to account for variation in sensitivity within the human population. Because the PBPK model was used, and because the adverse effect endpoint was a minimally adverse effect in a species more sensitive than humans, EPA used an uncertainty factor of 1 for LOAEL-to-NOAEL extrapolation, resulting in the final RfC of 1.6 mg/m^3.

EPA derived the oral RfD based on the same data as the RfC by using the Corley et al. 1994, 1997) PBPK model to perform route-to-route extrapolation to derive the 95% lower confidence limit on the daily oral dose of EGBE predicted to produce a 10% increase in hemosiderin staining of 1.4 mg/kg BW-day. To derive the RfD, EPA applied an intraspecies uncertainty factor of 10, to account for variation in sensitivity within the human population. Because the PBPK model was used, and because the adverse effect endpoint was a minimally adverse effect in a species more sensitive than humans, EPA used an uncertainty factor of 1 for LOAEL-to-NOAEL extrapolation, resulting in the final RfD of 0.1 mg/kg BW-day (rounded).

Both the RfD and RfC are based on the occurrence of hemolytic effects in rats. As noted previously, there is extensive evidence, both in vivo and in vitro that humans are much less sensitive than rats to the hemolytic effects of EGBE. Studies by Udden (2000, 2002) show that prehemolytic effects occur in rat red blood cells at concentrations of BAA, the proximate hemolytic agent, at least 100 times lower than concentrations that might affect human red blood cells. EPA accounts for this difference in susceptibility only partially in its derivation of the RfD and RfC by not using the standard 10-fold uncertainty factor for interspecies extrapolation, but rather assumes an interspecies correction factor of 1, implying that humans are equally sensitive rather than less sensitive than rats. However, the available relative toxicity data indicate that the actual interspecies factor from rats to humans is much less than 1. The hemolytic anemia comparative data from Udden et al. (2000, 2002) indicates that this interspecies factor should be no greater than 0.01, rather than 1, as used by EPA in deriving the RfD and RfC. This clearly demonstrates the very conservative nature of hemolytic effects in rats as a point of departure for establishing the EPA IRIS RfD and RfC.

Clearly, the interspecies uncertainty factor and point of departure are very conservative. Indeed, there is also little reason to believe that the IRIS intraspecies uncertainty factor of 10 is scientifically justified. As discussed in the IRIS assessment, investigation of population groups that might be expected to show increased sensitivity to hemolytic effects of EGBE (e.g., the young, the old, and individuals with sickle cell anemia or hereditary spherocytosis), did not reveal increased susceptibility. Thus, the IRIS intraspecies uncertainty factor of 10 is also likely to contribute undue conservatism to the RfC and RfD.

Another significant element of conservatism in the RfC and RfD relates to the fact that they were designed to be protective for continuous daily exposure for a full lifetime to EGBE. The emissions of interest in this petition are likely to fluctuate over time. As EPA recognized in the HAPs delisting decision (see Section 6.2.3, below), the lifetime average exposure level (which is the relevant metric for comparison to the RfD and RfC) will be substantially lower than

the peak concentration at the point of maximum impact (as assumed in the exposure assessment of this petition), thus providing an additional margin of safety.

5.0 EMISSIONS INVENTORY

As previously discussed, EPA determined in the HAPs delisting proceeding (68 FR 65651-52 [EPA 2003]) that the EPCRA TRI database "provide[s] a reasonable representation of … EGBE emissions" and "an adequate basis for dispersion modeling and … exposure assessment." Accordingly, this petition has conservatively developed an emission inventory of potential EGBE sources that includes all facilities that submitted TRI reports for Certain Glycol Ethers for the 2009, 2010, and 2011 calendar years, and which reported a non-zero release of Certain Glycol Ethers to air, either from onsite point or fugitive sources. In addition, because this petition also includes an assessment of potential human health and ecological risks based on exposures to other environmental media, facilities reporting non-zero releases of Certain Glycol Ethers to soil and surface water were added to the facilities included in emissions inventory (www.epa.gov/triexplorer). For the risk evaluation presented in Sections 6 through 8, it was conservatively assumed that all Certain Glycol Ethers released are EGBE for facilities without site-specific data on the proportion of Certain Glycol Ethers released that is EGBE.[g] Because EGBE represents 52% of ethylene glycol ethers consumed in the United States (SRI 2010), the application of this assumption in Sections 6 through 8 of this petition may overestimate exposures by two-fold.

Table 5-1 presents summary information on the distributions and magnitude of releases to air, water, and land, as well as changes in releases since 1993 and the mid-2000s. The 1993 data are used as a point of comparison because they formed the basis for the HAPs delisting decision and the 2003 through 2006 data were provided because they were compiled for ACC's previous petition prior to EPA's revision to the RfC and RfD. Because the Administrator determined in the HAPs delisting decision that releases of EGBE "may not reasonably be anticipated to cause any adverse effects" to human health or the environment (69 FR 69322), it is reasonable to expect that the same findings are justified in light of the substantial broad-based decrease in emissions since 1993, as shown in Table 5-1. In addition, Figure 5-1 shows the maximum reported emissions for Certain Glycol Ethers to the air by individual facilities for each year from 2000 through 2011. Note that the maximum facility air emissions have slowly declined over this time period.

Those facilities that reported non-zero TRI emissions of Certain Glycol Ethers during 2009, 2010, and/or 2011 are the basis for the emission inventory used for evaluating potential inhalation exposures and risks (Section 6). This emission inventory includes 1,109 facilities that reported non-zero emissions of Certain Glycol Ethers during 2009, 1,149 facilities that reported non-zero emissions during 2010, and 1,099 facilities reporting non-zero emissions during 2011.

[g] Facility-specific information on the percentage of Certain Glycol Ethers that is EGBE was requested for facilities evaluated in Steps B through Tier 3

6.0 INHALATION EXPOSURE ASSESSMENT AND RISK CHARACTERIZATION

For the purposes of this petition, the exposure assessment and risk characterization related to EGBE has two specific objectives: (a) to determine whether emissions of EGBE to ambient air could result in air concentrations that may pose a risk for acute and/or chronic human health effects; and (b) to determine whether emissions of EGBE from clusters of facilities within a limited geographic area could result in air concentrations of EGBE that pose a risk for acute and/or chronic health effects, at or beyond facility boundaries. This introduction provides an overview of the approach and findings of these analyses, while subsequent subsections detail all aspects of the inhalation exposure assessment and risk characterization.

The chronic (longer-term) and acute (short-term) exposure assessments were conducted for all facilities in the emissions inventory database developed as described in Section 5, in combination with a modified version of EPA's tiered modeling approach for assessing risks from stationary emission sources, which is described in *A Tiered Modeling Approach for Assessing the Risks Due to Sources of Hazardous Air Pollutants* (EPA 1992a). The tiered screening approach used in this petition follows the same general methodology used for the 2004 EGBE HAPs delisting decision; a methodology EPA reviewed, approved, and deemed as appropriate and conservative (in the sense that it overstates exposures). In brief, the tiered modeling approach involves performing analytical simulations (modeling) of air pollutant dispersion of emissions from stationary emission sources, given that measurement of long-term and short-term ambient concentrations of a pollutant in the vicinity of each source would be a prohibitively expensive task. The first modeling tier in this approach is designed to address the question of whether or not an emission source has the potential to result in EGBE air concentrations above the air concentrations of concern, and is performed using a table of lookup values that provides an estimate of the worst-case impact of the emission source being modeled. For this petition, the first tier (i.e., Tier 1) is preceded by two additional precursor screening steps (Steps A and B) designed to reduce the number of facilities for which additional site-specific data collection is required, through the use of conservative assumptions for parameters such as the proportion of certain glycol ether reported emissions that are EGBE, emission release height, and distance to nearest receptor. Facilities retained following these conservative, precursor screening steps are then subjected to the additional three tiers of the tiered modeling approach. In the tiered modeling approach, if predicted screening impacts at a given tier are less than the appropriate level(s) of concern, then no further modeling is needed in order to rule out the potential for adverse effects. Thus, facilities "screen out" of this tiered analysis only if their estimated maximum airborne concentrations of EGBE are determined not to pose a potential risk to human health. In the application of the tiered modeling approach in this petition, the exposure assessments performed for all facilities consistently employed conservative assumptions for emission-related parameters.

The screening approach for evaluating chronic EGBE exposures estimated the worst-case annual average airborne EGBE concentrations associated with EGBE emissions from

individual facilities or clusters of facilities at or beyond the facility property boundaries, for comparison to the EGBE RfC of 1.6 mg/m^3, in order to determine whether EGBE-emitting facilities pose a significant risk of adverse chronic human health effects. The analysis evaluated chronic exposures for all facilities that reported non-zero emissions of Certain Glycol Ethers to TRI in 2009, 2010, and/or 2011. The results of the tiered screening for chronic EGBE exposures demonstrated that maximum annual average EGBE concentrations at or beyond facility property boundaries, both for individual facilities and clusters of facilities emitting EGBE, are below the EGBE RfC, thus supporting a conclusion that emissions of EGBE do not result in a significant risk of chronic health effects.

The primary outcomes of the chronic exposure emissions modeling, as described in detail in this section, is a demonstration that (a) no ambient air concentrations of EGBE in the United States are predicted to exceed the EGBE RfC of 1.6 mg/m^3 and (b) the vast majority of EGBE air concentrations throughout the United States are well below that value. The first outcome is demonstrated through modeling performed for facilities that reported non-zero emissions of Certain Glycol Ethers in their TRI reports during 2009 through 2011: 1,109 facilities reporting Certain Glycol Ethers emissions for 2009; 1,149 facilities reporting Certain Glycol Ethers emissions for 2010; and 1,099 facilities reporting Certain Glycol Ethers emissions for 2011. The modeling demonstrated that long-term ambient air concentrations of EGBE at or beyond the fencelines of all these facilities are below 1.6 mg/m^3.

The conservatism of this conclusion is demonstrated in several ways. First, the modeled air concentration estimates in the initial modeling tiers (e.g. Tier 1) are based on a screening dispersion model. Screening dispersion models are intentionally designed to overestimate ambient air concentrations. Thus a facility that screens out in the earlier tiers does so based on a substantial overestimate of its EGBE ambient air concentrations. Second, when facilities that do not screen out at earlier tiers (e.g., Tier 1) are modeled in successive Tiers using increasingly realistic yet still conservative estimates, the results show substantial reductions in the predicted maximum EGBE concentrations compared to earlier modeling tiers, thus further demonstrating the conservatism of the conclusion that emissions of EGBE from even the highest emitting facilities and clusters of closely located facilities do not result in long-term ambient air concentrations of EGBE above the RfC. For example, up to an average 92% reduction in maximum predicted concentrations was realized in moving from Tier 1 modeling to Tier 2 modeling to Tier 3 modeling, and an average 99.3% reduction was realized in moving from Step A to Tier 3 modeling. Facilities predicted under Tier 1 modeling to have maximum annual average concentrations greater than 1.6 mg/m^3 were predicted under Tiers 2 and 3 to have maximum annual average concentrations as low as 0.043 mg/m^3.

Because an EPA RfC for short-term exposures is not available, the tiered screening approach for evaluating potential acute EGBE exposures uses the estimated worst-case 1-hour average airborne EGBE concentrations combined with a MOE methodology frequently used by EPA in TRI delisting decisions, in cases where an EPA reference concentration for short-term exposures is not available. The results of the analysis indicated that maximum 1-hour average concentrations at or beyond facility property boundaries equate to a MOE in excess of 5 below

the NOAEL for all facilities evaluated, supporting a conclusion that acute effects from EGBE emissions are highly unlikely. For the acute exposure assessment for clusters of facilities (located within a small geographic area), the maximum 1-hour average concentrations at or beyond facility property boundaries for the clustered facilities equate to a MOE in excess of 4. As a further note on the conservatism in this analysis, the acute NOAEL on which the MOE is based is derived from 2-hour human exposure data that was not adjusted to the 1-hour concentration. If the MOE was adjusted to the 1-hour concentration, the MOE would increase by about 40%.

6.1 Overview of the Tiered Modeling Method for Assessing Risks from Air Exposures

As described in Section 5, an emissions inventory of potential EGBE-emitting facilities was developed based on all facilities that reported non-zero emissions of Certain Glycol Ethers in their TRI reports for the 2009, 2010, and/or 2011 reporting years. For each facility reporting non-zero Certain Glycol Ethers emissions to EPA during these years, the potential for each facility's emissions to result in ambient air concentrations of EGBE above acute or chronic exposure concentrations of concern was evaluated using a conservative risk-based screening approach consistent with EPA's (1992a) guidance document, *A Tiered Modeling Approach for Assessing the Risks Due to Sources of Hazardous Air Pollutants* ("EPA's Tiered Modeling Guidance"). This guidance outlines EPA-approved procedures for assessing risks due to the atmospheric dispersion of emissions of pollutants from stationary sources. In brief, EPA's Tiered Modeling Guidance describes an approach that involves performing analytical simulations of air pollutant dispersion from stationary sources, given that measurement of long-term and short-term ambient concentrations of a pollutant in the vicinity of each source would be a prohibitively expensive task.

EPA's Tiered Modeling Guidance describes a three-tiered modeling approach, consisting of the following:

- Tier 1 – Lookup table
- Tier 2 – Screening air dispersion modeling
- Tier 3 – Detailed air dispersion modeling

EPA's Tiered Modeling Guidance states that if predicted screening impacts at a given tier are less than the appropriate level(s) of concern, then no further (refined) modeling is indicated. However, if the predicted screening impacts are above any levels of concern, the guidance states that further (refined) analysis of these impacts at a higher tier would be performed (i.e. successive refined modeling tiers) to obtain more accurate (realistic) results.

In EPA's Tiered Modeling Guidance, Tier 1 is designed to address the question of whether or not an emission source has the potential to cause a significant impact. Tier 1

screening uses lookup tables based on EPA's 1992[h] guidance, which are straightforward to use and require fairly limited input data. The values provided by the lookup table are the estimated worst-case air concentration associated with each emission source being modeled. Although EPA's (1992a) Tier 1 modeling step involves use of a lookup table that is straightforward to use and requires fairly limited input data, it requires more information than is available solely from TRI reports. As such, a more conservative and simpler two-step precursor screening procedure was developed for use prior to the Tier 1 screening step. The precursor procedure is designed to reduce the number of facilities for which additional data collection was required to perform the more refined Tier 1 screening. Thus, Step A of the two-step precursor screening procedure relies solely on data available from TRI submissions (i.e. total annual emissions of Certain Glycol Ethers), while Step B requires the total annual emissions data from TRI plus a small number of additional facility-specific parameters (though less than are required for Tier 1 screening). In instances where facility specific inputs were not available for Step B, conservative default assumptions for those parameters were used.

Step A uses an "inverted" Tier 1 table (see Table 6-1) that was generated using the same methodology that was used to generate the inverted Tier 1 table used for the same purpose in the HAPs delisting petition (CMA 1997). The inverted Tier 1 table (Table 6-1) provides a threshold emission rate below which a facility is not predicted to exceed a specific ambient air concentration, based on an assumed release height and distance to fenceline. Highly conservative assumptions were used to generate the "inverted" Tier 1 table used in Step A, such as an assumption that all emissions (combined point and fugitive emissions) of Certain Glycol Ethers are assumed to be EGBE[i], and that all emissions are assumed to be released from a single point source with a release height of zero meters. In the HAPs delisting decision, EPA specifically approved this adaptation of EPA's modeling guidelines as "reasonable" because it is based on "sound analytic principles" "and would tend to overestimate rather than underestimate maximum annual ambient average concentrations" (68 FR 65652, 65660 [EPA 2003]).

The Step B precursor screening step uses a modified version of EPA's Tier 1 lookup table (the same lookup table used for the Tier 1 screening step), along with a small number of facility-specific parameters required to model the maximum impact from each facility. However, as described in Section 6.2.3, Step B is more conservative than the Tier 1 screening. For Step B highly conservative assumptions were applied for facilities for which existing facility-specific

[h] Note that EPA's 2004 Community Air Screening How-To Manual (EPA 2004c) guidance also includes an analogous screening lookup table. However, an analysis of the 2004 lookup table using a subset of the highest emitting facilities evaluated as part of this petition, indicates that the 2004 screening lookup table is less conservative (predicts lower modeled concentrations) than the lookup table based on EPA's 1992 Tiered Modeling Guidance. As such, to maximize the conservatism of the tiered modeling approach used in this petition, a screening lookup table based on EPA's 1992 guidance lookup table is used, which is the same screening lookup table used for the same purpose in the HAPs delisting petition (CMA 1997).

[i] This assumption is considered conservative because EGBE comprises 52 percent (%) of the United States annual consumption of glycol ethers (SRI 2010).

information had been obtained for the 2007 EGBE TRI delisting petition, or was obtained from Step B survey responses received as part of this petition. For each of these facilities, very conservative assumptions were used with the lookup table, such as assuming that the combined point-source emissions for a facility were emitted from a single hypothetical stack, with a release height equal to the minimum stack height among all facility stacks, and the minimum distance to fenceline among all facility stacks. For all facilities without site-specific information for the required parameters, conservative default Step B input parameters were assumed, as described further below.

The conservative nature of the Step A and Step B prescreening steps is designed to ensure that maximum EGBE concentrations in ambient air at/beyond the fenceline of facilities that screen out using this methodology will not exceed the applicable levels of concern for EGBE for both chronic and acute inhalation exposures. For those facilities that did not screen out from Step A and Step B, more refined screening for both acute and chronic exposures was performed using slightly modified versions of EPA's Tier 1 lookup table (identical to the Tier 1 table used for the EGBE HAPs delisting petition). The Tier 1 lookup tables (acute and chronic) require additional site-specific data not required for the Step B screening step. Thus, the maximum concentrations predicted by the Tier 1 lookup tables, more precisely estimate the short-term and long-term ambient concentrations of EGBE, compared to Step A and Step B.

Those facilities for which the maximum Tier 1 predicted concentrations are below the applicable levels of concern for EGBE for acute or chronic inhalation exposures do not require further refined analysis. For the remaining facilities with predicted Tier 1 EGBE air concentrations above the acute or chronic concentrations of concern, more refined screening modeling was performed in the Tier 2 screening step using EPA's AERSCREEN v.11126. AERSCREEN is a screening-level air dispersion model designed to produce estimates of worst-case 1-hour concentrations for a single source, without the need for hourly meteorological data, and also includes conversion factors to estimate "worst-case" annual concentrations. If any facility with maximum predicted Tier 2 modeled EGBE concentrations in ambient air had exceeded the applicable levels of concern for EGBE for acute or chronic inhalation exposures, then the most refined and realistic analysis (Tier 3) using EPA's refined dispersion model AERMOD v.12060, would have been used. However, although all facilities screened out at Tier 2, in order to further test the conservatism of the screening procedure and to estimate the margin of safety[j] provided by the screening procedure, a subset of facilities screening out at Tier 2 were nonetheless subjected to Tier 3 analysis as part of the sensitivity and uncertainty analysis discussed in Section 6.6.

As discussed further in the remainder of this section, the exposure assessments performed for all facilities using EPA's tiered modeling approach consistently employed

[j] For purposes of this petition, margin of safety is defined as the factor by which concentrations could increase while remaining below the short-term reference concentration (e.g., predicted concentration divided by the no adverse effects level). It is recognized that in other applications, margin of safety does not incorporate the uncertainty factors that are built into the IRIS RFC.

conservative estimates of emission-related parameters whenever data were incomplete. Details of the tiered methodology used to support this delisting petition and the resulting risks for estimated long-term and short-term exposures to potential EGBE-emitting facilities are described in further detail in Sections 6.2 through 6.5.

6.2 Step A and B Prescreening

6.2.1 Step A Prescreening Methodology

Step A uses an "inverted" Tier 1 table, developed using the same methods used to develop the inverted Tier 1 table in the 1997 HAPs delisting petition (CMA 1997).[k] This inverted screening table provides annual EGBE emission thresholds (expressed as tpy) above which the annual average EGBE concentration would be predicted to exceed the RfC of 1.6 mg/m^3. The Step A inverted Tier 1 table is shown in Table 6-1.

The annual threshold emission levels listed in this table are computed by dividing the RfC by the normalized ambient concentrations in EPA's (1992a) Tier 1 table:

$$Q_{threshold} = RfC \div [\chi/Q]\ \text{Tier 1} \qquad \text{Eqn. 3}$$

where:

$Q_{threshold}$ = threshold emissions (tpy)
RfC = Reference Concentration (expressed in micrograms per cubic meter or μg/m^3), and
$[\chi/Q]_{Tier\ 1}$ = normalized ambient concentration in Tier 1 table (μg•m^{-3}/tpy)

The annual emission thresholds for the screening table are tabulated by source type, release height, and downwind distance.[l]

For Step A, each facility's annual TRI combined stack and fugitive Certain Glycol Ethers emissions are conservatively used to represent each facility's total annual EGBE emissions. Consistent with the HAPs petition's (CMA 1997) inverted Tier 1 table screening, Step A assumed that all stack and fugitive emissions from a given facility exhaust from a single point source with an emission height of zero meters and a minimum distance to fenceline of 50 meters. Based on the EGBE RfC of 1.6 mg/m^3, the corresponding threshold EGBE annual threshold emission rate for Step A screening is 4.9 tpy (Table 6-1). Based on these conservative assumptions regarding point-source releases, distances to fenceline, and percent of Certain Glycol Ethers that are EGBE, any facility emitting less than 4.9 tpy of Certain Glycol Ethers is predicted to have fenceline concentrations below the RfC.

[k] The difference between the inverted Tier 1 table developed for the 1997 HAP delisting petition and the inverted Tier 1 table developed for this petition is that the former was derived based on the prior EGBE reference concentration of 13 mg/m^3, while the Step A screening table for this petition is derived from the current RfC of 1.6 mg/m^3 based on the 2010 IRIS assessment.

[l] The emission source types in the screening table are identical to those listed in the Tier 1 lookup table.

6.2.2 Step A Results

All facilities reporting non-zero Certain Glycol Ethers emissions during the 2009, 2010, and/or 2011 TRI reporting years were evaluated using Step A. Step A screens out facilities that emit Certain Glycol Ethers (combined point and fugitive emissions) less than the lowest emission threshold for a 50 meter fenceline distance (i.e., 4.9 tpy). The results of the Step A screening are summarized below and in Table 6-2:

- Of the 1,109 facilities that reported non-zero emissions of Certain Glycol Ethers to air in 2009, 824 (76%) screened out from further analysis based on Step A, leaving 260 facilities warranting further evaluation in Step B.
- Of the 1,149 facilities that reported non-zero emissions of Certain Glycol Ethers to air in 2010, 850 (76%) were screened out from further analysis based on Step A, leaving 273 facilities warranting further evaluation in Step B.
- Of the 1,099 facilities that reported non-zero emissions of Certain Glycol Ethers to air in 2011, 823 (75%) were screened out from further analysis based on Step A, leaving 276 facilities warranting further evaluation in Step B.

A detailed listing of each facility included in the Step A analysis is provided in Tables C-1, C-2, and C-3 of Appendix C. For those facilities that reported total Certain Glycol Ethers emissions of more than the 4.9 tpy during 2009, 2010, and/or 2011, a more refined Step B screening evaluation was performed, as described below.

6.2.3 Step B Prescreening Methodology

Step B uses the same lookup table used for the Tier 1 analysis, which is a modified version of EPA's Tier 1 lookup table (similar to the Tier 1 table used for the EGBE HAPs delisting petition), along with a small number of facility-specific parameters required to model the maximum impact from each facility[m] – i.e. projected EGBE ambient air concentrations at or beyond the property boundary. Step B screening conservatively models all point-source emissions from a facility as if released from a single stack, and models fugitive releases as a single volume source, consistent with the EPA's Tier 1 screening process (EPA 1992a).

The parameters required for Step B for each facility are

1. point and fugitive release heights for EGBE emissions sources at each facility;
2. distance from each EGBE emission source to fenceline; and
3. proportion of Certain Glycol Ethers emissions reported to TRI that is EGBE.

The values assumed for each of these parameters were based on site-specific data or conservative default assumptions, as described in detail below. In addition, Step B was performed as a two-part process in order to reduce the number of facilities for which a survey was performed to collect additional site-specific information for this petition.

[m] Facilities that closed after emissions were reported to the TRI were excluded from subsequent modeling tiers, given the inability to obtain site-specific data and the lack of current emissions from the facility.

In the first part of Step B, existing available facility-specific information was used to perform a Step B screening, when such information had been previously obtained for facilities as part of ACC's work on a previous version of the EGBE delisting petition that was prepared in 2007, prior to EPA's revision to the RfC and RfD[n]. For each facility, the combined point-source emissions were conservatively assumed to be released from a single stack with a release height equivalent to lowest release height among all of that facility's stacks, thereby maximizing calculated off-site concentrations of EGBE in ambient air. The combined maximum annual average concentration of EGBE in ambient air associated with each facility's point and fugitive emissions was calculated as follows:

- The greatest emission height in the table that is less than or equal to the minimum stack height for the facility's EGBE point sources (stacks) was selected from the modified Tier 1 Table (see Appendix D Table D-1).
- The greatest distance in the table that is less than or equal to the minimum distance between any facility stack and the property line was selected (regardless of whether it corresponded to the facility stack with the minimum height).
- If available, the site-specific percent of Certain Glycol Ethers emissions that are EGBE was applied to the point and fugitive source emission rates obtained from TRI. If not available, all TRI-reported Certain Glycol Ethers releases were assumed to be EGBE.
- The appropriate normalized maximum annual concentration for the stack (based on the selected release height and distance to property line) was identified and multiplied by the annual combined point-source EGBE emission rate (in tpy) to obtain the maximum annual average ambient air concentration estimate (in $\mu g/m^3$) associated with EGBE point-source emission from the facility.
- The appropriate normalized maximum annual concentration for the fugitive emissions (using the default volume source parameters described below in combination with the minimum reported site-specific property line distance) was identified in the modified lookup table (Table D-1) and multiplied by the annual combined point-source EGBE emission rate (in tpy). This calculation provides the annual average ambient air concentration estimate (in $\mu g/m^3$) associated with EGBE fugitive emissions from the facility.
- The cumulative annual average ambient air concentration estimate associated with each facility (in $\mu g/m^3$) is conservatively calculated by adding the maximum predicted ambient air concentrations associated with the point-source emissions with the maximum predicted concentration associated with the fugitive emissions.

For all facilities lacking site-specific data from the 2007 EGBE TRI delisting petition (numbers of facilities provided in Table 6-3), the following conservative default assumptions were used in the first part of the Step B screening:

[n] Site-specific data had previously been compiled for certain facilities as part of the American Chemistry Council's petition submitted in 2007, prior to EPA's revision to the RfC and RfD for EGBE.

1. All TRI-reported Certain Glycol Ethers releases to air were assumed to be EGBE.
2. Point emissions were modeled as a 10 meter stack.
3. Fugitive emissions were modeled as a volume source with a lateral dimension of 10 meters and a release height of 3 meters.
4. The distance from each emission source (point or volume) to the nearest fenceline was assumed to be 50 meters.

These Step B default parameter assumptions for stack and fugitive emissions are identical to those used in EPA's exposure assessment for ethylene glycol (EPA 1995b) and the EGBE HAP delisting petition (CMA 1997).

The total maximum impact (maximum predicted ambient air concentration at or beyond the fenceline) for each facility lacking site-specific parameters was calculated based on these default assumptions, as the sum of stack and fugitive impacts derived from the modified EPA Tier 1 lookup table (see Appendix D Table D-1).

At the conclusion of the first part of the Step B analysis, each facility's total maximum impact (maximum predicted ambient air concentration at or beyond the fenceline) was compared to the RfC for EGBE of 1.6 mg/m^3. A survey was conducted for all facilities modeled using only default parameter assumptions for which the maximum predicted annual average concentration was above the RfC. The survey was intended to collect the site-specific information for use in the Step B screening. To increase responsiveness to the survey, the Can Manufacturers Institute (CMI) was enlisted to provide assistance with survey implementation for the CMI member facilities subject to this Step B screening. CMI identified contact names and addresses, distributed the Step B surveys to its member facilities, and provided survey follow up. Two facilities that were contacted as part of the Step B survey effort did not respond to the survey ([redacted] and [redacted]). For these two, facility-specific information was obtained from publically available sources to the extent that such information was publically available. In particular, EPA's National Emissions Inventory[o] (NEI) database was used to obtain information on facility stack heights. EPA prepares the NEI every three years, largely relying on EPA emission estimates and emission model inputs provided by state, local, and tribal air agencies for sources in their jurisdictions. As the NEI is a comprehensive and detailed estimate of air emissions of criteria pollutants (including volatile organic compounds or VOCs) from all air emissions sources, NEI's stack information is a reasonable estimate of facility stack parameters for purposes of subjecting these facilities to Step B modeling. Because the NEI database does not contain information on distances between each stack and a facility's property boundary, this distance was estimated for each stack by measuring distances between facility structures in aerial imagery and property boundaries obtained from municipal tax assessors' databases.

[o] http://www.epa.gov/ttn/chief/eiinformation.html. Data from both the 2005 and 2008 NEI datasets were queried for this petition.

Table C-4 in Appendix C summarizes all site-specific minimum stack height and distance to property line data obtained and used in the Step B screening analysis. Using these values, the maximum annual average concentration of EGBE in ambient air associated with each facility's point-source emissions was calculated described above. As described previously, for all other facilities lacking site-specific data for the required input parameters, the Step B default assumptions were used for stack and fugitive emissions. The total maximum impact for each facility was calculated as the sum of the facility's stack and fugitive impacts from the lookup table based on these assumptions, and then compared to the RfC for EGBE of 1.6 mg/m^3.

6.2.4 Step B Results

Based on the above assumptions, the modified Tier 1 lookup table was used to obtain maximum impacts associated with EGBE point and fugitive emissions. The total maximum impact for each facility was then calculated by summing stack and fugitive impacts, and the total impact was compared to EGBE's RfC of 1.6 mg/m^3. The final results of the Step B screening are summarized below and in Table 6-3 and Appendix C (Table C-4):

- Of the 260 facilities that reported non-zero emissions Certain Glycol Ethers to air during 2009 and that did not screen out based on Step A, 245 (94%) screened out from further analysis at Step B, leaving 15 facilities warranting further evaluation in Tier 1.
- Of the 273 facilities that reported non-zero emissions Certain Glycol Ethers to air during 2010 and that did not screen out based on Step A, 258 (95%) screened out from further analysis based on Step B, leaving 15 facilities warranting further evaluation in Tier 1.
- Of the 276 facilities that reported non-zero emissions Certain Glycol Ethers to air in 2011 and did not screen out based on Step A, 262 (95%) screened out from further analysis based on Step B, leaving 14 facilities warranting further evaluation in Tier 1.

For the 2009 TRI reporting year, one facility did not screen out at Step B, but was excluded from further analysis because it has since closed. Thus, it was not possible to obtain the site-specific data needed for more refined modeling. In any event, a facility that is not operating also would not emit Certain Glycol Ethers. This facility was the [redacted]. However, as discussed further in the uncertainty analysis (Section 6.6), if this facility was operating, it would be expected to screen out at the higher tiers based on the reported emissions of Certain Glycol Ethers when it was operating, as well as the demonstrated margin of safety provided by the analysis.

6.3 Chronic Inhalation Exposure Assessment for Individual Facilities

6.3.1 Tier 1 Screening for Individual Facilities

6.3.1.1 Tier 1 Methodology

Tier 1 screening was performed based on the Tier 1 of EPA's Tiered Modeling Guidance (1992a) guidance using a slightly modified version of EPA's Tier 1 lookup table (Appendix D, Table D-1). This approach is also consistent with that used for the EGBE HAPs delisting petition

(and the same used for Step B in this petition). As with Step B, the Tier 1 analysis for chronic exposures accounts for both fugitive emissions and individual point-source (stack) EGBE emissions. However, Tier 1 screening methodology differs from the Step B screening analysis in that Tier 1 screening individually evaluates each EGBE-emitting stack at a facility and each stack's respective minimum distance to the fenceline (assuming all point-source emissions are emitted by the given stack); whereas, Step B conservatively evaluates a single hypothetical stack (assuming all point-source emissions are emitted by the given stack) using the minimum emission height and minimum distance to fenceline among all stacks at a given facility. In other words, the principle difference between Step B and Tier 1 is that Step B uses the minimum fenceline distance and stack height among all stacks at a facility, regardless of whether those values relate to the same stack. The other difference is that Tier 1 uses more site-specific information for the estimation of impacts from fugitive emissions (e.g, it uses the actual fenceline distance from fugitive sources rather than the minimum stack distance to represent fenceline distances from fugitive sources).

The following site-specific information was required for Tier 1 modeling of each facility's EGBE emissions:

- The proportion of Certain Glycol Ethers emissions reported to TRI that is EGBE
- Annual emissions of EGBE (point and fugitive emissions) from each facility in tpy
- Height of the release point above ground in meters, for each point source
- Nearest distance to the property line in meters for point sources and fugitive sources

Point-source emissions release heights and receptor distances were derived from facility-specific data obtained from facility survey responses. Those responses were collected as part of Step B. As with Step B, for facilities that did not provide facility-specific data, information was obtained from publically available sources to the extent relevant information was available (i.e. EPA's NEI, aerial imagery, and municipal tax assessors' information). Because nearly all facilities requiring Tier 1 modeling responded to the Step B survey, information from publically available sources was only needed for one facility in the Tier 1 screening for all three years of TRI data (2009-2011)–the [redacted] facility in [redacted] Virginia.

The Tier 1 point-source contribution to each facility's maximum annual ambient air concentration of EGBE was determined for each stack at each facility using the following procedure:

- The facility's combined point-source EGBE emissions were assumed to be emitted from each stack evaluated at the facility.
- The greatest emission height in the table that is less than or equal to the stack height for the EGBE-emitting stack was selected from the modified Tier 1 Table (see Appendix D Table D-1).
- The greatest distance in the table that is less than or equal to the distance between this stack and the property line was selected.

- The appropriate normalized maximum annual concentration for this stack (based on its release height and distance to fenceline) was selected and multiplied by the annual combined point-source EGBE emission rate (in tpy) to obtain the maximum annual average ambient air concentration estimate (in μg/m^3) associated with EGBE point-source emission from the facility.

For Tier 1 screening, this procedure described above was performed for each EGBE-emitting stack at a facility. Then, the maximum annual Tier 1 concentration among these individual stack analyses was conservatively selected to represent the maximum impact for facility point-source emissions of EGBE. Each facility's fugitive EGBE emissions were assumed to be represented by a single volume source with a lateral dimension of 10 meters and a release height of 3 meters, as was the case for Step B. These assumptions are identical to those used in EPA's exposure assessment for ethylene glycol (EPA 1995b) and the EGBE HAP delisting petition (CMA 1997). The distances to the nearest receptors for fugitive emissions were based on site-specific data from the survey responses or from measurements of the minimum distance from the fugitive source (facility building) to the property boundary based on aerial imagery. For each facility, the maximum Tier 1 modeled annual average concentration of EGBE in ambient air was conservatively assumed to be the sum of fugitive impact and worst-case stack impact for the facility.

6.3.1.2 Tier 1 Results for Individual Facilities

For each facility, the maximum chronic EGBE exposure (impact) in ambient air at or beyond the property boundary was determined as described above, and the result was compared to the RfC of 1.6 mg/m^3 by calculating the chronic Hazard Quotient (HQ)[p]. Those facilities, for which the Tier 1 modeling result was less than the RfC, screened out and did not undergo further analysis. As summarized below and further detailed in Table 6-4 and Appendix D, two of the facilities subjected to Tier 1 screened out at this step:

- For the 14 facilities reporting non-zero emissions Certain Glycol Ethers in 2009 that did not screen out in Step B, 2 screened out in the Tier 1 screening step, leaving 12 facilities for additional refined evaluation in Tier 2.
- For the 15 facilities reporting non-zero emissions Certain Glycol Ethers in 2010 that did not screen out in Step B, 2 screened out in the Tier 1 screening step, leaving 13 facilities for additional refined evaluation in Tier 2.
- For the 14 facilities reporting non-zero emissions Certain Glycol Ethers in 2011 that did not screen out in Step B, 3 screened out in the Tier 1 screening step, leaving 11 facilities for additional refined evaluation in Tier 2.

For facilities subject to Tier 1 screening, the Tier 1 results were approximately 24% lower, on average, than Step B modeled impacts, with individual facility reductions (Step B to

[p] The HQ is calculated as the ratio of the maximum estimated exposure concentration to the RfC.

Tier 1) in the maximum estimated EGBE exposure concentrations that ranged from 0% to approximately 70% (see Table 6-10). Few additional facilities screened out in the Tier 1 screening. This result is not unexpected given general similarities between the Step B and Tier 1 approaches (i.e. use of the same lookup table). As discussed above, the principle difference between Step B and Tier 1 for point source emissions is that Step B uses the minimum fenceline distances and stack heights, regardless of whether those values relate to the same emission source. Thus, small reductions from Step B to Tier 1 indicate that the worst-case hypothetical stack assumed for Step B had only slightly worse dispersion characteristics than the worst case individual stack selected from among each facility's actual EGBE emitting stacks. Large reductions in the modeled exposure concentration from Step B to Tier 1 indicated that the Step B hypothetical stack height and minimum distance to fenceline assumptions had worse dispersion characteristics than any actual stack at the facility, further demonstrating the conservativeness of the Step B approach, with respect to Tier 1. Those facilities that did not screen out with the Tier 1 analysis were subjected to more refined Tier 2 modeling using EPA's AERSCREEN air dispersion model, as discussed in the next subsection.

6.3.2 Tier 2 Screening for Individual Facilities

Chronic exposure Tier 2 modeling was performed for each facility that did not screen out using the Tier 1 screening analysis. Tier 2 modeling was performed using EPA's recommended screening air dispersion model, AERSCREEN (EPA 2011a)[q]. AERSCREEN is designed to provide conservative estimates of ambient air concentrations. AERSCREEN requires additional facility-specific information beyond that which was required for the Tier 1 modeling. Specifically, the following facility-specific data is required for the Tier 2 modeling with AERSCREEN: (1) inside stack diameters; (2) exhaust velocities; (3) exit gas temperatures for all stack (point) releases; (4) extent of the facility property boundary; (5) building dimensions (used to parameterize fugitive EGBE emissions and evaluate the building downwash impacts for point sources); and (6) classification of the surrounding area as urban or rural. AERSCREEN also requires additional information related to land surface characteristics around each facility, as well as information on general meteorological characteristics for each site, which are used to generate the screening meteorological data applied with AERSCREEN.

AERSCREEN models the worst-case 1-hour average ambient air concentration based on a closely spaced receptor grid around each facility, which extends outward a distance of 5,000 meters (16,404 feet) and assumes the AERSCREEN default receptor spacing (within this grid) of 25 meters (82 feet). To estimate the maximum (chronic) annual average EGBE ambient air concentrations, AERSCREEN applies a scaling factor of 0.1 to the model-generated maximum 1-hour average concentration output, in accordance with EPA's AERSCREEN

[q] AERSCREEN is a screening-level air quality model based on AERMOD. AERSCREEN was implemented as the screening option in AERMOD, using a nonsequential meteorological data file representing a matrix of conditions, specifically worst-case meteorological conditions generated by the MAKEMET program.

guidance (EPA 2011). For each facility modeled using this approach, the Tier 2 AERSCREEN result represents the combined impact of point and fugitive EGBE emissions. Because AERSCREEN is limited to modeling a single emission source in each model run, point and fugitive sources for a facility were modeled separately in Tier 2. The maximum impact for the facility's total EGBE emissions (point and fugitive) was conservatively calculated as the sum of the maximum predicted AERSCREEN result for the point-source EGBE emissions combined with the maximum predicted AERSCREEN result for the facility's fugitive EGBE emissions.

A detailed discussion of inputs required by AERSCREEN and the methodology used to perform the modeling is provided in the remainder of this section. The results of the Tier 2 Screening are provided in Section 6.3.2.5.

6.3.2.1 AERSCREEN Meteorological Inputs

AERSCREEN modeling was carried out using simulated location-specific (worst-case) screening meteorological data generated by MAKEMET program version 09183 (EPA 2011a), using local temperature extremes and surface characteristics information. The screening meteorological data produced by MAKEMET is a location-specific matrix of meteorological conditions intended to be representative the meteorological possibilities for that geographic location. The screening meteorological data was generated for each facility subject to Tier 2 modeling using minimum and maximum ambient temperatures derived from historical daily temperature records at meteorological station closets to the facility, in the United States Historical Climatology Network. Extremes were determined using all historical records, spanning from 50 and over 100 years, depending on the station location. Site-specific surface characteristic data for the area around the facility were processed using United States Geological Survey National Land Cover Data (USGS) and EPA model AERSUFRACE (EPA 2008). Surface characteristics (albedo, Bowen ration and surface roughness) were provided in the form of seasonal 12 sector characteristics representative of a one kilometer (km) radius area centered at the facility. The remaining MAKEMET input parameters, such as minimum wind speed, anemometer height, and specified number of wind directions etc. used the default AERSCREEN values.

6.3.2.2 AERSCREEN Buildings and Receptor Location Inputs

EGBE 1-hour modeled concentrations are calculated by AERSCREEN at specific locations within the user-specified grid. For the Tier 2 screening, the specified receptor grid for each facility extended outward from each facility's property line to a distance of 5,000 meters (16,404 feet). The AERSCREEN default receptor spacing (within this grid) of 25 meters (82 feet) was used for the entire grid.

Property boundary information required for AERSCREEN modeling was obtained from Tier 2 survey responses, or was obtained from publically available sources, as described for Step B and Tier 1 screening. The property plans and images obtained from the local agencies were georeferenced by overlaying them onto an aerial image from Google Earth. For Tier 2 screening, the building dimensions, orientation, and distance to the property line were

determined using the Google Earth program. For buildings with multiple roof heights, each roof level was estimated using Google Earth's "Street View" feature and comparing the building height to a known height (e.g., a door). In the absence of a clear street view image, the height of the building's shadow was compared to that of a known shadow height such as that of a truck trailer or power line post, in order to estimate the building height.

6.3.2.3 AERSCREEN Elevation Data Inputs

AERSCREEN requires a determination whether complex terrain[r] is present within 5 km of the facility being modeled. Aerial imagery with elevations was also used to make that determination. Only one facility subject to Tier 2 modeling was identified as having the potential for complex terrain—the [redacted] facility in [redacted] WV [redacted]. All remaining sites for which Tier 2 modeling was required are located in areas with relatively flat terrain. For the [redacted] facility in WV, potential effects of complex terrain were evaluated in AERSCREEN by incorporating digital elevation data from the National Elevation Dataset (NED) (USGS; EPA 2009), at the resolution of 0.33 arc-second. For this facility, the results of the AERSCREEN modeling with terrain effects produced slightly lower annual average EGBE concentrations than if terrain effects were omitted. Consequently, complex terrain effects are not significant at the [redacted] WV facility. Nonetheless, to be conservative, the slightly higher AERSCREEN results that excluded terrain effects were used to represent the Tier 2 modeling results for this facility.

6.3.2.4 AERSCREEN EGBE Point and Fugitive Source Inputs

Tier 2 surveys were distributed to all facilities requiring Tier 2 modeling in order to collect the following facility-specific information: stack inside diameters, exit gas temperatures, building dimensions/configuration, and detailed information on the extent of the property boundary. As with the Step B/Tier 1 surveys, in order to increase responsiveness among the CMI-member facilities, CMI was enlisted to assist with survey distribution and follow up.

Following survey data collection, facilities were categorized as either (1) facilities for which Tier 2 survey responses were received or (2) facilities for which Tier 2 survey information was not provided. For facilities that did not respond, the missing information was obtained from publically available sources, in the same manner as described above with respect to Step B and Tier 1 screening. Where required parameters were not available from either survey responses or publically available sources, default assumptions were used, as described further below.

<u>EGBE Point and Fugitive Emission Rates</u>

Stack and fugitive emission rates used for chronic exposure modeling in the model (in units of grams per second [gps]) were derived from annual Certain Glycol Ether emissions reported to TRI and the proportion of Certain Glycol Ether emissions that EGBE comprises (as

[r] Complex terrain term refers to the setting where terrain features surrounding the facility, within a 5 km radius, exceed the stack height.

reported by each facility in their Tier 2 survey response). Where facilities did not provide this information, EGBE emissions were conservatively assumed to be 100% of the Certain Glycol Ether emissions reported to TRI. For evaluating chronic exposures, the EGBE emission rates used to model each point (stack) and volume source were developed from annual EGBE emissions for each facility, based on an assumption that facilities operate continuously. Based on survey responses received for facilities modeled during Tier 2 (surveys were received from 92% of facilities modeled during Tier 2), this assumption is reasonable. All respondents indicated that their facilities operated continuously throughout the year.

EGBE Point-Source Parameters

Separate AERSCREEN model runs were performed for each facility's stack emissions. In each model run, the facility's total EGBE point-source emissions were assumed to exhaust from a single stack. Sources of information for stack parameters used in Tier 2 modeling are discussed below.

For the two facilities that did not provide Tier 2 survey responses (i.e., [redacted] in [redacted] VA and [redacted] in [redacted] WI), information from the 2005 and 2008 NEI databases was used to estimate individual stack parameters. Based on the NEI database information, these facilities each reported VOC releases from a single stack at each facility. The NEI data provided the following stack parameters for these two facilities: stack height; stack inner diameter; exhaust temperature; and exit velocity. However, because the NEI database does not provide specific information on the location of the stacks at a facility, a sensitivity analysis was performed using AERSCREEN to determine the most conservative hypothetical stack location for the stack at each of these two facilities (i.e., the location that produced the highest modeled air concentration based on the stack parameters in the NEI database). First, to determine the likely location of the stack at each facility, aerial images were analyzed to first identify the section of each facility's building(s) that was most likely associated with process emissions (i.e., the portion of the building where stacks were visible). For point-sources (stacks), this analysis involved modeling a range of stack-to-property distances and stack-to-building configurations, including hypothetical stack locations that would be expected to result in higher modeled concentrations due to building downwash effects or proximity of the source to the property line. The worst-case stack location at each facility as determined in the sensitivity analyses was used for the final point-source AERSCREEN model run for these two facilities.

For facilities that provided Tier 2 survey responses, AERSCREEN was used to model each facility's total point-source EGBE emissions. For each stack determined to emit or potentially emit EGBE at the facility, individual AERSCREEN model runs were performed. For each model run, the facility's combined EGBE stack emissions were assumed to exhaust from each stack independently. The AERSCREEN model run that resulted in the highest predicted annual average EGBE concentration for a facility was conservatively selected to represent the worst-case (maximum) predicted airborne EGBE concentration for all point-source EGBE emissions from that facility.

EGBE Fugitive Source Parameters

For Tier 2, fugitive EGBE emissions were modeled as a single volume source, where the initial vertical dimension (σ_y) was derived from the facility's roof height and the initial horizontal dimension (σ_z) was derived from the building area, consistent with EPA guidance for selecting volume source parameters (EPA 1995d). The information provided by the facilities in Tier 2 survey indicates that fugitive EGBE emissions are released from rooftop vents on the portion of the building encompassing manufacturing operations. The release height of the volume source was therefore considered to be equivalent to each building's height. For facilities that did not respond to the Tier 2 survey and that had multiple buildings on site, aerial images were examined to identify likely production areas, based on presence of stacks, roof vents, etc. Fugitive emissions were assumed to be associated with those likely production areas. For all facilities (both with and without Tier 2 survey responses), volume sources were checked for the presence of an "exclusion zone condition" in AERSCREEN. Specifically, an exclusion zone condition applies if the distance between the volume center and closest property line (referred to as "PD") is less than or equal to 2.15 times the initial horizontal lateral dimension. In such cases, the volume source lateral dimension was reduced to ensure that the resulting σ_z was equal to (PD-1)/2.15.

6.3.2.5 Tier 2 Results

For each facility in the three TRI emission data sets (2009, 2010, 2011 calendar years) subjected to Tier 2 screening, a facility's Tier 2 worst-case (maximum) predicted airborne EGBE concentration was compared to the EGBE RfC of 1.6 mg/m^3. Facilities for which the worst-case Tier 2 concentration of EGBE in ambient air was less than the RfC screened out and required no further analysis. As summarized in Table 6-5 and detailed in Appendix D, all facilities screened out at Tier 2 because all worst-case EGBE airborne concentrations at or beyond the property boundaries were predicted to be below the EGBE RfC of 1.6 mg/m^3. The results of the Tier 2 chronic exposure assessment are summarized below:

- For the 12 facilities retained for Tier 2 modeling based on 2009 emissions, the maximum predicted annual average concentration was 1.20 mg/m^3 (i.e., 75% of the RfC). The minimum and average concentrations modeled for all facilities were 0.25 mg/m^3 and 0.54 mg/m^3 (corresponding to 15% and 33% of the RfC), respectively.
- For the 13 facilities retained for Tier 2 analysis based on 2010 emissions, the maximum predicted annual average concentration was 1.04 mg/m^3 (i.e., 65% of the RfC). The minimum and average concentrations modeled for all facilities were 0.25 mg/m^3 and 0.54 mg/m^3 (corresponding to 15% and 33% of the RfC), respectively.
- For the 12 facilities retained for Tier 2 analysis based on 2011 emissions, the maximum predicted annual concentration was less than or equal to 1.16 mg/m^3 (i.e., 73% of the RfC). The minimum and average concentrations modeled for all facilities were 0.24 mg/m^3 and 0.51 mg/m^3 (corresponding to 15% and 31% of the RfC), respectively.

Of the facilities for which Tier 2 modeling was performed, the [redacted] facility in [redacted] MA produced the highest modeled chronic EGBE impacts for all three years, with a maximum

annual average EGBE concentration of 1.20 mg/m^3 (i.e., 75% of the RfC), based on 2009 emissions data. Despite the use of very conservative assumptions and the inherent conservatism of the AERSCREEN model and screening meteorological data, the Tier 2 screening results demonstrate that EGBE emissions from individual facilities do not pose a significant risk of chronic health effects at or beyond the property boundaries for individual facilities. AERSCREEN model output files are provided in Appendix F.

Although all facilities screened out at Tier 2, in order to further test the conservatism of the screening procedure and to estimate the margin of safety provided by the screening procedure, six facilities that had screened out in Tier 2 modeling were subjected to additional analysis using EPA's long-term Tier 3 analysis. This analysis is described in Section 6.6, which discusses an analysis of uncertainty and conservatism of assumptions used to model chronic exposures from individual facilities.

6.4 Chronic Inhalation Exposure Assessment for Clusters of Facilities

The preceding analysis focused on potential risks associated with exposures to emissions from individual facilities. In the event that several emitting facilities are located within a limited geographic area, local residents may be exposed to the combined emissions from clusters of facilities. Therefore, the potential for chronic EGBE ambient air impacts from clusters of facilities was also evaluated as part of this petition.

Zip codes were selected as the geographic area used in this analysis, which evaluated potential chronic EGBE concentrations in ambient air from facilities located within all zip codes containing at least two facilities reporting non-zero emissions of Certain Glycol Ether emissions to TRI in 2009, 2010, and 2011. For the reasons described in greater detail below (Section 6.5.3), the zip code approach used in this petition is more conservative than the zip code/census tract approach used by Dolinoy and Miranda (2004). In addition, the method used for this facility cluster evaluation is similar to, but more refined than use of the metropolitan areas for the cluster evaluation used in the HAP delisting petition, a methodology EPA reviewed and accepted as appropriate and conservative that metropolitan area cluster evaluation as part of the HAPs delisting decision (68 FR 65653).

6.4.1 Facility Cluster Evaluation Tiered Screening Methodology

A conservative tiered modeling approach was also used to evaluate potential chronic airborne EGBE concentrations in ambient air from clusters of proximate facilities. The methodology used is analogous to the tiered modeling approach applied to individual facilities (see Sections 6.2 and 6.3), as discussed further below.

6.4.2 Step A Screening (Cluster Evaluation)

For the facility cluster evaluation, Step A was used to prescreen the inventory of all facilities that reported non-zero emissions of Certain Glycol Ethers to TRI for the 2009, 2010 and 2011 reporting years. Any zip code that contained at least two facilities reporting emissions of Certain Glycol Ethers during these three years was retained for evaluation in Step A. As with

the Step A screening performed on individual facilities, each facility's annual TRI combined stack and fugitive Certain Glycol Ethers emissions were conservatively combined and used to represent the facility's total annual EGBE emissions.

This approach differs from that employed by Dolinoy and Miranda (2004) in their evaluation of TRI-reported and potential non-TRI-reported emissions, but is a more conservative and appropriate basis for screening the clusters of facilities throughout the United States. Dolinoy and Miranda (2004) evaluated different spatial scales for estimating exposures to glycol ethers by modeling potential air concentrations at specific locations. Their approach took into account the relative distances to each source and the dispersion that occurs over those distances. They concluded that, for the purposes of determining spatially explicit exposure patterns, finer-grained resolution (e.g., census blocks) modeling revealed potential localized exposure hot-spots that are not apparent when modeling at higher resolution (e.g., zip codes). The screening approach in this petition, however, is not spatially explicit and combines facilities over geographic areas and treats them as a single source. Therefore, this approach does not account for air dispersion that occurs between facility boundaries. In addition, pooling facilities from larger geographic areas (i.e., zip codes rather than census blocks) captures more facilities within a single unit, and thus is considered more conservative than use of the potentially smaller subset of facilities when using smaller geographic areas.

In the facility cluster evaluation, Step A used the same "inverted" Tier 1 table described in Section 6.2.1. The inverted Tier 1 table provides annual EGBE emission thresholds (expressed as tpy) above which the annual average EGBE concentration would be predicted to exceed the RfC of 1.6 mg/m^3. Stack and fugitive emissions of Certain Glycol Ethers from all facilities in the same zip code were summed, and treated as if exhausted from a single point source with an emission height of zero meters and a minimum distance to fenceline of 50 meters. Based on the EGBE RfC of 1.6 mg/m^3, the corresponding threshold EGBE annual threshold emission rate for Step A screening is 4.9 tpy. Consistent with the Step A screening for individual facilities, any zip code for which the combined EGBE (point and fugitive) exceeded 4.9 tpy, was retained for further refined analysis.

The number of zip codes containing more than one facility reporting Certain Glycol Ether emissions was 158 in 2009, 164 in 2010, and 159 in 2011 (Table 6-6). The greatest number of facilities within a single zip code was 6 (zip code 60007, Elk Grove Village, IL). These zip codes were subjected to the Step A screening, with the following results:

- Of the 158 zip codes subjected to Step A screening for the 2009 TRI reporting year, 58 had cumulative emissions of Certain Glycol Ethers (assumed to be 100% EGBE) greater than 4.9 tpy;
- Of the 164 zip codes subjected to Step A screening for the 2010 TRI reporting year, 62 had cumulative emissions of Certain Glycol Ethers (assumed to be 100% EGBE) greater than 4.9 tpy; and
- Of the 159 zip codes subjected to Step A screening for the 2011 TRI reporting year, 65 had cumulative emissions of Certain Glycol Ethers (assumed to be 100% EGBE) greater than 4.9 tpy.

Those zip codes with combined emissions of Certain Glycol Ethers above 4.9 tpy underwent Step B screening, as discussed below.

6.4.3 Step B Screening (Cluster Evaluation)

The purpose of the Step B screening for facility clusters is to provide an initial assessment of chronic exposures for geographic areas (zip codes) that contain more than one facility emitting EGBE (or potentially emitting EGBE—i.e., reported TRI emissions of Certain Glycol Ethers). This screening consisted of two components. The first component included zip codes where emissions were dominated by a single facility. The second component included the remaining zip codes, where emissions were more evenly distributed across multiple facilities.

In order to identify the clusters dominated by one facility, the Certain Glycol Ethers emissions from the top reporting facility were compared to the cumulative Certain Glycol Ethers emissions for the zip code. If the percentage of cumulative emissions from one facility was at least 90% of the total, the zip code was evaluated as part of the first component of the Step B screen (i.e., dominated by a single facility). Any zip code for which the percentage of emissions from a single facility was less than 90% of the total was evaluated as part of the second component of the Step B screening.

For those zip codes evaluated under the first component of the facility cluster Step B screening, the maximum impacts from the individual facility Step B screening (Section 6.2.4 and Appendix C, Table C-4) for each facility in the zip code were compared to the RfC of 1.6 mg/m^3. If the maximum annual average EGBE concentration among all facilities in the zip code was less than 90% of the RfC, the zip code screened out and no further analysis was required. The cumulative zip code emissions from those zip codes that did not screen out at this point were compared to a threshold emissions level derived from the inverted Tier 1 lookup table developed for the Step A screening (Table 6-1). The threshold emissions level was determined based on the following assumptions, consistent with the Step B screening for individual facilities (Section 6.2.3):

1. All air emissions of Certain Glycol Ethers were assumed to be EGBE.
2. All air emissions in the zip code were assumed to be released from a single point source that was 10 meters high and 50 meters from the fenceline.
3. Fugitive emissions were combined with point-source emissions.

Based on these conservative assumptions, the threshold emissions rate that would correspond to the RfC is 75.8 tpy (Table 6-1). Zip codes with cumulative emissions greater than 75.8 tpy were retained for more refined facility cluster evaluation. The screening results from this first analysis are summarized below:

Based on the 2009 TRI inventory of facilities emitting Certain Glycol Ethers, 31 of the 58 zip codes that did not screen out at Step A contained one facility that represented more than 90% of the Certain Glycol Ethers emissions released in that zip code. The estimated maximum annual average EGBE concentrations for all 31 zip codes were less than 90% of the RfC. Thus,

none of the 31 zip codes were retained for the more refined Tier 1 analysis based on 2009 TRI data.

Based on the 2010 TRI inventory of facilities emitting Certain Glycol Ethers, 30 of the 62 zip codes that did not screen out at Step A contained one facility that represented more than 90% of the Certain Glycol Ethers emissions released in that zip code. The estimated maximum annual average EGBE concentrations for 29 of these zip codes were less than 90% of the RfC. Thus, one of these zip codes (i.e., 27320 in Reidsville, NC), was retained for the more refined Tier 1 analysis based on 2010 TRI data.

Based on the 2011 TRI inventory of facilities emitting Certain Glycol Ethers, 30 of the 64 zip codes that did not screen out at Step A contained one facility that represented more than 90% of the Certain Glycol Ethers emissions released in that zip code. The estimated maximum annual average EGBE concentrations for 29 of these zip codes were less than 90% of the RfC. Thus, one of these zip codes (i.e., 27320 in Reidsville, NC), was retained for the more refined Tier 1 analysis based on 2011 TRI data.

The second component of the Step B facility cluster evaluation evaluated all remaining zip codes that contain at least two facilities emitting EGBE (or potentially emitting EGBE—i.e., reported TRI emissions of Certain Glycol Ethers) and were not included in the preceding analysis. This second component of Step B was conducted for the following zip codes: (1) 24 zip codes for the 2009 TRI emission inventory; (2) 26 zip codes for the 2010 TRI emission inventory; and (3) 31 zip codes for the 2011 emission TRI inventory). The cumulative EGBE emissions (sum of the EGBE emissions for the TRI-reporting facilities in the zip code) for each zip code were compared to the threshold emissions level of 75.8 tpy, described above.

Based on these conservative assumptions, the majority of zip codes evaluated in the second component of Step B screened out. Those retained are shown in Table 6-7 and summarized below:

21 of the 24 zip codes analyzed based on the 2009 TRI emission inventory screened out at Step B. The three zip codes retained for more refined modeling were 60609 in Chicago, IL; 45840 in Findlay, OH; and 26062 in Weirton, WV.

22 of 26 zip codes analyzed based on the 2010 TRI emission inventory screened out at Step B. The four zip codes retained for more refined modeling were 60609 in Chicago, IL; 45840 in Findlay, OH; 46350 in La Porte, IN; and 26062 in Weirton, WV.

29 of 31 zip codes zip codes analyzed based on the 2011 TRI emission inventory screened out at Step B. The two zip codes retained for more refined modeling were 45840 in Findlay, OH and 26062 in Weirton, WV.

Combining the results from the two component analyses of the Step B screening, a total of five unique zip codes required further refined modeling in the Tier 2 screening using AERSCREEN to determine if long-term EGBE exposures resulting from EGBE emissions from clusters of facilities in these zip codes exceed the RfC, when less conservative assumptions are used. This included three zip codes based on the 2009 TRI data, five zip codes for 2010, and three zip codes for 2011.

6.4.4 Tier 2 Screening (Cluster Evaluation)

Because the initial Tier 1 lookup table for point sources does not lend itself for use in screening clusters of sources beyond the initial Step B screening step described in the previous section, Tier 1 analysis was not conducted as part of the cluster evaluation. As such, the five zip codes that did not screen out during Step B (cluster evaluation) were subjected to Tier 2 modeling instead. The Tier 2 modeling for the facility clusters was carried out using the same general approach used for the Tier 2 AERSCREEN modeling of individual facilities described in Section 6.3, with some minor differences discussed below.

AERSCREEN modeling of each facility within the five zip codes was performed using location-specific screening meteorological data generated by MAKEMET. However, while local meteorological inputs into the MAKEMET (e.g., temperature extremes) were identical for all facilities within the zip code, surface characteristic inputs were unique for each facility and were therefore based on the land cover characteristics of a 1-km radius area surrounding the individual facility. All individual facilities within the five zip codes were modeled assuming flat terrain[s] and using the same receptor grid configuration described in Section 6.3. As with the Tier 2 modeling of individual facilities, AERSCREEN 1-hour concentration results were converted to maximum annual average (chronic) impacts for comparison to the RfC, by multiplying the 1-hour average values by the scaling factor of 0.1[t].

As with the Tier 2 analysis for individual facilities, the facility cluster evaluation included facilities that provided Tier 2 survey responses and those that did not. Of the 12 facilities included in the facility cluster evaluation, 7 provided Tier 2 survey responses and 5 did not. For facilities that provided Tier 2 survey responses, source parameterization and AERSCREEN modeling of each facility was carried out in the same manner as described in Section 6.3.2 for individual facilities. Modeling was based on facility-specific information provided in the survey response, including actual stack parameters (stack height, diameter, temperature, and exit velocity), building dimensions, property boundary information and urban or rural setting designation.

Five facilities (one in each of these five zip codes) did not provide Tier 2 survey responses. For these facilities, point and fugitive emission source parameter inputs required for Tier 2 modeling were derived from publically available sources. Where the NEI database provided information on stack parameters, a sensitivity analysis was performed to determine the worst-case stack-to-building configuration and stack-to-fenceline distance, in the same manner

[s] As discussed in Section 6.2.3.2, with the exception of one facility in WV, all other facilities subject to Tier 2 modeling were located in areas of relatively flat terrain. For the facility in WV, the potential effects for complex terrain were evaluated in AERSCREEN by incorporating digital elevation data. For this facility, the results of the AERSCREEN modeling with terrain effects produced slightly lower annual average EGBE concentrations than if terrain effects were omitted. Consequently, complex terrain effects are not significant at this facility. Nonetheless, to be conservative, the slightly higher AERSCREEN results that excluded terrain effects were used to represent the Tier 2 modeling results for this facility.

[t] To estimate the maximum (chronic) annual average EGBE ambient air concentrations, AERSCREEN applies a scaling factor of 0.1 to the model-generated maximum 1-hour average concentration output, in accordance with EPA's AERSCREEN guidance (EPA 2011)

described in Section 6.3.2. A summary of the treatment of NEI stack data for these facilities is provided below:

- For two facilities, [redacted] in [redacted] OH and [redacted] in [redacted] NC, the NEI database provided information on a single stack at each facility. For these, stack parameters from the NEI database were used for the Tier 2 modeling, and the most conservative location for the single stack was determined through a sensitivity analysis performed in the same manner described for the Tier 2 screening for individual facilities (see Section 6.3.2).
- For two other facilities, [redacted] in [redacted] IL and [redacted] in [redacted]IN, the NEI database provided information on multiple stacks at each facility (e.g., NEI provides information on 20 stacks for [redacted]). For these facilities, the sensitivity analysis was simplified by selecting the most conservative combination of stack parameters among all stacks for which parameters were provided (i.e. conservative, from the perspective of resulting in the highest modeled annual average EGBE concentration). In other words, the hypothetical stack used in the Tier 2 modeling for that facility would have the height of the shortest NEI reported stacks, the exhaust temperature of the coolest stack, and the smallest diameter and the lowest velocity among all NEI stacks reported for the facility. This practice yields a hypothetical stack with the most conservative combined assumptions (more conservative than any of the individual stacks), and thus approximates the worst possible dispersion scenario for point-source emissions. The most conservative location for this hypothetical stack was determined through a sensitivity analysis performed in the same manner described for the Tier 2 screening for individual facilities.
- For the fifth facility (i.e., [redacted] in [redacted] WV) lacking a survey response, the NEI database included no information on stack parameters. For this facility, all point-source releases were therefore very conservatively modeled as fugitive emissions for the Tier 2 modeling (i.e. both point and fugitive emission rates were combined and modeled as a single volume source centered on the presumed production area of the facility building).

Fugitive emissions at each facility were modeled as a volume source, with modeling input parameters developed in the same manner as described in Section 6.3.2. The maximum modeled chronic impact for each facility in the zip code was calculated as the sum of the modeled maximum concentration from the volume source and the worst-case stack.

The maximum annual average air concentration for the entire zip code was calculated as the sum of the maximum impacts from each of the modeled facilities within the zip code (calculated using AERSCREEN in the same manner as described in Section 6.3.2). The individual facility maximum impacts were summed, regardless of where these maximum impacts occurred—i.e. for each facility modeled, the maximum impact for that facility may not occur at the same receptor location as the other facilities. The Tier 2 results of the maximum chronic (annual average) impacts for each cluster (zip code) are presented in Table 6-8 and modeling output files for the Tier 2 modeling are provided in Appendix F.

As shown in Table 6-8 for all three inventories (2009, 2010, and 2011), projected worst-case annual average EGBE concentrations at or beyond the property line for all five zip codes were appreciably below the RfC of 1.6 mg/m^3, as summarized below:

- Based on 2009 TRI emissions of facilities emitting Certain Glycol Ethers, the predicted maximum annual average concentration across all five zip codes modeled using Tier 2 was 0.91 mg/m^3 (i.e., 57% of the RfC). The minimum and average results for the five zip codes were 0.26 mg/m^3 and 0.52 mg/m^3, respectively (corresponding to 16% and 32% of the RfC, respectively).
- Based on 2010 TRI emissions of facilities emitting Certain Glycol Ethers, the maximum annual average concentration across all five zip codes modeled using Tier 2 was 1.16 mg/m^3 (i.e., 73% of the RfC). The minimum and average results for the five zip codes were 0.27 mg/m^3 and 0.58 mg/m^3 respectively (corresponding to 17% and 36% of the RfC, respectively).
- Based on 2011 TRI emissions of facilities emitting Certain Glycol Ethers, the maximum annual average concentration across all five zip codes modeled using Tier 2 was 0.74 mg/m^3 (i.e., 47% of the RfC). The minimum and average results for the five zip codes were 0.26 mg/m^3 and 0.49 mg/m^3 respectively (corresponding to 16% and 31% of the RfC, respectively).

Tier 2 modeling of the zip codes based on 2009, 2010, and 2011 TRI data indicated that the Chicago IL zip code (facility cluster) yielded the highest predicted chronic EGBE impact for all years evaluated, with a maximum calculated maximum annual average concentration of 1.16 mg/m^3 (i.e., 73% of the RfC) based on 2010 emissions.

Section 6.5 provides an analysis of uncertainty and conservatism of assumptions used in modeling chronic exposures from clusters of EGBE-emitting facilities.

6.5 Uncertainty Analysis

Based on the results of the tiered modeling approach for individual facilities and clusters of facilities presented in Sections 6.2 through 6.4 of this petition, the maximum annual average emissions of EGBE are not predicted to exceed the RfC for EGBE. Thus, even under highly conservative assumptions, EGBE emissions from facilities in the U.S. do not pose a risk to populations living around the facilities.

Nonetheless, to further demonstrate the margin of safety for this conclusion, all facilities and zip code clusters screened out at Tier 2 modeling were subjected to more refined modeling using AERMOD (Tier 3). In addition, the conservatism of assumptions made during each of the steps of the tiered analysis is discussed in further detail in this uncertainty analysis, and generally would apply to both the chronic and acute tiered modeling, although for the acute exposure assessment additional discussion of uncertainty is provided in the acute MOE assessment found in Section 6.6.3.

6.5.1 Conservatism of Step A through Tier 2

In several ways, Step A and Step B provide a more conservative screening approach than EPA's long-term Tier 1 analysis:

- In Step A, all reported Certain Glycol Ethers emissions were assumed to be EGBE, even though EGBE represents only about 52% of the market share (SRI 2010).
- In Steps A and B, all stack emissions were conservatively assumed to exhaust from one stack.
- In Step A, all emissions data were initially evaluated as if they are emitted through a single stack with a release height of 0 meters with a distance to fenceline of 50 meters. This scenario is not likely to occur often, if at all. The conservatism of the default assumption of a 0-meter emissions source height was evaluated based on the site-specific data provided by the facilities. The minimum release height reported is just over 3 meters. Furthermore, if the Step A screening is based on a release height of 2 meters and a distance to fence line of 10 meters, the screening threshold is 8.6 tpy (Table 6-1), 75% higher than the screening emission threshold used in our analysis.

The Tier 1 screening analysis also affords significant conservatism in the treatment of point and fugitive emission sources of EGBE:

- For Tier 1 screening, all point-source emissions are conservatively assumed to be released from a single stack from the list of all stacks onsite that could possibly release EGBE. The single stack selected was the one that yields the maximum potential fenceline concentration, regardless of whether it is the stack from which the majority of the EGBE is actually released.
- For Tier 1 screening, all fugitive emissions are assumed to be released from a single fugitive source, wherein the distance to fenceline was determined by the minimum distance from the edge of the fugitive source to the property boundary.

Conservatism of the Tier 2 analysis is also present on several levels. It is inherent in the use of a screening-level model such as AERSCREEN, and in the use of screening meteorology used by the model. Conservatism is also provided by the selection of parameters used for the Tier 2 modeling of each facility's point and fugitive EGBE emissions, and in the methodology used to calculate the combined point and fugitive impacts for each facility. These various levels of conservatism in the Tier 2 analysis are discussed in more detail in the remainder of this section.

Screening air quality models such as AERSCREEN are conservative by design, and are intended to provide the means for performing a prescreening analysis prior to engaging in full scale modeling using models such as AERMOD/AERMET (EPA 2012, 2004d). AERSCREEN's conservatism stems from the following key model characteristics and assumptions:

- The use of screening meteorological data in AERSCREEN (generated by MAKEMET) is designed to include the worst-case meteorological extremes for a given geographic location, including the least favorable dispersion conditions, which would be expected to produce the highest modeled ambient air concentrations (impacts). These most extreme

combinations of meteorological parameters in the screening meteorological dataset would rarely if ever occur in actual meteorological data and thus represent a level of conservativeness in the AERSCREEN modeling.

- The screening meteorological data is a theoretical sequence of meteorological hourly conditions that AERSCREEN uses to predict the maximum 1-hour average concentration at each prescribed location. As discussed above, for purposes of evaluating maximum predicted long-term air concentrations in the Tier 2 modeling, this maximum 1-hour result is scaled by 0.1 to approximate a maximum annual average air concentration. The resulting maximum annual average result is therefore based on a worst-case meteorological hour. This practice is far more conservative than the approach used in AERMOD, which employs actual meteorological data to calculate an annual average result from all meteorological hours.
- While AERSCREEN uses the same algorithms as the full-scale dispersion model AERMOD, AERSCREEN employs certain conservative assumptions not used in AERMOD modeling. For instance, information on the closest distance between the source and the fenceline is treated conservatively in AERSCREEN, which uniformly assumes this distance for all directions from the emission source. AERMOD instead allows that the property boundary be defined realistically at varying distances to the source in different directions.

In addition to the built in conservatism of the AERSCREEN model, the assumptions used in modeling point-source emissions at each facility provides an additional level of conservatism in Tier 2 modeling, as summarized below:

- As with the very conservative Step A screening, stack impacts were modeled as if each facility's total stack emissions were emitted from the single stack that produced the worst-case results, even though point-source emissions would actually be distributed across multiple stacks (providing greater dispersion).
- AERSCREEN is capable of modeling only one source at the time. As such, for multiple emission sources such as those modeled for this petition, the combined contribution of all sources at a facility are conservatively calculated as the sum of maximum results from the individual emission source model runs. In almost all circumstances, this practice would overestimate the result achieved by modeling all emission sources simultaneously.

In addition to the conservatism of the assumptions and methods used in the Tier 2 modeling of individual facilities, the facility cluster evaluation also incorporated the following additional conservative elements:

- Each of the five zip codes (clusters) modeled using the Tier 2 methodology included one facility for which a Tier 2 survey response was not received. For these facilities, highly conservative assumptions were used to model facility EGBE emissions. Specifically, point-source emission for each of these facilities were conservatively modeled using the least favorable stack location (based on a sensitivity analysis of predicted AERSCREEN results) and the most conservative combination of stack parameters reported to the NEI.

In addition, all Certain Glycol Ether reported air emissions from these facilities were conservatively assumed to be 100% EGBE.

- As an additional source of "spatial" conservatism in the AERSCREEN modeled results for each cluster, the cumulative impacts from multiple facilities in each zip code modeled were calculated as the sum of the maximum predicted impact from each facility at or beyond the property boundary, regardless of the specific (receptor) location that this impact was determined by the model to occur. Given that the receptor location of maximum impact for each facility is invariably closely located to the facility boundary, and distances between individual facilities in certain clusters are as much as 1,500 meters, the estimated maximum cumulative impact for each cluster was almost certainly overestimated.
- And finally, in addition to the spatial conservatism resulting from summing each facility impacts irrespective of the receptor location at which they occurred, a "temporal" conservatism is also present in the Tier 2 application of AERSCREEN for modeling facility clusters. AERSCREEN calculates a worst-case result for each facility emission source, which is based on the worst-case meteorological hour in the screening meteorological data set. This worst-case meteorological hour is likely to differ from emission source to emission source at a facility as well as from facility to facility. As such, the summing of maximum impacts across facilities introduces a level of temporal conservatism that almost certainly overestimates the maximum cumulative impact for each cluster.

Even though all individual facilities and facility clusters (zip codes) with non-zero Certain Glycol Ether emissions reported to TRI for 2009, 2010, and 2011 screened out at the conservative Tier 2 modeling step (i.e. the maximum annual average EGBE air concentrations at/beyond facility boundaries were below the RfC), in order to further demonstrate the margin of safety afforded in the tiered modeling approach, Tier 3 modeling using the EPA-approved refined air dispersion model AERMOD was performed, as discussed below.

6.5.2 Tier 3 Modeling (Individual Facilities)

As a further demonstration of the conservatism of the tiered modeling approach for individual facilities, and to provide further evidence of the "margin of safety" afforded for all facilities that screened out at Step A, Step B, Tier 1, or Tier 2, six facilities were modeled using EPA's regulatory AERMOD (EPA 2004d, EPA 2012) and AERMET (EPA 2004f, EPA 2011b) system (i.e., Tier 3 of the tiered modeling approach). These six facilities all previously screened out at Tier 2 based on their 2009, 2010, and 2011 TRI emissions and were also facilities that provided detailed information in Tier 2 survey responses. They included

- the three individual facilities that had the highest Tier 2 modeled maximum annual average EGBE concentrations ([redacted] in [redacted] MA, [redacted] in [redacted] WA, and [redacted] in [redacted] SC);
- two additional facilities that were also part of the Tier 2 facility cluster evaluations, and which were top emitters within their respective zip codes ([redacted] in [redacted] WV, [redacted] in [redacted] IL); and

- one additional facility that reported the maximum annual emissions of Certain Glycol Ethers in the TRI from 2009 through 2011 ([redacted] in [redacted] NC).

The six facilities subjected to Tier 3 modeling were also among the top 4% of emitters among all facilities reporting Certain Glycol Ethers emissions in their TRI reports for 2009 through 2011 (see Appendix B Tables B-1 through B-3). For each of these facilities, EGBE comprised between 85% and 100% of each facility's Certain Glycol Ether reported emissions.

Tier 3 modeling using AERMOD is the most refined analysis step, and is consistent with EPA's Tiered Modeling Guidelines (EPA 1992a). The Tier 3 analysis was conducted with the AERMOD model (v.12345, EPA 2012) in accordance with EPA's Guideline on Air Quality Models (40 CFR Part 51 Appendix W), EPA's tiered modeling guidelines (EPA 1992a), the AERMOD User Guide (EPA 2004d), and the AERMOD Implementation Guide (EPA 2009). Compared to Tier 2 modeling, Tier 3 modeling with AERMOD provides more realistic (yet still conservative) estimates of projected impacts of EGBE emission at locations at or beyond each facility's fenceline. The principle refinements afforded by AERMOD over AERSCREEN are summarized below, and discussed in more detail in the remainder of this section:

- The Tier 3 AERMOD modeling uses actual meteorological data from the closest weather station, rather than the artificially generated screening meteorological data sets used with AERSCREEN.
- Tier 3 modeling takes into account the variability of the actual property boundary, rather than using a single distance between each emission source and the property boundary, as is assumed for AERSCREEN. This refinement allows a more realistic treatment of dispersion effects between a stack and receptors.
- The Tier 3 modeling incorporates the distribution of EGBE emissions across stacks at a facility, rather than assuming that all stack emissions of EGBE occur from a single stack (with the worst stack location assumed).
- Tier 3 modeling with AERMOD permits simultaneous modeling of multiple emission sources, which yields collective impacts from all sources for each receptor location.
- Tier 3 modeling with AERMOD modeling allows for the direct calculation of long-term averages for predicted air concentrations through use of multi-year meteorological data sets.

The use of representative meteorological data processed using AERMET provides more realistic estimates of predicted impacts under actual atmospheric dispersion conditions characteristic of the geographic setting at each facility. The AERMOD modeling for each location was performed using five years of recent representative meteorological data (2006 through 2010 calendar years), from the meteorological stations closest to each facility. Meteorological data were processed using EPA's AERMET v. 11059 (EPA 2004f, EPA 2011b) meteorological preprocessor. The use of five years of hourly meteorological data ensures that AERMOD modeling results incorporate expected interyear meteorological variability at each location, while capturing the occasional short-term extreme meteorological conditions. The use of actual meteorological measurements in sequence also allows for the modeling of long-term

(chronic) concentrations directly, without needing to estimate them empirically by scaling 1-hour (short-term) impacts, as was required when using AERSCREEN.

Finally, AERMOD's capability to model multiple sources in a single run allows that the combined impacts from multiple sources within a facility, or those from multiple facilities in a given domain be estimated more realistically than by simply superimposing their maxima as it was done in the Tier 2 screening.

The Tier 3 AERMOD modeling used Universal Transverse Mercator (UTM) geographic coordinates for all emission sources, buildings and receptor locations modeled. NED terrain elevation data from USGS with resolution at 0.33 arc-second were used to incorporate elevation information for emission sources and receptor locations. Offsite concentrations were calculated at specified receptor locations within a nested receptor grid and along each facility's property boundary. Property boundary receptors were spaced at 25 meter intervals. Offsite receptors were spaced at 50 meters in the Cartesian receptor grid out to a distance of 350 meters from the facility. A second coarser receptor grid with spacing of 100 meters was used for distances between 350 meters up to 2 km from each facility; 500 meter receptor spacing was used for receptors at distances from 2 km to 5 km from the approximate center of each facility.

While the Tier 3 modeling for all six facilities relied on the same individual stack and volume source parameters used for Tier 2 modeling, the Tier 3 modeling also considered the distribution of EGBE emissions among the different stacks at a given facility, which was a level of refinement not considered in the Tier 2 screening. For one of the six facilities evaluated using Tier 3 modeling (the [redacted] facility located in [redacted] MA), the distribution of EGBE emissions between stacks was not provided. For this facility, stack emissions were assumed to be equally distributed among facility stacks for the Tier 3 modeling.

As discussed above, the Tier 3 modeling used five years of actual meteorological data. The AERMOD modeling was performed independently for each year, resulting in predicted maximum annual average concentrations at each receptor for each year of meteorological data. The maximum predicted annual average concentration for each receptor location was then conservatively calculated as the highest of the five modeled annual average concentrations for a given receptor. Results of the chronic (annual average) Tier 3 AERMOD modeling results for individual facilities is provided in Table 6-9 and model output files are provided in Appendix F. As shown in Table 6-9:

- Based on 2009 emissions, the maximum Tier 3 result among the six facilities was 0.269 mg/m^3, for the [redacted] facility in WA, which represents less than 17% of the RfC.
- Based on 2010 emissions, the maximum Tier 3 result among the six facilities was 0.253 mg/m^3, again for the [redacted] facility in WA, which represents less than 16% of the RfC.
- Based on 2011 emissions, the maximum Tier 3 result among the six facilities was 0.256 mg/m^3, for the [redacted] facility in MA, which represents less than 16% of the RfC.

These results indicate that, with the more refined and realistic (yet still conservative) assumptions used in the Tier 3 modeling, chronic exposures to EGBE for the highest emitting facilities are well below the RfC.

6.5.3 Tier 3 Modeling (Clusters of Facilities)

As a further demonstration of the conservatism of the tiered modeling approach for clusters of facilities, Tier 3 modeling was performed for facility clusters in two zip codes: (1) 60609 in Chicago, IL, which had the highest cumulative Tier 2 impact among the five zip codes evaluated in Tier 2; and (2) 26062 in Weirton, WV, the zip code evaluated in Tier 2 that contained the largest number of individual facilities (i.e., five) reporting emissions of Certain Glycol Ethers to TRI in a single zip code.

Tier 3 modeling for the facility cluster evaluation was performed with AERMOD using the same general methodology used for the Tier 3 modeling of individual facilities described in Section 6.5.2. Specifically, the AERMOD modeling for each facility relied on five years of representative meteorological data, with location information (UTM coordinates) and elevation data for all emission sources and buildings. Worst-case impacts from EGBE emissions at each facility were modeled for all receptor locations at or beyond each facility's property boundary using the same receptor grid spacing specified in Section 6.5.2. The principle difference between Tier 3 modeling of individual facilities (Section 6.5.2) and the Tier 3 modeling of facility clusters is that for facility cluster modeling, all modeled facilities were modeled simultaneously in AERMOD, and thus the cumulative impact from all facilities was calculated by AERMOD simultaneously.

Results of the chronic (annual average) Tier 3 AERMOD modeling of the two zip codes is provided in Table 6-8 (model output files are provided in Appendix F), and briefly summarized below:

- Zip Code 60609 in Chicago, IL – The maximum Tier 3 impact for this zip code was 0.11 mg/m^3 (2009 emissions), 0.18 mg/m^3 (2010 emissions), and 0.14 mg/m^3 (2011 emissions) corresponding to 7%, 12%, and 9% of the RfC, respectively.
- Zip Code 26062 in Weirton, WV – The maximum Tier 3 impact for this zip code was 0.16 mg/m^3 (2009 emissions), 0.16 mg/m^3 (2010 emissions), and 0.15 mg/m^3 (2011 emissions) corresponding to 10% of the RfC, in each year.

Predicted worst-case EGBE air concentrations for all modeled clusters based on 2009, 2010, and 2011 emissions averaged 0.15 mg/m^3, or 10% of the RfC. As these cluster analysis results demonstrate, even when considering the collective impacts of clusters of facilities in a zip code, and conservatively assuming the worst-case meteorological data year, the maximum annual average concentration of EGBE for all clusters modeled is predicted to be well below the RfC.

The predicted worst-case clusters impacts were less than the highest individual facility impacts presented in Section 6.5.2. This outcome reflects the fact that none of the individual facilities with the highest individual impacts are located in zip codes considered in the facility cluster evaluation (i.e. none were located in zip codes that contained more than one facility reporting emissions of Certain Glycol Ethers to the TRI during 2009, 2010, or 2011).

6.5.4 Conservatism of the Tiered Modeling Approach

In total, the potential for facility emissions of EGBE to result in chronic exposures greater than the RfC was evaluated for all United States facilities reporting non-zero emissions of Certain Glycol Ether to TRI during 2009 (1,109 facilities), 2010 (1,149 facilities), and 2011 (1,099 facilities).

The magnitude of conservatism (and margin of safety) built into the tiered modeling approach can be clearly demonstrated by comparing the reduction in maximum long-term modeled impacts between the lowest (most conservative) tier to the highest (most refined) modeling tiers. This reduction was demonstrated for the subset of individual facilities evaluated in all five tiers of the tiered modeling approach (Step A through Tier 3), the results of which are summarized below:

- In comparing initial (Step A and B) screening results to the results of the chronic exposure Tier 1, 2, and 3 analyses of high-emitting facilities, the maximum annual average concentrations decreased by an average of 84% when the same facility was evaluated first under Step A[u] and then under Step B.
- For the individual facilities subject to Tier 1, Tier 2, and Tier 3 modeling, the reduction in maximum predicted annual average concentrations in moving from Step B to Tier 1 averaged 24%. The reduction in the maximum predicted annual average concentrations in moving from Tier 1 to Tier 2 averaged 80% (based on 2009, 2010, and 2011 TRI emissions). The reduction observed in moving from Tier 2 to Tier 3 averaged 70% (Table 6-10).
- Thus, the cumulative conservatism of evaluating facilities using Step A, relative to Tier 3, averaged 99%.

These results demonstrated that for the highest emitting facilities, the modeled maximum annual average ambient concentrations resulting from Tier 3 modeling were consistently at least two orders of magnitude lower than the most conservative (Step A) screen applied, providing a significant margin of safety for those facilities screening out at lower tiers of modeling (Table 6-10). This tiered modeling approach also indicates a significant margin of safety even when considering possible year to year variability of EGBE emissions from facilities. As a demonstration of this margin of safety, consider that even the facility with the highest Tier 3 result of 0.269 mg/m^3 ([redacted] facility in [redacted]Washington based on its 2009 emissions) was well below (i.e., 17% of) the RfC. A gross estimate of range for overall interyear variability of EGBE emissions might be expected to generally follow the overall United States EGBE consumption trend, which is shown in Figure 2-1(SRI 2010). As illustrated in this figure, United States total EGBE consumption peaked in approximately 2005, and has steadily declined since then. The calculated ratio of United States total EGBE consumption in 2005

[u] Although impacts were not explicitly calculated for the Step A screening, they were calculated for the comparison in Table 6-10 by using the EPA tier 1 lookup table and the conservative Step A assumptions (EGBE is 100% of Certain Glycol Ether emissions, all air emissions are released from a single point source with a stack height of 0 meters and a fenceline distance of 50 meters).

versus 2009 is 1.3 (i.e., consumption was 30% higher in 2005 than in 2009). By comparison, the margin of safety (ratio) for the RfC compared to the maximum Tier 3 result is 5.9. The results of this analysis support the conclusion that the tiered modeling approach provides a sufficient margin of safety that encompasses reasonable interyear variability in facility EGBE emissions.

A second analysis was conducted to further demonstrate that the margin of safety indicated by the tiered modeling is sufficient to account for interyear variability in facility EGBE emissions over time. This analysis considered the historical changes in the reported total Certain Glycol Ether emissions for all 13 facilities that were subject to Tier 2 modeling. Tier 3 modeling performed for 6 of these high emitting facilities indicated that the highest Tier 3 chronic impact was 0.269 mg/m^3, which represented only 17% of the RfC. This equates to a ratio (margin of safety) between the RfC and the worst-case Tier 3 impact of 5.9. For purposes of comparison, a review of the historical Certain Glycol Ether emissions reported for these six facilities (see Table 6-11) between 2000 and 2011 was used to calculate the ratio between the peak (highest) emissions of Certain Glycol Ethers and the emissions reported during 2009, 2010, and 2011 (i.e. the years for which emissions were evaluated using the tiered modeling approach). These ratios also provide a reasonable representation of the expected maximum interyear variability in chronic impacts for each facility. The calculated ratios ranged from 1.1 to 2.3, indicating that the interyear variability that is less than the calculated margin of safety (i.e., 5.9) between the RfC and the worst-case Tier 3 modeled result. Similarly, this analysis can be extended to the eight other high emitting facilities modeled using the Tier 2 methodology. For these facilities, the calculated maximum ratios between peak year and 2009-2011 Certain Glycol Ether emissions ranged from 1.0 and 4.1, again demonstrating that interyear variability remains within the margin of safety demonstrated with the conservative Tier 3 modeling. Thus, it is highly unlikely that any facilities would have exceeded the RfC for EGBE even during each facility's peak emission years. This analysis further supports the conclusion that the tiered modeling approach provides a sufficient margin of safety that encompasses reasonable interyear variability in facility EGBE emissions. This analysis conservatively assumed that historical EGBE emissions represent the same fraction of Certain Glycol Ether emissions as in recent years (2009-2011).

Finally, the same conclusion of a sufficient margin of safety is also reached by examining trends in maximum TRI-reported Certain Glycol Ether emissions from any facility for each reporting year from 2000 to 2011 (see Figure 5-1). As shown in this figure, there has been remarkably little variability in the Certain Glycol Ether emissions from the highest emitting facilities over the past decade. Further, this variability is well within the margin of safety indicated by the ratio (5.9) between the 2009 Tier 3 modeled worst-case result and the RfC.

Consistent with EPA's conclusion in the HAPs delisting decision, the use of maximum annual average concentrations in each of the models significantly overstates the likely exposure levels of the actual exposed population (68 FR 65653):

> *The use of the maximum annual average ambient concentration for each emission source to characterize the exposed population provides a conservative approach to*

chronic exposure modeling. Furthermore, based on our experience, we judge that a refined exposure assessment estimating exposures for actual people living near these facilities would result in maximum individual exposures significantly lower than the maximum annual average ambient approach. Given the likely proximity of inhabitable areas and the variability of human activity patterns over an annualized time period, it is our expectation that actual maximum individual exposure would be at least a factor of 2 less than predicted by the models.

In conclusion, the maximum long-term exposures of persons in the vicinity of EGBE-emitting facilities are likely to be far below the estimates generated by the screening and modeling approach employed in this petition. Despite that considerable conservatism, these estimates were determined to pose a negligible risk for chronic health effects to the populations around the facilities that emit EGBE.

6.6 Acute Exposure Margin of Exposure (MOE) Assessment

As previously discussed, in the absence of an EPA Acute Exposure Guideline Level (AEGL) or other RfC for acute effects, the tiered screening approach for evaluating potential acute EGBE exposures uses a MOE methodology, which is frequently used by EPA in TRI delisting decisions in cases where an EPA RfC for short-term exposures is not available. The remainder of this section outlines the methodology and results of the acute exposure and MOE assessment of the potential short-term exposures to EGBE from individual facilities and clusters of facilities.

As discussed in Section 3.2.1.1, due to the relatively low sensitivity of human red blood cells to the hemolytic effects of EGBE, acute health effects are not expected to result from short-term ambient concentrations near EGBE-emitting facilities, and acute effects evaluations for EGBE have identified nonsystemic eye and upper respiratory tract irritation as the critical effect. Based on controlled studies of human volunteers, the lowest short-term concentration at which such irritation effects have been reported is 550 mg/m^3 (Carpenter 1956), and no irritation effects have been observed from exposure to 97 mg/m^3 for two hours during light physical exercise (Johanson et al., 1986). These acute air concentrations of concern are much higher than the predicted maximum annual average (chronic) air concentrations of EGBE estimated in Sections 6.3 through 6.5. In fact, the worst-case Tier 2 modeled chronic air concentrations for individual facilities and clusters of facilities were below these acute air concentrations of concern by factors of > 3,000 and > 500, respectively. Acute concentrations (typically evaluated based on maximum 1-hour averages) estimated using EPA tiered modeling are generally expected to be higher than chronic estimates (maximum annual averages) using the same modeling approaches. However, acute modeled concentrations that are 500 to 3,000 times greater than chronic results are highly unlikely.

In addition, a comparison of Tier 2 modeled chronic air concentrations to acute concentration of concern (i.e. the NOAEL) itself does not likely reflect the full margin of safety as the NOAEL is based on a 2-hour exposure duration, while acute tiered-modeling results are

based on a 1-hour average. A 1-hour-equivalent NOAEL would be 137 mg/m^3 (CalEPA 1999), over 40% higher. There is, therefore, a convincing basis to conclude that adverse acute effects from EGBE releases in the vicinity of emitting sources are unlikely.

To confirm this conclusion, a tiered screening analysis based on EPA's tiered modeling approach for short-term exposures to HAPs (EPA 1992a) was conducted for the 15 TRI facilities that did not screen out from Steps A & B of the chronic exposures assessment in Section 6.2. An additional tiered screening evaluation of potential short-term EGBE exposures was also conducted on the five zip codes evaluated in Section 6.3.1.

6.6.1 Acute Exposure Assessment for Individual Facilities

The tiered analysis used for short-term exposures is similar to the methodology presented for long-term exposures in Section 6.2, except that rather than modeling the maximum annual average concentrations of EGBE, the short-term modeling estimates maximum 1-hour concentrations of EGBE. The sections below describe the acute Tier 1 through Tier 2 screening methodology and results. As all individual facilities screened out at the Tier 2 step, no further refined modeling was required. However, Tier 3 modeling was performed as part of the margin of safety analysis used for the acute exposure assessment.

6.6.1.1 Tiered Modeling Methodology for Acute Exposures (Individual Facilities)

Tier 1 screening for acute exposures was performed for all 15 facilities that did not screen out at Step B chronic exposure screening. These facilities were among the top 6% of all facilities in terms of the mass of Certain Glycol Ether air emissions reported to TRI for the 2009, 2010, and 2011 (see Appendix B). These facilities also reported that EGBE made up at least 85% of all Certain Glycol Ethers used at each facility. Because these facilities represent the highest Certain Glycol Ether emitting facilities and because EGBE is the dominant or only glycol ether used at these facilities, these facilities offer a reasonable approximation of "worst-case" facilities.

A Tier 1 lookup table (Table E-1 of Appendix E) again was used to determine maximum acute (1-hour average) emissions based on distance to fenceline and stack height, consistent with EPA's Tiered Modeling Guidance (EPA 1992a). For the acute Tier 1 analysis, the short-term EGBE emissions rates (in gps) were calculated from facility annual EGBE emissions, based on the conservative assumption that EGBE releases occurred during a typical 40 hour work week for 50 weeks per year.

These short-term emission rates were used in combination with the short-term Tier 1 lookup table to determine the maximum point and fugitive 1-hour average (acute) concentrations (EPA 1992a), consistent with the method described for chronic exposure Tier 1 analysis (see Section 6.3.1). Facility total EGBE point-source releases (in gps) were conservatively assumed to be emitted from each individual stack, and the maximum short-term concentration from the Tier 1 short-term lookup table for the individual stacks was conservatively selected to represent the maximum point-source-related impact for the entire facility. Fugitive emissions were modeled as a volume source with a release height of 0 meters

and a lateral dimension of 10 meters. The release height of 0 meters is more conservative than the default release height used in the long-term Tier 1 analysis (3 meters), which was based on a modified version of EPA's Tier 1 table. This more conservative practice was adopted for consistency with the EGBE HAP delisting petition (CMA 1997). As such, the short-term exposure analysis for this petition uses an unmodified version of EPA's short-term Tier 1 lookup table (1992a). For the Tier 1 analysis, the maximum acute impact for each facility was derived from the sum of each facility's worst-case acute point and fugitive EGBE impacts, consistent with the chronic Tier 1 modeling (see Section 6.3.1).

Acute exposure Tier 2 modeling was performed for all 13 facilities that did not screen out using the Tier 1 acute screening analysis. As with the chronic exposure Tier 2 modeling for individual facilities, the Tier 2 acute exposure modeling used AERSCREEN (EPA 2011a), which is designed to provide conservative estimates of ambient air concentrations. The same facility-specific inputs for point and fugitive sources used for the chronic Tier 2 modeling were used for the acute Tier 2 modeling. However, the acute exposure analysis uses AERSCREEN's worst-case 1-hour average ambient air concentration results.

Tier 3 modeling of short-term exposures was carried out using the same general methodology employed in long-term Tier 3 modeling for longer-term exposures (Section 6.5.2). The same dispersion model (AERMOD) and site-specific meteorological data were used to model the same six individual facilities modeled with AERMOD in Section 6.5.2. These six facilities include the top three ranked facilities from Tier 2 acute analysis, two dominant emitters in the top three ranked clusters in Tier 2 acute facility cluster evaluation, and the facility reporting the largest emissions of Certain Glycol Ethers in the TRI from 2009 through 2011. Tier 3 modeling of short-term impacts was performed using the same source parameterization (assuming realistic emission distribution among stacks). The conservatism associated with AERMOD modeling is discussed in Section 6.5.4.

6.6.1.2 Acute Tiered Modeling Results (Individual Facilities)

The results from the short-term Tier 1 through Tier 3 modeling are presented in Appendix E. At the most conservative screening level (Tier 1), all but 2 of the 15 facilities had predicted maximum 1-hour concentrations above the NOAEL for acute irritation effects, 97 mg/m^3. The [redacted] facility in [redacted] Virginia had the highest predicted 1-hour Tier 1 concentrations (1,760 mg/m^3 in 2010) from all three years of TRI data[v] (2009, 2010, and 2011). Predicted 1-hour Tier 1 point-source and fugitive air concentrations are presented in Table 6-12. With the incorporation of site-specific data and more realistic accounting of stack emissions in Tier 2 and Tier 3 modeling, the predicted maximum 1-hour concentrations at all 13 remaining modeled facilities were significantly lower, as expected. The facility with the highest short-term Tier 2 concentration based on 2009-2011 TRI data the [redacted] facility in [redacted] Massachusetts, which had a maximum short-

[v] Concentrations presented are the sum of the combined maximum predicted 1-hour concentrations, at or beyond the fenceline, for fugitive/volume source emissions and point-source emissions.

term concentration of 52.41 mg/m^3 (54% of the NOAEL) based on 2009 TRI data (see Appendix E Table E-4). The maximum predicted 1-hour concentration for the short-term Tier 3 modeling for this facility was 15.24 mg/m^3 in 2009, 13.24 mg/m^3 in 2010, and 14.82 mg/m^3 in 2011 (see Appendix E Table E-6). These concentrations represent less than 15% of the acute NOAEL. The Tier 3 results, presented in Table E-6 (Appendix E), show that maximum 1-hour concentrations of EGBE at all six facilities are far below the acute NOAEL with an average predicted facility impact over the three years (i.e., less than 10% of the acute NOAEL.

6.6.2 Acute Exposure Assessment for Clusters of Facilities

6.6.2.1 Tiered Modeling Methodology for Acute Exposures (Clusters of Facilities)

Modeling the combined short-term impacts from multiple facilities within the same zip code was carried out using the same approach used in long-term facility cluster modeling. The five zip code areas that did not screen out in Step B were subjected to Tier 2 modeling. Short-term Tier 2 impacts from the five zip codes were estimated using the same screening meteorological data developed for long-term analysis and AERSCREEN model. As discussed further in Section 6.6.3, short-term emission rates were estimated using the conservative assumption that facilities operate for only 40 hours per week and only 50 weeks per year. This assumption is likely to overestimate the short-term emission rates because the high emitting facilities are CMI members and CMI reported that member facilities typically operate those manufacturing processes that use EGBE continuously and year-round.

All five zip codes screened out at Tier 2. Nonetheless, Tier 3 modeling was conducted as part of the margin of safety analysis of acute exposures associated with clusters of facilities. Of the three clusters with highest estimated Tier 2 impacts, two zip codes with sufficient site-specific data were selected for Tier 3 modeling. Tier 3 modeling of short-term impacts for two of the five zip codes for which sufficient site-specific data was available was performed using AERMOD and the same type of site-specific meteorological data developed for long-term analysis.

As with short-term modeling of individual facilities, Tier 2 and Tier 3 modeling was used the same average annual emission rates originally developed and used in long-term Tier 2 and Tier 3 cluster modeling. As discussed in Section 6.3.1.3, conservative Tier 2 treatment of stack emissions assumes that total EGBE stack emissions from a facility are released from a single stack. More realistic parameterization of stack emissions in Tier 3 accounts for actual breakdown and proportioning of EGBE emissions among the different stacks at a facility (see Section 6.4.1).

Maximum acute Tier 2 and Tier 3 impacts from clustered facilities were estimated following the same methodology used for long-term analysis (Sections 6.4.4 and 6.5.3). Maximum acute Tier 2 impacts for individual facilities were obtained by conservatively summing the maximum impacts for the separate volume and the worst-case stack scenarios, and the maximum cumulative impact for the entire cluster estimated by summing the maximum impacts from all individual facilities within the same zip code (irrespective of the specific receptor

location that each facility's maximum impacts occurred). In Tier 3, the maximum combined impact from multiple sources within a facility and the multiple facilities within a cluster were modeled using AERMOD. As discussed previously, AERMOD allows for the simultaneous modeling (in a single model execution) of all facilities in the cluster, as well as the modeled emission sources at each facility.

6.6.2.2 Acute Exposure Tiered Modeling Results (Clusters of Facilities)

Acute EGBE impacts from Tier 2 and Tier 3 cluster modeling are presented in Table 6-13. The highest short-term Tier 2 concentration based on TRI emission data from 2009 to 2011 was 50.9 mg/m^3 (for zip code 60609, Chicago IL in 2010). The maximum predicted 1-hour concentration for the short-term Tier 3 modeling for this same cluster was 14.0 mg/m^3, 23.5 mg/m^3, and 18.5 mg/m^3 for 2009, 2010, and 2011, respectively. The highest of these concentrations represents less than 24% of the acute NOAEL.

6.6.3 Acute Margin of Exposure (MOE) Assessment

The MOE approach used to evaluate the risk of potential acute irritation effects associated with short-term exposures to EGBE is consistent with previous TRI listing decisions (e.g., MEK, EPA 1998a; MIBK, EPA 1999c). The MOE was calculated as the ratio of the NOAEL for acute irritation effects, 97 mg/m^3, to the estimated short-term exposure level in the vicinity of EGBE-emitting facilities. The MOEs for the predicted 1-hour maximum concentrations for the 13 high-emitting facilities subjected to Tier 2 modeling, and the 6 facilities subjected to Tier 3 modeling, are presented in Table 6-14.

In each case that EPA applied the MOE approach in TRI listing decisions, EPA identified a numerical level below which the MOE "is associated with a concern for toxic effects." This level is generally expressed as the product of the applicable uncertainty and modifying factors uncertainty factors that the Agency considers for noncancer toxic effects. A MOE greater than this level "would generally indicate a low level of concern," whereas a MOE less than the level "is judged to be of concern" (MIBK, EPA 1999c). In the case of EGBE's acute irritation effects, the MOE determination is based on a NOAEL derived from human data. There is accordingly no need to apply uncertainty factors for interspecies extrapolation, or for LOAEL-to-NOAEL extrapolation. An intraspecies uncertainty factor of 10 has often been used to account for potentially susceptible subpopulations in EPA TRI and other program precedents.

Although the minimum MOE among facilities subjected to the most sophisticated and realistic modeling ranges from 5 to 46 (Table 6-14), the level of concern is even lower than the MOE analysis indicates for several reasons. The Standard Operating Procedures for EPA's AEGL program (NRC 2001) allow for interspecies uncertainty factors below 10 in some circumstances, and suggest that an intraspecies uncertainty factor of 3 is appropriate for substances for which only one or a small number of nonsystemic effects have been documented. As discussed in Section 3

- EGBE's systemic toxic effects are secondary to hemolysis;

- because of the relative insensitivity of humans to EGBE's hemolytic effects, and because investigation of potentially sensitive subgroups have consistently failed to reveal increased susceptibility, hemolytic effects—and other systemic effects—are not expected to occur from short-term exposures near emitting facilities; and
- nonsystemic eye and upper respiratory irritation is the sole acute health effect that has been associated with short-term exposures, and this effect is unlikely to depend substantially on metabolic, pharmacokinetic or other systemic factors that introduce variability into responses across the exposed human population.

Second, as observed above, the NOAEL for EGBE's acute irritation effects is based on a 2-hour exposure duration, and a 1-hour-equivalent NOAEL would be 137 mg/m^3 (CalEPA 1999), over 40% higher. Taken together, these two considerations effectively reduce the MOE concern level from 10 to about 2, a more than a factor of two below the lowest MOE derived from the reasonable worst-case short-term exposure assessment summarized above (Table 6-14). Accordingly, there is a persuasive basis for concluding that there is a low level of concern for acute health effects from EGBE facility emissions.

Finally, short-term emission rates were estimated using the conservative assumption that facilities operate for only 40 hours per week and only 50 weeks per year. This assumption is likely to overestimate the short-term emission rates because the high emitting facilities are CMI members and CMI reported that member facilities typically operate those manufacturing processes that use EGBE continuously, with little variability year-round. Therefore, actual hourly emission rates could be as much as four orders of magnitude lower than those used in the acute assessment.[w]

6.7 Risk Characterization Conclusions for Potential EGBE Inhalation Exposures

None of the facilities that reported non-zero emissions of Certain Glycol Ethers to the air to TRI during the 2009, 2010, and 2011 reporting years were is associated with maximum annual average concentrations of EGBE at or above the current IRIS RfC. By subjecting facilities to the more refined long-term Tier 1, 2, and/or 3 analyses in accordance with EPA's (1992a) Tiered Modeling Guidance, this petition has demonstrated that there exists at least a six-fold margin of safety as a result of the conservative screening procedure employed, not including the additional margin of safety built into the RfC value itself (see Section 3.1.3). Additionally, it was demonstrated that EGBE exposures at or above the RfC are not expected to result from emissions from multiple facilities within a limited geographic area (for this analysis, within the same zip code). Finally, screening of a subset of facilities with some of the highest annual EGBE emissions reported to TRI during 2009, 2010, and 2011 demonstrated that short-term EGBE exposures near facilities reporting Certain Glycol Ethers emissions are also highly unlikely to be associated sufficient to have resulted in any acute health effects.

[w] Continuous operations assume more than 4.3 times more hours of operations (and emissions) over the course of the year than the 40 hours per week, 50 weeks per year assumption (8,736 hours vs. 2,000 hours).

7.0 SURFACE WATER EXPOSURES AND RISKS

Although the 2009, 2010, and 2011 TRI data and the emissions inventory (Appendix B) indicate that releases to air far exceed releases to all other environmental media combined, chronic health effects posed by direct releases to water and partitioning to water were also evaluated. As previously discussed, EGBE (CAS 111-76-2) possesses physical characteristics that indicate a propensity to remain dissolved in water or to be transported to the water column. As detailed in Section 3.1, EGBE is readily biodegradable (Price et al. 1974, as cited in ATSDR 1998) and has a relatively short residence time in the environment. Its half-life in both surface water and soil ranges from 7 days to 4 weeks, while its half-life in groundwater is 14 days to 8 weeks, and its half-life in the atmosphere is approximately 3.3 to 33 hours (Howard et al. 1991, as cited in ATSDR 1998). EGBE is highly mobile in soil and is unlikely to partition from the water column to organic matter contained in sediments or suspended solids (Swann et al. 1983). The volatilization of EGBE from surface water and moist soil is slow (Lyman et al. 1982, as cited in ATSDR 1998). HSDB (http://toxnet.nlm.nih.gov) reports that an estimated BCF of 3 was calculated for EGBE, concluding that the potential for bioconcentration in aquatic organisms is low. In summary, EGBE is miscible in water and has low overall volatility, a limited tendency to bind to soil and low lipophilicity and thus low bioaccumulation potential. These characteristics indicate that the majority of EGBE in soil is in the more mobile soil water phase rather than the solid phase (Section 8.2.2). Thus, EGBE released to soil would be expected to readily move via surface runoff to surface water.

In light of the fate and transport behaviors of EGBE, this section evaluates potential risks associated with human exposures to EGBE in surface water. The same methodologies reviewed and conducted by EPA in the HAPs delisting matter are employed here, with updates to reflect surface water concentrations based on 2009, 2010, and 2011 TRI release data, the most recent version of the Mackay fugacity model (EQC v2.02; CEMC 2003), the IRIS RfD, and current EPA (2004b) guidance for dermal risk assessment. Conservative exposure assumptions were used to determine potential for adverse effects associated with reasonable maximum exposure (RME) scenarios.

7.1 Exposure Profiles

Because this evaluation is meant to apply broadly to any surface water body used for recreational and/or potable water (i.e., residential) purposes, all assumptions employed are purposefully generic and conservative. As such, this profile describes RME scenarios, likely representing at most a very small proportion of the overall United States population. The bases for all assumptions presented below are further detailed in Section 7.3.

Under the recreational scenario, three age groups (young children 1 through 5 years of age, older children 6 through 12 years of age, and adolescents/adults over 12 years of age) were assumed to swim and play in and around a lake, pond, stream, or river containing an estimated upper bound EGBE concentration of 0.000376 mg/L (i.e., the exposure point concentration). While playing and swimming in the water body, recreators were assumed to

contact EGBE dermally and through incidental ingestion of surface water. Under the residential scenario, the same three age groups were assumed to live at a house supplied with tap water containing the same exposure point concentration of EGBE. Individuals were assumed to contact EGBE in tap water through drinking water consumption and through dermal contact while showering and bathing.

The exposure point concentration of EGBE in surface water was developed using the Mackay III distributional model (EQC v2.02; CEMC 2003), based on 2010 TRI data on discharges to air, land, and water, as detailed in Section 8.2.2. In brief, it was assumed that all emissions of Certain Glycol Ethers to air, soil, and surface water throughout the United States (as reported in the 2010 TRI reports; www.epa.gov/triexplorer) are EGBE.[x] It was further assumed that all emissions are concentrated into a 100,000 square kilometer (km^2) area (approximately the size of Ohio), which is the Mackay model's default unit area (CEMC 2003). Because emissions of Certain Glycol Ethers to all media were greater in 2010 than in 2009 or 2011, the predicted surface water EGBE concentration using 2010 TRI data (0.000198 mg/L) was greater than the predicted surface water concentration based on 2009 and 2011 data (0.000190 mg/L and 0.000193 mg/L). Therefore, the water concentration based on the 20010 TRI data was used as the more conservative estimate of the upper bound concentration of EGBE in surface water. The implications of increases in EGBE releases in the future are qualitatively addressed in the Section 9.

7.2 Exposure Equations

Potential dermal and ingestion exposures were modeled based on the average daily intake (ADI), expressed in units of mg/kg BW-day, consistent with EPA (1989, 2004b) risk assessment guidance. The equations for estimating ADI for each exposure pathway are presented below. Definitions of variables that remain constant across pathways are provided for the first pathway only. Parameters that are unique to a pathway are defined for that specific pathway. While the equation listed below for the ingestion pathway is identical to that used in the HAPs petition (CMA 1997), the equation listed below for the dermal pathway is updated to reflect current EPA (2004b) guidance for dermal risk assessment and consequently differs from that used in the HAPs petition.

Ingestion of Drinking Water/Incidental Ingestion of Surface Water:

Eqn. 4

$$ADI\ (mg/kg\ BW\text{-}day) = C_w \times IR_w \times EF \times ED \times A_o \times (1/BW) \times (1/AT)$$

where:

C_w = Concentration of EGBE in water (mg/L)

IR_w = Ingestion rate (L/day)

[x] Releases to air were defined as those reported via On-Site Fugitive Air Emissions and On-Site Point Source Air Emissions. Releases to surface water were defined as those reported as On-Site Surface Water Discharges and releases to soil were defined as those reported as On-Site and Off-Site Land Treatment and Other Land Disposal.

EF = Exposure frequency (days/year)
ED = Exposure duration (years)
A_o = Oral absorption factor (unitless)
BW = Body weight (kg)
AT = Averaging time (days)

Dermal Contact with Tap Water/Surface Water While Bathing, Showering, or Swimming:

Eqn. 5

$$ADI\ (mg/kg\ BW\text{-}day) = DA_{event} \times EV \times ED \times EF \times SA \times (1/BW) \times (1/AT)$$

where:

DA_{event} = Absorbed dose per event (mg/cm^2-event)
EV = Event frequency (events/day)
SA = Skin surface area exposed (square centimeters or cm^2)

7.3 Exposure Assumptions

Calculation of ADI for the two pathways identified above requires the selection of exposure parameter values that reflect assumptions regarding individual behavior that results in contact with EGBE in surface water. All exposure factor values are listed in Tables 7-1 through 7-4 and are further described below. In all cases, exposure factor values were selected with the objective of describing RME scenarios (i.e., using assumptions that are consistently conservative in the sense that they significantly overstate the exposures likely to be experienced by the general population).

- Chemical concentration in water (C_w) − The assumed concentration of EGBE in surface water, 0.000198 mg/L, is estimated by applying Mackay's fugacity model to 2010 TRI data on releases of Certain Glycol Ethers to land, air, and water (assuming that EGBE comprises 100% of this chemical group), as further described in Section 8.2.2. For the HAPs petition, the assumed concentration of EGBE in surface water was 0.13 mg/L. Given the stronger technical basis for the value applied in this petition, it is likely more appropriate than that used for the HAPs petition. That said, Section 7.4 explores the effect that the value used in the HAPs petition has on predicted risks.
- Ingestion rate (IR) − Water IR values for both drinking water and incidental events while swimming from EPA (1989) risk assessment guidance were employed in this analysis. EPA (1989) reports a drinking water IR (IR_w) of 2 L/day for adults and older children. Young children are reported to drink 1 L/day of drinking water. For incidental ingestion of water while swimming, EPA (1989) reports IRs of 0.13 L/day for all three age groups. The same values were employed in the HAPs petition.
- Exposure frequency (EF) − Consistent with EPA (1989) risk assessment guidance, a 350 day/year EF was used for residential exposures for all age groups, assuming that individuals vacation away from home a total of 15 days/year. For recreational exposures, it was conservatively estimated that a warm climate that would permit swimming nine months/year. Therefore, adults and young children were assumed to swim once per

week, while older children were assumed to swim three times per week, yielding exposure frequencies of 36 and 108 days/year, respectively. For a cooler climate, these exposure frequencies could also represent a 4.5 month swimming season, in which adults and young children swim twice per week and older children swim six times per week. The same values were employed in the HAPs petition.

- Exposure duration (ED) − For both recreational and residential exposures, the ED was assumed to be 30 years broken down into 5 years as a young child, 7 years as an older child, and 18 years as an adolescent and adult. This assumption is similar to EPA (1989) risk assessment guidance and is consistent with the HAPs petition.
- Oral absorption factor (A_o) – It was conservatively assumed that 100% of the EGBE ingested is absorbed in the gastrointestinal tract. This assumption was employed in the HAPs petition.
- Body weight (BW) − EPA (1989) risk assessment guidance provides age-specific BWs of 70 kg, 30 kg, and 15 kg for adults and adolescents, older children, and young children, respectively. Although slightly higher (and therefore less conservative) BWs are offered in more recent EPA (1997b) guidance, the values first proposed by EPA (1989) were employed in this analysis for consistency with most other risk assessments and to ensure the conservatism of the overall assessment. The same values were employed in the HAPs petition.
- Averaging time (AT) − The AT for noncarcinogens represents the length of time between the first and last exposure, in days. Hence, the ATs for adults and adolescents, older children, and young children were set equal to 6,570 days, 2,555 days, and 1,825 days, respectively. The same values were employed in the HAPs petition.
- Event frequency (EV) – Consistent with EPA (2004b) dermal risk assessment guidance, it was assumed that residents take one shower or bath daily. Although residents may occasionally take two showers per day, they may also occasionally go without showering for a day or shower at places other than their residence. Thus, on average, this assumption is reasonable and conservative. Recreators are assumed to swim or wade three times each day that they visit recreational water bodies. When the HAPs petition was prepared, EPA guidance for dermal risk assessment did not require characterization of EV.
- Skin surface area exposed (SA) − Age-specific skin surface areas were derived from EPA (1997b) exposure assessment guidance. Surface areas of 23,000 cm^2, 12,914 cm^2, and 7,446 cm^2 are reported as upper percentile values for adults and adolescents, older children, and young children, respectively. These values are consistent with more recent EPA (2004b) guidance. It was assumed that 100% of the body contacts water during swimming, showering, and bathing. Skin surface areas applied in the HAPs petition were based on older EPA (1989) guidance and were slightly lower (i.e., less conservative) than those listed above. The HAPs petition employed surface areas of 20,900 cm^2, 12,349 cm^2, and 7,252 cm^2 for adults, older children, and young children, respectively.
- Absorbed Dose (DA_{event}) – Exhibit B-3 of EPA's (2004b) current dermal risk assessment guidelines lists a calculated value of 1.8E-6 milligrams per square centimeter (mg/cm^2)-event for the absorbed dose of EGBE via dermal contact with water (listed in the exhibit as butoxyethanol-2), assuming a chemical concentration of 1 mg/L in water. Thus, the

value of DA_{event} employed in this risk assessment was 3.6 x10-10 mg/cm^2-event, which is the product of the estimated concentration in water (0.000198 mg/L) and the default value listed in Exhibit B-3 (1.8 x 10^{-6} mg/cm^2-event). When the HAPs petition was prepared, EPA guidance for dermal risk assessment did not require characterization of DA_{event}.

7.4 Results and Conclusions

The exposure factor values were entered into the exposure equations listed above to yield ADIs for each exposure scenario, as presented in Tables 7-1 through 7-4. The ADIs were then divided by the IRIS RfD of 0.1 mg/kg BW-day (EPA 2010), to yield pathway-specific hazard quotients (HQs). Pathway-specific HQs were then summed to yield cumulative hazard indices, presented in Table 7-5. All HQs are several orders of magnitude below 1, the benchmark of acceptable hazard specified in the National Contingency Plan (EPA 1990a). Because the ADIs estimated here represent RME levels, it is likely that the ADIs and HQs in Table 7-5 represent significant overstatements of exposures and potential health risks for the vast majority of the United States population. Thus, adverse health effects are not anticipated to result from either recreational or residential exposures to EGBE in surface water.

As shown in Table 7-6, there are three main differences between the methods employed in the HAPs petition and in this petition to evaluate dermal and ingestion exposures from EGBE in surface water. First, both the underlying data (i.e., 1993 vs. 2010 TRI release data) and the model used to estimate the concentration of EGBE in surface water differ, such that the HAPs petition employed an exposure point concentration of 0.13 mg/L, while this petition uses a value of 0.00020 mg/L, a value that is 650-fold lower. Because the lower value is based on the latest release data and the current version of Mackay's fugacity model, it is expected to be the more accurate value. Nonetheless, the impact of assuming that surface water contains 0.13 mg/L on overall hazard estimates is evident by simply multiplying the maximum HQ shown in Table 7-5 (i.e., 0.0001) by 650, which yields a theoretical HQ of 0.08. Because this value is also well below 1, the assumed exposure point concentration does not affect the overall conclusions of this risk assessment.

The second main difference between the surface water hazards calculated in the HAPs petition and in this petition relates to the RfD. In 1997, EPA had not yet completed work on the IRIS RfD, and accordingly the draft interim value of 3 mg/kg BW-day under review at that time was employed in the 1997 HAPs petition. Thus, the final IRIS RfD of 0.1 mg/kg BW-day employed in this petition has a stronger scientific basis and is 30-fold more conservative than that used in the HAPs petition.

Third, in 1997, the equation typically used to estimate dermal dose differed from that now recommended by EPA (2004b) dermal exposure guidelines. However, given the much greater influence of the ingestion pathway over the dermal pathway in terms of the cumulative hazard, the change in approach to dermal risk assessment has minimal effect on overall conclusions regarding risk. Nonetheless, the method employed was updated to reflect the strongest technical basis and current regulatory practice.

In conclusion, the three main changes to the approach employed to calculate surface water hazards reflect the most recent emissions data, and advances in knowledge and practice related to fugacity modeling, EGBE toxicity, and dermal risk assessment. While these updates are certainly appropriate for generating more realistic estimates of potential hazards, they do not substantially change the overall conclusions of the assessment that predicted ingestion/dermal hazards (as measured by HQs) are well below 1 regardless of the combination of assumptions employed. Indeed, the maximum surface water HQ predicted in the HAPs petition was 0.007, while the maximum value predicted in this petition is 0.0001 (Table 7-6).

8.0 ECOLOGICAL RISKS

A series of ERAs has been prepared for EGBE (CAS 111-76-2), including several ERAs prepared in the HAPs delisting proceeding. All have concluded that EGBE is not expected to cause significant adverse environmental effects. Nevertheless, an updated ERA was performed as part of this petition to account for changes in emissions rates since the mid-1990s, as well as to incorporate more recent ecotoxicological information. The ERAs conducted for the HAPs delisting petition are summarized below, followed by a detailed description of the updated ERA developed to support this petition.

8.1 HAPs Delisting Ecological Risk Assessments

Several ERAs were conducted for EGBE in connection with EPA's review of the petition to remove EGBE from the CAA HAPs list. The first was prepared on behalf of the Panel as part of the HAPs delisting petition (CMA 1997). EPA's Office of Air Quality Planning and Standards then retained the Cadmus Group to prepare Tier 1 and Tier 2 ERAs. The Tier 1 ERA (Cadmus 2000b) employed extremely conservative point estimates of exposure and effects, while somewhat less conservative assumptions were used for the Tier 2 ERA (Cadmus 2000a). While the same general approach was employed in all three ERAs, specific assumptions varied. Nonetheless, the Panel and the EPA Tier 2 ERAs concluded that EGBE is not expected to cause significant adverse ecological effects, and the Agency ultimately made the same finding when it removed EGBE from the CAA HAPs list. The HAPs ERAs for EGBE are summarized below.

8.1.1 The Panel's ERA

Based on a review of the ecotoxicological literature and an evaluation of the relative sensitivities to EGBE by many receptors, the Panel's HAPs ERA (CMA 1997) evaluated two assessment endpoints: (1) sustainability of aquatic plant communities and (2) sustainability of small mammal populations.

The Panel's HAPs assessment used the Mackay Level III model to calculate the distribution of EGBE in air, water, and soil based on 1996 TRI national emissions. EGBE releases into the 100,000 km^2 area contained within the Mackay model were estimated by assuming that EGBE represents 50% of all Certain Glycol Ethers releases reported nationally as (1) point and fugitive air emissions; (2) releases directly to surface water; (3) releases to publicly owned treatment works (POTWs); (4) onsite land releases; and (5) transfers off site for disposal. The 1996 releases to air, water, and soil used in the Panel's HAPs analysis are listed in Table 8-1.

The Mackay model predicted that the majority of EGBE released to air is deposited to soil and water, while EGBE released to water and soil tends to remain in those media. The overall persistence of EGBE in the environment was estimated to be 19 days and losses were largely attributed to advection and reactions (e.g., degradation). Application of the Mackay Level

III model predicted concentrations of EGBE in air, water, and soil (at equilibrium), as shown in Table 8-2.

The predicted equilibrium water concentration (0.00135 mg/L) was used to evaluate exposure of aquatic plants to EGBE. Exposure of small mammals to EGBE was estimated based on EPA's (1993a) exposure equations for deer mice (*Peromyscus maniculatus*), considering direct ingestion of soil, water, and food, resulting in an EGBE dose of 0.203 mg/kg BW-day for small mammals.

An aquatic TRV was derived from the lowest relevant toxicity value available for aquatic plants—a 125 mg/L acute no observed effect concentration (NOEC) for growth rate inhibition in green algae (Dow 1988, Table 3-2). An uncertainty factor of 100 was applied to adjust the acute NOEC to be representative of chronic effects, because no data were available to clarify the potential difference in effects between acute and chronic exposures. Therefore, the Panel's HAPs assessment (CMA 1997) employed a TRV of 1.25 mg/L for evaluating risk to aquatic plants.

In the absence of any available studies of EGBE toxicity in wildlife, the small mammal TRV was derived from the 91-day drinking water study in female Fischer rats, which was also used in the IRIS assessment that was available at that time (EPA 1999a) to develop the human oral RfD for EGBE. The chronic LOAEL for this study was 59 mg/kg BW-day (Appendix A-2).[y] The rat chronic LOAEL was divided by a uncertainty factor of three to adjust for the absence of a NOAEL, to derive a TRV of 20 mg/kg BW-day for small mammals (CMA 1997).

Dividing the surface water concentration predicted by Mackay Level III modeling (0.00135 mg/L) by the aquatic TRV (1.25 mg/L) yielded an HQ of 0.0012. For small mammals, the predicted dose of 0.203 mg/kg BW-day was divided by the TRV of 20 mg/kg BW-day, to yield an HQ of 0.01. HQs less than 1.0 indicate that ecological effects are unlikely to occur. Thus, the Panel's HAPs assessment (CMA 1997) concluded that EGBE was unlikely to pose significant ecological risk under current or future uses.

8.1.2 EPA ERAs

The EPA HAPs ERAs (Cadmus 2000a, b) narrowed the assessment endpoints selected by CMA (1997) to some degree, selecting the following receptors for their analysis: (1) aquatic microorganisms in waters receiving atmospheric emissions of EGBE from nearby large sources and (2) small mammals with home ranges located immediately downwind of large sources of EGBE emissions. These endpoints are inherently more conservative than those employed by the earlier Panel assessment because they focus on those organisms that are in the immediate vicinity of EGBE emissions. EPA employed a tiered approach, wherein the first tier of analysis was intentionally very conservative. The Tier 1 ERA was not designed to generate a definitive

[y] The chronic LOAEL used to calculate the RfD differs slightly form the published LOAEL in the original study (82 mg/kg BW-day; NTP 1993) and presented in Appendix A-2 because IRIS (EPA 1999a) used water consumption rates and female body weights measured during the last week of exposure to calculate dose.

conclusion regarding potential ecological risks. Rather, it was intended to screen out those scenarios that clearly do not present concern.

8.1.3 Tier 1 ERA

EPA's application of the Mackay model differed somewhat from that used in the Panel's HAPs analysis. In particular, for Tier 1, EPA used the Level I Mackay model to determine the equilibrium distribution of EGBE in a model environment with 1,000 kg of EGBE emitted to the air. The Level I model does not account for any advection or degradation reaction losses of EGBE, and it predicted that more than 99% of the EGBE released to the model environment partitioned to water. The predicted air concentration was 0.000000423 mg/m^3, the predicted water concentration was 0.000497 mg/L, and the predicted soil concentration was 0.000024 mg/kg (Cadmus 2000b).

Because the assumed EGBE release rate used in the EPA Tier 1 assessment (1,000 kg) is arbitrary and unrelated to actual releases, the exposure concentrations were scaled as a function of both the distribution of EGBE determined from the Level I Mackay model and the predicted maximum annual average concentration of EGBE from the highest emitter in the 1993 TRI. The predicted maximum annual average concentration (0.327 mg/m^3) was 773,050 times greater than the air concentration (4.23×10^{-7} mg/m^3) predicted by the Level I Mackay model using the arbitrary release of 1,000 kg. The predicted water and soil concentrations were converted to concentrations that would be in equilibrium with the maximum annual average concentration at or beyond the fenceline, by multiplying each Mackay Level I modeled concentration by 773,050. This assumption is unrealistically high by a very large margin because maximum annual average air concentrations were calculated by assuming no interchange between EGBE in air, soil, or water. The Mackay model indicates that EGBE preferentially partitions to soil and water from air, which would dramatically lower maximum annual average concentrations at or beyond the fenceline. This assumption is also unrealistic because it does not account for the effect of dilution of air concentrations over time or space. The concentrations used in the EPA Tier 1 assessment (Cadmus 2000b) are presented in Table 8-2.

The equilibrium water concentration listed in Table 8-2 was used to evaluate exposure of aquatic microorganisms to EGBE. For small mammals, EPA's Tier 1 ERA used the meadow vole (*Microtus pennsylvanicus*) rather than the deer mouse, because the vole's diet has a higher proportion of plants and thus would likely have higher exposures to EGBE (Cadmus 2000b). In addition to dietary and drinking water pathways, the inhalation pathway for small mammals was evaluated. Exposure factor values and the dose equation were drawn from EPA (1993a) wildlife exposure assessment guidance, resulting in an estimated dose of 163.8 mg/kg BW-day for the meadow vole.

The lowest relevant toxicity value identified in the EPA Tier 1 assessment (Cadmus 2000b) for aquatic microorganisms was for the protozoan *Endosiphon sulcatum*, which experienced inhibition of cell multiplication following a 72-hour acute exposure to 91 mg/L. An acute-to-chronic uncertainty factor of 100 was applied to derive a TRV of 0.91 mg/L for aquatic

microorganisms. For small mammals, the EPA Tier 1 assessment adopted the same TRV developed by the Panel, 20 mg/kg BW-day. The resulting Tier 1 HQ for aquatic microorganisms was 422, while the Tier 1 HQ for small mammals was 8.2. Therefore, EPA concluded that additional ecological evaluation for both receptors was warranted and proceeded with a Tier 2 ERA.

8.1.4 Tier 2 ERA

The EPA Tier 2 ERA (Cadmus 2000a) evaluated the same assessment endpoints and pathways considered in the Tier 1 ERA; however, several of the unrealistic assumptions used in the Tier 1 assessment were replaced with more plausible estimates of exposure and effects. The Mackay Level III model was used to determine the equilibrium distribution of EGBE in a model environment with 1,000 kilograms per hour (kg/hr) of EGBE emitted to the air. Because advection and degradation reactions are accounted for in the Level III model, the predicted equilibrium concentrations were considerably lower than the Tier 1 model predictions. The predicted air concentration was 5.89×10^{-5} mg/m^3, the predicted water concentration was 6.56×10^{-4} mg/L, and the predicted soil concentration was 1.19×10^{-2} mg/kg (Cadmus 2000a). Because the assumed release rate (1,000 kg/hr) was arbitrary, it was again necessary to scale the predicted concentration based on the maximum annual average concentration predicted from the 1993 TRI (0.327 mg/m^3). The resulting concentrations, listed in Table 8-2, were used in the Tier 2 exposure assessment.

A water concentration of 3.64 mg/L (Table 8-2) was used to evaluate exposure of aquatic microorganisms to EGBE. The exposure model for the meadow vole (EPA 1993a) was used to estimate small mammal exposure to EGBE, yielding an estimated dose of 2.15 mg/kg BW-day.

For the Tier 2 effects assessment, EPA applied an acute-to-chronic uncertainty factor of 10 to the lowest relevant toxicity value of 91 mg/L, yielding a TRV of 9.1 mg/L for aquatic microorganisms. For small mammals, the same TRV (20 mg/kg BW-day) used in the Panel ERA and EPA's Tier 1 ERA was also applied in the Tier 2 ERA. The Tier 2 HQ for aquatic microorganisms was 0.40 and the Tier 2 HQ for small mammals was 0.11. Because both HQs were less than 1, the ERA conducted on behalf of EPA concluded that ecological risks due to exposure to EGBE are unlikely (Cadmus 2000a). When EPA evaluated these results in the HAPs delisting determination, it found the water concentration of 3.64 mg/L predicted in the Tier 2 ERA to be a "worst-case estimate" that would not be approached in communities near EGBE-emitting facilities, "because numerous variables were not taken into consideration that, if considered, were likely to reduce estimates of EGBE in water" (68 FR 65653 [EPA 2003]).

8.2 Updated ERA

For this petition, the previous HAPs ERAs were updated to reflect more realistic assumptions related to EGBE fate and transport in environmental media, current data on EGBE releases, and recent publications on EGBE ecotoxicity.

8.2.1 Problem Formulation

The assessment endpoints selected for this ERA were (1) sustainability of aquatic populations and communities and (2) sustainability of small terrestrial mammal populations. As detailed below in the effects assessment, because the aquatic organism TRV was selected based on the most sensitive aquatic species tested, the first assessment endpoint is considered protective of all types of aquatic organisms. Thus, it is not necessary to limit this endpoint to aquatic plants (as had been done in the Panel's HAPs assessment [CMA 1997]) or aquatic microorganisms (as had been done in the EPA HAPs ERAs [Cadmus 2000a,b]). As in the previous ERAs, the selected assessment endpoints were evaluated based on HQs, which are equal to the ratio of the estimated exposure concentration (or dose) to the TRV.

As in the EPA HAPs analyses, this ERA used meadow voles to represent small terrestrial mammals, given their expected higher exposures compared to other small mammal species. The same pathways used in the previous ERAs were also used in this analysis. Therefore, aquatic organism exposure was evaluated based on estimated surface water concentrations, and small terrestrial mammal exposure was evaluated based on the same exposure model used by the EPA HAPs analyses, considering the exposure pathways of inhalation and direct ingestion of soil, water, and food.

8.2.2 Exposure Assessment

The Mackay Level III fugacity model (EQC v2.02; CEMC 2003) was used to estimate the distribution of EGBE in air, water, and soils based on 2009, 2010, and 2011 TRI release data. Four types of releases of Certain Glycol Ethers were applied to the model: (1) point and fugitive air emissions; (2) releases directly to surface water; (3) onsite land treatment and other land releases; and (4) transfers off site for land treatment and other land disposal. These reported releases were used to estimate national release rates (in kg/hr) to air, water, and soil. Although EGBE comprises less than 50% of all ethylene glycol ethers consumed in the United States (SRI 2010), it was conservatively assumed to make up 100% of Certain Glycol Ethers reported by TRI as released in 2009, 2010, and 2011. National release rates from 2009, 2010, and 2011 were used to model the distribution of EGBE in air, water, and soil within the modeled area (100,000 km^2). That is, it was assumed that all Certain Glycol Ethers released nationwide in 2009, 2010, and 2011 were actually EGBE and were actually released within an area the size of the state of Ohio. While these assumptions are clearly conservative, because they are not arbitrary (i.e., they are based on actual release data), they require substantially less extrapolation and therefore introduce considerably less uncertainty compared to those applied in the EPA ERAs. Table 8-1 lists the 2009, 2010, and 2011 release rates used in the model. With the exception of the updated release rates, input parameter values used in the Level III model (Table 8-3) were consistent with those used by EPA (Cadmus 2000a). The predicted air, water, and soil concentrations based on 2009, 2010, and 2011 release rates are presented in Table 8-2.

Because the equilibrium air, surface water, and soil concentrations were highest in 2010, all ecological risk assessment calculations were conducted based on the 2010 TRI release data.

The predicted equilibrium water concentration (1.98 x 10^{-4} mg/L) of EGBE was used to evaluate exposure of aquatic organisms. Exposure of small terrestrial mammals to EGBE was estimated based on inhalation and direct ingestion of soil, water, and plants using the same total daily intake (TDI) equation and input values used by EPA (Cadmus 2000a) for meadow voles:

Eqn. 6

$$TDI = (C_a \times IR_a \times 3) + (C_w \times IR_w) + IR_{diet} \sum_{i=1}^{N} (C_i \times P_i)$$

where:

C_a = concentration of EGBE in air (mg/m^3)
IR_a = inhalation rate (cubic meters per kilogram body weight per day or m^3/kg BW-day)
C_w = concentration of EGBE in water (mg/L)
IR_w = water ingestion rate (kilograms per kilogram body weight per day or kg/kg BW-day)
IR_{diet} = total food ingestion rate (kg/kg BW-day)
C_i = concentration of EGBE in diet item i (mg/kg)
P_i = proportion of diet made up by diet item i (unitless)

In this equation, consistent with EPA (1993a) wildlife exposure assessment guidance and EPA's HAPs ERA for EGBE (Cadmus 2000a), the inhalation rate was multiplied by three to account for the inhalation rates derived in the laboratory, rather than from field metabolic rates. EPA (1993a) guidance recommends adjusting inhalation rates upwards by a factor of two to three to estimate rates expected in the wild. The values used for each of these parameters are presented in Table 8-4. The resulting EGBE dose for small terrestrial mammals is predicted to be 0.029 mg/kg BW-day.

8.2.3 Effects Assessment

The toxicity data compiled for aquatic organisms in Table 3-2 were reviewed to determine whether the TRVs used in the HAPs ERAs warrant updating. Because aquatic toxicity data are available for a variety of aquatic species representing a range of taxa and trophic levels (Table 3-2), a species sensitivity distribution approach was used for the aquatic organism effects assessment. The species sensitivity distribution approach can be used when toxicity values for the same endpoint (i.e., mortality) are available for a range of species. The advantage of this approach is that it incorporates all available toxicity data rather than relying on a single critical study. It is not possible, however, to use a species sensitivity distribution approach for the terrestrial mammalian effects assessment, because the available laboratory mammal toxicity data cover many different endpoints, but only a few species. Therefore, this assessment relies on the same TRV approach to assess potential risks to terrestrial mammals as used in the Panel and EPA HAPs ERAs. The following two subsections further detail the effects assessments for aquatic organisms and terrestrial mammals.

8.2.3.1 Aquatic Species Effects Assessment

Acute toxicity tests have been conducted on a variety of aquatic species (Table 3-2). Therefore, rather than relying on a single critical study, a species sensitivity distribution approach is used to assess potential effects to all aquatic organisms. Species sensitivity distributions have been used in previous ERAs (Solomon et al. 1996, Hall et al. 1998), they are included in the EPA guidance for ERAs (EPA 1998b), are implicit in EPA's derivation of ambient water quality criteria (Stephan et al. 1985, Fisher and Burton 2003), and they are the focus of a book reviewing their use in ecotoxicology in North America and Europe (Posthuma et al. 2002). In short, the approach is well tested and well accepted by the scientific and regulatory communities alike.

Species sensitivity distributions incorporate toxicity data from all species tested for similar endpoints (e.g., LC_{50} findings) into a distribution showing the percent of organisms that are affected at various chemical concentrations. The distribution of toxicity values can then be easily compared to environmental concentrations to determine the percent of species likely to be affected at the observed or predicted environmental concentrations.

Acute species sensitivity distributions were compiled from the aquatic vertebrate and invertebrate values presented in Table 3-2. For consistency across species, the following rules were adapted from EPA guidance on calculating ambient water quality criteria (Stephan et al. 1985) for selecting toxicity values to incorporate into the acute species sensitivity distribution:

- Endpoint – Only LC_{50} determinations were included.
- Exposure duration – With one exception, values derived from 96-hour exposures were preferred for most species. Per Stephan et al. (1985), 48-hour exposures were preferred for *Daphnia* sp. If values derived from 96-hour exposures were not available for a given species, 72-hour or 48-hour exposures were used.
- Species weighting – Rather than using the geometric mean of multiple acute values for a given species to obtain a species mean acute value (in accordance with Stephan et al. 1985), each acceptable acute value for a species was retained as a discrete point in the distribution. Acute values were then weighted by the number of tests per species to account for intraspecies variability, using methods described by Duboudin et al. (2004b).

Chronic toxicity values were available for seven species of aquatic vertebrates and invertebrates (Table 3-2) and the lowest chronic value (7.2 mg/L, rotifer) was greater than the lowest acute value (5.4 mg/L, grass shrimp). As discussed in Section 3.3 above, questions have been raised about the validity of the toxicity finding in the grass shrimp. Because the species sensitivity distribution generated from the chronic toxicity data incorporated fewer species and did not include values for the most sensitive species from the acute data, a more conservative approach was used to generate a chronic species sensitivity distribution, as follows.

Duboudin et al. (2004a) present a method for extrapolating chronic species sensitivity distributions for chemicals with limited chronic toxicity data by using the acute species sensitivity distributions for vertebrates and invertebrates (Figure 8-1). The acute species sensitivity distributions are used to calculate means and standard deviations for chronic vertebrate and

invertebrate species sensitivity distributions, based on empirical relationships between the acute and chronic toxicity distributions for 25 representative chemicals (Duboudin et al. 2004a). The calculated chronic distribution means and standard deviations for vertebrate and invertebrate species are then used to calculate chronic values from each of the acute toxicity values, thus populating the chronic species sensitivity distributions for vertebrates and invertebrates (Table 8-5). The calculated vertebrate and invertebrate chronic toxicity values are then combined with any algae or microbe toxicity data that might be available for the chemical, in order to generate a chronic species sensitivity distribution representative of all aquatic organisms (Duboudin et al. 2004a). The vertebrate and invertebrate acute species sensitivity distributions and the chronic species sensitivity distribution for all aquatic organisms for EGBE are presented in Figure 8-2.

The chronic species sensitivity distribution was used to assess effects to aquatic organisms by using the distribution to determine the EGBE surface water concentration that is predicted to protect at least 80% of aquatic organisms. Because the acute to chronic distribution relationship was established using LC_{50} findings for acute values and NOECs for chronic values (Duboudin et al. 2004a), the calculated chronic values for aquatic organisms (Table 8-5) represent predicted NOECs following chronic exposures. Therefore, the 80th percentile of the calculated chronic species sensitivity distribution represents the concentration at which no chronic effects (e.g., growth or reproduction) occur in at least 80% of the species tested. The 80th percentile of the no effect distribution was selected for this assessment based on a review of regulatory precedents to establish minimum acceptable ecological effect levels for remedial decisions at hazardous waste sites (Suter et al. 1995). Twenty percent was determined to be the minimum detectable effect level in the chronic and subchronic toxicity tests and field-based bioassessment protocols that are typically used to detect effects in ecological endpoints (Suter et al. 1995). One advantage of the species sensitivity distribution approach, however, is that any percentile can be readily identified and used, depending upon the degree of protection preferred. For example, ambient water quality criteria are derived based on the 95th percentile of the acute effect distribution (Stephan et al. 1985, Fisher and Burton 2003), while the 90th percentile of chronic effect distributions has been used in several ERAs (Klaine et al. 1996, Solomon et al. 1996, Hall et al. 1998). The 80th percentile of the no effect chronic distribution is 8.7 mg/L (Figure 8-2). While this value is used to evaluate risks to aquatic organisms in Section 8.2.4, the effect of using the 90th and 95th percentiles is also discussed.

8.2.3.2 Mammalian Effects Assessment

Several EGBE toxicity studies in laboratory mammals have been released since the last compilation of toxicity values (ATSDR 1998), but few provide relevant endpoints for ERA (Appendix A-2). As discussed above, due to its low K_{ow} and relatively short atmospheric half-life, EGBE released into the environment partitions into surface water (Section 8.1.2, Table 8-3). Therefore, laboratory mammal toxicity studies focusing on inhalation, injection, or in vitro routes of exposure do not represent environmental exposure to EGBE for small mammals. The results from three drinking water studies have been published since the ATSDR (1998) compilation was issued (Appendix A-2). One is an acute toxicity study on F344 rats where a LOAEL for

histopathological effects of 250 mg/kg BW-day is reported after two to four doses (Nyska et al. 2003); the second is from a single dose mortality study with guinea pigs where an LD_{50} of 1,414 mg/kg BW is reported (Gingell et al. 1998); and the third is from a multigenerational chronic study with mice where the LOAEL for mortality, growth, and reproductive effects was 10,000 mg/kg BW-day (Lamb et al. 1997). The first two acute studies do not provide an appropriate representation of environmental exposures to EGBE and all three studies present toxicity values much greater than the toxicity value that is the basis for EPA's RfD. In addition, none of the other oral exposure studies (e.g., oral gavage) provide a more sensitive toxicity value than the basis for the RfD (Appendix A-2). Therefore, this assessment uses the same small mammal TRV (20 mg/kg BW-day) applied in the previous HAPs ERAs. However, in light of the Lamb et al. (1997) study, this TRV is certainly conservative.

8.2.4 Risk Characterization

HQs were calculated to evaluate ecological risks using the equation below:

Eqn. 7

$$HQ = Exposure / TRV$$

Based on 80th percentile, the HQ for aquatic organisms is 0.00002, indicating that they are not likely to be at risk from the highly conservative EGBE exposure scenario presented above. Based on the 95th and 90th percentiles, the HQs for aquatic organisms are 0.00005 and 0.00009, respectively. Similarly, the HQ for small mammals was 0.001, indicating that they also are not likely to be at risk, even under the conservative assumptions used in this exposure scenario.

Both calculations reflect a high margin of safety because the HQs are much less than 1. For example, surface water concentrations would have to be more than 10,000 times higher than was predicted using the Mackay Level III model in order for exposures to approach the 80th percentile of the chronic species sensitivity distribution for aquatic organisms. Similarly, the dose to small mammals would have to be 300 times higher in order for exposures to approach the mammalian TRV.

The many conservative assumptions used to determine EGBE distribution, toxicity, and exposure further contribute to the margin of safety provided by this ERA. For example, in the Level III Mackay model, the total 2010 national emission rates for Certain Glycol Ethers were applied to a default model area approximately the size of the state of Ohio. Although the equilibrium distributions based on the 2009 and 2011 national emissions were also modeled, the equilibrium concentrations from the 2010 were used in the ERA because they were the highest from the three most recent years. In addition, the modeled area is 100,000 km^2 (Mackay et al. 1992) which is approximately 1.3% of the size of the continental United States. Because the modeled area is based on a default value, the modeled concentrations are expected to overestimate actual ambient concentrations, by up to three orders of magnitude.

In addition, although EGBE makes up only about half of the ethylene glycol ethers consumed in the United States, all releases of Certain Glycol Ethers in the TRI were conservatively assumed to be EGBE. Thus, the ERA was based on the conservative assumption that EGBE consumption is two-fold higher than most recent data suggest (SRI 2010).. Uncertainty is also potentially contributed to this analysis through the selected TRVs. The 80th percentile from the calculated chronic species sensitivity distribution was used for the aquatic organism TRV in this assessment. Although the 80th percentile of the no effect distribution is believed to be the most appropriate effect level for evaluating population and community level effects, it is worth noting that using the 95th percentile (2.3 mg/L) or the 90th percentile (4.2 mg/L) would only slightly increase the HQ for aquatic organisms. In addition, because the Duboudin et al. (2004a) method for extrapolating chronic species sensitivity distributions from acute distributions is still being evaluated for a variety of chemicals, it is worth noting that the TRV derived from the 80th percentile of the chronic species sensitivity distribution in this analysis is generally comparable to the TRVs used in the HAPs ERAs: 1.25 mg/L (CMA 1997), 0.91 mg/L (Cadmus 2000b), and 9.1 mg/L (Cadmus 2000a). Aquatic HQs calculated using the TRVs employed by the Panel (CMA 1997) and in EPA's Tier 1 and 2 assessments (Cadmus 2000a,b) would be 0.0002, 0.0002, and 0.00002, respectively. Therefore, using any of the TRVs from the previous ERAs would not significantly change the HQ for aquatic organisms calculated above.

8.3 Conclusions

Potential ecological risks posed by EGBE are the subject of three separate ERAs—the Panel's HAPs ERA (CMA 1997), EPA's HAPs ERA (Cadmus 2000a, b; EPA 2003, 2004a), and the analysis presented in this petition. Each assessment is consistent with EPA modeling and exposure assessment guidance and founded on highly conservative assumptions about EGBE distribution, toxicity, and exposure. The findings of all three assessments support the conclusion that EGBE does not meet the ecotoxicity listing criteria in Section 313(d)(2)(C). The Panel's HAPs analysis found no evidence of risk to aquatic plants or small terrestrial mammals from EGBE using national emissions data from the 1996 TRI when glycol ether emissions were almost double their current levels. The EPA HAPs analyses used what the Agency has called "worst-case" assumptions about EGBE mixing in the environment downwind of the facility with the highest glycol ether emissions in the country, but nevertheless found no evidence of risk to aquatic microorganisms and small terrestrial mammals. The updated assessment presented in this petition blends the most scientifically sound methods and assumptions from the previous analyses with updated emissions and ecotoxicological data and the more conservative assumption that EGBE represents 100% of reported releases of Certain Glycol Ethers. Like its predecessors, this ERA finds no evidence of adverse effects in aquatic organisms or small mammals from facility releases of EGBE. The margins of safety associated with the HQs generated in this ERA are sufficiently large to ensure that adjustments to individual input values (such as those related to the concentration of EGBE in surface water and the TRV) will not

change the conclusion of this ERA that EGBE is not expected to cause significant adverse environmental effects.

9.0 SUMMARY AND RATIONALE FOR DELISTING EGBE

The case for removing EGBE (CAS 111-76-2) from the EPCRA TRI reporting list is straightforward and compelling. The available scientific data indicate that EGBE poses a low potential for adverse human health and environmental effects, thus making an exposure assessment appropriate under EPA's interpretation of the TRI listing criteria in Section 313(d)(2) of EPCRA. This petition uses essentially the same protective health and environmental criteria and is consistent with the conservative exposure assessment methods that formed the basis of the Agency's HAPs delisting decision. Because emissions of EGBE are about half the levels evaluated in the HAPs delisting decision, EPA's HAPs findings that EGBE releases may not reasonably be anticipated to cause any adverse effects to the human health or the environment have an even stronger basis in the context of this petition.

In addition, the policies and goals of the TRI program would be well served by deleting EGBE from the EPCRA Section 313 reporting list. EPA's policy of ensuring consistency with other Agency decisions should be highly influential here, particularly in light of the confusion—and the concomitant potential for misdirected community priorities—that currently exists because EGBE has been found not to be "hazardous" under the CAA but remains on the EPCRA list of chemicals deemed to be "toxic" based on essentially identical statutory criteria. In this instance, misdirected local priorities can have real environmental consequences. Because EGBE is an effective cosolvent for water-based coatings, inks, and similar products, removing it from the TRI list would eliminate the disincentive that currently exists under EPCRA to its use in formulations that have substantial VOC-reduction benefits as compared to many other solvents.

9.1 Delisting EGBE Is Fully Consistent with EPCRA's TRI Listing Criteria as Interpreted by EPA

Section 313(d) of EPCRA calls for the delisting of a chemical where "there is not sufficient evidence to establish" that the chemical "is known to cause or can reasonably be anticipated to cause" any of three types of effects:

> (A) significant adverse acute human health effects;
>
> (B) (i) cancer or teratogenic effects, or (ii) serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutations, or other chronic health effects; or
>
> (C) a significant adverse effect on the environment of sufficient seriousness, in the judgment of the Administrator, to warrant reporting under EPCRA.

As EPA has interpreted these criteria (59 FR 61432 [EPA 1994a]), exposure may be considered for chronic human health and environmental effects if a substance exhibits "low to moderately low toxicity based on a hazard assessment," so that "unrealistic exposures would be necessary for it to pose a risk to communities." As detailed in the qualitative hazard evaluation presented in Section 3 above and summarized in Table 9-1, EGBE's potential to cause adverse

human health or environmental effects is appropriately assessed as low under EPA's hazard assessment criteria for TRI listing determinations.

With respect to potential adverse chronic human health effects, EPA has determined that hemolysis is the critical effect, and that prevention of hemolysis will protect against any other systemic effect potentially associated with EGBE exposure (Section 3.2). The scientific data show, moreover, that humans are resistant to the hemolytic effects of EGBE (Section 3.2.1.3). The PBPK model used in the IRIS assessment (Corley et al. 1994) predicts that, even in humans exposed continuously by inhalation to an EGBE-saturated atmosphere, maximum blood concentrations of EGBE's toxic metabolite (BAA) would be well below the level needed to produce hemolysis in humans (Udden 2002, EPA 2010). Likewise, even minor prehemolytic effects are not expected to occur in humans from ingestion exposures in excess of 500 mg/kg BW-day. Such inhalation and ingestion doses are not realistically expected to occur in the vicinity of EGBE-emitting facilities, where empirical and modeling-based estimates of air and surface water concentrations are many orders of magnitude below such exposures. (See Section 3.4.1 and Table 9-1).

EGBE's potential to cause significant adverse ecological effects is likewise appropriately evaluated as low under EPA's TRI hazard assessment criteria and past listing decisions. EGBE exhibits low potential for persistence or bioaccumulation (Section 3.1). Consistent with the findings of a series of ecotoxicity reviews of EGBE (WHO 1998, 2010, Staples 1998, Devillers et al. 2002, Environment Canada 2002, INERIS 2006), EPA concluded in the HAPs delisting rulemaking that EGBE causes only "very minor" effects that "are unlikely to be ecologically significant" (68 Fed. Reg. 65657 [EPA 2003]). In addition to the absence of any impacts on ecosystems, the scientific data indicate that EGBE's limited adverse effects on aquatic organisms occur only at what EPA's TRI listing criteria consider to be high exposures, meaning that EGBE is properly evaluated as a low-toxicity chemical in terms of potential environmental effects (see Sections 3.3 and 3.4.2; Table 9-1).

Because EGBE "is of low toxicity and unrealistic exposures would be necessary for it to pose a risk to communities," EPA's interpretation of EPCRA's TRI listing criteria calls for the consideration of exposures in determining whether to grant this petition and delist EGBE (59 FR 61442 [EPA 2004a]). Potential human and environmental exposures to EGBE were studied intensively by EPA in the HAPs rulemaking. There, EPA stated it was "confident" that "the results are more likely to overestimate rather than underestimate true exposures and risks" and, accordingly, determined that "the potential for adverse human health and environmental effects to occur from projected exposures is sufficiently low to provide reasonable assurance that such adverse effects will not occur" (68 Fed. Reg. 65660 [EPA 2003]). As summarized in Table 9-2, there is an even stronger basis for making this finding here.

Specifically, the general approach and specific assumptions employed in the exposure assessment presented here (Sections 4 through 8) are consistent with those that the Administrator's HAPs delisting decision found to be appropriate and conservative. EPA determined in the HAPs delisting proceeding (68 FR 65651-52) that the EPCRA TRI database "provide[s] a reasonable representation of … EGBE emissions" and "an adequate basis for

dispersion modeling and … exposure assessment." Accordingly, nationwide exposure potential is assessed in Section 5 by developing an inventory of Certain Glycol Ether releases using 2009, 2010, and 2011 TRI data, applying the assumption, in the absence of facility-specific information to the contrary, that EGBE represents 100% of reported glycol ether releases. More importantly, because this petition is based on current TRI data showing that emissions have declined by more than half from the 1993 TRI data used in the HAPs delisting rulemaking, predicted exposures have fallen substantially from the levels EPA evaluated in the HAPs context.

As described in Section 6, every EGBE-emitting facility listed in the TRI database has been subjected to a screening process very similar to that used in the HAPs proceeding to determine whether any facility has the potential to have maximum annual average concentrations of EGBE greater than the IRIS RfC of 1.6 mg/m^3 at or beyond the fenceline. Despite the highly conservative assumptions used in the screening, no EGBE-emitting facility was found to have potential maximum exposures above the RfC. AERMOD modeling conducted to test the conservatism of the screening step predicts that the maximum annual average concentrations are likely to be approximately two orders of magnitude below the RfC (see Section 6.5). Similarly, potential cumulative impacts from clusters of smaller sources are separately evaluated in Sections 6.4 and 6.5 using a methodology more conservative than that used in the HAPs proceeding, and the results show predicted maximum annual average concentrations of EGBE resulting from clusters of smaller sources within the same zip code are well below the RfC. The key findings of the facility and cluster assessments appear in Table 9-2.

In addition to screening facilities for long-term exposures to EGBE, we also evaluated the potential for short-term exposures near EGBE-emitting facilities to cause acute human health effects, *viz.*, eye and upper respiratory tract irritation, which has been identified as the critical effect for short-term exposures. As discussed in Section 3.2.1.1, above, because of the relatively high insensitivity of human red blood cells to the hemolytic effects of EGBE, the lowest short-term exposure level at which such irritation effects have been reported is 550 mg/m^3, and no irritation effects have been observed at 97 mg/m^3. These concentrations are higher than the maximum annual average concentrations estimated above based on EPA modeling guidelines by factors of >3,000 and >500, respectively. There is, accordingly, a convincing basis to conclude that adverse acute effects from EGBE facility releases is unlikely. Nevertheless, six high-emitting facilities offering a reasonable approximation of "worst-case" acute exposures were screened using EPA's short-term modeling methods for HAPs (EPA 1992a). The results were evaluated against the NOAEL of 97 mg/m^3 in a MOE analysis. Predicted maximum 1-hour concentrations at or beyond the fencelines of all six facilities screened were far below the NOAEL based on Tier 2 and 3 modeling, with Tier 3 MOEs ranging from 25 to 198. These results, presented in Section 6.6 and summarized in Table 9-2, are more than adequate to support a finding that EPCRA's acute effects delisting criterion is met, because the NOAEL is derived from human data meaning, in accordance with EPA TRI listing decisions, that MOEs above 10 "indicate a low level of concern" for potential acute effects. As developed in Section

6.4, several additional considerations suggest strongly that the potential for acute effects is far lower than the MOE analysis indicates.

This petition also evaluates the potential for chronic health effects posed by human contact with EGBE in surface water, based on essentially the same conservative assumptions and models that EPA used in the HAPs evaluation, with updates to reflect: the estimated surface water concentration based on 2009, 2010, and 2011 TRI data, the current RfD, and changes in EPA (2004b) guidance for dermal risk assessment. As developed in Section 7, the worst-case dose—for residents that consume and bathe in impacted water year-round for 30 years—was estimated to be 0.00001 mg/kg BW-day. Dividing the dose by the RfD yields an HQ of 0.0001 (see Table 9-2).

To assess potential adverse environmental effects, Section 8 builds on the three ERAs conducted in the HAPs proceeding by applying 2009, 2010, and 2011 TRI data to the Mackay Level III fugacity model to yield updated estimates of the maximum surface water concentration. Applying an updated TRV for aquatic organisms identified in a supplemental review of the ecotoxicity literature for EGBE, the ERA presented in this petition predicts HQs of 0.00002 for aquatic organisms and 0.001 for small mammals. (See Table 9-2.)

The results of these assessments show that estimated EGBE exposures in the vicinity of emitting facilities anywhere in the United States are well below the IRIS RfC and RfD for inhalation and dermal/ingestion exposures as well as appropriate ecological TRVs. All HQs generated by the exposure assessments developed for this petition are well below 1.0 and even lower than the HQs that led EPA to find in the HAPs delisting proceeding that releases of EGBE may not reasonably be anticipated to cause adverse human health or environmental effects. Because this petition uses assessment methods consistent with those EPA found appropriate and conservative in the HAPs case, there is an even stronger basis for making the same determination here.

9.2 Substantial Conservatism is Incorporated into Every Primary Element of the Toxicological, Exposure, and Ecological Assessments Presented in this Petition

The HQs estimated in this petition are overstated by at least three to five orders of magnitude because of the substantial conservatism built into every principal part of HHRA and ERA presented here, as summarized in Table 9-3 and discussed below.

9.2.1 IRIS Reference Values

In general, IRIS reference values are conservative criteria establishing a “daily exposure to the human population, including sensitive subgroups, that is likely to be without an appreciable risk of deleterious effects during a lifetime” (EPA 2010). As discussed in Section 4.2 above and summarized in Table 9-3, the specific IRIS RfC and RfD values that EPA derived for EGBE should provide ample protection against acute human health effects and reflect several significant elements of conservatism that likely render them significantly lower than necessary to protect against chronic health effects.

First, both the RfC and RfD were based on hemolytic effects in rats and, although the available data indicate that humans are 100 times less sensitive to the hemolytic effects of EGBE (see Section 3.2.1.3), the IRIS assessment uses interspecies uncertainty factors of 1 (ingestion) and 3 (inhalation) in deriving the reference values. The IRIS values therefore may reflect an additional safety margin of 100 to 300, and the available scientific data suggest that they may be far below exposure levels that would be fully protective of human health (EPA 2010).

Second, both the RfC and RfD incorporate an intraspecies uncertainty factor of 10 (EPA 2010). This factor is probably unnecessarily high by a factor of 3 to 10, because investigations of population groups that might be expected to show increased sensitivity to hemolytic effects of EGBE (including the young, the old, and individuals with sickle cell anemia or hereditary spherocytosis) do not show increased susceptibility.

Third, although the RfC is developed to be protective of continuous exposures over a human lifetime, the air concentrations that are compared to the RfC in the analysis are maximum predicted annual average concentrations. Concentrations averaged over a 70-year lifetime would be expected to be considerably lower than maximum annual averages, although the degree of conservatism contributed by this assumption cannot be quantified.

Finally, although the 2010 IRIS assessment finds “limited” evidence of potential carcinogenicity from rodent studies, subsequent mechanistic studies have led EPA to conclude that, even if the limited tumor findings in rodents are relevant to humans, the current RfC and RfD provide adequate protection against any such risk. Therefore, any uncertainties relating to the limited animal carcinogenicity data evaluated in the IRIS assessment have been eliminated and should not be significant considerations in an up-to-date assessment of human health risks.

9.2.2 Exposure Assessments

As developed in Sections 5, 6, and 7 of this petition and as summarized in Table 9-3, the models and assumptions used in the human inhalation and surface water exposure assessments presented in this petition reflect several significant elements of conservatism.

First, the inventory developed here (Section 5) assumes that all releases of Certain Glycol Ethers reported in the TRI database are EGBE, unless facility-specific information to the contrary is available. Because EGBE comprises 52% of United States annual consumption of glycol ethers (SRI 2010), the inventory’s assumption that all releases of Certain Glycol Ether are EGBE (in the absence of facility-specific information to the contrary) generally overstates EGBE releases by a factor of two.

Second, the chronic screening approach used in this petition (Section 6) predicts maximum annual average concentrations of EGBE for every emitting facility in the United States required to file Form R reports under TRI. Similarly, the acute screening approach predicts the maximum 1-hour average concentration of EGBE at facility fencelines. As EPA observed in the HAPs proceeding, the “use of the maximum annual average ambient concentration for each emission source to characterize the exposed population provides a conservative approach to chronic exposure modeling” and “[g]iven the likely proximity of inhabitable areas and the

variability of human activity patterns over an annualized time period, it is our expectation that actual maximum individual exposure would be at least a factor of 2 less than predicted by the models" (68 FR 65653 [EPA 2003]).

Third, the conservatism built into the screening procedure is evident when a subset of those facilities that screened out at Step B was subjected to Tier 1, 2, and/or 3 analyses. On average, the maximum annual average concentrations decreased by 99.3% when the same facility that was first evaluated under Step A was subsequently evaluated under Tier 3. That is, the maximum predicted annual average concentration generated under the more robust Tier 3 modeling was more than two orders of magnitude lower than that generated by the most conservative Step A screen. The Step B screen yielded maximum predicted annual average concentrations that were, on average, more than 26-fold higher than those generated using Tier 3 modeling.

Fourth, our assessment of potential acute health effects, based on (1) the NOAEL of 97 mg/m^3 derived from human data and (2) the estimated reasonable worst-case estimated maximum hourly average concentration, resulted in acute MOEs of over 5. An MOE above 5 is protective because the NOAEL is based on human data, EPA AEGL guidance calls for an interspecies uncertainty factor from 3 to 10 for nonsystemic irritation effects, and an appropriate time-adjustment would support an estimated 1-hr NOAEL of 137 mg/m^3, over 40% higher that the value used in the MOE derivation.

Fifth, EPA found that the modeling and assumptions used to assess ingestion and dermal exposures arising from EGBE in surface water levels were conservative and the maximum exposure estimates developed using the Agency's model, shown in Table 7-5, represents a worst-case exposure scenario (68 FR 65653-54). In addition, exposure point concentrations in surface water were calculated by assuming that 100% of releases of Certain Glycol Ethers to all media were EGBE and were concentrated into 100,000 km^2. In reality, because EGBE represents 52% of the market share of ethylene glycol ethers, actual releases of EGBE are likely overestimated by two-fold. Because the 100,000 km^2 unit area represents 1.3% of the total land area of the United States, actual concentrations may be overestimated by up to two orders of magnitude.

9.2.3 Ecological Risk Assessment

The ERAs previously conducted in the HAPs delisting proceeding and the updated ERA prepared for this petition conclude that EGBE concentrations are three or more orders of magnitude lower than highly protective levels of ecotoxicological concern (Section 8). In addition, EPA noted in the HAPs delisting decision that the TRVs used in the ERA "were derived from very minor effects which were unlikely to be ecologically significant" (68 FR 65657 [EPA 2003]).

As noted above, the exposure point concentrations in surface water are likely overestimated by up to 150-fold, due to the assumptions that 100% of releases of Certain Glycol Ethers to all media are EGBE and are concentrated into 100,000 km^2 (an area that is approximately 1.3% of the area of the United States). Conservative exposure assumptions

applied to the TDI calculation for small mammals are consistent with those employed in EPA's HAPs ERAs. Conservatism is also contributed by the TRVs for aquatic species (based on the most sensitive organism tested), and small mammals (based on the same underlying study used to generate the RfD, which may be too low by a factor of 50 to 100). Finally, as EPA found in the HAPs delisting decision, the evaluation of relatively nonsevere effects on individual organisms rather than effects that are likely to be ecologically significant at more complex levels of organization (population, community, ecosystem) contributes substantial conservatism to the ERA.

As summarized in Table 9-3, the above considerations, taken together, indicate that the already low HQs derived in Sections 6 through 8 and summarized in Table 9-2 may overstate potential chronic health and environmental risks of EGBE releases by as much as two to five orders of magnitude. Accordingly, the toxicity, exposure, and ecotoxicity assessments presented in this petition support an even higher level of confidence than EPA expressed in the HAPs delisting decision for the conclusion that there is "reasonable assurance" that "adverse human health and environmental effects" from EGBE facility emissions "will not occur."

9.3 In Light of the HAPs Delisting Decision, EPA's Policy of Ensuring Consistency with Other Agency Decisions Supports Removal of EGBE from the TRI Reporting List

EPA has emphasized the need to ensure that TRI listing decisions are consistent with "other EPA decisions on the same chemical, to the extent that such decisions relate to the same basic criteria for human health and the environment" (52 FR 5481 [EPA 1987a]). A policy of maintaining consistency across different environmental programs has long been in place at EPA, because it is essential to maintain the Agency's credibility as a scientific and regulatory body. But it has special significance here because, as developed below, the conclusion that EGBE should be removed from the TRI reporting list follows directly from the findings the Administrator made recently in the HAPs delisting.

CAA Section 112 calls for the removal of substances from the HAPs list where EPA finds that "there is adequate data on the health and environmental effects of the substance to determine that … the substance may not reasonably be anticipated to cause any adverse effects to the human health or adverse environmental effects." By its plain language, Section 112 places a higher burden on delisting decisions than does EPCRA Section 313. EPCRA calls for delisting where "there is not sufficient evidence to establish" that a chemical "can reasonably be anticipated to cause" the designated health and environmental effects. Section 112, in contrast, requires more than a finding that the data are "not sufficient" to establish the stated health and environmental findings. Section 112 requires "adequate data" "to determine that … the substance may not reasonably be anticipated to cause" adverse health or environmental effects.

Moreover, Section 112 requires a showing that a substance may not reasonably be anticipated to cause "any adverse effects to the human health." The CAA finding clearly encompasses the EPCRA human health delisting criteria in Section 313(d)(2)(A) & (B), which are limited to the specific health effects mentioned in the statute. Likewise, Section 112 requires

a demonstration that the substance to be delisted may not reasonably be anticipated to cause "adverse environmental effects," a test that is at least as broad, if not broader, than EPCRA Section 313(d)(2)(C), which refers to "a significant adverse effect on the environment of sufficient seriousness … to warrant reporting under this section."

In short, the Administrator's finding under Section 112 that EGBE "may not reasonably be anticipated to cause any adverse effects to the human health" or "adverse environmental effects" should be given at least heavy weight in applying the EPCRA delisting criteria to this petition unless, of course, significant changes in the relevant scientific and other data indicate that potential adverse human health and ecological risks are significantly greater than EPA found in 2004. This petition demonstrates that any such risks are far lower.

As demonstrated above, this petition is based on essentially the same exposure assessment methodology and ecological criteria that formed the basis for EPA's HAPs findings. The only significant differences between the scientific and factual record the Agency evaluated in the HAPs proceeding and the demonstrations made here are updates to human health criteria and use of the most recent TRI data available. Despite (i.e., 1%) growth in consumption since 1990 (SRI 2010), EGBE emissions have declined significantly as compared to the 1993 TRI data considered in the HAPs case, principally as a result of VOC emission control regulations and other environmental programs. Although the toxicity criteria have changed due to refinement of the data and modeling procedures used by EPA in deriving its RfD and RfC, as shown in Table 9-3, these criteria incorporate substantial levels of conservatism. Furthermore, the greater stringency in the toxicity criteria is more than balanced by the reduction in emissions and resultant human exposure such that predicted risks have decreased since the HAPs evaluation.

The human and environmental exposures conservatively estimated here are significantly lower than those EPA found appropriate to delist EGBE under Section 112. Consequently, EPA's determinations in the HAPs delisting proceeding, that EGBE releases "may not reasonably be anticipated to cause any adverse effects to the human health" or "adverse environmental effects," have an even stronger scientific and factual basis in the context of this petition under EPCRA. Further, the concurrent increase in consumption (+1%) and decrease in emissions (-70%) since 1993 suggests that the scientific basis for these findings would not be undermined even if current consumption and emission patterns of EGBE are taken into account.

9.4 Removing EGBE from the TRI Would Promote the Local Risk Management and Pollution Prevention Objectives of EPCRA

The purposes of EPCRA are to "to inform persons about releases of toxic chemicals to the environment; to assist governmental agencies, researchers, and other persons in the conduct of research and data gathering; [and] to aid in the development of appropriate regulations, guidelines, and standards" (42 U.S.C. § 11023(h)). Thus, the EPA TRI website (http://www.epa.gov/tri/whatis.htm) describes the objectives of the program as follows:

> One of Emergency Planning and Community Right-to-Know Act (EPCRA)'s primary purposes is to inform citizens of toxic chemical

> releases in their areas. EPCRA Section 313 requires EPA and the States to collect data annually on releases and transfers of certain toxic chemicals from industrial facilities and make the data available to the public through the Toxics Release Inventory (TRI)…..The goal of the Toxics Release Inventory Program is to provide communities with information about toxic chemical releases and waste management activities and to support informed decision making at all levels by industry, government, non-governmental organizations, and the public.

EPA has indicated elsewhere (59 FR 61443) that "[b]y listing chemicals that present a hazard and providing TRI data on these chemicals to the public, EPA allows the public to make the determination as to whether there is a risk in their community." As this passage indicates, the dissemination of accurate information on "chemicals that present a hazard" is critical to the success of the TRI program. An inventory that includes nonhazardous chemicals, particularly high-volume chemicals like EGBE, undermines the statutory goals by diverting the attention and resources of the public, regulatory officials, and researchers away from facilities and chemicals that should be the focus of local risk management and pollution prevention programs.

These considerations are significant in the case of EGBE. Many EGBE-using facilities, particularly can manufacturing plants, do not release reportable quantities of other TRI chemicals, including other chemicals in the "Certain Glycol Ethers" category. Nevertheless, as long as EGBE remains on the TRI, many of these facilities will continue to routinely appear on local and regional lists of "top toxics emitters" even though EPA has found that EGBE releases may not reasonably be anticipated to cause adverse human health or environmental effects. The contradictory signals that EPA is sending to local communities are confusing, undermine the credibility of the TRI program as a reliable source of information on toxic releases, and unfairly brand some EGBE-using facilities as major sources of "toxics."

VOC control considerations also support the delisting of EGBE from the TRI. Although it is now settled that EGBE's status as a VOC is not a sufficient basis for keeping it on the TRI reporting list,[z] facilities emitting EGBE remain subject to national and state/local emissions reporting and control programs under the ozone attainment provisions of Title I of the CAA. In fact, when EPA removed EGBE from the CAA HAPs list, it emphasized that it "will continue to be … regulated under EPA's criteria pollutant (ozone) program (69 FR 69321 [EPA 2004a]).[aa] Accordingly, removal of EGBE from the TRI reporting list should not adversely affect ozone attainment programs under Title I of the CAA.

Delisting EGBE may assist in achieving objectives of Title I. VOC emission control has long been a bedrock of EPA's ozone attainment strategy, particularly in consumer and

[z] American Chemistry Council v. Whitman, 406 F.3d 738, 742 (D.C. Cir. 2005).

[aa] EPA also indicated in the same passage that EGBE would continue to be listed on the TRI, but at that time the Agency continued to adhere to the position, since reversed on judicial review, that EGBE's status as a VOC is an adequate basis for listing on the TRI.

commercial products (EPA 1995, 2007). Although EGBE is a VOC, its physical characteristics support its use as a cosolvent for water-based formulations in many consumer and commercial coating products. In some applications, the switch to waterborne solvent formulations may reduce solvent content from up to 80% of the formulation to as little as 2% to 10%. EPA has often recognized that waterborne formulation, where commercially feasible, can contribute significantly to the ozone attainment objectives of the CAA. As recently as July 2007, the Agency emphasized that "water-based coatings are an environmentally friendly technology that we do not want to be lost as an option to manufacturers" (72 FR 38966 [EPA 2007]). EPA also has acknowledged that "it is important that manufacturers retain as much flexibility as possible" in developing reformulations that reduce the ozone-forming potential of their products while continuing to "meet the performance specifications required" (*ibid*.). The Agency has recognized, accordingly, the need to avoid regulatory measures that needlessly discourage manufacturers from using "environmentally friendly technologies" or unintentionally encourage the public, local regulators and manufacturers to use other solvents that may be toxic or highly reactive compounds that actually generate more ozone (*ibid*.).

As mentioned above, the primary goal of the TRI program, as EPA has put it, is to "empower" citizens and local regulators to "hold companies accountable" for releases of toxic chemicals, and to "make informed decisions about how toxic chemicals are to be managed." Maintaining EGBE on the TRI, particularly after the Agency has concluded that facility releases are not hazardous to human health or the environment, invites confusion and the concomitant potential for local decisions that actually impede the ozone attainment goals of Title I of the CAA. Conversely, removing EGBE from the TRI would eliminate an existing impediment to the replacement of solvent-based products with EGBE/water-based solvents with the potential to significantly lower overall VOC emissions. In short, as long as EGBE remains on the TRI, the Inventory cannot achieve its fundamental objective of providing accurate information that will enable business, regulators and the public to make environmentally sound decisions.

Significantly, the possibility of future increases in EGBE consumption—whether as a continuation of current favorable trends in favor of water-based solvents as a result of the removal of EGBE from the TRI reporting list or for other reasons—would not cast doubt, now or in the future, on the conclusion that facility releases of EGBE may not reasonably be anticipated to cause any adverse human health or adverse environmental effects. As discussed in Section 2.5, VOC emission limits, together with other potential factors such as corporate product stewardship programs, are likely responsible for the substantial (about 70%) reduction in EGBE emissions since the mid-1990s even while annual consumption increased through the 1990s and early 2000s (Figure 2-1). More recently, the national consumption of EGBE has stabilized and even declined. These factors keep to a minimum the potential for increased community exposures to EGBE in the future even if production or consumption rise in response to its removal from the TRI reporting list or for other reasons. In any case, the substantial conservatism built into very significant element of the toxicological, exposure, and ecological assessments presented in this petition—as measured by the two-to-five orders of magnitude overstatements in the HQs presented in Tables 9-2 and 9-3 above, render theoretical any

concern that future increases in EGBE production or consumption might justify a reevaluation of the determination that facility releases of EGBE may not reasonably be anticipated to cause any adverse human health or adverse environmental effects.

In conclusion, removing EGBE from the TRI reporting list is called for under the listing criteria of EPCRA Section 313(d)(2) as interpreted by EPA, is necessary to ensure consistency with other EPA programs (particularly the HAPs program), and would promote the objectives of the statute by encouraging increased use of a chemical with demonstrated environmental benefits without interfering with other federal or local environmental programs and policies. Accordingly, the Panel respectfully requests that the Administrator grant this petition and remove EGBE from the TRI reporting list.

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TABLES

Table ES-1. Key Findings of the Qualitative Hazard Evaluation

Toxicity Endpoint	Summary Evaluation and Principal Reference	
Acute Toxicity	Primary acute effects in humans are eye and nasal irritation at levels >500 mg/m^3 (Carpenter 1956); no irritation was found at current occupational exposure limits - 97 mg/m^3 (Johansen 1986). Facility fenceline and environmental concentrations are far lower.	
Chronic Toxicity	Releases of EGBE "may not reasonably be anticipated to cause any adverse effects to human health" (EPA, 69 FR 69322).	
Carcinogenicity	• "Limited" evidence of carcinogenicity in animals; the human carcinogenic potential of EGBE cannot be determined (IARC 2006). • Because nonlinear, nongenotoxic modes of action are likely responsible for the tumors observed in rodent studies, the IRIS RfD and RfC are adequately protective of any possible carcinogenic effects in humans (EPA Cancer Evaluation [EPA 2005a]).	
Mutagenicity	Not expected to be mutagenic or clastogenic. (EPA 2010)	
Developmental Toxicity	A "minimal" LOAEL for developmental effects = 700 mg/kg-day based on a very slight decrease in pup weight (EPA 2010).	
Reproductive Toxicity	700 and 1,300 mg/kg-day are considered to be NOAEL and LOAEL, respectively, for both maternal and reproductive effects (EPA 2010).	
Immunotoxicity	Not immunotoxic (EPA 2010)	
Other Chronic Toxicity	Continuous inhalation exposure to an EGBE-saturated atmosphere expected to result in maximum blood concentrations of EGBE's toxic metabolite (BAA) well below the level needed to produce hemolysis in humans (Udden 2002, EPA 2010).	
Environmental Toxicity	EGBE causes only "very minor" effects that "are unlikely to be ecologically significant" (EPA 2003 [68 Fed. Reg. 65657])	
Persistence	• Readily biodegradable • Half-life = 1-4 weeks in water and soil	(ATSDR 1998)
Bioaccumulation	• Bioconcentration factor = 3 • Octanol-water partition coefficient (Log K_{ow}) = 0.8	(HSDB 1997)
Terrestrial Mammals and Birds	No Data [Section 3.3, below]	
Acute Aquatic Toxicity	• Most sensitive credible LC_{50} = 89 mg/L • Most LC_{50} values > 1000 mg/L	(Section 3.3, below)
Chronic Aquatic Toxicity	• Most sensitive EC_{50} = 164 mg/L • Most sensitive LOAEL = 7.2 mg/L • Most LOAELs > 100 mg/L	(Section 3.3, below)

EGBE: ethylene glycol monobutyl ether
EPA: U.S. Environmental Protection Agency
IRIS: Integrated risk information system
LOAEL: lowest observed adverse effect level
mg/kg-day: milligrams per kilogram body weight per day
mg/L: milligrams per liter
mg/m^3: milligrams per cubic meter
NOAEL: no observed adverse effect level

Table ES-2. Key Findings of the Exposure and Risk Assessments

	HAPs Petition (1993 TRI Release Data)	This Petition (2009-2011 TRI Release Data)
Human Inhalation Exposures		
Chronic		
Maximum Annual Average Concentration (MAAC)	0.327 mg/m^3, based on Tier 3 (ISCST3) air dispersion modeling for the maximum impact facility.	All facilities screened out prior to chronic Tier 2 and 3 analyses. For subset of facilities that screened out in Tier 2, Tier 3 modeling was conducted to test the conservatism of this assessment found a predicted MAAC using Tier 3 (AERMOD) of 0.27 mg/m^3 based on 2009, 2010, and 2011 data.
RfC	13 mg/m^3	1.6 mg/m^3
Hazard Quotient (chronic)	0.02	≤ 0.2
Acute		
Maximum Hourly Average Concentration (MHAC)	n/a	For a subset of the highest emitting facilities, tiered modeling of acute exposures found a predicted MHAC using Tier 3 (AERMOD) of 3.9 mg/m3 based on the 2009, 2010, and 2011 data.
NOAEL (Irritation Based on Human Data)	n/a	97 mg/m^3
Margin of Exposure	n/a	> 25
Human Dermal and Ingestion Exposures		
Maximum Exposure	0.02 mg/kg BW-day	0.00001 mg/kg BW-day
RfD	3 mg/kg BW-day	0.1 mg/kg BW-day
Hazard Quotient	0.007	0.0001
Ecological Risk		
Small Mammals	(from Cadmus 2000a)	
Maximum Exposure	2.15 mg/kg BW-day	0.029 mg/kg BW-day
Toxicity Reference Value	20 mg/kg BW-day	20 mg/kg BW-day
Hazard Quotient	0.11	0.001
Aquatic Organisms	(from Cadmus 2000a)	
Maximum Exposure	3.64 mg/L	0.00019 mg/L
TRV	9.1 mg/L	8.7 mg/L
Hazard Quotient	0.4	0.00002

MAAC: maximum annual average concentration
mg/kg BW-day: milligrams per kilogram body weight per day
mg/L: milligrams per liter
mg/m^3: milligrams per cubic meter
RfC: IRIS reference concentration
RfD: IRIS reference dose
TRV: toxicity reference value

Table ES-3. Sources of Uncertainty and Conservatism

Section	Source of Uncertainty	Likely Effect on Outcome
3.0 Hazard Assessment		
	Humans are at least 100 times less sensitive than rats to hemolytic effects of EGBE. While a stand default interspecies UFs of 10 was not used - RfD uses UF of 1 and RfC uses UF of 3 – the actual interspecies factor is approximately 0.01.	RfD may be 100-fold overly conservative. RfC may be 300-fold overly conservative. Thus, HQs may be overestimated by a factor of 100 to 300.
	Intraspecies UF of 10 is probably overly conservative. A number of studies have found no evidence of increased susceptibility to hemolysis among sensitive subpopulations.	RfD and RfC may be overstated by an additional factor of 3 to 10.
	IARC (2006) concluded that the carcinogenicity of EGBE to humans cannot be determined and EPA (2010) concluded that carcinogenic effects from EGBE are not likely to occur in humans in the absence of critical noncancer effects.	EPA (2005) concluded that the RfD and RfC are adequately protective of carcinogenic effects in humans, if any. Thus, question of carcinogenicity does not affect petition outcome.
5.0 Emissions Inventory		
	TRI only lists releases of Certain Glycol Ethers. In the absence of specific data for EGBE releases, assumed all Certain Glycol Ethers releases were EGBE.	Because EGBE represents 52% of market share of ethylene glycol ethers (SRI 2010), actual releases of EGBE may be overestimated 2-fold, on average.
	TRI data are self-reported using a variety of methods. Individual facility data vary considerably in certainty.	Actual releases of Certain Glycol Ethers by facilities may be greater than or less than those reported on TRI. No evidence of systematic under-reporting.
6.0 Screening of Airborne Concentrations		
	a. Chronic	
	Step A assumed 100% of reported releases to air were exhausted through a single point 0 m high and 50 m from fence line. Resultant threshold rate (4.9 tpy) more conservative than that associated with 2 m high emission point located 10 m from fenceline (8.6 tpy), which encompasses virtually all facilities in inventory for which stack configuration data are available.	Maximum annual average concentrations predicted under Step A were up to 250-fold higher than those predicted using Tier 3 dispersion modeling. Thus, HQs predicted using Step A overestimated by 85-250 times.
	Tier 2 employed site-specific data on emission rates, stack and fugitive source physical parameters, and property boundaries. The maximum MAAC under Tier 2 was 1.2 mg/m^3, as compared to maximum MAAC under Tier 3 of 0.3 mg/m^3. Tier 2 results differed from Tier 3 results for the same facilities by factors of 1.2 to 6.7.	HQs predicted using Tier 2 overestimated by 2 times or more.
	Modeled maximum annual average concentration is highly conservative estimate of exposure over a lifetime.	Per EPA, actual maximum annual average concentrations are 2-fold lower than modeled values. Comparison of an annual average concentration to an RfC designed to be protective over a lifetime substantially overstates risk by an unknown margin.
	DEGREE OF CONSERVATISM ASSOCIATED WITH CHRONIC HUMAN INHALATION HAZARDS	(50 to 100) x (3 to 10) x 2 x (2 to 85) x ? = ***600 to 170,000 or more***
	b. Acute	
	The acute MOE based on the NOAEL of 97 mg/m^3 and the estimated reasonable worst-case estimated MHAC is approximately 18 mg/m^3. Because the NOAEL is derived from human data, per EPA TRI precedents MOEs >10 "indicate a low level of concern" for acute effects associated with EGBE facility releases.	An MOE above 5 is protective because EPA AEGL guidance calls for an interspecies uncertainty factor from 3-10 for non-systemic irritation effects, and an appropriate time-adjustment would support a 1-hr NOAEL of 137 mg/m^3.

Table ES-3. Sources of Uncertainty and Conservatism

Section	Source of Uncertainty	Likely Effect on Outcome
7.0 Surface Water Exposures and Risks		
	Exposure point concentrations in surface water calculated by assuming that 100% of U.S. releases of Certain Glycol Ethers to all media are EGBE and are concentrated into an area the size of the state of Ohio.	Because EGBE represents 52% of consumption of ethylene glycol ethers (SRI 2010), actual releases of EGBE may be overestimated 2-fold, on average. Because 100,000 km^2 represents 1.3% of total land area of U.S., actual concentrations of EGBE may be overestimated 77-fold.
	Exposure assumptions (350 day/yr, 70 years, all water contacted contains EGBE)	Actual exposure intensity likely to be considerably lower, but degree of conservatism cannot be quantified.
	DEGREE OF CONSERVATISM ASSOCIATED WITH HUMAN DERMAL AND INGESTION HAZARDS	(50 to 100) x (3 to 10) x 2 x 77 x ? = ***23,100 to 154,000 or more***
8.0 Ecological Risk Assessment		
	Exposure point concentrations in surface water calculated by assuming that 100% of U.S. releases of Certain Glycol Ethers to all media are EGBE and are concentrated into an area the size of the state of Ohio.	As previously noted, actual releases of EGBE may be overestimated 2-fold, on average, and actual concentrations of EGBE may be overestimated 77-fold.
	Conservative exposure assumptions for small mammals (inhalation rate, ingestion rate, bioaccumulation factor) consistent with Cadmus (2000a)	Actual exposure intensity likely to be considerably lower, but degree of conservatism cannot be quantified.
	TRV for aquatic organisms based on most sensitive species tested, which may not be representative of aquatic community present in most U.S. water bodies.	Although actual sensitivity of other aquatic organisms to EGBE may be considerably lower, degree of conservatism cannot be quantified.
	TRV for small mammals is based on same underlying data used to derive RfD. Thus, small mammal TRV shares same uncertainties as listed above with respect to Section 3.0.	TRV may be 50 to 1,000-fold overly conservative due to UFs.
	HQs focused on what EPA calls "very minor" effects on individual organisms, rather than effects that are likely to be ecologically significant.	Although individual organisms are likely to be substantially more sensitive than populations, communities, or ecosystems, degree of conservatism cannot be quantified.
	DEGREE OF CONSERVATISM ASSOCIATED WITH RISKS TO AQUATIC ORGANISMS	2 x 77 x ? = ***154 or more***
	DEGREE OF CONSERVATISM ASSOCIATED WITH RISKS TO SMALL MAMMALS	2 x 77 x (50 to 1,000) x ? = ***7,700 to 154,000 or more***

EGBE: ethylene glycol monobutyl ether
EPA: U.S. Environmental Protection Agency
FR: Federal Register
HQ: hazard quotient
IARC: International Agency for Research on Cancer
IRIS: Integrated Risk Information Service
km^2: square kilometer
m: meter
MAAC: Maximum annual average concentration
mg/m^3: milligrams per cubic meter
RfC: reference concentration
RfD: reference dose
tpy: tons per year
TRI: Toxics Release Inventory
TRV: toxicity reference value
UF: uncertainty factor

Table 2-1. Regulatory Standards and Guidelines Applicable to EGBE

Media	Agency	Description	Information	References [a]
NATIONAL				
Regulations:				
Air	EPA OAQPS	List of Chemicals Produced by Affected Facilities	Yes	40 CFR 60.489, EPA 1977
	EPA OAQPS	Chemicals Affected by Standards of Performance for Volatile Organic Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations	Yes	40 CFR 60.667, EPA 1990b
	EPA OAQPS	Chemicals Affected by Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Reactor Processes	Yes	40 CFR 60.707, EPA 1993b
	EPA OAQPS	Synthetic Organic Chemical Manufacturing Industry Chemicals	Yes	40 CFR 63 Table 1 to Subpart F, EPA 1992b
	OSHA	Permissible Exposure Limit (TWA)[b]	50 ppm (240 mg/m^3) skin [c]	29 CFR 1910.100, OSHA 1974
Water	EPA OW	Effluent Guidelines and Standards - Organic Chemicals, Plastics, and Synthetic Fibers - Bulk Organic Chemicals	Yes	40 CFR 414, subpart G, EPA 1987b
Other	EPA OPPTS	Tolerance Range for Agriculture Products	Conditionally Exempted from Tolerance	40 CFR 180.920, EPA 1971
	EPA OPPTS	Substance Subject to All Provisions of Health and Safety Data Reporting	Yes	40 CFR 716.120, EPA 1986b
Guidelines:				
Air	ACGIH	TLV-TWA for Occupational Exposure [d]	20 ppm (97 mg/m^3)	ACGIH 2012
	OSHA	Permissible Exposure Limit - TWA for Occupational Exposure [d]	50 ppm (240 mg/m^3) skin [b]	29 CFR 1910.1000
	NIOSH	Immediately Dangerous to Life or Health (IDLH)	700 ppm (3,383 mg/m^3)	NIOSH 2001
	NIOSH	Recommended Exposure Limit for Occupational Exposure (TWA)[e]	5 ppm (24 mg/m^3) skin [b]	NIOSH 1990
STATE				
Regulations and Guidelines:				
Air	AZ	AZ Ambient Air Quality Guidelines (24 hours)	0.9 mg/m^3	http://www.azdeq.gov/environ/air/download/modeling.pdf
	AZ	AZ Ambient Air Quality Guidelines (1 hour)	3.6 mg/m^3	
	CA	Inhalation Reference Level (1 hour)	14 mg/m^3	CalEPA 1999
	CT	Hazard Limit Value (8 hours)	2.4 mg/m^3	Reg. of CT State Agencies, Section 22a-174-29
		Hazard Limit Value (30 minutes)	12 mg/m^3	

Table 2-1. Regulatory Standards and Guidelines Applicable to EGBE

Media	Agency	Description	Information	References [a]
NATIONAL				
Air	ND	Guideline Concentration (8 hours)	1.9 mg/m^3	http://www.ndhealth.gov/AQ/Toxics/North%20Dakota%20Air%20Toxics%20Policy.pdf
	TX	Effects Screening Level (1 hour)	0.21 mg/m^3	http://www.tceq.texas.gov/toxicology/esl/list_main.html#esl_1
	TX	Effects Screening Level (Annual)	3.7 mg/m^3	

a. As cited in ATSDR 1998
b. Time-weighted average concentrations that must not be exceeded during any 8-hour work shift of a 40-hour week
c. Skin designation that there is a potential for dermal absorption and that skin exposure should be prevented through the use of gloves, coveralls, goggles, and other appropriate equipment.
d. ACGIH TLV-TWA is a time-weighted averaged concentration for an 8-hour workday and a 40-hour workweek.
e. Recommended exposure limit is a time-weighted average concentration for up to a 10-hour workday during a 40-hour work week.
ACGIH: American Conference of Governmental Industrial Hygienists
EGBE: ethylene glycol monobutyl ether
EPA: U.S. Environmental Protection Agency
mg/m^3: milligrams per cubic meter
NIOSH: Naitonal Institute for Occupational Safety and Health
OAQPS: Office of Air Quality Planning and Standards
OPPTS: Office of Pollution Prevention and Toxic Substances
OSHA: Occupational Safety and Health Administration
OW: Office of Water
ppm: parts per million
TLV: Threshold Limit Value
TWA: Time Weighted Average

Table 3-1. Physical and Chemical Properties of EGBE

Property	Information	Reference [a]
Molecular weight	118.17	Merck 1989
Color	colorless	Marsden and Mann 1963
Physical state	liquid	Merck 1989
Melting point	-70 C -75 C	HSDB 1997 ASTER 1995
Boiling point	171 C at 760 mm Hg 50 C at 4 mm Hg	Weast 1975 Weast 1989
Density at 20 C	0.9019 g/mL	Merck 1989
Odor	Faint odor Mild ethereal odor	Marsden and Mann 1963 ACGIH 1991
Odor threshold Air Water	 0.10 ppm (v/v) 0.4 ppm (v/v) No data	 Amoore and Hautala 1983 OSHA 1990
Solubility Water at 25 C Organic solvent(s)	 Soluble in all proportions Miscible with alcohol, ether Soluble in most organic solvents	 Riddick and Bunger 1970, Weast 1975 Weast 1975 Merck 1989
Partition coefficients Log Kow Log Koc	 0.83 0.84 1.83 (calculated) 1.79 (calculated)	 HSDB 1997 ASTER 1995 HSDB 1997, Lyman et al. 1982 ASTER 1995
Bioconcentration factor Log BCF	 0.40 (calculated)	 HSDB 1997, Lyman et al. 1982
Vapor pressure At 20 C At 25 C	 0.76 mm Hg 0.88 mmHg	 HSDB 1997 Dow 1993
Henry's law constant (atm-m^3/mol)	2.08×10^{-8} (calculated) 5.44×10^{-6} (calculated)	Howard 1993, HSDB 1997 ASTER 1995
Vapor-phase rate constant for reaction with photochemically produced hydroxy radicals	1.96×10^{-11} cm^3/molecule-second at 25 C (estimated)	Atkinson 1987
Atmospheric half-life at 25 C and 5 x 10^5 hydroxyl radicals/m^3	17 hours (calculated)	HSDB 1997
Autoignition temperature	238 C 244 C	HSDB 1997 Marsden and Mann 1963, OSHA 1990
Flashpoint	60°C (closed cup) 62°C (closed cup) 69°C (open cup) 74°C (open cup)	Merck 1989 HSDB 1997 OSHA 1990 Marsden and Mann 1963
Flammability	May be ignited by heat, sparks or open flame	HSDB 1997
Explosive limits	1.1% (lower); 10.1% (upper)	OSHA 1990

a. All references are as cited in ATSDR 1998
ASTER: Assessment Tools for the Evaluation of Risk
ATSDR: Agency for Toxic Substances and Disease Registry
BCF: bioconcentration factor
C: degrees Celsius
EGBE: ethylene glycol monobutyl ether
HSDB: Hazardous Substance Data Bank
Koc: organic carbon partition coefficient
Kow: octanol-water partition coefficient
OSHA: Occupational Safety and Health Administration

Table 3-2. Aquatic Ecotoxicity Data for EGBE

Scientific Name	Common Name	Effect	Endpoint	Duration	EGBE Concentration (mg/L)	Toxicity Review Source					Citation
						WHO 1998; 2005	Staples et al. 1998	Devillers et al. 2002	EC and HC 2002	INERIS 2005	
ACUTE EXPOSURES											
Fish											
Fundulus heteroclitus	mummichog	mortality	LC50	96 hr	6.7				x	x	Biospherics 1981 [A]
Cyprinodon variegatus	sheepshead minnow	mortality	LC50	96 hr	116			x		x	MBA 1984 [A]
Cyprinodon variegatus	sheepshead minnow	mortality	LC50	72 hr	121			x			MBA 1984
Cyprinodon variegatus	sheepshead minnow	mortality	LC50	48 hr	126			x			MBA 1984
Cyprinodon variegatus	sheepshead minnow	mortality	LC50	24 hr	149	x		x			OECD 1997
Lepomis macrochirus	bluegill	mortality	LC50	96 hr	127				x	x	CIBA-GEIGY 1976 [A]
Lepomis macrochirus	bluegill	mortality	LC50	96 hr	1490			x		x	Neely 1984
Lepomis macrochirus	bluegill	mortality	LC50	24 hr	2950	x	x	x			Dawson et al. 1977 [A]
Lepomis macrochirus	bluegill	mortality	LC50	96 hr	2950			x		x	Neely 1984
Leuciscus idus melanotus	golden ide	mortality	LC00	48 hr	1170			x		x	Junke and Ludemann 1978
Leuciscus idus melanotus	golden ide	mortality	LC00	48 hr	1350			x		x	Junke and Ludemann 1978
Leuciscus idus melanotus	golden ide	mortality	LC50	48 hr	1395			x		x	Junke and Ludemann 1978
Leuciscus idus melanotus	golden ide	mortality	LC100	48 hr	1490			x		x	Junke and Ludemann 1978
Leuciscus idus melanotus	golden ide	mortality	LC50	48 hr	1575	x		x		x	Junke and Ludemann 1978
Leuciscus idus melanotus	golden ide	mortality	LC100	48 hr	1620			x		x	Junke and Ludemann 1978
Leuciscus idus melanotus	golden ide	mortality	LC50	48 hr	1880	x	x				CMA 1994 [A]
Menidia beryllina	inland silverside	mortality	LC50	96 hr	1250	x	x	x		x	Dawson et al. 1977
Carassius auratus	goldfish	mortality	LC50	24 hr	1650	x	x				Verschueren 1983
Carassius auratus	goldfish	mortality	LC50	24 hr	1700	x	x	x		x	Birdie 1979
Oncorhynchus mykiss	rainbow trout	mortality	LC50	96 hr	1700	x					Environment Canada 1997
Oncorhynchus mykiss	rainbow trout	mortality	LC50	96 hr	>1000			x		x	Devillers et al. 2002
Pimephales promelas	fathead minnow	mortality	LC50	96 hr	2137	x	x			x	Dow 1979
Notropus atherinoides	emerald shiner	mortality	LC50	72 hr	>500	x	x				Dill 1995
Invertebrates											
Palaemonetes pugio	grass shrimp	mortality	LC50	96 hr	5.4	x			x	x	Biospherics 1981 [A]
Crassostrea virginica	oyster	mortality	LC50	96 hr	89	x			x	x	EPA 1984
Crassostrea virginica	oyster	mortality	LC50	72 hr	114			x			MBA 1984
Crassostrea virginica	oyster	mortality	LC50	48 hr	160			x			MBA 1984
Crassostrea virginica	oyster	mortality	LC50	24 hr	181			x			MBA 1984
Penaeus setiferus	white shrimp	mortality	LC50	96 hr	117					x	Welchem Inc. 1984 [A]
Penaeus setiferus	white shrimp	mortality	LC50	96 hr	130	x					OECD 1997

Table 3-2. Aquatic Ecotoxicity Data for EGBE

Scientific Name	Common Name	Effect	Endpoint	Duration	EGBE Concentration (mg/L)	Toxicity Review Source					Citation
						WHO 1998; 2005	Staples et al. 1998	Devillers et al. 2002	EC and HC 2002	INERIS 2005	
Penaeus setiferus	white shrimp	mortality	LC50	72 hr	147			x			MBA 1984
Penaeus setiferus	white shrimp	mortality	LC50	48 hr	173			x			MBA 1984
Crangon crangon	brown shrimp	mortality	LC50	96 hr	550	x	x				Verschueren 1983
Crangon crangon	brown shrimp	mortality	LC50	48 hr	600	x	x				Verschueren 1983
Crangon crangon	brown shrimp	mortality	LC50	96 hr	698					x	Blackman 1974 [A]
Hydra vulgaris	coelenterate	mortality	LC50	72 hr	690			x		x	Bowden et al. 1995
Daphnia magna	water flea	mortality	LC50	48 hr	835	x	x			x	Dow 1979
Daphnia magna	water flea	mortality	LC00	24 hr	1140			x		x	Bringmann and Kuhn 1977
Daphnia magna	water flea	mortality	EC00	24 hr	1283			x		x	Bringmann and Kuhn 1982
Daphnia magna	water flea	immobilization	EC50	48 hr	1600			x		x	Devillers et al. 2002
Daphnia magna	water flea	mortality	LC50	24 hr	1698	x	x	x		x	Bringmann and Kuhn 1982
Daphnia magna	water flea	mortality	LC50	24 hr	1720	x	x	x		x	Bringmann and Kuhn 1977
Daphnia magna	water flea	mortality	LC100	24 hr	2500			x		x	Bringmann and Kuhn 1977
Daphnia magna	water flea	mortality	EC100	24 hr	2500			x		x	Bringmann and Kuhn 1982
Daphnia magna	water flea	mortality	LC50	24 hr	5000	x	x			x	CMA 1994 [A]
Artemia salina	brine shrimp	mortality	LC50	24 hr	1000	x	x				Price et al. 1974
CHRONIC/INTERMEDIATE EXPOSURES											
Amphibian											
Xenopus laevis	African clawed frog	mortality	LOEC	12 d	2000			x			Devillers et al. 2002
Fish											
Brachydanio rerio	zebrafish	mortality	LOEC	21 d	>100					x	European Union 2005
Poecilia reticulata	guppy	mortality	LC50	7 day	982	x	x	x		x	Koenemann 1981
Invertebrates											
Brachionus calyciflorus	rotifer	reproduction	EC10	48 hr	7.2			x		x	Devillers et al. 2002
Brachionus calyciflorus	rotifer	reproduction	EC20	48 hr	14.3			x		x	Devillers et al. 2002
Brachionus calyciflorus	rotifer	reproduction	EC50	48 hr	164			x		x	Devillers et al. 2002
Daphnia magna	water flea	reproduction	NOEC	21 d	100			x		x	Devillers et al. 2002
Daphnia magna	water flea	reproduction	EC10	21 d	134					x	European Union 2005
Daphnia magna	water flea	reproduction	EC20	21 d	175					x	European Union 2005
Daphnia magna	water flea	reproduction	EC50	21 d	297					x	European Union 2005
Ceriodaphnia dubia	water flea	reproduction	EC10	7 d	134.9			x		x	Devillers et al. 2003
Crassostrea gigas	Japanese oyster	development	NOEC	24 hr	100			x			Devillers et al. 2002
Crassostrea gigas	Japanese oyster	development	LOEC	24 hr	1000			x			Devillers et al. 2002

Table 3-2. Aquatic Ecotoxicity Data for EGBE

Scientific Name	Common Name	Effect	Endpoint	Duration	EGBE Concentration (mg/L)	Toxicity Review Source					Citation
						WHO 1998; 2005	Staples et al. 1998	Devillers et al. 2002	EC and HC 2002	INERIS 2005	
Algae, Bacteria, Protozoans											
Microcystis aeruginosa	cyanobacterium	growth	LOEC	8 day	35	x	x	x	x	x	Bringmann and Kuhn 1980a
Entosiphon sulcatum	protozoan	growth	LOEC	72 hr	91	x	x	x		x	Bringmann and Kuhn 1980a
Selenastrum capricornutum	green alga	growth	NOEC	7 day	125	x	x			x	Dow 1988
Selenastrum capricornutum	green alga	growth	LOEC	7 day	250		x			x	Dow 1988
Selenastrum capricornutum	green alga	growth	EC50	7 day	>1000	x	x			x	Dow 1988
Uronema parduczi	protozoan	growth	EC05	48 hr	463	x	x	x		x	Bringmann and Kuhn 1980b
Pseudomonas putida	bacterium	growth	LOEC	16 hr	700	x	x	x		x	Bringmann and Kuhn 1980a
Scenedesmus quadricaudata	green alga	growth	LOEC	7 day	900	x	x	x		x	Bringmann and Kuhn 1980a
Chilomonas parmecium	protozoan	growth	EC05	48 hr	911	x	x	x		x	Bringmann and Kuhn 1980b
Pseudokirchneriella subcapitata	algae	growth (biomass	NOEC	72 hr	88.2			x			Devillers et al. 2002
Pseudokirchneriella subcapitata	algae	growth (rate)	NOEC	72 hr	286			x		x	Devillers et al. 2002
Pseudokirchneriella subcapitata	algae	growth	EC50	72 hr	944			x			Devillers et al. 2002
Pseudokirchneriella subcapitata	algae	growth	EC50	72 hr	1840			x			Devillers et al. 2002
Pseudokirchneriella subcapitata	algae	growth	EC50	24 hr	4183						Escher et al. 2008

A. Ecotoxicity values did not meet data quality requirements for inclusion in other risk assessments (INERIS 2005)
EC: Environment Canada
EC00: effect concentration for 0 percent of organisms tested
EC05: effect concentration for 5 percent of organisms tested
EC10: effect concentration for 10 percent of organisms tested
EC100: effect concentration for 100 percent of organisms tested
EC20: effect concentration for 20 percent of organisms tested
EC50: median effect concentration
EGBE: ethylene glycol monobutyl ether
HC: Health Canada
INERIS: National Institute for Industrial Environment and Risks (France)
LC00: lethal concentration for 0 percent of organisms tested
LC100: lethal concentration for 100 percent of organisms tested
LC50: median lethal concentration
LOEC: lowest observed effect concentration
NOEC: no observed effect concentration
WHO: World Health Organization

Table 5-1. Comparison of Glycol Ether TRI-Reported Releases from 1993 through 2011

Information	1993[a]	2003	2004	2005	2006	2008	2009	2010	2011	% Change (1993-2011)
Number of Facilities Reporting GE Emissions to Any Media	2,251	1,913	1,850	1,793	1,740	1,579	1,478	1,510	1,492	-34%
Number of Facilities Reporting Non-zero GE Emissions to Any Media	2,036	1,459	1,423	1,372	1,247	1,198	1,109	1,149	1,099	-46%
Total GE Releases (All Facilities) (tpy)	24,106	12,463	11,774	10,924	10,148	8,353	7,015	7,434	7,229	-70%
Maximum GE Release per Facility (tpy)	375	196	347	495	396	393	293	365	361	-4%
95th Percentile Release per Facility (tpy)	57	44	39	35	36	29	31	29	27	-53%
50th Percentile Release per Facility (tpy)	1.9	1.4	1.2	1.0	1.3	0.9	0.7	0.6	0.5	-73%
Average Release per Facility (tpy)	12	8.5	8.3	8.0	8.1	7.0	6.3	6.5	6.0	-49%
% Releases to Air (All Facilities)	97%	94%	93%	89%	90%	87%	90%	88%	87%	-10%
Average % Released to Air (by Facility)	92%	89%	89%	89%	89%	87%	88%	88%	88%	-4%
Total GE Releases to Air (All Facilities) (tpy)	23,448	11,699	10,942	9,699	9,101	7,282	6,285	6,541	6,304	-73%
Maximum GE Release to Air per Facility (tpy)	375	196	176	187	179	167	172	189	173	-54%
95th Percentile Release to Air per Facility (tpy)	56	41	37	35	35	28	31	28	21	-63%
50th Percentile Release to Air per Facility (tpy)	1.5	0.86	0.75	0.75	0.88	0.55	0.49	0.43	0.13	-91%
Average Release to Air per Facility (tpy)	12	8.0	7.7	7.2	7.4	6.2	5.8	5.8	5.2	-55%

Source: www.epa.gov/tri
a. 1993 TRI data are included because they were the basis for the Hazardous Air Pollutants petition (CMA 1997)
GE: Certain Glycol Ethers
tpy: tons per year
TRI: Toxic Release Inventory

Table 6-1. Screening Table Showing Threshold Emissions (tpy) for the Reference Concentration of 1.6 mg/m^3

Source	Release Height	Receptor Distance					
Type	(m)	10 m	30 m	50 m	100 m	200 m	500 m
Area (10 m)	0	1.7	5.3	9.8	24.7	69.0	289
Area (20 m)	0	3.1	8.7	15.0	33.5	83.8	317
Area (30 m)	0	4.6	12.2	20.2	42.8	99.4	349.3
Point	0	0.3	2.0	4.9[a]	16.5	55.0	263
Point	2	8.6	11.3	11.9	22.0	60.6	268
Point	5	16.6	21.4	30.9	58.8	108.1	309
Point	10	57.8	65.6	75.8[b]	117.6	223	556
Point	20	232	354	354	421	656	1,509
Point	35	708	708	1,416	1,441	1,782	3,628
Point	50	1,441	1,455	1,441	3,412	3,783	6,324

a. Preliminary emission rate used in the Step A screening (Table 6-2)
b. Preliminary emission rate used in the Step A screening of the cluster analysis
m: meter(s)
tpy: tons per year

$Q_{threshold} = RfC / [P/Q]_{Tier\ 1}$

WHERE:

$Q_{threshold}$ = threshold emissions (tpy)

RfC = Reference Concentration (expressed in µg/m^3), and

$[P/Q]_{Tier\ 1}$ = normalized ambient concentration in Tier 1 (USEPA 1992c) lookup table (µg×m^{-3}/tpy)

Table 6-2. Number of Facilities with Total TRI-Reported Air Emissions of Certain Glycol Ethers Relative to 4.9 tpy (Step A)

Classification	No. Facilities (2009)	No. Facilities (2010)	No. Facilities (2011)
Less than 4.9 tpy	824	850	823
Equal to or Greater than 4.9 tpy	260	273	276
Total	1,084	1,123	1,099
Percent of Total Less than 4.9 tpy	76%	76%	75%

tpy: tons per year
Emissions Data Source: Toxics Release Inventory (TRI)

Table 6-3. Number of Facilities with Total Air Emissions of Certain Glycol Ethers Greater than Site-Specific Screening Values (Step B)

Classification	2009			2010			2011		
	Number of Facilities Screened	Number Screened Out[a]	Number Retained	Number of Facilities Screened	Number Screened Out	Number Retained	Number of Facilities Screened	Number Screened Out	Number Retained
Complete Site-Specific Data Received	35	21	14	34	20	14	31	18	13
Partial Site-Specific Data Received	4	4	0	4	3	1	4	3	1
Default Assumptions Used	221	220	1	235	235	0	241	241	0
Total	**260**	**245**	**15**	**273**	**258**	**15**	**276**	**262**	**14**

a. All facilities retained for additional screening following Step A in any of the 3 years were subjected to Step B screening.
Note that one facility retained from the 2009 TRI (Aurora Casket) was not subjected to additional Tier 1 screening because it is no longer operational.
Emissions Data Source: Toxics Release Inventory (TRI)
Note: Site-specific data employed:

1) Minimum stack release height (meters)
2) Minimum distance to property fenceline (meters)
3) Percent of certain glycol ethers released as ethylene glycol monobutyl ether (EGBE)

Table 6-4. Long-Term (Chronic Exposure) Tier 1 Modeling Results

Site Name	Source Type	2009 TRI		2010 TRI		2011 TRI	
		Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	Long-Term HQ (combined)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	Long-Term HQ (combined)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	Long-Term HQ (combined)
[redacted]	Point	3654.7	**3**	3176.1	**2**	3553.4	**3**
	Volume	589.5		512.3		573.2	
	Point	104.4	0.4	87.5	0.4	74.7	0.4
	Volume	498.5		535.1		623.5	
	Point	2852.4	**2**	3056.1	**2**	2954.3	**2**
	Volume	651.8		688.0		675.9	
	Point	1753.1	**2**	1665.4	**2**	1598.8	**2**
	Volume	1526.5		1450.2		1392.2	
	Point	2885.0	**2**	3158.4	**3**	2214.1	**2**
	Volume	971.0		1070.7		882.0	
	Point	2268.3	**2**	2275.3	**2**	2099.0	**2**
	Volume	521.7		523.3		482.6	
	Point	1049.7	1	1364.6	1	1469.6	1
	Volume	718.4		413.1		431.0	
	Point	2743.0	**2**	2743.0	**2**	2848.5	**2**
	Volume	884.5		902.5		920.6	
	Point	1329.8	1	1354.2	1	1298.8	1
	Volume	451.3		463.9		440.1	
	Point	47.4	0.5	46.0	0.5	49.8	0.6
	Volume	823.6		799.2		865.6	
	Point	1833.0	**2**	1919.7	**2**	1998.5	**2**
	Volume	725.5		761.0		789.3	
	Point	1342.4	1	1395.9	1	691.5	0.6
	Volume	515.3		536.8		246.4	
	Point	1253.3	1	1171.5	1	1185.5	1
	Volume	608.1		568.4		575.2	
	Point	2068.4	**2**	1953.6	**2**	1950.4	1
	Volume	475.7		449.3		448.6	
	Point	1177.4	1	1336.4	1	1100.4	1
	Volume	579.7		659.1		542.7	

Hazard quotient (HQ) equals the sum of the maximum annual average concentration for fugitive/volume source emissions and point source emissions, at or beyond the fe
EGBE: ethylene glycol monobutyl ether
HQ: hazard quotient
RfC: reference concentration
TRI: Toxics Release Inventory
$\mu g/m^3$: micrograms per cubic meter
Bold text indicates an HQ greater than 1

Table 6-5. Long-Term (Chronic Exposure) Tier 2 Modeling Results (2009, 2010, and 2011 TRI Data)

Facility Name	City	State	Zip Code	2009 TRI		2010 TRI		2011 TRI	
				Maximum Predicted Annual Concentration (mg/m^3)[a]	Chronic HQ (combined fugitive and point)	Maximum Predicted Annual Concentration (mg/m^3)[a]	Chronic HQ (combined fugitive and point)	Maximum Predicted Annual Concentration (mg/m^3)[a]	Chronic HQ (combined fugitive and point)
[redacted]	Lawrence	MA	01843	1.20	0.7	1.04	0.6	1.16	0.7
	Williamsburg	VA	23185	0.54	0.3	0.58	0.4	0.56	0.4
	Weirton	WV	26062	0.28	0.2	0.26	0.2	0.25	0.2
	Winston-Salem	NC	27107	0.36	0.2	0.40	0.2	0.29	0.2
	Bishopville	SC	29010	0.89	0.6	0.89	0.6	0.83	0.5
	Columbus	OH	43213	0.46	0.3	0.56	0.3	0.60	0.4
	Findlay	OH	45840	0.28	0.2	0.28	0.2	0.29	0.2
	La Porte	IN	46350	0.25	0.2	0.25	0.2	0.24	0.1
	Owatonna	MN	55060	0.30	0.2	0.32	0.2	0.33	0.2
	Chicago	IL	60609	0.57	0.4	0.59	0.4	0.29	0.2
	Bradley	IL	60915	0.28	0.2	0.26	0.2	0.27	0.2
	Kent	WA	98032	1.08	0.7	1.02	0.6	1.02	0.6
	Olympia	WA	98501	0.47	0.3	0.54	0.3	0.44	0.3

*: Rexam Chicago facility was screened out from further analysis for the 2011 data following Step B.

a. Concentrations include point and volume/fugitive source emissions. For point sources, the result for the individual stack at the facility with the maximum predicted concentration is shown at that

HQ: hazard quotient. Maximum Predicted Annual Concentrations/RfC

mg/m^3: milligrams per cubic meter

RfC: Reference concentration (1.6 mg/m^3)

TRI: Toxics Release Inventory

Table 6-6. ZIP Codes with More than One Facility Reporting Air Emissions of Certain Glycol Ethers to the TRI in 2009 through 2011

ZIP	City	State	Number of Facilities			Total Reported Emissions (tpy)		
			2009	2010	2011	2009	2010	2011
00985	Carolina	Puerto Rico	2	2	2	30.2	27.7	24.3
01843	Lawrence	Massachusetts	2	2	NA	72.2	62.7	NA
01950	Newburyport	Massachusetts	NA	NA	2	NA	NA	0.1
02021	Canton	Massachusetts	2	2	2	0.4	0.4	0.4
07001	Avenel	New Jersey	2	2	2	1.2	1.3	1.2
07036	Linden	New Jersey	2	NA	NA	0.0	NA	NA
07105	Newark	New Jersey	NA	NA	2	NA	NA	0.3
12866	Saratoga Springs	New York	2	NA	2	24.2	NA	23.1
16148	Hermitage	Pennsylvania	NA	2	2	NA	2.3	2.4
16323	Franklin	Pennsylvania	2	2	2	11.4	11.9	8.7
17331	Hanover	Pennsylvania	2	2	2	37.4	37.7	33.3
17402	York	Pennsylvania	NA	2	2	NA	1.2	1.1
17601	Lancaster	Pennsylvania	2	2	2	12.8	11.5	17.0
17603	Lancaster	Pennsylvania	2	NA	NA	1.7	NA	NA
19067	Morrisville	Pennsylvania	2	NA	2	0.4	NA	1.3
19605	Reading	Pennsylvania	2	2	2	0.3	0.3	0.3
19904	Dover	Delaware	2	2	2	6.5	4.0	2.6
26062	Weirton	West Virginia	5	5	5	149.5	132.2	110.1
27261	High Point	North Carolina	3	2	NA	0.8	0.3	NA
27320	Reidsville	North Carolina	2	2	2	77.1	94.6	102.1
27409	Greensboro	North Carolina	2	2	2	0.1	0.2	0.1
27703	Durham	North Carolina	2	2	2	5.6	6.6	0.2
28273	Charlotte	North Carolina	4	3	5	2.3	2.7	3.0
29605	Greenville	South Carolina	NA	NA	2	NA	NA	0.4
29644	Fountain Inn	South Carolina	2	2	2	0.2	0.1	0.1
29730	Rock Hill	South Carolina	2	2	2	0.3	0.1	0.2
30043	Lawrenceville	Georgia	2	2	2	0.9	2.3	2.7
30062	Marietta	Georgia	2	2	2	0.4	0.4	0.5
30253	Mc Donough	Georgia	2	3	4	8.8	20.5	20.5
30260	Morrow	Georgia	2	2	2	0.4	0.4	0.4
32254	Jacksonville	Florida	NA	2	2	NA	35.0	25.6
32837	Orlando	Florida	NA	2	2	NA	2.0	1.6
33760	Clearwater	Florida	2	2	NA	0.5	0.4	NA
35064	Fairfield	Alabama	2	2	2	3.7	3.6	2.7
35234	Birmingham	Alabama	2	2	NA	11.6	10.3	NA
35401	Tuscaloosa	Alabama	3	3	NA	0.8	0.9	NA
37355	Manchester	Tennessee	NA	2	2	NA	20.6	34.6
38024	Dyersburg	Tennessee	2	2	NA	6.4	1.5	NA
38109	Memphis	Tennessee	NA	3	2	NA	0.1	0.0
38113	Memphis	Tennessee	3	3	2	7.1	3.4	1.8
38118	Memphis	Tennessee	2	NA	NA	0.0	NA	NA
38606	Batesville	Mississippi	2	2	2	29.5	25.7	26.0
38654	Olive Branch	Mississippi	3	NA	NA	92.2	NA	NA
39272	Jackson	Mississippi	2	2	2	18.7	15.0	15.4
40210	Louisville	Kentucky	2	2	4	1.7	1.9	4.1
42101	Bowling Green	Kentucky	2	2	2	1.0	1.1	1.2
43015	Delaware	Ohio	2	2	2	0.1	0.1	0.1
43207	Columbus	Ohio	2	2	2	0.1	0.1	0.1
43537	Maumee	Ohio	2	2	2	0.8	1.0	1.0
43607	Toledo	Ohio	2	2	2	11.3	17.2	16.8
43612	Toledo	Ohio	3	3	3	12.5	15.4	29.3

Table 6-6. ZIP Codes with More than One Facility Reporting Air Emissions of Certain Glycol Ethers to the TRI in 2009 through 2011

ZIP	City	State	Number of Facilities			Total Reported Emissions (tpy)		
			2009	2010	2011	2009	2010	2011
43615	Toledo	Ohio	2	2	2	1.1	1.0	1.2
44062	Middlefield	Ohio	NA	2	NA	NA	0.2	NA
44077	Painesville	Ohio	2	2	2	0.3	0.8	1.1
44087	Twinsburg	Ohio	2	2	2	0.3	0.3	0.3
44109	Cleveland	Ohio	2	2	2	0.1	0.1	0.3
44483	Warren	Ohio	2	2	2	21.7	19.4	22.3
45036	Lebanon	Ohio	NA	2	NA	NA	3.8	NA
45365	Sidney	Ohio	2	2	2	15.8	17.7	24.0
45840	Findlay	Ohio	2	2	2	177.3	177.4	182.0
46135	Greencastle	Indiana	2	NA	2	3.2	NA	6.9
46225	Indianapolis	Indiana	2	2	NA	0.0	0.1	NA
46320	Hammond	Indiana	2	2	2	6.0	6.3	5.9
46350	La Porte	Indiana	2	2	2	72.0	76.1	72.4
46540	Middlebury	Indiana	NA	2	2	NA	4.0	6.1
46705	Ashley	Indiana	NA	2	NA	NA	10.1	NA
46721	Butler	Indiana	2	2	NA	31.0	29.8	NA
47331	Connersville	Indiana	2	2	2	0.1	0.1	0.1
47905	Lafayette	Indiana	3	3	3	23.3	37.7	32.3
47933	Crawfordsville	Indiana	2	2	2	23.7	26.1	28.2
48091	Warren	Michigan	3	3	3	7.0	6.2	9.4
48121	Dearborn	Michigan	3	3	3	88.8	66.5	66.2
48174	Romulus	Michigan	NA	2	2	NA	0.2	0.2
48184	Wayne	Michigan	2	3	2	8.6	11.6	6.2
48192	Wyandotte	Michigan	2	2	2	2.4	3.1	3.1
48211	Detroit	Michigan	2	2	2	4.1	3.6	2.8
48220	Ferndale	Michigan	2	2	2	0.0	0.0	0.1
48312	Sterling Heights	Michigan	2	2	2	2.2	1.7	5.0
48341	Pontiac	Michigan	2	NA	NA	3.5	NA	NA
48359	Lake Orion	Michigan	NA	NA	2	NA	NA	4.0
53014	Chilton	Wisconsin	NA	NA	2	NA	NA	11.5
53027	Hartford	Wisconsin	2	2	2	23.2	21.7	20.6
53051	Menomonee Falls	Wisconsin	3	4	4	5.8	5.5	6.1
53066	Oconomowoc	Wisconsin	NA	NA	2	NA	NA	7.1
53095	West Bend	Wisconsin	2	2	2	0.3	0.3	0.2
53154	Oak Creek	Wisconsin	2	3	3	15.9	46.0	54.2
53177	Sturtevant	Wisconsin	2	2	3	0.5	0.5	0.8
53223	Milwaukee	Wisconsin	2	2	NA	0.4	0.3	NA
53224	Milwaukee	Wisconsin	3	3	3	51.7	47.4	44.4
53913	Baraboo	Wisconsin	NA	NA	2	NA	NA	30.1
54143	Marinette	Wisconsin	2	NA	NA	3.2	NA	NA
54220	Manitowoc	Wisconsin	NA	NA	2	NA	NA	2.6
60007	Elk Grove Village	Illinois	6	6	6	8.4	12.3	9.9
60090	Wheeling	Illinois	2	2	2	0.2	0.2	0.2
60174	Saint Charles	Illinois	2	2	2	2.4	1.4	1.3
60178	Sycamore	Illinois	NA	2	2	NA	10.6	7.4
60410	Channahon	Illinois	2	NA	NA	0.0	NA	NA
60411	Chicago Heights	Illinois	2	2	2	31.5	37.6	36.2
60426	Harvey	Illinois	2	2	2	16.2	25.9	7.2
60439	Lemont	Illinois	2	2	2	0.1	0.1	0.1
60455	Bridgeview	Illinois	2	2	2	8.4	9.5	8.5
60501	Bedford Park	Illinois	2	NA	NA	0.5	NA	NA

Table 6-6. ZIP Codes with More than One Facility Reporting Air Emissions of Certain Glycol Ethers to the TRI in 2009 through 2011

ZIP	City	State	Number of Facilities			Total Reported Emissions (tpy)		
			2009	2010	2011	2009	2010	2011
60510	Batavia	Illinois	3	3	3	0.8	1.1	2.2
60517	Woodridge	Illinois	2	NA	NA	0.0	NA	NA
60608	Chicago	Illinois	2	2	2	9.9	14.4	3.4
60609	Chicago	Illinois	2	2	2	91.1	111.1	67.1
60623	Chicago	Illinois	3	3	3	24.7	48.0	46.1
60632	Chicago	Illinois	NA	2	2	NA	6.6	8.9
60633	Chicago	Illinois	2	2	2	1.1	1.6	1.2
60803	Alsip	Illinois	NA	NA	2	NA	NA	19.0
61104	Rockford	Illinois	2	NA	NA	1.2	NA	NA
61265	Moline	Illinois	2	2	2	1.7	1.6	1.6
62040	Granite City	Illinois	NA	2	2	NA	6.0	5.8
62201	Sauget	Illinois	NA	2	2	NA	0.0	0.0
63043	Maryland Heights	Missouri	2	NA	NA	2.1	NA	NA
63077	Saint Clair	Missouri	2	2	2	0.3	0.7	0.1
63111	Saint Louis	Missouri	2	2	NA	0.2	0.2	NA
63147	Saint Louis	Missouri	2	2	2	0.3	0.3	0.3
64116	North Kansas City	Missouri	3	3	3	4.8	2.9	2.9
65708	Monett	Missouri	NA	2	NA	NA	11.2	NA
65712	Mount Vernon	Missouri	2	2	NA	12.8	11.7	NA
66106	Kansas City	Kansas	2	2	2	0.2	0.2	0.2
67219	Wichita	Kansas	NA	2	2	NA	6.1	5.9
68701	Norfolk	Nebraska	2	2	2	11.5	10.4	10.4
70560	New Iberia	Louisiana	NA	2	2	NA	1.6	1.9
70765	Plaquemine	Louisiana	2	2	NA	0.6	1.9	NA
70776	Saint Gabriel	Louisiana	2	NA	NA	0.5	NA	NA
70805	Baton Rouge	Louisiana	2	2	2	0.4	0.8	0.1
72315	Blytheville	Arizona	NA	NA	2	NA	NA	12.0
72764	Springdale	Arizona	NA	NA	2	NA	NA	12.1
72764	Springdale	Arkansas	2	2	NA	12.9	10.0	NA
73036	El Reno	Oklahoma	NA	2	2	NA	7.8	7.7
74063	Sand Springs	Oklahoma	NA	2	2	NA	0.2	0.1
74075	Stillwater	Oklahoma	2	2	2	4.9	2.3	3.5
74601	Ponca City	Oklahoma	2	2	NA	24.0	20.6	NA
75006	Carrollton	Texas	2	3	3	3.2	2.3	2.3
75041	Garland	Texas	3	3	4	0.2	0.2	0.2
75149	Mesquite	Texas	NA	NA	2	NA	NA	2.0
75165	Waxahachie	Texas	4	2	NA	0.7	0.1	NA
75501	Texarkana	Texas	2	NA	NA	0.6	NA	NA
75604	Longview	Texas	NA	NA	2	NA	NA	52.5
75662	Kilgore	Texas	NA	2	2	NA	0.1	0.1
75901	Lufkin	Texas	2	2	2	2.2	2.3	1.8
76011	Arlington	Texas	2	2	2	4.7	1.5	3.4
76063	Mansfield	Texas	NA	NA	2	NA	NA	0.6
77041	Houston	Texas	2	2	2	1.8	1.3	1.4
77051	Houston	Texas	2	2	2	1.1	1.0	0.8
77303	Conroe	Texas	2	2	3	18.9	18.8	49.7
77478	Sugar Land	Texas	NA	NA	2	NA	NA	31.5
77507	Pasadena	Texas	5	5	5	8.8	10.5	8.3
77571	La Porte	Texas	2	2	NA	4.8	2.1	NA
77630	Orange	Texas	NA	2	2	NA	0.3	0.3
77651	Port Neches	Texas	NA	2	2	NA	0.3	0.2

Table 6-6. ZIP Codes with More than One Facility Reporting Air Emissions of Certain Glycol Ethers to the TRI in 2009 through 2011

ZIP	City	State	Number of Facilities			Total Reported Emissions (tpy)		
			2009	2010	2011	2009	2010	2011
80216	Denver	Colorado	2	2	NA	0.0	0.0	NA
80550	Windsor	Colorado	2	2	2	57.5	55.0	54.3
85043	Phoenix	Arizona	2	NA	NA	39.8	NA	NA
90670	Santa Fe Springs	California	5	5	5	0.8	0.8	0.7
90810	Carson	California	2	2	2	0.3	0.4	0.4
91311	Chatsworth	California	3	3	3	54.6	44.4	29.0
91730	Rancho Cucamonga	California	2	3	3	0.4	1.4	1.3
92335	Fontana	California	2	2	2	2.0	1.0	0.4
92704	Santa Ana	California	2	NA	NA	0.0	NA	NA
93308	Bakersfield	California	NA	2	NA	NA	0.0	NA
94533	Fairfield	California	4	4	4	45.7	29.0	30.8
95824	Sacramento	California	NA	NA	2	NA	NA	5.2
97203	Portland	Oregon	2	2	2	3.5	4.1	3.2
97210	Portland	Oregon	NA	2	NA	NA	0.1	NA
98108	Seattle	Washington	2	2	2	3.0	0.2	0.2

tpy: tons per year
NA: no releases reported
TRI: toxics release inventory

Table 6-7. ZIP Codes and Facilities Identified for Dispersion Modeling Following Step B Screening

Facility	City	State	ZIP	Total Air (tpy) 2009 TRI	2010 TRI	2011 TRI
[redacted]	Chicago	IL	60609	26	43	34
	Chicago	IL	60609	65	68	33
Cumulative Zip Code Emissions				**91**	**111**	67
[redacted]	Findlay	OH	45840	23	22	22
	Findlay	OH	45840	155	155	161
Cumulative Zip Code Emissions				**177**	**177**	**182**
[redacted]	La Porte	IN	46350	5	8	7
	La Porte	IN	46350	67	68	65
Cumulative Zip Code Emissions				72	**76**	72
[redacted]	Weirton	WV	26062	2	2	0.4
	Weirton	WV	26062	37	23	13
	Weirton	WV	26062	101	96	92
	Weirton	WV	26062	6	7	3
	Weirton	WV	26062	4	4	2
Cumulative Zip Code Emissions				**149**	**132**	**109**
[redacted]	Reidsville	NC	27320	77	95	102
	Reidsville	NC	27320	0.05	0.05	0.05
Cumulative Zip Code Emissions[b]				77	**95**	**102**

[redacted]WV closed in September 2011 and has not reopened.

b. Zip code included because although 1 facility accounted for more than 90% of emissions, the conservative screening level was within 10% of the RfC.

Note: TRI Data are based on reported emissions of Certain Glycol Ethers, assuming that those are 100% ethylene glycol monobutyl ether.

Gray shading indicates zip codes that screened out from further analysis based on this screening. Cumulative

RfC: reference concentration (1.6 mg/m^3)

tpy: tons per year

TRI: Toxic Release Inventory

Table 6-8. Results of Chronic Tier 2 & 3 Modeling for Facility Clusters

Zip Codes	T2 AERMOD Modeling Result (Screening Met Data)		T3 AERMOD Modeling (Site-Specific Met Data)	
	Chronic Exposure (mg/m^3)	Chronic MOE[a]	Chronic Exposure (mg/m^3)	Chronic MOE[a]
2009				
Chicago, IL 60609	0.91	Out	0.11	15
Findlay, OH 45840	0.45	Out	--	--
La Porte, IN 46350	0.26	Out	--	--
Weirton, WV 26062	0.41	Out	0.16	10
Reidsville, NC 27320	0.57	Out	--	--
2010				
Chicago, IL 60609	1.16	Out	0.18	9
Findlay, OH 45840	0.45	Out	--	--
La Porte, IN 46350	0.27	Out	--	--
Weirton, WV 26062	0.32	Out	0.16	10
Reidsville, NC 27320	0.70	Out	--	--
2011				
Chicago, IL 60609	0.74	Out	0.14	11
Findlay, OH 45840	0.45	Out	--	--
La Porte, IN 46350	0.26	Out	--	--
Weirton, WV 26062	0.26	Out	0.15	10
Reidsville, NC 27320	0.74	Out	--	--

Basis: 2009, 2010, and 2011 TRI data

a. Chronic exposure results are compared to the Reference Concentration (RfC) of 1.6 mg/m^3. "Out" indicates the facility was screened out (concentration does not exceed the RfC) and "Retain" indicates the facility was not screened out.

b. The chronic MOE is determined by dividing the RfC by the estimated exposure concentration. It represents the factor by which the estimated exposure would have to increase to equal the RfC.

--: Zip code not subjected to sensitivity analysis using Tier 3 modeling.

mg/m^3: milligrams per cubic meter

MOE: margin of exposure

Table 6-9. Uncertainty Analysis
Long-Term (Chronic Exposure) Tier 3 Modeling for Selected Facilities (2009, 2010, and 2011 TRI Data)

Facility Name	City	State	Zip Code	2009 TRI		2010 TRI		2011 TRI	
				AERMOD Maximum Predicted Annual Average Concentration ($\mu g/m^3$)	Chronic HQ (combined fugitive and point)	AERMOD Maximum Predicted Annual Average Concentration ($\mu g/m^3$)	Chronic HQ (combined fugitive and point)	AERMOD Maximum Predicted Annual Average Concentration ($\mu g/m^3$)	Chronic HQ (combined fugitive and point)
[redacted]	Lawrence	MA	01843	261.9	0.2	228.7	0.1	255.9	0.2
	Kent	WA	98032	269.4	0.2	253.4	0.2	253.0	0.2
	Bishopville	SC	29010	153.1	0.1	149.4	0.09	137.8	0.09
	Weirton	WV	26062	158.1	0.1	158.1	0.10	151.8	0.09
	Winston Salem	NC	27107	157.4	0.1	172.8	0.11	128.4	0.08
	Chicago	IL	60609	85.3	0.05	87.7	0.05	43.0	0.03

HQ: hazard quotient. Maximum Predicted Annual Concentrations/RfC
$\mu g/m^3$: micrograms per cubic meter
RfC: Reference concentration (1,600 $\mu g/m^3$)
TRI: Toxics Release Inventory
Modeling results based on 2009, 2010 and 2011 TRI data

Table 6-10. Comparison of Concentrations Using the Tiered Modeling Approach

Facility Name	2011 Tiered Modeling Results (mg/m^3)					Change in Maximum Impact				
	Step A Impact[a]	Step B Impact[b]	Tier 1 Impact	Tier 2 Impact	Tier 3 Impact	Step A to Step B	Step B to Tier 1	Tier 1 to Tier 2	Tier 2 to Tier 3	Step A to Tier 3
[redacted]	22.8	4.19	4.13	1.16	0.26	-82%	-2%	-72%	-78.0%	-98.9%
	15.7	1.90	0.70	0.08	-	-88%	-63%	-89%	--	--
	56.2	3.93	3.63	0.56	-	-93%	-8%	-84%	--	--
	30.0	6.01	2.99	0.25	0.15	-80%	-50%	-92%	-40.1%	-99.5%
	44.3	3.10	3.10	0.29	0.13	-93%	0%	-91%	-55.7%	-99.7%
	29.0	3.81	2.58	0.83	0.14	-87%	-32%	-68%	-83.3%	-99.5%
	26.7	2.18	1.90	0.60	-	-92%	-13%	-68%	--	--
	52.2	3.77	3.77	0.29	-	-93%	0%	-92%	--	--
	21.3	1.79	1.74	0.24	-	-92%	-3%	-86%	--	--
	8.4	3.11	0.92	0.14	-	-63%	-71%	-85%	--	--
	41.5	3.14	2.79	0.33	-	-92%	-11%	-88%	--	--
	10.8	1.47	0.94	0.29	0.043	-86%	-36.3%	-69%	-85.2%	-99.6%
	21.1	3.01	1.76	0.27	-	-86%	-41%	-85%	--	--
	27.0	3.54	2.40	1.02	0.25	-87%	-32%	-57%	-75.2%	-99.1%
	20.8	1.71	1.64	0.44	-	-92%	-4%	-73%	--	--

Note: The 2011 TRI data are shown here for illustrative purposes.

The percent changes in predicated concentrations are similar using 2009 and 2010 TRI data.

a. Step A impacts calculated based on Tier 1 lookup table assuming all air emissions are from point sourece, stack height is 0 m, receptor distance is 10 m, and all Certain Glycol Ether emissions are EGBE.
m: meter
mg/m^3: milligrams per cubic meter
TRI: Toxics Release Inventory

Table 6-11. Total TRI Air Emissions (Fugitive and Point-Source Air) by Year for Selected Facilities

Facility and City	TRI Total Air Emissions (tpy)												Factor by Which Max 2000-2011 Emissions Exceed Recent TRI Emissions			Max Tier 3 Impacts (mg/m3)[a]
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2009	2010	2011	
[redacted]	**127.7**	125.2	125.1	124.4	105.4	124.2	103.6	76.4	70.9	70.0	76.5	82.0	1.8	1.7	1.6	--
	174.5	170.5	167.0	130.5	118.5	130.0	130.0	154.0	153.5	154.5	155.0	160.5	1.1	1.1	1.1	--
	205.0	189.0	178.5	171.0	164.5	144.5	143.5	179.5	167.0	167.0	178.5	173.0	1.2	1.1	1.2	--
	79.5	85.5	85.5	89.5	82.4	**98.4**	96.0	78.6	68.0	68.6	64.1	64.8	1.4	1.5	1.5	--
	98.0	86.0	89.4	80.0	55.3	18.7	25.5	24.9	23.5	24.5	23.8	25.8	4.0	4.1	3.8	--
	89.5	**105.5**	103.2	91.5	91.5	96.0	91.8	56.4	74.4	72.2	62.7	70.2	1.5	1.7	1.5	0.262
	65.0	75.5	73.5	61.5	40.0	57.8	39.3	33.9	34.2	68.4	**77.7**	64.0	1.1	1.0	1.2	--
	25.0	41.5	31.5	**107.0**	103.9	75.9	91.1	101.1	106.2	101.1	96.1	92.2	1.1	1.1	1.2	0.158
	75.5	78.0	99.5	77.0	80.5	108.2	80.4	59.0	105.0	117.1	122.6	**127.6**	1.1	1.0	1.0	--
	95.8	**108.8**	108.3	104.9	97.6	89.8	102.0	90.0	103.0	96.5	96.8	89.3	1.1	1.1	1.2	0.153
	76.5	73.8	72.0	70.4	76.2	70.3	71.1	68.5	68.4	65.4	68.0	33.2	1.2	1.1	2.3	0.088
	81.0	**125.2**	80.4	53.7	48.4	68.0	89.0	92.3	61.5	88.0	83.1	82.9	1.4	1.5	1.5	0.269
	136.6	164.3	169.8	185.1	84.8	123.8	179.0	172.4	147.5	172.2	**188.8**	136.2	1.1	1.0	1.4	0.330
	81.2	72.5	56.0	65.0	62.0	58.0	63.5	65.8	61.5	67.0	68.4	65.4	1.2	1.2	1.2	--
	11.1	10.0	4.8	7.7	7.7	2.5	NR	NR	7.4	40.4	42.4	**48.3**	1.2	1.1	1.0	--

Note:
All emissions are for Certain Glycol Ethers as reported in the TRI
Bold indicates the year with the maximum reported Certain Glycol Ether emissions in the TRI from 2000-2011.
a. Maximum long-term Tier 3 impact from 2009, 2010, and 2011 (Table 6-8)
Max: Maximum
NR: not reported
TRI: Toxics Release Inventory
tpy: tons per year
--: Tier 3 modeling of facility emissions not conducted in this petition.

Table 6-12. Short-Term (Acute Exposure) Tier 1 Modeling Results

Site Name	Source Type	2009 TRI		2010 TRI		2011 TRI	
		Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	Short-Term HQ (combined)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	Short-Term HQ (combined)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	Short-Term HQ (combined)
[redacted]	Point	1674648.6	**18**	1455360.1	**15**	1628244.9	**17**
	Volume	25839.6		22455.8		25123.6	
	Point	4575.2	0.3	3835.5	0.3	3274.4	0.3
	Volume	21848.5		23455.4		27327.9	
	Point	1614548.3	**17**	1729873.2	**18**	1672210.7	**18**
	Volume	28567.5		30154.6		29625.6	
	Point	153263.2	**2**	145599.8	**2**	139775.7	**2**
	Volume	66907.0		63561.5		61019.1	
	Point	126797.7	**2**	138811.6	**2**	97310.1	1
	Volume	42558.5		46926.7		38656.2	
	Point	781664.4	**8**	784081.0	**8**	723321.2	**8**
	Volume	22865.5		22936.6		21153.3	
	Point	516703.7	**6**	671714.9	**7**	723385.2	**8**
	Volume	31488.0		18105.6		18892.8	
	Point	602446.2	**7**	602446.2	**7**	625617.2	**7**
	Volume	38766.6		39557.8		40348.9	
	Point	625779.2	**7**	637261.3	**7**	611214.0	**7**
	Volume	19778.9		20332.7		19289.9	
	Point	2071.7	0.4	2010.6	0.4	2177.7	0.4
	Volume	36099.6		35030.0		37941.4	
	Point	373793.1	**4**	391475.5	**4**	407543.5	**5**
	Volume	31796.9		33353.0		34594.6	
	Point	487099.1	**5**	506509.5	**5**	250922.0	**3**
	Volume	22587.1		23527.5		10798.1	
	Point	364345.2	**4**	340549.6	**4**	344624.2	**4**
	Volume	26654.8		24914.5		25212.3	
	Point	884003.8	**9**	834954.6	**9**	833594.9	**9**
	Volume	20850.7		19693.1		19661.5	
	Point	185857.0	**2**	210964.4	**2**	173700.7	**2**
	Volume	25408.8		28888.5		23785.3	

Hazard quotient (HQ) equals the sum of the maximum annual average concentration for fugitive/volume source emissions and point source emissions, at or beyond the fe
EGBE: ethylene glycol monobutyl ether
HQ: hazard quotient
RfC: reference concentration
TRI: Toxics Release Inventory
µg/m^3: micrograms per cubic meter

Table 6-13. Results of Acute Tier 2 & 3 Modeling for Facility Clusters

Zip Code and Facilities	T2 AERMOD Modeling Result (Screening Met Data)		T3 AERMOD Modeling (Site-Specific Met Data)	
	Acute Exposure (mg/m^3)	Acute MOE[a]	Acute Exposure (mg/m^3)	Acute MOE[a]
2009				
Chicago, IL 60609	39.7	Out	14.0	7
Findlay, OH 45840	19.7	Out	--	--
La Porte, IN 46350	11.4	Out	--	--
Weirton, WV 26062	18.4	Out	8.25	12
Reidsville, NC 27320	24.9	Out	--	--
2010				
Chicago, IL 60609	50.9	Out	23.5	4
Findlay, OH 45840	19.6	Out	--	--
La Porte, IN 46350	12.0	Out	--	--
Weirton, WV 26062	16.0	Out	7.84	12
Reidsville, NC 27320	30.6	Out	--	--
2011				
Chicago, IL 60609	32.4	Out	18.5	5
Findlay, OH 45840	19.7	Out	--	--
La Porte, IN 46350	11.4	Out	--	--
Weirton, WV 26062	13.5	Out	7.52	13
Reidsville, NC 27320	32.6	Out	--	--

Basis: 2009, 2010, and 2011 TRI data

a. Acute exposure results are compared to the no observed adverse effects level (NOAEL) of 97 mg/m^3. "Out" indicates the facility was screened out (concentration does not exceed the NOAEL) and "Retain" indicates the facility was not screened out.

b. The acute MOE is determined by dividing the NOAEL by the estimated exposure concentration. It represents the factor by which the estimated exposure would have to increase to equal the NOAEL.

-- : Zip code not subjected to sensitivity analysis using Tier 3 modeling.

mg/m^3: milligrams per cubic meter

MOE: margin of exposure

Table 6-14. Results of Short-Term Tier 2 & 3 Modeling and Acute MOE Analysis for Selected High Emitting Facilities

Facility	City	State	Zip	2009				2010				2011			
				Tier 2		Tier 3		Tier 2		Tier 3		Tier 2		Tier 3	
				Maximum 1-Hr Concentration (mg/m^3)[a]	Acute MOE[b]	Maximum 1-Hr Concentration (mg/m^3)[a]	Acute MOE[b]	Maximum 1-Hr Concentration (mg/m^3)[a]	Acute MOE[b]	Maximum 1-Hr Concentration (mg/m^3)[a]	Acute MOE[b]	Maximum 1-Hr Concentration (mg/m^3)[a]	Acute MOE[b]	Maximum 1-Hr Concentration (mg/m^3)[a]	Acute MOE[b]
[redacted]	Columbus	OH	43213	19.99	4.9	--	--	24.42	4.0	--	--	26.26	3.7	--	--
	Findlay	OH	45840	12.10	8.0	--	--	12.19	8.0	--	--	12.58	7.7	--	--
	Williamsburg	VA	23185	23.80	4.1	--	--	25.47	3.8	--	--	24.65	3.9	--	--
	Bradley	IL	60915	12.39	7.8	--	--	11.58	8.4	--	--	11.72	8.3	--	--
	Olympia	WA	98501	20.76	4.7	--	--	23.56	4.1	--	--	19.40	5.0	--	--
	Lawrence	MA	01843	52.41	1.9	15.24	6.4	45.54	2.1	13.24	7.3	50.95	1.9	14.82	6.5
	Weirton	WV	26062	12.16	8.0	8.24	12	11.55	8.4	7.83	12	11.09	8.7	7.52	13
	Owatonna	MN	55060	13.23	7.3	--	--	13.86	7.0	--	--	14.42	6.7	--	--
	Bishopville	SC	29010	39.05	2.5	9.06	11	39.17	2.5	9.09	11	36.13	2.7	8.38	12
	Chicago	IL	60609	24.75	3.9	4.16	23	25.74	3.8	4.33	22	12.69	7.6	2.12	46
	Kent	WA	98032	47.46	2.0	7.66	13	44.83	2.2	7.23	13	44.76	2.2	7.22	13
	Winston Salem	NC	27107	15.36	6.3	16.71	5.8	16.85	5.8	18.31	5.3	12.32	7.9	13.126	7.4
	LaPorte	IN	46350	10.76	9.0	--	--	10.97	8.8	--	--	10.51	9.2	--	--

Basis: 2009, 2010, and 2011 TRI data

a. Concentrations are the sum of the predicted maximum 1-hour concentration for (i) fugitive/volume source emissions and (ii) point source emissions, at or beyond the fence line.

b. To calculate the MOE, the no observed adverse effect level (NOAEL) for irritation in humans of 97 mg/m^3 is divided by the concentration from combined fugitive/volume and point source emissions.

--: Facility not subjected to sensitivity analysis using Tier 3 modeling.

mg/m^3: milligrams per cubic meter

MOE: margin of exposure

Table 7-1. Hazards from Surface Water Exposure to EGBE
Residential Scenario: Ingestion of EGBE in Drinking Water

Hypothetical adolescent and adult (12+ years)

Chemical	**Cw** Conc. in Water (mg/L)	**IR** Ingestion Rate (L/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**Ao** Oral Abs. Factor (unitless)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	0.00020	2	350	18	1.0	70	6,570	0.00001	0.1	0.00005

Hypothetical child (6-12 years)

Chemical	**Cw** Conc. in Water (mg/L)	**IR** Ingestion Rate (L/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**Ao** Oral Abs. Factor (unitless)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	0.00020	2	350	7	1.0	30	2,555	0.00001	0.1	0.0001

Hypothetical young child (1-5 years)

Chemical	**Cw** Conc. in Water (mg/L)	**IR** Ingestion Rate (L/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**Ao** Oral Abs. Factor (unitless)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	0.00020	1	350	5	1.0	15	1,825	0.00001	0.1	0.0001

ADI = Cw x IR x EF x ED x Ao x (1/BW) x (1/AT)
HQ = ADI/RfD
EGBE: ethylene glycol monobutyl ether

Table 7-2. Hazards from Surface Water Exposure to EGBE
Residential Scenario: Dermal Contact with EGBE While Bathing and Showering

Hypothetical adolescent and adult (12+ years)

Chemical	**DAevent** Absorbed Dose (mg/cm^2-event)	**SA** Skin Surface Area Exposed (cm^2)	**EV** Event Frequency (events/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	3.6E-10	23,000	1	350	18	70	6,570	0.0000001	0.1	0.000001

Hypothetical child (6-12 years)

Chemical	**DAevent** Absorbed Dose (mg/cm^2-event)	**SA** Skin Surface Area Exposed (cm^2)	**EV** Event Frequency (events/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	3.6E-10	12,914	1	350	7	30	2,555	0.0000001	0.1	0.000001

Hypothetical young child (1-5 years)

Chemical	**DAevent** Absorbed Dose (mg/cm^2-event)	**SA** Skin Surface Area Exposed (cm^2)	**EV** Event Frequency (events/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	3.6E-10	7,446	1	350	5	15	1,825	0.0000002	0.1	0.000002

$ADI = DA_{event} \times SA \times EV \times EF \times ED \times (1/BW) \times (1/AT)$

HQ = ADI/RfD

EGBE: ethylene glycol monobutyl ether

Table 7-3. Hazards from Surface Water Exposure to EGBE
Recreational Scenario: Incidental Ingestion of EGBE in Surface Water While Swimming

Hypothetical adolescent and adult (12+ years)

Chemical	**Cw** Conc. in Water (mg/L)	**IR** Ingestion Rate (L/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**Ao** Oral Abs. Factor (unitless)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	0.00020	0.13	36	18	1.0	70	6,570	0.00000004	0.1	0.0000004

Hypothetical child (6-12 years)

Chemical	**Cw** Conc. in Water (mg/L)	**IR** Ingestion Rate (L/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**Ao** Oral Abs. Factor (unitless)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	0.00020	0.13	108	7	1.0	30	2,555	0.0000003	0.1	0.000003

Hypothetical young child (1-5 years)

Chemical	**Cw** Conc. in Water (mg/L)	**IR** Ingestion Rate (L/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**Ao** Oral Abs. Factor (unitless)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	Hazard (unitless)
EGBE	0.00020	0.13	36	5	1.0	15	1,825	0.0000002	0.1	0.0000017

ADI = Cw x IR x EF x ED x Ao x (1/BW) x (1/AT)

HQ = ADI/RfD

EGBE: ethylene glycol monobutyl ether

Table 7-4. Hazards from Surface Water Exposure to EGBE
Recreational Scenario: Dermal Contact with EGBE in Surface Water While Swimming

Hypothetical adolescent and adult (12+ years)

Chemical	**DAevent** Absorbed Dose (mg/cm^2-event)	**SA** Skin Surface Area Exposed (cm^2)	**EV** Event Frequency (events/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	3.6E-10	23,000	3	36	18	70	6,570	3.5E-08	0.1	0.0000003

Hypothetical child (6-12 years)

Chemical	**DAevent** Absorbed Dose (mg/cm^2-event)	**SA** Skin Surface Area Exposed (cm^2)	**EV** Event Frequency (events/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	**HQ** Hazard Quotient (unitless)
EGBE	3.6E-10	12,914	3	108	7	30	2,555	1.4E-07	0.1	0.0000014

Hypothetical young child (1-5 years)

Chemical	**DAevent** Absorbed Dose (mg/cm^2-event)	**SA** Skin Surface Area Exposed (cm^2)	**EV** Event Frequency (events/day)	**EF** Exposure Frequency (days/year)	**ED** Exposure Duration (years)	**BW** Body Weight (kg)	**AT** Averaging Time (days)	**ADI** Average Daily Intake (mg/kg-day)	**RfD** Reference Dose (mg/kg-day)	Hazard (unitless)
EGBE	3.6E-10	7,446	3	36	5	15	1,825	5.3E-08	0.1	0.0000005

$ADI = DA_{event} \times SA \times EV \times EF \times ED \times (1/BW) \times (1/AT)$

HQ = ADI/RfD

EGBE: ethylene glycol monobutyl ether

Table 7-5. Summary of Hazards from Surface Water Exposures to EGBE

Scenario	Age Group	Pathway		Hazard Quotient
		Ingestion	Dermal Contact	
Residential				
	Adolescent and adult (12+ years)	0.00005	0.000001	0.0001
	Child (6-12 years)	0.0001	0.000001	0.0001
	Young Child (1-5 years)	0.0001	0.000002	0.0001
	30-year lifetime	0.0003	0.000004	0.0003
Recreational				
	Adolescent and adult (12+ years)	0.0000004	0.0000003	0.000001
	Child (6-12 years)	0.000003	0.000001	0.00000
	Young Child (1-5 years)	0.000002	0.0000005	0.000002
	30-year lifetime	0.00000	0.000002	0.00001

Note: Hazard quotients less than 1 indicate that average daily intake is less than the reference dose and that negligible health effects are anticipated.

EGBE: ethylene glycol monobutyl ether

Table 7-6. Comparison of Hazards from Surface Water Exposures Predicted in HAPs Petition and This Petition

	HAPs Petition	This Petition
Maximum Exposed Individual	**Resident**	**Resident**
Concentration of EGBE in Water (mg/L)	0.13	0.00020
Predicted Ingestion Dose (mg/kg BW-day)	0.02	0.00001
Predicted Dermal Dose (mg/kg BW-day)	0.00004	0.0000002
Cumulative Predicted Dose (mg/kg BW-day)	0.02	0.00001
Reference Dose (mg/kg BW-day)	3	0.1
Maximum Hazard Quotient	0.007	0.0001

EGBE: ethylene glycol monobutyl ether
mg/L: milligrams per liter
mg/kg BW-day: milligrams per kilogram body weight per day

Table 8-1. EGBE Emissions Rates Used in Level III Mackay Distribution Model (kg/hr)

Receiving Media	CMA 1997 [a]	Updated Analysis with 2009 TRI data[b]	Updated Analysis with 2010 TRI data[b]	Updated Analysis with 2011 TRI data[bc]
Air	1,047	651	679	653
Soil	18	1.2	0.8	1.0
Water	292	3	3	5

a. CMA (1997) assumed 50 percent of Certain Glycol Ethers emitted was EGBE, based on 1996 TRI data.
b. These analyses assume 100 percent of Certain Glycol Ethers emitted were EGBE.
c. The emissions rates for 2011 are based on the preliminary 2011 TRI data, as acquired on September 12, 2012.
Air releases consisted of reported releases to "On-site Fugitive Air" and "On-site Point Source Air"
Soil releases consisted of reported releases to onsite and offsite "Land Treatment" and "Other Land Disposal"
Water releases consisted of reported releases to "On-site Surface Water Discharges."
EGBE: ethylene glycol monobutyl ether
kg/hr: kilograms per hour
TRI: Toxics Release Inventory

Table 8-2. Modeled EGBE Exposure Concentrations Used in This and Previous Ecological Risk Assessments

Environmental Media	CMA 1997 [a]	Cadmus 2000b Tier 1 [b]	Cadmus 2000a Tier 2 [c]	Updated Analysis 2009 TRI [d]	Updated Analysis 2010 TRI [d]	Updated Analysis 2011 TRI [de]	Units	Percent of Total EGBE (2011 TRI)[f]
Air	6.20E-05	3.27E-01	3.27E-01	3.82E-05	3.98E-05	3.83E-05	mg/m^3	2
Surface water	1.40E-03	3.84E+02	3.64E+00	1.90E-04	1.98E-04	1.93E-04	mg/L	18
Soil	1.30E-02	1.86E+01	7.00E-02	6.26E-03	6.53E-03	6.28E-03	mg/kg	80

a. The Level III Mackay model was used to determine equilibrium concentrations of EGBE in model environment receiving all national EGBE emissions from the 1996 TRI and assuming that 50 percent of all Certain Glycol Ethers are EGBE.

b. The Level I Mackay model was used to determine the equilibrium distribution of EGBE in the model environment (Cadmus 2000b). Concentrations were then scaled to the predicted worst-case fenceline concentration, based on CMA (1997) (Confidential Facility 25).

c. EQC Level III was used to determine the equilibrium distribution of EGBE in the model environment (Cadmus 2000a). Concentrations were scaled to same fenceline concentration as in Cadmus (2000b).

d. EQC Level III was used to determine the equilibrium concentrations of EGBE in model environment receiving all national emissions of Certain Glycol Ethers from TRI, assuming that all Certain Glycol Ethers are EGBE.

e. The emissions rates for 2011 are based on the preliminary 2011 TRI data, as acquired on September 12, 2012.

f. Percent of the total EGBE in each pool at equilibrium. Based on the modeled environment in EQC.

EGBE: ethylene glycol monobutyl ether

TRI: Toxics Release Inventory

mg/m^3: milligrams per cubic meter

mg/L: milligrams per liter

mg/kg: milligrams per kilogram

Table 8-3. EQC Level III Input Parameter Values

EGBE-Specific Input Parameters	Value	Units	Source
Molecular weight	118.17	g/mol	Merck 1989
Melting point	-75	°C	ASTER 1995
Water solubility[a]	5.67E+06	g/m^3	Calculated
Henry's law constant	2.11E-03	$Pa\text{-}m^3/mol$	Howard 1993, HSDB 1997
Vapor pressure[a]	101.32	Pa	HSDB 1997
Log K_{ow}	0.83	unitless	HSDB 1997
Reaction half lives			
Air	16	hr	PBT Profiler Ver. 1.301
Water	209	hr	PBT Profiler Ver. 1.301
Soil	408	hr	PBT Profiler Ver. 1.301
Sediment	1872	hr	PBT Profiler Ver. 1.301
EQC Model Parameters	**Value**	**Units**	
Total surface area	100,000	km^2	
Land surface area	90,000	km^2	
Water surface area	10,000	km^2	
Atmosphere depth	1,000	m	
Water depth	20	m	
Soil depth	0.2	m	
Sediment depth	0.05	m	
Organic carbon content			
Suspended solids	20%	unitless	
Soil	2%	unitless	
Sediment	4%	unitless	

a. values apply to the chemical at 20°C
EGBE: ethylene glycol monobutyl ether
EQC: Equilibrium Criteria Model
g/m^3: grams per cubic meter
g/mol: grams per mole
km^2: square kilometers
m: meter
$Pa\text{-}m^3/mol$: Pascal cubic meters per mole

Table 8-4. Exposure Assumptions for Small Mammals

Variable	Definition	Value	Units	Source
C_a	Concentration of EGBE in air	3.98E-05	mg/m^3	Table 8-2[a]
IR_a	Inhalation rate	1.2	m^3/kg BW-day	EPA 1993a
C_w	Concentration of EGBE in water	1.98E-04	mg/L	Table 8-2[a]
IR_w	Water ingestion rate	0.21	kg/kg BW-day	EPA 1993a
IR_{diet}	Food ingestion rate	0.35	kg/kg BW-day	EPA 1993a
C_i	Concentration of EGBE			
	Soil (C_s)	6.53E-03	mg/kg	Table 8-2[a]
	Plants (C_p)	8.4E-02	mg/kg	$C_p = B_v \times C_s$
P_i	Proportion of Diet			
	Soil (P_s)	0.02	unitless	Cadmus 2000a
	Plants (P_p)	0.98	unitless	Cadmus 2000a
TDI	Total Daily Intake	0.029	mg/kg BW-day	Calculated[b]

a. Based on 2010 Toxics Release Inventory data

b. where:

$$TDI = (C_a \times IR_a \times 3) + (C_w \times IR_w) + IR_{diet} \sum_{i=1}^{N} (C_i \times P_i)$$

EGBE: ethylene glycol monobutyl ether

mg/m^3: milligrams p

m^3/kg BW-day: cubic meter per kilogram body weight per day

mg/L: milligrams per liter

kg/kg BW-day: kilograms per kilogram body weight per day

mg/kg: milligrams per kilogram

mg/kg BW-day: milligrams per kilogram body weight per day

Table 8-5. Chronic Species Sensitivity Distribution Calculations for EGBE

Group	Species	Endpoint [a]	Duration	LC50 (mg/L)	LC50 (log)	Calculated Distribution		Rank among all CVs	Percent Protected
						Calc CV (log) [b]	Calc CV (mg/L) [b]		
Fish	mummichog	LC50	96 hr	6.7	0.826	-0.159	0.7	1	99.3
Fish	sheepshead minnow	LC50	96 hr	116	2.064	0.761	5.8	3	90.6
Fish	bluegill	LC50	96 hr	127	2.104	0.790	6.2	4	86.3
Fish	emerald shiner	LC50	72 hr	500	2.699	1.232	17.1	8	76.3
Fish	rainbow trout	LC50	96 hr	1000	3.000	1.456	28.6	9	71.9
Fish	inland silverside	LC50	96 hr	1250	3.097	1.528	33.7	10	69.8
Fish	golden ide	LC50	48 hr	1395	3.145	1.563	36.6	12	61.2
Fish	bluegill	LC50	96 hr	1490	3.173	1.584	38.4	13	59.7
Fish	golden ide	LC50	48 hr	1575	3.197	1.602	40.0	14	58.3
Fish	goldfish	LC50	24 hr	1650	3.217	1.617	41.4	15	56.8
Fish	rainbow trout	LC50	96 hr	1700	3.230	1.627	42.4	16	54.7
Fish	goldfish	LC50	24 hr	1700	3.230	1.627	42.4	16	54.7
Fish	golden ide	LC50	48 hr	1880	3.274	1.659	45.6	18	50.4
Fish	fathead minnow	LC50	96 hr	2137	3.330	1.701	50.2	20	46.8
Fish	bluegill	LC50	96 hr	2950	3.470	1.805	63.8	23	36.0
	Mean vertebrate (weighted)			524.3	2.720	1.247	17.7		
	Standard deviation (weighted)			6.2	0.794	0.59	3.9		
Invertebrate	grass shrimp	LC50	96 hr	5.4	0.732	0.093	1.2	2	95.0
Invertebrate	oyster	LC50	96 hr	89	1.949	1.052	11.3	5	84.9
Invertebrate	white shrimp	LC50	96 hr	117	2.068	1.146	14.0	6	80.6
Invertebrate	white shrimp	LC50	96 hr	130	2.114	1.182	15.2	7	78.4
Invertebrate	brown shrimp	LC50	96 hr	550	2.740	1.676	47.4	19	48.9
Invertebrate	coelenterate	LC50	72 hr	690	2.839	1.753	56.6	21	42.4
Invertebrate	brown shrimp	LC50	96 hr	698	2.844	1.757	57.2	22	38.1
Invertebrate	water flea	LC50	48 hr	835	2.922	1.818	65.8	24	34.5
Invertebrate	water flea	EC50	48 hr	1600	3.204	2.041	109.9	26	28.1
	Mean invertebrate acute (weighted)			175.6	2.244	1.285	19.3		
	Standard deviation (weighted)			6.7	0.825	0.65	4.5		
Algae/microbes	cyanobacterium	LOEC	8 day	na	na	1.544	35	11	65.5
Algae/microbes	protozoan	LOEC	72 hr	na	na	1.959	91	25	32.4
Algae/microbes	green alga	LOEC	7 day	na	na	2.398	250	27	25.9
Algae/microbes	algae	NOEC	72 hr	na	na	2.456	286	28	21.6
Algae/microbes	protozoan	EC05	48 hr	na	na	2.666	463	29	17.3
Algae/microbes	bacterium	LOEC	16 hr	na	na	2.845	700	30	12.9
Algae/microbes	green alga	LOEC	7 day	na	na	2.954	900	31	8.6
Algae/microbes	protozoan	EC05	48 hr	na	na	2.960	911	32	4.3

a. All algae endpoints are growth
b. Algae/microbe chronic values are as reported in the literature; they are not calculated
CV: chronic value
EC05: concentration at which 5% of the population was affected
EC50: median effect concentration
EGBE: ethylene glycol monobutyl ether
LC50: median lethal concentration
LOEC: lowest observed effect concentration
mg/L: milligrams of EGBE per liter of water
na: not available/applicable
NOEC: no observed effect concentration

Table 9-1. Key Findings of the Qualitative Hazard Evaluation

Toxicity Endpoint	Summary Evaluation and Principal Reference
1. Acute Toxicity	Primary acute effects in humans are eye and nasal irritation at levels >500 mg/m^3 (Carpenter 1956); no irritation was found at current occupational exposure limits - 97 mg/m^3 (Johansen 1986). Facility fenceline and environmental concentrations are far lower.
2. Chronic Toxicity	Releases of EGBE "may not reasonably be anticipated to cause any adverse effects to human health" (EPA, 69 FR 69322).
a. Carcinogenicity	• "Limited" evidence of carcinogenicity in animals; the human carcinogenic potential of EGBE cannot be determined (IARC 2006). • Because nonlinear, nongenotoxic modes of action are likely responsible for the tumors observed in rodent studies, the IRIS RfD and RfC are adequately protective of any possible carcinogenic effects in humans. (EPA Cancer Evaluation [EPA 2005a])
b. Mutagenicity	Not expected to be mutagenic or clastogenic. (EPA 2010)
c. Developmental Toxicity	A "minimal" LOAEL for developmental effects = 700 mg/kg-day based on a very slight decrease in pup weight. (EPA 2010)
d. Reproductive Toxicity	700 and 1,300 mg/kg-day are considered to be NOAEL and LOAEL, respectively, for both maternal and reproductive effects. (EPA 2010)
e. Immunotoxicity	Not immunotoxic. (IRIS)
f. Other Chronic Toxicity	Continuous inhalation exposure to an EGBE-saturated atmosphere expected to result in maximum blood concentrations of EGBE's toxic metabolite (BAA) well below the level needed to produce hemolysis in humans. (Udden 2002, EPA 2010)
3. Environmental Toxicity	EGBE causes only "very minor" effects that "are unlikely to be ecologically significant" (EPA 2003 [68 Fed. Reg. 65657])
a. Persistence	• Readily biodegradable (ATSDR 1998) • Half-life = 1-4 weeks in water and soil
b. Bioaccumulation	• Bioconcentration factor = 3 (HSDB 1997) • Octanol-water partition coefficient (Log K_{ow}) = 0.8
c. Terrestrial Mammals and Birds	No Data. [Section 3.3, below]

Table 9-1. Key Findings of the Qualitative Hazard Evaluation

Toxicity Endpoint	Summary Evaluation and Principal Reference	
d. Acute Aquatic Toxicity	• Most sensitive credible LC_{50} = 89 mg/L	(Section 3.3, below)
	• Most LC_{50} values > 1000 mg/L	
e. Chronic Aquatic Toxicity	• Most sensitive EC_{50} = 164 mg/L	(Section 3.3, below)
	• Most sensitive LOAEL = 7.2 mg/L	
	• Most LOAELs > 100 mg/L	

EGBE: ethylene glycol monobutyl ether
EPA: U.S. Environmental Protection Agency
LOAEL: lowest observed adverse effect level
mg/kg: milligrams per kilogram
mg/kg-day: milligrams per kilogram body weight per day
mg/L: milligrams per liter
mg/m^3: milligrams per cubic meter
NOAEL: no observed adverse effect level
RfC: reference concentration
RfD: reference dose

Table 9-2. Key Findings of the Exposure and Risk Assessments

	HAPs Petition (1993 TRI Release Data)	This Petition (2009-2011 TRI Release Data)
1. Human Inhalation Exposures		
a. Chronic		
Maximum Annual Average Concentration (MAAC)	0.327 mg/m^3, based on Tier 3 (ISCST3) air dispersion modeling for the maximum impact facility.	All facilities screened out prior to chronic Tier 2 and 3 analyses. For subset of facilities that screened out in Tier 2, Tier 3 modeling was conducted to test the conservatism of this assessment found a predicted MAAC using Tier 3 (AERMOD) of 0.27 mg/m^3 based on 2009, 2010, and 2011 data.
RfC	13 mg/m^3	1.6 mg/m^3
Hazard Quotient (chronic)	0.02	≤ 0.2
b. Acute		
Maximum Hourly Average Concentration (MHAC)	n/a	For a subset of the highest emitting facilities, tiered modeling of acute exposures found a predicted MHAC using Tier 3 (AERMOD) of 3.9 mg/m3 based on the 2009, 2010, and 2011 data.
NOAEL (Irritation Based on Human Data)	n/a	97 mg/m^3
Margin of Exposure	n/a	> 25
2. Human Dermal and Ingestion Exposures		
Maximum Exposure	0.02 mg/kg BW-day	0.00001 mg/kg BW-day
RfD	3 mg/kg BW-day	0.1 mg/kg BW-day
Hazard Quotient	0.007	0.0001
3. Ecological Risk		
a. Small Mammals	(from Cadmus 2000a)	
Maximum Exposure	2.15 mg/kg BW-day	0.029 mg/kg BW-day
Toxicity Reference Value	20 mg/kg BW-day	20 mg/kg BW-day
Hazard Quotient	0.11	0.001
b. Aquatic Organisms	(from Cadmus 2000a)	
Maximum Exposure	3.64 mg/L	0.0002 mg/L
Toxicity Reference Value	9.1 mg/L	8.7 mg/L
Hazard Quotient	0.4	0.00002

mg/kg BW-day: milligrams per kilogram body weight per day
mg/L: milligrams per liter
mg/m^3: milligrams per cubic meter
RfC: IRIS reference concentration
RfD: IRIS reference dose
TRV: toxicity reference value

Table 9-3. Sources of Uncertainty and Conservatism

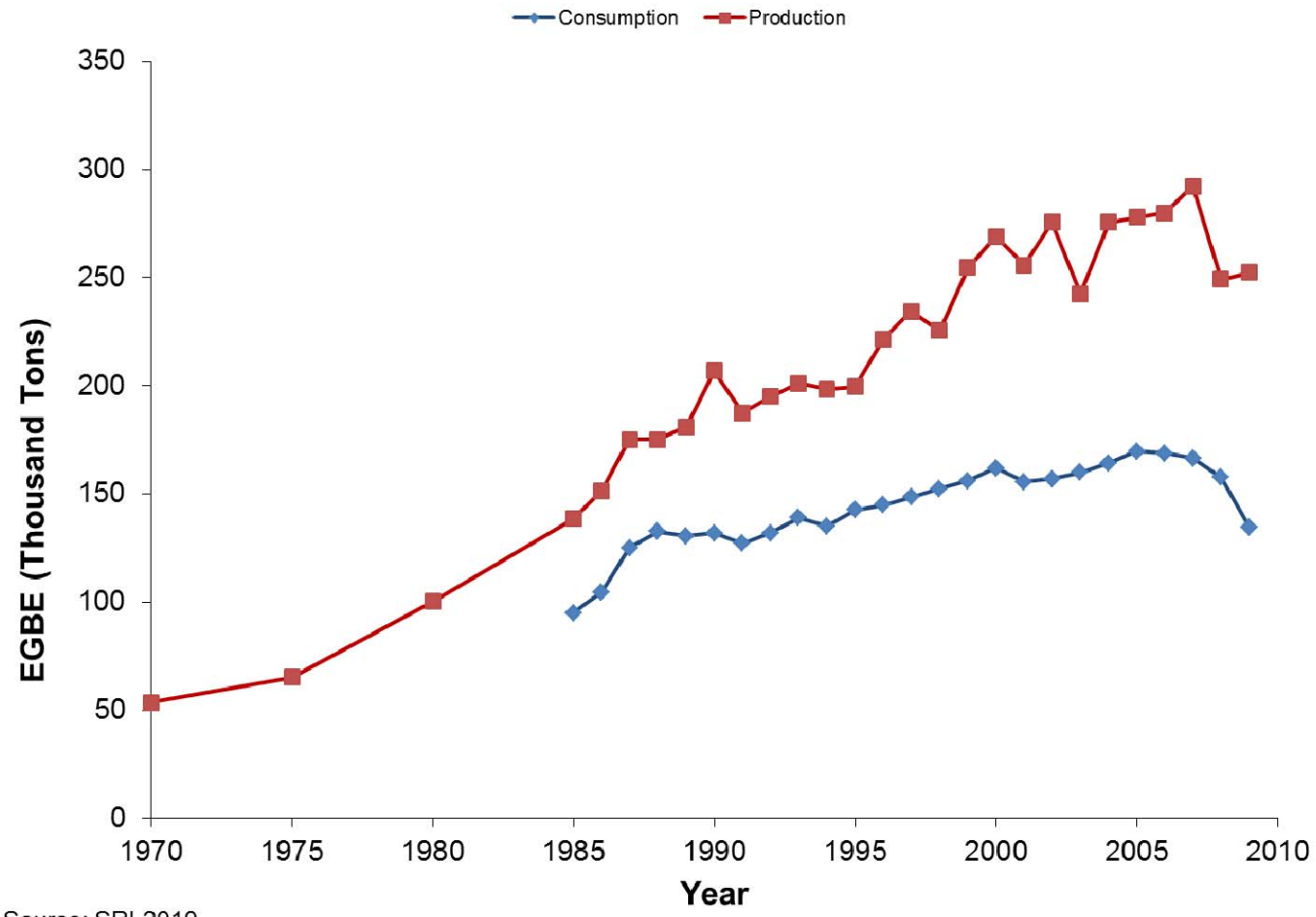
Section	Source of Uncertainty	Likely Effect on Outcome
3.0 Hazard Assessment		
	Humans are at least 100 times less sensitive than rats to hemolytic effects of EGBE. While a stand default interspecies UFs of 10 was not used - RfD uses UF of 1 and RfC uses UF of 3 – the actual interspecies factor is approximately 0.01.	RfD may be 100-fold overly conservative. RfC may be 300-fold overly conservative. Thus, HQs may be overestimated by a factor of 100 to 300.
	Intraspecies UF of 10 is probably overly conservative. A number of studies have found no evidence of increased susceptibility to hemolysis among sensitive subpopulations.	RfD and RfC may be overstated by an additional factor of 3 to 10.
	IARC (2006) concluded that the carcinogenicity of EGBE to humans cannot be determined and EPA (2010) concluded that carcinogenic effects from EGBE are not likely to occur in humans in the absence of critical noncancer effects.	EPA (2005) concluded that the RfD and RfC are adequately protective of carcinogenic effects in humans, if any. Thus, question of carcinogenicity does not affect petition outcome.
5.0 Emissions Inventory		
	TRI only lists releases of Certain Glycol Ethers. In the absence of specific data for EGBE releases, assumed all Certain Glycol Ethers releases were EGBE.	Because EGBE represents 52% of market share of ethylene glycol ethers (SRI 2010), actual releases of EGBE may be overestimated 2-fold, on average.
	TRI data are self-reported using a variety of methods. Individual facility data vary considerably in certainty.	Actual releases of Certain Glycol Ethers by facilities may be greater than or less than those reported on TRI. No evidence of systematic under-reporting.
6.0 Screening of Airborne Concentrations		
	a. <u>Chronic</u>	
	Step A assumed 100% of reported releases to air were exhausted through a single point 0 m high and 50 m from fence line. Resultant threshold rate (4.9 tpy) more conservative than that associated with 2 m high emission point located 10 m from fenceline (8.6 tpy), which encompasses virtually all facilities in inventory for which stack configuration data are available.	Maximum annual average concentrations predicted under Step A were up to 250-fold higher than those predicted using Tier 3 dispersion modeling. Thus, HQs predicted using Step A overestimated by 85-250 times.
	Tier 2 employed site-specific data on emission rates, stack and fugitive source physical parameters, and property boundaries. The maximum MAAC under Tier 2 was 1.2 mg/m^3, as compared to maximum MAAC under Tier 3 of 0.3 mg/m^3. Tier 2 results differed from Tier 3 results for the same facilities by factors of 1.2 to 6.7.	HQs predicted using Tier 2 overestimated by 2 times or more.
	Modeled maximum annual average concentration is highly conservative estimate of exposure over a lifetime.	Per EPA, actual maximum annual average concentrations are 2-fold lower than modeled values. Comparison of an annual average concentration to an RfC designed to be protective over a lifetime substantially overstates risk by an unknown margin.
	DEGREE OF CONSERVATISM ASSOCIATED WITH CHRONIC HUMAN INHALATION HAZARDS	(50 to 100) x (3 to 10) x 2 x (2 to 85) x ? = ***<u>600 to 170,000 or more</u>***
	b. <u>Acute</u>	
	The acute MOE based on the NOAEL of 97 mg/m^3 and the estimated reasonable worst-case estimated MHAC is approximately 18 mg/m^3. Because the NOAEL is derived from human data, per EPA TRI precedents MOEs >10 "indicate a low level of concern" for acute effects associated with EGBE facility releases.	An MOE above 5 is protective because EPA AEGL guidance calls for an interspecies uncertainty factor from 3-10 for non-systemic irritation effects, and an appropriate time-adjustment would support a 1-hr NOAEL of 137 mg/m^3.

Table 9-3. Sources of Uncertainty and Conservatism

Section	Source of Uncertainty	Likely Effect on Outcome
7.0 Surface Water Exposures and Risks		
	Exposure point concentrations in surface water calculated by assuming that 100% of U.S. releases of Certain Glycol Ethers to all media are EGBE and are concentrated into an area the size of the state of Ohio.	Because EGBE represents 52% of consumption of ethylene glycol ethers (SRI 2010), actual releases of EGBE may be overestimated 2-fold, on average. Because 100,000 km^2 represents 1.3% of total land area of U.S., actual concentrations of EGBE may be overestimated 77-fold.
	Exposure assumptions (350 day/yr, 70 years, all water contacted contains EGBE)	Actual exposure intensity likely to be considerably lower, but degree of conservatism cannot be quantified.
	DEGREE OF CONSERVATISM ASSOCIATED WITH HUMAN DERMAL AND INGESTION HAZARDS	(50 to 100) x (3 to 10) x 2 x 77 x ? = ***23,100 to 154,000 or more***
8.0 Ecological Risk Assessment		
	Exposure point concentrations in surface water calculated by assuming that 100% of U.S. releases of Certain Glycol Ethers to all media are EGBE and are concentrated into an area the size of the state of Ohio.	Actual releases of EGBE may be overestimated 2-fold, on average, and actual concentrations of EGBE may be overestimated 77-fold.
	Conservative exposure assumptions for small mammals (inhalation rate, ingestion rate, bioaccumulation factor) consistent with Cadmus (2000a)	Actual exposure intensity likely to be considerably lower, but degree of conservatism cannot be quantified.
	TRV for aquatic organisms based on most sensitive species tested, which may not be representative of aquatic community present in most U.S. water bodies	Although actual sensitivity of other aquatic organisms to EGBE may be considerably lower, degree of conservatism cannot be quantified.
	TRV for small mammals is based on same underlying data used to derive RfD. Thus, small mammal TRV shares same uncertainties as listed above with respect to Section 3.0.	TRV may be 50 to 1,000-fold overly conservative due to UFs.
	HQs focused on what EPA calls "very minor" effects on individual organisms, rather than effects that are likely to be ecologically significant.	Although individual organisms are likely to be substantially more sensitive than populations, communities, or ecosystems, degree of conservatism cannot be quantified.
	DEGREE OF CONSERVATISM ASSOCIATED WITH RISKS TO AQUATIC ORGANISMS	2 x 77 x ? = ***154 or more***
	DEGREE OF CONSERVATISM ASSOCIATED WITH RISKS TO SMALL MAMMALS	2 x 77 x (50 to 1,000) x ? = ***7,700 to 154,000 or more***

EGBE: ethylene glycol monobutyl ether
FR: Federal Register
HQ: hazard quotient
IRIS: Integrated Risk Information Service
km^2: square kilometer
m: meter
mg/m^3: milligrams per cubic meter
RfC: reference concentration
RfD: reference dose
tpy: tons per year
TRI: Toxics Release Inventory
TRV: toxicity reference value
UF: uncertainty factor
EPA: U.S. Environmental Protection Agency

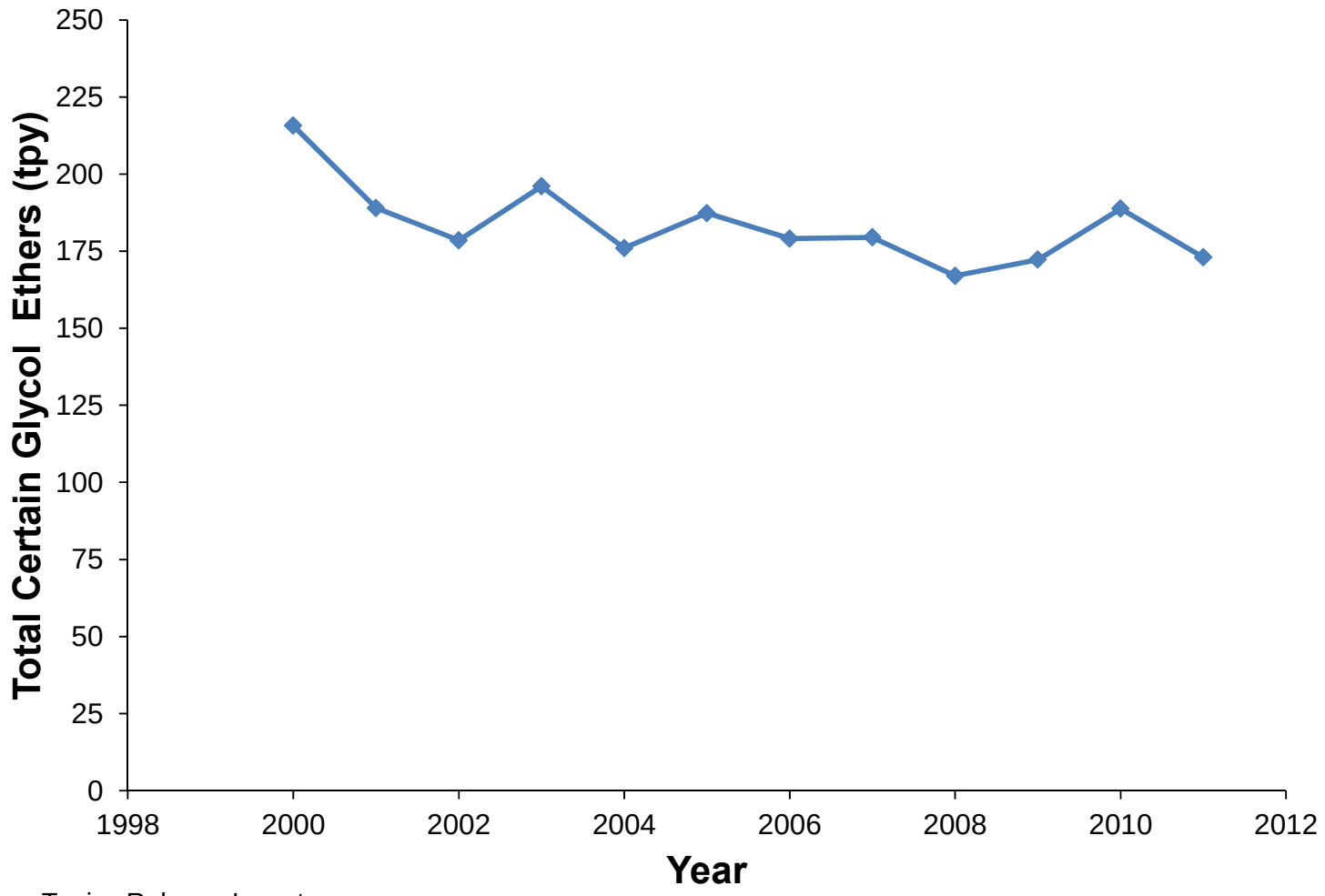
FIGURES



Source: SRI 2010

Annual Production and Consumption of EGBE in the United States (1970-2009)

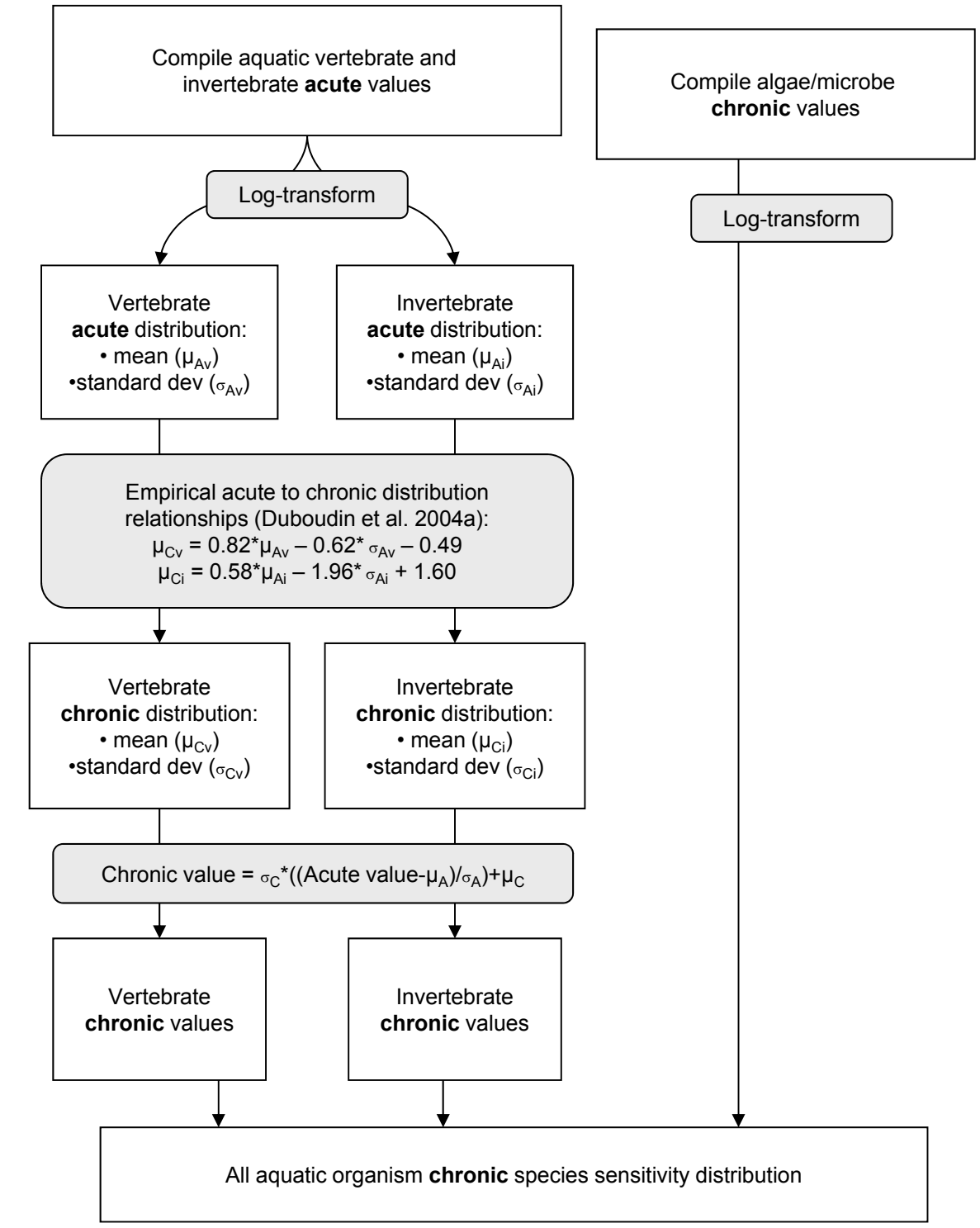
Figure 2-1



Source: Toxics Release Inventory
tpy: tons per year

Maximum Individual Facility Annual Certain Glycol Ether Releases to Air (2000 – 2011)

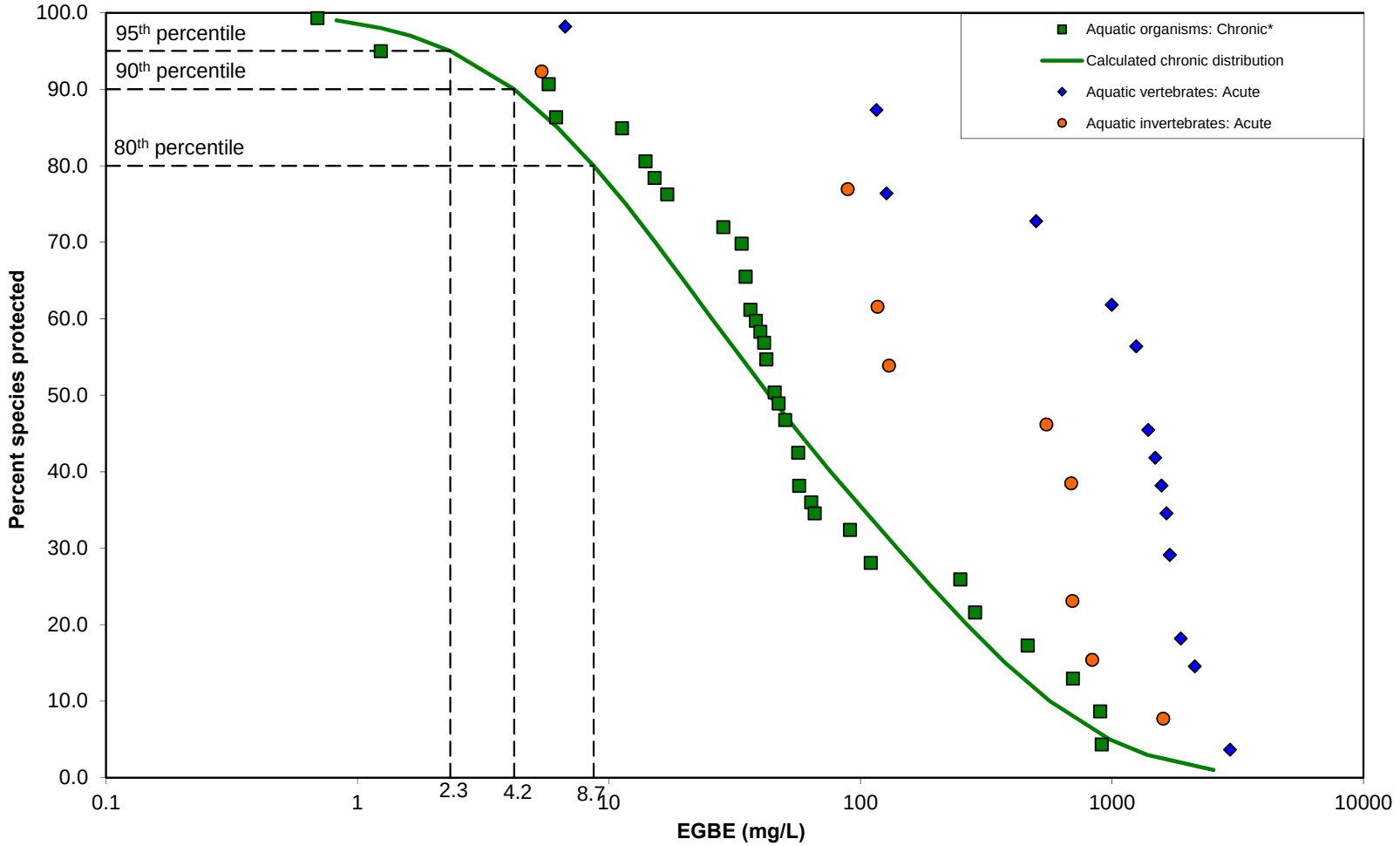
Figure 5-1



μ_C, μ_A = mean chronic or acute value, respectively
σ_C, σ_A = standard deviation of chronic and acute distribution, respectively

Aquatic Organism Species Sensitivity Distribution Approach

Figure 8-1



* Includes observed chronic values for algae and microbes and calculated chronic values for vertebrates and invertebrates (Duboudin et al. 2004a)

Aquatic Organism Species Sensitivity Distributions for EGBE

Figure 8-2

APPENDIX A

Toxicity Values in Laboratory Mammals

APPENDIX A-1

Toxicity Values in Laboratory Mammals from ATSDR 1998

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
ACUTE EXPOSURE							
Death							
1	Rat (NS)	1-6 d 2-9 hr/d				375 (death of 11/13 males and 23/23 females after 7 hrs)	Carpenter et al. 1956
2	Rat (Sherman)	3 d 7 hr/d				432 F (15/15 died)	Carpenter et al. 1956
3	Rat (Fischer- 344)	4 hr				486 M (LC_{50}) 450 F (LC_{50})	Dodd et al. 1983
4	Rat (Sprague-Dawley)	1 d 6.5 -7hr				250 F (2/3 died)	Nelson et al. 1984
5	Rat (Fischer- 344)	6 hr				438 M (2/4 died)	Sabourin et al. 1992a
6	Mouse (Swiss)	7 hr				700 (LC_{50})	Werner et al. 1943a
7	Rabbit (albino)	1-2d 7 hr/d				400-411 M (25-100% death)	Dow 1986
8	Rabbit (New Zealand)	Gd 6-18 6 hr/d				200 F (4/24 died)	Tyl et al. 1984
Systemic							
9	Human	4-8 hr	Resp	98	113 (nasal irritation, slight increase in nasal mucus discharge)		Carpenter et al. 1956
			Cardio	195 M			
			Gastro		98 F (emesis)		
			Hemato	195			
			Ocular	98	113 (ocular irritation)		
10	Human	2 hr	Resp	20 M			Johanson et al. 1986a
			Cardio	20 M			

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
11	Rat (NS)	2-8 hr	Hemato			432 F (hemolysis in 2 hrs; hemoglobinuria in 3 hrs; hemin crystals in urine in 4 hrs)	Carpenter et al. 1956
			Renal		432 F (slight cloudy swelling of convoluted tubules in 2 hrs)		
12	Rat (NS)	9 d 7 hr/d	Hemato			200 F (50% decrease in erythrocyte count and 25% decrease in HGB level)	Carpenter et al. 1956
13	Rat (NS)	4 hr	Hemato	32 F	62 F (significant osmotic fragility of RBCs)		Carpenter et al. 1956
14	Rat (Fischer- 344)	4 hr	Resp	523	867 (rapid and shallow breathing)		Dodd et al. 1983
			Renal	202		523 (red discharge around urogenital area and bladder [hematuria]; enlarged kidneys)	

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
15	Rat (Fischer- 344)	9 d 5 d/wk 6 hr/d	Resp	86 M 245 F	245 M (audible respiration and nasal discharge)		Dodd et al. 1983
			Hemato	20		86 M (HGB decreased 5%, significant increases in MCV of 11%) 86 F (HGB decreased 8%, MCHC decreased 18%, significant increases in MCV of 17%)	
			Hepatic	86 M 20 F	245 M (increased liver weights of about 5.4%) 86 F (increased liver weights of about 4.5%)		
			Renal	86	245 (transient red-stained urine [hematuria])		
			Ocular	245			
			Bd Wt	86 M 20 F	245 M (13% decrease in body weight gain) 86 F (10% decrease in body weight gain)		
16	Rat (Alpk/Ap)	3 hr	Renal			800 M (hematuria)	Doe 1984
17	Rat (Sprague-Dawley)	4 d 7 hr/d	Bd Wt	57-58 M			Dow 1972
18	Rat (Sprague-Dawley)	Gd 7-15 7 hr/d	Renal		150 F (slight hematuria)		Nelson et al. 1984
19	Rat (Sprague-Dawley)	1 d 6.5 -7 hr	Renal			250 F (hematuria)	Nelson et al. 1984
			Dermal		250 F (necrotic tail tip)		

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
20	Rat (Fischer- 344)	6 hr	Hemato			438 M (hemoglobinuria)	Sabourin et al. 1992a
21	Rat (Fischer- 344)	Gd 6-15 6 hr/d	Resp	50 F	100 F (perinasal encrustation)		Tyl et al. 1984
			Hemato	50[b] F		100 F (reduced RBC and MCHC; increased MCH and MCV)	
			Hepatic	200 F			
			Renal	50 F		100 F (hematuria)	
			Dermal	100 F	200 F (necrosis of the tail tip, stained fur)		
			Ocular		25 F (periocular wetness)		
			Bd Wt	50 F		100 F (29% decrease in body weight gain)	
			Other	50 F	100 F (13% reduction in food consumption)		
				100 F	200 F (14% reduction in water consumption)		
22	Mouse (NS)	7 hr	Hemato		100 (increased osmotic fragility)		Carpenter et al. 1956
23	Mouse (Swiss-Webster)	10 min	Resp		153M (20% decrease in respiratory rate)		Kane et al. 1980
24	Gn Pig (NS)	8 hr	Hemato	665 M			Carpenter et al. 1956
25	Rabbit (NS)	7 hr	Hemato		125 (increased osmotic fragility of RBCs)		Carpenter et al. 1956

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
26	Rabbit (albino)	1-2d 7 hr/d	Resp			400-411 M (congestion of lungs and turbinates, nasal discharge)	Dow 1986
			Gastro			400-411 M (hemorrhagic gastric ulcers)	
			Hepatic		400-411 M (mottled livers in surviving animals)		
			Renal			400-411 M (darkened kidneys in surviving animals, hematuria)	
			Ocular		400-411 M (ocular discharge, yellowing of sclerae)		
27	Rabbit (New Zealand)	Gd 6-18 6 hr/d	Resp	100 F	200 F (perinasal wetness and discharge)		Tyl et al. 1984
			Hemato	50 F	100 F (increased hemoglobin and hematocrit)		
			Hepatic	200 F			
			Renal	50 F		100 F (hematuria)	
			Dermal	100 F	200 F (stained fur)		
			Ocular	50 F	100 F (periocular wetness)		
			Bd Wt	100 F	200 F (9.7% reduction in maternal body weight)		
Immunological/Lymphoreticular							
28	Rat (Fischer- 344)	Gd 6-15 6 hr/d		100 F	200 F (20-24% increase in absolute and relative maternal spleen weights)		Tyl et al. 1984
Neurological							
29	Human	4-8 hr			98 (headache)		Carpenter et al. 1956
				98	113 M (disagreeable metallic taste)		
30	Rat (Fischer- 344)	4 hr		202		523 (loss of coordination)	Dodd et al. 1983

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
31	Dog (Beagle)	1-5 d 7 hr/d			400-411 M (salivation)		Dow 1986
32	Rabbit (albino)	1-2 d 7 hr/d				400-411 M (poor coordination of extremities and loss of equilibrium)	Dow 1986
	Reproductive						
33	Rat (Fischer- 344)	Gd 6-15 6 hr/d		100 F		200 F (50% decrease in viable implants & in live fetuses per litter; 8-fold increase in nonviable implants; reduced maternal gravid uterine weight)	Tyl et al. 1984
34	Rabbit (New Zealand)	Gd 6-18 6 hr/d		100		200 F (14% decrease in total implants; 20% decrease in viable implants)	Tyl et al. 1984
	Developmental						
35	Rat (Sprague-Dawley)	Gd 7-15 7 hr/d		200			Nelson et al. 1984
36	Rat (Fischer- 344)	Gd 6-15 6 hr/d		50	100 (retarded skeletal ossification)		Tyl et al. 1984
37	Rabbit (New Zealand)	Gd 6-18 6 hr/d		100	200 (22% reduction in gravid uterine weight, reduced ossification in fetuses)		Tyl et al. 1984
	INTERMEDIATE EXPOSURE						
	Death						
38	Rat (Sherman)	30 d 5 d/wk 7 hr/d				432 M (12/15 died) 314 F (15/15 died)	Carpenter et al. 1956
39	Mouse (C3H)	30 d				376 M (2/10 died)	Carpenter et al. 1956

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
40	Gn Pig (NS)	30 d 5 d/wk 7 hr/d				376 M (1/10 died)	Carpenter et al. 1956
	Systemic						
41	Rat (Sherman)	30 d 5 d/wk 7 hr/d	Resp	203		432 M (congestion & hemorrhage 314 F of the lungs)	Carpenter et al. 1956
			Gastro	203		432 M (congestion of the 314 F abdominal viscera)	
			Hemato		54 (erythrocyte fragility)	203 (hemoglobinuria)	
			Hepatic	54	107 (unspecified increase in liver weight)		
			Renal	54	107 (unspecified increase in kidney weight)		
			Bd Wt	203			
42	Rat (Fischer- 344)	13 wk 5 d/wk 6 hr/d	Resp	77			Dodd et al. 1983
			Cardio	77			
			Hemato	25[c]		77 (5%-13% decrease in RBC, in both sexes; 4% decrease in HGB; 11% increase in MCH, females)	
			Musc/skel	77			
			Hepatic	77			
			Renal	77			
			Endocr	77			
			Bd Wt	77			
43	Mouse (C3H)	30-90 d 7 hr/d	Hemato		100 M (increased erythrocyte osmotic fragility)		Carpenter et al. 1956
			Hepatic	100 M	200 M (unspecified increase ($p<0.05$) in liver weights)		
			Renal	400 M			
			Bd Wt	200 M	400 M (unspecified decrease ($p<0.05$) in body weights)		

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
44	Gn Pig (NS)	30 d 5 d/wk 7 hr/d	Resp	203 M	376 M (lung congestion)		Carpenter et al. 1956
			Hemato	494 M			
			Hepatic	494 M			
			Renal	107 M	203 M (unspecified increase ($p<0.05$) in kidney weight)		
			Bd Wt	495 M			
45	Dog (Hybrid)	31 d	Resp		200 (slight capillary engorgement or breakdown in the lungs)		Carpenter et al. 1956
			Hemato			200 M (increased osmotic fragility of RBCs and 100% increased leukocyte counts)	
					200 F (RBC osmotic fragility increased slightly; slight decrease in RBC count and hemoglobin level)		
			Ocular	200			
46	Dog (Terrier)	90 d	Hemato		100 (decreased hematocrit in male, transitory doubling of the leukocyte count midway into the 90-day exposure in both sexes)		Carpenter et al. 1956

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference
47	Dog (NS)	12 wk 5 d/wk 7 hr/d	Resp		415 (slightly increased nasal secretions)		Werner et al. 1943b
			Cardio	415			
			Gastro	415			
			Hemato		415 (decreased Hgb, hematocrit; hypochromia, polychromatophilia, and microcytosis)		
			Hepatic	415			
			Renal	415			
			Ocular		415 (slight increased secretions in the eyes)		
Immunological/Lymphoreticular							
48	Rat (Fischer- 344)	13 wk 5 d/wk 6 hr/d		77			Dodd et al. 1983
Neurological							
49	Rat (Fischer- 344)	13 wk 5 d/wk 6 hr/d		77			Dodd et al. 1983
Reproductive							
50	Rat (Fischer- 344)	13 wk 5 d/wk 6 hr/d		77 M			Dodd et al. 1983
CHRONIC EXPOSURE							
Systemic							
51	Human	1-6 yr	Hemato	0.6[d] M			Haufroid et al. 1997
			Hepatic	0.75 M			
			Renal	0.75 M			

Table 2-1. Levels of Significant Exposure to 2-Butoxyethanol - Inhalation (continued)

Key to figure[a]	Species/ (strain)	Exposure/ duration/ frequency	System	NOAEL (ppm)	LOAEL Less serious (ppm)	LOAEL Serious (ppm)	Reference

[a]The number corresponds to entries in Figure 2-1. Differences in levels of health effects and cancer effects between males and females are not indicated in Figure 2-1. Where such differences exist, only the levels of effect for the most sensitive gender are presented.

[b]Used to derive an acute inhalation minimal risk level (MRL) of 6.0 ppm. Concentration converted to an equivalent concentration in humans, and divided by an uncertainty factor of 9 (3 for extrapolation from animals to humans and 3 for human variability). For further details, see MRL worksheets in Appendix A.

[c]Used to derive an intermediate inhalation MRL of 3.0 ppm. Concentration converted to an equivalent concentration in humans, and divided by an uncertainty factor of 9 (3 for extrapolation from animals to humans and 3 for human variability). For further details, see MRL worksheets in Appendix A.

[d]Used to derive a chronic inhalation MRL of 0.2 ppm. Concentration divided by an uncertainty factor of 3 for human variability. Hematocrit significantly [p=0.03] decreased to 43.9%, MCHC significantly [p=0.02] increased to 33.6 g/dL. Changes in hematocrit and MCHC were within the range of normal clinical values and therefore were considered NOAELs. These effects were consistent with hemolysis seen in animal studies and may be an early indicator of potential adverse effects in humans. For further details, see MRL worksheets in Appendix A.

Bd Wt = body weight; Cardio = cardiovascular; d = day(s); Endocr = endocrine; F = female; Gastro = gastrointestinal; Gd = gestational day; Gn Pig = guinea pig; Hemato = hematological; HGB = hemoglobin; hr = hour(s); LC_{50} = lethal concentration; 50% kill; LOAEL = lowest-observable-adverse-effect level; M = male; MCH = mean corpuscular hemoglobin; MCHC = mean corpuscular concentration; MCV = mean corpuscular volume; min = minute(s); Musc/skel = musculoskeletal; NOAEL = no-observable-adverse-effect level; NS = not specified; RBC = red blood cell; Resp = respiratory; wk = week(s).

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
	ACUTE EXPOSURE						
	Death						
1	Rat (Wistar, Sherman, Carworth-Wistar)	once (G)				530-3000 (LD_{50})	Carpenter et al. 1956
2	Rat (NS)	NS (GW)				500 (death in 3/5 animals)	Dow 1959
3	Rat (Fischer- 344)	once (G)				2000 F (2/3 died)	Dow 1981
4	Rat (Crl:COBS CD (SD)BR)	13 d 5 d/wk (G)				443 M (death in 1/10)	Eastman Kodak 1983; Krasavage 1986
5	Rat (CD)	NS (G)				1746 M (LD_{50})	Eastman Kodak 1988
6	Rat (NS)	NS				1480 (LD_{50})	Nelson et al. 1984
7	Rat (Fischer- 344)	Gd 11-13 (GW)				150 F (1/9 died 24 hrs after exposure)	NTP 1989

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL			Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)		
8	Rat (Wistar)	once (G)				1590 M	(LD_{50})	Olin 1976
9	Rat (Fischer- 344)	2 d (GW)				200 M	(death in 1/6)	Smialowicz et al. 1992
10	Rat (Wistar)	once (GW)				1480 M	(LD_{50})	Smyth et al. 1941
11	Rat (Wistar)	once (G)				2417	(LD_{50})	Union Carbide 1980b
12	Mouse (NS)	once				1230 M	(LD_{50})	Carpenter et al. 1956
13	Mouse (Charles River, COBS, CD-1)	NS (G)				1519 M	(LD_{50})	Eastman Kodak 1988
14	Mouse (CD-1)	Gd 6-13 (GW)				1180 F	(death in 4/35 pregnant mice and 6/15 nonpregnant mice)	Hardin et al. 1987; Schuler et al. 1984
15	Mouse (Swiss CD-1)	2 wk (W)				12750	(death in 2/8 males, 5/8 females)	Heindel et al. 1990

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL			Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)		
16	Mouse (CD-1)	Gd 8-14 1x/d (G)				1500 F	(death in 3/6)	Wier et al. 1987
17	Gn Pig (NS)	once (G)				1200	(LD_{50})	Carpenter et al. 1956
18	Gn Pig (Hartley)	once (GW)				1414	(LD_{50})	Shepard 1994b
19	Rabbit (NS)	once				320-370 M	(LD_{50})	Carpenter et al. 1956
	Systemic							
20	Human	once (IN)	Resp			650 M	(diffuse pulmonary edema)	Bauer et al. 1992
			Cardio			650 M	(hypotension, tachycardia, sinusal rhythm)	
			Hemato			650 M	(low prothrombin time, nonhemolytic anemia, thrombopenia)	
			Hepatic			650 M	(abnormal liver function)	
			Renal		650M	(slight albuminuria)		
			Metab			650 M	(metabolic acidosis and hypoxemia with lactic acidosis)	

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
21	Human	once (IN)	Resp			391 F (obstructive respiration)	Gijsenbergh et al. 1989
			Cardio			391 F (low blood pressure)	
			Hemato			391 F (decreased hemoglobin from 11.9 to 8.9 g/dL)	
			Renal			391 F (hematuria)	
			Ocular			391 F (isocoric light reactive mydriasis)	
			Metab			391 F (marked metabolic acidosis)	
22	Human	2x	Hepatic		1006 M (increased serum ALT, AST, bilirubin; only after first exposure)		Gualtieri et al. 1995
			Metab			1006 M (significant acid-base disturbance)	
23	Human	once (IN)	Resp			467 F (poor ventilation)	Rambourg-Schepens et al. 1988
			Cardio	467 F			
			Hemato			467 F (hemoglobinuria, progressive erythropenia)	
			Hepatic	467 F			
			Renal			467 F (increased serum creatinine, oxaluria)	
			Metab			467 F (metabolic acidosis, hypokalaemia)	

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL				Reference
					Less Serious (mg/kg/day)		Serious (mg/kg/day)		
24	Rat (Wistar, Sherman, Carworth-Wistar)	once (G)	Resp				530	(congested or hemorrhagic lungs)	Carpenter et al. 1956
			Hemato				3000 M 1500 F	(hemoglobinuria)	
			Hepatic				530	(mottled livers)	
			Renal				530	(severely congested kidneys)	
			Dermal		530	(rough coat)			
25	Rat (Fischer- 344)	once (GW)	Hemato	8.6 M			126 M	(hemolysis, hemoglobinuria)	Corley et al. 1994
26	Rat (NS)	NS (GW)	Renal	1000 F	2000 F	(rapid, shallow breathing)			Dow 1959
			Resp	252			500	(hematuria)	
27	Rat (Fischer- 344)	once (G)	Dermal	500 F	1000 F	(rough hair coats; necrosis of tail)			Dow 1981
			Ocular	1000 F	2000 F	(palpebral closure)			
			Bd Wt	2000 F					
			Other		130 F	(staining in perineal region)			
28	Rat (Fischer- 344)	once (GW)	Hemato				250 M	(hemolysis)	Ghanayem and Sullivan 1993

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
29	Rat (Fischer- 344)	once (GW)	Hemato		32[b] M (hemoglobinuria)		Ghanayem et al. 1987a
			Hepatic	125 M		250 M (focal coagulative necrosis of hepatocytes, 1/6)	
			Renal			125 M (hemoglobin casts in proximal tubules)	
30	Rat (Fischer- 344)	once (GW)	Hemato			500 M (increase in free hemoglobin in the plasma, hemoglobinuria, hemolysis)	Ghanayem et al. 1987b
			Hepatic			500 M (coagulative necrosis and hemosiderin deposition in hepatocytes and Kupffer cells)	
			Renal			500 M (intracytoplasmic hemoglobin and hemoglobin casts in the proximal tubules)	
31	Rat (Fischer- 344)	once (GW)	Hemato			125 M (increase in free hemoglobin in the plasma, hemoglobinuria, hemolysis)	Ghanayem et al. 1987b
32	Rat (Fischer- 344)	once (GW)	Hemato			125 M (increased HCT, PCV, and MCV followed by decline with hemolysis)	Ghanayem et al. 1990b

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
33	Rat (Fischer- 344)	1-12 d 1x/d (GW)	Hemato			125 M (hemolytic anemia)	Ghanayem et al. 1992
			Hepatic		125M (time-dependent changes in liver weight: declined 10% on days 3 and 6, increased 5% on day 12)		
34	Rat (Fischer- 344)	4 d (GW)	Hemato			500 M (reduction of 23% in RBC, 11% in HGB, increase of 24% in MCV, 600% in reticulocyte counts and 16% in MCH; marrow hyperplasia)	Grant et al. 1985
			Hepatic		500M (15.8% increase in relative liver weights after day 1 recovery)		
			Renal	500 M	1000M (12.4% increase in relative kidney weight after day 1 recovery)		
			Bd Wt	500 M		1000 M (13.4% reduction in body weight gain after day 1 recovery and 26% reduction in body weight gain at day 4 recovery)	

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
35	Rat (Fischer- 344)	Gd 9-11 (GW)	Resp	300 F	600 F (dyspnea)		NTP 1989
			Hemato			150 F (increased reticulocytes, MCV, MCH and platelet count, decreased RBC, HGB, HCT, and MCHC)	
			Hepatic	150 F	300 F (27.1% decreased absolute liver weight [Gd 12])		
			Renal	300 F		600 F (urethral bleeding [hematuria])	
			Dermal	300 F	600 F (pale coloration, not further described)		
			Ocular	300 F	600 F (chromodacryorrhea)		
			Bd Wt			150 F (gestational weight gain decreased 34.7% [Gd 12])	
			Other		150 F (reduced food and water intake)		
				300 F	600 F (dehydration, cold to touch)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
36	Rat (Fischer- 344)	Gd 11-13 (GW)	Resp	300 F	600 F (dyspnea)		NTP 1989
			Hemato			150 F (increased reticulocytes, MCV, MCH and platelet count, decreased RBC, HGB, HCT and MCHC)	
			Hepatic	150 F	300 F (11.5% decreased absolute liver weight [Gd 14])		
			Renal	300 F		600 F (urethral bleeding [hematuria])	
			Dermal	300 F	600 F (pale coloration, not further described)		
			Ocular	300 F	600 F (chromodacryorrhea)		
			Bd Wt			150 F (gestational weight gain decreased 28.9% [Gd 14])	
			Other		150 F (reduced food and water intake)		
				300 F	600 F (dehydration, cold to touch)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
37	Rat (Fischer- 344)	Gd 9-11 (GW)	Hemato	30 F		100 F (reduced RBC, HCT and HGB, increased reticulocytes, WBC, platelet count, MCV and MCH)	NTP 1989
			Hepatic	100 F	200 F (decreased absolute maternal liver weights: 11.1% [Gd 20], 15.5% [Gd 12])		
			Renal	200 F			
			Bd Wt	100 F		200 F (gestational weight gain decreased 35.3% [Gd 20])	
			Other	100 F	200 F (decreased food and water intake)		
38	Rat (Fischer- 344)	Gd 11-13 (GW)	Hemato	30 F		100 F (reduced RBC, HCT and HGB, increased reticulocytes, WBC, platelet count, MCV and MCH)	NTP 1989
			Hepatic	100 F	300 F (decreased 11.8% [Gd 14] absolute maternal liver weights)		
			Renal	300 F			
			Bd Wt	100 F		300 F (gestational weight gain decreased 20.4 % [Gd 20])	
			Other	100 F	300 F (decreased food and water consumption)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
39	Rat (F344/N)	2 wk (W)	Resp	346 M 265 F			NTP 1993
			Cardio	346 M 265 F			
			Hepatic	346 M 265 F			
			Renal	346 M 265 F			
			Bd Wt	346 M 203 F		265 F (11% decreased final body weight, 32% decrease in body weight gain)	
			Other	174 M 102 F	242 M (14.1% decreased water consumption) 152 F (16.3% decreased water consumption)		
40	Rat (Wistar)	once (G)	Gastro	1310 M	2560 M (very red small intestine)		Olin 1976
			Musc/skel	1310 M	2560 M (flaccid)		
			Hepatic	670 M	1310 M (very dark liver)		
			Renal	670 M	1310 M (dark kidneys in 3/10, enlarged in 4/10)	2560 M (blood in bladder [hematuria])	
			Dermal	670 M	1310 M (piloerection)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
41	Rat (Wistar)	once (G)	Gastro	1127		2255 (distended stomach, liquid & gas-filled; blood in intestines)	Union Carbide 1980b
			Hepatic	1127	2255 (dark liver)		
			Renal	1127	2255 (red kidneys)		
			Endocr	1127	2255 (red adrenals)		
			Other		1127 (bloody saliva in 1 animal)		
42	Mouse (CD-1)	Gd 6-13 1x/d (GW)	Bd Wt			1180 F (80% decrease in body weight gain)	Hardin et al. 1987; Schuler et al. 1984
43	Mouse (Swiss CD-1)	2 wk (W)	Bd Wt	6375		12750 M (31% weight loss)	Heindel et al. 1990
			Other	637	1275 (unspecified decrease in fluid intake)		
44	Mouse (B6C3F1)	2 wk (W)	Resp	627 M 1364 F			NTP 1993
			Cardio	627 M 1364 F			
			Hepatic	627 M 1367 F			
			Renal	627 M 1364 F			
			Bd Wt	627 M 1364 F			
			Other	210 M	370 M (dehydration in 3/5) 150 F (26.5% decreased water consumption)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
45	Mouse (CD-1)	Gd 8-14 (G)	Resp	1000 F	1500 F (abnormal breathing)		Wier et al. 1987
			Bd Wt	1500 F	2000 F (unspecified decrease in maternal weight gain)		
46	Mouse (CD-1)	Gd 8-14 1x/d (G)	Bd Wt	650 F	1000 F (unspecified decrease in maternal weight gain)		Wier et al. 1987
47	Gn Pig (Hartley)	once (GW)	Hemato	250 M			Ghanayem and Sullivan 1993
48	Gn Pig (Hartley)	once (GW)	Gastro	500	1000 (moderate to mild necrosis and hemorrhage of the gastric mucosa in 1/5 males and 1/5 females)		Shepard 1994b
			Bd Wt	1000			
	Immunological/Lymphoreticular						
49	Rat (Fischer- 344)	once (GW)		63 M	125M (significant increase (110-150%) in relative spleen weight)		Ghanayem et al. 1987a
50	Rat (Fischer- 344)	once (GW)			500M (>220% increase in relative spleen weight due to trapped RBCs)		Ghanayem et al. 1987b

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL			Reference
					Less Serious (mg/kg/day)		Serious (mg/kg/day)	
51	Rat (Fischer- 344)	once (GW)			125M	(relative spleen weight 145-170% of control)		Ghanayem et al. 1987b
52	Rat (Fischer- 344)	1-12 d 1x/d (GW)			125M	(increase of about 62% in spleen weight after 6 days, decline of about 45% during days 6-12)		Ghanayem et al. 1992
53	Rat (Fischer- 344)	4 d (GW)			500M	(87% increase in relative spleen weight on day 1, extramedullary hematopoiesis)		Grant et al. 1985
54	Rat (Fischer- 344)	Gd 9-11 (GW)			150 F	(increased absolute spleen weight [13.5% Gd 20; 54.8% Gd 12])		NTP 1989
55	Rat (Fischer- 344)	Gd 11-13 (GW)			150 F	(increased absolute spleen weights [27.1% Gd 20; 67.7% Gd 14])		NTP 1989
56	Rat (Fischer- 344)	Gd 9-11 (GW)		30 F	100 F	(increased absolute spleen weight [11.8% Gd 20; 43.9% Gd 12])		NTP 1989
57	Rat (Fischer- 344)	Gd 11-13 (GW)		30 F	100 F	(increased absolute spleen weight [17.5% Gd 20; 44.4% Gd 14])		NTP 1989

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
58	Mouse (B6C3F1)	2 wk (W)		210 M 1364 F	370M (decreased 38.3% absolute thymus weight, 38.9% relative thymus weight)		NTP 1993
	Neurological						
59	Human	once (IN)				391 F (coma)	Gijsenbergh et al. 1989
60	Human	once (IN)				467 F (coma)	Rambourg-Schepens et al. 1988
61	Rat (Wistar, Sherman, Carworth-Wistar)	once				530 (sluggishness, prostration, narcosis)	Carpenter et al. 1956
62	Rat (NS)	NS (GW)			252 (drowsiness)		Dow 1959
63	Rat (Fischer- 344)	once (G)		1000 F	2000 F (lethargy)		Dow 1981
64	Rat (Crl:COBS CD (SD)BR)	1-3 d (G)		222 M	443M (lethargy after 1st dose)		Eastman Kodak 1983; Krasavage 1986

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL				Reference
					Less Serious (mg/kg/day)		Serious (mg/kg/day)		
65	Rat (Fischer- 344)	Gd 9-11 (GW)		300 F	600 F	(lethargy)			NTP 1989
66	Rat (Fischer- 344)	Gd 11-13 (GW)		300 F	600 F	(lethargy)			NTP 1989
67	Rat (Wistar)	once (G)		670 M	1310 M	(lethargy, piloerection)			Olin 1976
68	Rat (Sprague-Dawley)	once (GW)					500 F	(ataxia, piloerection)	Sivarao and Mehendale 1995
69	Rat (Wistar)	once (G)		1127	2255	(sluggish, unsteady gait)			Union Carbide 1980b
70	Mouse (CD-1)	Gd 8-14 1x/d (G)		1000 F			1500 F	(lethargy, failure to right)	Wier et al. 1987
71	Gn Pig (Hartley)	once (GW)			500	(slight weakness directly after dosing)	1000	(moderate to severe weakness and prostration directly after dosing)	Shepard 1994b

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL			Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)		
	Reproductive							
72	Rat (Fischer- 344)	once (GW)		500 M				Ghanayem et al. 1987a
73	Rat (Fischer- 344)	4 d (GW)		1000 M				Grant et al. 1985
74	Rat (Fischer- 344)	Gd 11-13 (GW)		300 F		600 F	(vaginal bleeding)	NTP 1989
75	Rat (Fischer- 344)	Gd 9-11 (GW)		100 F		200 F	(increased resorptions, implantation loss, vaginal bleeding)	NTP 1989
76	Rat (Fischer- 344)	Gd 11-13 (GW)		100 F		300 F	(increased resorptions, implantation loss, vaginal bleeding)	NTP 1989
77	Rat (F344/N)	2 wk (W)		346 M				NTP 1993
78	Mouse (CD-1)	Gd 6-13 1x/d (GW)				1180 F	(19% decrease in incidence of viable litters)	Hardin et al. 1987; Schuler et al. 1984

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
79	Mouse (CD-1)	Gd 8-14 (G)		650 F		1000 F (increased incidence of resorptions)	Wier et al. 1987
	Developmental						
80	Rat (Fischer- 344)	Gd 9-11 (GW)		150 F	300 F (decreased fetal weight)		NTP 1989
81	Rat (Fischer- 344)	Gd 11-13 (GW)		300 F	600 F (decreased fetal body weight, decreased gravid uterine weight)		NTP 1989
82	Rat (Fischer- 344)	Gd 9-11 (GW)		200			NTP 1989
83	Rat (Fischer- 344)	Gd 11-13 (GW)		300			NTP 1989
84	Mouse (CD-1)	Gd 8-14 1x/d (G)		650		1000 (cleft palate in 1/5 litters)	Wier et al. 1987

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL			Reference
					Less Serious (mg/kg/day)		Serious (mg/kg/day)	
	INTERMEDIATE EXPOSURE							
	Death							
85	Rat (Crl:COBS CD (SD)BR)	23 d 5 d/wk (G)					885 M (death in 1/9)	Eastman Kodak 1983; Krasavage 1986
86	Mouse (Swiss CD-1)	21 wk (W)					1300 F (death in 6/20)	Heindel et al. 1990
87	Mouse (JCL-ICR)	5 wk 5 d/wk (GO or GW)					2000 M (5/5 dead)	Nagano et al. 1979, 1984
	Systemic							
88	Rat (Sherman)	90 d (F)	Resp	1540				Carpenter et al. 1956
			Hemato	1540				
			Hepatic	76	310	(unspecified increase in relative liver weight)		
			Renal	310	1540	(unspecified increase in relative kidney weight)		
			Bd Wt	310	1540	(unspecified decrease in body weight gain)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
89	Rat (Crl:COBS CD (SD)BR)	6 wk 5 d/wk (G)	Resp	885 M			Eastman Kodak 1983; Krasavage 1986
			Cardio	885 M			
			Gastro		222M (mild hyperkeratosis and acanthosis in stomach)		
			Hemato			222 M (12% decreased RBC count, 7% decreased HGB, 6% increased MCH, hemoglobinuria)	
			Hepatic	222 M	443M (focal hemosiderin deposition, 30% increase in serum alkaline phosphatase activity)		
			Renal	222 M	443M (focal hemosiderin deposition in the proximal convoluted tubules)		
			Endocr	885 M			
			Ocular	885 M			
			Bd Wt	443 M	885M (7-12% decreased body weight gain in the presence of reduced feed consumption)		
			Other	443 M	885M (12-31% reduced feed consumption during days 0-20)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
90	Rat (Sprague-Dawley)	21 d (W)	Hepatic	506 M 444 F			Exon et al. 1991
			Renal	506 M 444 F			
			Bd Wt	506 M 444 F			
			Other	180 M	506 M (12% decreased water consumption)		
				204 F	444 F (31% decreased water consumption)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
91	Rat (F344/N)	13 wk (W)	Resp	452 M 470 F			NTP 1993
			Cardio	452 M 470 F			
			Gastro	367 M 363 F	452 M (diarrhea) 470 F (diarrhea)		
			Hemato	129 M		281 M (decreased RBC, mild anemia) 82 F (decreased RBC, HCT, HGB)	
			Musc/skel	452 M 470 F			
			Hepatic		69[c] M (hepatocellular alteration-cells that stained eosinophilic and lacked cytoplasmic granularity) 82 F		
			Renal		69 M (moderate increase in blood urea nitrogen) 82 F (decreased urine volune, possibly due to dehydration)		
			Endocr	452 M 470 F			
			Dermal	452 M 470 F			
			Ocular	452 M 470 F			
			Bd Wt	281 M 304 F	367 M (mean body weight gains decreased 12.5%)	452 M (24% decrease in body weight gain) 363 F (12% decreased final body weight and 32.5% decrease in body weight gain)	
			Other	69 M 82 F	129 M (water consumption decreased 12.1%) 151 F (water consumption decreased 17.6%)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
92	Rat (F344/N)	60 d (W)	Bd Wt	234 M	443 M (13% decrease in mean body weight gain)		NTP 1993
93	Rat (DW albino)	91-93 d (F)	Resp	919 M 976 F			Weil 1963
			Cardio	919 M 976 F			
			Gastro	919 M 976 F			
			Hepatic	188 M	919 M (25% increase in relative liver weight)		
				222 F	976 F (27% increase in relative liver weight)		
			Renal	188 M	919 M (18% increase in relative kidney weight)		
				222 F	976 F (23% increase in relative kidney weight)		
			Endocr	919 M 976 F			
			Bd Wt	28 M	188 M (body weight 91-7% less than controls over the course of the study)	919 M (body weight gain 53% lower than controls)	
				222 F		976 F (body weight gain 45% lower than controls)	
			Other	28 M	188 M (food intake 18% lower than controls)		
				222 F	976 F (food intake 23% lower than controls)		

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
94	Mouse (Swiss CD-1)	25 wk (W)	Hepatic	1300			Heindel et al. 1990
			Renal		1300 (13-22% increase in kidney weight)		
			Bd Wt	1300 M			
					1300 F (10% decrease in terminal body weight)		
			Other		700 (unspecified low water consumption)		
95	Mouse (Swiss CD-1)	14 wk (W)	Hepatic		700 (6-9% increase in absolute liver weight)		Heindel et al. 1990
			Renal	700 M			
					700 F (22% increase in absolute kidney/adrenal weight)		
			Bd Wt	700			
96	Mouse (JCL-ICR)	5 wk 5 d/wk (G)	Hemato			500 M (decrease in RBC count)	Nagano et al. 1979, 1984

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL Less Serious (mg/kg/day)	LOAEL Serious (mg/kg/day)	Reference
97	Mouse (B6C3F1)	13 wk (W)	Resp	694 M 1306 F			NTP 1993
			Cardio	694 M 1306 F			
			Gastro	694 M 1306 F			
			Musc/skel	694 M 1306 F			
			Hepatic	694 M 1306 F			
			Renal	694 M 1306 F			
			Endocr	694 M 1306 F			
			Dermal	694 M 1306 F			
			Ocular	694 M 1306 F			
			Bd Wt	223 M 370 F	553M (18.5% decreased body weight gain)	676 F (26.1% decreased mean body weight gain; 10% decreased mean final body weight)	
	Immunological/Lymphoreticular						
98	Rat (Crl:COBS CD (SD)BR)	6 wk 5 d/wk (G)		222 M	443M (enlarged, dark spleen in 3/9, 57% increase in spleen weight)		Eastman Kodak 1983; Krasavage 1986

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
99	Rat (Sprague-Dawley)	21 d (W)		506 M 444 F			Exon et al. 1991
100	Rat (F344/N)	13 wk (W)		69 M 82 F	129 M (increased hemosiderin 151 F pigmentation in spleen)		NTP 1993
101	Mouse (B6C3F1)	13 wk (W)		694 M 1306 F			NTP 1993
	Neurological						
102	Rat (Crl:COBS CD (SD)BR)	6 wk 5 d/wk (G)		222 M			Eastman Kodak 1983; Krasavage 1986
103	Rat (F344/N)	13 wk (W)		452 M 470 F			NTP 1993
104	Mouse (B6C3F1)	13 wk (W)		694 M 1306 F			NTP1993
	Reproductive						
105	Rat (Crl:COBS CD (SD)BR)	6 wk 5 d/wk (G)		885 M			Eastman Kodak 1983; Krasavage 1986

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL				Reference
					Less Serious (mg/kg/day)		Serious (mg/kg/day)		
106	Rat (Sprague-Dawley)	21 d (W)		506 M					Exon et al. 1991
107	Rat (F344/N)	13 wk (W)		129 M 304 F	281 M 363 F	(11.3% decreased sperm concentration) (altered estrous cycle)			NTP 1993
108	Rat (F344/N)	60 d (W)		443 M					NTP 1993
109	Mouse (Swiss CD-1)	21 wk (W)		700			1300	(21% decrease in litters/pair, 51% decrease in pups/litter)	Heindel et al. 1990
110	Mouse (Swiss CD-1)	25 wk (W)					1300 F	(58% decrease in fertility, 66% decrease in live pups per litter; altered estrous cycle)	Heindel et al. 1990
111	Mouse (Swiss CD-1)	14 wk (W)		700					Heindel et al. 1990
112	Mouse (JCL-ICR)	5 wk 5 d/wk (G)		1000 M					Nagano et al. 1979, 1984

Table 2-3. Levels of Significant Exposure to 2-Butoxyethanol - Oral (continued)

Key to[a] figure	Species/ (Strain)	Exposure/ Duration/ Frequency (Specific Route)	System	NOAEL (mg/kg/day)	LOAEL		Reference
					Less Serious (mg/kg/day)	Serious (mg/kg/day)	
113	Mouse (B6C3F1)	13 wk (W)		694 M 1306 F			NTP 1993
	Developmental						
114	Mouse (Swiss CD-1)	21 wk (W)			700 (decrease in live pup weight)		Heindel et al. 1990
115	Mouse (Swiss CD-1)	14 wk (W)		700			Heindel et al. 1990

[a]The number corresponds to entries in Figure 2-3. Differences in levels of health effects and cancer effects between males and females are not indicated in Figure 2-3. Where such differences exist, only the levels of effect for the most sensitive gender are presented.

[b]Used to derive an acute oral minimal risk level (MRL) of 0.4 mg/kg/day; dose divided by an uncertainty factor of 90 (10 for use of a LOAEL, 3 for extrapolation from animals to humans, and 3 for human variability). For further details, see MRL worksheets in Appendix A.

[c]Used to derive an intermediate oral MRL of 0.07 mg/kg/day; dose divided by an uncertainty factor of 1,000 (10 for use of a LOAEL, 10 for extrapolation from animals to humans, and 10 for human variability). For further details, see MRL worksheets in Appendix A.

Bd Wt = body weight; Cardio = cardiovascular; d = day(s); Endocr = endocrine; F = female; (G) = gavage; Gastro = gastrointestinal; Gd = gestational day; Gn Pig = guinea pig; (GO) = gavage in oil; (GW) = gavage in water; HCT = hematocrit; Hemato = hematological; HGB = hemoglobin; (IN) = ingestion; LD_{50} = lethal dose, 50% kill; LOAEL = lowest-observable-adverse-effect level; M = male; MCH = mean corpuscular hemoglobin; MCHC = mean corpuscular hemoglobin concentration; MCV = mean corpuscular volume; Metab = metabolic; Musc/skel = musculoskeletal; NOAEL = no-observable-adverse-effect level; NS = not specified; PCV = packed cell volume; RBC = red blood cell; Resp = respiratory; (W) = water; WBC = white blood cell; wk = week(s); x = times.

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL			Reference
				Less Serious	Serious		
ACUTE EXPOSURE							
Death							
Rat (NS)	4 hr				2273 mg/kg	F (LD_{50})	Carpenter and Condra 1961
Rat (Sprague-Dawley)	Gd 7-16 4x/d				1.4 mL/d	F (death in 10/11)	Hardin et al. 1984
Gn Pig (NS)	once				2.0 mL	(13/20 died within 1 week)	Wahlberg and Boman 1979
Rabbit (New Zealand)	24 hr				406-1804 mg/kg	M (LD_{50})	Carpenter et al. 1956
Rabbit (NS)	24 h				220 mg/kg	(LD_{50})	Dow 1959
Rabbit (New Zealand)	8 hr				72 mg/kg	F (death in 2/6 on day 5)	Duprat and Gradiski 1979
					99 mg/kg	F (LD_{50})	
Rabbit (NS)	NS				435 mg/kg	(LD_{50})	Eastman Kodak 1988
Rabbit (New Zealand)	24 hr				2000 mg/kg	(10/10 animals died)	Olin 1976
Rabbit (New Zealand)	24 hr				580 mg/kg	(LD_{50})	Olin 1976

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL			Reference
				Less Serious		Serious	
Rabbit (New Zealand)	once 6 hr					638 M (LD_{50}) mg/kg	Union Carbide 1980a
						568 F (LD_{50}) mg/kg	
Systemic							
Human	4-8 hr	Ocular	98 ppm	113 ppm	(ocular irritation)		Carpenter et al. 1956
Human	24-72 hr	Dermal	0.2 mL 10%				CMA 1992; Greenspan et al. 1995
Human	2 hr	Dermal		100% M	(drying of the skin, reduction in skinfold thickness and volume of exposed fingers)		Johanson et al. 1988
Rat (Wistar)	once	Hemato	200 F mg/kg			260 F mg/kg (hemolysis, hemoglobinuria)	Bartnik et al. 1987
Rat (Sprague-Dawley)	Gd 7-16 4x/d	Hemato				1.4 mL/d F (burgundy-colored urine [hemoglobinuria])	Hardin et al. 1984
		Dermal		1.4 mL/d F	(necrosis of tail; rough coat)		
Rat (Sprague-Dawley)	Gd 7-16 4x/d	Bd Wt		0.48 F mL/d	(16% decrease in body weight gain days 5-12; 13% decrease in body weight gain days 5-17)		Hardin et al. 1984

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL		Reference
				Less Serious	Serious	
Rat (Fischer- 344)	Gd 6-15 6 hr/d	Ocular		25 ppm F (periocular wetness)		Tyl et al. 1984
Gn Pig (NS)	once	Bd Wt	0.5 mL			Wahlberg and Boman 1979
Rabbit (New Zealand)	24 hr	Hemato			406 mg/kg M (hemoglobinuria)	Carpenter et al. 1956
		Hepatic			406 mg/kg M (pale liver)	
		Renal			406 mg/kg M (congested kidneys)	
Rabbit (New Zealand)	3 min	Hemato		505 mg/kg M (increased erythrocyte osmotic fragility)		Carpenter et al. 1956
Rabbit (NS)	24 h	Dermal		200 mg/kg (moderate skin irritation)		Dow 1959
		Ocular			100% (moderate conjunctival irritation; corneal injury)	
		Bd Wt		200 mg/kg (slight initial weight loss)		

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL				Reference
				Less Serious		Serious		
Rabbit (New Zealand)	8 hr	Resp		72 mg/kg F	(congestion, thickening of alveolar walls)			Duprat and Gradiski 1979
		Hemato				72 mg/kg F	(hemoglobinuria)	
		Hepatic				72 mg/kg F	(congestion in liver, necrosis and steatosis)	
		Renal				72 mg/kg F	(enlarged kidneys with hemoglobinuric nephrosis and interstitial reaction)	
		Dermal		72 mg/kg F	(necrosis of epidermis and dermis)			
		Other				72 mg/kg F	(hypothermia)	
Rabbit (New Zealand)	once	Ocular		0.1 mL of 10%	(mild eye irritation)	0.1 mL of 100%	(severe eye irritation)	Kennah et al. 1989a
Rabbit (New Zealand)	24 hr	Gastro	500 mg/kg			1000 mg/kg	(very dark areas in small intestine)	Olin 1976
		Musc/ske	500 mg/kg			1000 mg/kg	(flaccid muscle tone)	
		Hepatic				250 mg/kg	(discolored liver)	
		Renal	250 mg/kg			500 mg/kg	(blood in urine and bladder [hematuria], discolored kidney)	
		Ocular	250 mg/kg			500 mg/kg	(yellow cornea)	
Rabbit (New Zealand)	once or 4 hr	Dermal		0.5 mL	(moderate skin irritation)			Rohm and Haas 1983
		Ocular				0.1 mL	(severe eye irritation)	

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL		Reference
				Less Serious	Serious	
Rabbit (New Zealand)	Gd 6-18 6 hr/d	Ocular	50 ppm F	100 ppm F (periocular wetness)		Tyl et al. 1984
Rabbit (New Zealand)	11 d 9 x 1 mL/d 6 hr/d	Hemato	180 M mg/kg/d	361 M mg/kg/d (transient hemoglobinuria)		Union Carbide 1980a
			180 F mg/kg/d	361 F mg/kg/d (reduced mean erythrocyte counts, hemoglobin, MCHC; increased MCH)		
		Hepatic	361 mg/kg/d			
		Renal	90 F mg/kg/d		180 F mg/kg/d (blood in urine [hematuria])	
		Dermal		18 mg/kg/d (erythema)		
		Ocular	361 M mg/kg/d			
		Bd Wt	361 M mg/kg/d			
			180 F mg/kg/d		361 F mg/kg/d (121% decrease in weight gain on day 3)	

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL				Reference
				Less Serious		Serious		
Rabbit (New Zealand)	once 6 hr	Gastro	451 mg/kg	902 mg/kg	(reddened stomach; females: reddened intestines)			Union Carbide 1980a
		Hemato				451 mg/kg F	(hemoglobinuria)	
		Hepatic	451 mg/kg	902 mg/kg	(mottled with pocked surface)			
		Renal				451 mg/kg	(hematuria; enlarged, dark kidneys; male survivors had pocked surface)	
		Endocr		451 mg/kg	(reddened adrenals)			
		Dermal		451 mg/kg	(erythema; females: slight necrosis at application site)			
		Ocular	451 M mg/kg 902 F mg/kg			902 M mg/kg	(grey iris)	
		Other	451 mg/kg	902 mg/kg	(yellowed peritoneal fat)			
Rabbit (New Zealand)	11 d 9 x 1 mL/d 6 hr/d	Renal		271 mg/kg/d	(tubular vacuolization [4/6] degeneration [6/6] hyperplasia [3/6], glomerular adhesions [4/6], interstitial nephritis [3/6], hemoglobinuric nephrosis)			Union Carbide 1980a
		Dermal		271 mg/kg/d	(necrosis)			

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL		Reference
				Less Serious	Serious	
Rabbit (New Zealand)	24 hr	Resp			451 M mg/kg (orange-red lungs)	Union Carbide 1980b
		Gastro			451 M mg/kg (orange peritonea, intestines)	
		Hepatic			451 M mg/kg (orange-red liver)	
		Renal			451 M mg/kg (dark red kidneys, hematuria)	
		Dermal	451 M mg/kg	902 M mg/kg (erythema, necrosis)		
		Ocular	451 M mg/kg		902 M mg/kg (iritis in 2/4)	
Rabbit (NS)	once	Ocular	0.5 mL 5%	0.5 mL 15% (moderate corneal injury)		Union Carbide 1980b
Rabbit (New Zealand)	4 hr	Dermal		0.5 mL (irritant)		Zissu 1995
Rabbit (New Zealand)	24 hr	Dermal			0.5 mL (severe irritant)	Zissu 1995
Immunological/Lymphoreticular						
Human	24-72 hr		0.2 mL 10%			CMA 1992; Greenspan et al. 1995
Rabbit (New Zealand)	24 hr				406 M mg/kg (engorged spleen)	Carpenter et al. 1956

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL			Reference
				Less Serious	Serious		
Rabbit (New Zealand)	8 hr				72 mg/kg F	(enlarged spleens filled with erythrocytes, white atrophic pulp)	Duprat and Gradiski 1979
Rabbit (New Zealand)	once 6 hr		902 M mg/kg				Union Carbide 1980a
			451 F mg/kg	902 F mg/kg	(enlarged spleen)		
Rabbit (New Zealand)	once				451 M mg/kg	(dark spleens)	Union Carbide 1980b
Neurological							
Rat (Sprague-Dawley)	Gd 7-16 4x/d				1.4 mL/d F	(ataxia; moderate to marked inactivity)	Hardin et al. 1984
Rabbit (New Zealand)	8 hr				72 mg/kg F	(prostration, narcosis prior to death)	Duprat and Gradiski 1979
Rabbit (New Zealand)	24 hr		1000 mg/kg		2000 mg/kg	(anorexia, no spontaneous movement)	Olin 1976
Rabbit (New Zealand)	once 6 hr		902 M mg/kg				Union Carbide 1980a
			451 F mg/kg		902 F mg/kg	(nystagmus, convulsions)	

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL Less Serious	LOAEL Serious	Reference
Developmental						
Rat (Sprague-Dawley)	Gd 7-16 4x/d		0.48 mL/d			Hardin et al. 1984
INTERMEDIATE EXPOSURE						
Systemic						
Rabbit (New Zealand)	90 d 5 d/wk 6 hr/d	Resp	150 mg/kg			CMA 1983
		Cardio	150 mg/kg			
		Gastro	150 mg/kg			
		Hemato	150 mg/kg			
		Musc/ske	150 mg/kg			
		Hepatic	150 mg/kg			
		Renal	150 mg/kg			
		Endocr	150 mg/kg			
		Dermal		10 mg/kg	(slight to moderate erythema and edema)	
		Ocular	150 mg/kg			
		Bd Wt	150 mg/kg			

Table 2-6. Levels of Significant Exposure to 2-Butoxyethanol - Dermal (continued)

Species/ (Strain)	Exposure/ Duration/ Frequency/ (Specific Route)	System	NOAEL	LOAEL		Reference
				Less Serious	Serious	
Immunological/Lymphoreticular						
Rabbit (New Zealand)	90 d 5 d/wk 6 hr/d		150 mg/kg			CMA 1983
Neurological						
Rabbit (New Zealand)	90 d 5 d/wk 6 hr/d		150 mg/kg			CMA 1983
Reproductive						
Rabbit (New Zealand)	90 d 5 d/wk 6 hr/d		50 mg/kg M 150 F mg/kg	150 M mg/kg	(5.2% increase in relative testes weight)	CMA 1983

Bd Wt = body weight; d = day(s); Endocr = endocrine; F = female; Gastro = gastrointestinal; Gd = gestation day; Gn Pig = guinea pig; Hemato = hematological; hr = hour(s); LD_{50} = lethal dose, 50% kill; LOAEL = lowest-observable-adverse-effect level; M = male; MCH = mean corpuscular hemoglobin; MCHC = mean corpuscular hemoglobin concentration; min = minute(s); Musc/skel = musculoskeletal; NOAEL = no-observable-adverse-effect level; NS = not specified; Resp = respiratory; wk = week(s); x = times

APPENDIX A-2

Toxicity Values in Laboratory Mammals Published After 1998

Appendix A-2. Mammalian EGBE Toxicity Data Published Since 1998

Test Organism	Exposure Route	Exposure Duration	Effect Measurement	Endpoint	Effects Notes	EGBE Concentration	Units	Reference	Additional notes
ACUTE EXPOSURES									
BALB/c mice	Dermal	1 dose	Other sublethal	NOEC	Immune system response	1	mg/ear	Singh et al. 2002	Significant response depended on timing of dose relative to immune-system challenge with oxazalone.
BALB/c mice	Dermal	1 dose	Other sublethal	LOEC	Immune system response	4	mg/ear	Singh et al. 2002	Significant response depended on timing of dose relative to immune-system challenge with oxazalone.
BALB/c mice	Dermal	4 days	Other sublethal	LOAEL	Immune system response	500	mg/kg day	Singh et al. 2001	Possible T-cell immunity suppression, lowest concentration with significant difference from control
F344 rats	In vitro		Other sublethal	other	Hemolytic effects	11.8	mg/L	Udden 2002	Sub-hemolytic concentrations of 2-BAA for rats compared with human RBCs (100 times greater)
Syrian hamster	In vitro	<3 hrs	Other sublethal	other	Inhibition of pADPr synthesis	591	mg/L	Hoflack et al. 1997	Suspected precursor to genotoxicity in synergy with other compounds (methyl-methanesulfate)
Syrian hamster	In vitro	7 hr	Other sublethal	NOAEL	Cellular transformation induction	2364	mg/L	Park et al. 2002b	EGBE toxicity in liver may be from iron released by hemolysis
Opossum	In vitro	24 hr	Mortality	EC50	Cell viability	1000	mg/L	Dartsch et al. 1999	Toxic effects only observed with EGBE stored for 3 months and was due to 2-BAA (an EGBE degradate)
B6C3F1 mice	Inhalation	6 hr	Other sublethal	LOAEL	Forestomach lesions	250	ppm	Green et al. 2002	

Appendix A-2. Mammalian EGBE Toxicity Data Published Since 1998

Test Organism	Exposure Route	Exposure Duration	Effect Measurement	Endpoint	Effects Notes	EGBE Concentration	Units	Reference	Additional notes
guinea pig	Inhalation	1 hr	Mortality	NOEC		633	ppm	Gingell et al. 1998	Max vapor concentrations able to maintain. No mortalities/signs of toxicity for 14 days.
B6C3F1 mice	Injection	1 dose	Other sublethal	LOAEL	Forestomach lesions	10	mg/kg bw	Green et al. 2002	
guinea pig	Injection	1 dose	Mortality	NOAEL		2000	mg/kg bw	Gingell et al. 1998	LD50 test with no mortalities or other symptoms displayed after 14 days of monitoring
F344 rats	Oral - dw	2-4 days	Other sublethal	LOAEL	Histopathology	250	mg/kg bw-day	Nyska et al. 2003	Hemolysis and thrombosis
guinea pig	Oral - dw	1 dose	Mortality	LD50		1414	mg/kg bw	Gingell et al. 1998	
B6C3F1 mice	Oral - gavage	4 days	Other sublethal	LOAEL	Forestomach lesions	400	mg/kg bw-day	Poet et al. 2003	Minimal to mild forestomach epithelial hyperplasia. No stats presented.
B6C3F1 mice	Oral - gavage	4 days	Mortality	LOAEL		400	mg/kg bw-day	Poet et al. 2003	Mortality attributed to dosing method, not necessarily to actual EGBE dose
B6C3F1 mice	Oral - gavage	7 days	Other sublethal	LOAEL	Hepatic stress	450	mg/kg bw-day	Park et al. 2002a	Significant decrease in vitamin E, increase in oxidative DNA damage
B6C3F1 mice	Oral - gavage	1 dose	Other sublethal	other	EGBE metabolism and distribution	600	mg/kg bw	Deisinger et al. 2004	Mice monitored for 90 minutes, toxicity not reported or monitored for
F344 rats	Oral - gavage	1 dose	Other sublethal	LOAEL	Hemolytic effects	125	mg/kg bw	Udden 2000	Morphological changes in erythrocytes w/in 30 minutes of dose, persists > 4 hours

Appendix A-2. Mammalian EGBE Toxicity Data Published Since 1998

Test Organism	Exposure Route	Exposure Duration	Effect Measurement	Endpoint	Effects Notes	EGBE Concentration	Units	Reference	Additional notes
F344 rats	Oral - gavage	2-4 days	Other sublethal	LOEC	Increased adherence of RBCs to extracellular matrix	250	mg/kg bw-day	Koshkaryev et al. 2003	2, 3, and 4 doses tested. All showed a response. Greatest was in the 2 dose group.
F344 rats	Oral - gavage	1-3 days	Other sublethal	LOAEL	Acute regenerative hemolytic anemia	250	mg/kg bw-day	Ghanayem et al. 2001	Significant morphological changes in erythrocytes
F344 rats	Oral - gavage	1 dose	Other sublethal	LOAEL	Various hemotologic parameters	250	mg/kg bw	Ghanayem et al. 2000	Erythrocyte swelling, increase in MCV, increased spleen/body weight ratio
F344 rats	Oral - gavage	3 days	Other sublethal	LOAEL	Histopathology	250	mg/kg bw-day	Nyska et al. 1999a	Ocular thrombosis and retinal degeneration
Sprague Dawley rats	Oral - gavage	1-4 doses	Mortality	NOEC		500	mg/kg bw-day	Sawant et al. 1999	Dose concentration and timing varied, mortality rates depended on dose timing
Sprague Dawley rats	Oral - gavage	1-4 doses	Mortality	LOEC		1500	mg/kg bw-day	Sawant et al. 1999	Dose concentration and timing varied, mortality rates depended on dose timing
CHRONIC EXPOSURES									
B6C3F1 mice	Inhalation	14 wk	Other sublethal	LOEC	Hemolytic effects	31.2	ppm	NTP 2000	Significant changes in female hematology at all doses in both 14 wk/2 yr study. Min 2 yr dose = 62.5 ppm
B6C3F1 mice	Inhalation	2 years	Other sublethal	LOAEL	Hepatic lesions and forestomach effects	62.5	ppm	Boatman et al. 2004	Significant increase in cell pigmentation, ulcers, and eptithelial hyperplasia (Tables 1,2)

Appendix A-2. Mammalian EGBE Toxicity Data Published Since 1998

Test Organism	Exposure Route	Exposure Duration	Effect Measurement	Endpoint	Effects Notes	EGBE Concentration	Units	Reference	Additional notes
B6C3F1 mice	Inhalation	2 years	Mortality	NOEC		62.5	ppm	NTP 2000	Male mortality significantly affected, no change in female mortality in any dose (Table 15)
B6C3F1 mice	Inhalation	14 wk	Growth	NOEC		62.5	ppm	NTP 2000	No significant effects on body weight in 14 wk test (male or female)
B6C3F1 mice	Inhalation	2 years	Mortality	LOEC		125	ppm	NTP 2000	Significant increase in male mortality in 2 yr test (Table 15)
B6C3F1 mice	Inhalation	14 wk	Growth	LOEC		125	ppm	NTP 2000	Body weight gains for males significantly less than control in 14 wk study. Less obvious in 2 yr study.
B6C3F1 mice	Inhalation	18 mo	Mortality	NOEC	Elimination kinetics study, no mortality observed	250	ppm	Dill et al. 1998	Max blood concentration = 6.27 ug/g (males) and 12.96 ug/g (females)
F344 rats	Inhalation	2 years	Other sublethal	LOEC	Hemolytic effects (e.g., anemia)	31.2	ppm	NTP 2000	Significant changes in female hematology parameters at all doses (Table 3)
F344 rats	Inhalation	13 wks	Other sublethal	LOEC	Histopathology	32	ppm	Long et al. 2000, Nyska et al. 1999b	Histopathological effects observed in all groups tested (but not in controls)
F344 rats	Inhalation	2 years	Growth	NOEC		62.5	ppm	NTP 2000	No obvious difference in weights in males or females from controls (Tables 7,8)
F344 rats	Inhalation	18 mo	Mortality	NOEC	Elimination kinetics study, no mortality observed	125	ppm	Dill et al. 1998	Max blood concentration = 4.22 ug/g (males) and 3.16 ug/g (females)

Appendix A-2. Mammalian EGBE Toxicity Data Published Since 1998

Test Organism	Exposure Route	Exposure Duration	Effect Measurement	Endpoint	Effects Notes	EGBE Concentration	Units	Reference	Additional notes
F344 rats	Inhalation	13 wks	Immobilization	NOEC	Moribund	125	ppm	Long et al. 2000, Nyska et al. 1999b	No moribund individuals reported in any test groups below 125 ppm
F344 rats	Inhalation	2 years	Mortality	NOEC		125	ppm	NTP 2000	No mortality increase in 2 year test with 125 ppm as max concentration
F344 rats	Inhalation	2 years	Growth	LOEC		125	ppm	NTP 2000	Females in this dose tended to be smaller, no stats presented (Table 8)
F344 rats	Inhalation	13 wks	Immobilization	LOEC	Moribund	250	ppm	Long et al. 2000, Nyska et al. 1999b	1 of 10 individuals moribund before end of experiment, half of individuals from max group, no stats on mortality
F344 rats	Inhalation	2 years	Mortality	LOEC		250	ppm	NTP 2000	Moribund females (10%) during a 14 week exposure test
Swiss CD-1 mice	Oral - dw	2 generations	M, R, G	NOEC	Slight reproductive effects in 2nd generation	5000	mg/L	Lamb et al 1997	Concentrations tested: 0.5%, 1%, and 2% of drinking water
Swiss CD-1 mice	Oral - dw	2 generations	M, R, G	LOEC	Statistically significant effects	10000	mg/L	Lamb et al 1997	Concentrations tested: 0.5%, 1%, and 2% of drinking water
B6C3F1 mice	Oral - gavage	≤ 90 days	Other sublethal	LOAEL	Hemolytic and hepatic effects	225	mg/kg bw	Siesky et al. 2002	Increased hemolysis, hepatic effects, possible DNA synthesis effects. No mortality at any dose
B6C3F1 mice	Oral - gavage	≤ 90 days	Mortality	NOAEL		900	mg/kg bw	Siesky et al. 2002	No mortality reported at any doses after 90 days
F344 rats	Oral - gavage	≤ 90 days	Other sublethal	LOAEL	Hemolytic and hepatic effects	225	mg/kg bw	Siesky et al. 2002	Increased hemolysis, hepatic effects, possible DNA synthesis effects. No mortality at any dose

Appendix A-2. Mammalian EGBE Toxicity Data Published Since 1998

Test Organism	Exposure Route	Exposure Duration	Effect Measurement	Endpoint	Effects Notes	EGBE Concentration	Units	Reference	Additional notes
F344 rats	Oral - gavage	≤ 90 days	Mortality	NOAEL		450	mg/kg bw	Siesky et al. 2002	No mortality reported at any doses after 90 days

2-BAA: 2-butoxyacetaldehyde
DNA: deoxyribonucleic acid
Dw: drinking water
EC50: median effect concentration
LD50: median lethal dose
LOAEL: lowest observed adverse effect level
LOEC: lowest observed effect concentration
M, R, G: mortality, growth, reproduction
MCV: mean corpuscular volume
NOAEL: no observed adverse effect level
NOEC: no observed effect concentration
NTP: National Toxicology Program
pADPr: poly adenosine diphosphate-ribose
RBC: red blood cells

APPENDIX B

Emissions Inventory

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
EQ DETROIT INC	1923 FREDERICK	DETROIT	Michigan	48211	0	2.8215	2.8215	0	0	290.634	293.4555
REXAM BEVERAGE CAN CO RE: WINSTON SALEM PLANT	4000 OLD MILWAUKEE LN	WINSTON-SALEM	North Carolina	27107	28.312	143.9285	172.2405	0	0	0	172.2405
BALL METAL BEVERAGE CONTAINER CORP	8935 POCAHONTAS TRAIL JAMES RI	WILLIAMSBURG	Virginia	23185	27	140	167	0	0	0	167
BALL METAL BEVERAGE CONTAINER CORP	12340 TOWNSHIP RD 99 E	FINDLAY	Ohio	45840	24.5	130	154.5	0	0	0	154.5
SANYO SOLAR (USA) LLC	970 E 236TH ST	CARSON	California	90745	0.0005	8.4815	8.482	0	0	135.175	143.657
REXAM BEVERAGE CAN CO RE: FREMONT PLANT	2145 CEDAR	FREMONT	Ohio	43420	17.873	102.208	120.081	0	0	0	120.081
CROWN FOOD PACKAGING	2929 W BRIDGE ST	OWATONNA	Minnesota	55060	29.3115	87.749	117.0605	0	0	0	117.0605
AURORA CASKET CO INC	10944 MARSH RD	AURORA	Indiana	47001	0.0025	107.624	107.6265	0	0	0	107.6265
CROWN CORK & SEAL CO (USA) INC CROWN CLOSURE DIV	3011 BIRCH DR	WEIRTON	West Virginia	26062	37.8575	63.288	101.1455	0	0	0	101.1455
REXAM BEVERAGE CAN CO RE: BISHOPVILLE SC FACILITY	609 COUSAR ST	BISHOPVILLE	South Carolina	29010	14.4695	81.994	96.4635	0	0	0	96.4635
REXAM BEVERAGE CAN CO RE: EVA STREET ST PAUL MN	139 EVA ST	SAINT PAUL	Minnesota	55107	14.029	79.4975	93.5265	0	0	0	93.5265
FORD MOTOR CO DEARBORN TRUCK PLANT	3001 MILLER RD	DEARBORN	Michigan	48121	3.8	85	88.8	0	0	0	88.8
REXAM BEVERAGE CAN CO OLIVE BRANCH FACILITY	10800 MARINA DR	OLIVE BRANCH	Mississippi	38654	19.6495	68.4395	88.089	0	0	0	88.089
REXAM BEVERAGE CAN CO KENT WA FACILITY	1220 N SECOND AVE	KENT	Washington	98032	13.1945	74.7675	87.962	0	0	0	87.962
BALL METAL BEVERAGE CONTAINER CORP	1900 BARNES ST	REIDSVILLE	North Carolina	27320	12	65	77	0	0	0	77
CROWN BEVERAGE PACKAGING	GLEN & SHEPARD ST	LAWRENCE	Massachusetts	01843	18.0445	54.133	72.1775	0	0	0	72.1775
BMW MANUFACTURING CO LLC	1400 HWY 101 S	GREER	South Carolina	29651	3.543	67.089	70.632	0	0	0	70.632
BALL CONTAINER LLC COLUMBUS CAN PLANT	350 MCCORMICK BLVD	COLUMBUS	Ohio	43213	20	50	70	0	0	0	70
CROWN BEVERAGE PACKAGING	1035 E NORTH ST	BRADLEY	Illinois	60915	17.1385	51.416	68.5545	0	0	0	68.5545
CROWN BEVERAGE PACKAGING	1202 FONES RD	OLYMPIA	Washington	98501	17.083	51.3325	68.4155	0	0	0	68.4155
SILGAN CONTAINERS MANUFACTURING CORP	300 N FAIL RD	LA PORTE	Indiana	46350	12.5	54.5	67	0	0	0	67
REXAM BEVERAGE CAN CO LONGVIEW FACILITY	1001 FISHER RD	LONGVIEW	Texas	75604	17.6895	49.29	66.9795	0	0	0	66.9795
REXAM BEVERAGE CAN CO RE : CHICAGO PLANT	1101 W 43RD ST	CHICAGO	Illinois	60609	13.6425	51.733	65.3755	0	0	0	65.3755
METAL CONTAINER CORP - JACKSONVILLE CAN PLANT	1100 N ELLIS RD	JACKSONVILLE	Florida	32254	6.8885	54.5515	61.44	0	0	0	61.44
METAL CONTAINER CORPORTION - WINDSOR CAN PLANT	1201 METAL CONTAINER CT	WINDSOR	Colorado	80550	15.125	42.379	57.504	0	0	0	57.504
WHIRLPOOL CORP MARION D IVISION	1300 MARION-AGOSTA RD	MARION	Ohio	43302	0.05	55.751	55.801	0	0	0	55.801

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
REXAM BEVERAGE CAN CO CHATSWORTH FACILITY	20730 PRAIRIE ST	CHATSWORTH	California	91311	14.307	40.3275	54.6345	0	0	0	54.6345
SILGAN CONTAINERS MANUFACTURING CORP	1400 PLOVER RD PO BOX 97	PLOVER	Wisconsin	54467	10.75	40	50.75	0	0	0	50.75
BALL CONTAINER LLC ROME CAN PLANT	110 MCC DR	ROME	Georgia	30161	34.5	15	49.5	0	0	0	49.5
REXAM BEVERAGE CAN CO RE: WHITEHOUSE PLANT	10444 WATERVILLE	WHITEHOUSE	Ohio	43571	16.48	31.601	48.081	0	0	0	48.081
METAL CONTAINER CORP - NEWBURGH CAN PLANT	130 BREUNIG RD	NEW WINDSOR	New York	12553	12.0965	34.362	46.4585	0	0	0	46.4585
HONDA OF AMERICA MANUFACTURING INC	24000 HONDA PKY	MARYSVILLE	Ohio	43040	10.078	34.795	44.873	0	0	0.21	45.083
CROWN BEVERAGE PACKAGING	620 N 4TH ST	WORLAND	Wyoming	82401	11.1305	33.391	44.5215	0	0	0	44.5215
METAL CONTAINER CORP - ARNOLD CAN PLANT	42 TENBROOK INDUSTRIAL PARK	ARNOLD	Missouri	63010	17.1215	27.065	44.1865	0	0	0	44.1865
BALL METAL BEVERAGE CONTAINER CORP	8500 W TOWER AVE	MILWAUKEE	Wisconsin	53224	35.5	7	42.5	0	0	0	42.5
FORD MOTOR COMPANY--KANSAS CITY ASSEMBLY PLANT	8121 E US HWY 69	CLAYCOMO	Missouri	64119	2.25	39.5	41.75	0	0	0.0125	41.7625
RR DONNELLEY	2347 KRATZER RD	HARRISONBURG	Virginia	22802	36.14	4.277	40.417	0	0	0	40.417
REXAM BEVERAGE CAN CO PHOENIX FACILITY	211 N 51ST AVE	PHOENIX	Arizona	85043	5.2365	34.4115	39.648	0	0	0	39.648
ROCKY MOUNTAIN METAL CONTAINER	17755 W 32ND AVE	GOLDEN	Colorado	80401	30.5	6	36.5	0	0	2.4	38.9
CHRYSLER ST LOUIS NORTH ASSEMBLY PLANT	1050 DODGE DR	FENTON	Missouri	63026	5.5	32	37.5	0	0	0.0045	37.5045
NEW UNITED MOTOR MANUFACTURING INC	45500 FREMONT BLVD MAIL STOP 1(	FREMONT	California	94538	29.686	7.438	37.124	0	0	0	37.124
BALL METAL FOOD CONTAINER CORP	3010 BIRCH DR	WEIRTON	West Virginia	26062	25.5	11.5	37	0	0	0	37
WHIRLPOOL CORP - CLYDE DIV	119 BIRDSEYE ST	CLYDE	Ohio	43410	1.0635	34.295	35.3585	0	0	1.0645	36.423
GM TRUCK GROUP FLINT ASSEMBLY PLANT VAN SLYKE COMPLEX	G-3100 VAN SLYKE RD	FLINT	Michigan	48551	0.29	35.5	35.79	0	0	0.23	36.02
BALL METAL BEVERAGE CONTAINER CORP	501 N SIXTH ST	MONTICELLO	Indiana	47960	26	10	36	0	0	0	36
CROWN BEVERAGE PACKAGING	2501 N FRAZIER ST	CONROE	Texas	77305	29.291	4.775	34.066	0	0	0	34.066
CROWN FOOD PACKAGING	8801 CITATION RD	BALTIMORE	Maryland	21221	8.4905	25.471	33.9615	0	0	0	33.9615
BALL METAL BEVERAGE CONTAINER CORP	500 CRENSHAW BLVD	TORRANCE	California	90503	31	2.65	33.65	0	0	0	33.65
REXAM BEVERAGE CAN CO RE:OKLAHOMA CITY PLANT	3400 S COUNCIL RD	OKLAHOMA CITY	Oklahoma	73179	5.032	28.5175	33.5495	0	0	0	33.5495
FORD MOTOR CO KENTUCKY TRUCK PLANT	3001 CHAMBERLAIN LN	LOUISVILLE	Kentucky	40241	0.9	32.5	33.4	0	0	0.13	33.53
NISSAN NA INC SMYRNA MANUFACTURING PLANT	983 NISSAN DR	SMYRNA	Tennessee	37167	1.379	31.939	33.318	0	0	0	33.318

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

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METAL CONTAINER CORP - MIRA LOMA CAN PLANT	10980 INLAND AVE	MIRA LOMA	California	91752	29.0325	3.7525	32.785	0	0	0	32.785
GREIF PACKAGING LLC	7425 INDUSTRIAL RD	FLORENCE	Kentucky	41042	1.3765	26.154	27.5305	0	0	4.7335	32.264
CROWN BEVERAGE PACKAGING	12910 JESS PIRTLE BLVD	SUGAR LAND	Texas	77478	27.9735	4.196	32.1695	0	0	0	32.1695
BALL METAL BEVERAGE CONTAINER CORP	2400 HUNTINGTON DR	FAIRFIELD	California	94533	12.5	19	31.5	0	0	0	31.5
BALL METAL BEVERAGE CONTAINER CORP	4525 INDIANA ST	GOLDEN	Colorado	80403	21	10.5	31.5	0	0	0	31.5
CHICAGO HEIGHTS STEEL	211 E MAIN ST	CHICAGO HEIGHTS	Illinois	60411	6.2785	25.113	31.3915	0	0	0	31.3915
THERMA-TRU CORP	601 RE JONES RD	BUTLER	Indiana	46721	0	31.029	31.029	0	0	0	31.029
SENECA FOODS CORP	801 SAUK AVE	BARABOO	Wisconsin	53913	0	29.8385	29.8385	0	0	1.0045	30.843
CROWN BEVERAGE PACKAGING	380 CALLE FABRIL ST KM 126 PR-3,	CAROLINA	Puerto Rico	00985	7.531	22.5935	30.1245		0	0	30.1245
HONDA OF AMERICA MANUFACTURING INC	11000 STATE RT 347	EAST LIBERTY	Ohio	43319	1.95	27.5	29.45	0	0	0.11	29.56
EFCO CORP	1000 COUNTY RD	MONETT	Missouri	65708	1.1695	28.0645	29.234	0	0	0	29.234
BALL METAL BEVERAGE CONTAINER CORP	4700 WHITEWAY DR	TAMPA	Florida	33617	11.5	15.5	27	0	0	0	27
NISSAN NORTH AMERICA INC CANTON MS	300 NISSAN DR	CANTON	Mississippi	39046	2.0275	24.5915	26.619	0	0	0	26.619
CHRYSLER JEFFERSON NORTH ASSEMBLY PLANT	2101 CONNOR AVE	DETROIT	Michigan	48215	6.5	20	26.5	0	0	0.002	26.502
FLINT HILLS RESOURCES LP - WEST PLANT	2825 SUNTIDE RD	CORPUS CHRISTI	Texas	78410	0.055	0	0.055	0	0	26.2985	26.3535
NYW REALTY LLC/ HANOVER	500 E MIDDLE ST	HANOVER	Pennsylvania	17331	0	25.986	25.986		0	0	25.986
EDSAL MANUFACTURING CO INC	4400 S PACKER	CHICAGO	Illinois	60609	0	25.7385	25.7385	0	0	0	25.7385
AVX CORP MYRTLE BEACH	801 17TH AVE S	MYRTLE BEACH	South Carolina	29577	7.2445	2.136	9.3805	0.0005	0	15.955	25.336
CROWN BEVERAGE PACKAGING	195 CROWN RD	BATESVILLE	Mississippi	38606	22.54	2.711	25.251	0	0	0	25.251
CROWN BEVERAGE PACKAGING	1501 ST JAMES ST	LA CROSSE	Wisconsin	54603	22.8145	1.711	24.5255	0	0	0	24.5255
SAPA EXTRUSIONS INC	2500 ALUMAX RD	YANKTON	South Dakota	57078	0	24.4475	24.4475	0	0	0	24.4475
MAGNA STEYR NORTH AMERICA	3800 STICKNEY AVE	TOLEDO	Ohio	43608	2.95	21	23.95	0	0	0	23.95
AIR SYSTEM COMPONENTS LP	900 DARR PARK DR	PONCA CITY	Oklahoma	74601	0.2435	23.6125	23.856	0	0	0	23.856
MOBIL CHEMICAL CO	41501 WOLVERINE RD	SHAWNEE	Oklahoma	74804	0.375	23	23.375	0	0	0.0025	23.3775
WHIRLPOOL CORP FINDLAY DIV	4901 N MAIN ST	FINDLAY	Ohio	45840	2.2845	20.562	22.8465	0	0	0	22.8465
S B FOOT TANNING CO	805 BENCH ST	RED WING	Minnesota	55066	0	22.8265	22.8265	0	0	0	22.8265
CROWN BEVERAGE PACKAGING	100 EVANS ROW	CHERAW	South Carolina	29520	19.606	2.5155	22.1215	0	0	0	22.1215
SUBARU OF INDIANA AUTOMOTIVE INC	5500 STATE RD 38E	LAFAYETTE	Indiana	47905	0.22	21.9	22.12	0	0	0	22.12
BATESVILLE MANUFACTURING INC	175 MONOGARD DR	MANCHESTER	Tennessee	37355	1.088	20.6735	21.7615	0	0	0.0075	21.769

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
MEMC PASADENA INC	3000 N S ST	PASADENA	Texas	77503	12.6555	8.0295	20.685	0	0	0.89	21.575
PPG INDUSTRIES OHIO INC - DELAWARE	760 PITTSBURGH DR	DELAWARE	Ohio	43015	0.057	0	0.057	0	0	19.714	19.771
BWAY CORP	1601 VALDOSTA HWY	HOMERVILLE	Georgia	31634	19.247	0.3615	19.6085	0	0	0	19.6085
BALL METAL BEVERAGE CONTAINER CORP	1001 N FM 3083 E	CONROE	Texas	77303	14	4.6	18.6	0	0	0	18.6
SPECTRUM METAL FINISHING	535 BEV RD	YOUNGSTOWN	Ohio	44512	0.37	18.05	18.42	0	0	0	18.42
DEXTER CHASSIS GROUP PLANT 55	501 S MILLER DR	WHITE PIGEON	Michigan	49099	0	18.265	18.265	0	0	0.0985	18.3635
ROLL COATER INC	1950 E MAIN ST	GREENFIELD	Indiana	46140	0.033	18.318	18.351	0	0	0	18.351
BALL METAL BEVERAGE CONTAINER CORP	11 ADAMS RD	SARATOGA SPRING	New York	12866	3.3	15	18.3	0	0	0	18.3
GM SPRING HILL MANUFACTURING	100 SATURN PKWY MAIL DROP 371-9	SPRING HILL	Tennessee	37174	0.175	18	18.175	0	0	0	18.175
OLDCASTLE BUILDING ENVELOPE TEXAS FACILITY	803 AIRPORT RD	TERRELL	Texas	75160	2.7755	14.8745	17.65	0	0	0	17.65
UNION CARBIDE CORP SEADRIFT PLANT	7501 N HWY 185	SEADRIFT	Texas	77983	13.899	3.1365	17.0355	0	0	0.027	17.0625
HONDA MANUFACTURING OF ALABAMA LLC	1800 HONDA DR	LINCOLN	Alabama	35096	0.198	16.555	16.753	0	0	0	16.753
NUCOR VULCRAFT GROUP GRAPELAND DIV	175 COUNTY RD 2345	GRAPELAND	Texas	75844	0.15	16.287	16.437	0	0	0	16.437
PPG INDUSTRIES INC-OAK CREEK	10800 S 13TH ST	OAK CREEK	Wisconsin	53154	15.48	0.374	15.854	0	0	0.424	16.278
NORTH COAST CONTAINER CORP	8806 CRANE AVE	CLEVELAND	Ohio	44105	0	16.0815	16.0815	0	0	0	16.0815
TOYOTA MOTOR MANUFACTURING INDIANA INC	4000 TULIP TREE DR	PRINCETON	Indiana	47670	9.7535	6.3155	16.069	0	0	0	16.069
ALLIED TUBE & CONDUIT CORP	16100 S LATHROP AVE	HARVEY	Illinois	60426	10.022	5.9115	15.9335	0	0	0	15.9335
NOVELIS CORP	390 GRISWOLD ST NE	WARREN	Ohio	44483	4.657	11.265	15.922	0	0	0	15.922
METAL INDUSTRIES INC - BUSHNELL	400 W WALKER AVE	BUSHNELL	Florida	33513	0.0765	15.742	15.8185	0	0	0	15.8185
BOEING COMMERCIAL AIRPLANE GROUP - EVERETT	3003 W CASINO RD	EVERETT	Washington	98204	1.6	14	15.6	0	0.0075	0	15.6075
AIR SYSTEM COMPONENTS LP	3301 N MAIN ST	TARBORO	North Carolina	27886	0.155	14.7635	14.9185	0	0	0.2665	15.185
HAMMER PACKAGING CORP	200 LUCIUS GORDON DR	WEST HENRIETTA	New York	14586	0	15.118	15.118	0	0	0	15.118
S D WARREN CO	89 CUMBERLAND ST	WESTBROOK	Maine	04098	0.0015	15	15.0015	0.055	0	0	15.0565
SEIDEL TANNING CORP	1306 E MEINECKE AVE	MILWAUKEE	Wisconsin	53212	0	14.8525	14.8525	0	0	0	14.8525
HART & COOLEY INC	4910 MOORES MILL RD	HUNTSVILLE	Alabama	35811	0.852	13.4005	14.2525	0	0	0.598	14.8505
PELLA CORP	102 MAIN ST	PELLA	Iowa	50219	0.125	14.444	14.569	0	0	0	14.569
BALL CONTAINER LLC	105 E BLACKHAWK DR	FORT ATKINSON	Wisconsin	53538	3.55	11	14.55	0	0	0	14.55
ALCOA INC - WARRICK OPERATIONS	HWYS 66 & 61	NEWBURGH	Indiana	47629	0	14.5275	14.5275	0	0	0	14.5275
L A DARLING CO - PIGGOTT AR FACILITY	HWY 49 S	PIGGOTT	Arkansas	72454	0.167	14.203	14.37	0	0	0	14.37

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
MPM SILICONES LLC	3500 S STATE RT 2	FRIENDLY	West Virginia	26146	2.2045	0.005	2.2095	9.3265	0	2.805	14.341
PROFESSIONAL DISPOSABLES INTERNATIONAL INC	TWO NICE-PAK PARK	ORANGEBURG	New York	10962	0.043	0.133	0.176	0	0	14	14.176
JOHNSON WELDED PRODUCTS INC	625 S EDGEWOOD AVE	URBANA	Ohio	43078	0	14.069	14.069	0	0	0	14.069
REXAM BEVERAGE CAN CO FAIRFIELD PLANT	2433 CROCKER CIR	FAIRFIELD	California	94533	5.4755	8.5055	13.981	0	0	0	13.981
EASTMAN CHEMICAL CO TEXAS OPERATIONS	300 KODAK BLVD	LONGVIEW	Texas	75602	12	1.8	13.8	0	0.001	0	13.801
MUELLER CO	956 INDUSTRIAL BLVD	ALBERTVILLE	Alabama	35950	6.892	6.892	13.784	0	0	0	13.784
CROWN BEVERAGE PACKAGING	400 N WALNUT ST	CRAWFORDSVILLE	Indiana	47933	10.035	3.7435	13.7785	0	0	0	13.7785
ALSTOM POWER INC PLATE FORMED PRODUCTS DIV	911 W MAIN ST	CHATTANOOGA	Tennessee	37402	13.7535	0	13.7535	0	0	0	13.7535
PRECOAT METALS	1095 MENDELL DAVIS DR	JACKSON	Mississippi	39272	12.341	1.283	13.624	0	0	0	13.624
GENERAL MOTORS CORP LORDSTOWN COMPLEX	2300 HALLOCK-YOUNG RD	LORDSTOWN	Ohio	44481	12	0.22	12.22	0	0	1.15	13.37
KNAPHEIDE MANUFACTURING CO	1848 WESTPHALIA STRASSE	QUINCY	Illinois	62305	0.131	12.98	13.111		0	0	13.111
BEMIS MANUFACTURING CO PLANT B	300 MILL ST	SHEBOYGAN FALLS	Wisconsin	53085	0	13.105	13.105	0	0	0	13.105
BALL METAL BEVERAGE CONTAINER CORP	95 BALLARD RD	MIDDLETOWN	New York	10940	6	7	13	0	0	0	13
BALL METAL BEVERAGE CONTAINER CORP	6600 WILL ROGERS BLVD	FORT WORTH	Texas	76140	5.5	7.5	13	0	0	0	13
CAN CORP OF AMERICA INC	326 JUNE AVE	BLANDON	Pennsylvania	19510	3.168	9.601	12.769	0	0	0	12.769
SILGAN CONTAINERS MANUFACTURING CORP	305 W N ST	MOUNT VERNON	Missouri	65712	2.621	10.1265	12.7475	0	0	0	12.7475
BALL METAL BEVERAGE CONTAINER CORP	91-320 KOMOHANA ST	KAPOLEI	Hawaii	96707	2.2	10.5	12.7	0	0	0	12.7
AUTOALLIANCE INTERNATIONAL INC	1 INTERNATIONAL DR	FLAT ROCK	Michigan	48134	0.0025	12.5975	12.6	0	0	0	12.6
BEDFORD MATERIALS CO INC	7676 ALLEGHENY RD	MANNS CHOICE	Pennsylvania	15550	1.2505	11.3215	12.572	0	0	0	12.572
HUNTSMAN PETROCHEMICAL LLC PORT NECHES PERFORMANCE PRODUCTS	6001 HWY 366	PORT NECHES	Texas	77651	0.079	0	0.079	0	0	12.4175	12.4965
QUAD/GRAPHICS INC	1900 W SUMNER ST	HARTFORD	Wisconsin	53027	12	0.4	12.4	0	0	0	12.4
FORD LOUISVILLE ASSEMBLY	2000 FERN VALLEY RD	LOUISVILLE	Kentucky	40213	0.125	12	12.125	0	0	0.13	12.255
MERCEDES-BENZ US INTERNATIONAL INC	1 MERCEDES DR	VANCE	Alabama	35490	2.3115	9.8975	12.209	0	0	0	12.209
MODINE MANUFACTURING CO INC	551 TAPP RD	HARRODSBURG	Kentucky	40330	1.202	10.817	12.019	0	0	0	12.019
M&B HANGERS	1313 PKWY DR SE	LEEDS	Alabama	35094	2.399	9.596	11.995	0	0	0	11.995
CROWN FOOD PACKAGING	1650 BROADWAY	HANOVER	Pennsylvania	17331	2.852	8.5555	11.4075	0	0	0	11.4075
TOKICO (USA) INC	301 MAYDE RD	BEREA	Kentucky	40403	0.245	11.058	11.303	0	0	0.0005	11.3035
NUCOR CORP VULCRAFT/NUCOR COLD FINISH DIV	1601 W OMAHA AVE	NORFOLK	Nebraska	68701	0.8	10.5	11.3	0	0	0	11.3
AKZO NOBEL COATINGS INC	1629 VANDERBILT RD	BIRMINGHAM	Alabama	35234	11.1405	0.159	11.2995	0	0	0	11.2995

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
MEADWESTVACO CONSUMER PACKAGING GROUP LLC	7411 OAKWOOD ST	MEBANE	North Carolina	27302	11.2585	0	11.2585	0	0	0	11.2585
CROWN FOOD PACKAGING	5201 ENTERPRISE BLVD	TOLEDO	Ohio	43612	2.806	8.409	11.215	0	0	0	11.215
AMERICAN TRIM LLC	1501 W MICHIGAN ST	SIDNEY	Ohio	45365	0	11.167	11.167	0	0	0	11.167
GEA BPO LLC	301 N CURRY PIKE	BLOOMINGTON	Indiana	47404	0	11.046	11.046	0	0	0	11.046
HEXION SPECIALTY CHEMICALS INC	2525 S COMBEE RD	LAKELAND	Florida	33801	9.3205	0.0195	9.34	0	0	1.686	11.026
GERSTENSLAGER CO	1425 E BOWMAN ST	WOOSTER	Ohio	44691	0.325	10.512	10.837	0	0	0.004	10.841
BROAN-NUTONE LLC	926 W STATE ST	HARTFORD	Wisconsin	53027	0.1135	10.6365	10.75	0	0	0	10.75
POWER PARTNERS INC	200 NEWTON BRIDGE RD	ATHENS	Georgia	30607	0	10.75	10.75	0	0	0	10.75
VESTAL MANUFACTURING ENTERPRISES INC	177 INDUSTRIAL PARK RD	SWEETWATER	Tennessee	37874	10.7105	0	10.7105	0	0	0	10.7105
FRANKLIN INVESTMENT CORP	600 ATLANTIC AVE	FRANKLIN	Pennsylvania	16323	10.7	0	10.7	0	0	0	10.7
TRI VULCRAFT OF NEW YORK INC	5362 RAILROAD ST	CHEMUNG	New York	14825	4.5235	5.7985	10.322	0	0	0.2615	10.5835
CECO DOOR PRODUCTS	9159 TELECOM DR	MILAN	Tennessee	38358	5.289	5.289	10.578	0	0	0	10.578
INGERSOLL-RAND CO STEELCRAFT DIV	9017 BLUE ASH RD	CINCINNATI	Ohio	45242	2.5475	7.9325	10.48	0	0	0	10.48
MEYER STEEL DRUM INC	2000 S KILBOURN AVE	CHICAGO	Illinois	60623	1.1265	9.112	10.2385	0	0	0	10.2385
BALL AEROSOL & SPECIALTY CONTAINER INC	1717 GIFFORD RD	ELGIN	Illinois	60120	1.65	8.5	10.15	0	0	0	10.15
CARDONE INDUSTRIES	5660 RISING SUN AVE	PHILADELPHIA	Pennsylvania	19120	1.987	8.1175	10.1045	0	0	0	10.1045
KAWNEER CO INC	600 KAWNEER DR	SPRINGDALE	Arkansas	72764	4.781	5.2985	10.0795	0	0	0	10.0795
MAYFLOWER VEHICLE SYSTEMS INC NORWALK FACILITY	55 N GARFIELD ST	NORWALK	Ohio	44857	0	10	10	0	0	0	10
YKK AP AMERICA INC	332 FIRETOWER RD	DUBLIN	Georgia	31021	9.541	0.351	9.892	0	0	0	9.892
RR DONNELLEY CRAWFORDSVILLE	1009 SLOAN ST	CRAWFORDSVILLE	Indiana	47933	5.107	4.785	9.892	0	0	0	9.892
BERENFIELD CONTAINERS SW LTD	3300 N HUTCHINSON ST	WHITE HALL	Arkansas	71602	0	9.8915	9.8915	0	0	0	9.8915
COOK COMPOSITES & POLYMERS CO	340 RAILROAD ST	SAUKVILLE	Wisconsin	53080	0.7885	0.0595	0.848	0	0	9.0035	9.8515
KEYMARK CORP OF FLORIDA	2540 KNIGHTS STATION RD	LAKELAND	Florida	33810	0.4925	9.355	9.8475	0	0	0	9.8475
LAKESIDE LITHOGRAPHY LLC	1600 S LAFLIN ST	CHICAGO	Illinois	60608	1	8.75	9.75	0	0	0	9.75
PENN COLOR INC	2755 BERGEY RD	HATFIELD	Pennsylvania	19440	0.2255	0.479	0.7045	0	0	9.0065	9.711
NUCOR VULCRAFT GROUP SAINT JOE DIV	6610 COUNTY RD 60	SAINT JOE	Indiana	46785	4.2105	1.6955	5.906	0	0	3.7695	9.6755
RINECO	1007 VULCAN RD- HASKELL	BENTON	Arkansas	72015	0.0495	0	0.0495	0	0	9.6	9.6495
ROYAL MOULDINGS LTD; MARION VIRGINIA	135 BEAR CREEK RD	MARION	Virginia	24354	0.3835	9.1695	9.553	0	0	0	9.553

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
HEWLETT-PACKARD CARIBE BV SITE	HWY 110 N KM 5.1	AGUADILLA	Puerto Rico	00605	0.125	9.405	9.53	0	0	0	9.53
3M CO - GUIN	6675 US HWY 43	GUIN	Alabama	35563	0.001	9.5	9.501	0	0	0	9.501
STANLEY WORKS HAND TOOLS DIV	600 MYRTLE ST	NEW BRITAIN	Connecticut	06052	0.946	8.514	9.46	0	0	0	9.46
CIRCLE GRAPHICS INC	120 9TH AVE	LONGMONT	Colorado	80501	3.05	1.9	4.95	0	0	4.5	9.45
NUCOR CORP VULCRAFT DIV	1501 W DARLINGTON ST	FLORENCE	South Carolina	29501	8.525	0.9115	9.4365	0	0	0	9.4365
EPCO EXTRUSION PAINTING CO	413 MCCLURG RD	BOARDMAN	Ohio	44512	0.8375	8.375	9.2125	0	0	0	9.2125
QUAD/GRAPHICS INC	N63 W23075 STATE HWY 74 ATTN: E	SUSSEX	Wisconsin	53089	8.275	0.925	9.2	0	0	0	9.2
HALLSTAR CO ESTER SOLUTIONS FACILITY	5851 W 73RD ST	BEDFORD PARK	Illinois	60638	1.134	0.1295	1.2635	0	0	7.931	9.1945
SILGAN CONTAINERS MANUFACTURING CORP	2115 SW LOWER LAKE RD	SAINT JOSEPH	Missouri	64504	6.299	2.891	9.19	0	0	0	9.19
KUBIN-NICHOLSON CORP	8448 N 87TH ST	MILWAUKEE	Wisconsin	53224	9.148	0	9.148	0	0	0	9.148
SILGAN CAN CO	2120 NC HWY N UNIT A	MAXTON	North Carolina	28364	2.965	6.16	9.125	0	0	0	9.125
SILGAN CAN CO	12-773 ST RT 110	NAPOLEON	Ohio	43545	2.438	6.571	9.009	0	0	0	9.009
SQUARE D CO	1601 MERCER RD	LEXINGTON	Kentucky	40511	0	9.0085	9.0085	0	0	0	9.0085
HESS PRINT SOLUTIONS	3765 SUNNYBROOK RD	BRIMFIELD	Ohio	44240	9	0	9	0	0	0	9
CROWN AEROSOL PACKAGING	3737 E EXCHANGE AVE	AURORA	Illinois	60504	7.8805	0.991	8.8715	0	0	0	8.8715
SILGAN CONTAINERS MANAUFACTURING CORP	520 W 2ND ST	OCONOMOWOC	Wisconsin	53066	1.75	7.05	8.8	0	0	0	8.8
GENERAL MOTORS LANSING DELTA TOWNSHIP	8175 MILLETT HWY	LANSING	Michigan	48917	0.23	8.5	8.73	0	0	0.0105	8.7405
TOPPAN INTERAMERICA INC	1131 HWY 155 S	MC DONOUGH	Georgia	30253	0	8.7	8.7	0	0	0	8.7
SILGAN WHITE CAP CORP	2201 W MARYLAND ST	EVANSVILLE	Indiana	47710	1.9	6.75	8.65	0	0	0	8.65
TOYOTA MOTOR MANUFACTURING TEX AS INC	1 LONE STAR PASS	SAN ANTONIO	Texas	78264	5.2135	3.4115	8.625	0	0	0	8.625
FORD MOTOR COMPANY-WAYNE ASSEMBLY	37625 MICHIGAN AVE	WAYNE	Michigan	48184	0.085	8.5	8.585	0	0	0	8.585
MAYTAG CORP CLEVELAND COOKING PRODUCTS PLANT 1	740 KING EDWARD AVE SE	CLEVELAND	Tennessee	37311	0	8.5585	8.5585	0	0	0	8.5585
RR DONNELLEY & SONS CO	1145 CONWELL AVE	WILLARD	Ohio	44890	6.0815	2.366	8.4475	0	0	0	8.4475
SIGNODE	7701 W 71ST ST	BRIDGEVIEW	Illinois	60455	0.85	7.55	8.4	0	0	0	8.4
BERENFIELD CONTAINERS INC	31 RAILROAD ST	CLARENDON	Pennsylvania	16313	0.0755	8.2925	8.368		0	0	8.368
GM ORION ASSEMBLY CENTER	4555 GIDDINGS RD	ORION	Michigan	48359	6.5	0.8	7.3	0	1.05	0	8.35
MASTERBRAND CABINETS INC	217 S OAK ST	ARTHUR	Illinois	61911	0	8.25	8.25	0	0	0	8.25
SILGAN CAN CO	500 NW LOOP 286 SUITE 101	PARIS	Texas	75460	4.945	3.217	8.162	0	0	0	8.162
BERENFIELD CONTAINERS INC MASON	1229 CASTLE DR	MASON	Ohio	45040	0.375	7.508	7.883		0	0	7.883

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
NOV DOWNHOLE TOOLS CASPER	778 CIR DR	CASPER	Wyoming	82601	0	0	0	0	0	7.857	7.857
LA-Z-BOY TENNESSEE	500 WALNUT GROVE RD	DAYTON	Tennessee	37321	0	7.823	7.823	0	0	0	7.823
DECORATIVE PANELS INTERNATIONA L	2900 HILL AVE	TOLEDO	Ohio	43607	7.5945	0.0135	7.608	0	0	0	7.608
GREIF PACKAGING LLC	2400 COOPER AVE	MERCED	California	95348	6.4965	1.0605	7.557	0	0	0	7.557
GM TRUCK GROUP FORT WAYNE ASSEMBLY	12200 LAFAYETTE CENTER RD	ROANOKE	Indiana	46783	0.475	7	7.475	0	0	0	7.475
WHITING DOOR MANUFACTURING CORP	113 CEDAR ST	AKRON	New York	14001	0	7.4105	7.4105	0	0	0	7.4105
HOWARD FINISHING LLC	32565 DEQUINDRE	MADISON HEIGHTS	Michigan	48071	0.0025	7.3555	7.358	0	0	0	7.358
SILGAN CONTAINERS MANUFACTURING CORP	135 NATIONAL RD	EDISON	New Jersey	08817	6	1.35	7.35	0	0	0	7.35
BWAY CORP	3200 S KILBOURN AVE	CHICAGO	Illinois	60623	4.3655	2.886	7.2515	0	0	0	7.2515
SILGAN CONTAINERS MANUFACTURING CORP	1416 INDIANHEAD DR	MENOMONIE	Wisconsin	54751	1.45	5.8	7.25	0	0	0	7.25
NASHVILLE WIRE PRODUCTS	1604 COUNTY HOSPITAL RD	NASHVILLE	Tennessee	37218	0.7	6.5	7.2	0	0	0	7.2
CHICAGO STEEL CONTAINER CORP	1846 S KILBOURN AVE	CHICAGO	Illinois	60623	1.3	5.89	7.19	0	0	0	7.19
DOW CHEMICAL CO FREEPORT FACILITY	2301 N BRAZOSPORT BLVD BUILDIN	FREEPORT	Texas	77541	0.1645	0.0035	0.168	3.2305	0	3.7895	7.188
BENJAMIN MOORE & CO JOHNSTOWN	UNION AVE EXTENSION	JOHNSTOWN	New York	12095	0.014	0	0.014	0	0	7.1215	7.1355
SHIELDCOAT TECHNOLOGIES INC (DBA CYBERSHIELD OF TEXAS)	2602 SPENCE ST	LUFKIN	Texas	75904	7.1205	0	7.1205	0	0	0	7.1205
WIX FILTRATION CORP - ALLEN PLANT	2900 NW BLVD	GASTONIA	North Carolina	28052	0.0025	7.1	7.1025	0	0	0	7.1025
RR DONNELLEY LANCASTER WEST	1375 HARRISBURG PIKE	LANCASTER	Pennsylvania	17601	6.6515	0.445	7.0965	0	0	0	7.0965
NUCOR CORP VULCRAFT DIV	7205 GAULT AVE N	FORT PAYNE	Alabama	35967	5.101	1.822	6.923	0	0	0	6.923
GREIF PACKAGING LLC	6000 JEFFERSON HWY	NEW ORLEANS	Louisiana	70123	2.673	4.1805	6.8535	0	0	0	6.8535
SONOCO PHOENIX - PRESIDENTS ISLAND	2755 HARBOR AVE	MEMPHIS	Tennessee	38113	0	6.841	6.841	0	0	0	6.841
AFTON CHEMICAL CORP	725 CANNON BRIDGE RD	ORANGEBURG	South Carolina	29115	3.179	0.526	3.705	0.247	0	2.8645	6.8165
ACME FINISHING CO INC	1595 E OAKTON ST	ELK GROVE VILLAG	Illinois	60007	1.359	5.435	6.794	0	0	0	6.794
EQUISTAR CHEMICALS BAYPORT CHEMICALS PLANT	5761 UNDERWOOD RD	PASADENA	Texas	77507	6.753	0.0095	6.7625	0	0	0	6.7625
COLOR COMMUNICATIONS INC	4242 W FILLMORE	CHICAGO	Illinois	60624	1.419	5.3145	6.7335	0	0	0	6.7335
CHRYSLER WARREN TRUCK ASSEMBLY PLANT (PART)	21500 MOUND RD	WARREN	Michigan	48091	6	0.7	6.7	0	0	0.0055	6.7055
IMPRESS USA INC	936 BARRACUDA ST	TERMINAL ISLAND	California	90731	6.15	0.55	6.7	0	0	0	6.7
BERENFIELD CONTAINERS SE LTD	12180 UNIVERSITY CITY BLVD	HARRISBURG	North Carolina	28075	0	6.6745	6.6745	0	0	0	6.6745
GMVM-LANSING GRAND RIVER ASSEMBLY	920 TOWNSEND ST MAIL CODE: 489-	LANSING	Michigan	48921	3.55	3.1	6.65	0	0	0	6.65

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
KITZINGER COOPERAGE CORP	2529 E NORWICH AVE	SAINT FRANCIS	Wisconsin	53235	0	6.6085	6.6085	0	0	0	6.6085
ARMSTRONG HARDWOOD FLOORING CO	565 HARTCO DR	ONEIDA	Tennessee	37841	0	6.568	6.568	0	0	0	6.568
HIRSH INDUSTRIES INC	1525 MCKEE RD	DOVER	Delaware	19904	0.0025	6.5135	6.516	0	0	0	6.516
WORLDCOLOR - DYERSBURG DIV	2030 SYLVAN RD	DYERSBURG	Tennessee	38024	6.2595	0.111	6.3705	0	0	0	6.3705
ESCO CORP	9098 EASTSIDE DR EXT	NEWTON	Mississippi	39345	6.312	0	6.312		0	0	6.312
JOHN DEERE HARVESTER WORKS EAST MOLINE	1100 13TH AVE	EAST MOLINE	Illinois	61244	0.3145	5.9755	6.29	0	0	0	6.29
AKZO NOBEL SURFACE CHEMISTRY LLC	15200 ALMEDA RD	HOUSTON	Texas	77053	0.626	0.116	0.742	0	0	5.4675	6.2095
QUEBECOR WORLD DIRECT-PETTY	420 W INDUSTRIAL AVE	EFFINGHAM	Illinois	62401	6.155	0	6.155	0	0	0	6.155
PACKAGING DYNAMICS INC BAGCRAFT/PAPERCON DIV	3400 BAGCRAFT BLVD	BAXTER SPRINGS	Kansas	66713	0	6.15	6.15	0	0	0	6.15
GMTG - SHREVEPORT ASSEMBLY	7600 GENERAL MOTORS BLVD	SHREVEPORT	Louisiana	71129	0.105	6	6.105	0	0	0	6.105
SENECA FOODS CORP CAN PLANT	3709 MILL ST	MARION	New York	14505	0	6.103	6.103		0	0	6.103
NOVOLYTE TECHNOLOGIES	111 W IRENE RD	ZACHARY	Louisiana	70791	4.7	0.445	5.145	0.95	0	0	6.095
CARRY-ON TRAILER CORP	1965 HWY 30	MISSOURI VALLEY	Iowa	51555	0	6.013	6.013	0	0	0	6.013
SILGAN CONTAINERS MANUFACTURING CORP	2501 165TH ST	HAMMOND	Indiana	46320	0	6	6	0	0	0	6
METOKOTE CORP PLANT 15	312 SAVANNAH	CEDAR FALLS	Iowa	50613	0	5.991	5.991	0	0	0	5.991
ELECTROPRIME INC	63 DIXIE HWY	ROSSFORD	Ohio	43460	0	5.952	5.952	0	0	0	5.952
QUAD/GRAPHICS INC	56 DUPLAINVILLE RD	SARATOGA SPRING	New York	12866	5.575	0.325	5.9	0	0	0	5.9
FIBERMARK NORTH AMERICA INC	5492 BOSTWICK ST	LOWVILLE	New York	13367	0.0595	5.8	5.8595	0	0	0	5.8595
BRADFORD WHITE CORP	200 LAFAYETTE ST	MIDDLEVILLE	Michigan	49333	0	5.837	5.837	0	0	0	5.837
TECNOCAP LLC	2100 GRISWOLD NE	WARREN	Ohio	44483	2.074	3.7205	5.7945	0	0	0	5.7945
VON HOFFMANN GRAPHICS INC	1005 COMMERCIAL DR	OWENSVILLE	Missouri	65066	4.147	1.6345	5.7815	0	0	0	5.7815
U.S. AIR FORCE TINKER AFB OK	7701 ARNOLD ST SUITE 204	TINKER A F B	Oklahoma	73145	1.6	4.15	5.75	0	0	0.0165	5.7665
HUNTER DOUGLAS TUPELO CENTER	RT 2 LEE INDUSTRIAL PARK E	SHANNON	Mississippi	38868	0.274	5.4825	5.7565	0	0	0	5.7565
CROWN FOOD PACKAGING	851 E MAPLE ST	WINTER GARDEN	Florida	34787	1.3385	4.4155	5.754	0	0	0	5.754
RR DONNELLEY LANCASTER EAST	216 GREENFIELD RD	LANCASTER	Pennsylvania	17601	5.319	0.3725	5.6915	0	0	0	5.6915
ROLL COATER INC	4502 FREEDOM WAY	WEIRTON	West Virginia	26062	0	5.684	5.684	0	0	0	5.684
CNH AMERICA LLC	1930 DES MOINES AVE	BURLINGTON	Iowa	52601	0.175	5.5	5.675		0	0	5.675
NAVISTAR INC	6125 URBANA RD	SPRINGFIELD	Ohio	45502	0.6	5	5.6	0.015	0	0.0305	5.6455
HUSQVARNA CONSUMER OUTDOOR PRODUCTS	172 OLD ELLOREE RD	ORANGEBURG	South Carolina	29116	0.115	5.525	5.64	0	0	0	5.64

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PRECOAT METALS	25 NORTHGATE INDUSTRIAL DR	GRANITE CITY	Illinois	62040	4.4645	1.0945	5.559	0	0	0	5.559
LOGAN ALUMINUM INC	US HWY 431 N	RUSSELLVILLE	Kentucky	42276	0.0475	5.4965	5.544	0	0	0	5.544
PPG INDUSTRIES,INC-SPRINGDALE COMPLEX	125 COLFAX ST	SPRINGDALE	Pennsylvania	15144	5.4805	0.0435	5.524	0	0	0	5.524
GREIF PACKAGING LLC	4300 W 130TH ST	ALSIP	Illinois	60803	1.5795	3.93	5.5095	0	0	0	5.5095
USS - CLAIRTON WORKS	400 STATE ST	CLAIRTON	Pennsylvania	15025	5.5	0	5.5	0	0	0	5.5
CREE INC	4600 SILICON DR	DURHAM	North Carolina	27703	1.34	4.1565	5.4965	0	0	0	5.4965
TOYOTA MOTOR MANUFACTURING KENTUCKY INC	1001 CHERRY BLOSSOM WAY	GEORGETOWN	Kentucky	40324	0.125	5.35	5.475	0	0	0	5.475
PRIME TANNING CO - HARTLAND	9 MAIN ST	HARTLAND	Maine	04943	0.1085	5.3265	5.435	0	0	0	5.435
NAZDAR SHAWNEE	8501 HEDGE LN TERRACE	SHAWNEE	Kansas	66227	1.623	3.7875	5.4105	0	0	0	5.4105
BALL METAL FOOD CONTAINER CORP	300 W GREGER RD	OAKDALE	California	95361	0.75	4.65	5.4	0	0	0	5.4
3M CO - CORDOVA	22614 RT 84 N	CORDOVA	Illinois	61242	0.27	0.0385	0.3085	5.05	0	4.44089E-16	5.3585
OWENS CORNING VETROTEX LLC	4837 HWY 81 S	STARR	South Carolina	29684	0.5355	4.819	5.3545	0	0	0	5.3545
NEW MILLENNIUM BUILDING SYSTEMS	100 DIUGUIDS LN	SALEM	Virginia	24153	5.296	0	5.296	0	0	0	5.296
MID CONTINENT CABINETRY	67 E 2ND ST N	COTTONWOOD	Minnesota	56229	0.5285	4.758	5.2865	0	0	0	5.2865
AVERY DENNISON - IBMD LENOIR	950 GERMAN ST	LENOIR	North Carolina	28645	3.73	1.556	5.286	0	0	0	5.286
GREIF PACKAGING LLC	10850 STRANG RD	LA PORTE	Texas	77571	4.1335	0.085	4.2185	0	0	1.063	5.2815
SILGAN CAN CO	6200 FRANKLIN BLVD SUITE #100	SACRAMENTO	California	95824	4.864	0.407	5.271	0	0	0	5.271
ENKEI AMERICA INC	2900 W INWOOD DR	COLUMBUS	Indiana	47201	0	5.25	5.25	0	0	0.012	5.262
WORTHINGTON CYLINDERS WISCONSI N LLC	300 E BREED ST	CHILTON	Wisconsin	53014	0.9375	4.3205	5.258	0	0	0	5.258
METAL COATERS MISSISSIPPI	951 PRISOCK RD	JACKSON	Mississippi	39272	0	5.1255	5.1255	0	0	0	5.1255
MEDALLION CABINETRY INC	180 INDUSTRIAL BLVD	WACONIA	Minnesota	55387	0	5.0815	5.0815	0	0	0	5.0815
PRECOAT METALS	16402 JACINTOPORT BLVD	HOUSTON	Texas	77015	4.8145	0.2605	5.075	0	0	0	5.075
TRAD NA INC	210 BILL BRYAN BLVD	HOPKINSVILLE	Kentucky	42240	0.004	5.066	5.07	0	0	0	5.07
AGY AIKEN LLC	2556 WAGENER RD	AIKEN	South Carolina	29801	2.9835	0.8965	3.88	0	1.183	0	5.063
GREENWICH INDUSTRIES LP CLARIN DIV	927 N SHORE DR	LAKE BLUFF	Illinois	60044	0.0505	5.0075	5.058	0	0	0	5.058
ROLL COATER	858 E HUPP RD	LA PORTE	Indiana	46350	0.0025	5.0255	5.028	0	0	0	5.028
ALCOA HOME EXTERIORS INC	2615 CAMPBELL RD	SIDNEY	Ohio	45365	0.6675	3.95	4.6175	0	0	0.3	4.9175
SCHAEFFER MANUFACTURING	102 BARTON ST	SAINT LOUIS	Missouri	63104	4.8465	0	4.8465	0	0	0	4.8465
ASHLEY INDUSTRIAL MOLDING INC	310 S WABASH	ASHLEY	Indiana	46705	0.475	4.35	4.825	0	0	0	4.825

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US ARMY LAKE CITY ARMY AMMUNITION PLANT	INTERSECTION OF MO HWYS 7 & 78	INDEPENDENCE	Missouri	64051	1.3775	3.349	4.7265	0	0	0	4.7265
INX DIGITAL INK CO	405 INDUSTRIAL WAY	DIXON	California	95620	4.7155	0	4.7155	0	0	0	4.7155
NAHAN PRINTING INC	7000 SAUKVIEW DR	SAINT CLOUD	Minnesota	56303	4.577	0.132	4.709	0	0	0	4.709
AAP ST MARYS CORP	1100 MCKINLEY RD	SAINT MARYS	Ohio	45885	0.031	4.6575	4.6885	0	0	0	4.6885
ZURN INDUSTRIES LLC	1301 RASPBERRY ST	ERIE	Pennsylvania	16502	4.674	0	4.674	0	0	0	4.674
DUPONT PONTCHARTRAIN WORKS	586 HWY 44	LA PLACE	Louisiana	70068	0.005	0	0.005	0	0	4.596	4.601
ARVINMERITOR HEAVY VEHICLE SYSTEMS LLC	801 RAILROAD AVE	YORK	South Carolina	29745	0.001	4.5785	4.5795	0	0	0	4.5795
OMG AMERICAS	TWO MILE RUN RD	FRANKLIN	Pennsylvania	16323	0.025	0.634	0.659	0	0	3.8855	4.5445
SABIC INNOVATIVE PLASTICS MT VERNON LLC	1 LEXAN LN	MOUNT VERNON	Indiana	47620	2.7	1.7	4.4	0.125	0	0	4.525
GENERAL MOTORS WENTZVILLE ASSEMBLY	1500 E RT A	WENTZVILLE	Missouri	63385	0.85	3.65	4.5	0	0	0	4.5
RUSKIN CO	HWY 27 N	GENEVA	Alabama	36340	0.027	4.4635	4.4905	0	0	0	4.4905
ALLIANCE INDUSTRIES WAUPACA	N 2467 VAUGHAN RD	WAUPACA	Wisconsin	54981	0.447	4.0215	4.4685	0	0	0	4.4685
GENIE INDUSTRIES SOUTH CAMPUS	18700 NE 65TH ST	REDMOND	Washington	98052	0.125	4.29	4.415	0	0	0	4.415
ENDICOTT INTERCONNECT TECHNOLOGIES INC	1093 CLARK ST	ENDICOTT	New York	13760	0.25	4.1155	4.3655	0.031	0	0	4.3965
BROWN PRINTING CO	2300 BROWN AVE	WASECA	Minnesota	56093	4.2665	0.057	4.3235	0	0	0	4.3235
BALL METAL BEVERAGE CONTAINER CORP	1800 REYNOLDS AVE	KANSAS CITY	Missouri	64120	4.15	0.09	4.24	0	0	0	4.24
BATESVILLE MANUFACTURING INC	310 CROWN RD	BATESVILLE	Mississippi	38606	0.6345	3.5955	4.23	0	0	0	4.23
SILGAN CONTAINERS MANUFACTURING CORP	N90 W14600 COMMERCE DR	MENOMONEE FALLS	Wisconsin	53051	0	4.2	4.2	0	0	0	4.2
GREIF PACKAGING LLC	695 LOUIS DR	WARMINSTER	Pennsylvania	18974	0.4005	0.65	1.0505	0	0	3.144	4.1945
SEQUA COATINGS CORP-PRECOAT M ETALS DIV	US HWY 12 AT RT 249	PORTAGE	Indiana	46368	0.2925	3.8895	4.182	0	0	0	4.182
R R DONNELLEY & SONS CO DANVILLE DIV	JOHN HILL BAILEY INDL PARK HWY	DANVILLE	Kentucky	40422	3.8845	0.272	4.1565	0	0	0	4.1565
BROWN PRINTING CO	11595 MCCONNELL RD	WOODSTOCK	Illinois	60098	4.035	0.09	4.125	0	0	0	4.125
SILGAN CONTAINER MANUFACTURING CORP	3250 PATTERSON RD	RIVERBANK	California	95367	0.218	3.8875	4.1055	0	0	0	4.1055
QUEBECOR WORLD	8649 HACKS CROSS RD	OLIVE BRANCH	Mississippi	38654	0.375	3.722	4.097		0	0	4.097
CLARIANT CORP - MOUNT HOLLY WEST PLANT	625 E CATAWBA AVE	MOUNT HOLLY	North Carolina	28120	0	0.0545	0.0545	0	3.48	0.534	4.0685
VAN CAN CO	10837 ETIWANDA AVE	FONTANA	California	92337	3.5	0.55	4.05	0	0	0	4.05
WORLDCOLOR STILLWATER (WAS QUEBECOR WORLD - STILLWATER DIV)	100 W AIRPORT RD	STILLWATER	Oklahoma	74075	3.517	0.4105	3.9275	0	0	0	3.9275
PRO LINE PRINTING ARLINGTON	401 N GREAT SW PKWY	ARLINGTON	Texas	76011	3.8005	0.125	3.9255	0	0	0	3.9255
ALERIS ROLLED PRODUCTS INC	1372 KY HWY 1957	LEWISPORT	Kentucky	42351	0.125	3.6985	3.8235	0	0	0	3.8235

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NESTLE PURINA PETCARE	1000 HAMILTON RD	WEIRTON	West Virginia	26062	0.993	2.809	3.802	0	0	0	3.802
RR DONNELLEY LOS ANGELES MANUFACTURING	19681 PACIFIC GATEWAY DR	TORRANCE	California	90502	3.706	0.0865	3.7925	0	0	0	3.7925
BROWN PRINTING CO	668 GRAVEL PIKE	EAST GREENVILLE	Pennsylvania	18041	3.6115	0.125	3.7365	0	0	0.006	3.7425
INLAND LABEL & MARKETING	2009 W AVE S	LA CROSSE	Wisconsin	54601	3.7245	0	3.7245	0	0	0	3.7245
PHOENIX CONTAINER INC	1202 AIRPORT RD	NORTH BRUNSWICK	New Jersey	08902	1.4665	2.21	3.6765	0	0	0	3.6765
BETCO CORP	1001 BROWN AVE	TOLEDO	Ohio	43607	3.674	0	3.674	0	0	0	3.674
FUJIFILM NORTH AMERICA CORP	20 W 14TH AVE	NORTH KANSAS CIT	Missouri	64116	0	3.547	3.547	0	0	0	3.547
FORD MOTOR CO TWIN CITIES ASSEMBLY PLANT	966 S MISSISSIPPI RIVER BLVD	SAINT PAUL	Minnesota	55116	0.41	3	3.41	0	0	0.13	3.54
AVERY DENNISON INDUSTRIAL PRODUCTS DIV	17700 FOLTZ PKWY	STRONGSVILLE	Ohio	44149	0.4595	3.0755	3.535	0	0	0	3.535
BATESVILLE MANUFACTURING INC -DOLL PLANT	1000 E PEARL ST	BATESVILLE	Indiana	47006	0.175	3.329	3.504	0	0	0	3.504
KODAK COLORADO DIV	9952 EASTMAN PARK DR	WINDSOR	Colorado	80551	0	0	0	3.486	0	0	3.486
MERIX CORP	1521 POPLAR LN	FOREST GROVE	Oregon	97116	0.0895	3.3955	3.485	0	0	0	3.485
SCHWAN'S GLOBAL SUPPLY CHAIN - SALINA KS	3019 SCANLAN	SALINA	Kansas	67401	0	3.4845	3.4845	0	0	0	3.4845
BWAY CORP BWAY PACKAGING DIV	8200 BROADWELL RD	CINCINNATI	Ohio	45244	3.1135	0.3665	3.48	0	0	0	3.48
APOLLO COLORS INC	1550 MOUND RD	ROCKDALE	Illinois	60436	0	0	0	0	0	3.469	3.469
TTM PRINTED CIRCUIT GROUP - S TAFFORD DIV	4 OLD MONSON RD	STAFFORD	Connecticut	06075	0	3.403	3.403	0	0	0	3.403
BON L MANUFACTURING CO	508 W WILSON ST	KENTLAND	Indiana	47951	0.33	3.05	3.38	0	0	0.005	3.385
PONTIAC ASSEMBLY CENTER	2100 S OPDYKE RD	PONTIAC	Michigan	48341	0.335	3.05	3.385	0	0	0	3.385
WORLDCOLOR LEBANON DIV	760 FUJITEC DR	LEBANON	Ohio	45036	2.938	0.438	3.376	0	0	0	3.376
QUEBECOR WORLD INC WINCHESTER VIRGINIA	160 CENTURY LN STONEWALL INDU	WINCHESTER	Virginia	22603	3.202	0.1495	3.3515	0	0	0	3.3515
AK STEEL CORP - ZANESVI LLE WORKS	1724 LINDEN AVE	ZANESVILLE	Ohio	43701	0	2.45	2.45	0	0	0.9	3.35
SHERWIN-WILLIAMS CO	2150 W SAND LAKE RD	ORLANDO	Florida	32809	0	0.0015	0.0015	0	0	3.3465	3.348
KAWASAKI MOTORS MANUFACTURING CORP USA	6600 NW 27TH ST	LINCOLN	Nebraska	68524	0.3235	2.8725	3.196	0	0	0.125	3.321
SILGAN CONTAINERS MANUFACTURING CORP	8673 LYONS-MARENGO RD	LYONS	New York	14489	0.6	2.7	3.3	0	0	0	3.3
TYCO FIRE SUPPRESSION & BUILDING PRODUCTS	1 STANTON ST	MARINETTE	Wisconsin	54143	0.0065	3.189	3.1955	0	0	0	3.1955
CROWN FOOD PACKAGING	10200 N LOMBARD ST	PORTLAND	Oregon	97203	1.191	1.9725	3.1635	0	0	0	3.1635
ST CHARLES OPERATIONS (TAFT/STAR) UNION CARBIDE CORP	355 LA HWY 3142 (GATE 1)	TAFT	Louisiana	70057	0.62	0.925	1.545	1.565	0	0.0005	3.1105
CROWN EQUIPMENT CORP	2600 E STATE RD 240	GREENCASTLE	Indiana	46135	0	3.104	3.104	0	0	0	3.104
SILGAN CONTAINERS MANUFACTURING CORP	400 N 15TH ST	ROCHELLE	Illinois	61068	1.8115	1.26	3.0715	0	0	0	3.0715

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3M CO - MENOMONIE	1425 STOKKE PKWY	MENOMONIE	Wisconsin	54751	0	0	0	0	0	3.05	3.05
MERCK SHARP & DOHME CORP	2778 SE SIDE HWY	ELKTON	Virginia	22827	0.705	0.805	1.51	1.465	0	0	2.975
DISC GRAPHICS	10 GILPIN AVE	HAUPPAUGE	New York	11788	0.7425	2.2275	2.97	0	0	0	2.97
DOW CHEMICAL CO	1790 BUILDING	MIDLAND	Michigan	48667	2.65	0.045	2.695	0.0035	0	0.256	2.9545
PPG INDUSTRIES ARCHITECTURAL FINISHES	1020 OLYMPIC DR	BATAVIA	Illinois	60510	0	0.52	0.52	0	0	2.431	2.951
ACCESS BUSINESS GROUP LLC	7575 FULTON ST E	ADA	Michigan	49355	2.815	0.132	2.947	0	0	0	2.947
ITW DYMON	805 E OLD 56 HWY	OLATHE	Kansas	66061	0.8825	2.059	2.9415	0	0	0	2.9415
MAXIM INTEGRATED PRODUCTS INC	9651 WESTOVER HILLS BLVD	SAN ANTONIO	Texas	78251	0	2.9395	2.9395	0	0	0	2.9395
SAPA EXTRUDER INC	2905 OLD OAKWOOD RD	GAINESVILLE	Georgia	30504	0	2.926	2.926	0	0	0	2.926
U.S. AIR FORCE ROBINS AFB GA	775 MACON ST BUILDING 1555	ROBINS AFB	Georgia	31098	1.597	0.93	2.527	0	0	0.382	2.909
PRECOAT METALS	3399 DAVEY ALLISON BLVD	HUEYTOWN	Alabama	35023	2.209	0.6895	2.8985	0	0	0	2.8985
VERTIS COMMUNICATIONS	4051 FONDORF DR	COLUMBUS	Ohio	43228	2.579	0.301	2.88	0	0	0	2.88
MAUSER CORP	14 CONVERY BLVD	WOODBRIDGE	New Jersey	07095	0.023	2.854	2.877	0	0	0	2.877
MOTOR CASTINGS CO	1323 S 65TH	MILWAUKEE	Wisconsin	53214	0	1.466	1.466	0	0	1.3885	2.8545
CURTIS METAL FINISHING CO	6645 SIMS DR	STERLING HEIGHTS	Michigan	48313	2.039	0.813	2.852	0	0	0	2.852
TITAN COATINGS INC	2025 EXCHANGE PL	BESSEMER	Alabama	35023	2.85	0	2.85	0	0	0	2.85
BALL METAL FOOD CONTAINER CORP	1200 S CRUTCHER ST	SPRINGDALE	Arkansas	72764	0.015	2.8	2.815	0	0	0	2.815
MAXIM INTEGRATED PRODUCTS INC	3725 N FIRST ST	SAN JOSE	California	95134	2.785	0	2.785	0	0	0	2.785
3M CO - HUTCHINSON	905/915 ADAMS ST SE	HUTCHINSON	Minnesota	55350	0	2.767	2.767	0	0	0	2.767
MICHELIN NORTH AMERICA INC	5101 21ST ST	TUSCALOOSA	Alabama	35401	0.004	0.006	0.01	0	0	2.737	2.747
GOODYEAR TIRE & RUBBER CO. AKRON TECHNICAL CENTER	200 S. MARTHA AVE	AKRON	Ohio	44309	0	0	0	0	0	2.7435	2.7435
WORLDCOLOR ATGLEN	4581 LOWER VALLEY RD	ATGLEN	Pennsylvania	19310	2.5835	0.1205	2.704	0	0	0	2.704
RR DONNELLEY STRASBURG DIV	ONE SHENANDOAH VALLEY DR	STRASBURG	Virginia	22657	2.6	0.1	2.7	0	0	0.0025	2.7025
RHODIA INC	2ND ST & BLUEBALL AVE	MARCUS HOOK	Pennsylvania	19061	0.161	0.0005	0.1615	0	0	2.492	2.6535
CENTRIA	530 N SECOND ST	CAMBRIDGE	Ohio	43725	1.3625	1.289	2.6515	0	0	0	2.6515
BON L MANUFACTURING CO	HWY 53 BONNELL RD	CARTHAGE	Tennessee	37030	0.9755	1.2295	2.205	0	0.36	0.037	2.602
MISSION KLEENSWEEP PRODUCTS INC	2434 BIRKDALE ST	LOS ANGELES	California	90031	2.6	0	2.6		0	0	2.6
SOLIANT LLC	1872 HWY 9 BYPASS W	LANCASTER	South Carolina	29721	0.566	1.995	2.561	0	0	0	2.561
GREIF INDUSTRIAL PACKAGING & SERVICES	7604 RAILROAD AVE	WINFIELD	Kansas	67156	0.255	2.2955	2.5505	0	0	0	2.5505

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
KNS COMPANYS INC	475 RANDY RD	CAROL STREAM	Illinois	60188	0.5035	2.015	2.5185	0	0	0	2.5185
BRILLION IRON WORKS INC	200 PARK AVE	BRILLION	Wisconsin	54110	2.0315	0.3605	2.392	0	0	0.125	2.517
TEXAS FINISHING CO	1801 SURVEYOR BLVD	CARROLLTON	Texas	75006	0	2.4885	2.4885	0	0	0	2.4885
WORLDCOLOR	451 INTERNATIONAL BLVD	CLARKSVILLE	Tennessee	37040	2.35	0.12	2.47	0	0	0	2.47
BRUNSWICK CORP MERCURY MARINE DIV	W6250 PIONEER RD	FOND DU LAC	Wisconsin	54935	0.2425	2.1815	2.424	0	0	0	2.424
DENSO MANUFACTURING TENNESSEE INC	1720, 1725, 1755 ROBERT C JACKSO	MARYVILLE	Tennesee	37801	0	2.3935	2.3935		0	0	2.3935
MASTER GUARD CORP	1200 E 8TH ST	VEEDERSBURG	Indiana	47987	0.024	2.349	2.373	0.0025	0.0025	0	2.3775
SANFORD LP	1 PENCIL ST	SHELBYVILLE	Tennessee	37160	0.125	2.226	2.351	0.0025	0	0	2.3535
ABC COMPOUNDING CO INC	6970 JONESBORO RD	MORROW	Georgia	30260	0.0025	0.375	0.3775	0.0025	0	1.964	2.344
ROPPE CORP	1602 N UNION ST	FOSTORIA	Ohio	44830	0.125	2.2045	2.3295	0	0	0	2.3295
AMERICAN COLOR GRAPHICS INC	215 N ZARFOSS DR	YORK	Pennsylvania	17404	2.073	0.2395	2.3125	0	0	0	2.3125
SUN CHEMICAL CORP	2445 PRODUCTION DR	SAINT CHARLES	Illinois	60174	0.299	1.9925	2.2915	0	0	0	2.2915
3M CO - BROWNWOOD	4501 HWY 377 S	BROWNWOOD	Texas	76801	0.065	2.2	2.265	0	0	0.007	2.272
KIK (HOUSTON) INC	2921 CORDER ST	HOUSTON	Texas	77054	2.265	0	2.265		0	0	2.265
SAFETY-KLEEN SYSTEMS INC	130 A FRONTAGE RD	LEXINGTON	South Carolina	29073	0	2.216	2.216	0	0	0	2.216
KAWNEER CO INC	2785 MCCRACKEN RD	HERNANDO	Mississippi	38632	0.2475	1.9595	2.207	0	0	0	2.207
AMERICAN COLOR GRAPHICS - LUFKIN	3001 ATKINSON DR	LUFKIN	Texas	75901	2.009	0.172	2.181	0	0	0	2.181
CENTURY INDUSTRIAL COATINGS I NC	HWY 69 S	JACKSONVILLE	Texas	75766	0.089	1.69	1.779	0	0	0.357	2.136
LEHIGH PRESS CADILLAC (DBA LEHIGH DIRECT DIVISION)	1900 S 25TH AVE	BROADVIEW	Illinois	60153	1.9755	0.1495	2.125	0	0	0	2.125
MACDERMID PRINTING SOLUTIONS	260 S PACIFIC ST	SAN MARCOS	California	92078	0	2.122	2.122		0	0.0005	2.1225
UNION CARBIDE CORP SOUTH CHARLESTON FACILITY	437 MACCORKLE AVE SW	SOUTH CHARLESTO	West Virginia	25303	2.058	0.0595	2.1175	0	0	0	2.1175
THREE RIVERS ALUMINUM CO	71 PROGRESS AVE	CRANBERRY TOWN	Pennsylvania	16066	0.2195	1.8905	2.11	0	0	0	2.11
NCP COATINGS INC	225 FORT ST	NILES	Michigan	49120	2.1075	0	2.1075	0	0	0	2.1075
PRECOAT METALS	4301 S SPRING AVE	SAINT LOUIS	Missouri	63116	0.57	1.523	2.093	0	0	0	2.093
VERTIS COMMUNICATIONS	10911 GRANITE ST	CHARLOTTE	North Carolina	28273	1.841	0.215	2.056	0	0	0	2.056
DUPONT YERKES PLANT	3115 RIVER RD	BUFFALO	New York	14207	0.039	2.014	2.053	0	0	0	2.053
TORO CO	200 SIME AVE	TOMAH	Wisconsin	54660	0	2.0475	2.0475	0	0	0	2.0475
CADON PLATING CO	3715 11TH ST	WYANDOTTE	Michigan	48192	1.121	0.915	2.036	0	0	0	2.036
WORLD COLOR PRESS	50 JOHN HANCOCK RD	TAUNTON	Massachusetts	02780	1.605	0.032	1.637	0	0	0.3745	2.0115

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
AVX CORP CONWAY	2875 HWY 501 E	CONWAY	South Carolina	29526	0.888	1.085	1.973	0	0	0	1.973
SILGAN CONTAINERS MANUFACTURING CORP	2200 WILBUR AVE	ANTIOCH	California	94509	0	1.9645	1.9645	0	0	0	1.9645
STEELSCAPE INC	7001 ALLISON-BONNET MEMORIAL D	FAIRFIELD	Alabama	35064	0.0045	1.9495	1.954	0	0	0	1.954
BASF CORP - CLEAR LAKE PLANT	11200 BAY AREA BLVD	PASADENA	Texas	77507	1.95	0.0005	1.9505	0	0	0	1.9505
BOEING COMMERCIAL AIRPLANE GROUP NORTH BOEING FIELD (PART)	7500 E MARGINAL WAY S	SEATTLE	Washington	98108	0.1155	1.8345	1.95	0	0	0	1.95
RR DONNELLEY PINEVILLE	10519 INDUSTRIAL DR	PINEVILLE	North Carolina	28134	1.85	0.098	1.948	0	0	0	1.948
THIRD COAST PACKAGING INC PEARLAND	1871 MYKAWA	PEARLAND	Texas	77581	0	0	0	0	0	1.942	1.942
NOV TUBOSCOPE NAVASOTA	9574 FM 1227	NAVASOTA	Texas	77868	0.8325	0.31	1.1425	0	0	0.7975	1.94
TYSON FRESH MEATS INC	HWY 66 E & FARM RD 1912	AMARILLO	Texas	79187	0.07	0	0.07	0	1.86	0.0025	1.9325
TREND OFFSET PRINTING SERVICES INC	3791 CATALINA ST	LOS ALAMITOS	California	90720	1.8	0.125	1.925	0	0	0	1.925
WARREN UNILUBE INC	1200 S 8TH ST	WEST MEMPHIS	Arkansas	72301	1.9085	0.007	1.9155	0	0	0	1.9155
HYUNDAI MOTOR MANUFACTURING ALABAMA LLC	700 HYUNDAI BLVD	MONTGOMERY	Alabama	36105	1.2395	0.66	1.8995	0	0	0	1.8995
PRIOR COATED METALS	2233 26TH ST SW	ALLENTOWN	Pennsylvania	18103	1.305	0.581	1.886	0	0	0	1.886
KEYMARK CORP	1188 CAYADUTTA ST RT 334	FONDA	New York	12068	0.007	1.8765	1.8835	0	0	0	1.8835
BUCKEYE INTERNATIONAL INC	2700 WAGNER PL	MARYLAND HEIGHT	Missouri	63043	0.125	1.7515	1.8765	0	0	0	1.8765
AMERICAN COLOR GRAPHICS	810 E S ST	MARENGO	Iowa	52301	1.669	0.1985	1.8675	0	0	0	1.8675
HANNA STEEL CORP	3812 COMMERCE AVE	FAIRFIELD	Alabama	35064	0.6905	1.027	1.7175	0	0	0.1435	1.861
DUPONT CHAMBERS WORKS	RT 130	DEEPWATER	New Jersey	08023	0.139	0.001	0.14	1.628	0	0.09	1.858
ASTRO COATINGS INC	27 MAIN ST	STRUTHERS	Ohio	44471	0.65	1.15	1.8	0	0	0.0195	1.8195
IMPRESS USA INC	3030 BIRCH DR HALF MOON INDUST	WEIRTON	West Virginia	26062	0.006	1.8125	1.8185	0	0	0	1.8185
EASTMAN KODAK CO EASTMAN BUSINESS PARK	1669 LAKE AVE	ROCHESTER	New York	14652	0.001	0.0165	0.0175	1.2285	0	0.5685	1.8145
CUMMINS POWER GENERATION	1400 73RD AVE NE	FRIDLEY	Minnesota	55432	0.09	1.7	1.79	0	0	0	1.79
NOV TUBOSCOPE WEST LITTLE YORK COATING	12100 W LITTLE YORK RD	HOUSTON	Texas	77041	0.0535	1.41	1.4635	0	0	0.323	1.7865
TTM TECHNOLOGIES INC	710 N 600 W	LOGAN	Utah	84321	0.12	1.079	1.199	0	0	0.5835	1.7825
FORD MOTOR CO - OHIO ASSEMBLY PLANT	650 MILLER RD	AVON LAKE	Ohio	44012	1.65	0.12	1.77	0	0	0	1.77
LION COPOLYMER LLC	5955 SCENIC HWY	BATON ROUGE	Louisiana	70805	0	0	0	0.0015	0	1.75	1.7515
REICHHOLD INC	425 S PACE BLVD	PENSACOLA	Florida	32502	0.1065	1.628	1.7345	0	0	0	1.7345
J&M MANUFACTURING CO INC	284 RAILROAD ST	FORT RECOVERY	Ohio	45846	0	1.7285	1.7285	0	0	0	1.7285
RR DONNELLEY	100 QUALITY CT	CHARLESTOWN	Indiana	47111	1.6325	0.076	1.7085	0	0	0	1.7085

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

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BOEING COMMERCIAL AIRPLANE GROUP - RENTON	8TH & LOGAN AVE N	RENTON	Washington	98055	0.697	1.0065	1.7035	0	0	0	1.7035
GMC TRUCK GROUP ARLINGTON ASSEMBLY PLANT	2525 E ABRAMS ST	ARLINGTON	Texas	76010	0.5	1.2	1.7	0	0	0	1.7
PRO LINE PRINTING / RR DONNELLEY	365 PARR CIR	RENO	Nevada	89512	1.5035	0.1755	1.679	0	0	0	1.679
TRELLEBORG COATED SYSTEMS US INC / GRACE ADVANCED MATERIALS	715 RAILROAD AVE & HWY 74	RUTHERFORDTON	North Carolina	28139	0	0.125	0.125	0	0	1.5385	1.6635
EASTMAN CHEMICAL CO TENNESSEE OPERATIONS	100 EASTMAN RD	KINGSPORT	Tennessee	37662	0.5725	0.825	1.3975	0.262	0	0	1.6595
RR DONNELLEY VON HOFFMANN CORP	321 WILSON DR	JEFFERSON CITY	Missouri	65109	1.6195	0.038	1.6575	0	0	0	1.6575
COMPLEMENTARY COATINGS CORP	308 OLD COUNTY RD	EDGEWATER	Florida	32132	1.639	0	1.639	0	0	0	1.639
CHRYSLER STERLING HEIGHTS ASSEMBLY PLANT	38111 VAN DYKE	STERLING HEIGHTS	Michigan	48312	0.9	0.7	1.6	0	0	0	1.6
COLOR CORP OF AMERICA	1630 W HILL ST	LOUISVILLE	Kentucky	40210	0	1.59	1.59	0	0	0	1.59
U S CHEMICAL	316 HART ST	WATERTOWN	Wisconsin	53094	0	0	0	0	0	1.5605	1.5605
U.S. AIR FORCE OGDEN AIR LOGISTICS CENTER	7274 WARDLEIGH DR	HILL AFB	Utah	84056	0.8625	0.69	1.5525	0	0	0	1.5525
AKZONOBEL AEROSPACE COATINGS	1 E WATER ST	WAUKEGAN	Illinois	60085	0.775	0.7765	1.5515	0	0	0	1.5515
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	901 N GREENWOOD AVE	KANKAKEE	Illinois	60901	0.9585	0.545	1.5035	0	0	0	1.5035
BENCHMARK ENERGY PRODUCTS LLC	4113 W INDUSTRIAL AVE	MIDLAND	Texas	79703	0.125	1.3725	1.4975	0	0	0	1.4975
IVC INDUSTRIAL COATINGS INC	2245-50 VALLEY AVE	INDIANAPOLIS	Indiana	46218	0.2955	1.183	1.4785	0	0	0	1.4785
VANEX INC	1700 S SHAWNEE ST	MOUNT VERNON	Illinois	62864	0	1.467	1.467	0	0	0	1.467
SAPA INC COATINGS DIVSION	5325 NE SKYPORT WAY	PORTLAND	Oregon	97218	1.0905	0.376	1.4665	0	0	0	1.4665
VEYANCE TECHNOLOGIES INC	2701 W OMAHA AVE	NORFOLK	Nebraska	68701	0.0615	0.183	0.2445	0	0	1.208	1.4525
ARANDELL CORP	N82 W13118 LEON RD	MENOMONEE FALLS	Wisconsin	53051	1.418	0.033	1.451	0	0	0	1.451
WHEELING CORRUGATING CO - BEECH BOTTOM PLANT	2481 RIVER RD	WELLSBURG	West Virginia	26070	0	1.45	1.45	0	0	0	1.45
ZEP INC	1310 SEABOARD INDUSTRIAL BLVD	ATLANTA	Georgia	30318	0.1435	0.287	0.4305	0.1235	0.8565	0.027	1.4375
CARDINAL ALUMINUM CO PLAN T 3	4005 OAKLAWN DR	LOUISVILLE	Kentucky	40219	0.05	1.3855	1.4355	0	0	0	1.4355
GREIF INDUSTRIAL PACKAGING & SERVICES LLC	8250 ALMERIA AVE	FONTANA	California	92335	0.1915	1.2415	1.433	0	0	0	1.433
DECOSTAR INDUSTRIES INC	1 DECOMA DR	CARROLLTON	Georgia	30117	0.125	1.307	1.432	0	0	0	1.432
ALERIS ROLLED PRODUCTS INC	1 REYNOLDS RD	ASHVILLE	Ohio	43103	0.668	0.748	1.416	0	0	0	1.416
MITSUBISHI MOTORS NORTH AMERICA INC	100 N MITSUBISHI MOTORWAY	NORMAL	Illinois	61761	1.41	0.0035	1.4135	0	0	0	1.4135
GATES CORP - CHARLESTON	1300 S PLANT RD	CHARLESTON	Missouri	63834	0.0795	0.119	0.1985	0	0	1.2095	1.408
BRENNTAG SOUTHWEST INC HOUS TON	14826 HOOPER RD	HOUSTON	Texas	77047	0.02	0.0175	0.0375	0	0	1.3675	1.405

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CAMACO COLUMBUS MANUFACTURING	1851 E 32ND AVE	COLUMBUS	Nebraska	68601	0	1.4005	1.4005	0	0	0	1.4005
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	372 CLEVELAND ST	ROCHESTER	Pennsylvania	15074	0.53	0.8595	1.3895	0	0	0	1.3895
TAIYO AMERICA INC	2675 ANTLER DR	CARSON CITY	Nevada	89701	0.005	0.7885	0.7935	0	0	0.584	1.3775
W W HENRY	150 MOONEY DR	BOURBONNAIS	Illinois	60914	1.3725	0	1.3725	0	0	0	1.3725
UNIVAR USA INC MORRISVILLE BRANCH	200 DEAN SIEVERS PL	MORRISVILLE	Pennsylvania	19067	0.002	0.0025	0.0045	0	0	1.363	1.3675
JOHN DEERE SEEDING & CYLINDER	501 RIVER DR	MOLINE	Illinois	61265	0	1.353	1.353	0	0	0	1.353
CROWN AEROSOL PACKAGING	4TH ST & PARK AVE	FARIBAULT	Minnesota	55021	0.877	0.4725	1.3495	0	0	0	1.3495
BRENNTAG SOUTHWEST INC LANC ASTER	704 E WINTERGREEN RD	LANCASTER	Texas	75134	0.0175	0.0175	0.035	0	0	1.3	1.335
GM MLCG FAIRFAX ASSEMBLY	3201 FAIRFAX TRAFFICWAY	KANSAS CITY	Kansas	66115	0.0175	1.3	1.3175	0	0	0	1.3175
ARR-MAZ CUSTOM CHEMICALS	4800 STATE RD 60 E	MULBERRY	Florida	33860	0.0625	1.2505	1.313		0	0	1.313
SILGAN WHITE CAP CORP	350 JAYCEE DR VALMONT INDUSTR	HAZLETON	Pennsylvania	18201	0.7	0.6	1.3	0	0	0	1.3
AKZO NOBEL COATINGS INC	1313 WINDSOR AVE	COLUMBUS	Ohio	43211	0.7545	0.5455	1.3	0	0	0	1.3
ARMSTRONG WORLD INDUSTRIES LANCASTER PLANT	1067 DILLERVILLE RD	LANCASTER	Pennsylvania	17603	0.8895	0.4005	1.29	0	0	0	1.29
GENERAL MOTORS MLCG DETROIT-HAMTRAMCK ASSEM BLY CENTER	2500 E GENERAL MOTORS BLVD	DETROIT	Michigan	48211	1.15	0.14	1.29	0	0	0	1.29
CHEMCOAT INC	2790 CANFIELDS LN	MONTOURSVILLE	Pennsylvania	17754	0.125	0	0.125	0	0	1.158	1.283
PPG ARCHITECTURAL FINISHES EAST POINT	1377 OAKLEIGH DR	EAST POINT	Georgia	30344	0.001	0.791	0.792	0	0	0.478	1.27
PARKER HANNIFIN TECH SEAL DIV	2600 WILCO BLVD	WILSON	North Carolina	27893	0	0	0	0	0	1.2605	1.2605
DAIMLERCHRYSLER CORP TOLEDO ASSEMBLY PLANT	4000 STICKNEY AVE	TOLEDO	Ohio	43612	0.355	0.9	1.255	0	0	0.0025	1.2575
SHEBOYGAN PAINT CO	608 CANAL ST	CEDARTOWN	Georgia	30125	0.687	0.554	1.241	0	0	0	1.241
RR DONNELLEY & SONS CO	60 SECURITY DR	AVON	Connecticut	06001	1.2045	0.028	1.2325	0	0	0	1.2325
CONSOLIDATED SYSTEMS INC	650 ROSEWOOD DR	COLUMBIA	South Carolina	29201	0	1.23	1.23	0	0	0	1.23
CHRYSLER BELVIDERE ASSEMBLY PLANT	3000 W CHRYSLER DR	BELVIDERE	Illinois	61008	0.12	1.1	1.22	0	0	0.0055	1.2255
DURA COAT PRODUCTS INC	26655 PEOPLES RD	MADISON	Alabama	35756	1.2145	0.0025	1.217	0	0	0	1.217
CLEVELAND STEEL CONTAINER - NI LES	115 ERIE ST	NILES	Ohio	44446	0.0025	1.202	1.2045	0	0	0	1.2045
CCL CONTAINER AEROSOL DIV	ONE LLODIO DR	HERMITAGE	Pennsylvania	16148	0.0935	1.0955	1.189	0	0	0	1.189
CATERPILLAR INC	3701 STATE RD 26 E	LAFAYETTE	Indiana	47905	0.0475	1.1275	1.175	0	0	0	1.175
GFX INTERNATIONAL	333 BARRON BLVD	GRAYSLAKE	Illinois	60030	0	0.79	0.79	0	0	0.378	1.168
BEHR PROCESS CORP	3400 W GARRY AVE	SANTA ANA	California	92704	0.0035	0.0055	0.009	0	1.139	0	1.148

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WINSLOW-BROWNING INC	215 BROWNSVILLE AVE	LIBERTY	Indiana	47353	1.148	0	1.148	0	0	0	1.148
CHEMTURA CORP - TAFT PLANT	471 HWY 3142	KILLONA	Louisiana	70066	0.105	1.0405	1.1455	0	0	0	1.1455
J L CLARK INC	923 23RD AVE	ROCKFORD	Illinois	61104	0.304	0.8415	1.1455	0	0	0	1.1455
PRECOAT METALS	6754 SANTA BARBARA CT	ELKRIDGE	Maryland	21075	0	1.1415	1.1415	0	0	0	1.1415
HARCROS CHEMICALS INC	5200 SPEAKER RD	KANSAS CITY	Kansas	66106	0.0175	0.07	0.0875	0.0005	0.002	1.05	1.14
NICHOLS ALUMINUM ALABAMA INC	2001 HWY 20 W	DECATUR	Alabama	35601	0.913	0.2245	1.1375	0	0	0	1.1375
SONY ELECTRONICS INC	4275 W MAIN ST	DOTHAN	Alabama	36305	0	0	0	0	0	1.137	1.137
GENTEK BUILDING PRODUCTS	11 CRAGWOOD RD	AVENEL	New Jersey	07001	0.2	0.9335	1.1335	0	0	0	1.1335
OHIO ART CO	ONE TOY ST	BRYAN	Ohio	43506	0.8965	0.2295	1.126	0	0	0	1.126
RED SPOT WESTLAND INC	550 S EDWIN ST	WESTLAND	Michigan	48186	0.628	0.483	1.111	0	0	0	1.111
TRELLEBORG OFFSHORE US RANKIN ROAD FACILITY	1902 RANKIN RD	HOUSTON	Texas	77073	1.1105	0	1.1105	0	0	0	1.1105
INCHEM CORP	800 CEL-RIVER RD	ROCK HILL	South Carolina	29730	0.125	0.125	0.25	0	0	0.8545	1.1045
HUNTSMAN PETROCHEMICAL LLC	3892 US HWY 90	DAYTON	Texas	77535	0.001	0	0.001	0	0	1.1025	1.1035
TEXAS INSTRUMENTS INC	12201 SW FWY MS600	STAFFORD	Texas	77477	0.0025	0.125	0.1275	0	0	0.975	1.1025
TESORO REFINING & MARKETING CO - MANDAN REFINERY	900 OLD RED TRAIL NE	MANDAN	North Dakota	58554	1.1	0.0005	1.1005	0	0	0	1.1005
CANFIELD METAL COATING CORP	460 W MAIN ST	CANFIELD	Ohio	44406	0	1.1	1.1	0	0	0	1.1
BEAULIEU OF AMERICA PLANT 560-MODEL	950 RIVERBEND RD	DALTON	Georgia	30721	0	1.0865	1.0865	0	0	0	1.0865
COOK COMPOSITES & POLYMERS CO	1415 STEELE AVE SW	GRAND RAPIDS	Michigan	49507	0.7325	0.3525	1.085	0	0	0	1.085
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	701 SHILOH RD	GARLAND	Texas	75042	0.644	0.4405	1.0845	0	0	0	1.0845
POLYMERIC IMAGING INC	117 E 14TH AVE	NORTH KANSAS CIT	Missouri	64116	0	1.0705	1.0705	0	0	0	1.0705
CELLU TISSUE/CITYFOREST LLC	1215 WORDEN AVE E	LADYSMITH	Wisconsin	54848	0	0	0	1.07	0	0	1.07
COMBE PRODUCTS INC	EL DUQUE INDUSTRIAL PARK RD 97	NAGUABO	Puerto Rico	00718	0	0	0	0	0	1.053	1.053
CANBERRA CORP	3610 HOLLAND-SYLVANIA RD	TOLEDO	Ohio	43615	0.675	0.375	1.05	0	0	0	1.05
NEXTEER AUTOMOTIVE CORP	3900 HOLLAND RD	SAGINAW	Michigan	48601	0.1045	0.9385	1.043	0	0	0	1.043
SPRAYLAT CORP CA	3465 S LA CIENAGA BLVD	LOS ANGELES	California	90016	0.52	0.52	1.04	0	0	0	1.04
AKZONOBEL COATINGS INC	120 FRANKLIN RD	PONTIAC	Michigan	48341	0.105	0.026	0.131	0	0	0.901	1.032
ROLL COATER INC	2604 RIVER RD	HAWESVILLE	Kentucky	42348	0	1.032	1.032	0	0	0	1.032
RED SPOT PAINT & VARNISH CO INC	1016 E COLUMBIA ST	EVANSVILLE	Indiana	47711	0.6065	0.416	1.0225	0	0	0	1.0225

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
STAR BUILDING SYSTEMS	151 JUDGE DON LEWIS RD	ELIZABETHTON	Tennessee	37643	0	1.019	1.019	0	0	0	1.019
BOEING COMMERCIAL AIRPLANE GROUP PLANT 2 (PART)	7755 E MARGINAL WAY S	SEATTLE	Washington	98108	0.9965	0.0125	1.009	0	0	0	1.009
HYDRITE CHEMICAL CO	114 N MAIN ST	COTTAGE GROVE	Wisconsin	53527	0	1	1	0	0	0	1
ARMSTRONG WORLD INDUSTRIES INC	4115 N PERKINS RD	STILLWATER	Oklahoma	74075	0.3885	0.6095	0.998	0	0	0	0.998
VERSO PAPER HOLDINGS LLC	ANDROSCOGGIN MILL RILEY RD	JAY	Maine	04239	0.0125	0	0.0125	0.967	0	0.001	0.9805
TTM TECHNOLOGIES-SANTA CLARA	407 MATHEW ST	SANTA CLARA	California	95050	0	0.9555	0.9555	0	0	0	0.9555
COOK COMPOSITES & POLYMERS CO	2434 HOLMES RD	HOUSTON	Texas	77051	0.9225	0.004	0.9265	0	0	0	0.9265
IVC SOUTH	875 PROGRESS CENTER AVE	LAWRENCEVILLE	Georgia	30043	0.185	0.739	0.924	0	0	0	0.924
HADCO (SANMINA) CORP - OWEGO DIV	1200 TAYLOR RD	OWEGO	New York	13827	0.009	0.8935	0.9025	0	0	0.014	0.9165
WATSON STANDARD CO (NEVILLE ISLAND PLANT)	2895 GRAND AVE	NEVILLE ISLAND	Pennsylvania	15225	0.8975	0.0125	0.91	0	0	0	0.91
MAXIM INTEGRATED PRODUCTS	4350 S BELTWOOD PKWY	DALLAS	Texas	75244	0	0.9005	0.9005	0	0	0	0.9005
SYNDICATE SYSTEMS INC	402 N MAIN ST	MIDDLEBURY	Indiana	46540	0	0.8555	0.8555	0	0	0	0.8555
B-WAY PACKAGING INC	6 LITHO RD	TRENTON	New Jersey	08648	0.085	0.763	0.848	0	0	0	0.848
BEHR PROCESS CORP ALLENTOWN	7529 MORRIS CT BLDG 500 W PARK	ALLENTOWN	Pennsylvania	18106	0.021	0.0355	0.0565	0	0.769	0	0.8255
EVONIK DEGUSSA CORP TIPPECANOE LABORATORIES	1650 LILLY RD	LAFAYETTE	Indiana	47909	0.7	0.125	0.825	0	0	0	0.825
SPRAYLAT CORP IL	1701 E 122-ND ST	CHICAGO	Illinois	60633	0.041	0.777	0.818	0	0	0	0.818
NJT ENTERPRISES LLC	42400 MERRILL RD	STERLING HEIGHTS	Michigan	48314	0	0.8135	0.8135	0	0	0	0.8135
STEEL DYNAMICS INC	5134 LOOP RD	JEFFERSONVILLE	Indiana	47130	0	0.8125	0.8125	0	0	0	0.8125
ICL-IP AMERICA INC	11636 HUNTINGTON	GALLIPOLIS FERRY	West Virginia	25515	0.0635	0.1585	0.222	0.103	0.48	8.32667E-17	0.805
FLINT HILLS RESOURCES LP	13775 CLARK RD	ROSEMOUNT	Minnesota	55068	0.8	0	0.8	0.0025	0	0	0.8025
COMPLEMENTARY COATINGS CORP	4701 O'DONNELL ST	BALTIMORE	Maryland	21224	0.8	0	0.8	0	0	0	0.8
BERRYMAN PRODUCTS INC	3800 E RANDOL MILL RD	ARLINGTON	Texas	76011	0.8	0	0.8	0	0	0	0.8
IC OF OKLAHOMA LLC	2322 N MINGO RD	TULSA	Oklahoma	74116	0	0.8	0.8	0	0	0	0.8
GENERAL MOTORS LLC BOWLING GREEN ASSEMBLY PLANT	600 CORVETTE DR	BOWLING GREEN	Kentucky	42101	0.135	0.65	0.785	0	0	0.007	0.792
METALS USA BUILDING PRODUCTS	227 S TOWN E BLVD	MESQUITE	Texas	75149	0.391	0.391	0.782	0	0	0	0.782
SUN CHEMICAL CORP	1380 FORD RD	MAUMEE	Ohio	43537	0.114	0.6455	0.7595	0	0	0	0.7595
VISTA PAINT CORP	2020 E ORANGETHORPE AVE	FULLERTON	California	92831	0.673	0	0.673	0	0	0.084	0.757
UNITED PAINT & CHEMICAL	24671 TELEGRAPH RD	SOUTHFIELD	Michigan	48034	0.7525	0	0.7525	0	0	0	0.7525

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
DELEET MERCHANDISING	26 BLANCHARD ST	NEWARK	New Jersey	07105	0.375	0.375	0.75	0	0	0	0.75
TEXAS TILE MANUFACTURING LLC	1705 N OLIVER	HOUSTON	Texas	77007	0.001	0.748	0.749	0	0	0	0.749
HB FULLER	12110 HARLAND DR NE	COVINGTON	Georgia	30014	0.386	0.275	0.661	0	0.0765	0	0.7375
LONGABERGER CO	5565 RAIDERS RD	FRAZEYSBURG	Ohio	43822	0.2325	0.214	0.4465	0	0	0.288	0.7345
KAWNEER CO INC	7200 DOE AVE	VISALIA	California	93291	0.5005	0.225	0.7255	0	0	0	0.7255
HUNT REFINING CO A CORP	1855 FAIRLAWN RD	TUSCALOOSA	Alabama	35401	0.7205	0	0.7205	0	0	0	0.7205
RYCOLINE PRODUCTS LLC	5540 NW HWY	CHICAGO	Illinois	60630	0.108	0.6115	0.7195	0	0	0	0.7195
VEYANCE TECHNOLOGIES INC	400 N GOODYEAR RD	MOUNT PLEASANT	Iowa	52641	0.0005	0	0.0005	0	0	0.7075	0.708
MARCUS PAINT CO	235 E MARKET ST	LOUISVILLE	Kentucky	40202	0.7	0.0025	0.7025	0	0	0	0.7025
WESTERN EXTRUSIONS CORP	1735 SANDY LAKE RD	CARROLLTON	Texas	75006	0.125	0.5735	0.6985	0.0025	0	0	0.701
ELEMENTIS SPECIALTIES	400 CLAREMONT AVE	JERSEY CITY	New Jersey	07304	0.2	0.5	0.7	0	0	0	0.7
SPARTAN CHEMICAL CO INC	1110 SPARTAN DR	MAUMEE	Ohio	43537	0.0675	0	0.0675	0	0	0.6325	0.7
KAWNEER CO INC	500 E 12TH ST	BLOOMSBURG	Pennsylvania	17815	0.117	0.579	0.696	0	0	0	0.696
CLEVELAND STEEL CONTAINER - PE OTONE FACILITY	117 E LINCOLN ST	PEOTONE	Illinois	60468	0.008	0.6865	0.6945	0	0	0	0.6945
WEST PENN OIL CO, INC130130	2305 MARKET ST EXT	WARREN	Pennsylvania	16365	0.6945	0	0.6945	0	0	0	0.6945
TERNIUM USA INC	2500 RON BEAN BLVD	SHREVEPORT	Louisiana	71115	0.0165	0.674	0.6905	0	0	0	0.6905
SONOCO PRODUCTS CO	1854 CENTRAL FLORIDA PKWY	ORLANDO	Florida	32837	0.385	0.292	0.677	0	0	0	0.677
FERRO GLASS & COLOR CORP	W WYLIE AVE	WASHINGTON	Pennsylvania	15301	0.1255	0.548	0.6735	0	0	0	0.6735
BJ CHEMICAL SERVICES	707 N LEECH	HOBBS	New Mexico	88240	0.0065	0.0015	0.008	0	0	0.663	0.671
FINISHES UNLIMITED INC	482 WHEELER RD	SUGAR GROVE	Illinois	60554	0.3325	0.3325	0.665	0	0	0	0.665
VANGUARD PAINTS & FINISHES INC	1409 GREENE ST	MARIETTA	Ohio	45750	0.648	0	0.648		0	0	0.648
SYNGENTA CROP PROTECTION INC SAINT GABRIEL FACILITY	3905 HWY 75	SAINT GABRIEL	Louisiana	70776	0.249	0.201	0.45	0.0005	0	0.1965	0.647
SILGAN CONTAINERS MANUFACTURING CORP	12130 LYNN AVE S	SAVAGE	Minnesota	55378	0	0.642	0.642	0	0	0	0.642
CRYSTAL FINISHING SYSTEMS INC	2608 ROSS AVE	SCHOFIELD	Wisconsin	54476	0	0.6405	0.6405	0	0	0	0.6405
HERCULES INC KENEDY TEXAS	ONE MILL ST	KENEDY	Texas	78119	0.602	0.033	0.635	0	0	0	0.635
BASF CORP	1175 MARTIN ST	GREENVILLE	Ohio	45331	0.12	0.13	0.25	0	0	0.385	0.635
CENTRIA	500 PERTH DR NEW ECONOMY BUS	AMBRIDGE	Pennsylvania	15003	0	0.635	0.635	0	0	0	0.635
TRINKOTE INDUSTRIAL FINISHES INC	1800 PARK PL AVE	FORT WORTH	Texas	76110	0	0.628	0.628	0	0	0	0.628
ALERIS ROLLED PRODUCTS INC	3321 DURHAM RD	ROXBORO	North Carolina	27573	0.0025	0.624	0.6265	0	0	0	0.6265

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
CHROMASOURCE INC	2433 S CR 600 E	COLUMBIA CITY	Indiana	46725	0	0.621	0.621	0	0	0	0.621
MULTICIRCUITS	2301 UNIVERSAL ST	OSHKOSH	Wisconsin	54903	0.619	0	0.619	0	0	0	0.619
TCI COATINGS INC	4501 BRADLEY ST	LUBBOCK	Texas	79415	0.616	0	0.616	0	0	0	0.616
BRENNTAG SOUTHWEST INC ST GABRIEL	7200 HWY 74	SAINT GABRIEL	Louisiana	70776	0.0075	0.008	0.0155	0	0	0.6	0.6155
GREIF INDUSTRIAL PACKAGING & SERVICES LLC	10700 STRANG RD	LA PORTE	Texas	77571	0.595	0.0025	0.5975	0	0	0	0.5975
ROCK TENN CO	2301 S 21ST ST	CLINTON	Iowa	52732	0	0.585	0.585	0	0	0.0025	0.5875
ASHLAND DISTRIBUTION	8500 S WILLOW SPRINGS RD	WILLOW SPRINGS	Illinois	60480	0.538	0.048	0.586	0	0	0	0.586
CLEVELAND STEEL CONTAINER CORP - STREETSBORO PLANT	10048 AURORA-HUDSON RD	STREETSBORO	Ohio	44241	0.006	0.5735	0.5795	0	0	0	0.5795
BECKER SPECIALTY CORP	15310 ARROW BLVD	FONTANA	California	92335	0.0285	0.55	0.5785		0	0	0.5785
COMPLEX CHEMICALS CO INC	MADISON PARISH INDUSTRIAL PARK	TALLULAH	Louisiana	71282	0.3	0.2	0.5	0.072	0	0	0.572
NICHOLS ALUMINUM DAVENPORT	1725 ROCKINGHAM RD	DAVENPORT	Iowa	52802	0.159	0.408	0.567	0	0	0	0.567
SUPERIOR OIL CO INC RECLAIMED ENERGY DIV	1500 WESTERN AVE	CONNERSVILLE	Indiana	47331	0.041	0.025	0.066	0	0	0.5	0.566
SOUTHERN CLAY PRODUCTS INC	1335 S 13TH ST	LOUISVILLE	Kentucky	40210	0.0025	0.125	0.1275		0.0025	0.425	0.555
ALUMAX MILL PRODUCTS INC	300 ALUMAX DR	TEXARKANA	Texas	75501	0	0.5505	0.5505	0	0	0	0.5505
CHRYSLER GROUP LLC STERLING STAMPING PLANT (PART)	35777 VAN DYKE	STERLING HEIGHTS	Michigan	48312	0.55	0	0.55	0	0	0	0.55
HB FULLER CO	4440 MALSBARY RD	BLUE ASH	Ohio	45242	0.545	0.0015	0.5465	0	0	0	0.5465
BRADLEY COATINGS GROUP	608 W CRAWFORD AVE	CONNELLSVILLE	Pennsylvania	15425	0.389	0	0.389	0	0	0.157	0.546
HOVENSA LLC	1 ESTATE HOPE	CHRISTIANSTED	Virgin Islands	00820	0.351	0	0.351	0.1805	0	0	0.5315
FLINT GROUP NORTH AMERICA CORP	104 NATIONAL DR	ANNISTON	Alabama	36207	0.265	0.265	0.53	0	0	0	0.53
GLASS COATINGS & CONCEPTS	300 LAWTON AVE	MONROE	Ohio	45050	0.5245	0.002	0.5265	0	0	0	0.5265
NAPCO INC	125 MCFANN RD	VALENCIA	Pennsylvania	16059	0.48	0.0445	0.5245	0	0	0	0.5245
LEVLAD	9200 MASON AVE	CHATSWORTH	California	91311	0.0005	0	0.0005	0	0	0.5235	0.524
ARROW GROUP INDUSTRIES INC	1 THIRD AVE	HASKELL	New Jersey	07420	0.0025	0.219	0.2215	0	0	0.3005	0.522
RADIATOR SPECIALTY CO	600 RADIATOR RD	INDIAN TRAIL	North Carolina	28079	0.161	0	0.161	0	0	0.36	0.521
NB COATINGS INC	2701 E 170TH ST	LANSING	Illinois	60438	0.315	0.08	0.395	0	0	0.119	0.514
DUBOIS CHEMICALS INC	3630 E KEMPER RD	SHARONVILLE	Ohio	45241	0	0	0	0	0	0.513	0.513
FORREST PAINT CO	1011 MCKINLEY ST	EUGENE	Oregon	97402	0.206	0.307	0.513	0	0	0	0.513
LOCKHEED MARTIN AERONAUTICS CO	1011 LOCKHEED WAY MZ 6607	PALMDALE	California	93599	0.0715	0.431	0.5025	0	0	0.005	0.5075

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INEOS OXIDE A DIV OF INEOS AMERICAS LLC	21255A HWY 1 S	PLAQUEMINE	Louisiana	70765	0.4805	0.0255	0.506	0	0	0.0005	0.5065
PPG INDUSTRIES ARCHITECTURAL FINISHES	1886 LYNNBURY WOODS RD	DOVER	Delaware	19904	0.0025	0.0025	0.005	0	0	0.5	0.505
BRIGHTSMITH LLC	120 ENTERPRISE AVE	MORRISVILLE	Pennsylvania	19067	0.1025	0.2435	0.346		0	0.1585	0.5045
CLARIANT CORP MARTIN PLANT	788 CHERT QUARRY RD	MARTIN	South Carolina	29836	0.125	0.0025	0.1275	0.375	0	0	0.5025
STEELSCAPE	222 W KALAMA RIVER RD	KALAMA	Washington	98625	0.003	0.4995	0.5025	0	0	0	0.5025
PPG INDUSTRIES INC	500 PITTSBURGH AVE	MCCARRAN	Nevada	89434	0	0.125	0.125	0	0	0.3775	0.5025
ARCADIA INC	3225 E WASHINGTON BLVD	VERNON	California	90023	0.125	0.375	0.5	0	0	0	0.5
SILBOND CORP	9901 SAND CREEK HWY	WESTON	Michigan	49289	0.125	0.375	0.5	0	0	0	0.5
RUST-OLEUM CORP	8105 95TH ST	PLEASANT PRAIRIE	Wisconsin	53158	0.125	0.375	0.5	0	0	0	0.5
SC JOHNSON & SON INC WAXDALE FACILITY	8311 16TH ST	STURTEVANT	Wisconsin	53177	0.125	0.375	0.5	0	0	0	0.5
DERRICK CORP	3350 UNION RD	CHEEKTOWAGA	New York	14225	0	0.4975	0.4975	0	0	0	0.4975
HEXION SPECIALTY CHEMICALS INC	8600 W 71ST ST	BEDFORD PARK	Illinois	60501	0	0.4925	0.4925		0	0	0.4925
EXXONMOBIL CHEMICAL BATON ROUGE CHEMICAL PLANT	4999 SCENIC HWY	BATON ROUGE	Louisiana	70805	0.245	0.0015	0.2465	0.245	0	0	0.4915
BECKER SPECIALTY CORP	2500 DELTA LN	ELK GROVE VILLAG	Illinois	60007	0.005	0.485	0.49		0	0	0.49
TTM TECHNOLOGIES INC	234 CASHMAN DR	CHIPPEWA FALLS	Wisconsin	54729	0	0.4895	0.4895	0	0	0	0.4895
PARKER HANNIFIN	400 S ST	MC COOK	Nebraska	69001	0	0	0	0	0	0.486	0.486
ENGINEERED POLYMER SOLUTIONS I NC D/B/A VALSPAR COATINGS	90 CARSON RD	BIRMINGHAM	Alabama	35215	0.125	0.36	0.485	0	0	0	0.485
UNIVAR USA INC SALEM BRANCH	COLONIAL RD	SALEM	Massachusetts	01970	0.001	0.001	0.002	0	0	0.4775	0.4795
SHERWIN-WILLIAMS CO	2802 W MILLER RD	GARLAND	Texas	75041	0.003	0.0315	0.0345	0	0	0.4405	0.475
SNAP-ON TOOLS MANUFACTURING CO	2600 US HWY 18 E	ALGONA	Iowa	50511	0.0055	0.465	0.4705	0	0	0.0025	0.473
SKF SEALING SOLUTIONS	900 N STATE ST	ELGIN	Illinois	60123	0	0	0	0	0	0.463	0.463
IVC INDUSTRIAL COATINGS INC	550-560 W CENTENNIAL BLVD	CASA GRANDE	Arizona	85222	0.091	0.3635	0.4545	0	0	0	0.454
UNIVERSAL CHEMICALS & COATINGS INC	1124 ELMHURST RD	ELK GROVE VILLAG	Illinois	60007	0	0.4505	0.4505	0	0	0	0.4505
DUPONT MOUNT CLEMENS PLANT	400 GROESBECK HWY	MOUNT CLEMENS	Michigan	48043	0.0005	0.449	0.4495	0	0	0	0.4495
NAZDAR CHICAGO	1087 N N BRANCH ST	CHICAGO	Illinois	60622	0.131	0.3055	0.4365	0	0	0	0.4365
APOLLO CHEMICAL	2001 WILLOW SPRINGS LN	BURLINGTON	North Carolina	27215	0.14	0	0.14	0	0	0.2955	0.4355
ROHM & HAAS CHEMICALS LLC KNOXVILLE SITE	730 DALE AVE	KNOXVILLE	Tennessee	37921	0.002	0.0005	0.0025	0	0	0.431	0.4335
PFI INC	9215 SANTA FE SPRINGS RD	SANTA FE SPRINGS	California	90670	0.42	0	0.42	0	0	0	0.42

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SILGAN WHITE CAP CORP	1701 WILLIAMSBURG PIKE	RICHMOND	Indiana	47375	0.055	0.3625	0.4175	0	0	0	0.4175
STANDARD PAINTS INC	940 S 6TH AVE	MANSFIELD	Texas	76063	0	0.3865	0.3865	0	0	0.03	0.4165
MUTI-PACK LLC	8372 N STEVEN RD	MILWAUKEE	Wisconsin	53223	0.415	0	0.415	0	0	0	0.415
UNITED STATES ALUMINUM CORP	200 SINGLETON DR	WAXAHACHIE	Texas	75165	0.3775	0.03	0.4075	0	0	0	0.4075
AMERIMAX HOME PRODUCTS INC	450 RICHARDSON DR	LANCASTER	Pennsylvania	17603	0.0115	0.3905	0.402	0	0	0	0.402
STP PRODUCTS MANUFACTURING CO	477 LEXINGTON AVE	PAINESVILLE	Ohio	44077	0.298	0	0.298	0	0	0.102	0.4
DIAMOND VOGEL PAINTS	5111 E 36TH ST N	TULSA	Oklahoma	74115	0.008	0.3895	0.3975	0	0	0	0.3975
AMERICAN METALS CORP	1000 CROCKER RD	WESTLAKE	Ohio	44145	0	0.3955	0.3955	0	0	0	0.3955
FORBO ADHESIVES LLC	7440 W DUPONT RD	MORRIS	Illinois	60450	0.3905	0	0.3905	0	0	0	0.3905
ROLLEX CORP	800 CHASE AVE	ELK GROVE VILLAGE	Illinois	60007	0	0.387	0.387	0	0	0	0.387
GSP MARKETING TECHNOLOGIES	5400 140TH AVE N	CLEARWATER	Florida	33760	0.384	0	0.384	0	0	0	0.384
NALCO CO TULSA PLANT 102	6717 S 61ST W AVE	TULSA	Oklahoma	74131	0.0015	0.006	0.0075	0	0	0.375	0.3825
EXXONMOBIL REFINING & SUPPLY BATON ROUGE REFINERY	4045 SCENIC HWY	BATON ROUGE	Louisiana	70805	0.175	0.001	0.176	0.205	0	2.77556E-17	0.381
BASF CORP	1609 BIDDLE AVE	WYANDOTTE	Michigan	48192	0.375	0.0025	0.3775	0	0	0	0.3775
INTERNATIONAL PAINT LLC	6001 ANTOINE DR	HOUSTON	Texas	77091	0.0025	0.375	0.3775	0	0	0	0.3775
TYSON FRESH MEATS INC JOSLIN IL	HWY 92 & I-88 28424 38TH AVE N	HILLSDALE	Illinois	61257	0.0125	0.0025	0.015	0.115	0.005	0.24	0.375
FIBRO CHEM LLC	1804 KIMBERLY PARK DR	DALTON	Georgia	30720	0.125	0	0.125	0	0	0.25	0.375
TOWER PRODUCTS INC	2703 FREEMANSBURG AVE	EASTON	Pennsylvania	18045	0.375	0	0.375	0	0	0	0.375
RODDA PAINT CO	6123 N MARINE DR	PORTLAND	Oregon	97203	0.373	0.002	0.375	0	0	0	0.375
QUEST CHEMICAL CORP	12255 FM 529	HOUSTON	Texas	77041	0.375	0	0.375	0	0	0	0.375
PARISER INDUSTRIES INC	91 MICHIGAN AVE	PATERSON	New Jersey	07503	0.375	0	0.375	0	0	0	0.375
HILLYARD INDUSTRIES INC	402 N 3TH ST	SAINT JOSEPH	Missouri	64501	0.334	0.0335	0.3675	0	0	0	0.3675
SIKA CORP SIKA SARNAFIL DIV	100 DAN RD	CANTON	Massachusetts	02021	0	0.366	0.366	0	0	0	0.366
NASCOTE INDUSTRIES	18310 ENTERPRISE AVE	NASHVILLE	Illinois	62263	0.1275	0.2375	0.365	0	0	0.0005	0.3655
MASCO RETAIL CABINET GROUP LLC	423 HOPEWELL RD	WAVERLY	Ohio	45690	0.0055	0.3525	0.358	0	0	0	0.358
FULLER BRUSH CO	ONE FULLER WAY	GREAT BEND	Kansas	67530	0.1185	0.237	0.3555	0	0	0	0.3555
WATSON LABORATORIES INC UTAH	575, 577, 579 CHIPETA WAY	SALT LAKE CITY	Utah	84108	0.353	0	0.353	0	0	0	0.353
SHERWIN-WILLIAMS AUTOMOTIVE FINISHES CORP	395 BOGGS LN - S	RICHMOND	Kentucky	40475	0.32	0.03	0.35	0	0	0	0.35

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1717 ENGLISH RD	HIGH POINT	North Carolina	27261	0.0635	0.2855	0.349	0	0	0	0.349
NELCO PRODUCTS INC	1107 E KIMBERLY	ANAHEIM	California	92801	0.027	0.321	0.348	0	0	0	0.348
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	5400 23RD AVE	MOLINE	Illinois	61265	0.207	0.134	0.341	0	0	0	0.341
ROHM & HAAS CHEMICALS LLC	200 RT 413	BRISTOL	Pennsylvania	19007	0.0645	0.2015	0.266	0	0	0.074	0.34
HERITAGE-WTI INC	1250 ST GEORGE ST	EAST LIVERPOOL	Ohio	43920	0.005	0	0.005	0	0	0.3295	0.3345
ROLL COATER INC	5888 E COUNTY RD 180	BLYTHEVILLE	Arkansas	72315	0	0.334	0.334	0	0	0	0.334
ENERGIZER BATTERY MANUFACTURING INC	75 SWANTON RD	SAINT ALBANS	Vermont	05478	0.0025	0.1715	0.174	0	0	0.159	0.333
ASHLAND DISTRIBUTION	3300 BALL ST	BIRMINGHAM	Alabama	35234	0.2985	0.034	0.3325	0	0	0	0.3325
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	411 N DARLING	FREMONT	Michigan	49412	0.31	0.0175	0.3275	0	0	0	0.3275
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1647 ENGLISH RD	HIGH POINT	North Carolina	27261	0.0635	0.2635	0.327	0	0	0	0.327
HB FULLER	10500 INDUSTRIAL AVE	ROSEVILLE	California	95678	0.008	0.2585	0.2665	0	0.06	0	0.3265
PACKAGING CORP OF AMERICA COUNCE MILL	HWY 57	COUNCE	Tennessee	38326	0.0205	0	0.0205	0.305	0	1.73472E-17	0.3255
KIK-SOCAL INC	9028 DICE RD	SANTA FE SPRINGS	California	90670	0.3255	0	0.3255	0	0	0	0.3255
ENTHONE INC	350 FRONTAGE RD	WEST HAVEN	Connecticut	06516	0.006	0.307	0.313	0	0	0.0005	0.3135
PILOT CHEMICAL CO	11623 N HOUSTON ROSSLYN RD	HOUSTON	Texas	77086	0.31	0.0005	0.3105	0	0	0.0005	0.311
METAL COATERS OF CALIFORNIA INC	9133 CENTER AVE	RANCHO CUCAMON	California	91730	0.0285	0.2825	0.311	0	0	0	0.311
PPG INDUSTRIES OHIO INC (CL)	3800 W 143 ST	CLEVELAND	Ohio	44111	0.001	0.303	0.304	0	0	0	0.304
ET PRODUCTS CO INC	747 DOUGLAS RD	BREMEN	Indiana	46506	0	0.3	0.3	0	0	0	0.3
DUCKBACK PRODUCTS	2644 HEGAN LN	CHICO	California	95928	0.298	0	0.298	0	0	0	0.298
SIERRA CORP	11400 W 47TH ST	MINNETONKA	Minnesota	55343	0.2975	0	0.2975	0	0	0	0.2975
SUMTER COATINGS INC	2410 HWY 15S	SUMTER	South Carolina	29150	0.0625	0.1895	0.252	0	0	0.0455	0.2975
LINETEC	725 S 75TH AVE	WAUSAU	Wisconsin	54401	0.0205	0.2755	0.296	0	0	0	0.296
CERTIFIED ENAMELING INC	3342 EMERY ST	LOS ANGELES	California	90023	0	0.2905	0.2905	0	0	0	0.2905
CROWN CORK & SEAL CO (USA) INC CROWN CLOSURES DIV	940 MILL PARK DR	LANCASTER	Ohio	43130	0	0.2905	0.2905	0	0	0	0.2905
PPG ARCHITECTURAL FINISHES INC	400 S 13TH ST	LOUISVILLE	Kentucky	40203	0	0.2895	0.2895	0	0	0	0.2895
CELLO PROFESSIONAL PRODUCTS	1354 OLD POST RD	HAVRE DE GRACE	Maryland	21078	0.2795	0.0015	0.281	0	0	0	0.281
FORD MOTOR CO CHICAGO ASSEMBLY	12600 S TORRENCE AVE	CHICAGO	Illinois	60633	0.28	0	0.28	0	0	0	0.28

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SERIGRAPH INC	3801 E DECORAH RD	WEST BEND	Wisconsin	53095	0.0455	0.234	0.2795	0	0	0	0.2795
VIDEOJET TECHNOLOGIES INC	1855 ESTES AVE	ELK GROVE VILLAG	Illinois	60007	0	0.275	0.275	0	0	0	0.275
QUANTUM MARKETING INC	3606 CRAFTSMAN BLVD	LAKELAND	Florida	33803	0.272	0	0.272	0	0	0	0.272
FUCHS LUBRICANTS CO-CORPORATE OFFICE	17050 S LATHROP AVE	HARVEY	Illinois	60426	0.2675	0	0.2675	0	0	0	0.2675
HELEN,INC DBA ENVIRONMENTAL COATINGS,INC	6450 HANNA LAKE AVE SE	CALEDONIA	Michigan	49316	0.2	0.065	0.265	0	0	0	0.265
SEQUA COATINGS CORP PRECOAT METALS DIV	3500 WALNUT ST	MC KEESPORT	Pennsylvania	15132	0.2105	0.0535	0.264	0	0	0	0.264
OLDCASTLE BUILDING ENVELOPE TENNESSEE FACILITY	920 POTTERTOWN RD	MIDWAY	Tennessee	37809	0	0.2615	0.2615	0	0	0	0.2615
HARLEY-DAVIDSON MOTOR CO OPERATIONS INC	1425 EDEN RD	YORK	Pennsylvania	17402	0.2365	0.024	0.2605	0	0	0	0.2605
ASHLAND DISTRIBUTION CO	395 JAMES AVE	SAINT PAUL	Minnesota	55102	0.248	0.0115	0.2595	0	0	0	0.2595
GATES CORP	630 US HWY 150 E	GALESBURG	Illinois	61401	0	0	0	0	0	0.259	0.259
HEXION SPECIALTY CHEMICALS INC	400 E COTTAGE PL	CARPENTERSVILLE	Illinois	60110	0.0645	0.194	0.2585	0	0	0	0.2585
SHERWIN-WILLIAMS CO	180 CANAL ST	TERRE HAUTE	Indiana	47808	0.0165	0.042	0.0585	0	0	0.196	0.2545
ASHLAND DISTRIBUTION	2315 CLIFTON AVE	NASHVILLE	Tennessee	37209	0.2435	0.0105	0.254	0	0	0	0.254
CHASE PRODUCTS CO	2727 GARDNER RD	BROADVIEW	Illinois	60155	0.0015	0.252	0.2535		0	0	0.2535
MOC PRODUCTS CO INC	12306 MONTAGUE ST	PACOIMA	California	91331	0.125	0.0025	0.1275	0	0	0.125	0.2525
BF GOODRICH TIRE MANUFACTURING	18906 US 24 E	WOODBURN	Indiana	46797	0.0025	0.125	0.1275	0	0	0.125	0.2525
BACHMAN SERVICES INC	2220 S PROSPECT	OKLAHOMA CITY	Oklahoma	73129	0.125	0.125	0.25	0	0	0.0025	0.2525
ASHLAND DISTRIBUTION CO	350 ROOSEVELT AVE	CARTERET	New Jersey	07008	0.229	0.023	0.252	0	0	0	0.252
MISCO PRODUCTS CORP	1048 STINSON DR	READING	Pennsylvania	19605	0.125	0.125	0.25	0	0	0	0.25
YENKIN-MAJESTIC PAINT CORPORAT ION	1920 LEONARD AVE	COLUMBUS	Ohio	43219	0.125	0.125	0.25	0	0	0	0.25
QUANTUM COATINGS INC	1337 N WOOD BRANCH DR	CHARLOTTE	North Carolina	28273	0.125	0.125	0.25	0	0	0	0.25
HONDA MANUFACTURING OF INDIANA LLC	2755 N MICHIGAN AVE	GREENSBURG	Indiana	47240	0.125	0.125	0.25	0	0	0	0.25
MALCO PRODUCTS INC	361 FAIRVIEW AVE	BARBERTON	Ohio	44203	0.125	0.125	0.25		0	0	0.25
UNIVAR USA INC BERKELEY	8925 SEEGER INDUSTRIAL DR	BERKELEY	Missouri	63134	0.125	0.125	0.25	0	0	0	0.25
CHEMICAL SPECIALISTS & DEVELOPMENT INC	9733 MEADOR RD	CONROE	Texas	77303	0.125	0.125	0.25	0	0	0	0.25
EQUILON CARSON TERMINAL	20945 S WILMINGTON AVE	CARSON	California	90810	0.125	0.125	0.25	0	0	0	0.25
PREMIER INK SYSTEMS INC	10420 N STATE ST	HARRISON	Ohio	45030	0.125	0	0.125	0	0	0.125	0.25
PROCLEAN OF ARIZONA INC	4315 W VAN BUREN	PHOENIX	Arizona	85043	0	0.125	0.125	0	0	0.125	0.25
UNIVAR USA INC METRO BLVD	2646 METRO BLVD	MARYLAND HEIGHT	Missouri	63043	0.125	0.125	0.25	0	0	0	0.25

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BERGQUIST CO	301 WASHINGTON ST	CANNON FALLS	Minnesota	55009	0.125	0.125	0.25	0	0	0	0.25
REICHHOLD INC	249 ST LOUIS AVE	VALLEY PARK	Missouri	63088	0.125	0.125	0.25	0	0	0	0.25
CPJ TECHNOLOGIES	200 TANNER DR	TAYLORS	South Carolina	29687	0.125	0.125	0.25	0	0	0	0.25
ASHLAND DISTRIBUTION CO	1610 E HIGHLAND RD	TWINSBURG	Ohio	44087	0.229	0.019	0.248	0	0	0	0.248
EFI / INKWARE	189 WAUKEWAN ST	MEREDITH	New Hampshire	03253	0	0.0635	0.0635	0	0	0.1835	0.247
FLINT GROUP NORTH AMERICA	4675 W PARK DR	ATLANTA	Georgia	30339	0.12	0.12	0.24	0	0	0	0.24
ATMI MATERIALS LTD	706 HOUSTON CLINTON DR	BURNET	Texas	78611	0.051	0.0005	0.0515	0	0	0.1885	0.24
CAR PRODUCTS INC	630 BEAULIEU ST	HOLYOKE	Massachusetts	01040	0.236	0	0.236	0	0	0	0.236
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	347 CENTRAL AVE	BOWLING GREEN	Kentucky	42101	0.1285	0.1045	0.233	0	0	0	0.233
WARREN STAMPING PLANT (PART)	22800 MOUND RD	WARREN	Michigan	48091	0.23	0	0.23	0	0	0	0.23
METAL COATERS OF GEORGIA	1150 MARIETTA INDUSTRIAL DR NE	MARIETTA	Georgia	30062	0.003	0.225	0.228	0	0	0	0.228
CLEARWATER INTERNATIONAL LLC	4420 S FLORES	ELMENDORF	Texas	78112	0.0005	0.002	0.0025	0	0	0.225	0.2275
COSMETIC LABORATORIES OF AMERICA	20245 SUNBURST ST	CHATSWORTH	California	91311	0	0.002	0.002	0	0	0.225	0.227
FLUID ROUTING SOLUTIONS	1921 N BROAD ST	LEXINGTON	Tennessee	38351	0	0	0	0	0	0.225	0.225
PERMA-PIPE OIL & GAS	5008-11 CURTIS LN	NEW IBERIA	Louisiana	70560	0.22	0	0.22	0	0	0	0.22
MARY KAY INC	1330 REGAL ROW	DALLAS	Texas	75247	0.0005	0	0.0005	0	0	0.214	0.2145
INTERNATIONAL EXTRUSION CORP TEXAS	202 SINGLETON DR	WAXAHACHIE	Texas	75165	0	0.2115	0.2115	0	0	0	0.2115
COLWELL INC	231 S PROGRESS DR E	KENDALLVILLE	Indiana	46755	0.19	0.02	0.21	0	0	0	0.21
ACTEGA KELSTAR INC	1050 TAYLORS LN	CINNAMINSON	New Jersey	08077	0.0015	0.005	0.0065	0	0	0.2	0.2065
GUARDIAN AUTOMOTIVE - MOREHEAD PLANT	200 GUARDIAN AVE	MOREHEAD	Kentucky	40351	0	0.203	0.203	0	0	0	0.203
ASHLAND DISTRIBUTION CO	4550 NE EXPRESSWAY	DORAVILLE	Georgia	30340	0.1555	0.047	0.2025	0	0	0	0.2025
CHAMPION TECHNOLOGIES INC	3303 HWY 135 N	KILGORE	Texas	75662	0.194	0.002	0.196	0	0	0	0.196
RHODIA INC	577 BANKHEAD HWY	WINDER	Georgia	30680	0.16	0.0335	0.1935	0	0	0	0.1935
ROCKLINE INDUSTRIES	1113 MARYLAND AVE	SHEBOYGAN	Wisconsin	53081	0.193	0	0.193	0	0	0	0.193
FIRST AMERICAN RESOURCES CO	2030 RIVERVIEW INDUSTRIAL DR	MABLETON	Georgia	30126	0	0.191	0.191	0	0	0	0.191
SASOL NORTH AMERICA INC LAKE CHARLES CHEMICAL COMPLEX	2201 OLD SPANISH TRAIL	WESTLAKE	Louisiana	70669	0.124	0.0645	0.1885	0	0	0	0.1885
RUDD CO INC	1141 NW 50TH ST	SEATTLE	Washington	98107	0.175	0.0125	0.1875	0	0	0	0.1875
ASHLAND DISTRIBUTION	7710 POLK ST	SAINT LOUIS	Missouri	63111	0.1845	0.0015	0.186	0	0	0	0.186
CURTIS METAL FINISHING CO	9917 N ALPINE	MACHESNEY PARK	Illinois	61115	0.1325	0.053	0.1855	0	0	0	0.1855

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TRITECH COATINGS CORP	1378 KINGSLAND AVE	PAGEDALE	Missouri	63133	0.1585	0.0235	0.182	0	0	0	0.182
ASHLAND DISTRIBUTION CO GARLAND TX	3101 WOOD DR	GARLAND	Texas	75041	0.151	0.031	0.182	0	0	0	0.182
JAMESTOWN COATING TECHNOLOGIES	108 MAIN ST	JAMESTOWN	Pennsylvania	16134	0.1795	0	0.1795	0	0	0	0.1795
NALCO CO PLANT 106	7701 US HWY 90A	SUGAR LAND	Texas	77478	0	0	0	0	0	0.1795	0.1795
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1991 S WHEELING RD	WHEELING	Illinois	60090	0.0635	0.1135	0.177	0	0	0	0.177
ASHLAND INC - CHANDLER	6839 W CHICAGO ST	CHANDLER	Arizona	85226	0.149	0.028	0.177	0	0	0	0.177
PLAZE INC	113 BOLTE LN	SAINT CLAIR	Missouri	63077	0.1745	0	0.1745	0	0	0	0.1745
ASHLAND DISTRIBUTION CO	11109 S CHOCTAW DR	BATON ROUGE	Louisiana	70815	0.1625	0.0105	0.173	0	0	0	0.173
BYK USA INC	524 S CHERRY ST	WALLINGFORD	Connecticut	06492	0.17	0.003	0.173	0	0	0	0.173
DUPONT FRONT ROYAL PLANT	7961 WINCHESTER RD	FRONT ROYAL	Virginia	22630	0.0005	0.1675	0.168	0	0	0	0.168
SHERWIN-WILLIAMS CO	1891 DUFFY RD	FERNLEY	Nevada	89408	0.0005	0.002	0.0025	0	0	0.165	0.1675
ANCHOR PAINT MANUFACTURING CO INC	6707 E 14TH ST	TULSA	Oklahoma	74112	0.167	0	0.167	0	0	0	0.167
JOHNSONDIVERSEY INC	8311 16TH ST	STURTEVANT	Wisconsin	53177	0.0255	0.01	0.0355	0	0	0.124	0.1595
BEHR PROCESS CORP - CHICAGO	270 STATE ST	CHICAGO HEIGHTS	Illinois	60411	0.048	0.0815	0.1295	0	0.0275	0	0.157
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	188 SIDE TRACK DR	STATESVILLE	North Carolina	28625	0.0635	0.0925	0.156	0	0	0	0.156
SONOCO FLEXIBLE PACKAGING	6502 S US HWY 31 N	EDINBURGH	Indiana	46124	0	0.1545	0.1545	0	0	0	0.1545
STOUSE INC	300 NEW CENTURY PKWY	NEW CENTURY	Kansas	66031	0.154	0	0.154	0	0	0	0.154
DUPONT FORT MADISON PLANT	801 - 35TH ST	FORT MADISON	Iowa	52627	0	0.135	0.135	0	0	0.0185	0.1535
WARREN OIL CO - NC	2340 US 301 N	DUNN	North Carolina	28335	0.1525	0.0005	0.153	0	0	0	0.153
HENTZEN COATINGS,INC BATAVIA FACILITY	1500 LATHEM ST	BATAVIA	Illinois	60510	0.151	0	0.151	0	0	0	0.151
ROHM & HAAS ELECTRONIC MATERIA LS LLC	455 FOREST ST	MARLBOROUGH	Massachusetts	01752	0.0025	0.0025	0.005	0	0	0.144	0.149
BAKER PETROLITE CORP	9100 W 21ST ST	SAND SPRINGS	Oklahoma	74063	0.103	0.0295	0.1325	0	0	0.0145	0.147
SUPERIOR SOLVENTS & CHEMICALS	320 NORTHPOINTE DR	FAIRFIELD	Ohio	45014	0.0365	0	0.0365	0	0	0.11	0.1465
TNEMEC CO INC	123 W 23RD AVE	NORTH KANSAS CIT	Missouri	64116	0	0.1465	0.1465	0	0	0	0.1465
PPG INDUSTRIES OHIO INC CIRCLEVILLE OH	559 PITTSBURGH RD	CIRCLEVILLE	Ohio	43113	0.0345	0.111	0.1455	0	0	0	0.1455
MT ELLIOTT TOOL & DIE MANUFACTURING (PART)	3675 E OUTER DR	DETROIT	Michigan	48234	0.145	0	0.145	0	0	0	0.145
DYCO PAINTS INC	5850 ULMERTON RD	CLEARWATER	Florida	33760	0	0.142	0.142	0	0	0	0.142
MID-STATES PAINT & CHEMICAL CO	9315 WATSON INDUSTRIAL PARK	CRESTWOOD	Missouri	63126	0.1415	0	0.1415	0	0	0	0.1415

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DOW CHEMICAL CO - LOUISIANA OPERATIONS	21255 LA HWY 1 S	PLAQUEMINE	Louisiana	70765	0.139	0	0.139	0	0	0	0.139
ASHLAND DISTRIBUTION	2351 CHANNEL AVE	MEMPHIS	Tennessee	38113	0.1225	0.012	0.1345	0	0	0	0.1345
AMREP INC	990 INDUSTRIAL PARK DR	MARIETTA	Georgia	30062	0.0435	0.088	0.1315	0	0	0	0.1315
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	3050 HANFORD DR	LEBANON	Pennsylvania	17046	0.0635	0.068	0.1315	0	0	0	0.1315
NALCO CO - ODESSA PLANT 114	12205 W COUNTY RD 125	ODESSA	Texas	79765	0	0.125	0.125	0	0	0.006	0.131
VARN INTERNATIONAL	1333 N KIRK RD	BATAVIA	Illinois	60510	0.125	0.0025	0.1275	0.0025	0	0	0.13
WATSON STANDARD CO HARWICK PLANT	616 HITE RD	HARWICK	Pennsylvania	15049	0.1165	0.011	0.1275	0	0	0	0.1275
POWER SERVICE PRODUCTS INC	513 PEASTER HWY	WEATHERFORD	Texas	76086	0.0025	0.125	0.1275		0	0	0.1275
BASF CORP	3455 SOUTHPORT RD	SPARTANBURG	South Carolina	29302	0.125	0.0025	0.1275	0	0	0	0.1275
PERMATEX SOLON	6875 PARKLAND BLVD	SOLON	Ohio	44139	0.0025	0.125	0.1275	0	0	0	0.1275
CONOCOPHILLIPS PONCA CITY REFINERY	1000 S PINE ST	PONCA CITY	Oklahoma	74601	0.0025	0.125	0.1275	0	0	0	0.1275
CONOCOPHILLIPS OKLAHOMA CITY PRODUCTS TERMINAL	4600 NE 10TH ST	OKLAHOMA CITY	Oklahoma	73117	0.0025	0.125	0.1275	0	0	0	0.1275
GEORGE S COYNE CHEMICAL CO INC	3015 STATE RD	CROYDON	Pennsylvania	19021	0.125	0.0025	0.1275	0	0	0	0.1275
TAKASAGO INTERNATIONAL CORP (USA)	267 UNION ST	NORTHVALE	New Jersey	07647	0.125	0.0025	0.1275	0	0	0	0.1275
BRYCE CO LLC	4505 OLD LAMAR AVE	MEMPHIS	Tennessee	38118	0	0.0025	0.0025	0	0	0.125	0.1275
CHEMICALS INC	12321 HATCHERVILLE RD	BAYTOWN	Texas	77520	0.125	0.0025	0.1275	0	0	0	0.1275
COASTAL CHEMICAL CO LLC	3520 VETERANS MEMORIAL BLVD	ABBEVILLE	Louisiana	70510	0.125	0.0025	0.1275	0	0	0	0.1275
OAKLEY INC	1 ICON	FOOTHILL RANCH	California	92610	0.0025	0.125	0.1275	0	0	0	0.1275
GE WATER & PROCESS TECHNOLOGIES ORANGE FACILITY	3901 WILLIAMS DR	ORANGE	Texas	77630	0.125	0.0025	0.1275	0	0	0	0.1275
BRENNTAG GREAT LAKES LLC	14765 W BOBOLINK AVE	MENOMONEE FALLS	Wisconsin	53051	0.0025	0.125	0.1275	0	0	0	0.1275
RESEARCH SOLVENTS & CHEMICALS INC	402 INDUSTRIAL PARK DR	PELHAM	Alabama	35124	0.125	0.0025	0.1275	0	0	0	0.1275
RESEARCH SOLVENTS & CHEMICALS INC	133 BAIN DR	LA VERGNE	Tennessee	37086	0.125	0.0025	0.1275	0	0	0	0.1275
UNITED LABORATORIES INC	320 37TH AVE	SAINT CHARLES	Illinois	60174	0.125	0.0025	0.1275	0	0	0	0.1275
RR STREET & CO INC	2353 S BLUE ISLAND AVE	CHICAGO	Illinois	60608	0.0025	0.125	0.1275	0	0	0	0.1275
NICCA USA INC	1044 S NELSON RD	FOUNTAIN INN	South Carolina	29644	0.0025	0.125	0.1275	0	0	0	0.1275
ELANTAS PDG INC	5200 N SECOND ST	SAINT LOUIS	Missouri	63147	0.0025	0.125	0.1275	0	0	0	0.1275
HARCROS CHEMICALS INC	4606 NEW W DR	PASADENA	Texas	77507	0.0345	0.0035	0.038	0	0.0025	0.085	0.1255
ACTON TECHNOLOGIES INC	100 THOMPSON ST	PITTSTON	Pennsylvania	18640	0.125	0	0.125	0	0	0	0.125

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
AKCROS CHEMICALS INC	500 JERSEY AVE	NEW BRUNSWICK	New Jersey	08901	0	0.125	0.125	0	0	0	0.125
MAGNABLEND INC LIQUID PLANT	100 W STERRETT RD	WAXAHACHIE	Texas	75165	0.125	0	0.125	0	0	0	0.125
KALCOR COATINGS CO	37721 STEVENS BLVD	WILLOUGHBY	Ohio	44094	0.125	0	0.125	0	0	0	0.125
DANLIN INDUSTRIES CORP	23737 HWY 47	THOMAS	Oklahoma	73669	0.125	0	0.125	0	0	0	0.125
UNIVAR USA INC DALLAS DAN MORTON FACILITY	3636 DAN MORTON DR	DALLAS	Texas	75236	0.125	0	0.125	0	0	0	0.125
TYSON FRESH MEATS INC	HWY 50 W	HOLCOMB	Kansas	67851	0.125	0	0.125	0	0	0	0.125
NOV TUBOSCOPE HOLMES ROAD	2811 HOLMES RD	HOUSTON	Texas	77051	0.125	0	0.125	0	0	0	0.125
SICPA SECURINK CORP	8000 RESEARCH WAY	SPRINGFIELD	Virginia	22153	0.125	0	0.125	0	0	0	0.125
TRANS CHEMICAL INC	419 E DE SOTO AVE	SAINT LOUIS	Missouri	63147	0.125	0	0.125	0	0	0	0.125
JASPER RUBBER PRODUCTS INC	1010 FIRST AVE	JASPER	Indiana	47546	0	0	0	0	0	0.125	0.125
CLEANING SYSTEMS INC	1997 AMERICAN BLVD	DE PERE	Wisconsin	54115	0.125	0	0.125	0	0	0	0.125
CHEMETALL US INC	13177 HURON RIVER DR	ROMULUS	Michigan	48174	0	0.125	0.125	0	0	0	0.125
CERAM-TRAZ CORP CERAMIC INDL COATINGS (DBA)	325 HWY 81	OSSEO	Minnesota	55369	0.125	0	0.125		0	0	0.125
COLUMBIA PAINT CORP	641 JACKSON AVE	HUNTINGTON	West Virginia	25704	0.125	0	0.125	0	0	0	0.125
INX INTERNATIONAL INK CO	1000 MAPLE AVE	HOMEWOOD	Illinois	60430	0	0.125	0.125	0	0	0	0.125
W M BARR & CO	2105 CHANNEL AVE	MEMPHIS	Tennessee	38113	0	0.125	0.125	0	0	0	0.125
GOLD EAGLE CO	4400 S KILDARE AVE	CHICAGO	Illinois	60632	0.125	0	0.125	0	0	0	0.125
AKZO NOBEL COATINGS INC	1431 PROGRESS AVE	HIGH POINT	North Carolina	27261	0.125	0	0.125	0	0	0	0.125
ELECTRONICS FOR IMAGING INC	1260 JAMES L HART PKWY	YPSILANTI	Michigan	48197	0.124	0	0.124	0	0	0	0.124
KEYSTONE ANILINE CORP	2165 HWY 292	INMAN	South Carolina	29349	0.0615	0.0615	0.123	0	0	0	0.123
CAROLINA SOLVENTS INC	2274 1ST ST SE	HICKORY	North Carolina	28602	0.116	0.0025	0.1185	0.0025	0	0	0.121
ASHLAND DISTRIBUTION	4185 ALGONQUIN PKWY	LOUISVILLE	Kentucky	40211	0.1145	0.0065	0.121	0	0	0	0.121
ASHLAND DISTRIBUTION CO	3930 GLENWOOD DR	CHARLOTTE	North Carolina	28208	0.082	0.036	0.118	0	0	0	0.118
AEP INDUSTRIES INC	1201 S PINE HILL RD	GRIFFIN	Georgia	30224	0.0025	0.115	0.1175	0	0	0	0.1175
ALLEGHENY PETROLEUM PRODUCTS CO	999 AIRBRAKE AVE	WILMERDING	Pennsylvania	15148	0.0235	0.093	0.1165	0	0	0	0.1165
ACCURATE DISPERSIONS	192 W 155TH ST	SOUTH HOLLAND	Illinois	60473	0.088	0.028	0.116	0	0	0	0.116
SUPERIOR SOLVENTS & CHEMICALS	4211 BRAMERS LN	LOUISVILLE	Kentucky	40216	0.004	0	0.004	0	0	0.111	0.115
US MARINE CORPS AIR STATION YUMA	AVE 3E	YUMA	Arizona	85369	0.096	0.0185	0.1145	0	0	0	0.1145
TECHNICAL CHEMICAL CO	3327 PIPELINE RD	CLEBURNE	Texas	76033	0.1135	0	0.1135		0	0	0.1135

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ARDEX LABORATORIES INC	2050 BYBERRY RD	PHILADELPHIA	Pennsylvania	19116	0.1125	0	0.1125	0	0	0	0.1125
ASHLAND INC - EVENDALE	2788 GLENDALE-MILFORD RD	EVENDALE	Ohio	45241	0.0805	0.032	0.1125	0	0	0	0.1125
SHERWIN-WILLIAMS CO	2121 NEW WORLD DR	COLUMBUS	Ohio	43207	0.0085	0.0065	0.015	0	0	0.097	0.112
SHERWIN-WILLIAMS CO	1025 HOWARD ST	GREENSBORO	North Carolina	27403	0.053	0.057	0.11	0	0	0.001	0.111
3M CO - NEVADA	2120 E AUSTIN BLVD	NEVADA	Missouri	64772	0.01	0.1	0.11	0	0	0	0.11
DELTA LABORATORIES INC	3710 COUNTY RD 326 W	OCALA	Florida	34475	0.1085	0.0005	0.109	0	0	0	0.109
SHERWIN-WILLIAMS CO	636 E 40TH ST	HOLLAND	Michigan	49423	0.1045	0.0015	0.106	0	0	0	0.106
SUPERIOR OIL CO INC	400 W REGENT ST	INDIANAPOLIS	Indiana	46225	0.0045	0	0.0045	0	0	0.0995	0.104
FRAZEE INDUSTRIES	6625 MIRAMAR RD	SAN DIEGO	California	92121	0	0.103	0.103	0	0	0	0.103
HENKEL CORP	23343 SHERWOOD AVE	WARREN	Michigan	48091	0.044	0.044	0.088	0	0	0.015	0.103
CENTRAL MOTOR WHEEL OF AMERICA (DBA CMWA)	125 WHEAT DR	PARIS	Kentucky	40361	0	0.103	0.103		0	0	0.103
ASHLAND DISTRIBUTION CO	2461 CROCKER CIR	FAIRFIELD	California	94533	0.1015	0.001	0.1025	0	0	0	0.1025
STEELSCAPE INC RANCHO	11200 ARROW RT	RANCHO CUCAMON	California	91730	0.0035	0.0975	0.101	0	0	0	0.101
ASHLAND DISTRIBUTION CO	20915 S WILMINGTON AVE	CARSON	California	90810	0.0925	0.0055	0.098	0	0	0	0.098
MRCG-KRAFTMAID P3	150 GRAND VALLEY AVE	ORWELL	Ohio	44076	0.002	0.0775	0.0795	0	0	0.0175	0.097
UNIVAR USA INC HAMILTON BRANCH	12 STANDEN DR	HAMILTON	Ohio	45015	0.007	0.02	0.027	0	0	0.0685	0.0955
GROTTOES PLASTICS PLANT	149 GRAND CAVERNS DR	GROTTOES	Virginia	24441	0.022	0.0375	0.0595	0.004	0	0.03	0.0935
CYTEC INDUSTRIES INC LANGLEY PLANT	403 CARLINE RD	LANGLEY	South Carolina	29834	0.0835	0.01	0.0935	0	0	0	0.0935
ASHLAND DISTRIBUTION CO	200 NE 181ST ST	MIAMI	Florida	33162	0.075	0.018	0.093	0	0	0	0.093
CE BRADLEY LABORATORIES INC	55 BENNETT DR	BRATTLEBORO	Vermont	05301	0.093	0	0.093	0	0	0	0.093
MULTI-COLOR CORP	2281 S US 31	SCOTTSBURG	Indiana	47170	0	0.091	0.091	0	0	0	0.091
ATHEA LABORATORIES INC	7855 N FAULKNER RD	MILWAUKEE	Wisconsin	53224	0.0905	0	0.0905	0	0	0	0.0905
BRENNTAG PACIFIC INC	10747 PATTERSON PL	SANTA FE SPRINGS	California	90670	0.081	0.0065	0.0875	0	0	0	0.0875
DIC IMAGING PRODUCTS USA LLC	7335 S 10TH ST	OAK CREEK	Wisconsin	53154	0.0085	0.0775	0.086	0	0	0	0.086
NORTHERN COATINGS & CHEMICAL CO INC	705 6TH AVE	MENOMINEE	Michigan	49858	0.085	0	0.085	0	0	0	0.085
CCI MANUFACTURING IL CORP	15550 CANAL BANK RD	LEMONT	Illinois	60439	0	0.0835	0.0835	0	0	0	0.0835
UNION TANK CAR ALEXANDRIA MANUFACTURING FACILITY	6325 HWY 1 N	ALEXANDRIA	Louisiana	71303	0.004	0.0795	0.0835	0	0	0	0.0835
CHAMPION TECHNOLOGIES INC	350 CENTAURUS RD	CORPUS CHRISTI	Texas	78405	0.0805	0.002	0.0825	0	0	0	0.0825
ASHLAND DISTRIBUTION	400 MAIN ST	TEWKSBURY	Massachusetts	01876	0.076	0.006	0.082	0	0	0	0.082

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
THIRD COAST PACKAGING INC FRIENDSWOOD	18410 W CLOVER LN	FRIENDSWOOD	Texas	77549	0	0	0	0	0	0.0815	0.0815
BERNER CHEESE CORP	2034 E FACTORY RD	DAKOTA	Illinois	61018	0	0	0	0	0	0.0805	0.0805
CHAMPION TECHNOLOGIES INC	1100 HUGHIE LONG RD	CRESSON	Texas	76035	0.0795	0.0005	0.08	0	0	0	0.08
BUZZI UNICEM USA - GREENCASTLE PLANT	3301 S COUNTY RD 150 W	GREENCASTLE	Indiana	46135	0.0155	0.064	0.0795	0	0	0	0.0795
KEY POLYMER	17 SHEPARD ST LAWRENCE INDUST	LAWRENCE	Massachusetts	01843	0	0.0165	0.0165	0	0	0.063	0.0795
TEXAS INSTRUMENTS INC	13500 N CENTRAL EXPRESSWAY	DALLAS	Texas	75243	0	0.0795	0.0795	0	0	0	0.0795
AVERY DENNISON PFD	650 W 67TH AVE	SCHERERVILLE	Indiana	46375	0.0545	0.025	0.0795	0	0	0	0.0795
ECOLAB	18383 E RAILROAD ST	CITY OF INDUSTRY	California	91748	0.018	0.061	0.079	0	0	0	0.079
LUBRIZOL	9550 W 55TH ST	MC COOK	Illinois	60525	0	0.078	0.078		0	0	0.078
ARCH CHEMICALS INC	HWY 933	BRANDENBURG	Kentucky	40108	0.02	0.058	0.078	0	0	0	0.078
PLAZE INC	105 BOLTE LN	SAINT CLAIR	Missouri	63077	0.078	0	0.078	0	0	0	0.078
ASHLAND DISTRIBUTION CO	5420 SPEAKER RD	KANSAS CITY	Kansas	66106	0.069	0.0085	0.0775	0	0	0	0.0775
AKZO NOBEL COATINGS INC	1000 INDUSTRIAL PARK DR	CLINTON	Mississippi	39056	0.0765	0	0.0765	0	0	0	0.0765
MATTHEWS INTERNATIONAL CORP	101 FAIRVIEW AVE	PITTSBURGH	Pennsylvania	15238	0.064	0.0125	0.0765	0	0	0	0.0765
CHEMICAL SOLVENTS JENNINGS ROAD FACILITY	3751 JENNINGS RD	CLEVELAND	Ohio	44109	0.069	0.003	0.072	0	0	0.0025	0.0745
CLOROX PRODUCTS MANUFACTURING CO	2600 HUNTINGTON DR	FAIRFIELD	California	94533	0.074	0.0005	0.0745	0	0	0	0.0745
LAMBERTI USA INC WHARTON CHEMICAL COMPLEX	HWY 59 AT COUNTY RD 212	HUNGERFORD	Texas	77448	0.0115	0	0.0115	0.021	0	0.042	0.0745
SPRAYLAT CORP	716 S COLUMBUS AVE	MOUNT VERNON	New York	10550	0.0035	0.0705	0.074	0	0	0	0.074
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	2000 WESTHALL ST	PITTSBURGH	Pennsylvania	15233	0.063	0.0105	0.0735	0	0	0	0.0735
AKZO NOBEL COATINGS INC	1660 CROSS ST SE	SALEM	Oregon	97302	0.043	0.03	0.073	0	0	0	0.073
BOEHRINGER INGELHEIM CHEMICALS INC	2820 N NORMANDY RD	PETERSBURG	Virginia	23805	0.009	0.0635	0.0725	0	0	0	0.0725
VEYANCE TECHNOLOGIES INC	4021 N 56TH ST	LINCOLN	Nebraska	68504	0	0	0	0	0	0.072	0.072
VEOLIA ES TECHNICAL SOLUTIONS LLC PORT ARTHUR FACILITY	HWY 73, 35 MILES W OF TAYLOR BA	PORT ARTHUR	Texas	77640	0.071	0	0.071	0	0	0	0.071
ADCO CLEANING PRODUCTS LLC	900 W MAIN ST	SEDALIA	Missouri	65301	0.0235	0.0475	0.071	0	0	0	0.071
WARSAW CHEMICAL CO INC	390 ARGONNE RD	WARSAW	Indiana	46580	0.048	0.022	0.07	0	0	0	0.07
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	901 W UNION ST	MONTEBELLO	California	90640	0.0635	0.0065	0.07	0	0	0	0.07
GENERAL DYNAMICS ORDNANCE & TACTICAL SYSTEMS GARLAND	1200 N GLENBROOK	GARLAND	Texas	75040	0.003	0	0.003	0	0	0.064	0.067

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
CARDINAL INDUSTRIAL FINISHES	1329 POTRERO AVE	SOUTH EL MONTE	California	91733	0.048	0.018	0.066	0	0	0	0.066
MINUTEMAN INTERNATIONAL MULTI-CLEAN DIV	600 CARDIGAN RD	SHOREVIEW	Minnesota	55126	0.063	0.0025	0.0655	0	0	0	0.0655
UNIVAR USA INC INDIANAPOLIS WEST BRANCH	5850 W 82ND ST	INDIANAPOLIS	Indiana	46268	0.003	0.0085	0.0115	0	0	0.0515	0.063
KARCHER NORTH AMERICA- PROCHEM	325 S PRICE RD	CHANDLER	Arizona	85224	0.0625	0	0.0625	0	0	0	0.0625
ICI PAINTS PUERTO RICO INC	65 INFANTERIA KM 134	CAROLINA	Puerto Rico	00985	0.0615	0	0.0615	0	0	0	0.0615
COOK COMPOSITES & POLYMERS C O	13511 MAIN ST	LEMONT	Illinois	60439	0.017	0.044	0.061	0	0	0	0.061
MRCG-KRAFTMAID P1	16052 INDUSTRIAL PKWY	MIDDLEFIELD	Ohio	44062	0	0.0485	0.0485	0	0	0.0105	0.059
BRENNTAG SOUTHEAST INC	2000 E PETTIGREW ST	DURHAM	North Carolina	27703	0.043	0.015	0.058	0	0	0	0.058
CONOCOPHILLIPS CO EAST ST LOUIS TERMINAL	3300 MISSISSIPPI AVE	CAHOKIA	Illinois	62206	0	0.0575	0.0575	0	0	0	0.0575
CONTINENTAL CEMENT CO LLC	10107 HWY 79	HANNIBAL	Missouri	63401	0.057	0	0.057	0	0	0	0.057
ECOLAB INC	261 HWY 155 S	MC DONOUGH	Georgia	30253	0.0185	0.0385	0.057		0	0	0.057
COGNIS CORP MAULDIN PLANT	1520 OLD STAGE RD	MAULDIN	South Carolina	29662	0.0465	0.0105	0.057	0	0	0	0.057
GRAPHIC CONTROLS LLC	400 EXCHANGE ST	BUFFALO	New York	14204	0.054	0	0.054	0	0	0	0.054
UNIVAR USA INC	7050 W 71ST ST	BEDFORD PARK	Illinois	60499	0.0285	0.025	0.0535	0	0	0	0.0535
ABC COMPOUNDING CO OF TEXAS INC	1102 AVE J E	GRAND PRAIRIE	Texas	75050	0.0025	0.051	0.0535	0	0	0	0.0535
HANNA STEEL CORP	220 HANNA DR	PEKIN	Illinois	61554	0.0035	0.0495	0.053	0	0	0	0.053
DYSTAR LP	209 WATLINGTON INDUSTRIAL DR	REIDSVILLE	North Carolina	27320	0.035	0.015	0.05	0	0	0	0.05
NORTHERN LABS INC WEST DRIVE	5800 W DR	MANITOWOC	Wisconsin	54220	0.049	0	0.049	0	0	0	0.049
BARTON SOLVENTS INC BETTENDORF	204 36TH ST	BETTENDORF	Iowa	52722	0.0115	0.0375	0.049	0	0	0	0.049
WHITFORD CORP	47 PARK AVE	ELVERSON	Pennsylvania	19520	0.046	0.0025	0.0485	0	0	0	0.0485
AMERICAN COATINGS INC	10625 MAHAFFEY RD	TOMBALL	Texas	77375	0.013	0.0355	0.0485	0	0	0	0.0485
NORMAN FOX & CO	5511 S BOYLE AVE	VERNON	California	90058	0.0025	0.046	0.0485		0	0	0.0485
KAY CHEMICAL CO	8300 CAPITAL DR	GREENSBORO	North Carolina	27409	0.0095	0.0385	0.048	0	0	0	0.048
ASHLAND DISTRIBUTION CO	5125 W HANNA AVE	TAMPA	Florida	33634	0.0015	0.0455	0.047	0	0	0	0.047
FRANKLIN INTERNATIONAL	2020 BRUCK ST	COLUMBUS	Ohio	43207	0.0045	0.0425	0.047	0	0	0	0.047
RECKITT BENCKISER	799 RT 206 & HILLSBOROUGH RD	HILLSBOROUGH	New Jersey	08844	0.045	0.001	0.046	0	0	0	0.046
INOAC PACKAGING GROUP	901 NUTTER DR	BARDSTOWN	Kentucky	40004	0	0.044	0.044	0	0	0	0.044
ECOLAB INC	3001 CHANNAHON RD	JOLIET	Illinois	60436	0.0305	0.0125	0.043	0	0	0	0.043
CORSICANA TECHNOLOGIES INC	2733 E HWY 31	CORSICANA	Texas	75109	0.0065	0.018	0.0245	0	0	0.018	0.0425

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
KBP COIL COATERS INC	3600 E 44TH AVE	DENVER	Colorado	80216	0	0.042	0.042	0	0	0	0.042
ENTHONE INC	9809 INDUSTRIAL DR	BRIDGEVIEW	Illinois	60455	0.004	0.0375	0.0415	0	0	0	0.0415
FORD MOTOR CO MICHIGAN ASSEMBLY PLANT	38303 MICHIGAN AVE	WAYNE	Michigan	48184	0.0405	0	0.0405	0	0	0	0.0405
RECTICEL INTERIORS NORTH AMERICA LLC	1420 INDUSTRIAL PARK DR	TUSCALOOSA	Alabama	35401	0.0005	0.039	0.0395	0	0	0	0.0395
BIOLAB INC	1735 DOGWOOD DR	CONYERS	Georgia	30012	0.039	0	0.039	0	0	0	0.039
BARTON SOLVENTS INC WICHITA	201 S CEDAR	VALLEY CENTER	Kansas	67147	0.008	0.031	0.039	0	0	0	0.039
BARTON SOLVENTS INC KANSAS CITY	901 S 66TH TERRACE	KANSAS CITY	Kansas	66111	0.008	0.031	0.039	0	0	0	0.039
SHERWIN-WILLIAMS CO	630 E 13TH	ANDOVER	Kansas	67002	0.0285	0.01	0.0385	0	0	0	0.0385
CLEAN HARBORS EL DORADO LLC	309 AMERICAN CIR UNION	EL DORADO	Arkansas	71730	0.037	0	0.037	0	0	0.0005	0.0375
ECOLAB	383 N HIGH ST	HEBRON	Ohio	43025	0.0265	0.0105	0.037	0	0	0	0.037
EXCEL-POLYMERS LLC	HWY 353 S PO BOX 377	JONESBOROUGH	Tennessee	37659	0	0.0365	0.0365	0	0	0	0.0365
AIR PRODUCTS PERFORMANCE MANUFACTURING INC	337 VINCENT DR	MILTON	Wisconsin	53563	0.0025	0.0335	0.036	0	0	0	0.036
ECOLAB INC	942 BAKER RD	MARTINSBURG	West Virginia	25405	0.022	0.0135	0.0355	0	0	0	0.0355
HUNTSMAN ADVANCED MATERIALS AMERICAS INC	555 HUNTSMAN RD	MC INTOSH	Alabama	36553	0.0125	0.023	0.0355	0	0	0	0.0355
ETHOX CHEMICALS LLC	1801 PERIMETER RD	GREENVILLE	South Carolina	29605	0.0025	0.0325	0.035	0	0	0	0.035
RICHARDSAPEX INC	4202-24 MAIN ST	PHILADELPHIA	Pennsylvania	19127	0.025	0	0.025	0	0	0.0095	0.0345
GIANT CEMENT CO	HWY 453 & I-26 (654 JUDGE ST)	HARLEYVILLE	South Carolina	29448	0.0015	0.0005	0.002	0	0	0.032	0.034
BRENNTAG NORTHEAST INC	81 W HULLER LN	READING	Pennsylvania	19605	0.0185	0.015	0.0335	0	0	0	0.0335
LUBRIZOL CORP	29400 LAKELAND BLVD	WICKLIFFE	Ohio	44092	0.033	0	0.033	0	0	0	0.033
RANBAR ELECTRICAL MATERIALS INC	RTE 993 ONE MILE W OF RTE 130	MANOR	Pennsylvania	15665	0	0.023	0.023	0	0	0.01	0.033
DUPONT PARLIN PLANT	CHEESEQUAKE RD	PARLIN	New Jersey	08859	0.004	0.028	0.032	0	0	0	0.032
BARTON SOLVENTS INC WEST BEND	800 RAIL WAY	WEST BEND	Wisconsin	53095	0.005	0.0265	0.0315	0	0	0	0.0315
3M CO - KNOXVILLE	3406 E PLEASANT	KNOXVILLE	Iowa	50138	0	0.0315	0.0315	0	0	0	0.0315
SI GROUP INC	1000 MAIN ST	ROTTERDAM JUNCT	New York	12150	0.009	0.0145	0.0235	0.007	0	0	0.0305
UNIVAR USA INC - INDIANAPOLIS	7425 E 30TH ST	INDIANAPOLIS	Indiana	46219	0.008	0.0225	0.0305	0	0	0	0.0305
MACDERMID INC	1221 FARROW AVE	FERNDALE	Michigan	48220	0.0135	0.015	0.0285	0	0	0	0.0285
MEADWESTVACO SOUTH CAROLINA LLC	400 CROSBY RD	DERIDDER	Louisiana	70634	0.0025	0.0255	0.028	0	0	0	0.028
CARBOLINE CO	900 OPELOUSAS ST	LAKE CHARLES	Louisiana	70601	0	0.028	0.028	0	0	0	0.028
ASHLAND DISTRIBUTION	2011 TURNER ST	LANSING	Michigan	48906	0.025	0.0025	0.0275	0	0	0	0.0275

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
KEMIRA WATER SOLUTIONS INC	1 CYANAMID RD	MOBILE	Alabama	36614	0.013	0.0125	0.0255	0	0	0.0015	0.027
UNIVAR USA INC - TOLEDO SOUTH BRANCH	4051 S AVE	TOLEDO	Ohio	43615	0.009	0.0175	0.0265	0	0	0	0.0265
ECOLAB INC	2305 SHERWIN ST	GARLAND	Texas	75041	0.0145	0.012	0.0265	0	0	0	0.0265
VEOLIA ES TECHNICAL SOLUTIONS LLC	125 FACTORY LN	MIDDLESEX	New Jersey	08846	0.0125	0.0135	0.026	0	0	0	0.026
AMPHENOL APC INC	91 NORTHEASTERN BLVD	NASHUA	New Hampshire	03062	0.0025	0.0235	0.026	0	0	0	0.026
CLEARWATER INTERNATIONAL LLC	100 INDUSTRIAL DR (BLDG 180, 150,	LEETSDALE	Pennsylvania	15056	0.0015	0	0.0015	0	0	0.0245	0.026
BARTON SOLVENTS INC DES MOINES	1970 NE BROADWAY	DES MOINES	Iowa	50313	0.003	0.023	0.026	0	0	0	0.026
HOLLY OAK CHEMICAL INC	101 CASE ST	FOUNTAIN INN	South Carolina	29644	0.025	0	0.025	0	0	0	0.025
PROCTER & GAMBLE HAIR CARE LLC	2200 LOWER MUSCATINE RD	IOWA CITY	Iowa	52240	0.005	0.01	0.015	0	0	0.01	0.025
EXCEL POLYMERS LLC	150 S CONNELL AVE	DYERSBURG	Tennessee	38024	0	0.0245	0.0245	0	0	0	0.0245
ASHLAND DISTRIBUTION CO	8901 OLD GALVESTON RD	HOUSTON	Texas	77034	0.0055	0.019	0.0245	0	0	0	0.0245
SHERWIN-WILLIAMS CO	113 STAGE COACH TRAIL	GREENSBORO	North Carolina	27409	0.004	0.0205	0.0245	0	0	0	0.0245
SHERWIN-WILLIAMS CO	11700 S COTTAGE GROVE	CHICAGO	Illinois	60628	0	0	0	0	0	0.024	0.024
FORD MOTOR CO DEARBORN TOOL & DIE PLANT	3001 MILLER RD	DEARBORN	Michigan	48121	0.001	0	0.001	0	0	0.0225	0.0235
BASF CORP	1 JAMES ST	BELVIDERE	New Jersey	07823	0	0.02	0.02	0	0	0.0035	0.0235
UNIVAR USA INC NORCROSS FACILI TY	2145 SKYLAND CT	NORCROSS	Georgia	30071	0.011	0.0125	0.0235	0	0	0	0.0235
ECOLAB INC	640 LENFEST RD	SAN JOSE	California	95133	0.0135	0.0095	0.023	0	0	0	0.023
VALERO THREE RIVERS REFINERY	301 LEROY ST	THREE RIVERS	Texas	78071	0.023	0	0.023	0	0	0	0.023
BARTON SOLVENTS INC COUNCIL BLUFFS	2135 9TH AVE	COUNCIL BLUFFS	Iowa	51502	0.0015	0.0215	0.023	0	0	0	0.023
UNIVAR USA INC - TOLEDO BRANCH	30450 TRACY RD	WALBRIDGE	Ohio	43465	0.003	0.0195	0.0225	0	0	0	0.0225
PRIDE SOLVENTS & CHEMICAL CO OF NEW JERSEY	211 RANDOLPH AVE	AVENEL	New Jersey	07001	0.0055	0.017	0.0225	0	0	0	0.0225
DAUBERT CHEMICAL CO	4700 S CENTRAL AVE	CHICAGO	Illinois	60638	0.0095	0.0125	0.022	0	0	0	0.022
KWAL-HOWELLS INC (DBA KWAL PAINT INC)	2430 ALBERT BROADFOOT ST	BONHAM	Texas	75418	0	0.0185	0.0185		0	0.0025	0.021
U.S. POLYMERS ACCUREZ LLC	300 E PRIMM ST	SAINT LOUIS	Missouri	63111	0.0085	0.003	0.0115	0	0	0.009	0.0205
3M CO - SPRINGFIELD	3211 E CHESTNUT EXPY	SPRINGFIELD	Missouri	65802	0	0.02	0.02	0	0	0	0.02
UNIVAR USA INC 68TH ST	8500 W 68 TH ST	BEDFORD PARK	Illinois	60501	0.01	0.0095	0.0195	0	0	0	0.0195
GAGE PRODUCTS CO	625 WANDA AVE	FERNDALE	Michigan	48220	0	0.0195	0.0195	0	0	0	0.0195
VALSPAR REFINISH	210 CROSBY ST	PICAYUNE	Mississippi	39466	0	0.019	0.019	0	0	0	0.019
FISHER SCIENTIFIC INTERNATIONAL MTN DIAGNOSTICS PLANT	8365 VALLEY PIKE	MIDDLETOWN	Virginia	22645	0	0.019	0.019	0	0	0	0.019

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ZEP COMMERCIAL	350 JOE FRANK HARRIS PKWY	EMERSON	Georgia	30137	0	0.019	0.019	0	0	0	0.019
STEEL DYNAMICS INC	4500 COUNTY RD 59	BUTLER	Indiana	46721	0	0.0185	0.0185	0	0	0	0.0185
TRANSTAR AUTOBODY TECHNOLOGIES	2040 HEISERMAN DR	BRIGHTON	Michigan	48114	0.009	0.009	0.018	0	0	0	0.0175
ASHLAND DISTRIBUTION CO	1842 ENTERPRISE PKWY	TWINSBURG	Ohio	44087	0.0025	0.0145	0.017	0	0	0	0.017
BLENTECH CORP	1305 RYE ST	HOUSTON	Texas	77029	0.0125	0.0015	0.014	0	0	0.0025	0.0165
ARLON INC ADHESIVES & FILMS DIV	2811 S HARBOR BLVD	SANTA ANA	California	92704	0	0.0165	0.0165	0	0	0	0.0165
HENKEL	14351 HWY 221	ENOREE	South Carolina	29335	0.0005	0.0145	0.015	0	0	0	0.015
CHEMDESIGN PRODUCTS INC	2 STANTON ST	MARINETTE	Wisconsin	54143	0.006	0.0085	0.0145	0	0	0	0.0145
MONSANTO CO	2500 WIGGINS RD	MUSCATINE	Iowa	52761	0.0135	0.001	0.0145	0	0	0	0.0145
SHERWIN-WILLIAMS CO	6795 S MAIN ST	MORROW	Georgia	30260	0.004	0.0105	0.0145	0	0	0	0.0145
PRIDE SOLVENT & CHEMICAL CO OF NY INC	6 LONG ISLAND AVE	HOLTSVILLE	New York	11742	0.0035	0.0105	0.014	0	0	0	0.014
SIMONIZ USA INC	201 BOSTON TURNPIKE	BOLTON	Connecticut	06043	0.0125	0.001	0.0135	0	0	0	0.013
BRULIN CORP	2920 DR ANDREW J BROWN AVE	INDIANAPOLIS	Indiana	46205	0.003	0.0095	0.0125	0	0	0	0.0125
EVONIK DEGUSSA CORP	4201 DEGUSSA RD	THEODORE	Alabama	36582	0.012	0.0005	0.0125	0	0	0	0.0125
UNIVAR USA INC	2600 S GARFIELD AVE	COMMERCE	California	90040	0.011	0.0015	0.0125	0	0	0	0.0125
HUBBARD-HALL INC	563 S LEONARD ST	WATERBURY	Connecticut	06708	0.0005	0.0115	0.012	0	0	0	0.012
GOODWIN CO	700 PROGRESS CENTER AVE	LAWRENCEVILLE	Georgia	30043	0.011	0.0005	0.0115	0	0	0	0.0115
HENKEL CORP	421 LONDON RD	DELAWARE	Ohio	43015	0.005	0.0065	0.0115	0	0	0	0.0115
SHERWIN-WILLIAMS CO	2325 HOLLINS FERRY RD	BALTIMORE	Maryland	21230	0.0065	0.004	0.0105	0	0	0	0.0105
PRC-DESOTO INTERNATIONAL INC	11601 UNITED ST	MOJAVE	California	93501	0.004	0.006	0.01	0	0	0	0.01
BERRIDGE MANUFACTURING CO	6515 FRATT RD	SAN ANTONIO	Texas	78218	0	0.01	0.01	0	0	0	0.01
BUCKLEY OIL CO	1809 ROCK ISLAND ST	DALLAS	Texas	75207	0.0075	0.0025	0.01	0	0	0	0.01
CHEMOL CO INC	2300 RANDOLPH AVE	GREENSBORO	North Carolina	27406	0	0.0095	0.0095	0	0	0	0.0095
HYDRITE CHEMICAL CO	2545 BOND ST	UNIVERSITY PARK	Illinois	60466	0	0.0095	0.0095	0	0	0	0.0095
TRUE VALUE MANUFACTURING	201 JANDUS RD	CARY	Illinois	60013	0.0025	0.007	0.0095	0	0	0	0.0095
DAVIES IMPERIAL COATINGS INC	1275 STATE ST	HAMMOND	Indiana	46320	0.0095	0	0.0095	0	0	0	0.0095
UNIVAR USA INC SANTA FE SPRINGS	13900 CARMENITA RD	SANTA FE SPRINGS	California	90670	0.003	0.0065	0.0095	0	0	0	0.0095
HENKEL ONTARIO	1496 E FRANCIS ST	ONTARIO	California	91761	0.0015	0.0075	0.009	0	0	0	0.009
BENJAMIN MOORE & CO PELL CITY	109 BAMBERG DR	PELL CITY	Alabama	35125	0.0085	0	0.0085	0	0	0	0.0085

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
GEORGIA-PACIFIC CHEMICALS LLC	1429 E LUFKIN AVE	LUFKIN	Texas	75901	0.008	0.0005	0.0085	0	0	0	0.0085
SHERWIN-WILLIAMS CO	26300 FARGO AVE	BEDFORD HEIGHTS	Ohio	44146	0.0005	0.0015	0.002	0	0	0.0065	0.0085
CRODA INC	315 CHERRY LN	NEW CASTLE	Delaware	19720	0.0075	0.0005	0.008	0	0	0	0.008
TARR ACQUISITION LLC	2429 N BORTHWICK AVE	PORTLAND	Oregon	97227	0.008	0	0.008	0	0	0	0.008
INTERSTATE CHEMICAL CO INC	23247 W EAMES ST	CHANNAHON	Illinois	60410	0.0025	0.0055	0.008	0	0	0	0.0075
DSM DESOTECH INC	1101 HWY 27 S	STANLEY	North Carolina	28164	0	0.0075	0.0075	0	0	0	0.0075
NEW DAWN MANUFACTURING CO	16001 TRADE ZONE AVE	UPPER MARLBORO	Maryland	20774	0.0075	0	0.0075	0	0	0	0.0075
RUSTOLEUM CORP	7850 OHIO RIVER RD	LESAGE	West Virginia	25537	0.0025	0.005	0.0075	0	0	0	0.0075
3M COTTAGE GROVE CENTER	10746 INNOVATION RD	COTTAGE GROVE	Minnesota	55016	0	0.002	0.002	0	0	0.0055	0.0075
SHERWIN-WILLIAMS CO	12401 INDUSTRIAL BLVD	VICTORVILLE	California	92392	0.0035	0.004	0.0075	0	0	0	0.0075
DYNALOY LLC	6445 OLIVIA LN	INDIANAPOLIS	Indiana	46226	0.0015	0.006	0.0075	0	0	0	0.0075
LUBRIZOL CORP PAINESVIL LE PLANT	155 FREEDOM RD	PAINESVILLE	Ohio	44077	0.0065	0.001	0.0075	0	0	0	0.0075
SCOT LABORATORIES	16841 PARK CIR DR	CHAGRIN FALLS	Ohio	44023	0.0025	0	0.0025	0	0.0025	0.0025	0.0075
CLOROX PRODUCTS MANUFACTURING CO	17 LAKE MIRROR RD	FOREST PARK	Georgia	30297	0.0035	0.0035	0.007	0	0	0.0005	0.0075
CUSTOM CHEMICAL FORMULATORS	8707 MILLERGROVE DR	SANTA FE SPRINGS	California	90670	0.007	0	0.007	0	0	0	0.007
HENKEL CORP	923 MAULDIN RD	CALHOUN	Georgia	30701	0	0.0065	0.0065	0	0	0	0.0065
UNIVAR USA INC - SAN JOSE	2256 JUNCTION AVE	SAN JOSE	California	95131	0.003	0.0035	0.0065	0	0	0	0.0065
DOW CHEMICAL JOLIET SITE	26332 S FRONTAGE RD W	CHANNAHON	Illinois	60410	0	0.0065	0.0065	0	0	0	0.0065
KEYSTONE CEMENT CO	RT 329	BATH	Pennsylvania	18014	0	0.0065	0.0065	0	0	0	0.0065
PROCTER & GAMBLE MANUFACTURING CO	1900 KANSAS AVE	KANSAS CITY	Kansas	66105	0.006	0	0.006	0	0	0	0.006
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	546 W ABBOTT ST	INDIANAPOLIS	Indiana	46225	0	0.006	0.006	0	0	0	0.006
AROMATIC TECHNOLOGIES INC	130 INDUSTRIAL PKWY	SOMERVILLE	New Jersey	08876	0.0055	0	0.0055	0	0	0	0.0055
CALLAHAN CHEMICAL CO	200 INDUSTRIAL AVE	RIDGEFIELD PARK	New Jersey	07660	0.003	0.0025	0.0055	0	0	0	0.0055
ACTEGA RADCURE INC	5 MANSARD CT	WAYNE	New Jersey	07470	0.0025	0.0025	0.005	0	0	0	0.005
INDEPENDENT INK INC	14705 S AVALON BLVD	GARDENA	California	90248	0.0025	0.0025	0.005		0	0	0.005
US ECOLOGY TEXAS INC	3277 COUNTY RD 69	ROBSTOWN	Texas	78380	0.0025	0	0.0025	0	0.0025	0	0.005
CUSTOM SYNTHESIS LLC	1704 DENVER RD	ANDERSON	South Carolina	29625	0.0025	0.0025	0.005	0	0	0	0.005
WORWAG COATINGS LLC NA	3420 KOSSUTH ST	LAFAYETTE	Indiana	47905	0.0025	0.0025	0.005		0	0	0.005
CR BRANDS INC	141 VENTURE BLVD	SPARTANBURG	South Carolina	29306	0.0025	0.0025	0.005	0	0	0	0.005

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
CENTRAL SOLUTIONS INC	401 FUNSTON RD	KANSAS CITY	Kansas	66115	0	0	0	0	0.005	0	0.005
UNIVAR USA INC LAKEVILLE	21675 HAMBURG AVE	LAKEVILLE	Minnesota	55044	0.0025	0.0025	0.005	0	0	0	0.005
CAR CARE PACKAGING LLC	1910 S STATE AVE	INDIANAPOLIS	Indiana	46203	0.0005	0.0045	0.005	0	0	0	0.005
SHIELD PACKAGING CO INC	50 OXFORD AVE	DUDLEY	Massachusetts	01571	0.0025	0.0025	0.005	0	0	0	0.005
GOODWIN CO	12361 MONARCH ST	GARDEN GROVE	California	92841	0.0045	0.0005	0.005	0	0	0	0.005
C P INC	196 S WATER	CONNERSVILLE	Indiana	47331	0.0025	0.0025	0.005	0	0	0	0.005
INTEL CORP - RONLER ACRES CAMPUS	2501 NW 229TH ST	HILLSBORO	Oregon	97124	0.0025	0.0025	0.005	0	0	0	0.005
BRAIN POWER INC	4470 SW 74TH AVE	MIAMI	Florida	33155	0.0025	0.0025	0.005	0	0	0	0.005
SARTOMER CO INC	601 TIGHTSQUEEZE INDUSTRIAL RD	CHATHAM	Virginia	24531	0.0025	0.0025	0.005	0	0	0	0.005
CHAMPION PACKAGING & DISTRIBUTING INC	1840 INTERNATIONALE PKWY	WOODRIDGE	Illinois	60517	0.0025	0.0025	0.005	0	0	0	0.005
INTEL CORP	4500 S DOBSON RD MAIL STOP: OC4	CHANDLER	Arizona	85248	0.0025	0.0025	0.005	0	0	0	0.005
SARTOMER CO INC	610 S BOLMAR ST	WEST CHESTER	Pennsylvania	19382	0.0025	0.0025	0.005	0	0	0	0.005
ASHLAND DISTRIBUTION CO	FREEPORT CENTER BUILDING 12 PO	CLEARFIELD	Utah	84016	0.0015	0.003	0.0045	0	0	0	0.0045
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1215 NELSON BLVD	ROCKFORD	Illinois	61104	0	0.0045	0.0045	0	0	0	0.0045
KING INDUSTRIES INC	SCIENCE RD	NORWALK	Connecticut	06852	0.002	0.002	0.004	0	0	0	0.004
COGNIS CORP -- CHARLOTT E PLANT	3300 WESTINGHOUSE BLVD	CHARLOTTE	North Carolina	28273	0.004	0	0.004	0	0	0	0.004
OMNIUM	1280 IMPERIAL RD	HAMPTON	Iowa	50441	0.0025	0.0015	0.004	0	0	0	0.004
CALLAHAN CHEMICAL CO	18 INDUSTRIAL RD	WALPOLE	Massachusetts	02081	0.002	0.0015	0.0035	0	0	0	0.0035
UNIVAR USA INC HOUSTON	777 BRISBANE ST	HOUSTON	Texas	77061	0.0035	0	0.0035	0	0	0	0.0035
PENRAY COMPANIES INC	1801 ESTES AVE	ELK GROVE VILLAGE	Illinois	60007	0.0005	0.0005	0.001	0.0025	0	0	0.0035
ENGINEERED POLYMER SOLUTIONS INC	5501 E SLAUSON AVE	CITY OF COMMERCE	California	90040	0.003	0.0005	0.0035	0	0	0	0.0035
CARESTREAM HEALTH COLORADO	2000 HOWARD SMITH AVE W C42	WINDSOR	Colorado	80550	0.0035	0	0.0035	0	0	0	0.0035
BAKER PETROLITE BAYPORT FACILI TY	13200 BAYPARK RD	PASADENA	Texas	77507	0.0035	0	0.0035	0	0	0	0.0035
PENRAY COMPANIES INC	440 DENNISTON CT	WHEELING	Illinois	60090	0.0005	0.0005	0.001	0.0025	0	0	0.0035
BAKER PETROLITE	5135 BOYLAN ST	BAKERSFIELD	California	93308	0.0025	0.0005	0.003	0	0	0	0.003
DYNASOL INC	330 PINE ST	CANTON	Massachusetts	02021	0.003	0	0.003	0	0	0	0.003
NORLITE CORP	628 S SARATOGA ST	COHOES	New York	12047	0.003	0	0.003	0	0	0	0.003
FORD MOTOR CO DEARBORN DIVERSIFIED MANUFACTURING	3001 MILLER RD	DEARBORN	Michigan	48121	0.003	0	0.003	0	0	0	0.003

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
CALLAHAN CHEMICAL CO	BROAD ST & FILMORE AVE	PALMYRA	New Jersey	08065	0.0015	0.0015	0.003	0	0	0	0.003
BAKER PETROLITE CORP	16950 WALLISVILLE RD	HOUSTON	Texas	77049	0.0005	0.002	0.0025	0	0	0.0005	0.003
HEXION SPECIALTY CHEMICALS INC	2801 LYNWOOD RD	LYNWOOD	California	90262	0.0005	0.0025	0.003	0	0	0	0.003
MAINTEX INC	13300 E NELSON AVE	CITY OF INDUSTRY	California	91746	0.0025	0	0.0025	0	0	0	0.0025
CLEAN HARBORS ENVIRONMENTAL SERVICES INC	2247 S HWY 71	KIMBALL	Nebraska	69145	0.002	0.0005	0.0025	0	0	0	0.0025
ECP INC WOODRIDGE	11210 KATHERINE'S CROSSING SUIT	WOODRIDGE	Illinois	60517	0.0025	0	0.0025	0	0	0	0.0025
UNIVAR USA INC MEMPHIS	3909 OUTLAND RD	MEMPHIS	Tennessee	38118	0.0025	0	0.0025	0	0	0	0.0025
CR BRANDS INC	230 OLD CONVERSE RD	SPARTANBURG	South Carolina	29307	0.0025	0	0.0025	0	0	0	0.0025
MAHONING PAINT CORP	653 JONES ST	YOUNGSTOWN	Ohio	44502	0.0025	0	0.0025		0	0	0.0025
UNION SPECIALTIES INC	3 MALCOLM HOYT DR	NEWBURYPORT	Massachusetts	01950	0.0005	0.002	0.0025	0	0	0	0.0025
UNIVAR USA INC DENVER	4300 HOLLY ST	DENVER	Colorado	80216	0.0025	0	0.0025	0	0	0	0.0025
SINCLAIR WYOMING REFINING CO	100 E LINCOLN AVE	SINCLAIR	Wyoming	82334	0	0.0025	0.0025	0	0	0	0.0025
ATOTECH USA	1750 OVERVIEW DR	ROCK HILL	South Carolina	29730	0.0025	0	0.0025	0	0	0	0.0025
FINGER LAKES CHEMICAL INC	418-424 ST PAUL ST	ROCHESTER	New York	14605	0.0025	0	0.0025	0	0	0	0.0025
MALLINCKRODT BAKER INC	600 N BROAD ST	PHILLIPSBURG	New Jersey	08865	0.0025	0	0.0025	0	0	0	0.0025
CHEMTEX LABORATORIES INC	2725 ARMENTROUT DR	CONCORD	North Carolina	28025	0.0025	0	0.0025	0	0	0	0.0025
WYNNEWOOD REFINING CO	906 S POWELL	WYNNEWOOD	Oklahoma	73098	0	0.0025	0.0025	0	0	0	0.0025
BASF CORP	100 INDUSTRIAL BLVD	SEAFORD	Delaware	19973	0.0025	0	0.0025	0	0	0	0.0025
CONOCOPHILLIPS CO TREMLEY POINT TERMINAL	FOOT OF S WOOD AVE	LINDEN	New Jersey	07036	0.0025	0	0.0025	0	0	0	0.0025
CONOCOPHILLIPS MT VERNON PRODUCTS TERMINAL	15138 HWY 96	MOUNT VERNON	Missouri	65712	0	0.0025	0.0025	0	0	0	0.0025
NIACET CORP	400 47TH ST	NIAGARA FALLS	New York	14304	0.0025	0	0.0025	0	0	0	0.0025
MAGNABLEND INC-CENTRAL PLANT	1601 W HWY 287 BYPASS	WAXAHACHIE	Texas	75165	0.0025	0	0.0025		0	0	0.0025
INTEL CORP	4100 SARA RD MS RR5-491	RIO RANCHO	New Mexico	87124	0.0025	0	0.0025	0	0	0	0.0025
HERCULES INC	1111 HERCULES RD	HOPEWELL	Virginia	23860	0.0025	0	0.0025	0	0	0	0.0025
MILPORT ENTERPRISES INC	2829 S 5TH CT	MILWAUKEE	Wisconsin	53207	0	0.002	0.002	0	0	0	0.002
DELTA HOUSTON	334 TIDAL RD	DEER PARK	Texas	77536	0.0015	0	0.0015	0	0	0.0005	0.002
ASTRO CHEMICALS INC	126 MEMORIAL DR	SPRINGFIELD	Massachusetts	01104	0.0015	0.0005	0.002	0	0	0	0.002
DUPONT EKC TECHNOLOGY	2520 BARRINGTON CT	HAYWARD	California	94545	0.0005	0.0015	0.002	0	0	0	0.002
DOBER CHEMICAL CORP	14461 WAVERLY AVE	MIDLOTHIAN	Illinois	60445	0.002	0	0.002	0	0	0	0.002

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
GOODYEAR TIRE & RUBBER CO	3260 GOODYEAR BLVD	UNION CITY	Tennessee	38261	0	0.0005	0.0005	0.0015	0	0	0.002
UNIVAR USA INC- CINCINNATI OH BRANCH	4600 DUES DR	CINCINNATI	Ohio	45246	0.001	0.001	0.002	0	0	0	0.002
KELLY-MOORE PAINT CO INC	1015 COMMERCIAL ST	SAN CARLOS	California	94070	0	0.0015	0.0015	0	0	0	0.0015
HYDRITE CHEMICAL CO	7300 W BRADLEY RD	MILWAUKEE	Wisconsin	53223	0.0005	0.001	0.0015	0	0	0	0.0015
FUJIFILM HUNT CHEMICALS USA INC	900 CARNEGIE ST	ROLLING MEADOWS	Illinois	60008	0.0015	0.0005	0.002	0	0	0	0.0015
CLEAN HARBORS ARAGONITE LLC	11600 N APTUS RD	GRANTSVILLE	Utah	84029	0	0	0	0	0	0.0015	0.0015
CHEMICAL SOLVENTS INC--DENISON FACILITY	1010 OLD DENNISON AVE	CLEVELAND	Ohio	44109	0.0015	0	0.0015	0	0	0	0.0015
BAKER PETROLITE-RAYNE FACILITY	135 INDUSTRIAL DR	RAYNE	Louisiana	70578	0.0005	0.001	0.0015	0	0	0	0.0015
FIRST SOURCE WORLDWIDE LLC MILWAUKEE	11725 W FAIRVIEW AVE	MILWAUKEE	Wisconsin	53226	0.001	0	0.001	0	0	0.0005	0.0015
BUCKMAN LABORATORIES INC	1256 N MCLEAN BLVD	MEMPHIS	Tennessee	38108	0	0.0015	0.0015	0	0	0	0.0015
SHERWIN-WILLIAMS CO	404 E MALLORY AVE	MEMPHIS	Tennessee	38109	0.0005	0.0005	0.001	0	0	0	0.001
SHERWIN-WILLIAMS CO	10136 MAGNOLIA DR	OLIVE BRANCH	Mississippi	38654	0.0005	0.0005	0.001	0	0	0	0.001
VOLTAIX LLC	197 MEISTER AVE	BRANCHBURG	New Jersey	08876	0	0.001	0.001	0	0	0	0.001
NALCO CO	3901 TERRY ST	TEXARKANA	Texas	75501	0	0.001	0.001	0	0	0	0.001
HONEYWELL-PRESTONE PRODUCTS CORP	250 HALLS MILL RD	FREEHOLD	New Jersey	07728	0.001	0	0.001	0	0	0	0.001
BRENNTAG SOUTHEAST INC	11750 FRUEHAUF DR	CHARLOTTE	North Carolina	28273	0.0005	0.0005	0.001	0	0	0	0.001
PPG ARCHITECTURAL COATINGS	6804 ENTERPRISE DR	LOUISVILLE	Kentucky	40214	0	0.001	0.001	0	0	0	0.001
SAFETY-KLEEN SYSTEMS INC	1200 SYLVAN ST	LINDEN	New Jersey	07036	0.0005	0	0.0005	0	0	0.0005	0.001
DSM NEORESINS INC	3110 W ST RD 28	FRANKFORT	Indiana	46041	0.001	0	0.001	0	0	0	0.001
SHERWIN-WILLIAMS CO	14 INDUSTRIAL PARK	FLORA	Illinois	62839	0	0.0005	0.0005	0	0	0	0.0005
MEADWESTVACO SC LLC CHARLESTON CHEMICAL PLANT	5598 VIRGINIA AVE	NORTH CHARLESTO	South Carolina	29406	0	0.0005	0.0005	0	0	0	0.0005
NATIONAL INDUSTRIAL COATINGS INC DBA NICOAT INC	1600 GLENLAKE AVE	ITASCA	Illinois	60143	0.0005	0	0.0005	0	0	0	0.0005
LANCO MANUFACTURING CORP	URBAPONTE #5	SAN LORENZO	Puerto Rico	00754	0	0.0005	0.0005	0	0	0	0.0005
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	5060 83RD ST	SACRAMENTO	California	95826	0	0.0005	0.0005	0	0	0	0.0005
IFF AUGUSTA LTD	3005 INTERNATIONAL BLVD	AUGUSTA	Georgia	30906	0	0.0005	0.0005		0	0	0.0005
SOLITE LLC	RT 652	ARVONIA	Virginia	23004	0	0.0005	0.0005	0	0	0	0.0005
HENTZEN COATINGS,INC	6937 W MILL RD	MILWAUKEE	Wisconsin	53218	0.0005	0.0005	0.001	0	0	0	0.0005
RIKER PRODUCTS INC	4901 STICKNEY AVE	TOLEDO	Ohio	43612	0.0005	0.0005	0.001	0	0	0	0.0005

Table B-1. 2009 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
CLARIANT CORP CLEAR LAKE PLANT	9502 BAYPORT BLVD - ETOX UNIT	PASADENA	Texas	77507	0.0005	0	0.0005	0	0	0	0.0005
LAMBERTI SYNTHESIS USA INC	4001 N HAWTHORNE ST	CHATTANOOGA	Tennessee	37406	0.0005	0	0.0005	0	0	0	0.0005

a. Releases to Surface Water reported as "On-Site Releases to Surface Water."
b. Releases to Soil is the sum of reported releases to onsite and offsite releases to land treatment and other land disposal.
c. Releases to other media include reported releases to onsite and offsite groundwater and landfills.
tpy: tons per year

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
EQ DETROIT INC	1923 FREDERICK	DETROIT	Michigan	48211	0	1.8155	1.8155	0		363.538	365.3535
REXAM BEVERAGE CAN CO RE: WINSTON SALEM PLANT	4000 OLD MILWAUKEE LN	WINSTON-SALEM	North Carolina	27107	31.218	157.5655	188.7835	0	0	0	188.7835
BALL METAL BEVERAGE CONTAINER CORP	8935 POCAHONTAS TRAIL J	WILLIAMSBURG	Virginia	23185	28.5	150	178.5	0	0	0	178.5
SANYO SOLAR (USA) LLC	970 E 236TH ST	CARSON	California	90745	0.0005	7.184275	7.184775	0		168.4595129	175.6442879
BALL METAL BEVERAGE CONTAINER CORP	12340 TOWNSHIP RD 99 E	FINDLAY	Ohio	45840	25	130	155	0		0	155
CROWN FOOD PACKAGING	2929 W BRIDGE ST	OWATONNA	Minnesota	55060	30.746	91.9	122.646	0		0	122.646
REXAM BEVERAGE CAN CO RE: FREMONT PLANT	2145 CEDAR	FREMONT	Ohio	43420	15.931	90.3915	106.3225	0	0	0	106.3225
REXAM BEVERAGE CAN CO RE: BISHOPVILLE SC FACILITY	609 COUSAR ST	BISHOPVILLE	South Carolina	29010	14.5145	82.2475	96.762	0	0	0	96.762
CROWN CORK & SEAL CO (USA) INC CROWN CLOSURE DIV	3011 BIRCH DR	WEIRTON	West Virginia	26062	35.9645	60.1235	96.088	0	0	0	96.088
BALL METAL BEVERAGE CONTAINER CORP	1900 BARNES ST	REIDSVILLE	North Carolina	27320	14.5	80	94.5	0	0	0	94.5
BMW MANUFACTURING CO LLC	1400 HWY 101 S	GREER	South Carolina	29651	1.8155	89.397	91.2125	0		0	91.2125
REXAM BEVERAGE CAN CO RE: EVA STREET ST PAUL MN	139 EVA ST	SAINT PAUL	Minnesota	55107	13.4245	76.0735	89.498	0	0	0	89.498
REXAM BEVERAGE CAN CO KENT WA FACILITY	1220 N SECOND AVE	KENT	Washington	98032	12.462	70.619	83.081	0	0	0	83.081
CROWN BEVERAGE PACKAGING	1202 FONES RD	OLYMPIA	Washington	98501	19.4225	58.267	77.6895	0	0	0	77.6895
REXAM BEVERAGE CAN CO OLIVE BRANCH FACILITY	10800 MARINA DR	OLIVE BRANCH	Mississippi	38654	20.551	56.273	76.824	0	0	0	76.824
BALL CONTAINER LLC COLUMBUS CAN PLANT	350 MCCORMICK BLVD	COLUMBUS	Ohio	43213	11.5	65	76.5	0	0	0	76.5
SILGAN CONTAINERS MANUFACTURING CORP	300 N FAIL RD	LA PORTE	Indiana	46350	12.85	55.5	68.35	0	0	0	68.35
AURORA CASKET CO INC	10944 MARSH RD	AURORA	Indiana	47001	0	68.17917	68.17917	0	0	0	68.17917
REXAM BEVERAGE CAN CO RE : CHICAGO PLANT	1101 W 43RD ST	CHICAGO	Illinois	60609	14.2105	53.7945	68.005	0	0	0	68.005
REXAM BEVERAGE CAN CO RE: WHITEHOUSE PLANT	10444 WATERVILLE	WHITEHOUSE	Ohio	43571	23.1975	44.6385	67.836	0	0	0	67.836
FORD MOTOR CO DEARBORN TRUCK PLANT	3001 MILLER RD	DEARBORN	Michigan	48121	1.5	65	66.5	0		0	66.5
CROWN BEVERAGE PACKAGING	1035 E NORTH ST	BRADLEY	Illinois	60915	16.0195	48.058	64.0775	0	0	0	64.0775
CROWN BEVERAGE PACKAGING	GLEN & SHEPARD ST	LAWRENCE	Massachusetts	01843	15.6815	47.0445	62.726	0	0	0	62.726
REXAM BEVERAGE CAN CO LONGVIEW FACILITY	1001 FISHER RD	LONGVIEW	Texas	75604	14.4385	43.014	57.4525	0	0	0	57.4525
WHIRLPOOL CORP MARION D IVISION	1300 MARION-AGOSTA RD	MARION	Ohio	43302	0.05	57.1625	57.2125	0		0	57.2125
BALL CONTAINER LLC ROME CAN PLANT	110 MCC DR	ROME	Georgia	30161	33.5	22	55.5	0	0	0	55.5
METAL CONTAINER CORPORTION - WINDSOR CAN PLANT	1201 METAL CONTAINER CT	WINDSOR	Colorado	80550	14.9135	40.085	54.9985	0		0	54.9985

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
FORD MOTOR COMPANY--KANSAS CITY ASSEMBLY PLANT	8121 E US HWY 69	CLAYCOMO	Missouri	64119	1.5	50	51.5	0		0.013	51.513
CROWN BEVERAGE PACKAGING	620 N 4TH ST	WORLAND	Wyoming	82401	12.782	38.346	51.128	0	0	0	51.128
HONDA OF AMERICA MANUFACTURING INC	11000 STATE RT 347	EAST LIBERTY	Ohio	43319	2.2	45	47.2	0		0.191	47.391
METAL CONTAINER CORP - ARNOLD CAN PLANT	42 TENBROOK INDUSTRIAL	ARNOLD	Missouri	63010	17.9475	28.3695	46.317	0		0	46.317
BWAY CORP	1601 VALDOSTA HWY	HOMERVILLE	Georgia	31634	37.053	8.9105	45.9635	0	0	0	45.9635
MEMC PASADENA INC	3000 N S ST	PASADENA	Texas	77503	12.77	8.793	21.563	0	0	23.7725	45.3355
REXAM BEVERAGE CAN CO CHATSWORTH FACILITY	20730 PRAIRIE ST	CHATSWORTH	California	91311	8.9005	35.513	44.4135	0	0	0	44.4135
EDSAL MANUFACTURING CO INC	4400 S PACKER	CHICAGO	Illinois	60609	0	43.1447	43.1447	0		0	43.1447
HONDA OF AMERICA MANUFACTURING INC	24000 HONDA PKY	MARYSVILLE	Ohio	43040	3.8	38.5	42.3	0		0.2335	42.5335
RR DONNELLEY	2347 KRATZER RD	HARRISONBURG	Virginia	22802	38.798	3.5855	42.3835	0		0	42.3835
METAL CONTAINER CORP - NEWBURGH CAN PLANT	130 BREUNIG RD	NEW WINDSOR	New York	12553	11.4875	30.7785	42.266	0		0	42.266
REXAM BEVERAGE CAN CO PHOENIX FACILITY	211 N 51ST AVE	PHOENIX	Arizona	85043	5.2035	32.9575	38.161	0	0	0	38.161
BALL METAL BEVERAGE CONTAINER CORP	8500 W TOWER AVE	MILWAUKEE	Wisconsin	53224	29	9	38	0		0	38
MAGNA STEYR NORTH AMERICA	3800 STICKNEY AVE	TOLEDO	Ohio	43608	4.65	33	37.65	0		0	37.65
CHICAGO HEIGHTS STEEL	211 E MAIN ST	CHICAGO HEIGHTS	Illinois	60411	7.496	29.984	37.48	0	0	0	37.48
ROCKY MOUNTAIN METAL CONTAINER	17755 W 32ND AVE	GOLDEN	Colorado	80401	29.5	6	35.5	0	0	1.9	37.4
CROWN BEVERAGE PACKAGING	2501 N FRAZIER ST	CONROE	Texas	77305	30.8465	5.0285	35.875	0	0	0	35.875
SUBARU OF INDIANA AUTOMOTIVE INC	5500 STATE RD 38E	LAFAYETTE	Indiana	47905	0.355	35.335	35.69	0		0	35.69
CHRYSLER JEFFERSON NORTH ASSEMBLY PLANT	2101 CONNOR AVE	DETROIT	Michigan	48215	4.1	31.5	35.6	0		0.003	35.603
NISSAN NA INC SMYRNA MANUFACTURING PLANT	983 NISSAN DR	SMYRNA	Tennessee	37167	1.307	34.2725	35.5795	0	0	0	35.5795
FORD MOTOR CO KENTUCKY TRUCK PLANT	3001 CHAMBERLAIN LN	LOUISVILLE	Kentucky	40241	2.4	33	35.4	0		0.13	35.53
GREIF PACKAGING LLC	7425 INDUSTRIAL RD	FLORENCE	Kentucky	41042	1.7475	33.1985	34.946	0		0.5	35.446
SILGAN CONTAINERS MANUFACTURING CORP	1400 PLOVER RD PO BOX 9	PLOVER	Wisconsin	54467	7.6	27.75	35.35	0	0	0	35.35
METAL CONTAINER CORP - JACKSONVILLE CAN PLANT	1100 N ELLIS RD	JACKSONVILLE	Florida	32254	6.952	28.0305	34.9825	0		0	34.9825
CROWN FOOD PACKAGING	8801 CITATION RD	BALTIMORE	Maryland	21221	8.5165	25.5495	34.066	0		0	34.066
CROWN BEVERAGE PACKAGING	12910 JESS PIRTLE BLVD	SUGAR LAND	Texas	77478	28.1175	4.2175	32.335	0	0	0	32.335
METAL CONTAINER CORP - MIRA LOMA CAN PLANT	10980 INLAND AVE	MIRA LOMA	California	91752	28.5415	3.7115	32.253	0		0	32.253
BALL METAL BEVERAGE CONTAINER CORP	500 CRENSHAW BLVD	TORRANCE	California	90503	29	3	32	0	0	0	32
BERENFIELD CONTAINERS SE LTD	12180 UNIVERSITY CITY BL	HARRISBURG	North Carolina	28075	0	31.510045	31.510045	0	0	0	31.510045
SENECA FOODS CORP	801 SAUK AVE	BARABOO	Wisconsin	53913	0	30.575	30.575	0	0	0.855	31.43

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
THERMA-TRU CORP	601 RE JONES RD	BUTLER	Indiana	46721	0	29.7775	29.7775	0	0	0	29.7775
BALL METAL BEVERAGE CONTAINER CORP	4525 INDIANA ST	GOLDEN	Colorado	80403	19.5	9.5	29	0	0	0	29
BALL METAL BEVERAGE CONTAINER CORP	501 N SIXTH ST	MONTICELLO	Indiana	47960	12.5	16	28.5	0	0	0	28.5
HUNTSMAN PETROCHEMICAL LLC PORT NECHES PERFORMANCE PRODUCTS	6001 HWY 366	PORT NECHES	Texas	77651	0.141	0	0.141	0	0	27.6245	27.7655
CROWN BEVERAGE PACKAGING	380 CALLE FABRIL ST KM 12	CAROLINA	Puerto Rico	00985	6.91	20.7295	27.6395	0	0	0	27.6395
S B FOOT TANNING CO	805 BENCH ST	RED WING	Minnesota	55066	0	27.586	27.586	0		0	27.586
PPG INDUSTRIES INC-OAK CREEK	10800 S 13TH ST	OAK CREEK	Wisconsin	53154	25.224	0.407	25.631	0	0	1.208	26.839
DEXTER CHASSIS GROUP PLANT 55	501 S MILLER DR	WHITE PIGEON	Michigan	49099	0	26.3225	26.3225	0	0	0.1285	26.451
MERCEDES-BENZ US INTERNATIONAL INC	1 MERCEDES DR	VANCE	Alabama	35490	0.366025	25.58058	25.946605	0	0	0	25.946605
INGERSOLL-RAND CO STEELCRAFT DIV	9017 BLUE ASH RD	CINCINNATI	Ohio	45242	5.6855	19.8995	25.585	0	0	0	25.585
ALLIED TUBE & CONDUIT CORP	16100 S LATHROP AVE	HARVEY	Illinois	60426	16.0515	9.4675	25.519	0	0	0	25.519
BWAY CORP	3200 S KILBOURN AVE	CHICAGO	Illinois	60623	6.818275	18.679745	25.49802	0		3.55271E-15	25.49802
GM TRUCK GROUP FLINT ASSEMBLY PLANT VAN SLYKE COMPLEX	G-3100 VAN SLYKE RD	FLINT	Michigan	48551	0.45	24.5	24.95	0	0	0.26	25.21
WHIRLPOOL CORP - CLYDE DIV	119 BIRDSEYE ST	CLYDE	Ohio	43410	0.718	22.64	23.358	0		1.2415	24.5995
ROLL COATER INC	1950 E MAIN ST	GREENFIELD	Indiana	46140	0	24.2775	24.2775	0	0	0	24.2775
NYW REALTY LLC/ HANOVER	500 E MIDDLE ST	HANOVER	Pennsylvania	17331	0	24.2	24.2	0	0	0	24.2
TOYOTA MOTOR MANUFACTURING INDIANA INC	4000 TULIP TREE DR	PRINCETON	Indiana	47670	10.3485	13.83	24.1785	0	0	0	24.1785
CROWN BEVERAGE PACKAGING	100 EVANS ROW	CHERAW	South Carolina	29520	21.398	2.7455	24.1435	0	0	0	24.1435
BALL METAL BEVERAGE CONTAINER CORP	4700 WHITEWAY DR	TAMPA	Florida	33617	9	15	24	0	0	0	24
HONDA MANUFACTURING OF ALABAMA LLC	1800 HONDA DR	LINCOLN	Alabama	35096	0.4995	23.484	23.9835	0		0	23.9835
CROWN BEVERAGE PACKAGING	1501 ST JAMES ST	LA CROSSE	Wisconsin	54603	22.1385	1.6605	23.799	0	0	0	23.799
GENERAL MOTORS LANSING DELTA TOWNSHIP	8175 MILLETT HWY	LANSING	Michigan	48917	0.5	23	23.5	0		0.1415	23.6415
S D WARREN CO	89 CUMBERLAND ST	WESTBROOK	Maine	04098	0.0025	23.5	23.5025	0.0835	0	0	23.586
GREIF PACKAGING LLC	4300 W 130TH ST	ALSIP	Illinois	60803	1.99	21.267	23.257	0	0	0	23.257
BALL METAL FOOD CONTAINER CORP	3010 BIRCH DR	WEIRTON	West Virginia	26062	14.5	8	22.5	0	0	0	22.5
CROWN BEVERAGE PACKAGING	195 CROWN RD	BATESVILLE	Mississippi	38606	19.5525	2.933	22.4855	0	0	0	22.4855
WHIRLPOOL CORP FINDLAY DIV	4901 N MAIN ST	FINDLAY	Ohio	45840	2.2375	20.1375	22.375	0		0	22.375
AVX CORP MYRTLE BEACH	801 17TH AVE S	MYRTLE BEACH	South Carolina	29577	3.3725	2.492	5.8645	0	0	16.405	22.2695
MOBIL CHEMICAL CO	41501 WOLVERINE RD	SHAWNEE	Oklahoma	74804	0.375	21.5	21.875	0		0.0025	21.8775

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AMES TRUE TEMPER INC	1500 S CAMERON ST	HARRISBURG	PENNSYLVANI	17104	1.082	20.557	21.639	0	0	0	21.639
NORTH COAST CONTAINER CORP	8806 CRANE AVE	CLEVELAND	Ohio	44105	0	21.231	21.231	0	0	0	21.231
BALL CONTAINER LLC	105 E BLACKHAWK DR	FORT ATKINSON	Wisconsin	53538	3.85	17	20.85	0	0	0	20.85
AIR SYSTEM COMPONENTS LP	900 DARR PARK DR	PONCA CITY	Oklahoma	74601	0.209	20.4325	20.6415	0		0	20.6415
PELLA CORP	102 MAIN ST	PELLA	Iowa	50219	0.125	20.2705	20.3955	0	0	0	20.3955
BALL METAL BEVERAGE CONTAINER CORP	11 ADAMS RD	SARATOGA SPRING	New York	12866	3.35	17	20.35	0	0	0	20.35
MID-AMERICA STEEL DRUM CO IN C	8570 S CHICAGO RD	OAK CREEK	WISCONSIN	53154	0	20.3365	20.3365	0		0	20.3365
BATESVILLE MANUFACTURING INC	175 MONOGARD DR	MANCHESTER	Tennessee	37355	1.0165	19.309	20.3255	0		0.0045	20.33
CECO DOOR PRODUCTS	9159 TELECOM DR	MILAN	Tennessee	38358	10.0825	10.0825	20.165	0	0	0	20.165
BALL METAL BEVERAGE CONTAINER CORP	2400 HUNTINGTON DR	FAIRFIELD	California	94533	7.5	12	19.5	0	0	0	19.5
WAYNE DISPOSAL INC	49350 N I-94 SERVICE DR	BELLEVILLE	MICHIGAN	48111	0	0.004	0.004	0	0	19.082	19.086
CROWN BEVERAGE PACKAGING	400 N WALNUT ST	CRAWFORDSVILLE	Indiana	47933	13.8125	5.1575	18.97	0	0	0	18.97
HALLSTAR CO ESTER SOLUTIONS FACILITY	5851 W 73RD ST	BEDFORD PARK	Illinois	60638	1.167	0.1455	1.3125	0		17.3205	18.633
BALL METAL BEVERAGE CONTAINER CORP	1001 N FM 3083 E	CONROE	Texas	77303	14	4.55	18.55	0	0	0	18.55
THOMAS BUILT BUSES INC	715 W FAIRFIELD RD	HIGH POINT	NORTH CAROL	27263	0	17.92	17.92	0	0	0	17.92
UNION CARBIDE CORP SEADRIFT PLANT	7501 N HWY 185	SEADRIFT	Texas	77983	13.946	3.5265	17.4725	0	0	0.064	17.5365
AIR SYSTEM COMPONENTS LP	3301 N MAIN ST	TARBORO	North Carolina	27886	0.1745	16.585	16.7595	0		0.3225	17.082
NASHVILLE WIRE PRODUCTS	1604 COUNTY HOSPITAL RD	NASHVILLE	Tennessee	37218	1.7	15	16.7	0		0	16.7
ALSTOM POWER INC PLATE FORMED PRODUCTS DIV	911 W MAIN ST	CHATTANOOGA	Tennessee	37402	16.67	0	16.67	0	0	0	16.67
OLDCASTLE BUILDING ENVELOPE TEXAS FACILITY	803 AIRPORT RD	TERRELL	Texas	75160	3.2115	13.386	16.5975	0	0	0	16.5975
SPECTRUM METAL FINISHING	535 BEV RD	YOUNGSTOWN	Ohio	44512	0.33	16.2	16.53	0	0	0.01	16.54
TOKICO (USA) INC	301 MAYDE RD	BEREA	Kentucky	40403	0.341	16.1255	16.4665	0	0	0	16.4665
AGY AIKEN LLC	2556 WAGENER RD	AIKEN	South Carolina	29801	10.0075	3.102	13.1095	0		3.3325	16.442
SEIDEL TANNING CORP	1306 E MEINECKE AVE	MILWAUKEE	Wisconsin	53212	0	15.463	15.463	0	0	0	15.463
METAL INDUSTRIES INC - BUSHNELL	400 W WALKER AVE	BUSHNELL	Florida	33513	0.075	14.7885	14.8635	0	0	0	14.8635
EASTMAN CHEMICAL CO TEXAS OPERATIONS	300 KODAK BLVD	LONGVIEW	Texas	75602	12.052	2.5015	14.5535	0	0.0205	0	14.574
NEW UNITED MOTOR MANUFACTURING INC	45500 FREMONT BLVD MAIL	FREMONT	California	94538	14.564	0	14.564	0		0	14.564
MPM SILICONES LLC	3500 S STATE RT 2	FRIENDLY	West Virginia	26146	2.193	0.0035	2.1965	9.7605	0	2.571	14.528
USS - CLAIRTON WORKS	400 STATE ST	CLAIRTON	Pennsylvania	15025	14.5	0	14.5	0	0	0	14.5
LAKESIDE LITHOGRAPHY LLC	1600 S LAFLIN ST	CHICAGO	Illinois	60608	1.125	13.15	14.275	0	0	0	14.275

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
HART & COOLEY INC	4910 MOORES MILL RD	HUNTSVILLE	Alabama	35811	0.8045	12.8325	13.637	0		0.564	14.201
JOHNSON WELDED PRODUCTS INC	625 S EDGEWOOD AVE	URBANA	Ohio	43078	0	14.1725	14.1725	0	0	0	14.1725
BEDFORD MATERIALS CO INC	7676 ALLEGHENY RD	MANNS CHOICE	Pennsylvania	15550	1.403	12.701	14.104	0	0	0	14.104
BALL METAL BEVERAGE CONTAINER CORP	95 BALLARD RD	MIDDLETOWN	New York	10940	6.5	7.5	14	0	0	0	14
QUAD/GRAPHICS INC	1900 W SUMNER ST	HARTFORD	Wisconsin	53027	13.5	0.435	13.935	0		0	13.935
BEMIS MANUFACTURING CO PLANT B	300 MILL ST	SHEBOYGAN FALLS	Wisconsin	53085	0	13.9125	13.9125	0		0	13.9125
SILGAN WHITE CAP CORP	2201 W MARYLAND ST	EVANSVILLE	Indiana	47710	11.15	2.75	13.9	0	0	0	13.9
CROWN FOOD PACKAGING	5201 ENTERPRISE BLVD	TOLEDO	Ohio	43612	3.457	10.3605	13.8175	0	0	0	13.8175
GERSTENSLAGER CO	1425 E BOWMAN ST	WOOSTER	Ohio	44691	0.4135	13.3765	13.79	0		0.0045	13.7945
ROYAL MOULDINGS LTD; MARION VIRGINIA	135 BEAR CREEK RD	MARION	Virginia	24354	0.6885	13.076	13.7645	0	0	0	13.7645
TOPPAN INTERAMERICA INC	1131 HWY 155 S	MC DONOUGH	Georgia	30253	0	13.7	13.7	0	0	0	13.7
M&B HANGERS	1313 PKWY DR SE	LEEDS	Alabama	35094	2.732	10.929	13.661	0		0	13.661
KNAPHEIDE MANUFACTURING CO	1848 WESTPHALIA STRASS	QUINCY	Illinois	62305	0.175	13.4385	13.6135	0		0	13.6135
CROWN FOOD PACKAGING	1650 BROADWAY	HANOVER	Pennsylvania	17331	3.382	10.1465	13.5285	0		0	13.5285
NUCOR VULCRAFT GROUP GRAPELAND DIV	175 COUNTY RD 2345	GRAPELAND	Texas	75844	0.174	13.333	13.507	0	0	0	13.507
BALL METAL BEVERAGE CONTAINER CORP	6600 WILL ROGERS BLVD	FORT WORTH	Texas	76140	5.5	8	13.5	0	0	0	13.5
PENN COLOR INC	2755 BERGEY RD	HATFIELD	Pennsylvania	19440	0.176	0.058	0.234	0	0	13.2355	13.4695
FLINT HILLS RESOURCES LP - WEST PLANT	2825 SUNTIDE RD	CORPUS CHRISTI	Texas	78410	0.0075	0	0.0075	0	0	13.38	13.3875
DECORATIVE PANELS INTERNATIONA L	2900 HILL AVE	TOLEDO	Ohio	43607	13.32944	0	13.32944	0		0	13.32944
L A DARLING CO - PIGGOTT AR FACILITY	HWY 49 S	PIGGOTT	Arkansas	72454	0.152	13.158	13.31	0		0	13.31
TRI VULCRAFT OF NEW YORK INC	5362 RAILROAD ST	CHEMUNG	New York	14825	5.101	7.1315	12.2325	0	0	0.666	12.8985
BALL METAL BEVERAGE CONTAINER CORP	91-320 KOMOHANA ST	KAPOLEI	Hawaii	96707	2.3	10.5	12.8	0	0	0	12.8
3M CO - GUIN	6675 US HWY 43	GUIN	Alabama	35563	0.001	12.75	12.751	0	0	0	12.751
TOYOTA MOTOR MANUFACTURING KENTUCKY INC	1001 CHERRY BLOSSOM W/	GEORGETOWN	Kentucky	40324	0.375	12.302	12.677	0		0	12.677
AMERICAN TRIM LLC	1501 W MICHIGAN ST	SIDNEY	Ohio	45365	0	12.659	12.659	0	0	0	12.659
KEYMARK CORP OF FLORIDA	2540 KNIGHTS STATION RD	LAKELAND	Florida	33810	0.619	11.7595	12.3785	0	0	0	12.3785
VESTAL MANUFACTURING ENTERPRISES INC	177 INDUSTRIAL PARK RD	SWEETWATER	Tennessee	37874	12.168	0	12.168	0		0	12.168
GM TRUCK GROUP FORT WAYNE ASSEMBLY	12200 LAFAYETTE CENTER	ROANOKE	Indiana	46783	0.65	11.5	12.15	0		0	12.15
NOVELIS CORP	390 GRISWOLD ST NE	WARREN	Ohio	44483	3.543	8.579	12.122	0	0	0	12.122
BERENFIELD CONTAINERS INC MASON	1229 CASTLE DR	MASON	Ohio	45040	0.125	11.6705	11.7955	0	0	0	11.7955

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
HOWARD FINISHING LLC	32565 DEQUINDRE	MADISON HEIGHTS	Michigan	48071	0.0025	11.751	11.7535	0	0	0	11.7535
SILGAN CONTAINERS MANUFACTURING CORP	305 W N ST	MOUNT VERNON	Missouri	65712	2.35	9.327	11.677	0	0	0	11.677
FRANKLIN INVESTMENT CORP	600 ATLANTIC AVE	FRANKLIN	Pennsylvania	16323	11.6	0	11.6	0		0	11.6
CHICAGO STEEL CONTAINER CORP	1846 S KILBOURN AVE	CHICAGO	Illinois	60623	1.453	9.7415	11.1945	0	0	0.25	11.4445
MEYER STEEL DRUM INC	2000 S KILBOURN AVE	CHICAGO	Illinois	60623	1.247	10.09	11.337	0		0	11.337
RINECO	1007 VULCAN RD- HASKELL	BENTON	Arkansas	72015	0.0495	0	0.0495	0	0	11.25	11.2995
CARRY-ON TRAILER CORP	101 JOE HARVEY ST	LAVONIA	GEORGIA	30553	0	11.244	11.244	0	0	0	11.244
SHAMROCK TECHNOLOGIES	FOOT OF PACIFIC ST	NEWARK	NEW JERSEY	07114	0	0	0	0		11.1435	11.1435
FORD MOTOR COMPANY-WAYNE ASSEMBLY	37625 MICHIGAN AVE	WAYNE	Michigan	48184	0.125	11	11.125	0		0	11.125
PRECOAT METALS	1095 MENDELL DAVIS DR	JACKSON	Mississippi	39272	10.083	0.9495	11.0325	0	0	0	11.0325
BOEING COMMERCIAL AIRPLANE GROUP - EVERETT	3003 W CASINO RD	EVERETT	Washington	98204	2	9	11	0		0.0175	11.0175
PHOENIX COLOR CORP	18249 PHOENIX DR	HAGERSTOWN	MARYLAND	21742	11	0	11	0	0	0	11
GEA BPO LLC	301 N CURRY PIKE	BLOOMINGTON	Indiana	47404	0	11	11	0	0	0	11
PROFESSIONAL DISPOSABLES INTERNATIONAL INC	TWO NICE-PAK PARK	ORANGEBURG	New York	10962	0.10232	0.032815	0.135135	0		10.8205	10.955635
TRILLA ST LOUIS CORP	2391 CASSENS DR	FENTON	MISSOURI	63026	1.59594	8.216745	9.812685	0	0	1.13675	10.949435
CARRY-ON TRAILER CORP	931 INDUSTRIAL BLVD	MEXIA	TEXAS	76667	0	10.7145	10.7145	0	0	0	10.7145
MAVERICK TUBE LLC DBA TENARISCONROE	699 FM 3083	CONROE	TEXAS	77301	0.423225	10.1492388	10.5724638	0	0	0	10.5724638
ACME FINISHING CO INC	1595 E OAKTON ST	ELK GROVE VILLAGE	Illinois	60007	2.089	8.356	10.445	0	0	0	10.445
STATE INDUSTRIES INC	500 TENNESSEE WALTZ PK	ASHLAND CITY	TENNESSEE	37015	0.104	10.3115	10.4155	0	0	0	10.4155
ANDERSON TULLY LUMBER CO WALTERSVILLE LUMBER MILL	1725 N WASHINGTON ST	VICKSBURG	MISSISSIPPI	39181	10.4095	0	10.4095	0		0	10.4095
3M CO - CORDOVA	22614 RT 84 N	CORDOVA	Illinois	61242	0.7	0.065	0.765	9.5	0	5.55112E-16	10.265
NUCOR CORP VULCRAFT/NUCOR COLD FINISH DIV	1601 W OMAHA AVE	NORFOLK	Nebraska	68701	0.26	10	10.26	0		0	10.26
SILGAN CAN CO	2120 NC HWY N UNIT A	MAXTON	North Carolina	28364	3.2155	6.97	10.1855	0	0	0	10.1855
SYCAMORE SYSTEMS LLC	449 N CALIFORNIA ST	SYCAMORE	ILLINOIS	60178	0	10.144	10.144	0		0	10.144
ASHLEY INDUSTRIAL MOLDING INC	310 S WABASH	ASHLEY	Indiana	46705	1.05	9.05	10.1	0	0	0	10.1
BERENFIELD CONTAINERS SW LTD	3300 N HUTCHINSON ST	WHITE HALL	Arkansas	71602	0	10.0855	10.0855	0	0	0	10.0855
STANLEY WORKS HAND TOOLS DIV	600 MYRTLE ST	NEW BRITAIN	Connecticut	06052	0.997	8.972	9.969	0	0	0	9.969
SILGAN CONTAINERS MANAUFACTURING CORP	520 W 2ND ST	OCONOMOWOC	Wisconsin	53066	1.65	8.3	9.95	0	0	0	9.95
RR DONNELLEY & SONS CO	1145 CONWELL AVE	WILLARD	Ohio	44890	7.5445	2.3705	9.915	0		0	9.915

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
AKZO NOBEL COATINGS INC	1629 VANDERBILT RD	BIRMINGHAM	Alabama	35234	9.755	0.14	9.895	0	0	0	9.895
CAN CORP OF AMERICA INC	326 JUNE AVE	BLANDON	Pennsylvania	19510	2.6565	7.2325	9.889	0	0	0	9.889
NUCOR CORP VULCRAFT DIV	1501 W DARLINGTON ST	FLORENCE	South Carolina	29501	8.9355	0.8415	9.777	0	0	0	9.777
SAFETY-KLEEN SYSTEMS INC	130 A FRONTAGE RD	LEXINGTON	South Carolina	29073	0	9.7255	9.7255	0	0	0	9.7255
NUCOR CORP VULCRAFT DIV	7205 GAULT AVE N	FORT PAYNE	Alabama	35967	6.1415	3.55	9.6915	0	0	0	9.6915
YKK AP AMERICA INC	332 FIRETOWER RD	DUBLIN	Georgia	31021	9.3205	0.2955	9.616	0	0	0	9.616
QUAD/GRAPHICS INC	N63 W23075 STATE HWY 74	SUSSEX	Wisconsin	53089	8.62	0.975	9.595	0		0	9.595
SIGNODE	7701 W 71ST ST	BRIDGEVIEW	Illinois	60455	0.95	8.55	9.5	0	0	0	9.5
SQUARE D CO	1601 MERCER RD	LEXINGTON	Kentucky	40511	0	9.4845	9.4845	0		0	9.4845
NUCOR VULCRAFT GROUP SAINT JOE DIV	6610 COUNTY RD 60	SAINT JOE	Indiana	46785	3.5585	2.813	6.3715	0		3.0555	9.427
REXAM BEVERAGE CAN CO FAIRFIELD PLANT	2433 CROCKER CIR	FAIRFIELD	California	94533	5.4255	3.9445	9.37	0	0	0	9.37
KUBIN-NICHOLSON CORP	8448 N 87TH ST	MILWAUKEE	Wisconsin	53224	9.296	0	9.296	0		0	9.296
NATIONAL COATINGS INC	604 US HWY 150 E	GALESBURG	ILLINOIS	61401	9.247	0	9.247	0	0	0	9.247
SILGAN CONTAINERS MANUFACTURING CORP	2115 SW LOWER LAKE RD	SAINT JOSEPH	Missouri	64504	5.4375	3.5775	9.015	0	0	0	9.015
GREIF PACKAGING LLC	6000 JEFFERSON HWY	NEW ORLEANS	Louisiana	70123	3.396	5.312	8.708	0	0	0	8.708
ALLIANCE INDUSTRIES WAUPACA	N 2467 VAUGHAN RD	WAUPACA	Wisconsin	54981	0.8605	7.7445	8.605	0	0	0	8.605
COOK COMPOSITES & POLYMERS CO	340 RAILROAD ST	SAUKVILLE	Wisconsin	53080	0.866	0.336	1.202	0	0	7.374	8.576
LA-Z-BOY TENNESSEE	500 WALNUT GROVE RD	DAYTON	Tennessee	37321	0	8.57306025	8.57306025	0	0	0	8.57306025
ESCO CORP	9098 EASTSIDE DR EXT	NEWTON	Mississippi	39345	8.5565	0	8.5565	0	0	0	8.5565
HEXION SPECIALTY CHEMICALS INC	2525 S COMBEE RD	LAKELAND	Florida	33801	8.39	0.0045	8.3945	0	0	0.0655	8.46
CNH AMERICA LLC	600 E PEORIA ST	GOODFIELD	ILLINOIS	61742	0.125	8.3055	8.4305	0		0	8.4305
WHITING DOOR MANUFACTURING CORP	113 CEDAR ST	AKRON	New York	14001	0	8.413	8.413	0	0	0	8.413
CIRCLE GRAPHICS INC	120 9TH AVE	LONGMONT	Colorado	80501	3	1.85	4.85	0	0	3.54	8.39
BALL AEROSOL & SPECIALTY CONTAINER INC	1717 GIFFORD RD	ELGIN	Illinois	60120	0.85	7.5	8.35	0	0	0	8.35
SILGAN CAN CO	12-773 ST RT 110	NAPOLEON	Ohio	43545	2.3235	6.014	8.3375	0	0	0	8.3375
DOW CHEMICAL CO FREEPORT FACILITY	2301 N BRAZOSPORT BLVD	FREEPORT	Texas	77541	0.4605	0.003	0.4635	2.7385	0	5.1075	8.3095
SHIELDCOAT TECHNOLOGIES INC (DBA CYBERSHIELD OF TEXAS)	2602 SPENCE ST	LUFKIN	Texas	75904	8.303	0	8.303	0	0	0	8.303
KAWNEER CO INC	600 KAWNEER DR	SPRINGDALE	Arkansas	72764	3.3635	4.8495	8.213	0	0	0	8.213
AM GENERAL LLC	13200 MCKINLEY HWY	MISHAWAKA	INDIANA	46545	0	8.1875	8.1875	0	0	0	8.1875

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CNH AMERICA LLC	1930 DES MOINES AVE	BURLINGTON	Iowa	52601	0.175	8	8.175	0		0	8.175
SUPERIOR INDUSTRIES INTERNATIONAL ARKANSAS LLC	1901 E BORICK DR	FAYETTEVILLE	ARKANSAS	72701	0	7.3	7.3	0		0.64	7.94
SILGAN CONTAINERS MANUFACTURING CORP	1416 INDIANHEAD DR	MENOMONIE	Wisconsin	54751	1.6	6.25	7.85	0	0	0	7.85
CROWN AEROSOL PACKAGING	3737 E EXCHANGE AVE	AURORA	Illinois	60504	7.0285	0.808	7.8365	0	0	0	7.8365
CARRY-ON TRAILER CORP	1965 HWY 30	MISSOURI VALLEY	Iowa	51555	0	7.834	7.834	0	0	0	7.834
BROAN-NUTONE LLC	926 W STATE ST	HARTFORD	Wisconsin	53027	0.1135	7.6235	7.737	0		0	7.737
ROLL COATER	858 E HUPP RD	LA PORTE	Indiana	46350	0	7.7325	7.7325	0	0	0	7.7325
VON HOFFMANN GRAPHICS INC	1005 COMMERCIAL DR	OWENSVILLE	Missouri	65066	6.5635	1.1015	7.665	0		0	7.665
GMVM-LANSING GRAND RIVER ASSEMBLY	920 TOWNSEND ST MAIL CO	LANSING	Michigan	48921	3.45	4.1	7.55	0		0.0195	7.5695
GREIF INDUSTRIAL PACKAGING & SERVICES	7604 RAILROAD AVE	WINFIELD	Kansas	67156	0.7535	6.7795	7.533	0	0	0	7.533
HUTCHENS INDUSTRIES INC MANSFIELD FACILITY	898 E COMMERCIAL	MANSFIELD	MISSOURI	65704	0	7.505	7.505	0		0	7.505
3M CO - MENOMONIE	1425 STOKKE PKWY	MENOMONIE	Wisconsin	54751	0	0	0	0	0	7.5	7.5
CARRY-ON TRAILER CORP	5300 WESTMORELAND RD	WINNEMUCCA	NEVADA	89445	0	7.4985	7.4985	0	0	0	7.4985
AKZO NOBEL SURFACE CHEMISTRY LLC	15200 ALMEDA RD	HOUSTON	Texas	77053	0.445	0.145	0.59	0	0	6.845	7.435
ELECTROPRIME INC	63 DIXIE HWY	ROSSFORD	Ohio	43460	0	7.4105	7.4105	0		0	7.4105
DEXTER AXLE	500 SE 27TH	EL RENO	OKLAHOMA	73036	0	7.409	7.409	0	0	0	7.409
EQUISTAR CHEMICALS BAYPORT CHEMICALS PLANT	5761 UNDERWOOD RD	PASADENA	Texas	77507	6.7145	0.689	7.4035	0		0	7.4035
MICHELIN NORTH AMERICA INC	5101 21ST ST	TUSCALOOSA	Alabama	35401	0.003	0.004	0.007	0	0	7.35	7.357
U.S. AIR FORCE TINKER AFB OK	7701 ARNOLD ST SUITE 204	TINKER A F B	Oklahoma	73145	1.3	6	7.3	0	0	0.05	7.35
NAHAN PRINTING INC	7000 SAUKVIEW DR	SAINT CLOUD	Minnesota	56303	7.061195	0.276025	7.33722	0	0	8.88178E-16	7.33722
CHRYSLER BELVIDERE ASSEMBLY PLANT	3000 W CHRYSLER DR	BELVIDERE	Illinois	61008	0.8	6.5	7.3	0		0.0075	7.3075
TECNOCAP LLC	2100 GRISWOLD NE	WARREN	Ohio	44483	1.5755	5.7295	7.305	0	0	0	7.305
AFTON CHEMICAL CORP	725 CANNON BRIDGE RD	ORANGEBURG	South Carolina	29115	2.813	0.6965	3.5095	0.3	0	3.479	7.2885
GENERAL MOTORS WENTZVILLE ASSEMBLY	1500 E RT A	WENTZVILLE	Missouri	63385	1.25	6	7.25	0		0	7.25
GENERAL MOTORS CORP LORDSTOWN COMPLEX	2300 HALLOCK-YOUNG RD	LORDSTOWN	Ohio	44481	3.15	0.75	3.9	0		3.35	7.25
ROLL COATER INC	4502 FREEDOM WAY	WEIRTON	West Virginia	26062	0	7.2295	7.2295	0	0	0	7.2295
WIX FILTRATION CORP - ALLEN PLANT	2900 NW BLVD	GASTONIA	North Carolina	28052	0.0025	7.2	7.2025	0	0	0	7.2025
ALCOA INC - WARRICK OPERATIONS	HWYS 66 & 61	NEWBURGH	Indiana	47629	0	7	7	0.14	0	0	7.14
RR DONNELLEY CRAWFORDSVILLE	1009 SLOAN ST	CRAWFORDSVILLE	Indiana	47933	6.805	0.3175	7.1225	0		0	7.1225

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
KITZINGER COOPERAGE CORP	2529 E NORWICH AVE	SAINT FRANCIS	Wisconsin	53235	0	7.09505	7.09505	0		0	7.09505
JOHN DEERE DES MOINES WORKS	825 SW IRVINEDALE DR	ANKENY	IOWA	50023	0	7.0485	7.0485	0	0	0	7.0485
AVERY DENNISON - IBMD LENOIR	950 GERMAN ST	LENOIR	North Carolina	28645	5.725	1.3205	7.0455	0	0	0	7.0455
BRIGHTSMITH LLC	120 ENTERPRISE AVE	MORRISVILLE	Pennsylvania	19067	0.06	0.205	0.265	0	0	6.7285	6.9935
SILGAN CAN CO	500 NW LOOP 286 SUITE 10	PARIS	Texas	75460	4.034	2.919	6.953	0	0	0	6.953
ENKEI AMERICA INC	2900 W INWOOD DR	COLUMBUS	Indiana	47201	0	6.95	6.95	0	0	0	6.95
CARDONE INDUSTRIES	5660 RISING SUN AVE	PHILADELPHIA	Pennsylvania	19120	1.367	5.5745	6.9415	0	0	0	6.9415
MAUSER CORP	14 CONVERY BLVD	WOODBRIDGE	New Jersey	07095	0.0585	6.772	6.8305	0	0	0	6.8305
HAMMER PACKAGING CORP	200 LUCIUS GORDON DR	WEST HENRIETTA	New York	14586	0	6.7935	6.7935	0		0	6.7935
BRIGGS & STRATTON YARD POWER PRODUCTS MCDONOUGH OPERATIONS	535 MACON RD	MC DONOUGH	GEORGIA	30253	0	6.7395	6.7395	0		0	6.7395
SUPERIOR INDUSTRIES INTERNATIONAL ARKANSAS LLC	1301 N DIXIELAND RD	ROGERS	ARKANSAS	72756	0.0025	6.7325	6.735	0		0	6.735
AAP ST MARYS CORP	1100 MCKINLEY RD	SAINT MARYS	Ohio	45885	0.0245	6.707	6.7315	0	0	0	6.7315
BERENFIELD CONTAINERS INC	31 RAILROAD ST	CLARENDON	Pennsylvania	16313	0.073365	6.65362	6.726985	0	0	0	6.726985
SENECA FOODS CORP CAN PLANT	3709 MILL ST	MARION	New York	14505	0	6.6935	6.6935	0	0	0	6.6935
RR DONNELLEY LANCASTER EAST	216 GREENFIELD RD	LANCASTER	Pennsylvania	17601	6.2035	0.434	6.6375	0		0	6.6375
CREE INC	4600 SILICON DR	DURHAM	North Carolina	27703	0	6.601	6.601	0		0	6.601
HUSQVARNA CONSUMER OUTDOOR PRODUCTS	172 OLD ELLOREE RD	ORANGEBURG	South Carolina	29116	0.1325	6.4275	6.56	0		0	6.56
OWENS CORNING VETROTEX LLC	4837 HWY 81 S	STARR	South Carolina	29684	0.656	5.903	6.559	0	0	0	6.559
WHEELING MACHINE PRODUCTS DIV PINE BLUFF	5411 INDUSTRIAL DR S	PINE BLUFF	ARKANSAS	71602	6.5	0	6.5	0	0	0	6.5
SILGAN CONTAINERS MANUFACTURIN G CORP	3591 MAPLE DR	FORT DODGE	IOWA	50501	0.00028	6.4915	6.49178	0		0	6.49178
SKOLNIK INDUSTRIES	4900 S KILBOURN AVE	CHICAGO	ILLINOIS	60632	0.65	5.8	6.45	0		0	6.45
NISSAN NORTH AMERICA INC CANTON MS	300 NISSAN DR	CANTON	Mississippi	39046	2.534	3.8215	6.3555	0	0	0	6.3555
SILGAN CONTAINERS MANUFACTURING CORP	2501 165TH ST	HAMMOND	Indiana	46320	0	6.331	6.331	0	0	0	6.331
SAPA EXTRUSIONS INC	2500 ALUMAX RD	YANKTON	South Dakota	57078	0	6.31004485	6.31004485	0	0	0	6.31004485
BRADFORD WHITE CORP	200 LAFAYETTE ST	MIDDLEVILLE	Michigan	49333	0	6.2995	6.2995	0	0	0	6.2995
MAYTAG CORP CLEVELAND COOKING PRODUCTS PLANT 1	740 KING EDWARD AVE SE	CLEVELAND	Tennessee	37311	0	6.25	6.25	0	0	0	6.25
EFCO CORP	1000 COUNTY RD	MONETT	Missouri	65708	0.958	5.2355	6.1935	0	0	0	6.1935
HUNTER DOUGLAS TUPELO CENTER	RT 2 LEE INDUSTRIAL PARK	SHANNON	Mississippi	38868	0.2935	5.870515	6.164015	0	0	0	6.164015

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
NAVISTAR INC	6125 URBANA RD	SPRINGFIELD	Ohio	45502	0.6	5.5	6.1	0.02	0	0.032	6.152
SILGAN CAN CO	6200 FRANKLIN BLVD SUITE	SACRAMENTO	California	95824	5.1925	0.8925	6.085	0		0	6.085
THE COLEMAN CO INC	3600 N HYDRAULIC	WICHITA	KANSAS	67219	0.001	6.05	6.051	0	0	0	6.051
AK STEEL CORP - ZANESVI LLE WORKS	1724 LINDEN AVE	ZANESVILLE	Ohio	43701	0	4.7	4.7	0	0	1.35	6.05
BOBCAT CO (MELROE)	210 1ST AVE NE	GWINNER	NORTH DAKOT	58040	0	5.964	5.964	0		0	5.964
PACKAGING DYNAMICS INC BAGCRAFT/PAPERCON DIV	3400 BAGCRAFT BLVD	BAXTER SPRINGS	Kansas	66713	5.9425	0	5.9425	0		0	5.9425
CHRYSLER WARREN TRUCK ASSEMBLY PLANT (PART)	21500 MOUND RD	WARREN	Michigan	48091	5.5	0.415	5.915	0		0.0095	5.9245
QUEBECOR WORLD INC WINCHESTER VIRGINIA	160 CENTURY LN STONEWA	WINCHESTER	Virginia	22603	5.48138	0.2558	5.73718	0	0	0.166475	5.903655
GREIF PACKAGING LLC	2400 COOPER AVE	MERCED	California	95348	4.5705	1.2955	5.866	0	0	0	5.866
SCHAEFFER MANUFACTURING	102 BARTON ST	SAINT LOUIS	Missouri	63104	5.84243	0	5.84243	0		0	5.84243
WORTHINGTON CYLINDERS WISCONSI N LLC	300 E BREED ST	CHILTON	Wisconsin	53014	0.8835	4.948	5.8315	0	0	0	5.8315
SILGAN CONTAINERS MANUFACTURING CORP	400 N 15TH ST	ROCHELLE	Illinois	61068	4.3695	1.4365	5.806	0	0	0	5.806
TTM TECHNOLOGIES INC	710 N 600 W	LOGAN	Utah	84321	0.432	3.888	4.32	0		1.484	5.804
NAZDAR SHAWNEE	8501 HEDGE LN TERRACE	SHAWNEE	Kansas	66227	1.7235	4.0215	5.745	0	0	0	5.745
ALCOA HOME EXTERIORS INC	2615 CAMPBELL RD	SIDNEY	Ohio	45365	0.8075	4.225	5.0325	0		0.7	5.7325
TACO INC - CRANSTON	1160 CRANSTON ST	CRANSTON	RHODE ISLAND	02920	0.0575	5.662	5.7195	0	0	0	5.7195
METOKOTE CORP PLANT 15	312 SAVANNAH	CEDAR FALLS	Iowa	50613	0	5.66847	5.66847	0	0	0	5.66847
INX DIGITAL INK CO	405 INDUSTRIAL WAY	DIXON	California	95620	5.621	0	5.621	0	0	0	5.621
NOVOLYTE TECHNOLOGIES	111 W IRENE RD	ZACHARY	Louisiana	70791	5.05	0.495	5.545	0.075	0	0	5.62
PRECOAT METALS	25 NORTHGATE INDUSTRIA	GRANITE CITY	Illinois	62040	4.516	1.0955	5.6115	0	0	0	5.6115
DUPONT PONTCHARTRAIN WORKS	586 HWY 44	LA PLACE	Louisiana	70068	0.006	0	0.006	0	0	5.601	5.607
SILGAN CONTAINERS MANUFACTURING CORP	135 NATIONAL RD	EDISON	New Jersey	08817	4.45	1.1	5.55	0	0	0	5.55
KNS COMPANYS INC	475 RANDY RD	CAROL STREAM	Illinois	60188	1.099	4.397	5.496	0		0	5.496
LOGAN ALUMINUM INC	US HWY 431 N	RUSSELLVILLE	Kentucky	42276	0.0355	5.3625	5.398	0	0	0	5.398
DU PONT ELECTRONICS MICROCIRCU ITS INDUSTRIES LTD	HWY 686 KM 23	MANATI	PUERTO RICO	00674	0	0.0725	0.0725	0	0	5.3235	5.396
NOV TUBOSCOPE NAVASOTA	9574 FM 1227	NAVASOTA	Texas	77868	4.911	0.48	5.391	0	0	0	5.391
AJAX METAL PROCESSING INC	4651 BELLEVUE AVE	DETROIT	MICHIGAN	48207	0	5.384	5.384	0	0	0	5.384
FIBERMARK NORTH AMERICA INC	5492 BOSTWICK ST	LOWVILLE	New York	13367	0.083	5.2795	5.3625	0		0	5.3625
PPG INDUSTRIES,INC-SPRINGDALE COMPLEX	125 COLFAX ST	SPRINGDALE	Pennsylvania	15144	5.2425	0.062	5.3045	0	0	0	5.3045

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BATESVILLE MANUFACTURING INC -DOLL PLANT	1000 E PEARL ST	BATESVILLE	Indiana	47006	0.265	5.032	5.297	0	0	0	5.297
AUTOALLIANCE INTERNATIONAL INC	1 INTERNATIONAL DR	FLAT ROCK	Michigan	48134	0.48	4.8	5.28	0		0	5.28
ARMSTRONG HARDWOOD FLOORING CO	565 HARTCO DR	ONEIDA	Tennessee	37841	0	5.22175	5.22175	0	0	0	5.22175
US ARMY LAKE CITY ARMY AMMUNITION PLANT	INTERSECTION OF MO HWY	INDEPENDENCE	Missouri	64051	1.302	3.864	5.166	0	0	0	5.166
RUSKIN CO	HWY 27 N	GENEVA	Alabama	36340	0.019	5.0965	5.1155	0	0	0	5.1155
PELLA CORP CARROLL OPERATIONS	1750 E US HWY 30 E	CARROLL	IOWA	51401	0	5.05	5.05	0		0	5.05
GREIF PACKAGING LLC	695 LOUIS DR	WARMINSTER	Pennsylvania	18974	2.1455	1.451	3.5965	0	0	1.4455	5.042
HYDRO ALUMINUM NORTH AMERICA INC	808 COUNTY RD	MONETT	MISSOURI	65708	0.252	4.7845	5.0365	0	0	0	5.0365
RR DONNELLEY LANCASTER WEST	1375 HARRISBURG PIKE	LANCASTER	Pennsylvania	17601	4.5877	0.272	4.8597	0		0	4.8597
PRECOAT METALS	16402 JACINTOPORT BLVD	HOUSTON	Texas	77015	4.5625	0.2525	4.815	0	0	0	4.815
PHOENIX CONTAINER INC	1202 AIRPORT RD	NORTH BRUNSWICK	New Jersey	08902	1.871	2.902	4.773	0	0	0	4.773
SILGAN CONTAINER MANUFACTURING CORP	3250 PATTERSON RD	RIVERBANK	California	95367	0.2825	4.4455	4.728	0	0	0	4.728
FORD MOTOR CO TWIN CITIES ASSEMBLY PLANT	966 S MISSISSIPPI RIVER BL	SAINT PAUL	Minnesota	55116	0.39	4.2	4.59	0		0.13	4.72
CROWN AEROSOL PACKAGING	4TH ST & PARK AVE	FARIBAULT	Minnesota	55021	3.029	1.6865	4.7155	0	0	0	4.7155
HYUNDAI MOTOR MANUFACTURING ALABAMA LLC	700 HYUNDAI BLVD	MONTGOMERY	Alabama	36105	2.7715	1.9425	4.714	0		0	4.714
COLOR COMMUNICATIONS INC	4242 W FILLMORE	CHICAGO	Illinois	60624	0.81	3.84	4.65	0		0	4.65
PRECOAT METALS	4301 S SPRING AVE	SAINT LOUIS	Missouri	63116	1.073	3.5665	4.6395	0	0	0	4.6395
PRIME TANNING CO - HARTLAND	9 MAIN ST	HARTLAND	Maine	04943	0.0915	4.4955	4.587	0	0	0	4.587
RR DONNELLEY-WETMORE PLANT	1645 W SAM HOUSTON PKW	HOUSTON	TEXAS	77043	4.5675	0.011	4.5785	0		0	4.5785
VOLVO TRUCKS NORTH AMERICA	4881 COUGAR TRAIL RD	DUBLIN	VIRGINIA	24084	2.15	2.4	4.55	0	0	0	4.55
R R DONNELLEY & SONS CO DANVILLE DIV	JOHN HILL BAILEY INDL PAR	DANVILLE	Kentucky	40422	4.208	0.2945	4.5025	0	0	0	4.5025
NESTLE PURINA PETCARE	1000 HAMILTON RD	WEIRTON	West Virginia	26062	1.2665	3.2185	4.485	0	0	0	4.485
IMPRESS USA INC	936 BARRACUDA ST	TERMINAL ISLAND	California	90731	4.1	0.375	4.475	0	0	0	4.475
BROWN PRINTING CO	2300 BROWN AVE	WASECA	Minnesota	56093	4.4155	0.0585	4.474	0		0	4.474
CURTIS METAL FINISHING CO	6645 SIMS DR	STERLING HEIGHTS	Michigan	48313	3.19	1.2715	4.4615	0		0	4.4615
ARVINMERITOR HEAVY VEHICLE SYSTEMS LLC	801 RAILROAD AVE	YORK	South Carolina	29745	0.001	4.4215	4.4225	0	0	0	4.4225
ENDICOTT INTERCONNECT TECHNOLOGIES INC	1093 CLARK ST	ENDICOTT	New York	13760	0.25	4.1155	4.3655	0.032	0	0	4.3975
WORLDCOLOR	451 INTERNATIONAL BLVD	CLARKSVILLE	Tennessee	37040	3.7745	0.612	4.3865	0		0	4.3865
MERIX CORP	1521 POPLAR LN	FOREST GROVE	Oregon	97116	0.0835	4.1895	4.273	0		0	4.273
INLAND LABEL & MARKETING	2009 W AVE S	LA CROSSE	Wisconsin	54601	2.0245	2.209	4.2335	0	0	0	4.2335

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SAPA EXTRUDER INC	2905 OLD OAKWOOD RD	GAINESVILLE	Georgia	30504	0	4.226	4.226	0	0	0	4.226
CARRY-ON TRAILER CORP	159 INDUSTRIAL PARK RD	MONTROSS	VIRGINIA	22520	0	4.1765	4.1765	0	0	0	4.1765
GENIE INDUSTRIES SOUTH CAMPUS	18700 NE 65TH ST	REDMOND	Washington	98052	0.23425	3.9122	4.14645	0		0	4.14645
SEQUA COATINGS CORP-PRECOAT M ETALS DIV	US HWY 12 AT RT 249	PORTAGE	Indiana	46368	0.284	3.8295	4.1135	0	0	0	4.1135
BROWN PRINTING CO	11595 MCCONNELL RD	WOODSTOCK	Illinois	60098	3.915	0.09	4.005	0		0	4.005
METAL COATERS MISSISSIPPI	951 PRISOCK RD	JACKSON	Mississippi	39272	0	3.9925	3.9925	0	0	0	3.9925
BALL METAL FOOD CONTAINER CORP	300 W GREGER RD	OAKDALE	California	95361	0.134	3.85	3.984	0	0	0	3.984
HIRSH INDUSTRIES INC	1525 MCKEE RD	DOVER	Delaware	19904	0.0025	3.9815	3.984	0		0	3.984
SILGAN CONTAINERS MANUFACTURING CORP	N90 W14600 COMMERCE DR	MENOMONEE FALLS	Wisconsin	53051	0	3.95	3.95	0	0	0	3.95
BETCO CORP	1001 BROWN AVE	TOLEDO	Ohio	43607	3.885	0	3.885	0		0	3.885
QUEBECOR WORLD DIRECT-PETTY	420 W INDUSTRIAL AVE	EFFINGHAM	Illinois	62401	3.43	0.4	3.83	0		0	3.83
MAGNA MIRRORS CORP - NEWAYGO	700 S PARK DR	NEWAYGO	MICHIGAN	49337	1.1175	2.689	3.8065	0	0	0	3.8065
GMTG - SHREVEPORT ASSEMBLY	7600 GENERAL MOTORS BL	SHREVEPORT	Louisiana	71129	0.095	3.65	3.745	0	0	0	3.745
VAN CAN CO	10837 ETIWANDA AVE	FONTANA	California	92337	3.2	0.5	3.7	0	0	0	3.7
CROWN FOOD PACKAGING	10200 N LOMBARD ST	PORTLAND	Oregon	97203	1.583	2.0475	3.6305	0	0	0	3.6305
TAIYO AMERICA INC	2675 ANTLER DR	CARSON CITY	Nevada	89701	0.005	1.29	1.295	0	0	2.3295	3.6245
BROWN PRINTING CO	668 GRAVEL PIKE	EAST GREENVILLE	Pennsylvania	18041	3.423	0.1185	3.5415	0	0	0.0075	3.549
RR DONNELLEY & SONS CO	6821 E COUNTY RD 1100 N	MATTOON	ILLINOIS	61938	3.2385	0.2265	3.465	0	0	0	3.465
BRILLION IRON WORKS INC	200 PARK AVE	BRILLION	Wisconsin	54110	2.4496	0.85945	3.30905	0		0.125	3.43405
OMG AMERICAS	TWO MILE RUN RD	FRANKLIN	Pennsylvania	16323	0.025	0.259	0.284	0	0	3.143	3.427
TITAN COATINGS INC	2025 EXCHANGE PL	BESSEMER	Alabama	35023	3.42	0	3.42	0	0	0	3.42
TTM PRINTED CIRCUIT GROUP - S TAFFORD DIV	4 OLD MONSON RD	STAFFORD	Connecticut	06075	0	3.3675	3.3675	0		0	3.3675
TORO CO	200 SIME AVE	TOMAH	Wisconsin	54660	0	3.331	3.331	0		0	3.331
ALERIS ROLLED PRODUCTS INC	1372 KY HWY 1957	LEWISPORT	Kentucky	42351	0.125	3.1985	3.3235	0	0	0	3.3235
AVERY DENNISON INDUSTRIAL PRODUCTS DIV	17700 FOLTZ PKWY	STRONGSVILLE	Ohio	44149	0.431	2.885	3.316	0	0	0	3.316
RADIATOR SPECIALTY CO	600 RADIATOR RD	INDIAN TRAIL	North Carolina	28079	2.1845	0	2.1845	0	0	1.13	3.3145
CENTURY INDUSTRIAL COATINGS I NC	HWY 69 S	JACKSONVILLE	Texas	75766	0.074	1.4035	1.4775	0	0	1.8115	3.289
SILGAN CONTAINERS MANUFACTURING CORP	8673 LYONS-MARENGO RD	LYONS	New York	14489	0.5625	2.7	3.2625	0	0	0	3.2625
GM SPRING HILL MANUFACTURING	100 SATURN PKWY MAIL DR	SPRING HILL	Tennessee	37174	0.0065	3.25	3.2565	0		0	3.2565
QUAD/GRAPHICS INC	555 S 108TH ST	WEST ALLIS	WISCONSIN	53214	3.17	0.085	3.255	0		0	3.255

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BATESVILLE MANUFACTURING INC	310 CROWN RD	BATESVILLE	Mississippi	38606	0.488	2.7645	3.2525	0	0	0	3.2525
PRECOAT METALS	3399 DAVEY ALLISON BLVD	HUEYTOWN	Alabama	35023	2.5065	0.725	3.2315	0	0	0	3.2315
MIDDLEBURY HARDWOOD PRODUCTS	101 JOAN DR	MIDDLEBURY	INDIANA	46540	0	3.2215	3.2215	0	0	0	3.2215
WORLDCOLOR LEBANON DIV	760 FUJITEC DR	LEBANON	Ohio	45036	3.1125	0.0735	3.186	0		0	3.186
CADON PLATING CO	3715 11TH ST	WYANDOTTE	Michigan	48192	1.6414	1.495375	3.136775	0	0	0	3.136775
SONOCO PHOENIX - PRESIDENTS ISLAND	2755 HARBOR AVE	MEMPHIS	Tennessee	38113	0	3.122	3.122	0	0	0	3.122
RR DONNELLEY STRASBURG DIV	ONE SHENANDOAH VALLEY	STRASBURG	Virginia	22657	2.95	0.15	3.1	0		0.0025	3.1025
BASF CORP - CLEAR LAKE PLANT	11200 BAY AREA BLVD	PASADENA	Texas	77507	3.0356	0.043567767	3.079167767	0		0	3.079167767
KAWASAKI MOTORS MANUFACTURING CORP USA	6600 NW 27TH ST	LINCOLN	Nebraska	68524	0.2995	2.6515	2.951	0		0.125	3.076
SPRAYLAT CORP CA	3465 S LA CIENAGA BLVD	LOS ANGELES	California	90016	1.5375	1.5375	3.075	0		0	3.075
U.S. AIR FORCE ROBINS AFB GA	775 MACON ST BUILDING 15	ROBINS AFB	Georgia	31098	2.4135	0.379	2.7925	0	0	0.2715	3.064
RR DONNELLEY LOS ANGELES MANUFACTURING	19681 PACIFIC GATEWAY D	TORRANCE	California	90502	2.9545	0.069	3.0235	0		0	3.0235
JELD-WEN	600 JELD-WEN RD	CRAIGSVILLE	WEST VIRGINIA	26205	0.1395	2.882	3.0215	0		0	3.0215
BENJAMIN MOORE & CO JOHNSTOWN	UNION AVE EXTENSION	JOHNSTOWN	New York	12095	0.0148	0.000011	0.014811	0	0	2.9644	2.979211
ST CHARLES OPERATIONS (TAFT/STAR) UNION CARBIDE CORP	355 LA HWY 3142 (GATE 1)	TAFT	Louisiana	70057	0.2455	1.21	1.4555	1.485	0	0	2.9405
VERTIS COMMUNICATIONS	4051 FONDORF DR	COLUMBUS	Ohio	43228	2.5835	0.301	2.8845	0	0	0	2.8845
DOW CHEMICAL CO	1790 BUILDING	MIDLAND	Michigan	48667	2.75	0.1	2.85	0.0015	0	0	2.8515
QUAD/GRAPHICS INC	N11896 HWY 175 PO BOX 27	LOMIRA	WISCONSIN	53048	2.5685	0.2745	2.843	0		0	2.843
TOYOTA MOTOR MANUFACTURING TEX AS INC	1 LONE STAR PASS	SAN ANTONIO	Texas	78264	2.39455575	0.42551085	2.8200666	0	0	0	2.8200666
GM MLCG FAIRFAX ASSEMBLY	3201 FAIRFAX TRAFFICWAY	KANSAS CITY	Kansas	66115	0.032	2.75	2.782	0		0	2.782
SOLIANT LLC	1872 HWY 9 BYPASS W	LANCASTER	South Carolina	29721	0.554	2.204	2.758	0		0	2.758
KIA MOTORS MANUFACTURING OF GEORGIA	7777 KIA PKWY	WEST POINT	GEORGIA	31833	0.0525	2.694	2.7465	0	0	0	2.7465
APOLLO COLORS INC	1550 MOUND RD	ROCKDALE	Illinois	60436	0	0	0	0		2.705	2.705
VERTIS COMMUNICATIONS	10911 GRANITE ST	CHARLOTTE	North Carolina	28273	2.3815	0.276	2.6575	0	0	0	2.6575
ABC COMPOUNDING CO INC	6970 JONESBORO RD	MORROW	Georgia	30260	0.0025	0.375	0.3775	0.0025	0	2.2555	2.6355
ITW DYMON	805 E OLD 56 HWY	OLATHE	Kansas	66061	0.7835	1.8285	2.612	0	0	0	2.612
FORD MOTOR CO - OHIO ASSEMBLY PLANT	650 MILLER RD	AVON LAKE	Ohio	44012	2.4	0.195	2.595	0		0	2.595
ARR-MAZ CUSTOM CHEMICALS	4800 STATE RD 60 E	MULBERRY	Florida	33860	0.101	2.4835	2.5845	0		0	2.5845
BON L MANUFACTURING CO	HWY 53 BONNELL RD	CARTHAGE	Tennessee	37030	0.5795	1.6995	2.279	0	0.2945	0.007	2.5805
DERRICK CORP	3350 UNION RD	CHEEKTOWAGA	New York	14225	0	2.58	2.58	0	0	0	2.58

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
TYCO FIRE SUPPRESSION & BUILDING PRODUCTS	1 STANTON ST	MARINETTE	Wisconsin	54143	0.0035	2.555	2.5585	0		0	2.5585
IC OF OKLAHOMA LLC	2322 N MINGO RD	TULSA	Oklahoma	74116	0	2.55	2.55	0		0	2.55
BWAY CORP BWAY PACKAGING DIV	8200 BROADWELL RD	CINCINNATI	Ohio	45244	1.65079	0.8941	2.54489	0		0	2.54489
BRUNSWICK CORP MERCURY MARINE DIV	W6250 PIONEER RD	FOND DU LAC	Wisconsin	54935	0.2525	2.271	2.5235	0		0	2.5235
ACCESS BUSINESS GROUP LLC	7575 FULTON ST E	ADA	Michigan	49355	2.3755	0.128	2.5035	0		0	2.5035
MISSION KLEENSWEEP PRODUCTS INC	2434 BIRKDALE ST	LOS ANGELES	California	90031	2.5	0	2.5	0		0	2.5
ROHM & HAAS CHEMICALS LLC	200 RT 413	BRISTOL	Pennsylvania	19007	0.05715	0.19785	0.255	0	0	2.214	2.469
POWER PARTNERS INC	200 NEWTON BRIDGE RD	ATHENS	Georgia	30607	0	2.4385	2.4385	0		0	2.4385
AMERICAN COLOR GRAPHICS	810 E S ST	MARENGO	Iowa	52301	2.2715	0.1575	2.429	0		0	2.429
CENTRIA	530 N SECOND ST	CAMBRIDGE	Ohio	43725	1.209	1.2115	2.4205	0	0	0	2.4205
CUMMINS POWER GENERATION	1400 73RD AVE NE	FRIDLEY	Minnesota	55432	0.12	2.3	2.42	0		0	2.42
HEWLETT-PACKARD CARIBE BV SITE	HWY 110 N KM 5.1	AGUADILLA	Puerto Rico	00605	0.125	2.248	2.373	0	0	0	2.373
MOTOR CASTINGS CO	1323 S 65TH	MILWAUKEE	Wisconsin	53214	0	1.159	1.159	0	0	1.213	2.372
VERTIS INC RNS SPRINGFIELD DIV	245 BENTON DR	EAST LONGMEADOV	MASSACHUSE	01028	2.311	0.0535	2.3645	0	0	0	2.3645
CADMUS SPECIALTY PUBLICATIONS	2901 BYRDHILL RD	RICHMOND	VIRGINIA	23228	2.242785	0.104675	2.34746	0		0	2.34746
ROPPE CORP	1602 N UNION ST	FOSTORIA	Ohio	44830	0.125	2.22	2.345	0		0	2.345
CCL CONTAINER AEROSOL DIV	ONE LLODIO DR	HERMITAGE	Pennsylvania	16148	0.1835	2.1485	2.332	0	0	0	2.332
AMERICAN COLOR GRAPHICS - LUFKIN	3001 ATKINSON DR	LUFKIN	Texas	75901	2.2015	0.1025	2.304	0		0	2.304
IVC SOUTH	875 PROGRESS CENTER AV	LAWRENCEVILLE	Georgia	30043	0.4575	1.8305	2.288	0		0	2.288
NCP COATINGS INC	225 FORT ST	NILES	Michigan	49120	2.275	0	2.275	0	0	0	2.275
DENSO MANUFACTURING TENNESSEE INC	1720, 1725, 1755 ROBERT C	MARYVILLE	Tennesee	37801	0	2.2585	2.2585	0	0	0	2.2585
3M CO - HUTCHINSON	905/915 ADAMS ST SE	HUTCHINSON	Minnesota	55350	0	2.2255	2.2255	0	0	0	2.2255
SABIC INNOVATIVE PLASTICS MT VERNON LLC	1 LEXAN LN	MOUNT VERNON	Indiana	47620	1.3	0.8	2.1	0.125	0	0	2.225
HONDA MANUFACTURING OF INDIANA LLC	2755 N MICHIGAN AVE	GREENSBURG	Indiana	47240	1.7	0.5	2.2	0	0	0.0025	2.2025
GATES CORP	1450 MONTANA RD	IOLA	KANSAS	66749	0	0.0023	0.0023	0	0	2.1605	2.1628
GREIF PACKAGING LLC	10850 STRANG RD	LA PORTE	Texas	77571	1.6775	0.462	2.1395	0		0	2.1395
VANEX INC	1700 S SHAWNEE ST	MOUNT VERNON	Illinois	62864	0	2.1145	2.1145	0		0	2.1145
RED SPOT WESTLAND INC	550 S EDWIN ST	WESTLAND	Michigan	48186	1.192	0.912	2.104	0	0	0	2.104
BENCHMARK ENERGY PRODUCTS LLC	4113 W INDUSTRIAL AVE	MIDLAND	Texas	79703	0.191	1.912	2.103	0		0	2.103
VERTIS	7619 DOANE DR	MANASSAS	VIRGINIA	20109	1.9855	0.065	2.0505	0		0	2.0505

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BRENNTAG SOUTHWEST INC LANC ASTER	704 E WINTERGREEN RD	LANCASTER	Texas	75134	0.0225	0.02	0.0425	0	0	2	2.0425
HANNA STEEL CORP	3812 COMMERCE AVE	FAIRFIELD	Alabama	35064	0.77	1.1105	1.8805	0	0	0.16	2.0405
SAPA INC COATINGS DIVSION	5325 NE SKYPORT WAY	PORTLAND	Oregon	97218	1.6348493	0.38930365	2.02415295	0	0	0	2.02415295
CLEVELAND STEEL CONTAINER - NI LES	115 ERIE ST	NILES	Ohio	44446	0.0025	2.0185	2.021	0	0	0	2.021
WORLD COLOR PRESS	50 JOHN HANCOCK RD	TAUNTON	Massachusetts	02780	1.605	0.032	1.637	0	0	0.3745	2.0115
DUPONT YERKES PLANT	3115 RIVER RD	BUFFALO	New York	14207	0.753	1.2515	2.0045	0	0	0	2.0045
CLEVELAND STEEL CONTAINER CORP	350 MILL ST	QUAKERTOWN	PENNSYLVANIA	18951	0.0145	1.9805	1.995	0	0	0	1.995
KEYMARK CORP	1188 CAYADUTTA ST RT 334	FONDA	New York	12068	0.007	1.9795	1.9865	0	0	0	1.9865
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	901 N GREENWOOD AVE	KANKAKEE	Illinois	60901	0.8285	1.155	1.9835	0	0	0	1.9835
PPG INDUSTRIES ARCHITECTURAL FINISHES	1020 OLYMPIC DR	BATAVIA	Illinois	60510	0	0.786	0.786	0	0	1.178	1.964
ZEP INC	1310 SEABOARD INDUSTRIA	ATLANTA	Georgia	30318	0.117	0.2185	0.3355	0.078		1.547	1.9605
ASTRO COATINGS INC	27 MAIN ST	STRUTHERS	Ohio	44471	0.5915	1.3605	1.952	0	0	0	1.952
FORD LOUISVILLE ASSEMBLY	2000 FERN VALLEY RD	LOUISVILLE	Kentucky	40213	0.215	1.6	1.815	0		0.13	1.945
REICHHOLD INC	425 S PACE BLVD	PENSACOLA	Florida	32502	0.169	1.7665	1.9355	0		0	1.9355
VERTIS COMMUNICATIONS	4646 S GRADY AVE	TAMPA	FLORIDA	33611	1.7675	0.165	1.9325	0	0	0	1.9325
CONSOLIDATED SYSTEMS INC	650 ROSEWOOD DR	COLUMBIA	South Carolina	29201	0	1.925	1.925	0	0	0	1.925
SC JOHNSON & SON INC WAXDALE FACILITY	8311 16TH ST	STURTEVANT	Wisconsin	53177	0.125	0.375	0.5	0		1.425	1.925
GATES CORP - CHARLESTON	1300 S PLANT RD	CHARLESTON	Missouri	63834	0	0.0056	0.0056	0	0	1.8995	1.9051
WARREN UNILUBE INC	1200 S 8TH ST	WEST MEMPHIS	Arkansas	72301	1.892	0.007	1.899	0	0	0	1.899
IMPRESS USA INC	3030 BIRCH DR HALF MOON	WEIRTON	West Virginia	26062	0.0065	1.8665	1.873	0	0	0	1.873
DURA COAT PRODUCTS INC	26655 PEOPLES RD	MADISON	Alabama	35756	1.64203	0.21697	1.859	0	0	0	1.859
AKZONOBEL AEROSPACE COATINGS	1 E WATER ST	WAUKEGAN	Illinois	60085	0.916	0.918	1.834	0	0	0	1.834
GENERAL MOTORS MLCG DETROIT-HAMTRAMCK ASSEMBLY CENTER	2500 E GENERAL MOTORS I	DETROIT	Michigan	48211	1.6	0.19	1.79	0		0.027	1.817
PRO LINE PRINTING / RR DONNELLEY	365 PARR CIR	RENO	Nevada	89512	1.759	0.041	1.8	0		0	1.8
EASTMAN CHEMICAL CO TENNESSEE OPERATIONS	100 EASTMAN RD	KINGSPORT	Tennessee	37662	0.8855	0.8405	1.726	0.0675	0	0.002	1.7955
BALL METAL FOOD CONTAINER CORP	1200 S CRUTCHER ST	SPRINGDALE	Arkansas	72764	0.09	1.7	1.79	0	0	0	1.79
COLOR CORP OF AMERICA	1630 W HILL ST	LOUISVILLE	Kentucky	40210	0.009	1.756	1.765	0	0	0	1.765
RHODIA INC	2ND ST & BLUEBALL AVE	MARCUS HOOK	Pennsylvania	19061	0.201	0.0005	0.2015	0		1.562	1.7635
CAMACO COLUMBUS MANUFACTURING	1851 E 32ND AVE	COLUMBUS	Nebraska	68601	0	1.753	1.753	0		0	1.753

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
RR DONNELLEY PINEVILLE	10519 INDUSTRIAL DR	PINEVILLE	North Carolina	28134	1.6305	0.0865	1.717	0		0	1.717
STEELSCAPE INC	7001 ALLISON-BONNET MEN	FAIRFIELD	Alabama	35064	0.003895	1.709215	1.71311	0	0	0	1.71311
SILGAN CONTAINERS MANUFACTURING CORP	2200 WILBUR AVE	ANTIOCH	California	94509	0	1.7065	1.7065	0	0	0	1.7065
FUJIFILM NORTH AMERICA CORP	20 W 14TH AVE	NORTH KANSAS CIT	Missouri	64116	0	1.683	1.683	0	0	0	1.683
U S CHEMICAL	316 HART ST	WATERTOWN	Wisconsin	53094	0.00011	0.00003	0.00014	0		1.6775	1.67764
EASTMAN KODAK CO EASTMAN BUSINESS PARK	1669 LAKE AVE	ROCHESTER	New York	14652	0.001	0.0035	0.0045	1.19	0	0.438	1.6325
DAIMLERCHRYSLER CORP TOLEDO ASSEMBLY PLANT	4000 STICKNEY AVE	TOLEDO	Ohio	43612	0.50765	1.1	1.60765	0	0	0.0025	1.61015
STP PRODUCTS MANUFACTURING CO	477 LEXINGTON AVE	PAINESVILLE	Ohio	44077	0.81	0	0.81	0	0	0.772	1.582
HUNTSMAN PETROCHEMICAL LLC	5451 JEFFERSON CHEMICA	CONROE	Texas	77301	0	0	0	0	0	1.5735	1.5735
RR DONNELLEY VON HOFFMANN CORP	321 WILSON DR	JEFFERSON CITY	Missouri	65109	1.534445	0.03795	1.572395	0		0	1.572395
J L CLARK INC	923 23RD AVE	ROCKFORD	Illinois	61104	0.26	1.2795	1.5395	0	0	0	1.5395
DOW CHEMICAL CO - LOUISIANA OPERATIONS	21255 LA HWY 1 S	PLAQUEMINE	Louisiana	70765	1.538	0	1.538	0	0	0	1.538
WORLDCOLOR - DYERSBURG DIV	2030 SYLVAN RD	DYERSBURG	Tennessee	38024	1.4305	0.0985	1.529	0		0	1.529
RANBAR ELECTRICAL MATERIALS INC	RTE 993 ONE MILE W OF RT	MANOR	Pennsylvania	15665	0	0.006	0.006	0	0	1.4975	1.5035
SILGAN WHITE CAP CORP	350 JAYCEE DR VALMONT II	HAZLETON	Pennsylvania	18201	0.75	0.75	1.5	0	0	0	1.5
TEXAS FINISHING CO	1801 SURVEYOR BLVD	CARROLLTON	Texas	75006	0	1.4565	1.4565	0		0	1.4565
CARESTREAM HEALTH COLORADO	2000 HOWARD SMITH AVE V	WINDSOR	Colorado	80550	0.002	0	0.002	1.4505	0	1.73472E-18	1.4525
CHRYSLER STERLING HEIGHTS ASSEMBLY PLANT	38111 VAN DYKE	STERLING HEIGHTS	Michigan	48312	0.55	0.9	1.45	0		0	1.45
WORLDCOLOR STILLWATER (WAS QUEBECOR WORLD - STILLWATER DIV)	100 W AIRPORT RD	STILLWATER	Oklahoma	74075	1.2965	0.1515	1.448	0	0	0	1.448
THIRD COAST PACKAGING INC PEARLAND	1871 MYKAWA	PEARLAND	Texas	77581	0	0	0	0	0	1.431	1.431
RR DONNELLEY	100 QUALITY CT	CHARLESTOWN	Indiana	47111	1.362	0.0635	1.4255	0		0	1.4255
BAYOU COS INC	5200 CURTIS LN	NEW IBERIA	LOUISIANA	70560	1.4245	0	1.4245	0	0	0	1.4245
NICHOLS ALUMINUM ALABAMA INC	2001 HWY 20 W	DECATUR	Alabama	35601	1.135	0.279	1.414	0		0	1.414
GMC TRUCK GROUP ARLINGTON ASSEMBLY PLANT	2525 E ABRAMS ST	ARLINGTON	Texas	76010	0.36	1.05	1.41	0		0	1.41
CARDINAL ALUMINUM CO PLAN T 3	4005 OAKLAWN DR	LOUISVILLE	Kentucky	40219	0.0485	1.354	1.4025	0	0	0	1.4025
WHEELING CORRUGATING CO - BEECH BOTTOM PLANT	2481 RIVER RD	WELLSBURG	West Virginia	26070	0	1.4	1.4	0	0	0	1.4
OHIO ART CO	ONE TOY ST	BRYAN	Ohio	43506	0.944	0.444	1.388	0	0	0	1.388
PRO LINE PRINTING ARLINGTON	401 N GREAT SW PKWY	ARLINGTON	Texas	76011	1.25	0.125	1.375	0		0	1.375

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	372 CLEVELAND ST	ROCHESTER	Pennsylvania	15074	0.523	0.8515	1.3745	0	0	0	1.3745
GFX INTERNATIONAL	333 BARRON BLVD	GRAYSLAKE	Illinois	60030	0	0.82	0.82	0		0.55	1.37
HUNTSMAN PETROCHEMICAL LLC	3892 US HWY 90	DAYTON	Texas	77535	0.001	0.001	0.002	0	0	1.368	1.37
CHROMASOURCE INC	2433 S CR 600 E	COLUMBIA CITY	Indiana	46725	0	1.338	1.338	0	0	0	1.338
VEYANCE TECHNOLOGIES INC	400 N GOODYEAR RD	MOUNT PLEASANT	Iowa	52641	0.0005	0	0.0005	0		1.3175	1.318
SHEBOYGAN PAINT CO	608 CANAL ST	CEDARTOWN	Georgia	30125	0.635	0.677	1.312	0	0	0	1.312
COOK COMPOSITES & POLYMERS CO	1415 STEELE AVE SW	GRAND RAPIDS	Michigan	49507	1.061	0.251	1.312	0	0	0	1.312
ICL-IP AMERICA INC	11636 HUNTINGTON	GALLIPOLIS FERRY	West Virginia	25515	0.005715	0.344885	0.3506	0.9545	0	0	1.3051
RR DONNELLEY & SONS CO	60 SECURITY DR	AVON	Connecticut	06001	1.258	0.0295	1.2875	0		0	1.2875
MASCO RETAIL CABINET GROUP LLC	423 HOPEWELL RD	WAVERLY	Ohio	45690	0.0055	1.1675	1.173	0	0	0.1105	1.2835
CLEVELAND STEEL CONTAINER - PE OTONE FACILITY	117 E LINCOLN ST	PEOTONE	Illinois	60468	0.053	1.214	1.267	0	0	0	1.267
CATERPILLAR INC	3701 STATE RD 26 E	LAFAYETTE	Indiana	47905	0.04	1.2155	1.2555	0	0	0	1.2555
LION COPOLYMER LLC	5955 SCENIC HWY	BATON ROUGE	Louisiana	70805	0	0	0	0.0015	0	1.25	1.2515
GOODYEAR TIRE & RUBBER CO. AKRON TECHNICAL CENTER	200 S. MARTHA AVE	AKRON	Ohio	44309	0	0	0	0	0	1.25	1.25
GENTEK BUILDING PRODUCTS	11 CRAGWOOD RD	AVENEL	New Jersey	07001	0.122	1.126	1.248	0	0	0	1.248
SUN CHEMICAL CORP	2445 PRODUCTION DR	SAINT CHARLES	Illinois	60174	0.185	1.049	1.234	0	0	0	1.234
PPG ARCHITECTURAL FINISHES EAST POINT	1377 OAKLEIGH DR	EAST POINT	Georgia	30344	0	0.691	0.691	0	0	0.541	1.232
AKZO NOBEL COATINGS INC	1313 WINDSOR AVE	COLUMBUS	Ohio	43211	0.7885	0.4365	1.225	0	0	0	1.225
SPIRALKOTE FLEXIBLE PACKAGING	1200 CENTRAL FLORIDA PK	ORLANDO	FLORIDA	32837	0	1.2105	1.2105	0	0	0	1.2105
SPRAYLAT CORP IL	1701 E 122-ND ST	CHICAGO	Illinois	60633	0.06	1.141	1.201	0	0	0	1.201
KIK (HOUSTON) INC	2921 CORDER ST	HOUSTON	Texas	77054	1.19	0	1.19	0		0	1.19
CP CONVERTERS INC	15 GRUMBACHER RD	YORK	PENNSYLVANI	17402	1.17007	0	1.17007	0	0	0	1.17007
RED SPOT PAINT & VARNISH CO INC	1016 E COLUMBIA ST	EVANSVILLE	Indiana	47711	0.6865	0.4695	1.156	0	0	0	1.156
JOHN DEERE SEEDING & CYLINDER	501 RIVER DR	MOLINE	Illinois	61265	0	1.15	1.15	0	0	0	1.15
VEYANCE TECHNOLOGIES INC	2701 W OMAHA AVE	NORFOLK	Nebraska	68701	0.03668	0.108535	0.145215	0	0	1.000835	1.14605
BJ CHEMICAL SERVICES	707 N LEECH	HOBBS	New Mexico	88240	0.014	0.00335	0.01735	0		1.12405	1.1414
ARANDELL CORP	N82 W13118 LEON RD	MENOMONEE FALLS	Wisconsin	53051	1.094	0.0255	1.1195	0	0	0	1.1195
CHEMCOAT INC	2790 CANFIELDS LN	MONTOURSVILLE	Pennsylvania	17754	0.125	0	0.125	0	0	0.986	1.111
W W HENRY	150 MOONEY DR	BOURBONNAIS	Illinois	60914	1.1105	0	1.1105	0	0	0	1.1105

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DUBOIS CHEMICALS INC	3630 E KEMPER RD	SHARONVILLE	Ohio	45241	0	0	0	0		1.11	1.11
BEAULIEU OF AMERICA PLANT 560-MODEL	950 RIVERBEND RD	DALTON	Georgia	30721	0	1.1095	1.1095	0		0	1.1095
TESORO REFINING & MARKETING CO - MANDAN REFINERY	900 OLD RED TRAIL NE	MANDAN	North Dakota	58554	1.1	0.0005	1.1005	0	0	0	1.1005
IVC INDUSTRIAL COATINGS INC	2245-50 VALLEY AVE	INDIANAPOLIS	Indiana	46218	0.21965	0.87855	1.0982	0	0	0	1.0982
VANGUARD PAINTS & FINISHES INC	1409 GREENE ST	MARIETTA	Ohio	45750	1.078	0	1.078	0	0	0	1.078
WINSLOW-BROWNING INC	215 BROWNSVILLE AVE	LIBERTY	Indiana	47353	1.077	0	1.077	0	0	0	1.077
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	701 SHILOH RD	GARLAND	Texas	75042	0.5915	0.4765	1.068	0		0	1.068
GENERAL DYNAMICS ORDNANCE & TACTICAL SYSTEMS GARLAND	1200 N GLENBROOK	GARLAND	Texas	75040	0.002985	0.000005	0.00299	0	0	1.06475	1.06774
POLYMERIC IMAGING INC	117 E 14TH AVE	NORTH KANSAS CIT	Missouri	64116	0	1.0665	1.0665	0	0	0	1.0665
3M CO - BROWNWOOD	4501 HWY 377 S	BROWNWOOD	Texas	76801	0.0435	1	1.0435	0	0	0.006	1.0495
HB FULLER	12110 HARLAND DR NE	COVINGTON	Georgia	30014	0.5815	0.2815	0.863	0		0.1855	1.0485
COMPLEMENTARY COATINGS CORP	4701 O'DONNELL ST	BALTIMORE	Maryland	21224	1.029	0	1.029	0	0	0	1.029
UNITED PAINT & CHEMICAL	24671 TELEGRAPH RD	SOUTHFIELD	Michigan	48034	1.023	0	1.023	0	0	0	1.023
COOK COMPOSITES & POLYMERS CO	2434 HOLMES RD	HOUSTON	Texas	77051	1.013	0.006	1.019	0	0	0	1.019
TTM TECHNOLOGIES INC	234 CASHMAN DR	CHIPPEWA FALLS	Wisconsin	54729	0	1.002	1.002	0		0	1.002
GENERAL MOTORS LLC BOWLING GREEN ASSEMBLY PLANT	600 CORVETTE DR	BOWLING GREEN	Kentucky	42101	0.1	0.9	1	0		0	1
TTM TECHNOLOGIES-SANTA CLARA	407 MATHEW ST	SANTA CLARA	California	95050	0	0.9985	0.9985	0		0	0.9985
NICHOLS ALUMINUM DAVENPORT	1725 ROCKINGHAM RD	DAVENPORT	Iowa	52802	0.2795	0.717	0.9965	0		0	0.9965
THREE RIVERS ALUMINUM CO	71 PROGRESS AVE	CRANBERRY TOWN	Pennsylvania	16066	0.3575	0.637	0.9945	0	0	0	0.9945
LEVLAD	9200 MASON AVE	CHATSWORTH	California	91311	0.000185	0	0.000185	0		0.9875	0.987685
SONY ELECTRONICS INC	4275 W MAIN ST	DOTHAN	Alabama	36305	0	0	0	0	0	0.983	0.983
CANBERRA CORP	3610 HOLLAND-SYLVANIA R	TOLEDO	Ohio	43615	0.6	0.375	0.975	0		0	0.975
PPG INDUSTRIES OHIO INC (CL)	3800 W 143 ST	CLEVELAND	Ohio	44111	0.4135	0.554	0.9675	0	0	0	0.9675
TEXAS INSTRUMENTS INC	12201 SW FWY MS600	STAFFORD	Texas	77477	0.0025	0.125	0.1275	0	0	0.825	0.9525
B-WAY PACKAGING INC	6 LITHO RD	TRENTON	New Jersey	08648	0.095	0.857	0.952	0	0	0	0.952
GATES CORP	1650 ROWE PKWY	POPLAR BLUFF	MISSOURI	63901	0	0.0005	0.0005	0	0	0.948	0.9485
WESTERN METAL DECORATING CO	8875 INDUSTRIAL AVE	RANCHO CUCAMON	CALIFORNIA	91730	0.55	0.375	0.925	0	0	0	0.925
HILLYARD INDUSTRIES INC	402 N 3TH ST	SAINT JOSEPH	Missouri	64501	0.3575	0.563	0.9205	0		0	0.9205

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
U.S. POLYMERS ACCUREZ LLC	300 E PRIMM ST	SAINT LOUIS	Missouri	63111	0.0045	0.0025	0.007	0		0.8995	0.9065
FORBO ADHESIVES LLC	7440 W DUPONT RD	MORRIS	Illinois	60450	0.896	0	0.896	0		0	0.896
NAPCO INC	125 MCFANN RD	VALENCIA	Pennsylvania	16059	0.817	0.076	0.893	0	0	0	0.893
CRYSTAL FINISHING SYSTEMS INC	2608 ROSS AVE	SCHOFIELD	Wisconsin	54476	0	0.89296195	0.89296195	0	0	0	0.89296195
HUNT REFINING CO A CORP	1855 FAIRLAWN RD	TUSCALOOSA	Alabama	35401	0.8905	0	0.8905	0	0	0	0.8905
POLARTEC LLC	46 STAFFORD ST	LAWRENCE	MASSACHUSE	1841	0.89	0	0.89	0		0	0.89
SUN CHEMICAL CORP	1380 FORD RD	MAUMEE	Ohio	43537	0.133	0.7545	0.8875	0	0	0	0.8875
EXXONMOBIL CHEMICAL BATON ROUGE CHEMICAL PLANT	4999 SCENIC HWY	BATON ROUGE	Louisiana	70805	0.6	0	0.6	0.285	0	1.11022E-16	0.885
HOVENSA LLC	1 ESTATE HOPE	CHRISTIANSTED	Virgin Islands	00820	0.702	0	0.702	0.1805	0	0	0.8825
FINISHES UNLIMITED INC	482 WHEELER RD	SUGAR GROVE	Illinois	60554	0.438	0.438	0.876	0		0	0.876
UNIVAR USA INC HOUSTON FM 529	11235 FM 529	HOUSTON	TEXAS	77041	0.375	0.5	0.875	0	0	0	0.875
UNIVERSAL CHEMICALS & COATINGS INC	1124 ELMHURST RD	ELK GROVE VILLAGE	Illinois	60007	0	0.8735	0.8735	0	0	0	0.8735
ARMSTRONG WORLD INDUSTRIES INC	4115 N PERKINS RD	STILLWATER	Oklahoma	74075	0.33403	0.52419	0.85822	0	0	0	0.85822
BRENNTAG SOUTHWEST INC HOUS TON	14826 HOOPER RD	HOUSTON	Texas	77047	0.0125	0.0125	0.025	0	0	0.83	0.855
MITSUBISHI MOTORS NORTH AMERICA INC	100 N MITSUBISHI MOTORW	NORMAL	Illinois	61761	0.843	0.0055	0.8485	0	0	0	0.8485
CROWN CORK & SEAL CO (USA) INC CROWN CLOSURES DIV	940 MILL PARK DR	LANCASTER	Ohio	43130	0	0.8195	0.8195	0	0	0	0.8195
DPIX LLC	1635 AEROPLAZA DR	COLORADO SPRING	COLORADO	80916	0.3395	0.1355	0.475	0	0	0.3375	0.8125
SONOCO PRODUCTS CO	1854 CENTRAL FLORIDA PK	ORLANDO	Florida	32837	0.59	0.22	0.81	0	0	0	0.81
NEXTEER AUTOMOTIVE CORP	3900 HOLLAND RD	SAGINAW	Michigan	48601	0.08	0.72	0.8	0		0	0.8
FIVE STAR COATINGS GROUP	36616 89TH ST	TWIN LAKES	WISCONSIN	53181	0	0.798	0.798	0	0	0	0.798
PEORIA DISPOSAL CO #1	4349 W SOUTHPORT RD	PEORIA	Illinois	61615	0.7925	0	0.7925	0.0005		1.11022E-16	0.793
TRELLEBORG OFFSHORE US RANKIN ROAD FACILITY	1902 RANKIN RD	HOUSTON	Texas	77073	0.785	0	0.785	0	0	0	0.785
SILGAN CONTAINERS MANUFACTURING CORP	12130 LYNN AVE S	SAVAGE	Minnesota	55378	0	0.785	0.785	0	0	0	0.785
KAWNEER CO INC	500 E 12TH ST	BLOOMSBURG	Pennsylvania	17815	0.1305	0.645	0.7755	0	0	0	0.7755
ASHLAND DISTRIBUTION CO GARLAND TX	3101 WOOD DR	GARLAND	Texas	75041	0.152	0.035	0.187	0	0	0.5845	0.7715
TCI COATINGS INC	4501 BRADLEY ST	LUBBOCK	Texas	79415	0.7665	0	0.7665	0		0	0.7665
STEEL DYNAMICS INC	5134 LOOP RD	JEFFERSONVILLE	Indiana	47130	0	0.763	0.763	0	0	0	0.763
WORWAG COATINGS LLC NA	3420 KOSSUTH ST	LAFAYETTE	Indiana	47905	0.6285	0.125	0.7535	0	0	0	0.7535
ROHM & HAAS ELECTRONIC MATERIA LS LLC	455 FOREST ST	MARLBOROUGH	Massachusetts	01752	0.0025	0.0025	0.005	0		0.7465	0.7515

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
RUST-OLEUM CORP	8105 95TH ST	PLEASANT PRAIRIE	Wisconsin	53158	0.375	0.375	0.75	0	0	0	0.75
BASF CORP	1175 MARTIN ST	GREENVILLE	Ohio	45331	0.095	0.155	0.25	0	0	0.5	0.75
PARKER HANNIFIN	400 S ST	MC COOK	Nebraska	69001	0	0	0	0	0	0.741685	0.741685
SYNDICATE SYSTEMS INC	402 N MAIN ST	MIDDLEBURY	Indiana	46540	0	0.733	0.733	0	0	0	0.733
MERCK SHARP & DOHME CORP	2778 SE SIDE HWY	ELKTON	Virginia	22827	0.21	0.17	0.38	0.335	0	0.015	0.73
KODAK COLORADO DIV	9952 EASTMAN PARK DR	WINDSOR	Colorado	80551	0	0	0	0.7255	0	0	0.7255
UNIVAR USA INC ROMULUS BRANCH	13395 HURON RIVER DR	ROMULUS	Michigan	48174	0.0105	0.0275	0.038	0		0.6745	0.7125
MARCUS PAINT CO	235 E MARKET ST	LOUISVILLE	Kentucky	40202	0.705	0.0025	0.7075	0	0	0	0.7075
SUPERIOR OIL CO INC RECLAIMED ENERGY DIV	1500 WESTERN AVE	CONNERSVILLE	Indiana	47331	0.05	0.025	0.075	0	0	0.632	0.707
GREIF INDUSTRIAL PACKAGING & SERVICES LLC	8250 ALMERIA AVE	FONTANA	California	92335	0.06325	0.6398	0.70305	0	0	0	0.70305
WATSON STANDARD CO HARWICK PLANT	616 HITE RD	HARWICK	Pennsylvania	15049	0.5685	0.125	0.6935	0	0	0	0.6935
WESTERN EXTRUSIONS CORP	1735 SANDY LAKE RD	CARROLLTON	Texas	75006	0.125	0.565	0.69	0.0025	0	1.11022E-16	0.6925
WEST PENN OIL CO, INC130130	2305 MARKET ST EXT	WARREN	Pennsylvania	16365	0.678	0	0.678	0		0	0.678
LOCKHEED MARTIN AERONAUTICS CO	1011 LOCKHEED WAY MZ 66	PALMDALE	California	93599	0.069	0.445	0.514	0		0.163	0.677
TEXAS TILE MANUFACTURING LLC	1705 N OLIVER	HOUSTON	Texas	77007	0.001	0.671	0.672	0		0	0.672
NALCO CO PLANT 106	7701 US HWY 90A	SUGAR LAND	Texas	77478	0	0	0	0		0.669	0.669
SASOL NORTH AMERICA INC LAKE CHARLES CHEMICAL COMPLEX	2201 OLD SPANISH TRAIL	WESTLAKE	Louisiana	70669	0.547	0.1215	0.6685	0	0	0	0.6685
METALS USA BUILDING PRODUCTS	227 S TOWN E BLVD	MESQUITE	Texas	75149	0.332	0.331	0.663	0	0	0	0.663
KAWNEER CO INC	7200 DOE AVE	VISALIA	California	93291	0.049	0.609	0.658	0	0	0	0.658
BASF CORP	361 SHEEP PASTURE RD	EAST SETAUKET	NEW YORK	11733	0.008	0	0.008	0	0	0.65	0.658
ROLL COATER INC	5888 E COUNTY RD 180	BLYTHEVILLE	Arkansas	72315	0	0.6505	0.6505	0	0	0	0.6505
PRECOAT METALS	6754 SANTA BARBARA CT	ELKRIDGE	Maryland	21075	0	0.634	0.634	0	0	0	0.634
STEELSCAPE	222 W KALAMA RIVER RD	KALAMA	Washington	98625	0.003865	0.62815	0.632015	0	0	0	0.632015
TRINKOTE INDUSTRIAL FINISHES INC	1800 PARK PL AVE	FORT WORTH	Texas	76110	0	0.628	0.628	0	0	0	0.628
TRELLEBORG COATED SYSTEMS US INC / GRACE ADVANCED MATERIALS	715 RAILROAD AVE & HWY 1	RUTHERFORDTON	North Carolina	28139	0	0.00625	0.00625	0	0	0.6215	0.62775
SANFORD LP LIQUID MANUFACTURING & TECHNOLOGY CENTER	831 VOLUNTEER PKWY	MANCHESTER	TENNESSEE	37355	0.125	0.125	0.25	0.0025	0.375	0	0.6275
FLINT GROUP NORTH AMERICA CORP	2675 HENKLE DR	LEBANON	Ohio	45036	0.604	0.004	0.608	0	0	0	0.608
RYCOLINE PRODUCTS LLC	5540 NW HWY	CHICAGO	Illinois	60630	0.091	0.5155	0.6065	0	0	0	0.6065

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
GLASS COATINGS & CONCEPTS	300 LAWTON AVE	MONROE	Ohio	45050	0.5905	0.002	0.5925	0		0	0.5925
ALERIS ROLLED PRODUCTS INC	1 REYNOLDS RD	ASHVILLE	Ohio	43103	0.119	0.4695	0.5885	0	0	0	0.5885
ENGINEERED POLYMER SOLUTIONS I NC D/B/A VALSPAR COATINGS	90 CARSON RD	BIRMINGHAM	Alabama	35215	0.217	0.3715	0.5885	0	0	0	0.5885
CELLU TISSUE/CITYFOREST LLC	1215 WORDEN AVE E	LADYSMITH	Wisconsin	54848	0	0	0	0.5865		0	0.5865
ASHLAND DISTRIBUTION	8500 S WILLOW SPRINGS R	WILLOW SPRINGS	Illinois	60480	0.536	0.05	0.586	0	0	0	0.586
ROLL COATER INC	2604 RIVER RD	HAWESVILLE	Kentucky	42348	0	0.58	0.58	0	0	0	0.58
DIAMOND VOGEL PAINTS	5111 E 36TH ST N	TULSA	Oklahoma	74115	0.0115	0.568	0.5795	0	0	0	0.5795
HERCULES INC KENEDY TEXAS	ONE MILL ST	KENEDY	Texas	78119	0.09493	0.03923	0.13416	0		0.44255	0.57671
COMPLEX CHEMICALS CO INC	MADISON PARISH INDUSTR	TALLULAH	Louisiana	71282	0.3	0.225	0.525	0.0515		0	0.5765
PRIOR COATED METALS	2233 26TH ST SW	ALLENTOWN	Pennsylvania	18103	0	0.568	0.568	0	0	0	0.568
DUCKBACK PRODUCTS	2644 HEGAN LN	CHICO	California	95928	0.5605	0	0.5605	0	0	0	0.5605
KLINGER PAINT CO INC	5555 WILLOW CREEK DR SV	CEDAR RAPIDS	IOWA	52404	0.559	0.00084	0.55984	0	0	0	0.55984
CLARIANT CORP - MOUNT HOLLY WEST PLANT	625 E CATAWBA AVE	MOUNT HOLLY	North Carolina	28120	0	0.0555	0.0555	0		0.5	0.5555
SOUTHERN CLAY PRODUCTS INC	1335 S 13TH ST	LOUISVILLE	Kentucky	40210	0.0025	0.125	0.1275	0		0.425	0.5525
FLINT HILLS RESOURCES LP	13775 CLARK RD	ROSEMOUNT	Minnesota	55068	0.55	0	0.55	0	0	0	0.55
HYDRITE CHEMICAL CO	114 N MAIN ST	COTTAGE GROVE	Wisconsin	53527	0	0.55	0.55	0	0	0	0.55
REICHHOLD INC	249 ST LOUIS AVE	VALLEY PARK	Missouri	63088	0.261075	0.2888	0.549875	0		5E-05	0.549925
DUPONT FORT MADISON PLANT	801 - 35TH ST	FORT MADISON	Iowa	52627	0	0.544	0.544	0	0	0	0.544
SPARTAN CHEMICAL CO INC	1110 SPARTAN DR	MAUMEE	Ohio	43537	0.0675	0	0.0675	0		0.4645	0.532
CENTRIA	500 PERTH DR NEW ECONC	AMBRIDGE	Pennsylvania	15003	0	0.5315	0.5315	0	0	0	0.5315
PARISER INDUSTRIES INC	91 MICHIGAN AVE	PATERSON	New Jersey	07503	0.5275	0	0.5275	0		0	0.5275
APOLLO CHEMICAL	2001 WILLOW SPRINGS LN	BURLINGTON	North Carolina	27215	0.230495	0.000002	0.230497	0		0.296825	0.527322
MARY KAY INC	1330 REGAL ROW	DALLAS	Texas	75247	0.00026	0	0.00026	0		0.5265	0.52676
DUPONT MOUNT CLEMENS PLANT	400 GROESBECK HWY	MOUNT CLEMENS	Michigan	48043	0.0025	0.524	0.5265	0	0	0	0.5265
MAXIM INTEGRATED PRODUCTS INC	9651 WESTOVER HILLS BLV	SAN ANTONIO	Texas	78251	0	0.517	0.517	0	0	0	0.517
ALERIS ROLLED PRODUCTS INC	3321 DURHAM RD	ROXBORO	North Carolina	27573	0.0025	0.5105	0.513	0	0	0	0.513
ARROW GROUP INDUSTRIES INC	1 THIRD AVE	HASKELL	New Jersey	07420	0.0025	0.1925	0.195	0	0	0.3165	0.5115
PLAZE INC	105 BOLTE LN	SAINT CLAIR	Missouri	63077	0.509	0	0.509	0	0	0	0.509
TERNIUM USA INC	2500 RON BEAN BLVD	SHREVEPORT	Louisiana	71115	0.0125	0.496	0.5085	0	0	0	0.5085
CLARIANT CORP MARTIN PLANT	788 CHERT QUARRY RD	MARTIN	South Carolina	29836	0.125	0.0025	0.1275	0.375	0	0	0.5025

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ARCADIA INC	3225 E WASHINGTON BLVD	VERNON	California	90023	0.125	0.375	0.5	0		0	0.5
SILBOND CORP	9901 SAND CREEK HWY	WESTON	Michigan	49289	0.375	0.125	0.5	0	0	0	0.5
FERRO GLASS & COLOR CORP	W WYLIE AVE	WASHINGTON	Pennsylvania	15301	0.125	0.375	0.5	0	0	0	0.5
EVONIK DEGUSSA CORP TIPPECANOE LABORATORIES	1650 LILLY RD	LAFAYETTE	Indiana	47909	0.375	0.125	0.5	0	0	0	0.5
FORMULA CORP	4432 C ST NE	AUBURN	WASHINGTON	98002	0.125	0	0.125	0		0.375	0.5
BEHR PROCESS CORP ALLENTOWN	7529 MORRIS CT BLDG 500	ALLENTOWN	Pennsylvania	18106	0.0066	0.0113	0.0179	0	0.482	0	0.4999
TRAD NA INC	210 BILL BRYAN BLVD	HOPKINSVILLE	Kentucky	42240	0	0.48455	0.48455	0		0	0.48455
CLEAN HARBORS EL DORADO LLC	309 AMERICAN CIR UNION	EL DORADO	Arkansas	71730	0	0.0098	0.0098	0	0	0.474515	0.484315
FULLER BRUSH CO	ONE FULLER WAY	GREAT BEND	Kansas	67530	0.161	0.3215	0.4825	0		0	0.4825
TYSON FRESH MEATS INC	HWY 35/IBP AVE	DAKOTA CITY	NEBRASKA	68731	0.005	0.005	0.01	0.245	0.2205	8.67362E-18	0.4755
NAZDAR CHICAGO	1087 N N BRANCH ST	CHICAGO	Illinois	60622	0.142	0.3315	0.4735	0	0	0	0.4735
SNAP-ON TOOLS MANUFACTURING CO	2600 US HWY 18 E	ALGONA	Iowa	50511	0.0055	0.465	0.4705	0		0.0025	0.473
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	5400 23RD AVE	MOLINE	Illinois	61265	0.207	0.263	0.47	0	0	0	0.47
SHERWIN-WILLIAMS CO	2802 W MILLER RD	GARLAND	Texas	75041	0.0025	0.0275	0.03	0	0	0.439	0.469
CLEVELAND STEEL CONTAINER CORP - STREETSBORO PLANT	10048 AURORA-HUDSON RD	STREETSBORO	Ohio	44241	0.0045	0.4635	0.468	0	0	0	0.468
ROCK TENN CO	2301 S 21ST ST	CLINTON	Iowa	52732	0	0.466	0.466	0		0	0.466
HEXION SPECIALTY CHEMICALS INC	8600 W 71ST ST	BEDFORD PARK	Illinois	60501	0	0.458	0.458	0		0	0.458
VISTA PAINT CORP	2020 E ORANGETHORPE AV	FULLERTON	California	92831	0.4065	0	0.4065	0	0	0.0405	0.447
UNIVAR USA INC SALEM BRANCH	COLONIAL RD	SALEM	Massachusetts	01970	0.001	0.001	0.002	0	0	0.4405	0.4425
SOUTHWEST DISTRIBUTING CO	539 S DREW ST	MESA	Arizona	85210	0.0005	0	0.0005	0	0	0.442	0.4425
FORREST PAINT CO	1011 MCKINLEY ST	EUGENE	Oregon	97402	0.1755	0.2615	0.437	0	0	0	0.437
SEYMOUR OF SYCAMORE INC	917 CROSBY AVE	SYCAMORE	ILLINOIS	60178	0.3785	0.0555	0.434	0	0	0	0.434
NB COATINGS INC	2701 E 170TH ST	LANSING	Illinois	60438	0.4065	0.00175	0.40825	0	0	0.0235	0.43175
PFI INC	9215 SANTA FE SPRINGS RD	SANTA FE SPRINGS	California	90670	0.43	0	0.43	0	0	0	0.43
RODDA PAINT CO	6123 N MARINE DR	PORTLAND	Oregon	97203	0.427	0.0025	0.4295	0	0	0	0.4295
NELCO PRODUCTS INC	1107 E KIMBERLY	ANAHEIM	California	92801	0.033	0.395	0.428	0	0	0	0.428
ELEMENTIS SPECIALTIES	400 CLAREMONT AVE	JERSEY CITY	New Jersey	07304	0.1125	0.3155	0.428	0	0	0	0.428
NASCOTE INDUSTRIES	18310 ENTERPRISE AVE	NASHVILLE	Illinois	62263	0.149425	0.278235	0.42766	0	0	0	0.42766

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ASHLAND DISTRIBUTION	3300 BALL ST	BIRMINGHAM	Alabama	35234	0.3735	0.048	0.4215	0		0	0.4215
GEMINI COATINGS INC	2300 HOLLOWAY DR	EL RENO	OKLAHOMA	73036	0.4005	0.0025	0.403	0.0025	0	0	0.4055
BEHR PROCESS CORP - CHICAGO	270 STATE ST	CHICAGO HEIGHTS	Illinois	60411	0.0291	0.0496	0.0787	0	0.326	0	0.4047
MAGNABLEND INC-CENTRAL PLANT	1601 W HWY 287 BYPASS	WAXAHACHIE	Texas	75165	0.0025	0	0.0025	0		0.4	0.4025
BRADLEY COATINGS GROUP	608 W CRAWFORD AVE	CONNELLSVILLE	Pennsylvania	15425	0.28171	0	0.28171	0	0	0.11381	0.39552
ROLLEX CORP	800 CHASE AVE	ELK GROVE VILLAGE	Illinois	60007	0	0.3955	0.3955	0		0	0.3955
NALCO CO TULSA PLANT 102	6717 S 61ST W AVE	TULSA	Oklahoma	74131	0	0	0	0	0	0.3935	0.3935
INCHEM CORP	800 CEL-RIVER RD	ROCK HILL	South Carolina	29730	0.0025	0.125	0.1275	0		0.264	0.3915
SIKA CORP SIKA SARNAFIL DIV	100 DAN RD	CANTON	Massachusetts	02021	0	0.3895	0.3895	0	0	0	0.3895
IMS ENGINEERED PRODUCTS LLC	ONE INNOVATION DR	DES PLAINES	ILLINOIS	60016	0.0025	0.375	0.3775	0		0.0025	0.38
ZSCHIMMER & SCHWARZ	70 GA HWY 22 W	MILLEDGEVILLE	GEORGIA	31061	0.0025	0.375	0.3775	0		0	0.3775
INTERNATIONAL PAINT LLC	6001 ANTOINE DR	HOUSTON	Texas	77091	0.0025	0.375	0.3775	0	0	0	0.3775
QUEST CHEMICAL CORP	12255 FM 529	HOUSTON	Texas	77041	0.375	0	0.375	0	0	0	0.375
TOWER PRODUCTS INC	2703 FREEMANSBURG AVE	EASTON	Pennsylvania	18045	0.375	0	0.375	0		0	0.375
PATRIOT PAINT LLC	304 S BLAINE PIKE	PORTLAND	INDIANA	47371	0.375	0	0.375	0	0	0	0.375
BRYCE CO LLC	450 S BENTON ST	SEARCY	ARKANSAS	72143	0.125	0.125	0.25	0	0	0.125	0.375
JASPER RUBBER PRODUCTS INC	1010 FIRST AVE	JASPER	Indiana	47546	0	0	0	0		0.375	0.375
MARCHEM TECHNOLOGIES LLC	20851 S SANTA FE AVE	LONG BEACH	California	90810	0	0	0	0		0.375	0.375
FUCHS LUBRICANTS CO-CORPORATE OFFICE	17050 S LATHROP AVE	HARVEY	Illinois	60426	0.3715	0	0.3715	0	0	0	0.3715
FLINT GROUP NORTH AMERICA CORP	104 NATIONAL DR	ANNISTON	Alabama	36207	0.185	0.185	0.37	0		0	0.37
METAL COATERS OF CALIFORNIA INC	9133 CENTER AVE	RANCHO CUCAMON	California	91730	0.033515	0.33515	0.368665	0	0	5.55112E-17	0.368665
TYSON FRESH MEATS INC JOSLIN IL	HWY 92 & I-88 28424 38TH A	HILLSDALE	Illinois	61257	0.015	0.0025	0.0175	0.11	0.03	0.21	0.3675
MIDWEST METAL COATINGS	9 KONZEN CT	GRANITE CITY	ILLINOIS	62040	0.3	0.067	0.367	0	0	0	0.367
IVC INDUSTRIAL COATINGS INC	1825 E NATIONAL AVE	BRAZIL	INDIANA	47834	0.07321	0.29284	0.36605	0	0	5.55112E-17	0.36605
AKZONOBEL COATINGS INC	120 FRANKLIN RD	PONTIAC	Michigan	48341	0.0915	0.0075	0.099	0		0.2635	0.3625
COMBE PRODUCTS INC	EL DUQUE INDUSTRIAL PAR	NAGUABO	Puerto Rico	00718	0	0	0	0		0.3615	0.3615
CELLO PROFESSIONAL PRODUCTS	1354 OLD POST RD	HAVRE DE GRACE	Maryland	21078	0.3525	0.0015	0.354	0		0	0.354
EXXONMOBIL REFINING & SUPPLY BATON ROUGE REFINERY	4045 SCENIC HWY	BATON ROUGE	Louisiana	70805	0.16	0.0015	0.1615	0.19	0	0	0.3515
FORD MOTOR CO CHICAGO ASSEMBLY	12600 S TORRENCE AVE	CHICAGO	Illinois	60633	0.35	0	0.35	0		0	0.35

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SHERWIN-WILLIAMS CO	180 CANAL ST	TERRE HAUTE	Indiana	47808	0.0235	0.06	0.0835	0	0	0.2665	0.35
LONGABERGER CO	5565 RAIDERS RD	FRAZEYSBURG	Ohio	43822	0.2105	0.01425	0.22475	0	0	0.125	0.34975
INEOS OXIDE A DIV OF INEOS AMERICAS LLC	21255A HWY 1 S	PLAQUEMINE	Louisiana	70765	0.318275	0.02926	0.347535	0	0	5.55112E-17	0.347535
QUEST SPECIALTY COATINGS LLC MENOMONEE FALLS	N92 W14701 ANTHONY AVE	MENOMONEE FALLS	WISCONSIN	53051	0.3475	0	0.3475	0	0	0	0.3475
INX INTERNATIONAL INK CO	1000 MAPLE AVE	HOMEWOOD	Illinois	60430	0.00566	0	0.00566	0		0.3395	0.34516
PACKAGING CORP OF AMERICA COUNCE MILL	HWY 57	COUNCE	Tennessee	38326	0.0215	0	0.0215	0.32	0	2.08167E-17	0.3415
DIVERSIFIED COATING SYSTEMS INC	309 ECHELON RD	GREENVILLE SOUTH	SOUTH CAROL	29605	0.0035	0.334	0.3375	0	0	0	0.3375
SIERRA CORP	11400 W 47TH ST	MINNETONKA	Minnesota	55343	0.336	0	0.336	0	0	0	0.336
SHERWIN-WILLIAMS AUTOMOTIVE FINISHES CORP	395 BOGGS LN - S	RICHMOND	Kentucky	40475	0.3175	0.0185	0.336	0	0	0	0.336
BECKER SPECIALTY CORP	2500 DELTA LN	ELK GROVE VILLAGE	Illinois	60007	0.0275	0.3075	0.335	0	0	0	0.335
AMERIMAX HOME PRODUCTS INC	450 RICHARDSON DR	LANCASTER	Pennsylvania	17603	0.0095	0.323	0.3325	0	0	0	0.3325
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	411 N DARLING	FREMONT	Michigan	49412	0.31	0.021	0.331	0	0	0	0.331
GATES CORP	630 US HWY 150 E	GALESBURG	Illinois	61401	0	0	0	0		0.329	0.329
ENGLERT INC	1200 AMBOY AVE	PERTH AMBOY	NEW JERSEY	08861	0.1315	0.187	0.3185	0		0	0.3185
ENERGIZER BATTERY MANUFACTURING INC	75 SWANTON RD	SAINT ALBANS	Vermont	05478	0.0025	0.157	0.1595	0	0	0.157	0.3165
AMERIMAX COATED PRODUCTS	215 PHILLIPS 324 RD	HELENA	ARKANSAS	72342	0	0.30835	0.30835	0	0	0	0.30835
CURTIS METAL FINISHING CO	9917 N ALPINE	MACHESNEY PARK	Illinois	61115	0.22	0.0875	0.3075	0		0	0.3075
LINETEC	725 S 75TH AVE	WAUSAU	Wisconsin	54401	0.0205	0.2815	0.302	0	0	0	0.302
FORD MOTOR CO MICHIGAN ASSEMBLY PLANT	38303 MICHIGAN AVE	WAYNE	Michigan	48184	0.0015	0.3	0.3015	0		0	0.3015
ET PRODUCTS CO INC	747 DOUGLAS RD	BREMEN	Indiana	46506	0	0.3	0.3	0		0	0.3
AMERICAN METALS CORP	1000 CROCKER RD	WESTLAKE	Ohio	44145	0	0.296	0.296	0	0	0	0.296
MAXIM INTEGRATED PRODUCTS INC	3725 N FIRST ST	SAN JOSE	California	95134	0	0.295	0.295	0	0	0	0.295
ATMI MATERIALS LTD	706 HOUSTON CLINTON DR	BURNET	Texas	78611	0.050745	0.000765	0.05151	0	0	0.23997	0.29148
MUTI-PACK LLC	8372 N STEVEN RD	MILWAUKEE	Wisconsin	53223	0.29	0	0.29	0		0	0.29
VIDEOJET TECHNOLOGIES INC	1855 ESTES AVE	ELK GROVE VILLAGE	Illinois	60007	0	0.287	0.287	0	0	0	0.287
TRITECH COATINGS CORP	1378 KINGSLAND AVE	PAGEDALE	Missouri	63133	0.194	0.0925	0.2865	0	0	0	0.2865
ENTHONE INC	350 FRONTAGE RD	WEST HAVEN	Connecticut	06516	0.005595	0.279675	0.28527	0	0	0	0.28527
SHERWIN-WILLIAMS CO	2150 W SAND LAKE RD	ORLANDO	Florida	32809	0	0.002	0.002	0	0	0.2765	0.2785
SUMTER COATINGS INC	2410 HWY 15S	SUMTER	South Carolina	29150	0.058	0.1755	0.2335	0	0	0.0425	0.276

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SPRAYLAT CORP	716 S COLUMBUS AVE	MOUNT VERNON	New York	10550	0.0135	0.2605	0.274	0		0	0.274
INTEL CORP	4100 SARA RD MS RR5-491	RIO RANCHO	New Mexico	87124	0.0025	0.2705	0.273	0		0	0.273
STANDARD PAINTS INC	940 S 6TH AVE	MANSFIELD	Texas	76063	0	0.239	0.239	0	0	0.03	0.269
QUANTUM MARKETING INC	3606 CRAFTSMAN BLVD	LAKELAND	Florida	33803	0.268	0	0.268	0		0	0.268
PPG ARCHITECTURAL FINISHES INC	400 S 13TH ST	LOUISVILLE	Kentucky	40203	0	0.2655	0.2655	0		0.0015	0.267
SERIGRAPH INC	3801 E DECORAH RD	WEST BEND	Wisconsin	53095	0.0325	0.232	0.2645	0		0	0.2645
HENKEL CORP	23343 SHERWOOD AVE	WARREN	Michigan	48091	0.125	0.125	0.25	0		0.0125	0.2625
IVC INDUSTRIAL COATINGS INC	550-560 W CENTENNIAL BL	CASA GRANDE	Arizona	85222	0.0520125	0.20805	0.2600625	0		0	0.2600625
MASCO RETAIL CABINET GROUP SAYRE PENNSYLVANIA PLANT	217 LAMOKA RD	SAYRE	PENNSYLVANI	18840	0	0.26	0.26	0		0	0.26
ASHLAND DISTRIBUTION CO	395 JAMES AVE	SAINT PAUL	Minnesota	55102	0.2475	0.012	0.2595	0	0	0	0.2595
ASHLAND DISTRIBUTION CO	350 ROOSEVELT AVE	CARTERET	New Jersey	07008	0.2305	0.029	0.2595	0		0	0.2595
HENTZEN COATINGS,INC BATAVIA FACILITY	1500 LATHEM ST	BATAVIA	Illinois	60510	0.23381	0.025645	0.259455	0	0	0	0.259455
PPG INDUSTRIES ARCHITECTURAL FINISHES	1886 LYNNBURY WOODS RI	DOVER	Delaware	19904	0.0025	0.0025	0.005	0		0.25	0.255
BACHMAN SERVICES INC	2220 S PROSPECT	OKLAHOMA CITY	Oklahoma	73129	0.125	0.125	0.25	0	0	0.0025	0.2525
BF GOODRICH TIRE MANUFACTURING	18906 US 24 E	WOODBURN	Indiana	46797	0.0025	0.125	0.1275	0	0	0.125	0.2525
MOC PRODUCTS CO INC	12306 MONTAGUE ST	PACOIMA	California	91331	0.125	0.0025	0.1275	0	0	0.125	0.2525
ASHLAND DISTRIBUTION CO	1610 E HIGHLAND RD	TWINSBURG	Ohio	44087	0.2295	0.021	0.2505	0	0	0	0.2505
RESEARCH SOLVENTS & CHEMICALS INC	402 INDUSTRIAL PARK DR	PELHAM	Alabama	35124	0.125	0.125	0.25	0		0	0.25
MISCO PRODUCTS CORP	1048 STINSON DR	READING	Pennsylvania	19605	0.125	0.125	0.25	0		0	0.25
METAL COATERS OF GEORGIA	1150 MARIETTA INDUSTRIA	MARIETTA	Georgia	30062	0.0035	0.2465	0.25	0	0	0	0.25
MAGNI INDUSTRIES INC	10250 TOEBBEN DR	INDEPENDENCE	KENTUCKY	41051	0.125	0.125	0.25	0	0	0	0.25
KEYSTONE ANILINE CORP	2165 HWY 292	INMAN	South Carolina	29349	0.125	0.125	0.25	0	0	0	0.25
EQUILON CARSON TERMINAL	20945 S WILMINGTON AVE	CARSON	California	90810	0.125	0.125	0.25	0		0	0.25
CHEMICAL SPECIALISTS & DEVELOPMENT INC	9733 MEADOR RD	CONROE	Texas	77303	0.125	0.125	0.25	0	0	0	0.25
BECKER SPECIALTY CORP	15310 ARROW BLVD	FONTANA	California	92335	0.125	0.125	0.25	0	0	0	0.25
YENKIN-MAJESTIC PAINT CORPORAT ION	1920 LEONARD AVE	COLUMBUS	Ohio	43219	0.125	0.125	0.25	0	0	0	0.25
MALCO PRODUCTS INC	361 FAIRVIEW AVE	BARBERTON	Ohio	44203	0.125	0.125	0.25	0	0	0	0.25
HEXION SPECIALTY CHEMICALS INC	400 E COTTAGE PL	CARPENTERSVILLE	Illinois	60110	0.025	0.221	0.246	0	0	0.004	0.25
PREMIER INK SYSTEMS INC	10420 N STATE ST	HARRISON	Ohio	45030	0.125	0	0.125	0		0.125	0.25
BRYCE CO LLC	4505 OLD LAMAR AVE	MEMPHIS	Tennessee	38118	0	0.125	0.125	0	0	0.125	0.25

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
AMERICAN COLORS INC DISPERSION PLANT SANDUSKY OHIO	1110 EDGEWATER AVE	SANDUSKY	OHIO	44870	0.125	0	0.125	0	0	0.125	0.25
DUPONT FAYETTEVILLE PLANT	22828 NC HWY 87 W	FAYETTEVILLE	NORTH CAROL	28306	0.247	0	0.247	0	0	0	0.247
CAR PRODUCTS INC	630 BEAULIEU ST	HOLYOKE	Massachusetts	01040	0.238	0	0.238	0		0	0.238
WORLDCOLOR ATGLEN	4581 LOWER VALLEY RD	ATGLEN	Pennsylvania	19310	0.2285	0.0095	0.238	0	0	0	0.238
KIK-SOCAL INC	9028 DICE RD	SANTA FE SPRINGS	California	90670	0.2365	0	0.2365	0		0	0.2365
BERGQUIST CO	301 WASHINGTON ST	CANNON FALLS	Minnesota	55009	0.069	0.167	0.236	0	0	0	0.236
DYCO PAINTS INC	5850 ULMERTON RD	CLEARWATER	Florida	33760	0	0.236	0.236	0	0	0	0.236
SUN CHEMICAL CORP	3301 HUNTING PARK AVE	PHILADELPHIA	Pennsylvania	19132	0.035	0.199	0.234	0	0	0	0.234
CHEMTURA CORP - TAFT PLANT	471 HWY 3142	KILLONA	Louisiana	70066	0.069	0.163	0.232	0	0	0	0.232
CHRYSLER GROUP LLC STERLING STAMPING PLANT (PART)	35777 VAN DYKE	STERLING HEIGHTS	Michigan	48312	0.228	0	0.228	0	0	0	0.228
PPG INDUSTRIES OHIO INC CIRCLEVILLE OH	559 PITTSBURGH RD	CIRCLEVILLE	Ohio	43113	0.055	0.171	0.226	0	0	0	0.226
CERTIFIED ENAMELING INC	3342 EMERY ST	LOS ANGELES	California	90023	0.0025	0.22	0.2225	0		0	0.2225
ACTEGA KELSTAR INC	1050 TAYLORS LN	CINNAMINSON	New Jersey	08077	0.003	0.0085	0.0115	0	0	0.211	0.2225
PERMA-PIPE OIL & GAS	5008-11 CURTIS LN	NEW IBERIA	Louisiana	70560	0.22	0	0.22	0		0	0.22
RHODIA INC	577 BANKHEAD HWY	WINDER	Georgia	30680	0.16	0.056	0.216	0		0	0.216
COLWELL INC	231 S PROGRESS DR E	KENDALLVILLE	Indiana	46755	0.195	0.02	0.215	0	0	0	0.215
SYNGENTA CROP PROTECTION INC SAINT GABRIEL FACILITY	3905 HWY 75	SAINT GABRIEL	Louisiana	70776	0.106	0.1065	0.2125	0	0	0	0.2125
ASHLAND DISTRIBUTION CO	4550 NE EXPRESSWAY	DORAVILLE	Georgia	30340	0.158	0.0535	0.2115	0		0	0.2115
FLINT GROUP NORTH AMERICA	4675 W PARK DR	ATLANTA	Georgia	30339	0.105	0.105	0.21	0	0	0	0.21
WARREN OIL CO - NC	2340 US 301 N	DUNN	North Carolina	28335	0.2075	0.0005	0.208	0	0	0	0.208
BOEING COMMERCIAL AIRPLANE GROUP - RENTON	8TH & LOGAN AVE N	RENTON	Washington	98055	0.086	0.1115	0.1975	0		0.0075	0.205
UNION CARBIDE CORP SOUTH CHARLESTON FACILITY	437 MACCORKLE AVE SW	SOUTH CHARLESTO	West Virginia	25303	0.139	0.0655	0.2045	0		0	0.2045
FIRST AMERICAN RESOURCES CO	2030 RIVERVIEW INDUSTRI/	MABLETON	Georgia	30126	0	0.203	0.203	0		0	0.203
BOEING COMMERCIAL AIRPLANE GROUP NORTH BOEING FIELD (PART)	7500 E MARGINAL WAY S	SEATTLE	Washington	98108	0.059	0.1005	0.1595	0	0.04	0	0.1995
RUDD CO INC	1141 NW 50TH ST	SEATTLE	Washington	98107	0.185	0.0125	0.1975	0	0	0	0.1975
UNIVERSAL CHEMICALS & COATINGS INC	1975 FOX LN	ELGIN	ILLINOIS	60123	0	0.196	0.196	0	0	0	0.196
INTEL CORP - RONLER ACRES CAMPUS	2501 NW 229TH ST	HILLSBORO	Oregon	97124	0.0025	0.19	0.1925	0		0	0.1925

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
U.S. NAVY NAVAL AIR STATION JACKSONVILLE	6500 ROOSEVELT BLVD BUI	JACKSONVILLE	FLORIDA	32212	0.07	0.045	0.115	0.05	0	0.025	0.19
HADCO (SANMINA) CORP - OWEGO DIV	1200 TAYLOR RD	OWEGO	New York	13827	0.0045	0.1725	0.177	0		0.0109	0.1879
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1991 S WHEELING RD	WHEELING	Illinois	60090	0.0635	0.1165	0.18	0		0	0.18
QUAD GRAPHICS NASHVILLE	2947 BRICK CHURCH PIKE	NASHVILLE	TENNESSEE	37207	0.1585	0.0185	0.177	0	0	0	0.177
LAMBERTI USA INC WHARTON CHEMICAL COMPLEX	HWY 59 AT COUNTY RD 212	HUNGERFORD	Texas	77448	0.0405	0	0.0405	0.0455	0	0.0905	0.1765
SILGAN WHITE CAP CORP	1701 WILLIAMSBURG PIKE	RICHMOND	Indiana	47375	0.05	0.125	0.175	0	0	0	0.175
BYK USA INC	524 S CHERRY ST	WALLINGFORD	Connecticut	06492	0.17	0.004	0.174	0		0	0.174
ASHLAND DISTRIBUTION CO	11109 S CHOCTAW DR	BATON ROUGE	Louisiana	70815	0.1625	0.011	0.1735	0	0	0	0.1735
CHAMPION TECHNOLOGIES INC	115 PROCTOR	ODESSA	Texas	79762	0.1615	0.008	0.1695	0	0	0	0.1695
ASHLAND DISTRIBUTION	7710 POLK ST	SAINT LOUIS	Missouri	63111	0.1685	0	0.1685	0		0	0.1685
KAY CHEMICAL CO	8300 CAPITAL DR	GREENSBORO	North Carolina	27409	0.0075	0.1575	0.165	0		0	0.165
AMREP INC	990 INDUSTRIAL PARK DR	MARIETTA	Georgia	30062	0.054	0.1085	0.1625	0	0	0	0.1625
SUPERIOR SOLVENTS & CHEMICALS	320 NORTHPOINTE DR	FAIRFIELD	Ohio	45014	0.02254	0	0.02254	0	0	0.138295	0.160835
ANCHOR PAINT MANUFACTURING CO INC	6707 E 14TH ST	TULSA	Oklahoma	74112	0.16	0	0.16	0		0	0.16
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1717 ENGLISH RD	HIGH POINT	North Carolina	27261	0.0635	0.0965	0.16	0	0	0	0.16
INTEL CORP	4500 S DOBSON RD MAIL ST	CHANDLER	Arizona	85248	0.0025	0.154	0.1565	0		0	0.1565
SHERWIN-WILLIAMS CO	1891 DUFFY RD	FERNLEY	Nevada	89408	0.0005	0.002	0.0025	0	0	0.152	0.1545
SUPERIOR SOLVENTS & CHEMICALS	4211 BRAMERS LN	LOUISVILLE	Kentucky	40216	0.0045	0	0.0045	0	0	0.147585	0.152085
PLAZE INC	113 BOLTE LN	SAINT CLAIR	Missouri	63077	0.152	0	0.152	0	0	0	0.152
BAKER PETROLITE CORP	9100 W 21ST ST	SAND SPRINGS	Oklahoma	74063	0.123525	0.013275	0.1368	0	0	0.014705	0.151505
MID-STATES PAINT & CHEMICAL CO	9315 WATSON INDUSTRIAL	CRESTWOOD	Missouri	63126	0.151	0	0.151	0		0	0.151
SONOCO FLEXIBLE PACKAGING	6502 S US HWY 31 N	EDINBURGH	Indiana	46124	0	0.14951	0.14951	0	0	0	0.14951
CENTRAL MOTOR WHEEL OF AMERICA (DBA CMWA)	125 WHEAT DR	PARIS	Kentucky	40361	0	0.1475	0.1475	0	0	0	0.1475
GOJO INDUSTRIES INC	3783 STATE RD	CUYAHOGA FALLS	OHIO	44223	0.0015	0.0001295	0.0016295	0		0.1442	0.1458295
CHASE PRODUCTS CO	2727 GARDNER RD	BROADVIEW	Illinois	60155	0.0005	0.145	0.1455	0	0	0	0.1455
DAVIS-FROST INC	3420 CANDLER'S MOUNTAIN	LYNCHBURG	VIRGINIA	24506	0.1415	0	0.1415	0	0	0	0.1415
BLENTECH CORP	1305 RYE ST	HOUSTON	Texas	77029	0.0125	0.0025	0.015	0	0	0.125	0.14
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	3050 HANFORD DR	LEBANON	Pennsylvania	17046	0.0635	0.0725	0.136	0	0	0	0.136

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ISP SYNTHETIC ELASTOMERS LP	1615 MAIN ST	PORT NECHES	TEXAS	77651	0	0.132	0.132	0	0	0	0.132
ASHLAND DISTRIBUTION	2351 CHANNEL AVE	MEMPHIS	Tennessee	38113	0.1215	0.0085	0.13	0	0	0	0.13
POWER SERVICE PRODUCTS INC	513 PEASTER HWY	WEATHERFORD	Texas	76086	0.125	0.0025	0.1275	0	0	0	0.1275
UNITED LABORATORIES INC	320 37TH AVE	SAINT CHARLES	Illinois	60174	0.125	0.0025	0.1275	0	0	0	0.1275
RESEARCH SOLVENTS & CHEMICALS INC	133 BAIN DR	LA VERGNE	Tennessee	37086	0.125	0.0025	0.1275	0		0	0.1275
PERMATEX SOLON	6875 PARKLAND BLVD	SOLON	Ohio	44139	0.0025	0.125	0.1275	0		0	0.1275
ONESOURCE COIL COATERS	5110 140TH AVE	CLEARWATER	FLORIDA	33760	0.0025	0.125	0.1275	0	0	0	0.1275
OAKLEY INC	1 ICON	FOOTHILL RANCH	California	92610	0.0025	0.125	0.1275	0	0	0	0.1275
NICCA USA INC	1044 S NELSON RD	FOUNTAIN INN	South Carolina	29644	0.0025	0.125	0.1275	0		0	0.1275
WESTERN TUBE & CONDUIT CORP	2001 E DOMINGUEZ ST	LONG BEACH	CALIFORNIA	90810	0.0025	0.125	0.1275	0	0	0	0.1275
BRENNTAG GREAT LAKES LLC	14765 W BOBOLINK AVE	MENOMONEE FALLS	Wisconsin	53051	0.0025	0.125	0.1275	0	0	0	0.1275
RR STREET & CO INC	2353 S BLUE ISLAND AVE	CHICAGO	Illinois	60608	0.0025	0.125	0.1275	0	0	0	0.1275
BASF CORP	3455 SOUTHPORT RD	SPARTANBURG	South Carolina	29302	0.125	0.0025	0.1275	0		0	0.1275
GE WATER & PROCESS TECHNOLOGIES ORANGE FACILITY	3901 WILLIAMS DR	ORANGE	Texas	77630	0.125	0.0025	0.1275	0		0	0.1275
CHEMICALS INC	12321 HATCHERVILLE RD	BAYTOWN	Texas	77520	0.125	0.0025	0.1275	0		0	0.1275
COASTAL CHEMICAL CO LLC	3520 VETERANS MEMORIAL	ABBEVILLE	Louisiana	70510	0.125	0.0025	0.1275	0	0	0	0.1275
DELTA HOUSTON	334 TIDAL RD	DEER PARK	Texas	77536	0.125	0.0025	0.1275	0		0	0.1275
ELANTAS PDG INC	5200 N SECOND ST	SAINT LOUIS	Missouri	63147	0.0025	0.125	0.1275	0		0	0.1275
ELECTRO PLATE CIRCUITRY INC	1430 CENTURY DR	CARROLLTON	TEXAS	75006	0.0025	0.125	0.1275	0		0	0.1275
JOHNSON BRYCE INC	276 S PKWY W	MEMPHIS	TENNESSEE	38109	0	0.0025	0.0025	0	0	0.125	0.1275
ASHLAND DISTRIBUTION CO	3930 GLENWOOD DR	CHARLOTTE	North Carolina	28208	0.083	0.0425	0.1255	0	0	0	0.1255
WEBB CHEMICAL SERVICE CORP	2708 JARMAN	MUSKEGON HEIGHT	MICHIGAN	49444	0.08	0	0.08	0		0.0455	0.1255
CERAM-TRAZ CORP CERAMIC INDL COATINGS (DBA)	325 HWY 81	OSSEO	Minnesota	55369	0.125	0	0.125	0	0	0	0.125
COLUMBIA PAINT CORP	641 JACKSON AVE	HUNTINGTON	West Virginia	25704	0.125	0	0.125	0	0	0	0.125
CLEANING SYSTEMS INC	1997 AMERICAN BLVD	DE PERE	Wisconsin	54115	0.125	0	0.125	0		0	0.125
CHEMETALL US INC	13177 HURON RIVER DR	ROMULUS	Michigan	48174	0	0.125	0.125	0	0	0	0.125
EXXONMOBIL OIL CORP - TORRANCE REFINERY	3700 W 190TH ST	TORRANCE	CALIFORNIA	90509	0.125	0	0.125	0		0	0.125
BERRYMAN PRODUCTS INC	3800 E RANDOL MILL RD	ARLINGTON	Texas	76011	0.125	0	0.125	0		0	0.125
AMERICAN JETWAY CORP	34136 MYRTLE	WAYNE	MICHIGAN	48184	0.125	0	0.125	0	0	0	0.125
AKZO NOBEL COATINGS INC	1431 PROGRESS AVE	HIGH POINT	North Carolina	27261	0.125	0	0.125	0	0	0	0.125

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
GOLD KEY PROCESSING INC	14910 MADISON RD	MIDDLEFIELD	OHIO	44062	0.125	0	0.125	0	0	0	0.125
ACTON TECHNOLOGIES INC	100 THOMPSON ST	PITTSTON	Pennsylvania	18640	0.125	0	0.125	0		0	0.125
GOLD EAGLE CO	4400 S KILDARE AVE	CHICAGO	Illinois	60632	0.125	0	0.125	0	0	0	0.125
AKCROS CHEMICALS INC	500 JERSEY AVE	NEW BRUNSWICK	New Jersey	08901	0	0.125	0.125	0		0	0.125
WM BARR & CO INC	2170 BUOY ST	MEMPHIS	TENNESSEE	38113	0	0.125	0.125	0	0	0	0.125
INVISTA SARL - ORANGE SITE	3055A FM 1006	ORANGE	TEXAS	77630	0.125	0	0.125	0	0	0	0.125
KALCOR COATINGS CO	37721 STEVENS BLVD	WILLOUGHBY	Ohio	44094	0.125	0	0.125	0	0	0	0.125
MAGNABLEND INC LIQUID PLANT	100 W STERRETT RD	WAXAHACHIE	Texas	75165	0.125	0	0.125	0	0	0	0.125
MAINTEX INC	13300 E NELSON AVE	CITY OF INDUSTRY	California	91746	0.125	0	0.125	0		0	0.125
NORTHERN COATINGS & CHEMICAL CO INC	705 6TH AVE	MENOMINEE	Michigan	49858	0.125	0	0.125	0	0	0	0.125
PPG INDUSTRIES INC	500 PITTSBURGH AVE	MCCARRAN	Nevada	89434	0	0.125	0.125	0	0	0	0.125
SICPA SECURINK CORP	8000 RESEARCH WAY	SPRINGFIELD	Virginia	22153	0.125	0	0.125	0	0	0	0.125
TNEMEC CO INC	123 W 23RD AVE	NORTH KANSAS CIT	Missouri	64116	0	0.125	0.125	0	0	0	0.125
TRANS CHEMICAL INC	419 E DE SOTO AVE	SAINT LOUIS	Missouri	63147	0.125	0	0.125	0	0	0	0.125
TYSON FRESH MEATS INC	HWY 50 W	HOLCOMB	Kansas	67851	0.125	0	0.125	0	0	0	0.125
DANLIN INDUSTRIES CORP	23737 HWY 47	THOMAS	Oklahoma	73669	0.125	0	0.125	0		0	0.125
HERCULES INC	1111 HERCULES RD	HOPEWELL	Virginia	23860	0.125	0	0.125	0		0	0.125
FLUID ROUTING SOLUTIONS	1921 N BROAD ST	LEXINGTON	Tennessee	38351	0	0	0	0		0.125	0.125
WATSON LABORATORIES INC UTAH	575, 577, 579 CHIPETA WAY	SALT LAKE CITY	Utah	84108	0.124456	0	0.124456	0		0	0.124456
TECHNICAL CHEMICAL CO	3327 PIPELINE RD	CLEBURNE	Texas	76033	0.123	0	0.123	0		0	0.123
CYTEC INDUSTRIES INC LANGLEY PLANT	403 CARLINE RD	LANGLEY	South Carolina	29834	0.1075	0.0155	0.123	0		0	0.123
AEP INDUSTRIES INC	1201 S PINE HILL RD	GRIFFIN	Georgia	30224	0.00275	0.12	0.12275	0		0	0.12275
ASHLAND INC - EVENDALE	2788 GLENDALE-MILFORD R	EVENDALE	Ohio	45241	0.0815	0.04	0.1215	0		0	0.1215
FRAZEE INDUSTRIES	6625 MIRAMAR RD	SAN DIEGO	California	92121	0	0.12	0.12	0	0	0	0.12
ARDEX LABORATORIES INC	2050 BYBERRY RD	PHILADELPHIA	Pennsylvania	19116	0.119	0	0.119	0		0	0.119
STOUSE INC	300 NEW CENTURY PKWY	NEW CENTURY	Kansas	66031	0.118	0	0.118	0		0	0.118
SUPERIOR OIL CO INC	400 W REGENT ST	INDIANAPOLIS	Indiana	46225	0.007465	0	0.007465	0	0	0.107	0.114465
PILOT CHEMICAL CO	11623 N HOUSTON ROSSLY	HOUSTON	Texas	77086	0.11	0.0005	0.1105	0	0	0.0005	0.111
ELECTRONICS FOR IMAGING INC	1260 JAMES L HART PKWY	YPSILANTI	Michigan	48197	0.11	0	0.11	0	0	0	0.11
VEYANCE TECHNOLOGIES INC	4021 N 56TH ST	LINCOLN	Nebraska	68504	7.5E-09	2.5E-09	0.00000001	0		0.10956147	0.10956148

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
TEXAS INSTRUMENTS INC	13500 N CENTRAL EXPRESS	DALLAS	Texas	75243	0	0.1095	0.1095	0	0	0	0.1095
DELTA LABORATORIES INC	3710 COUNTY RD 326 W	OCALA	Florida	34475	0.108	0.0005	0.1085	0	0	0	0.1085
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	347 CENTRAL AVE	BOWLING GREEN	Kentucky	42101	0.065	0.043	0.108	0	0	0	0.108
CAROLINA SOLVENTS INC	2274 1ST ST SE	HICKORY	North Carolina	28602	0.1015	0.0025	0.104	0.0025	0	0	0.1065
SKF SEALING SOLUTIONS	900 N STATE ST	ELGIN	Illinois	60123	0	0	0	0	0	0.1065	0.1065
CHAMPION TECHNOLOGIES INC	350 CENTAURUS RD	CORPUS CHRISTI	Texas	78405	0.05455	0.0016	0.05615	0	0	0.05	0.10615
SHERWIN-WILLIAMS CO	636 E 40TH ST	HOLLAND	Michigan	49423	0.1045	0.0015	0.106	0	0	0	0.106
ACCURATE DISPERSIONS	192 W 155TH ST	SOUTH HOLLAND	Illinois	60473	0.0825	0.021	0.1035	0		0	0.1035
CCI MANUFACTURING IL CORP	15550 CANAL BANK RD	LEMONT	Illinois	60439	0	0.1035	0.1035	0	0	0	0.1035
ASHLAND DISTRIBUTION CO	200 NE 181ST ST	MIAMI	Florida	33162	0.0755	0.0265	0.102	0		0	0.102
TWINCO ROMAX	3100 W MILL RD	MILWAUKEE	WISCONSIN	53209	0.0995	0.00116	0.10066	0		0	0.10066
ASHLAND DISTRIBUTION CO	20915 S WILMINGTON AVE	CARSON	California	90810	0.0905	0.0095	0.1	0		0	0.1
ARCH CHEMICALS INC	HWY 933	BRANDENBURG	Kentucky	40108	0.042	0.058	0.1	0	0	0	0.1
BUZZI UNICEM USA - GREENCASTLE PLANT	3301 S COUNTY RD 150 W	GREENCASTLE	Indiana	46135	0.0225	0.0775	0.1	0	0	0	0.1
BRENNTAG PACIFIC INC	10747 PATTERSON PL	SANTA FE SPRINGS	California	90670	0.0955	0.0045	0.1	0		0	0.1
HARCROS CHEMICALS INC	5200 SPEAKER RD	KANSAS CITY	Kansas	66106	0.0245	0.0725	0.097	0.0005		0.002	0.0995
CE BRADLEY LABORATORIES INC	55 BENNETT DR	BRATTLEBORO	Vermont	05301	0.0985	0	0.0985	0	0	0	0.0985
OLDCASTLE BUILDING ENVELOPE TENNESSEE FACILITY	920 POTTERTOWN RD	MIDWAY	Tennessee	37809	0	0.0945	0.0945	0	0	0	0.0945
ALLEGHENY PETROLEUM PRODUCTS CO	999 AIRBRAKE AVE	WILMERDING	Pennsylvania	15148	0.019	0.0755	0.0945	0	0	0	0.0945
SHERWIN-WILLIAMS CO	1025 HOWARD ST	GREENSBORO	North Carolina	27403	0.0065	0.0145	0.021	0		0.0725	0.0935
CPJ TECHNOLOGIES	200 TANNER DR	TAYLORS	South Carolina	29687	0.034	0.058	0.092	0		0	0.092
TNEMEC CO INC	2300 EDGEWATER AVE	BALTIMORE	Maryland	21222	0	0.09	0.09	0	0	0	0.09
STEELSCAPE INC RANCHO	11200 ARROW RT	RANCHO CUCAMON	California	91730	0.0031	0.086845	0.089945	0	0	0	0.089945
ATHEA LABORATORIES INC	7855 N FAULKNER RD	MILWAUKEE	Wisconsin	53224	0.08874	0.00006	0.0888	0		0	0.0888
COSMETIC LABORATORIES OF AMERICA	20245 SUNBURST ST	CHATSWORTH	California	91311	0	0.002	0.002	0		0.085	0.087
MRCG-KRAFTMAID P3	150 GRAND VALLEY AVE	ORWELL	Ohio	44076	0	0.069	0.069	0	0	0.0175	0.0865
ASHLAND DISTRIBUTION CO	2461 CROCKER CIR	FAIRFIELD	California	94533	0.0845	0.001	0.0855	0	0	0	0.0855
ASHLAND DISTRIBUTION CO	5420 SPEAKER RD	KANSAS CITY	Kansas	66106	0.0755	0.0085	0.084	0	0	0	0.084
AKZO NOBEL COATINGS INC	1000 INDUSTRIAL PARK DR	CLINTON	Mississippi	39056	0.082	0	0.082	0	0	0	0.082

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ASHLAND DISTRIBUTION	400 MAIN ST	TEWKSBURY	Massachusetts	01876	0.075	0.0045	0.0795	0	0	0	0.0795
MATTHEWS INTERNATIONAL CORP	101 FAIRVIEW AVE	PITTSBURGH	Pennsylvania	15238	0.0565	0.021	0.0775	0	0	0	0.0775
ICI PAINTS PUERTO RICO INC	65 INFANTERIA KM 134	CAROLINA	Puerto Rico	00985	0.050405	0.02682	0.077225	0	0	0	0.077225
CORSICANA TECHNOLOGIES INC	2733 E HWY 31	CORSICANA	Texas	75109	0.01949	0.05759	0.07708	0	0	6.7015E-05	0.077147015
CHEMICAL SOLVENTS JENNINGS ROAD FACILITY	3751 JENNINGS RD	CLEVELAND	Ohio	44109	0.071	0.00296	0.07396	0	0	0.0025	0.07646
IMPERIAL PAINT CO INC	2526 NW YEON AVE	PORTLAND	OREGON	97210	0	0.076	0.076	0		0	0.076
AKZO NOBEL COATINGS INC	1660 CROSS ST SE	SALEM	Oregon	97302	0.045	0.02915	0.07415	0		0	0.07415
WHITFORD CORP	47 PARK AVE	ELVERSON	Pennsylvania	19520	0.069255	0.003645	0.0729	0	0	1.38778E-17	0.0729
CHAMPION TECHNOLOGIES INC	304 IDA RD	BROUSSARD	Louisiana	70518	0.071	0.001	0.072	0	0	0	0.072
PPG INDUSTRIES OHIO INC - DELAWARE	760 PITTSBURGH DR	DELAWARE	Ohio	43015	0.0695	0.00006	0.06956	0		0	0.06956
WARSAW CHEMICAL CO INC	390 ARGONNE RD	WARSAW	Indiana	46580	0.0465	0.0225	0.069	0		0	0.069
LUBRIZOL	9550 W 55TH ST	MC COOK	Illinois	60525	0	0.067	0.067	0	0	0	0.067
CARDINAL INDUSTRIAL FINISHES	1329 POTRERO AVE	SOUTH EL MONTE	California	91733	0.0475	0.0195	0.067	0		0	0.067
ADCO CLEANING PRODUCTS LLC	900 W MAIN ST	SEDALIA	Missouri	65301	0.022	0.0445	0.0665	0	0	0	0.0665
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	901 W UNION ST	MONTEBELLO	California	90640	0.0635	0.002	0.0655	0	0	0	0.0655
MRCG-KRAFTMAID P1	16052 INDUSTRIAL PKWY	MIDDLEFIELD	Ohio	44062	0	0.0555	0.0555	0	0	0.01	0.0655
KEY POLYMER	17 SHEPARD ST LAWRENCE	LAWRENCE	Massachusetts	01843	0	0.01365	0.01365	0		0.0507	0.06435
VEOLIA ES TECHNICAL SOLUTIONS LLC	125 FACTORY LN	MIDDLESEX	New Jersey	08846	0.045	0.0145	0.0595	0		0.001	0.0605
WARREN STAMPING PLANT (PART)	22800 MOUND RD	WARREN	Michigan	48091	0.06	0	0.06	0	0	0	0.06
KARCHER NORTH AMERICA- PROCHEM	325 S PRICE RD	CHANDLER	Arizona	85224	0.0595	0	0.0595	0		0	0.0595
ABC COMPOUNDING CO OF TEXAS INC	1102 AVE J E	GRAND PRAIRIE	Texas	75050	0.0025	0.0565	0.059	0	0	0	0.059
AMPHENOL APC INC	91 NORTHEASTERN BLVD	NASHUA	New Hampshire	03062	0.0025	0.0549235	0.0574235	0		0	0.0574235
MINUTEMAN INTERNATIONAL MULTI-CLEAN DIV	600 CARDIGAN RD	SHOREVIEW	Minnesota	55126	0.0545	0.0025	0.057	0		0	0.057
ECOLAB INC	3001 CHANNAHON RD	JOLIET	Illinois	60436	0.044	0.013	0.057	0		0	0.057
CHEVRON PRODUCTS CO PASCAGOULA REFINERY	250 INDUSTRIAL RD	PASCAGOULA	MISSISSIPPI	39581	0.055	0	0.055	0	0	0	0.055
UNIVAR USA INC	2600 S GARFIELD AVE	COMMERCE	California	90040	0.0505	0.004	0.0545	0	0	0	0.0545
CLEVELAND STEEL CONTAINER - KILGORE	5005 ELDER LAKE RD	KILGORE	TEXAS	75662	0.0025	0.052	0.0545	0	0	0	0.0545
HARLEY-DAVIDSON MOTOR CO OPERATIONS INC	1425 EDEN RD	YORK	Pennsylvania	17402	0.02725	0.0271	0.05435	0		0	0.05435
3M CO - NEVADA	2120 E AUSTIN BLVD	NEVADA	Missouri	64772	0.004	0.05	0.054	0		0	0.054

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
UNIVAR USA INC - TOLEDO BRANCH	30450 TRACY RD	WALBRIDGE	Ohio	43465	0.017	0.0365	0.0535	0		0	0.0535
CLOROX PRODUCTS MANUFACTURING CO	2600 HUNTINGTON DR	FAIRFIELD	California	94533	0.053	0.0005	0.0535	0		0	0.0535
ROCKLINE INDUSTRIES	1113 MARYLAND AVE	SHEBOYGAN	Wisconsin	53081	0.0535	0	0.0535	0		0	0.0535
FRANKLIN INTERNATIONAL	2020 BRUCK ST	COLUMBUS	Ohio	43207	0.0055	0.048	0.0535	0		0	0.0535
ECOLAB INC	942 BAKER RD	MARTINSBURG	West Virginia	25405	0.0385	0.0145	0.053	0		0	0.053
ECOLAB INC	261 HWY 155 S	MC DONOUGH	Georgia	30253	0.0155	0.037	0.0525	0		0	0.0525
NEWMAN TECHNOLOGY INC	100 CAIRNS RD	MANSFIELD	OHIO	44903	0	0.0025	0.0025	0		0.049	0.0515
HANNA STEEL CORP	220 HANNA DR	PEKIN	Illinois	61554	0.0025	0.04811	0.05061	0	0	0	0.05061
BENJAMIN MOORE & CO PELL CITY	109 BAMBERG DR	PELL CITY	Alabama	35125	0.04945	0.00055	0.05	0	0	0	0.05
DYSTAR LP	209 WATLINGTON INDUSTR	REIDSVILLE	North Carolina	27320	0.035	0.015	0.05	0		0	0.05
CONOCOPHILLIPS OKLAHOMA CITY PRODUCTS TERMINAL	4600 NE 10TH ST	OKLAHOMA CITY	Oklahoma	73117	0.0025	0.0475	0.05	0		0	0.05
CHAMPION TECHNOLOGIES INC	3130 FM 521	FRESNO	Texas	77545	0.0495	0.0001	0.0496	0	0	0	0.0496
VALERO REFINING CO - TENNESSEE LLC	2385 RIVERPORT RD	MEMPHIS	TENNESSEE	38109	0.0495	0	0.0495	0		0	0.0495
AIR PRODUCTS & CHEMICALS INC	412 N MAIN ST	CALVERT CITY	Kentucky	42029	0	0.049	0.049	0	0	0	0.049
BARTON SOLVENTS INC BETTENDORF	204 36TH ST	BETTENDORF	Iowa	52722	0.0115	0.0375	0.049	0		0	0.049
UNIVAR USA INC HAMILTON BRANCH	12 STANDEN DR	HAMILTON	Ohio	45015	0.013	0.036	0.049	0		0	0.049
EXCEL-POLYMERS LLC	HWY 353 S PO BOX 377	JONESBOROUGH	Tennessee	37659	0	0.0485	0.0485	0	0	0	0.0485
GRAPHIC CONTROLS LLC	400 EXCHANGE ST	BUFFALO	New York	14204	0.048	0	0.048	0		0	0.048
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	546 W ABBOTT ST	INDIANAPOLIS	Indiana	46225	0	0.0465	0.0465	0	0	0	0.0465
LUBRIZOL CORP	29400 LAKELAND BLVD	WICKLIFFE	Ohio	44092	0.0455	0	0.0455	0	0	0	0.0455
RECKITT BENCKISER	799 RT 206 & HILLSBOROUG	HILLSBOROUGH	New Jersey	08844	0.0445	0.001	0.0455	0		0	0.0455
BRENNTAG SOUTHEAST INC	2000 E PETTIGREW ST	DURHAM	North Carolina	27703	0.028	0.016	0.044	0	0	0	0.044
WATSON STANDARD CO (NEVILLE ISLAND PLANT)	2895 GRAND AVE	NEVILLE ISLAND	Pennsylvania	15225	0.038	0.006	0.044	0	0	0	0.044
UNIVAR USA INC DALLAS DAN MORTON FACILITY	3636 DAN MORTON DR	DALLAS	Texas	75236	0.0165	0.027	0.0435	0	0	0	0.0435
HARCROS CHEMICALS INC	4606 NEW W DR	PASADENA	Texas	77507	0.015	0.0255	0.0405	0	0.0025	0	0.043
CUSTOM SYNTHESIS LLC	1704 DENVER RD	ANDERSON	South Carolina	29625	0.0025	0.04	0.0425	0	0	0	0.0425
ASHLAND DISTRIBUTION CO	5125 W HANNA AVE	TAMPA	Florida	33634	0.0015	0.0405	0.042	0	0	0	0.042
BARTON SOLVENTS INC KANSAS CITY	901 S 66TH TERRACE	KANSAS CITY	Kansas	66111	0.009	0.0325	0.0415	0	0	0	0.0415
SHERWIN-WILLIAMS CO	630 E 13TH	ANDOVER	Kansas	67002	0.0315	0.0095	0.041	0	0	0	0.041

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BRENNTAG SOUTHWEST INC SAND SPRINGS	206 E MORROW RD	SAND SPRINGS	Oklahoma	74063	0.02	0.02	0.04	0	0	0	0.04
RECTICEL INTERIORS NORTH AMERICA LLC	1420 INDUSTRIAL PARK DR	TUSCALOOSA	Alabama	35401	0.0005	0.0395	0.04	0	0	0	0.04
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	2000 WESTHALL ST	PITTSBURGH	Pennsylvania	15233	0.032	0.0075	0.0395	0	0	0	0.0395
AIR PRODUCTS PERFORMANCE MANUFACTURING INC	337 VINCENT DR	MILTON	Wisconsin	53563	0.0025	0.037	0.0395	0		0	0.0395
BIOLAB INC	1735 DOGWOOD DR	CONYERS	Georgia	30012	0.03915	0	0.03915	0	0	0	0.03915
HUNTSMAN ADVANCED MATERIALS AMERICAS INC	555 HUNTSMAN RD	MC INTOSH	Alabama	36553	0.0125	0.0263	0.0388	0		0	0.0388
BASF CORP	100 INDUSTRIAL BLVD	SEAFORD	Delaware	19973	0.0025	0	0.0025	0		0.036	0.0385
CLEARWATER INTERNATIONAL LLC	100 INDUSTRIAL DR (BLDG	LEETSDALE	Pennsylvania	15056	0	0	0	0		0.038	0.038
RICHARDSAPEX INC	4202-24 MAIN ST	PHILADELPHIA	Pennsylvania	19127	0.02673425	0	0.02673425	0		0.0103555	0.03708975
KEMIRA WATER SOLUTIONS INC	1 CYANAMID RD	MOBILE	Alabama	36614	0.013	0.0235	0.0365	0		0	0.0365
CONOCOPHILLIPS CO EAST ST LOUIS TERMINAL	3300 MISSISSIPPI AVE	CAHOKIA	Illinois	62206	0	0.0355	0.0355	0	0	0	0.0355
CONTINENTAL CEMENT CO LLC	10107 HWY 79	HANNIBAL	Missouri	63401	0.0351	0.000025	0.035125	0	0	0	0.035125
SI GROUP INC	1000 MAIN ST	ROTTERDAM JUNCT	New York	12150	0	0.0245	0.0245	0.0095	0	0	0.034
BRENNTAG NORTHEAST INC	81 W HULLER LN	READING	Pennsylvania	19605	0.01975	0.014	0.03375	0	0	0	0.03375
UNIVAR USA INC BERKELEY	8925 SEEGER INDUSTRIAL I	BERKELEY	Missouri	63134	0.0295	0.0035	0.033	0	0	0	0.033
VEOLIA ES TECHNICAL SOLUTIONS LLC	7 MOBILE AVE	SAUGET	ILLINOIS	62201	0.0015	0.0015	0.003	0	0	0.03	0.033
TRANSTAR AUTOBODY TECHNOLOGIES	2040 HEISERMAN DR	BRIGHTON	Michigan	48114	0.016435	0.01611	0.032545	0	0	0	0.032545
VALSPAR REFINISH	210 CROSBY ST	PICAYUNE	Mississippi	39466	0	0.0315	0.0315	0	0	0	0.0315
DUPONT PARLIN PLANT	CHEESEQUAKE RD	PARLIN	New Jersey	08859	0.004	0.027	0.031	0	0	0	0.031
ASHLAND DISTRIBUTION	2011 TURNER ST	LANSING	Michigan	48906	0.026	0.005	0.031	0		0	0.031
AMERICAN COATINGS INC	10625 MAHAFFEY RD	TOMBALL	Texas	77375	0.0085	0.022	0.0305	0	0	0	0.0305
COOK COMPOSITES & POLYMERS C O	13511 MAIN ST	LEMONT	Illinois	60439	0.0075	0.0225	0.03	0	0	0	0.03
BERNER CHEESE CORP	2034 E FACTORY RD	DAKOTA	Illinois	61018	0	0	0	0		0.03	0.03
GEORGIA-PACIFIC CHEMICALS LLC	1429 E LUFKIN AVE	LUFKIN	Texas	75901	0.0285	0.001	0.0295	0		0	0.0295
ECOLAB	18383 E RAILROAD ST	CITY OF INDUSTRY	California	91748	0.015	0.0145	0.0295	0		0	0.0295
VERSO PAPER BUCKSPORT MILL	RIVER RD	BUCKSPORT	MAINE	4416	0.0003	0	0.0003	0.018		0.0112	0.0295
BARTON SOLVENTS INC DES MOINES	1970 NE BROADWAY	DES MOINES	Iowa	50313	0.004	0.025	0.029	0	0	0	0.029
KWAL-HOWELLS INC (DBA KWAL PAINT INC)	2430 ALBERT BROADFOOT	BONHAM	Texas	75418	0	0.029	0.029	0	0	0	0.029
SHERWIN-WILLIAMS CO	113 STAGE COACH TRAIL	GREENSBORO	North Carolina	27409	0.0045	0.024	0.0285	0	0	0	0.0285

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BARTON SOLVENTS INC WEST BEND	800 RAIL WAY	WEST BEND	Wisconsin	53095	0.0015	0.0265	0.028	0	0	0	0.028
ASHLAND DISTRIBUTION CO	8901 OLD GALVESTON RD	HOUSTON	Texas	77034	0.0055	0.022	0.0275	0		0	0.0275
VEOLIA ES TECHNICAL SOLUTIONS LLC PORT ARTHUR FACILITY	HWY 73, 35 MILES W OF TA	PORT ARTHUR	Texas	77640	0.026735	0.00006	0.026795	0	0	3.46945E-18	0.026795
DIC IMAGING PRODUCTS USA LLC	7335 S 10TH ST	OAK CREEK	Wisconsin	53154	0.0025	0.0235	0.026	0	0	0	0.026
NORTHERN LABS INC WEST DRIVE	5800 W DR	MANITOWOC	Wisconsin	54220	0.025225	0	0.025225	0		0	0.025225
SUN CHEMICAL CORP	135 W LAKE ST	NORTHLAKE	ILLINOIS	60164	0.0035	0.021	0.0245	0	0	0	0.0245
BARTON SOLVENTS INC COUNCIL BLUFFS	2135 9TH AVE	COUNCIL BLUFFS	Iowa	51502	0.0015	0.0215	0.023	0		0	0.023
VALERO THREE RIVERS REFINERY	301 LEROY ST	THREE RIVERS	Texas	78071	0.023	0	0.023	0	0	0	0.023
BARTON SOLVENTS INC WICHITA	201 S CEDAR	VALLEY CENTER	Kansas	67147	0.01	0.013	0.023	0	0	0	0.023
DAUBERT CHEMICAL CO	4700 S CENTRAL AVE	CHICAGO	Illinois	60638	0.009615	0.013335	0.02295	0	0	0	0.02295
ARLON INC ADHESIVES & FILMS DIV	2811 S HARBOR BLVD	SANTA ANA	California	92704	0	0.0225	0.0225	0	0	0	0.0225
KBP COIL COATERS INC	3600 E 44TH AVE	DENVER	Colorado	80216	0	0.0225	0.0225	0	0	0	0.0225
GAGE PRODUCTS CO	625 WANDA AVE	FERNDALE	Michigan	48220	0	0.0215	0.0215	0	0	0	0.0215
PROCTER & GAMBLE HAIR CARE LLC	2200 LOWER MUSCATINE R	IOWA CITY	Iowa	52240	0.0065	0.01	0.0165	0		0.005	0.0215
SHERWIN-WILLIAMS CO	11700 S COTTAGE GROVE	CHICAGO	Illinois	60628	0	0	0	0	0	0.0215	0.0215
BASF CORP	1 JAMES ST	BELVIDERE	New Jersey	07823	0	0.02	0.02	0	0	0.001	0.021
HERITAGE-WTI INC	1250 ST GEORGE ST	EAST LIVERPOOL	Ohio	43920	0.005	0.000065	0.005065	0		0.0155	0.020565
EXCEL POLYMERS LLC	14330 KINSMAN RD	BURTON	OHIO	44021	0	0.02	0.02	0	0	0	0.02
3M CO - SPRINGFIELD	3211 E CHESTNUT EXPY	SPRINGFIELD	Missouri	65802	0	0.02	0.02	0	0	0	0.02
AFTON CHEMICAL CORP	501 MONSANTO AVE	SAUGET	ILLINOIS	62201	0.005	0.015	0.02	0		0	0.02
PRIDE SOLVENTS & CHEMICAL CO OF NEW JERSEY	211 RANDOLPH AVE	AVENEL	New Jersey	07001	0.005	0.015	0.02	0	0	0	0.02
UNIVAR USA INC - TOLEDO SOUTH BRANCH	4051 S AVE	TOLEDO	Ohio	43615	0.009	0.01	0.019	0		0	0.019
ECOLAB INC	2305 SHERWIN ST	GARLAND	Texas	75041	0.0085	0.01	0.0185	0		0	0.0185
STEEL DYNAMICS INC	4500 COUNTY RD 59	BUTLER	Indiana	46721	0	0.0185	0.0185	0	0	0	0.0185
UNIVAR USA INC JACKSONVILLE FA CILITY	155 ELLIS RD S	JACKSONVILLE	Florida	32254	0.0145	0.0035	0.018	0	0	0	0.018
ZEP COMMERCIAL	350 JOE FRANK HARRIS PK	EMERSON	Georgia	30137	0	0.018	0.018	0	0	0	0.018
TAKASAGO INTERNATIONAL CORP (USA)	267 UNION ST	NORTHVALE	New Jersey	07647	0.017325	0.000295	0.01762	0		0	0.01762
SHERWIN-WILLIAMS CO	6795 S MAIN ST	MORROW	Georgia	30260	0.005	0.0125	0.0175	0	0	0	0.0175
DAVIES IMPERIAL COATINGS INC	1275 STATE ST	HAMMOND	Indiana	46320	0.0175	0	0.0175	0		0	0.0175
SHERWIN-WILLIAMS CO	2121 NEW WORLD DR	COLUMBUS	Ohio	43207	0.009	0.0085	0.0175	0	0	0	0.0175

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
UNIVAR USA INC	21600 DRAKE RD	STRONGSVILLE	Ohio	44136	0.0085	0.009	0.0175	0		0	0.0175
HENKEL CORP	421 LONDON RD	DELAWARE	Ohio	43015	0	0.0165	0.0165	0		0	0.0165
RUST-OLEUM CORP IN MD	16410 INDUSTRIAL LN	WILLIAMSPORT	MARYLAND	21795	0.0085	0.008	0.0165	0	0	0	0.0165
AVERY DENNISON PFD	650 W 67TH AVE	SCHERERVILLE	Indiana	46375	0.015	0.001	0.016	0	0	0	0.016
HOLLY OAK CHEMICAL INC	101 CASE ST	FOUNTAIN INN	South Carolina	29644	0.0153	0	0.0153	0		0	0.0153
ASHLAND DISTRIBUTION CO	1842 ENTERPRISE PKWY	TWINSBURG	Ohio	44087	0.002	0.013	0.015	0	0	0	0.015
PRIDE SOLVENT & CHEMICAL CO OF NY INC	6 LONG ISLAND AVE	HOLTSVILLE	New York	11742	0.0035	0.011	0.0145	0	0	0	0.0145
ETHOX CHEMICALS LLC	1801 PERIMETER RD	GREENVILLE	South Carolina	29605	0.0025	0.012	0.0145	0		0	0.0145
UNIVAR USA INC - INDIANAPOLIS	7425 E 30TH ST	INDIANAPOLIS	Indiana	46219	0.0035	0.011	0.0145	0		0	0.0145
SIMONIZ USA INC	201 BOSTON TURNPIKE	BOLTON	Connecticut	06043	0.0135	0.001	0.0145	0		0	0.0145
MEADWESTVACO SOUTH CAROLINA LLC	400 CROSBY RD	DERIDDER	Louisiana	70634	0	0.0145	0.0145	0	0	0	0.0145
COGNIS CORP MAULDIN PLANT	1520 OLD STAGE RD	MAULDIN	South Carolina	29662	0.006	0.008	0.014	0		0	0.014
INTERSTATE CHEMICAL CO INC	2797 FREEDLAND RD	HERMITAGE	PENNSYLVANI/	16148	0.003	0.011	0.014	0		0	0.014
EXCEL POLYMERS LLC	150 S CONNELL AVE	DYERSBURG	Tennessee	38024	0	0.0135	0.0135	0	0	0	0.0135
PRC-DESOTO INTERNATIONAL INC	11601 UNITED ST	MOJAVE	California	93501	0.006	0.0075	0.0135	0	0	0	0.0135
CARBOLINE CO	900 OPELOUSAS ST	LAKE CHARLES	Louisiana	70601	0	0.0135	0.0135	0	0	0	0.0135
JOHNSONDIVERSEY INC	8311 16TH ST	STURTEVANT	Wisconsin	53177	0.001385	0.00943	0.010815	0		0.0025	0.013315
UNIVAR USA INC TAMPA FACILITY	6049 OLD 41A HWY	TAMPA	Florida	33619	0.005	0.008	0.013	0		0	0.013
PLASTI-KOTE INC	1000 LAKE RD	MEDINA	OHIO	44258	0	0.0125	0.0125	0	0	0	0.0125
GOODWIN CO	700 PROGRESS CENTER AV	LAWRENCEVILLE	Georgia	30043	0.012	0.0005	0.0125	0		0	0.0125
VARN INTERNATIONAL	1333 N KIRK RD	BATAVIA	Illinois	60510	0.0075	0.0025	0.01	0.0025	0	0	0.0125
TRUE VALUE MANUFACTURING	201 JANDUS RD	CARY	Illinois	60013	0.0025	0.00963	0.01213	0	0	0	0.01213
UNIVAR USA INC - SAN JOSE	2256 JUNCTION AVE	SAN JOSE	California	95131	0.002	0.0095	0.0115	0	0	0	0.0115
EVONIK DEGUSSA CORP	4201 DEGUSSA RD	THEODORE	Alabama	36582	0.011	0.0005	0.0115	0	0	0	0.0115
BERRIDGE MANUFACTURING CO	6515 FRATT RD	SAN ANTONIO	Texas	78218	0	0.01	0.01	0	0	0	0.01
CLEAN HARBORS ENVIRONMENTAL SERVICES INC	2247 S HWY 71	KIMBALL	Nebraska	69145	0.0065	0.0035	0.01	0	0	0	0.01
BUCKLEY OIL CO	1809 ROCK ISLAND ST	DALLAS	Texas	75207	0.0075	0.0025	0.01	0	0	0	0.01
CHEMOL CO INC	2300 RANDOLPH AVE	GREENSBORO	North Carolina	27406	0	0.009535	0.009535	0		0	0.009535
HYDRITE CHEMICAL CO	2545 BOND ST	UNIVERSITY PARK	Illinois	60466	0	0.0095	0.0095	0	0	0	0.0095
HENKEL CORP	923 MAULDIN RD	CALHOUN	Georgia	30701	0	0.0095	0.0095	0		0	0.0095

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SHERWIN-WILLIAMS CO	2325 HOLLINS FERRY RD	BALTIMORE	Maryland	21230	0.004	0.0055	0.0095	0		0	0.0095
SHERWIN-WILLIAMS CO	26300 FARGO AVE	BEDFORD HEIGHTS	Ohio	44146	0.0005	0.0015	0.002	0	0	0.0075	0.0095
DSM DESOTECH INC	1101 HWY 27 S	STANLEY	North Carolina	28164	0	0.0093	0.0093	0	0	0	0.0093
MULTI-COLOR CORP	2281 S US 31	SCOTTSBURG	Indiana	47170	0	0.008625	0.008625	0		0	0.008625
MARATHON PETROLEUM CO LLC	502 10TH ST S	TEXAS CITY	Texas	77590	0	0.0085	0.0085	0	0	0	0.0085
FERRO CORP WALTON HILLS OPERATIONS	7050 KRICK RD	WALTON HILLS	OHIO	44146	0.0035	0.0005	0.004	0		0.0045	0.0085
CLOROX PRODUCTS MANUFACTURING CO	17 LAKE MIRROR RD	FOREST PARK	Georgia	30297	0.003985	0.003985	0.00797	0		0	0.00797
MALLINCKRODT BAKER INC	600 N BROAD ST	PHILLIPSBURG	New Jersey	08865	0.0075	0	0.0075	0	0	0	0.0075
US DOD USAF JOINT BASE ELMENDORF-RICHARDSON	6326 ARCTIC WARRIOR DR	ELMENDORF AFB	ALASKA	99506	0.005	0.0025	0.0075	0	0	0	0.0075
RUSTOLEUM CORP	7850 OHIO RIVER RD	LESAGE	West Virginia	25537	0.0025	0.005	0.0075	0	0	0	0.0075
INTERSTATE CHEMICAL CO INC	23247 W EAMES ST	CHANNAHON	Illinois	60410	0.002	0.0055	0.0075	0		0	0.0075
DYNALOY LLC	6445 OLIVIA LN	INDIANAPOLIS	Indiana	46226	0.0015	0.006	0.0075	0		0	0.0075
BASF CORP	1609 BIDDLE AVE	WYANDOTTE	Michigan	48192	0.0025	0.0025	0.005	0.0025		0	0.0075
NATIONAL INDUSTRIAL COATINGS INC DBA NICOAT INC	1600 GLENLAKE AVE	ITASCA	Illinois	60143	0.0005	0	0.0005	0	0	0.007	0.0075
BRULIN CORP	2920 DR ANDREW J BROWN	INDIANAPOLIS	Indiana	46205	0.0030875	0.00417	0.0072575	0		0	0.0072575
FORD MOTOR CO DEARBORN DIVERSIFIED MANUFACTURING	3001 MILLER RD	DEARBORN	Michigan	48121	0.007	0	0.007	0		0	0.007
MARATHON PETROLEUM CO LLC - SPEEDWAY IN TERMINAL	1304 OLIN AVE	INDIANAPOLIS	Indiana	46222	0.007	0	0.007	0		0	0.007
HONEYWELL-PRESTONE PRODUCTS CORP	250 HALLS MILL RD	FREEHOLD	New Jersey	07728	0.0035	0.0035	0.007	0	0	0	0.007
LANCO MANUFACTURING CORP	URBAPONTE #5	SAN LORENZO	Puerto Rico	00754	0.0068	0.00004	0.00684	0		0	0.00684
NEW DAWN MANUFACTURING CO	16001 TRADE ZONE AVE	UPPER MARLBORO	Maryland	20774	0.006732805	0	0.006732805	0		0	0.006732805
UNIVAR USA INC NORCROSS FACILI TY	2145 SKYLAND CT	NORCROSS	Georgia	30071	0.003	0.0035	0.0065	0		0	0.0065
SHERWIN-WILLIAMS CO	12401 INDUSTRIAL BLVD	VICTORVILLE	California	92392	0.003	0.0035	0.0065	0	0	0	0.0065
VERSO PAPER HOLDINGS LLC	ANDROSCOGGIN MILL RILE	JAY	Maine	04239	0.0025	0	0.0025	0.0035		0.0005	0.0065
PROCTER & GAMBLE MANUFACTURING CO	1900 KANSAS AVE	KANSAS CITY	Kansas	66105	0.005915	0.00018	0.006095	0		0	0.006095
BP PRODUCTS NORTH AMERICA WHITING	2815 INDIANAPOLIS BLVD	WHITING	Indiana	46394	0.006	0	0.006	0	0	0	0.006
CONOCOCPHILLIPS CO WICHITA TERMINAL	2400 E 37TH ST N	WICHITA	KANSAS	67219	0	0.0059	0.0059	0	0	0	0.0059
CALLAHAN CHEMICAL CO	200 INDUSTRIAL AVE	RIDGEFIELD PARK	New Jersey	07660	0.003	0.0025	0.0055	0		0	0.0055
GOODWIN CO	12361 MONARCH ST	GARDEN GROVE	California	92841	0.005	0.0005	0.0055	0		0	0.0055

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
HUBBARD-HALL INC	563 S LEONARD ST	WATERBURY	Connecticut	06708	0.0005	0.005	0.0055	0		0	0.0055
LUBRIZOL CORP PAINESVIL LE PLANT	155 FREEDOM RD	PAINESVILLE	Ohio	44077	0.0045	0.001	0.0055	0		0	0.0055
UNIVAR USA INC - BUNOLA BRANC H	328 BUNOLA RIVER RD	BUNOLA	Pennsylvania	15020	0.0025	0.003	0.0055	0	0	0	0.0055
ENTHONE INC	9809 INDUSTRIAL DR	BRIDGEVIEW	Illinois	60455	0.00053	0.004765	0.005295	0	0	0	0.005295
GE WATER & PROCESS TECHNOLOGIES	333 S LOMBARD RD	ADDISON	ILLINOIS	60101	0.0025	0.0025	0.005	0		0	0.005
SHIELD PACKAGING CO INC	50 OXFORD AVE	DUDLEY	Massachusetts	01571	0.0025	0.0025	0.005	0	0	0	0.005
SARTOMER CO INC	601 TIGHTSQUEEZE INDUST	CHATHAM	Virginia	24531	0.0025	0.0025	0.005	0		0	0.005
UNIVAR USA INC LAKEVILLE	21675 HAMBURG AVE	LAKEVILLE	Minnesota	55044	0.0025	0.0025	0.005	0	0	0	0.005
PVS NOLWOOD CHEMICALS INC	9000 HUBBELL AVE	DETROIT	MICHIGAN	48228	0.0025	0.0025	0.005	0	0	0	0.005
INTERNATIONAL PAINT LLC	640 N ROCKY RIVER DR	BEREA	OHIO	44017	0.0025	0.0025	0.005	0	0	0	0.005
INDEPENDENT INK INC	14705 S AVALON BLVD	GARDENA	California	90248	0.0025	0.0025	0.005	0	0	0	0.005
GE WATER & PROCESS TECHNOLOGIES	2118 REISER AVE SE	NEW PHILADELPHIA	OHIO	44663	0.0025	0.0025	0.005	0		0	0.005
SARTOMER CO INC	610 S BOLMAR ST	WEST CHESTER	Pennsylvania	19382	0.0025	0.0025	0.005	0		0	0.005
FORD MOTOR CO DEARBORN TOOL & DIE PLANT	3001 MILLER RD	DEARBORN	Michigan	48121	0.005	0	0.005	0		0	0.005
CR BRANDS INC	141 VENTURE BLVD	SPARTANBURG	South Carolina	29306	0.0025	0.0025	0.005	0		0	0.005
C P INC	196 S WATER	CONNERSVILLE	Indiana	47331	0.0025	0.0025	0.005	0	0	0	0.005
BRAIN POWER INC	4470 SW 74TH AVE	MIAMI	Florida	33155	0.0025	0.0025	0.005	0		0	0.005
ACTEGA RADCURE INC	5 MANSARD CT	WAYNE	New Jersey	07470	0.0025	0.0025	0.005	0	0	0	0.005
GE WATER & PROCESS TECHNOLOGIES - BAKERSFIELD	3050 PEGASUS RD	BAKERSFIELD	CALIFORNIA	93308	0.0025	0.0025	0.005	0		0	0.005
BOEING COMMERCIAL AIRPLANE GROUP PLANT 2 (PART)	7755 E MARGINAL WAY S	SEATTLE	Washington	98108	0.001	0	0.001	0	0.004	0	0.005
CENTRAL SOLUTIONS INC	401 FUNSTON RD	KANSAS CITY	Kansas	66115	0	0	0	0	0.005	0	0.005
BAKER PETROLITE BAYPORT FACILI TY	13200 BAYPARK RD	PASADENA	Texas	77507	0.0045	0.000135	0.004635	0	0	0	0.004635
EDCO PRODUCTS INC	8700 EXCELSIOR BLVD	HOPKINS	MINNESOTA	55343	0	0.0045	0.0045	0	0	0	0.0045
MEADWESTVACO SC LLC CHARLESTON CHEMICAL PLANT	5598 VIRGINIA AVE	NORTH CHARLESTO	South Carolina	29406	0.004475	0.000025	0.0045	0	0	0	0.0045
LAFARGE MIDWEST INC (INCLD SYSTECH ENVIRONMENTAL)	1400 S CEMENT RD	FREDONIA	KANSAS	66736	0.0045	0	0.0045	0	0	0	0.0045
COGNIS CORP -- CHARLOTT E PLANT	3300 WESTINGHOUSE BLVD	CHARLOTTE	North Carolina	28273	0.0045	0	0.0045	0		0	0.0045
OMNIUM	1280 IMPERIAL RD	HAMPTON	Iowa	50441	0.0015	0.0025	0.004	0	0	0	0.004
CUSTOM CHEMICAL FORMULATORS	8707 MILLERGROVE DR	SANTA FE SPRINGS	California	90670	0.004	0	0.004	0		0	0.004

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
CHEMTEX LABORATORIES INC	2725 ARMENTROUT DR	CONCORD	North Carolina	28025	0.004	0	0.004	0		0	0.004
ASHLAND DISTRIBUTION	3701 RIVER RD	TONAWANDA	New York	14150	0.001	0.003	0.004	0		0	0.004
NORLITE CORP	628 S SARATOGA ST	COHOES	New York	12047	0.003525	0.000255	0.00378	0	0	0	0.00378
PENRAY COMPANIES INC	1801 ESTES AVE	ELK GROVE VILLAGE	Illinois	60007	0.0005	0.0005	0.001	0.0025		0	0.0035
PENRAY COMPANIES INC	440 DENNISTON CT	WHEELING	Illinois	60090	0.0005	0.0005	0.001	0.0025		0	0.0035
BAKER PETROLITE	5135 BOYLAN ST	BAKERSFIELD	California	93308	0.003025	0.000435	0.00346	0	0	0	0.00346
UNIVAR USA INC DENVER	4300 HOLLY ST	DENVER	Colorado	80216	0.0025	0.0005	0.003	0	0	0	0.003
VOGEL PAINT & WAX CO INC	1020 ALBANY PL SE	ORANGE CITY	Iowa	51041	0.0025	0.0005	0.003	0	0	0	0.003
UNIVAR USA INC- CINCINNATI OH BRANCH	4600 DUES DR	CINCINNATI	Ohio	45246	0.0015	0.0015	0.003	0	0	0	0.003
SHERWIN-WILLIAMS CO	404 E MALLORY AVE	MEMPHIS	Tennessee	38109	0.001	0.002	0.003	0	0	0	0.003
3M COTTAGE GROVE CENTER	10746 INNOVATION RD	COTTAGE GROVE	Minnesota	55016	0	0.003	0.003	0	0	0	0.003
UNIVAR USA INC	3950 NW YEON AVE	PORTLAND	Oregon	97210	0.002	0.001	0.003	0	0	0	0.003
CONOCOPHILLIPS MT VERNON PRODUCTS TERMINAL	15138 HWY 96	MOUNT VERNON	Missouri	65712	0	0.00296	0.00296	0	0	0	0.00296
MACDERMID INC	1221 FARROW AVE	FERNDALE	Michigan	48220	0.00131	0.00144	0.00275	0		0	0.00275
CONOCOPHILLIPS PONCA CITY REFINERY	1000 S PINE ST	PONCA CITY	Oklahoma	74601	0.0025	0.00016	0.00266	0	0	0	0.00266
ASTRO CHEMICALS INC	126 MEMORIAL DR	SPRINGFIELD	Massachusetts	01104	0.002	0.0005	0.0025	0	0	0	0.0025
UNION SPECIALTIES INC	3 MALCOLM HOYT DR	NEWBURYPORT	Massachusetts	01950	0.0005	0.002	0.0025	0	0	0	0.0025
PPG ARCHITECURAL COATINGS HOUSTON	3530 LANG RD	HOUSTON	Texas	77092	0.0025	0	0.0025	0	0	0	0.0025
CONOCOPHILLIPS CO TREMLEY POINT TERMINAL	FOOT OF S WOOD AVE	LINDEN	New Jersey	07036	0.0025	0	0.0025	0	0	0	0.0025
ECP INC WOODRIDGE	11210 KATHERINE'S CROSS	WOODRIDGE	Illinois	60517	0.0025	0	0.0025	0		0	0.0025
MILPORT ENTERPRISES INC	2829 S 5TH CT	MILWAUKEE	Wisconsin	53207	0	0.0025	0.0025	0		0	0.0025
BRAINERD CHEMICAL CO INC	1200 N PEORIA	TULSA	OKLAHOMA	74147	0	0.0025	0.0025	0		0	0.0025
DOBER CHEMICAL CORP	14461 WAVERLY AVE	MIDLOTHIAN	Illinois	60445	0.0025	0	0.0025	0		0	0.0025
NOV TUBOSCOPE HOLMES ROAD	2811 HOLMES RD	HOUSTON	Texas	77051	0.0025	0	0.0025	0	0	0	0.0025
FINGER LAKES CHEMICAL INC	418-424 ST PAUL ST	ROCHESTER	New York	14605	0.0025	0	0.0025	0		0	0.0025
ATOTECH USA	1750 OVERVIEW DR	ROCK HILL	South Carolina	29730	0.0025	0	0.0025	0	0	0	0.0025
KEYSTONE CEMENT CO	RT 329	BATH	Pennsylvania	18014	0	0.0025	0.0025	0	0	0	0.0025
NIACET CORP	400 47TH ST	NIAGARA FALLS	New York	14304	0.0025	0	0.0025	0	0	0	0.0025
BIOLAB INC	101 S PARKER DR	ASHLEY	INDIANA	46705	0.0025	0	0.0025	0	0	0	0.0025
CR BRANDS INC	230 OLD CONVERSE RD	SPARTANBURG	South Carolina	29307	0.0025	0	0.0025	0		0	0.0025

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
WYNNEWOOD REFINING CO	906 S POWELL	WYNNEWOOD	Oklahoma	73098	0	0.0025	0.0025	0	0	0	0.0025
CHEMICAL SOLVENTS INC--DENISON FACILITY	1010 OLD DENNISON AVE	CLEVELAND	Ohio	44109	0.0025	0	0.0025	0	0	0	0.0025
BAKER PETROLITE CORP	16950 WALLISVILLE RD	HOUSTON	Texas	77049	0.0003495	0.002085	0.0024345	0	0	0	0.0024345
KING INDUSTRIES INC	SCIENCE RD	NORWALK	Connecticut	06852	0.00125	0.00115	0.0024	0		0	0.0024
CLARIANT CORP CLEAR LAKE PLANT	9502 BAYPORT BLVD - ETO/	PASADENA	Texas	77507	0.0023	0	0.0023	0		0	0.0023
HENTZEN COATINGS,INC	6937 W MILL RD	MILWAUKEE	Wisconsin	53218	0.000875	0.00131	0.002185	0	0	0	0.002185
DYNASOL INC	330 PINE ST	CANTON	Massachusetts	02021	0.00215	0	0.00215	0		0	0.00215
UNIVAR USA INC SANTA FE SPRINGS	13900 CARMENITA RD	SANTA FE SPRINGS	California	90670	0.001	0.001	0.002	0	0	0	0.002
DUPONT EKC TECHNOLOGY	2520 BARRINGTON CT	HAYWARD	California	94545	0.0005	0.0015	0.002	0		0	0.002
CALLAHAN CHEMICAL CO	18 INDUSTRIAL RD	WALPOLE	Massachusetts	02081	0.0015	0.0005	0.002	0	0	0	0.002
ASHLAND DISTRIBUTION CO	FREEPORT CENTER BUILDI	CLEARFIELD	Utah	84016	0.0005	0.0015	0.002	0	0	0	0.002
CRODA INC	315 CHERRY LN	NEW CASTLE	Delaware	19720	0.001405	0.0005	0.001905	0		0	0.001905
TARR ACQUISITION LLC	2429 N BORTHWICK AVE	PORTLAND	Oregon	97227	0.001825	0	0.001825	0	0	0	0.001825
BAKER PETROLITE-RAYNE FACILITY	135 INDUSTRIAL DR	RAYNE	Louisiana	70578	0.0005	0.001	0.0015	0		0	0.0015
VOLTAIX LLC	197 MEISTER AVE	BRANCHBURG	New Jersey	08876	0.0005	0.001	0.0015	0	0	0	0.0015
GIANT CEMENT CO	HWY 453 & I-26 (654 JUDGE	HARLEYVILLE	South Carolina	29448	0.001	0.0005	0.0015	0	0	0	0.0015
BUCKMAN LABORATORIES INC	1256 N MCLEAN BLVD	MEMPHIS	Tennessee	38108	0	0.0015	0.0015	0		0	0.0015
KELLY-MOORE PAINT CO INC	1015 COMMERCIAL ST	SAN CARLOS	California	94070	0	0.0015	0.0015	0	0	0	0.0015
HYDRITE CHEMICAL CO	7300 W BRADLEY RD	MILWAUKEE	Wisconsin	53223	0.0005	0.001	0.0015	0		0	0.0015
NALCO CO - ODESSA PLANT 114	12205 W COUNTY RD 125	ODESSA	Texas	79765	0	0	0	0	0	0.0015	0.0015
PPG ARCHITECTURAL COATINGS	6804 ENTERPRISE DR	LOUISVILLE	Kentucky	40214	0	0.0008	0.0008	0	0	0.0005	0.0013
FUJIFILM HUNT CHEMICALS USA INC	900 CARNEGIE ST	ROLLING MEADOWS	Illinois	60008	0.00105	0.0002	0.00125	0		0	0.00125
FIRST SOURCE WORLDWIDE LLC MILWAUKEE	11725 W FAIRVIEW AVE	MILWAUKEE	Wisconsin	53226	0.0011	0.00015	0.00125	0		0	0.00125
MANN DISTRIBUTION	3134 POST RD	WARWICK	Rhode Island	02886	0.00112	0	0.00112	0		0	0.00112
SHERWIN-WILLIAMS CO	14 INDUSTRIAL PARK	FLORA	Illinois	62839	0.0005	0.0005	0.001	0	0	0	0.001
MONSANTO CO	2500 WIGGINS RD	MUSCATINE	Iowa	52761	0	0.001	0.001	0	0	0	0.001
CLEAN HARBORS DEER PARK LLC	2027 INDEPENDENCE PKWY	LA PORTE	TEXAS	77571	0.001	0	0.001	0	0	0	0.001
BRENNTAG SOUTHEAST INC	11750 FRUEHAUF DR	CHARLOTTE	North Carolina	28273	0.0005	0.0005	0.001	0	0	0	0.001
BENJAMIN MOORE & CO - NEWARK	134 LISTER AVE	NEWARK	New Jersey	07105	0.001	0	0.001	0	0	0	0.001
LAFARGE NA (INCLUDING SYSTECH ENV CORP)	11435 COUNTY RD 176	PAULDING	OHIO	45879	0	0.001	0.001	0	0	0	0.001

Table B-2. 2010 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
OMNOVA SOLUTIONS INC	1455 J A COCHRAN BY-PAS	CHESTER	South Carolina	29706	0.00075	0.00002	0.00077	0		0	0.00077
NALCO CO	3901 TERRY ST	TEXARKANA	Texas	75501	0	0.0005	0.0005	0		0	0.0005
HARWICK STANDARD DISTRIBUTION CORP	60 S SEIBERLING ST	AKRON	Ohio	44305	0.0005	0	0.0005	0	0	0	0.0005
NALCO CO - EVANSVILLE PLANT 108	4900 E YELLOWSTONE HWY	EVANSVILLE	WYOMING	82636	0	0	0	0	0	0.0005	0.0005
SURPASS CHEMICAL CO INC	1254 BROADWAY	ALBANY	New York	12204	0.000485	0	0.000485	0		0	0.000485
NALCO CO	812 RENAUD DR	SCOTT	Louisiana	70583	0.000011	0.0003275	0.0003385	0	0	0	0.0003385
PARKER HANNIFIN TECH SEAL DIV	2600 WILCO BLVD	WILSON	North Carolina	27893	0	0.00029	0.00029	0	0	0	0.00029
LAMBERTI SYNTHESIS USA INC	4001 N HAWTHORNE ST	CHATTANOOGA	Tennessee	37406	0.0002205	0	0.0002205	0	0	0	0.0002205
CHEMETALL US INC	1610 CLARA ST	JACKSON	Michigan	49203	0.0000441	0.0001213	0.0001654	0	0	0	0.0001654
IFF AUGUSTA LTD	3005 INTERNATIONAL BLVD	AUGUSTA	Georgia	30906	0	0.000085	0.000085	0	0	0	0.000085
RIKER PRODUCTS INC	4901 STICKNEY AVE	TOLEDO	Ohio	43612	0.000082	0	0.000082	0	0	0	0.000082
BAKER PETROLITE KILGORE BLEND PLANT	806 PALUXY ST	KILGORE	Texas	75662	0.0000212	0.0000595	0.0000807	0	0	0	0.0000807
EMERALD SERVICES INC	1825 E ALEXANDER AVE	TACOMA	Washington	98421	0	0.000005	0.000005	0	0	0.00005	0.000055
NALCO CO	125 NALCO WAY/RT 65	ELLWOOD CITY	Pennsylvania	16117	0.0000028	0.000009	0.0000118	0	0	0	0.0000118
AIR PRODUCTS PERFORMANCE MANUFACTURING INC	474 W 19TH ST	RESERVE	Louisiana	70084	0	0.000002	0.000002	0		0	0.000002

a. Releases to Surface Water reported as "On-Site Releases to Surface Water."
b. Releases to Soil is the sum of reported releases to onsite and offsite releases to land treatment and other land disposal.
c. Releases to other media include reported releases to onsite and offsite groundwater and landfills.
tpy: tons per year

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
EQ DETROIT INC	1923 FREDERICK	DETROIT	MI	48211	0	1.778	1.778	0		358.8295	360.6075
BALL METAL BEVERAGE CONTAINER CORP	8935 POCAHONTAS TRAIL	WILLIAMSBURG	VA	23185	28	145	173	0	0	0	173
BALL METAL BEVERAGE CONTAINER CORP	12340 TOWNSHIP RD 99 E	FINDLAY	OH	45840	25.5	135	160.5	0		0	160.5
BMW MANUFACTURING CO LLC	1400 HWY 101 S	GREER	SC	29651	2.4745	150.0455	152.52	0		0	152.52
REXAM BEVERAGE CAN CO RE: WINSTON SALEM PLANT	4000 OLD MILWAUKEE LN	WINSTON-SALEM	NC	27107	25.716	110.457	136.173	0	0	0.441	136.614
CROWN FOOD PACKAGING	2929 W BRIDGE ST	OWATONNA	MN	55060	31.8905	95.672	127.5625	0		0	127.5625
REXAM BEVERAGE CAN CO RE: FREMONT PLANT	2145 CEDAR	FREMONT	OH	43420	19.034	107.921	126.955	0	0	0	126.955
BALL METAL BEVERAGE CONTAINER CORP	1900 BARNES ST	REIDSVILLE	NC	27320	17	85	102	0	0	0	102
FLINT HILLS RESOURCES CORPUS CHRISTI LLC - WEST PLANT	2825 SUNTIDE RD	CORPUS CHRISTI	TX	78409	0.1435	0	0.1435	0	0	97.9	98.0435
CROWN CORK & SEAL CO (USA) INC CROWN CLOSURE DIV	3011 BIRCH DR	WEIRTON	WV	26062	34.526	57.7185	92.2445	0	0	0	92.2445
REXAM BEVERAGE CAN CO RE: BISHOPVILLE SC FACILITY	609 COUSAR ST	BISHOPVILLE	SC	29010	13.386	75.874	89.26	0	0	0.2515	89.5115
REXAM BEVERAGE CAN CO RE: KENT WA FACILITY	1220 N SECOND AVE	KENT	WA	98032	12.442	70.504	82.946	0	0	0	82.946
REXAM BEVERAGE CAN CO RE: OLIVE BRANCH FACILITY	10800 MARINA DR	OLIVE BRANCH	MS	38654	18.811	63.4835	82.2945	0	0	0.1425	82.437
BALL CONTAINER LLC - COLUMBUS CAN PLANT	350 MCCORMICK BLVD	COLUMBUS	OH	43213	12	70	82	0	0	0	82
REXAM BEVERAGE CAN CO RE: EVA STREET ST PAUL MN	139 EVA ST	SAINT PAUL	MN	55107	11.8215	66.994	78.8155	0	0	0	78.8155
REXAM BEVERAGE CAN CO RE: WHITEHOUSE PLANT	10444 WATERVILLE	WHITEHOUSE	OH	43571	24.8555	51.4725	76.328	0	0	0.301	76.629
CROWN BEVERAGE PACKAGING	GLEN & SHEPARD ST	LAWRENCE	MA	01843	17.5445	52.633	70.1775	0	0	0	70.1775
FORD MOTOR CO DEARBORN TRUCK PLANT	3001 MILLER RD	DEARBORN	MI	48121	1.15	65	66.15	0		0	66.15
PPG INDUSTRIES INC-OAK CREEK	10800 S 13TH ST	OAK CREEK	WI	53154	35.178	0.402	35.58	0	0	30.2865	65.8665
SILGAN CONTAINERS MANUFACTURING CORP	300 N FAIL RD	LA PORTE	IN	46350	12.191	53.2315	65.4225	0		0	65.4225
CROWN BEVERAGE PACKAGING	1035 E N ST	BRADLEY	IL	60915	16.211	48.633	64.844	0	0	0	64.844
CROWN BEVERAGE PACKAGING	1202 FONES RD	OLYMPIA	WA	98501	15.9915	47.975	63.9665	0	0	0	63.9665
FORD MOTOR COMPANY--KANSAS CITY ASSEMBLY PLANT	8121 E U.S. HWY 69	CLAYCOMO	MO	64119	1.55	55	56.55	0		0.0185	56.5685
CHRYSLER JEFFERSON NORTH ASSEMBLY PLANT	2101 CONNOR AVE	DETROIT	MI	48215	6	50	56	0		0.0225	56.0225
METAL CONTAINER CORPORTION - WINDSOR CAN PLANT	1201 METAL CONTAINER C	WINDSOR	CO	80550	14.5265	39.731	54.2575	0		0	54.2575
CROWN BEVERAGE PACKAGING	620 N 4TH ST	WORLAND	WY	82401	13.335	40.0055	53.3405	0	0	0	53.3405
REXAM BEVERAGE CAN CO RE: LONGVIEW FACILITY	1001 FISHER RD	LONGVIEW	TX	75604	4.823	47.662	52.485	0	0	0	52.485

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WHIRLPOOL CORP MARION DIV	1300 MARION-AGOSTA RD	MARION	OH	43302	0.05	51.411	51.461	0		0	51.461
RR DONNELLEY	2347 KRATZER RD	HARRISONBURG	VA	22802	45.2035	3.061	48.2645	0		0	48.2645
HUNTSMAN PETROCHEMICAL LLC PORT NECHES FACILITY	6001 HWY 366	PORT NECHES	TX	77651	0.11	0	0.11	0	0	46.92	47.03
BALL CONTAINER LLC ROME CAN PLANT	110 BALL DR	ROME	GA	30161	31	13.5	44.5	0	0	0	44.5
FORD MOTOR CO KENTUCKY TRUCK PLANT	3001 CHAMBERLAIN LN	LOUISVILLE	KY	40241	3.25	41	44.25	0		0.13	44.38
METAL CONTAINER CORP - ARNOLD CAN PLANT	42 TENBROOK INDUSTRIAL	ARNOLD	MO	63010	16.3535	25.671	42.0245	0		0	42.0245
REXAM BEVERAGE CAN CO RE: PHOENIX FACILITY	211 N 51AVE	PHOENIX	AZ	85043	5.7315	36.1725	41.904	0	0	0	41.904
USS - CLAIRTON PLANT	400 STATE ST	CLAIRTON	PA	15025	41	0	41	0	0	0	41
METAL CONTAINER CORP - NEWBURGH CAN PLANT	130 BREUNIG RD	NEW WINDSOR	NY	12553	11.0015	29.428	40.4295	0		0	40.4295
HONDA OF AMERICA MANUFACTURING INC	24000 HONDA PKWY	MARYSVILLE	OH	43040	2.7	37.5	40.2	0		0.213	40.413
HONDA OF AMERICA MANUFACTURING INC	11000 STATE RT 347	EAST LIBERTY	OH	43319	2.3	36	38.3	0		0.1495	38.4495
GREIF PACKAGING LLC	7425 INDUSTRIAL RD	FLORENCE	KY	41042	3.4725	31.252	34.7245	0		2.166	36.8905
CHICAGO HEIGHTS STEEL	211 E MAIN ST	CHICAGO HEIGHTS	IL	60411	7.172	28.6875	35.8595	0	0	0	35.8595
S D WARREN CO	89 CUMBERLAND ST	WESTBROOK	ME	04098	0.00391	35.2055	35.20941	0.125	0	0	35.33441
BALL METAL BEVERAGE CONTAINER CORP	8500 W TOWER AVE	MILWAUKEE	WI	53224	27.5	7.5	35	0		0	35
ROCKY MOUNTAIN METAL CONTAINER	17755 W 32ND AVE	GOLDEN	CO	80401	26.5	7	33.5	0	0	1.4	34.9
CROWN FOOD PACKAGING	8801 CITATION RD	BALTIMORE	MD	21221	8.637	25.911	34.548	0		0	34.548
BATESVILLE MANUFACTURING INC	175 MONOGARD DR	MANCHESTER	TN	37355	1.709	32.4675	34.1765	0		0.0045	34.181
EDSAL MANUFACTURING CO INC	4400 S PACKER	CHICAGO	IL	60609	0	33.9425	33.9425	0		0	33.9425
REXAM BEVERAGE CAN CO RE : CHICAGO PLANT	1101 W 43RD ST	CHICAGO	IL	60609	6.522	26.6495	33.1715	0	0	0.0805	33.252
BALL METAL BEVERAGE CONTAINER CORP	501 N SIXTH ST	MONTICELLO	IN	47960	14.5	18.5	33	0	0	0	33
INGERSOLL-RAND CO STEELCRAFT DIV	9017 BLUE ASH RD	CINCINNATI	OH	45242	7.5	25	32.5	0	0	0	32.5
CROWN BEVERAGE PACKAGING	2501 N FRAZIER ST	CONROE	TX	77303	27.5695	4.4945	32.064	0	0	0	32.064
BALL METAL BEVERAGE CONTAINER CORP	4525 INDIANA ST	GOLDEN	CO	80403	20	11.5	31.5	0	0	0	31.5
CROWN BEVERAGE PACKAGING	12910 JESS PIRTLE BLVD	SUGAR LAND	TX	77478	27.381	4.107	31.488	0	0	0	31.488
METAL CONTAINER CORP - MIRA LOMA CAN PLANT	10980 INLAND AVE	MIRA LOMA	CA	91752	27.5195	3.656	31.1755	0		0	31.1755
NISSAN NA INC SMYRNA MANUFACTURING PLANT	983 NISSAN DR	SMYRNA	TN	37167	0.02302895	30.7183514	30.74138035	0	0	0	30.74138035
SUBARU OF INDIANA AUTOMOTIVE INC	5500 STATE RD 38E	LAFAYETTE	IN	47905	0.295	29.34	29.635	0		0	29.635
REXAM BEVERAGE CAN CO RE: CHATSWORTH FACILITY	20730 PRAIRIE ST	CHATSWORTH	CA	91311	6.4125	22.592	29.0045	0	0	0	29.0045
MERCEDES-BENZ US INTERNATIONAL INC	1 MERCEDES DR	VANCE	AL	35490	0.501	27.801	28.302	0	0	0	28.302

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NEW YORK WIRE	500 E MIDDLE ST	HANOVER	PA	17331	0	28.0405	28.0405	0	0	0	28.0405
ARKEMA COATING RESINS	340 RAILROAD ST	SAUKVILLE	WI	53080	0.6965	0.204	0.9005	0	0	27.0115	27.912
AMES TRUE TEMPER INC	1500 S CAMERON ST	HARRISBURG	PA	17104	1.381	26.2385	27.6195	0	0	0	27.6195
SENECA FOODS CORP	801 SAUK AVE	BARABOO	WI	53913	0	25.711	25.711	0	0	0.823	26.534
GM LLC POWERTRAIN FLINT ENGINE OPERATIONS	2100 BRISTOL RD	FLINT	MI	48552	0.6855	25.5	26.1855	0	0	0.255	26.4405
CROWN BEVERAGE PACKAGING	1501 ST JAMES ST	LA CROSSE	WI	54603	23.9785	1.7985	25.777	0	0	0	25.777
METAL CONTAINER CORP - JACKSONVILLE CAN PLANT	1100 N ELLIS RD	JACKSONVILLE	FL	32254	6.4585	19.1565	25.615	0		0	25.615
HONDA MANUFACTURING OF ALABAMA LLC	1800 HONDA DR	LINCOLN	AL	35096	0.4995	24.7705	25.27	0		0	25.27
GENERAL MOTORS LANSING DELTA TOWNSHIP	8175 MILLETT HWY	LANSING	MI	48917	0.55	24	24.55	0		0	24.55
THERMA-TRU CORP	601 RE JONES RD	BUTLER	IN	46721	0	24.3635	24.3635	0	0	0	24.3635
S B FOOT TANNING CO	805 BENCH ST	RED WING	MN	55066	0	24.362	24.362	0		0	24.362
CROWN BEVERAGE PACKAGING	380 CALLE FABRIL ST KM 1	CAROLINA	PR	00985	6.0485	18.1455	24.194	0	0	0	24.194
MEMC PASADENA INC	3000 N S ST	PASADENA	TX	77503	15.043	8.7685	23.8115	0	0	0.19505	24.00655
ALSTOM POWER INC CHATTANOOGA BOILERS	1119 RIVERFRONT PKWY	CHATTANOOGA	TN	37402	23.9355	0	23.9355	0	0	0	23.9355
CROWN BEVERAGE PACKAGING	100 EVANS ROW	CHERAW	SC	29520	21.161	2.715	23.876	0	0	0	23.876
BWAY CORP	3200 S KILBOURN AVE	CHICAGO	IL	60623	7.24545	15.749	22.99445	0		0	22.99445
CROWN BEVERAGE PACKAGING	195 CROWN RD	BATESVILLE	MS	38606	19.269	2.8905	22.1595	0	0	0	22.1595
MAVERICK TUBE LLC DBA TENARISCONROE	699 F.M. 3083	CONROE	TX	77301	0.95633545	5.98814565	6.9444811	0	0	14.96	21.9044811
CROWN BEVERAGE PACKAGING	400 N WALNUT ST	CRAWFORDSVILLE	IN	47933	15.725	5.872	21.597	0	0	0	21.597
WHIRLPOOL CORP FINDLAY DIV	4901 N MAIN ST	FINDLAY	OH	45840	2.1509	19.3581	21.509	0		0	21.509
BALL METAL BEVERAGE CONTAINER CORP	2400 HUNTINGTON DR	FAIRFIELD	CA	94533	9	12.5	21.5	0	0	0	21.5
SAF-HOLLAND USA INC	101 S ELM	WARRENTON	MO	63383	18.5495	2.93	21.4795	0	0	0	21.4795
JOHN DEERE DES MOINES WORKS	825 SW IRVINEDALE DR	ANKENY	IA	50023	0	21.1695	21.1695	0		0	21.1695
ALCOA INC - WARRICK OPERATIONS	HWYS 66 & 61	NEWBURGH	IN	47629	0	8.5	8.5	0.185	0	12.2	20.885
BOEING COMMERCIAL AIRPLANES - EVERETT	3003 W CASINO RD	EVERETT	WA	98204	3.45	17	20.45	0		0.0095	20.4595
AIR SYSTEM COMPONENTS LP	900 DARR PARK DR	PONCA CITY	OK	74601	0.2025	19.677	19.8795	0		0	19.8795
AGY AIKEN LLC	2556 WAGENER RD	AIKEN	SC	29801	12.247	2.269	14.516	0		5.2685	19.7845
PELLA CORP	102 MAIN ST	PELLA	IA	50219	0.125	19.3945	19.5195	0	0	0	19.5195
ITW SEXTON INC	3101 SEXTON RD	DECATUR	AL	35603	0.96278	18.29282	19.2556	0	0	0	19.2556
BALL METAL BEVERAGE CONTAINER CORP	11 ADAMS RD	SARATOGA SPRING	NY	12866	3.25	16	19.25	0	0	0	19.25

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
MOBIL CHEMICAL CO	41501 WOLVERINE RD	SHAWNEE	OK	74804	0.375	18.7	19.075	0		0.0025	19.0775
GREIF PACKAGING LLC	4300 W 130TH ST	ALSIP	IL	60803	4.1295	14.601	18.7305	0	0	0	18.7305
MID-AMERICA STEEL DRUM CO IN C	8570 S CHICAGO RD	OAK CREEK	WI	53154	0	18.578	18.578	0		0	18.578
NASHVILLE WIRE PRODUCTS	1604 COUNTY HOSPITAL R	NASHVILLE	TN	37218	16.5	1.85	18.35	0		0	18.35
TOYOTA MOTOR MANUFACTURING INDIANA INC	4000 TULIP TREE DR	PRINCETON	IN	47670	12.595	5.374	17.969	0	0	0	17.969
UNION CARBIDE CORP SEADRIFT PLANT	7501 N HWY 185	SEADRIFT	TX	77983	14.188	3.478	17.666	0.0875	0	0.097	17.8505
BALL METAL BEVERAGE CONTAINER CORP	95 BALLARD RD	MIDDLETOWN	NY	10940	8	9.5	17.5	0	0	0	17.5
CARRY-ON TRAILER CORP	101 JOE HARVEY ST	LAVONIA	GA	30553	0	17.346	17.346	0	0	0	17.346
NORTH COAST CONTAINER CORP	8806 CRANE AVE	CLEVELAND	OH	44105	0	17.316	17.316	0	0	0	17.316
BALL METAL BEVERAGE CONTAINER CORP	1001 N FM 3083 E	CONROE	TX	77303	13	4.15	17.15	0	0	0	17.15
BALL METAL BEVERAGE CONTAINER CORP	4700 WHITEWAY DR	TAMPA	FL	33617	8	9	17	0	0	0	17
PENN COLOR INC	2755 BERGEY RD	HATFIELD	PA	19440	2.951	0.065805	3.016805	0	0	13.952	16.968805
MAVERICK TUBE LLC	4950 N COUNTY RD 967	BLYTHEVILLE	AR	72315	11.16161105	0	11.16161105	0	0	5.775	16.93661105
AIR SYSTEM COMPONENTS LP	3301 N MAIN ST	TARBORO	NC	27886	0.172	16.3515	16.5235	0		0.324	16.8475
CECO DOOR PRODUCTS	9159 TELECOM DR	MILAN	TN	38358	8.377	8.377	16.754	0	0	0	16.754
CNH AMERICA LLC	600 E PEORIA ST	GOODFIELD	IL	61742	1.6725	15.0505	16.723	0		0	16.723
BALL METAL BEVERAGE CONTAINER CORP	500 CRENSHAW BLVD	TORRANCE	CA	90503	16	0.65	16.65	0	0	0	16.65
KUKA TOLEDO PRODUCTION OPERATIONS	3770 STICKNEY AVE	TOLEDO	OH	43612	2.0510995	14.5	16.5510995	0	0	0.034	16.5850995
DEXTER CHASSIS GROUP PLANT 55	501 S MILLER DR	WHITE PIGEON	MI	49099	0	16.1035	16.1035	0	0	0.08	16.1835
THE KNAPHEIDE MANUFACTURING CO	1848 WESTPHALIA STRASS	QUINCY	IL	62305	0.141	15.94	16.081	0		0	16.081
THOMAS BUILT BUSES INC	715 W FAIRFIELD RD	HIGH POINT	NC	27263	0	15.9935	15.9935	0	0	0	15.9935
MPM SILICONES LLC	3500 S STATE RT 2	FRIENDLY	WV	26146	2.1935	0.0035	2.197	10.845	0	2.922	15.964
NOVOLYTE PERFORMANCE MATERIALS	111 W IRENE RD	ZACHARY	LA	70791	4.75	0.605	5.355	10.6	0	0	15.955
AVX CORP MYRTLE BEACH	801 17TH AVE S	MYRTLE BEACH	SC	29577	1.6645	1.028	2.6925	0	0	12.8455	15.538
SILGAN WHITE CAP CORP	2201 W MARYLAND ST	EVANSVILLE	IN	47710	11.6705	3.742	15.4125	0	0	0	15.4125
EASTMAN CHEMICAL CO TEXAS OPERATIONS	300 KODAK BLVD	LONGVIEW	TX	75602	12.262	3.0575	15.3195	0	0	0	15.3195
OLDCASTLE BUILDING ENVELOPE - TEXAS FACILITY	803 AIRPORT RD	TERRELL	TX	75160	0	15.309	15.309	0	0	0	15.309
GM TRUCK GROUP FORT WAYNE ASSEMBLY	12200 LAFAYETTE CENTER	ROANOKE	IN	46783	0.7	14.5	15.2	0		0	15.2
NOVELIS CORP	390 GRISWOLD ST NE	WARREN	OH	44483	4.568	10.398	14.966	0	0	0	14.966
HITACHI AUTOMOTIVE SYSTEMS AMERICAS INC-BEREA KY	301 MAYDE RD	BEREA	KY	40403	0.0675	14.7307	14.7982	0	0	0	14.7982

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BEDFORD MATERIALS CO INC	7676 ALLEGHENY RD	MANNS CHOICE	PA	15550	1.4135	12.7915	14.205	0	0	0	14.205
ANDERSON TULLY LUMBER CO WALTERSVILLE LUMBER MILL	1725 N WASHINGTON ST	VICKSBURG	MS	39181	14.1275	0	14.1275	0		0	14.1275
SILGAN CONTAINERS MANUFACTURIN G CORP	3591 MAPLE DR	FORT DODGE	IA	50501	0.002535	13.684	13.686535	0		0	13.686535
M&B HANGERS	1313 PKWY DR SE	LEEDS	AL	35094	2.6945	10.7775	13.472	0		0	13.472
ARTIFLEX MANUFACTURING LLC GERSTCO DIV WOOSTER	1425 E BOWMAN ST	WOOSTER	OH	44691	0.401	12.9615	13.3625	0		0.0075	13.37
BALL METAL FOOD CONTAINER CORP	3010 BIRCH DR	WEIRTON	WV	26062	9.95	3.3	13.25	0	0	0	13.25
GRAPHIC PACKAGING INTERNATIONAL INC	10300 ROBERTS BLVD	FORT SMITH	AR	72916	0	13.2445	13.2445	0		0	13.2445
DECORATIVE PANELS INTERNATIONA L	2900 HILL AVE	TOLEDO	OH	43607	13.1175	0.023	13.1405	0		0	13.1405
VESTAL MANUFACTURING ENTERPRISES INC	177 INDUSTRIAL PARK RD	SWEETWATER	TN	37874	13.094	0	13.094	0		0	13.094
SIGNCRAFT SCREEN PRINT	100 A.J. HARLE DR	GALENA	IL	61036	12.185	0	12.185	0	0	0.841	13.026
HALLSTAR CO ESTER SOLUTIONS FACILITY	5851 W 73RD ST	BEDFORD PARK	IL	60638	1.1705	0.1565	1.327	0		11.6165	12.9435
SUPERIOR INDUSTRIES INTERNATIONAL ARKANSAS LLC	1301 N DIXIELAND RD	ROGERS	AR	72756	0.0025	12.8805	12.883	0.0025		1.77636E-15	12.8855
QUAD/GRAPHICS INC	N61 W23044 HARRY'S WAY	SUSSEX	WI	53089	11.55	1.3	12.85	0		0	12.85
RUSKIN CO	HWY 27 N	GENEVA	AL	36340	0.0565	12.7365	12.793	0	0	0	12.793
BEMIS MANUFACTURING CO PLANT B	300 MILL ST	SHEBOYGAN FALLS	WI	53085	0	12.7415	12.7415	0		0	12.7415
SILGAN CAN CO	12-773 ST RT 110	NAPOLEON	OH	43545	5.3645	7.366	12.7305	0	0	0	12.7305
CROWN FOOD PACKAGING	5201 ENTERPRISE BLVD	TOLEDO	OH	43612	3.1835	9.541	12.7245	0	0	0	12.7245
BERENFIELD CONTAINERS INC MASON	1229 CASTLE DR	MASON	OH	45040	0.125	12.564	12.689	0	0	0	12.689
CLEAN HARBORS LONE MOUNTAIN LLC LONE MOUNTAIN FACILITY	5 MILES E & 1 MILE N OF JU	WAYNOKA	OK	73860	0.00125	0.0004	0.00165	0		12.5485	12.55015
3M CO - GUIN	6675 US HWY 43	GUIN	AL	35563	0.001	12.5	12.501	0	0	0	12.501
BALL METAL BEVERAGE CONTAINER CORP	6600 WILL ROGERS BLVD	FORT WORTH	TX	76140	5.5	7	12.5	0	0	0	12.5
NUCOR VULCRAFT GROUP SAINT JOE DIV	6610 COUNTY RD 60	SAINT JOE	IN	46785	2.877	5.354	8.231	0		4.2115	12.4425
AKZO NOBEL COATINGS INC	1629 VANDERBILT RD	BIRMINGHAM	AL	35234	12.1875	0.175	12.3625	0	0	0	12.3625
HOWARD FINISHING LLC	32565 DEQUINDRE	MADISON HEIGHTS	MI	48071	0.0025	12.358	12.3605	0	0	0	12.3605
MEYER STEEL DRUM INC	2000 S KILBOURN AVE	CHICAGO	IL	60623	1.3505	10.927	12.2775	0		0	12.2775
NUCOR CORP VULCRAFT DIV	1501 W DARLINGTON ST	FLORENCE	SC	29501	10.9885	1.255	12.2435	0	0	0	12.2435
NUCOR VULCRAFT GROUP - GRAPELAND DIV	175 COUNTY RD 2345	GRAPELAND	TX	75844	4.282	7.922	12.204	0	0	0	12.204
PLY GEM	2615 CAMPBELL RD	SIDNEY	OH	45365	0.705	11.45	12.155	0		0	12.155
BALL CONTAINER LLC	105 E BLACKHAWK DR	FORT ATKINSON	WI	53538	3.45	8.5	11.95	0	0	0	11.95

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AMERICAN TRIM LLC	1501 W MICHIGAN ST	SIDNEY	OH	45365	0	11.892	11.892	0	0	0	11.892
QUAD/GRAPHICS INC	1900 W SUMNER ST	HARTFORD	WI	53027	11.5	0.35	11.85	0		0	11.85
SHAMROCK TECHNOLOGIES INC	FOOT OF PACIFIC ST	NEWARK	NJ	07114	0	0	0	0		11.718	11.718
WHITING DOOR MANUFACTURING CORP	113 CEDAR ST	AKRON	NY	14001	0	11.6965	11.6965	0	0	0	11.6965
CNH AMERICA LLC	1930 DES MOINES AVE	BURLINGTON	IA	52601	0.18	11	11.18	0		0	11.18
CHRYSLER BELVIDERE ASSEMBLY PLANT	3000 W CHRYSLER DR	BELVIDERE	IL	61008	1.15	10	11.15	0		0.0095	11.1595
TOPPAN INTERAMERICA INC	1131 HWY 155 S	MC DONOUGH	GA	30253	0	11.15	11.15	0	0	0	11.15
VULCRAFT OF NEW YORK INC	5362 RAILROAD ST	CHEMUNG	NY	14825	4.005	6.4505	10.4555	0	0	0.61	11.0655
SILGAN CONTAINERS MANUFACTURING CORP	400 N 15TH ST	ROCHELLE	IL	61068	7.265	3.78	11.045	0	0	0	11.045
SUPERIOR INDUSTRIES INTERNATIONAL ARKANSAS LLC	1901 E BORICK DR	FAYETTEVILLE	AR	72701	0	10.9685	10.9685	0		0.0625	11.031
VOLKSWAGEN GROUP OF AMERICA CHATTANOOGA OPERATIONS LLC	8001 VOLKSWAGEN DR	CHATTANOOGA	TN	37416	0	11.0214265	11.0214265	0	0	0	11.0214265
BALL METAL BEVERAGE CONTAINER CORP	91-320 KOMOHANA ST	KAPOLEI	HI	96707	1.95	9	10.95	0	0	0	10.95
TRADEBE TREATMENT & RECYCLING LLC	4343 KENNEDY AVE	EAST CHICAGO	IN	46312	0.4655	0	0.4655	0	0.02	10.45	10.9355
PRECOAT METALS	1095 MENDELL DAVIS DR	JACKSON	MS	39272	9.879	1.0255	10.9045	0	0	0	10.9045
CHICAGO STEEL CONTAINER CORP	1846 S KILBOURN AVE	CHICAGO	IL	60623	0.898	9.9355	10.8335	0	0	0.0535	10.887
TRILLA ST LOUIS CORP	2391 CASSENS DR	FENTON	MO	63026	1.3775	8.2505	9.628	0	0	1.2326	10.8606
METAL INDUSTRIES INC - BUSHNELL	400 W WALKER AVE	BUSHNELL	FL	33513	0.0765	10.621	10.6975	0	0	0	10.6975
STANLEY WORKS HAND TOOLS DIV	600 MYRTLE ST	NEW BRITAIN	CT	06052	1.055	9.4965	10.5515	0		0	10.5515
TYSON FRESH MEATS INC	5000 N FM 1912	AMARILLO	TX	79108	0.02	0	0.02	0	0.72	9.74	10.48
PROFESSIONAL DISPOSABLES INTERNATIONAL INC	TWO NICE-PAK PARK	ORANGEBURG	NY	10962	0.097675	0.03133	0.129005	0		10.329	10.458005
ALLIANCE INDUSTRIES WAUPACA	N 2467 VAUGHAN RD	WAUPACA	WI	54981	1.0415	9.3735	10.415	0	0	0	10.415
TRELLEBORG OFFSHORE US RANKIN ROAD FACILITY	1902 RANKIN RD	HOUSTON	TX	77073	0.5125	0	0.5125	0	0	9.7895	10.302
NUCOR CORP - VULCRAFT/NUCOR COLD FINISH DIV	1601 W OMAHA AVE	NORFOLK	NE	68701	0.25	10	10.25	0		0	10.25
THE DIAL CORP A SUBSIDIARY OF HENKEL CONSUMER GOODS	6901 MCKISSOCK AVE	SAINT LOUIS	MO	63147	0.081	0.081	0.162	0		10.0435	10.2055
KAWNEER CO INC	600 KAWNEER DR	SPRINGDALE	AR	72764	4.094	5.9025	9.9965	0	0	0	9.9965
TOYOTA MOTOR MANUFACTURING TEX AS INC	1 LONE STAR PASS	SAN ANTONIO	TX	78264	6.8057207	3.13111505	9.93683575	0	0	0	9.93683575
SILGAN CAN CO	2120 NC HWY N UNIT A	MAXTON	NC	28364	3.112	6.6775	9.7895	0	0	0	9.7895
KITZINGER COOPERAGE CORP	2529 E NORWICH AVE	SAINT FRANCIS	WI	53235	0	9.7653	9.7653	0		0	9.7653
NISSAN NORTH AMERICA INC CANTON MS	300 NISSAN DR	CANTON	MS	39046	7.6025	2.0095	9.612	0	0	0	9.612

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ESCO CORP	9098 EASTSIDE DR EXT.	NEWTON	MS	39345	9.578	0	9.578	0	0	0	9.578
DOW CHEMICAL CO FREEPORT FACILITY	2301 N BRAZOSPORT BLVD	FREEPORT	TX	77541	0.0135	0.0015	0.015	4.191	0	5.3525	9.5585
GREIF PACKAGING LLC	6000 JEFFERSON HWY	NEW ORLEANS	LA	70123	1.433	8.1215	9.5545	0	0	0	9.5545
STATE INDUSTRIES INC	500 TENNESSEE WALTZ PK	ASHLAND CITY	TN	37015	0.094	9.3135	9.4075	0	0	0	9.4075
YKK AP AMERICA INC	1229 HWY 441 N BYPASS	DUBLIN	GA	31021	9.0285	0.3635	9.392	0	0	0	9.392
TOYOTA MOTOR MANUFACTURING KENTUCKY INC	1001 CHERRY BLOSSOM W	GEORGETOWN	KY	40324	0.1875	9.1995	9.387	0		0	9.387
KUBIN-NICHOLSON CORP	8448 N 87TH ST	MILWAUKEE	WI	53224	9.352	0	9.352	0		0	9.352
ENVIRITE OF OHIO INC	2050 CENTRAL AVE SE	CANTON	OH	44707	0	0	0	0	0	9.1835	9.1835
REXAM BEVERAGE CAN CO RE: FAIRFIELD PLANT	2433 CROCKER CIR	FAIRFIELD	CA	94533	5.29	3.871	9.161	0	0	0	9.161
GREIF INDUSTRIAL PACKAGING & SERVICES	7604 RAILROAD AVE	WINFIELD	KS	67156	2.086	7.0235	9.1095	0	0	0	9.1095
SQUARE D CO	1601 MERCER RD	LEXINGTON	KY	40511	0.098	8.994	9.092	0		0	9.092
RR DONNELLEY LANCASTER WEST	1375 HARRISBURG PIKE	LANCASTER	PA	17601	8.509	0.57335	9.08235	0		0	9.08235
GENERAL MOTORS WENTZVILLE ASSEMBLY	1500 E RT A	WENTZVILLE	MO	63385	1.05	8	9.05	0		0	9.05
BRIGGS & STRATTON POWER PRODUCTS MCDONOUGH OPERATIONS	535 MACON RD	MC DONOUGH	GA	30253	0	9.043	9.043	0		0	9.043
KEYMARK CORP OF FLORIDA	2540 KNIGHTS STATION RD	LAKELAND	FL	33810	0.45	8.549	8.999	0	0	0	8.999
SILGAN CONTAINERS MANUFACTURING CORP	2115 SW LOWER LAKE RD	SAINT JOSEPH	MO	64504	5.2455	3.728	8.9735	0	0	0	8.9735
ROYAL MOULDINGS LTD; MARION VIRGINIA	135 BEAR CREEK RD	MARION	VA	24354	0.4475	8.496	8.9435	0	0	0	8.9435
MAUSER CORP	14 CONVERY BLVD	WOODBRIDGE	NJ	07095	0.076	8.8005	8.8765	0	0	0	8.8765
KNS COS INC	475 RANDY RD	CAROL STREAM	IL	60188	1.76171	7.04684	8.80855	0		0	8.80855
SKOLNIK INDUSTRIES	4900 S KILBOURN AVE	CHICAGO	IL	60632	0.9	7.9	8.8	0	0	0	8.8
ACME FINISHING CO INC	1595 E OAKTON ST	ELK GROVE VILLAG	IL	60007	1.758	7.032	8.79	0	0	0	8.79
BROAN-NUTONE LLC	926 W STATE ST	HARTFORD	WI	53027	0.1135	8.666	8.7795	0		0	8.7795
RR DONNELLEY & SONS CO	1145 CONWELL AVE	WILLARD	OH	44890	6.8885	1.856	8.7445	0		0	8.7445
CHRYSLER WARREN TRUCK ASSEMBLY PLANT (PART)	21500 MOUND RD	WARREN	MI	48091	8.5	0.155	8.655	0		0.013	8.668
GRAPHIC PACKAGING INTERNATIONAL INC	1500 N PITCHER ST	KALAMAZOO	MI	49007	0.007	8.593	8.6	0	0	0	8.6
HART & COOLEY INC	4910 MOORES MILL RD	HUNTSVILLE	AL	35811	0.5875	7.9375	8.525	0		0.004	8.529
BERENFIELD CONTAINERS SW LTD	3300 N HUTCHINSON ST	WHITE HALL	AR	71602	0	8.5085	8.5085	0	0	0	8.5085
CIRCLE GRAPHICS INC	120 9TH AVE	LONGMONT	CO	80501	3.3	1.7	5	0	0	3.505	8.505
3M CO - MENOMONIE	1425 STOKKE PKWY	MENOMONIE	WI	54751	0	0	0	0	0	8.5	8.5
PHOENIX COLOR CORP	18249 PHOENIX DR	HAGERSTOWN	MD	21742	8.5	0	8.5	0	0	0	8.5

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
FRANKLIN INVESTMENT CORP	600 ATLANTIC AVE	FRANKLIN	PA	16323	8.5	0	8.5	0		0	8.5
MOMENTIVE SPECIALTY CHEMICALS INC	2525 S COMBEE RD	LAKELAND	FL	33801	8.357	0.0005	8.3575	0	0	0	8.3575
SIGNODE	7701 W 71ST ST	BRIDGEVIEW	IL	60455	0.85	7.5	8.35	0	0	0	8.35
HAMMER PACKAGING CORP	200 LUCIUS GORDON DR	WEST HENRIETTA	NY	14586	0	8.2645	8.2645	0		0	8.2645
RR DONNELLEY LANCASTER EAST	216 GREENFIELD RD	LANCASTER	PA	17601	7.417	0.519	7.936	0		0	7.936
PRECOAT METALS	1950 E MAIN ST	GREENFIELD	IN	46140	0.026	7.817	7.843	0	0	0	7.843
ELECTROPRIME INC	63 DIXIE HWY	ROSSFORD	OH	43460	0	7.819	7.819	0		0	7.819
SILGAN CONTAINER MANUFACTURING CORP	3250 PATTERSON RD	RIVERBANK	CA	95367	0.5925	7.217	7.8095	0	0	0	7.8095
BWAY CORP	1601 VALDOSTA HWY	HOMERVILLE	GA	31634	5.993215	1.811395	7.80461	0	0	0	7.80461
SILGAN CONTAINERS MANUFACTURING CORP	1416 INDIANHEAD DR	MENOMONIE	WI	54751	1.55	6.2	7.75	0	0	0	7.75
GREIF PACKAGING LLC	695 LOUIS DR	WARMINSTER	PA	18974	3.072	2.956	6.028	0	0	1.6735	7.7015
SUPERPAC INC	1220 INDUSTRIAL BLVD	SOUTHAMPTON	PA	18966	0.038	7.5475	7.5855	0		0	7.5855
DEXTER AXLE	500 SE 27TH	EL RENO	OK	73036	0	7.514	7.514	0	0	0	7.514
AAP ST MARYS CORP	1100 MCKINLEY RD	SAINT MARYS	OH	45885	0.011	7.491	7.502	0	0	0	7.502
AJAX METAL PROCESSING INC	4651 BELLEVUE AVE	DETROIT	MI	48207	0	7.4295	7.4295	0	0	0	7.4295
TTM TECHNOLOGIES INC	710 N 600 W	LOGAN	UT	84321	0.585	5.266	5.851	0		1.5185	7.3695
TECNOCAP LLC	2100 GRISWOLD NE	WARREN	OH	44483	1.5575	5.8075	7.365	0	0	0	7.365
NATIONAL COATINGS INC	604 US HWY 150 E	GALESBURG	IL	61401	7.3525	0	7.3525	0	0	0	7.3525
DUPONT PONTCHARTRAIN WORKS	586 HWY 44	LA PLACE	LA	70068	0.0075	0	0.0075	0	0	7.2925	7.3
FORD MOTOR CO TWIN CITIES ASSEMBLY PLANT	966 S MISSISSIPPI RIVER B	SAINT PAUL	MN	55116	0.08	7	7.08	0		0.13	7.21
GM LORDSTOWN COMPLEX	2300 HALLOCK-YOUNG RD	LORDSTOWN	OH	44481	3.95	1.05	5	0		2.2	7.2
BRADFORD WHITE CORP	200 LAFAYETTE ST	MIDDLEVILLE	MI	49333	0	7.1365	7.1365	0	0	0	7.1365
QUAD GRAPHICS NASHVILLE	2947 BRICK CHURCH PIKE	NASHVILLE	TN	37207	6.36	0.742	7.102	0		0	7.102
PRECOAT METALS	858 E HUPP RD	LA PORTE	IN	46350	0.02	6.915	6.935	0	0	0	6.935
AK STEEL CORP - ZANESVI LLE WORKS	1724 LINDEN AVE	ZANESVILLE	OH	43701	0	6	6	0	0	0.9	6.9
ALLIED TUBE & CONDUIT CORP	16100 S LATHROP AVE	HARVEY	IL	60426	4.3175	2.5465	6.864	0	0	0	6.864
BROWN PRINTING CO	2300 BROWN AVE	WASECA	MN	56093	6.6725	0.089	6.7615	0		0	6.7615
CROWN EQUIPMENT CORP	2600 E STATE RD 240	GREENCASTLE	IN	46135	1.351405	5.405605	6.75701	0		8.88178E-16	6.75701
SYCAMORE SYSTEMS LLC	449 N CALIFORNIA ST	SYCAMORE	IL	60178	0	6.722	6.722	0	0	0	6.722
TEKNOR APEX TENNESSEE CO (AKA HAYWOOD CO)	751 DUPREE ST	BROWNSVILLE	TN	38012	0	6.669	6.669	0		0.0475	6.7165

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SILGAN CAN CO	500 NW LOOP 286 SUITE 10	PARIS	TX	75460	3.412	3.2385	6.6505	0	0	0	6.6505
RR DONNELLEY CRAWFORDSVILLE	1009 SLOAN ST	CRAWFORDSVILLE	IN	47933	6.3135	0.2945	6.608	0		0	6.608
HUSQVARNA CONSUMER OUTDOOR PRODUCTS	172 OLD ELLOREE RD	ORANGEBURG	SC	29116	0.1325	6.4715	6.604	0		0	6.604
CAN CORP OF AMERICA INC	326 JUNE AVE	BLANDON	PA	19510	1.6585	4.938	6.5965	0	0	0	6.5965
LA-Z-BOY TENNESSEE	500 WALNUT GROVE RD	DAYTON	TN	37321	0	6.58324085	6.58324085	0	0	0	6.58324085
SNAP-ON TOOLS MANUFACTURING CO	2600 US HWY 18 E	ALGONA	IA	50511	0.0015	0.119	0.1205	0		6.395	6.5155
GEA BPO LLC	301 N CURRY PIKE	BLOOMINGTON	IN	47404	0	6.5	6.5	0	0	0	6.5
SILGAN CONTAINERS MANUFACTURING CORP	520 W 2ND ST	OCONOMOWOC	WI	53066	1.3	5.175	6.475	0	0	0	6.475
DUPONT CHAMBERS WORKS	RT 130	DEEPWATER	NJ	08023	0.092	0.0695	0.1615	5.9625	0	0.3305	6.4545
SCHAEFFER MANUFACTURING	102 BARTON ST	SAINT LOUIS	MO	63104	6.34465	0	6.34465	0		0.0225	6.36715
NUCOR CORP VULCRAFT DIV	7205 GAULT AVE N	FORT PAYNE	AL	35967	3.6825	2.66	6.3425	0	0	0	6.3425
NORTHLAND ALUMINUM PRODUCTS I NC	5005 COUNTY RD 25	MINNEAPOLIS	MN	55416	0	6.3187	6.3187	0	0	0	6.3187
AMERICAN FINISHING RESOURCES INC	476 CLAY ST	CHILTON	WI	53014	6.272	0	6.272	0		0	6.272
BROWN PRINTING CO	11595 MCCONNELL RD	WOODSTOCK	IL	60098	6.125	0.14	6.265	0		0	6.265
MAYTAG CORP CLEVELAND COOKING PRODUCTS PLANT 1	740 KING EDWARD AVE SE	CLEVELAND	TN	37311	0	6.264	6.264	0	0	0	6.264
AKZO NOBEL SURFACE CHEMISTRY LLC	15200 ALMEDA RD	HOUSTON	TX	77053	0.045	0.129	0.174	0	0	6.0785	6.2525
DU PONT ELECTRONICS MICROCIRCU ITS INDUSTRIES LTD (PART)	HWY 686 KM 2.3	MANATI	PR	00674	0	0	0	0	0	6.21	6.21
CURTIS METAL FINISHING CO	6645 SIMS DR	STERLING HEIGHTS	MI	48313	4.411	1.758	6.169	0		0	6.169
HUNTER DOUGLAS TUPELO CENTER	RT. 2 LEE INDUSTRIAL PAR	SHANNON	MS	38868	0.2925	5.864	6.1565	0	0	0	6.1565
3M CO - CORDOVA	22614 RT 84 N	CORDOVA	IL	61242	0.434	0.18	0.614	5.5	0	0	6.114
FORD MOTOR CO MICHIGAN ASSEMBLY PLANT	38303 MICHIGAN AVE	WAYNE	MI	48184	0.065	6	6.065	0		0	6.065
WHEELING MACHINE PRODUCTS DIV PINE BLUFF	5411 INDUSTRIAL DR S	PINE BLUFF	AR	71602	6	0	6	0	0	0	6
ASHLEY INDUSTRIAL MOLDING INC	310 S WABASH	ASHLEY	IN	46705	0.6	5.4	6	0	0	0	6
ENKEI AMERICA INC	2900 W INWOOD DR	COLUMBUS	IN	47201	0	6	6	0	0	0	6
WIX FILTRATION CORP - ALLEN PLANT	2900 NW BLVD	GASTONIA	NC	28052	0.0025	5.95	5.9525	0	0	0	5.9525
SILGAN CONTAINERS MANUFACTURING CORP	2501 165TH ST	HAMMOND	IN	46320	0	5.873	5.873	0	0	0	5.873
THE COLEMAN CO INC	3600 N HYDRAULIC	WICHITA	KS	67219	0.001	5.857	5.858	0	0	0	5.858
NAHAN PRINTING INC	7000 SAUKVIEW DR	SAINT CLOUD	MN	56303	5.67614	0.180825	5.856965	0	0	0	5.856965
QG PRINTING II CORP	4708 KRUEGER DR	JONESBORO	AR	72401	3.55	2.3	5.85	0		0	5.85

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
PPG INDUSTRIES,INC-SPRINGDALE COMPLEX	125 COLFAX ST	SPRINGDALE	PA	15144	5.754	0.0585	5.8125	0	0	0	5.8125
GMVM-LANSING GRAND RIVER ASSEMBLY	920 TOWNSEND ST MAIL C	LANSING	MI	48921	2.6	3.2	5.8	0		0	5.8
CROWN AEROSOL PACKAGING	3737 E EXCHANGE AVE	AURORA	IL	60504	5.0525	0.717	5.7695	0	0	0	5.7695
AVERY DENNISON RBIS LENOIR	950 GERMAN ST	LENOIR	NC	28645	4.668	1.066	5.734	0	0	0	5.734
TACO INC - CRANSTON	1160 CRANSTON ST	CRANSTON	RI	02920	0.058	5.6685	5.7265	0	0	0	5.7265
PELLA CORP CARROLL OPERATIONS	1750 E US HWY 30 E	CARROLL	IA	51401	0	5.5825	5.5825	0		0	5.5825
GREIF PACKAGING LLC	10850 STRANG RD	LA PORTE	TX	77571	4.47095	0.5371	5.00805	0		0.566795	5.574845
JOHN DEERE HORICON WORKS-DT	300 N VINE ST	HORICON	WI	53032	0	5.5	5.5	0		0	5.5
CARRY-ON TRAILER CORP	1965 HWY 30	MISSOURI VALLEY	IA	51555	0	5.464	5.464	0	0	0	5.464
L A DARLING CO - PIGGOTT AR FACILITY	HWY 49 S	PIGGOTT	AR	72454	0.073	5.3855	5.4585	0		0	5.4585
TORO CO	200 SIME AVE	TOMAH	WI	54660	0	5.426	5.426	0		0	5.426
SENECA FOODS CORP CAN PLANT	3709 MILL ST	MARION	NY	14505	0	5.423	5.423	0		0	5.423
COLOR COMMUNICATIONS INC	4242 W FILLMORE	CHICAGO	IL	60624	1.05	4.35	5.4	0		0	5.4
MIDDLEBURY HARDWOOD PRODUCTS	101 JOAN DR	MIDDLEBURY	IN	46540	0	5.3965	5.3965	0	0	0	5.3965
SABIC INNOVATIVE PLASTICS MT VERNON LLC	1 LEXAN LN	MOUNT VERNON	IN	47620	3.2	2.05	5.25	0.125	0	0	5.375
QUAD/GRAPHICS INC	N11896 HWY 175 PO BOX 2	LOMIRA	WI	53048	4.836	0.5315	5.3675	0		0	5.3675
BATESVILLE MANUFACTURING INC -DOLL PLANT	1000 E PEARL ST	BATESVILLE	IN	47006	0.2675	5.085	5.3525	0	0	0	5.3525
BERENFIELD CONTAINERS SE LTD	12180 UNIVERSITY CITY BL	HARRISBURG	NC	28075	0	5.351	5.351	0	0	0	5.351
GATES CORP	1450 MONTANA RD	IOLA	KS	66749	0	0.00295	0.00295	0	0	5.3455	5.34845
KOHLER CO	2000 N 5TH ST	UNION CITY	TN	38261	0.5345	4.8125	5.347	0		0	5.347
DUNBARTON CORP REDIFRAME DIV	1101 TECHNOLOGY DR	DOTHAN	AL	36303	0	5.3	5.3	0	0	0	5.3
WORTHINGTON CYLINDERS WISCONSI N LLC	300 E BREED ST	CHILTON	WI	53014	0.2495	5.020885	5.270385	0	0	0	5.270385
PRECOAT METALS	25 NORTHGATE INDUSTRIA	GRANITE CITY	IL	62040	4.232	1.0355	5.2675	0	0	0	5.2675
POWER PARTNERS INC	200 NEWTON BRIDGE RD	ATHENS	GA	30607	0	5.246	5.246	0		0	5.246
EQUISTAR CHEMICALS BAYPORT CHEMICALS PLANT	5761 UNDERWOOD RD	PASADENA	TX	77507	5.0705	0.168	5.2385	0		0	5.2385
CROWN FOOD PACKAGING	1650 BROADWAY	HANOVER	PA	17331	1.3065	3.92	5.2265	0		0	5.2265
PRECOAT METALS	2604 RIVER RD	HAWESVILLE	KY	42348	0.007	5.211	5.218	0	0	0	5.218
US DOD USAF TINKER AFB	72 CEG/CEA 7535 FIFTH ST	TINKER AFB	OK	73145	1.9	3.2	5.1	0	0	0.065	5.165
COORSTEK	2449 RIVERSIDE PKWY	GRAND JUNCTION	CO	81505	0.0025	4.84	4.8425	0	0.25	0	5.0925
VON HOFFMANN GRAPHICS INC	1005 COMMERCIAL DR	OWENSVILLE	MO	65066	3.703	1.3745	5.0775	0		0	5.0775

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SILGAN CAN CO	6200 FRANKLIN BLVD SUIT	SACRAMENTO	CA	95824	4.432	0.6065	5.0385	0		0	5.0385
CARRY-ON TRAILER CORP	5300 WESTMORELAND RD	WINNEMUCCA	NV	89445	0	5.0015	5.0015	0	0	0	5.0015
HESS PRINT SOLUTIONS	3765 SUNNYBROOK RD	BRIMFIELD	OH	44240	5	0	5	0		0	5
VALMONT INDUSTRIES INC	7002 N 288TH ST	VALLEY	NE	68064	5	0	5	0	0	0	5
VAUGHAN-BASSETT FURNITURE CO GALAX	300 E GRAYSON ST	GALAX	VA	24333	0.74943095	4.2467754	4.99620635	0	0	0	4.99620635
SILGAN CONTAINERS MANUFACTURING CORP	135 NATIONAL RD	EDISON	NJ	08817	4.02	0.975	4.995	0	0	0	4.995
KIA MOTORS MANUFACTURING OF GEORGIA	7777 KIA PKWY	WEST POINT	GA	31833	0.0525	4.912	4.9645	0		0	4.9645
LOGAN ALUMINUM INC	US HWY 431 N	RUSSELLVILLE	KY	42276	0.035	4.9145	4.9495	0	0	0	4.9495
SEQUA COATINGS CORP-PRECOAT M ETALS DIV	US HWY 12 AT RT 249	PORTAGE	IN	46368	0.572	4.328	4.9	0	0	0	4.9
ARVINMERITOR HEAVY VEHICLE SYSTEMS LLC	801 RAILROAD AVE	YORK	SC	29745	0.001	4.893	4.894	0	0	0	4.894
AUTOALLIANCE INTERNATIONAL INC	1 INTERNATIONAL DR	FLAT ROCK	MI	48134	0.2	4.65	4.85	0		0	4.85
OWENS CORNING VETROTEX LLC - ANDERSON SC	4837 HWY 81 S	STARR	SC	29684	0.479	4.3105	4.7895	0	0	0	4.7895
TEREX WASHINGTON SOUTH CAMPUS	18700 NE 65TH ST	REDMOND	WA	98052	0.1114	4.6565	4.7679	0		0	4.7679
ARMSTRONG HARDWOOD FLOORING CO	565 HARTCO DR	ONEIDA	TN	37841	0	4.7345	4.7345	0		0	4.7345
RR DONNELLEY-WETMORE PLANT	1645 W SAM HOUSTON PKV	HOUSTON	TX	77043	4.6345	0.092	4.7265	0		0	4.7265
PRECOAT METALS	16402 JACINTOPORT BLVD	HOUSTON	TX	77015	4.407	0.245	4.652	0	0	0	4.652
CARDONE INDUSTRIES	5660 RISING SUN AVE	PHILADELPHIA	PA	19120	0.8115	3.8385	4.65	0	0	0	4.65
METAL COATERS	951 PRISOCK RD	JACKSON	MS	39272	0	4.4805	4.4805	0	0	0	4.4805
SILGAN CONTAINERS MANUFACTURING CORP	1400 PLOVER RD	PLOVER	WI	54467	1.31	3.16	4.47	0	0	0	4.47
FIBERMARK NORTH AMERICA INC	5492 BOSTWICK ST	LOWVILLE	NY	13367	0.091	4.3535	4.4445	0		0	4.4445
BERENFIELD CONTAINERS INC	31 RAILROAD ST	CLARENDON	PA	16313	0.132025	4.29749	4.429515	0	0	8.88178E-16	4.429515
RR DONNELLEY BARABOO DIV	1300 SAUK AVE	BARABOO	WI	53913	4.1785	0.2435	4.422	0		0	4.422
ENDICOTT INTERCONNECT TECHNOLOGIES INC	1093 CLARK ST	ENDICOTT	NY	13760	0.25	4.1155	4.3655	0.029	0	0	4.3945
INX DIGITAL INK CO	405 INDUSTRIAL WAY	DIXON	CA	95620	4.3915	0	4.3915	0	0	0	4.3915
TCI COATINGS INC	4501 BRADLEY ST	LUBBOCK	TX	79415	4.36875	0	4.36875	0		0	4.36875
CHRYSLER STERLING HEIGHTS ASSEMBLY PLANT (PART)	38111 VAN DYKE	STERLING HEIGHTS	MI	48312	0.49	3.85	4.34	0		0	4.34
SILGAN CONTAINERS MANUFACTURING CORP	N90 W14600 COMMERCE D	MENOMONEE FALLS	WI	53051	0	4.2	4.2	0	0	0	4.2
MASTERBRAND CABINETS INC	1002 EISENHOWER DR N	GOSHEN	IN	46526	0.0035	4.1895	4.193	0	0	0.0065	4.1995
QG LLC WINCHESTER VIRGINIA	160 CENTURY LN STONEW	WINCHESTER	VA	22603	3.8727	0.180725	4.053425	0	0	0.126	4.179425
ARDAGH METAL PACKAGING USA INC	936 BARRACUDA ST	TERMINAL ISLAND	CA	90731	3.8	0.375	4.175	0	0	0	4.175

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
R R DONNELLEY & SONS CO DANVILLE DIV	3201 LEBANON RD	DANVILLE	KY	40422	3.8985	0.273	4.1715	0	0	0	4.1715
ROHM & HAAS CHEMICALS LLC	200 RT 413	BRISTOL	PA	19007	0.0519	0.1905	0.2424	0	0	3.9055	4.1479
INLAND LABEL & MARKETING	2009 W AVE S	LA CROSSE	WI	54601	2.2045	1.9285	4.133	0	0	0	4.133
SC JOHNSON & SON INC WAXDALE FACILITY	8311 16TH ST	STURTEVANT	WI	53177	0.125	0.375	0.5	0		3.628795	4.128795
HYUNDAI MOTOR MANUFACTURING ALABAMA LLC	700 HYUNDAI BLVD	MONTGOMERY	AL	36105	2.6025	1.506	4.1085	0		0	4.1085
US ARMY LAKE CITY ARMY AMMUNITION PLANT	INTERSECTION OF MO HW	INDEPENDENCE	MO	64051	1.579	2.516	4.095	0	0	0	4.095
CROWN AEROSOL PACKAGING	4TH ST & PARK AVE	FARIBAULT	MN	55021	2.6265	1.4625	4.089	0	0	0	4.089
CLEVELAND STEEL CONTAINER CORP	350 MILL ST	QUAKERTOWN	PA	18951	0.035	4.04	4.075	0	0	0	4.075
RRD MAPLE GROVE	7401 KILMER LN	MAPLE GROVE	MN	55369	3.9335	0.1045	4.038	0		0	4.038
SILGAN CONTAINERS MANUFACTURING CORP	8673 LYONS-MARENGO RD	LYONS	NY	14489	0.7275	3.3065	4.034	0	0	0	4.034
THIRD COAST TERMINALS PEARLAND	1871 MYKAWA	PEARLAND	TX	77581	0	0	0	0	0	3.9915	3.9915
PRO LINE PRINTING ARLINGTON	401 N GREAT SW PKWY	ARLINGTON	TX	76011	3.088685	0.17821	3.266895	0	0.701975	0	3.96887
TTM PRINTED CIRCUIT GROUP - S TAFFORD DIV	4 OLD MONSON RD	STAFFORD	CT	06075	0	3.9505	3.9505	0		0	3.9505
CARRY-ON TRAILER CORP	159 INDUSTRIAL PARK RD	MONTROSS	VA	22520	0	3.925	3.925	0	0	0	3.925
QUAD/GRAPHICS INC	56 DUPLAINVILLE RD	SARATOGA SPRING	NY	12866	3.68	0.1875	3.8675	0	0	0	3.8675
NAVISTAR INC	6125 URBANA RD	SPRINGFIELD	OH	45502	0.415	3.4	3.815	0.014	0	0.02	3.849
AFTON CHEMICAL CORP	725 CANNON BRIDGE RD	ORANGEBURG	SC	29115	2.813	0.488	3.301	0.0405	0	0.4705	3.812
BATESVILLE MANUFACTURING INC	310 CROWN RD	BATESVILLE	MS	38606	0.5695	3.2265	3.796	0	0	0	3.796
BENCHMARK ENERGY PRODUCTS LLC	4113 W INDUSTRIAL AVE	MIDLAND	TX	79703	0.344	3.4415	3.7855	0		0	3.7855
OMG AMERICAS	TWO MILE RUN RD	FRANKLIN	PA	16323	0.025	0.223	0.248	0	0	3.4725	3.7205
BETCO CORP	1001 BROWN AVE	TOLEDO	OH	43607	3.69	0	3.69	0		0	3.69
NAZDAR SHAWNEE	8501 HEDGE LN TERRACE	SHAWNEE	KS	66227	1.0955	2.556	3.6515	0	0	0	3.6515
VIASYSTEMS CORP	1521 POPLAR LN	FOREST GROVE	OR	97116	0.0675	3.58	3.6475	0		0	3.6475
TITAN COATINGS INC	2025 EXCHANGE PL	BESSEMER	AL	35023	3.59	0	3.59	0	0	0	3.59
AUTOMOTIVE COMPONENTS HOLDINGS LLC SALINE PLANT	7700 MICHIGAN AVE	SALINE	MI	48176	0.06	3.5	3.56	0	0	0	3.56
BALL METAL FOOD CONTAINER CORP	300 W GREGER RD	OAKDALE	CA	95361	0.152	3.4	3.552	0	0	0	3.552
QUAD/GRAPHICS INC	555 S 108TH ST	WEST ALLIS	WI	53214	3.41	0.095	3.505	0		0	3.505
MOTOR CASTINGS CO	1323 S 65TH	MILWAUKEE	WI	53214	0	1.5915	1.5915	0	0	1.894	3.4855
GM MLCG FAIRFAX ASSEMBLY	3201 FAIRFAX TRAFFICWA	KANSAS CITY	KS	66115	0.1	3.35	3.45	0		0	3.45
FORD MOTOR CO - OHIO ASSEMBLY PLANT	650 MILLER RD	AVON LAKE	OH	44012	0.395	3	3.395	0		0.0035	3.3985

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BROWN PRINTING CO	668 GRAVEL PIKE	EAST GREENVILLE	PA	18041	3.2665	0.1135	3.38	0	0.0075	4.44089E-16	3.3875
RHODIA INC	2ND ST & BLUEBALL AVE	MARCUS HOOK	PA	19061	0.1915	0.0005	0.192	0		3.167	3.359
SPRAYLAT CORP CA	3465 S LA CIENAGA BLVD	LOS ANGELES	CA	90016	1.679	1.679	3.358	0		0	3.358
PRECOAT METALS	4301 S SPRING AVE	SAINT LOUIS	MO	63116	0.926	2.429	3.355	0	0	0	3.355
LAKESIDE LITHOGRAPHY LLC	1600 S LAFLIN ST	CHICAGO	IL	60608	2.65	0.6	3.25	0	0	0	3.25
AVERY DENNISON	17700 FOLTZ INDUSTRIAL F	STRONGSVILLE	OH	44149	0.422	2.824	3.246	0		0	3.246
HEWLETT-PACKARD CARIBE BV SITE	HWY 110 N KM 5.1	AGUADILLA	PR	00605	0	3.2155	3.2155	0		0	3.2155
QUAD GRAPHICS TAUNTON RETAIL	50 JOHN HANCOCK RD	TAUNTON	MA	02780	1.91685	0.04475	1.9616	0	0	1.24606	3.20766
RR DONNELLEY STRASBURG DIV	ONE SHENANDOAH VALLE	STRASBURG	VA	22657	3.1	0.04	3.14	0		0.011	3.151
BRILLION IRON WORKS INC	200 PARK AVE	BRILLION	WI	54110	2.13095	0.8037	2.93465	0		0.21095	3.1456
CADON PLATING CO	3715 11TH ST	WYANDOTTE	MI	48192	1.708	1.41	3.118	0	0	0	3.118
ABC COMPOUNDING CO INC	6970 JONESBORO RD	MORROW	GA	30260	0.0025	0.375	0.3775	0.0025	0	2.6855	3.0655
CLEAR LAKE CHEMICALS LLC	11200 BAY AREA BLVD	PASADENA	TX	77507	3.0356	0.00095	3.03655	0		4.44089E-16	3.03655
CENTURY INDUSTRIAL COATINGS I NC	HWY 69 S	JACKSONVILLE	TX	75766	0.085	1.611	1.696	0	0	1.3035	2.9995
CLEVELAND STEEL CONTAINER - NI LES	115 ERIE ST	NILES	OH	44446	0.0025	2.988	2.9905	0	0	0	2.9905
MEADWESTVACO CONSUMER PACKAGING GROUP LLC	7411 OAKWOOD ST	MEBANE	NC	27302	2.9255	0	2.9255	0		0	2.9255
UNIVAR USA INC - BUNOLA BRANCH	328 BUNOLA RIVER RD	BUNOLA	PA	15020	0.125	0.0025	0.1275	0	0	2.786	2.9135
ARR-MAZ CUSTOM CHEMICALS	4800 STATE RD 60 E	MULBERRY	FL	33860	0.1415	2.76	2.9015	0		0	2.9015
IVC INDUSTRIAL COATINGS INC	1825 E NATIONAL AVE	BRAZIL	IN	47834	0.577852	2.311408	2.88926	0	0	4.44089E-16	2.88926
ROPPE CORP	1602 N UNION ST	FOSTORIA	OH	44830	0.125	2.7255	2.8505	0		0	2.8505
VAN CAN CO	10837 ETIWANDA AVE	FONTANA	CA	92337	2.45	0.375	2.825	0	0	0	2.825
VANEX INC	1700 S SHAWNEE ST	MOUNT VERNON	IL	62864	0	2.818	2.818	0		0	2.818
CROWN FOOD PACKAGING	10200 N LOMBARD ST	PORTLAND	OR	97203	1.2615	1.4975	2.759	0	0	0	2.759
CENTRIA	530 N SECOND ST	CAMBRIDGE	OH	43725	1.411	1.335	2.746	0	0	0	2.746
RED SPOT WESTLAND INC	550 S EDWIN ST	WESTLAND	MI	48186	1.226	1.4995	2.7255	0	0	0	2.7255
CLEVELAND STEEL CONTAINER CORP - STREETSBORO PLANT	10048 AURORA-HUDSON R	STREETSBORO	OH	44241	0.0025	2.715	2.7175	0	0	0	2.7175
ALERIS ROLLED PRODUCTS INC	1372 KY HWY 1957	LEWISPORT	KY	42351	0.125	2.571	2.696	0	0	0	2.696
IVC SOUTH	875 PROGRESS CENTER A	LAWRENCEVILLE	GA	30043	0.538	2.1515	2.6895	0		0	2.6895
MAGNA MIRRORS CORP - NEWAYGO	700 S PARK DR	NEWAYGO	MI	49337	1.4755	1.1975	2.673	0	0	0	2.673
ASTRO COATINGS INC	27 MAIN ST	STRUTHERS	OH	44471	0.5225	2.1285	2.651	0	0	0	2.651

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
IC OF OKLAHOMA LLC	2322 N MINGO RD	TULSA	OK	74116	0	2.65	2.65	0		0	2.65
AKZONOBEL	1872 HWY 9 BYPASS W	LANCASTER	SC	29720	0.4955	2.148	2.6435	0		0	2.6435
HIRSH INDUSTRIES INC	1525 MCKEE RD	DOVER	DE	19904	0.0025	2.633	2.6355	0		0	2.6355
PRECOAT METALS	4502 FREEDOM WAY	WEIRTON	WV	26062	0	2.6315	2.6315	0	0	0	2.6315
RADIATOR SPECIALTY CO	600 RADIATOR RD	INDIAN TRAIL	NC	28079	0.146	0	0.146	0	0	2.4785	2.6245
PRECOAT METALS	3399 DAVEY ALLISON BLVD	HUEYTOWN	AL	35023	2.041	0.5505	2.5915	0	0	0	2.5915
ROBROY INDUSTRIES TEXAS LP	1100 US HWY 271 S	GILMER	TX	75644	0	0.041	0.041	0		2.55	2.591
NORTHERN LABS INC WEST DRIVE	5800 W DR	MANITOWOC	WI	54220	1.0045	1.5835	2.588	0		0	2.588
GMTG - SHREVEPORT ASSEMBLY	7600 GENERAL MOTORS BL	SHREVEPORT	LA	71129	0.125	2.45	2.575	0	0	0	2.575
INTERNATIONAL PAPER PINE HILL MILL	7600 HWY 10 W	PINE HILL	AL	36769	0.058	0	0.058	2.4305		2.70617E-16	2.4885
QG LLC	420 W INDUSTRIAL AVE	EFFINGHAM	IL	62401	2.19	0.255	2.445	0		0	2.445
RR DONNELLEY LOS ANGELES MANUFACTURING	19681 PACIFIC GATEWAY D	TORRANCE	CA	90502	2.3775	0.0555	2.433	0		0	2.433
VERTIS COMMUNICATIONS	4051 FONDORF DR	COLUMBUS	OH	43228	2.1765	0.2535	2.43	0	0	0	2.43
CCL CONTAINER AEROSOL DIV	ONE LLODIO DR	HERMITAGE	PA	16148	0.19	2.2265	2.4165	0	0	0	2.4165
SAPA EXTRUSIONS INC	2500 ALUMAX RD	YANKTON	SD	57078	0	2.4011901	2.4011901	0	0	0	2.4011901
CUMMINS POWER GENERATION	1400 73RD AVE NE	FRIDLEY	MN	55432	0.12	2.28	2.4	0		0	2.4
QUAD/GRAPHICS INC	100 DUPLAINVILLE RD	THE ROCK	GA	30285	2.285	0.11	2.395	0	0	0	2.395
SCHNEIDER ELECTRIC	1990 SANDIFER BLVD	SENECA	SC	29678	0	2.35	2.35	0		0.0345	2.3845
APOLLO COLORS INC	1550 MOUND RD	ROCKDALE	IL	60436	0	0	0	0		2.3445	2.3445
SAPA EXTRUDER INC	2905 OLD OAKWOOD RD	GAINESVILLE	GA	30504	0	2.317	2.317	0	0	0	2.317
PPG INDUSTRIES ARCHITECTURAL FINISHES	1020 OLYMPIC DR	BATAVIA	IL	60510	0	0.821	0.821	0	0	1.491	2.312
ST CHARLES OPERATIONS (TAFT/STAR) UNION CARBIDE CORP	355 LA HWY 3142 (GATE 1)	TAFT	LA	70057	0.6	1.07	1.67	0.64	0	0	2.31
HANNA STEEL CORP	3812 COMMERCE AVE	FAIRFIELD	AL	35064	0.9095	1.201	2.1105	0	0	0.189	2.2995
THE DOW CHEMICAL CO	1790 BUILDING	MIDLAND	MI	48667	2.2	0.09	2.29	0.0035	0	0.0025	2.296
DUPONT TOWANDA PLANT	192 PATTERSON BLVD	TOWANDA	PA	18848	0.252	2.0365	2.2885	0	0	0	2.2885
HONDA MANUFACTURING OF INDIANA LLC	2755 N MICHIGAN AVE	GREENSBURG	IN	47240	1.785	0.497	2.282	0	0	0.0025	2.2845
COLOR CORP OF AMERICA	1630 W HILL ST	LOUISVILLE	KY	40210	0.009	2.2185	2.2275	0	0	0	2.2275
BRENNTAG SOUTHWEST INC LANC ASTER	704 E WINTERGREEN RD	LANCASTER	TX	75134	0.0225	0.025	0.0475	0	0	2.175	2.2225
KAY AUTOMOTIVE GRAPHICS	57 KAY INDUSTRIAL DR	LAKE ORION	MI	48359	0	2.2135	2.2135	0	0	0	2.2135
MAGNABLEND INC- LIQUID PLANT	100 W STERRETT RD	WAXAHACHIE	TX	75165	0.125	0	0.125	0	0	2.0785	2.2035

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
VERTIS	7619 DOANE DR	MANASSAS	VA	20109	2.1285	0.0695	2.198	0		0	2.198
NCP COATINGS INC	225 FORT ST	NILES	MI	49120	2.1685	0	2.1685	0	0	0	2.1685
AMERICAN COLOR GRAPHICS	810 E S ST	MARENGO	IA	52301	2.02	0.1395	2.1595	0		0	2.1595
DERRICK CORP	3350 UNION RD	CHEEKTOWAGA	NY	14225	0	2.1335	2.1335	0	0	0	2.1335
BALL METAL FOOD CONTAINER CORP	1200 S CRUTCHER ST	SPRINGDALE	AR	72764	0.23	1.9	2.13	0	0	0	2.13
RR DONNELLEY & SONS CO	6821 E COUNTY RD 1100 N	MATTOON	IL	61938	1.9725	0.138	2.1105	0	0	0	2.1105
KEYMARK CORP	1188 CAYADUTTA ST RT 33	FONDA	NY	12068	0	2.105	2.105	0.00012	0	0	2.10512
RR DONNELLEY	100 QUALITY CT	CHARLESTOWN	IN	47111	1.955	0.148	2.103	0		0	2.103
BON L MANUFACTURING CO	HWY 53 BONNELL RD	CARTHAGE	TN	37030	0.644	1.229	1.873	0	0.214	0.013	2.1
BWAY CORP	1202 AIRPORT RD	NORTH BRUNSWICK	NJ	08902	0.8015	1.2945	2.096	0	0	0	2.096
NEXTEER AUTOMOTIVE CORP	3900 HOLLAND RD	SAGINAW	MI	48601	0.2085	1.875	2.0835	0		0	2.0835
VERTIS COMMUNICATIONS	10911 GRANITE ST	CHARLOTTE	NC	28273	1.8595	0.215	2.0745	0	0	0	2.0745
GM ORION ASSEMBLY CENTER	4555 GIDDINGS RD	LAKE ORION	MI	48359	0.9	0.85	1.75	0		0.32	2.07
SILGAN CONTAINERS MANUFACTURING CORP	2200 WILBUR AVE	ANTIOCH	CA	94509	0	2.067	2.067	0	0	0	2.067
CONSOLIDATED SYSTEMS INC	650 ROSEWOOD DR	COLUMBIA	SC	29201	0	2.0475	2.0475	0	0	0	2.0475
QG LLC (WAS WORLDCOLOR STILLWATER)	100 W AIRPORT RD	STILLWATER	OK	74075	1.8275	0.213	2.0405	0	0	0	2.0405
DURA COAT PRODUCTS INC	26655 PEOPLES RD	MADISON	AL	35756	1.75171	0.28554	2.03725	0	0	0	2.03725
ITW DYMON	805 E OLD 56 HWY	OLATHE	KS	66061	0.6005	1.4015	2.002	0	0	0	2.002
CANFIELD METAL COATING CORP	460 W MAIN ST	CANFIELD	OH	44406	0	2	2	0	0	0	2
VERTIS COMMUNICATIONS	4646 S GRADY AVE	TAMPA	FL	33611	1.818	0.1695	1.9875	0	0	0	1.9875
ACCESS BUSINESS GROUP LLC	7575 FULTON ST E	ADA	MI	49355	1.8935	0.092	1.9855	0		0	1.9855
VEYANCE TECHNOLOGIES INC	2701 W OMAHA AVE	NORFOLK	NE	68701	0.037085	0.10976	0.146845	0	0	1.829935	1.97678
CATERPILLAR INC	3701 STATE RD 26 E	LAFAYETTE	IN	47905	0.1205	1.8545	1.975	0	0	0	1.975
VANGUARD PAINTS & FINISHES INC	1409 GREENE ST	MARIETTA	OH	45750	1.965	0	1.965	0		0	1.965
SENOX CORP	227 S TOWN E BLVD	MESQUITE	TX	75149	0.9865	0.9765	1.963	0	0	0	1.963
RR DONNELLEY / PINEVILLE	10519 INDUSTRIAL DR	PINEVILLE	NC	28134	1.8475	0.098	1.9455	0		0	1.9455
CAMACO COLUMBUS MANUFACTURING	1851 E 32ND AVE	COLUMBUS	NE	68601	0	1.94	1.94	0		0	1.94
OHIO ART CO	ONE TOY ST	BRYAN	OH	43506	1.1855	0.6985	1.884	0	0	0	1.884
STEEL DYNAMICS INC	5134 LOOP RD	JEFFERSONVILLE	IN	47130	0	1.87	1.87	0	0	0	1.87
DUPONT YERKES PLANT	3115 RIVER RD	BUFFALO	NY	14207	0.5085	1.354	1.8625	0	0	0	1.8625

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BALL AEROSOL & SPECIALTY CONTAINER INC	1717 GIFFORD RD	ELGIN	IL	60120	0.438	1.4	1.838	0	0	0	1.838
CARESTREAM HEALTH COLORADO	2000 HOWARD SMITH AVE	WINDSOR	CO	80550	0.0015	0	0.0015	1.8295	0	5.68122E-17	1.831
RR DONNELLEY / VON HOFFMANN CORP	321 WILSON DR	JEFFERSON CITY	MO	65109	1.78179	0.04407	1.82586	0		0	1.82586
SILGAN WHITE CAP CORP	350 JAYCEE DR VALMONT	HAZLETON	PA	18201	0.779	1.0335	1.8125	0	0	0	1.8125
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	901 N GREENWOOD AVE	KANKAKEE	IL	60901	0.7475	1.054	1.8015	0	0	0	1.8015
STP PRODUCTS MANUFACTURING CO	477 LEXINGTON AVE	PAINESVILLE	OH	44077	1.0615	0	1.0615	0	0	0.7195	1.781
REICHHOLD INC	425 S PACE BLVD	PENSACOLA	FL	32502	0.1375	1.632	1.7695	0		0	1.7695
AMERICAN COLOR GRAPHICS - LUFKIN	3001 ATKINSON DR	LUFKIN	TX	75901	1.6675	0.078	1.7455	0		0	1.7455
GFX INTERNATIONAL	333 BARRON BLVD	GRAYSLAKE	IL	60030	0	1.075	1.075	0		0.67	1.745
BUCKEYE INTERNATIONAL INC	2700 WAGNER PL	MARYLAND HEIGHT	MO	63043	0.125	1.6145	1.7395	0		0	1.7395
WISMARQ CORP	11440 W ADDISON AVE	FRANKLIN PARK	IL	60131	0	1.7385	1.7385	0	0	0	1.7385
DIVERSEY INC	316 HART ST	WATERTOWN	WI	53094	0.00009	0.00003	0.00012	0		1.716	1.71612
SAPA INC - COATINGS DIVSION	5325 NE SKYPORT WAY	PORTLAND	OR	97218	1.46070735	0.251972	1.71267935	0	0	2.22045E-16	1.71267935
SONOCO PRODUCTS CO - PRESIDENTS ISLAND	2755 HARBOR AVE	MEMPHIS	TN	38113	0	1.7065	1.7065	0	0	0	1.7065
EFCO CORP	1000 COUNTY RD	MONETT	MO	65708	1.11	0.586	1.696	0	0	0	1.696
HUNTSMAN PETROCHEMICAL LLC	3892 US HWY 90	DAYTON	TX	77535	0	0.001	0.001	0	0	1.6905	1.6915
FUJIFILM NORTH AMERICA CORP	20 W 14TH AVE	NORTH KANSAS CIT	MO	64116	0	1.677	1.677	0	0	0	1.677
TEXAS FINISHING CO	1801 SURVEYOR BLVD	CARROLLTON	TX	75006	0	1.676	1.676	0		0	1.676
GATES CORP	1650 ROWE PKWY	POPLAR BLUFF	MO	63901	0	0.001	0.001	0	0	1.6725	1.6735
BWAY CORP BWAY PACKAGING DIV	8200 BROADWELL RD	CINCINNATI	OH	45244	0.88529	0.72807	1.61336	0		0	1.61336
3M CO - HUTCHINSON	905/915 ADAMS ST SE	HUTCHINSON	MN	55350	0	1.585	1.585	0	0	0	1.585
NESTLE PURINA PETCARE	1000 HAMILTON RD	WEIRTON	WV	26062	0.3935	1.1835	1.577	0	0	0	1.577
RR DONNELLEY & SONS CO	60 SECURITY DR	AVON	CT	06001	1.54	0.0365	1.5765	0	0	0	1.5765
GATES CORP - CHARLESTON	1300 S PLANT RD	CHARLESTON	MO	63834	0	0.00555	0.00555	0	0	1.565	1.57055
LION COPOLYMER LLC	5955 SCENIC HWY	BATON ROUGE	LA	70805	0	0	0	0.0025	0	1.5625	1.565
FUJIFILM MANUFACTURING USA INC	211 PUCKETTS FERRY RD	GREENWOOD	SC	29649	0	1.56	1.56	0		0	1.56
CRYSTAL FINISHING SYSTEMS INC	2608 ROSS AVE	SCHOFIELD	WI	54476	0	1.5361434	1.5361434	0	0	0	1.5361434
INDEPENDENT CAN CO	1300 BRASS MILL RD	BELCAMP	MD	21017	0	1.52745	1.52745	0	0	0	1.52745
MISSION KLEENSWEEP PRODUCTS INC	2434 BIRKDALE ST	LOS ANGELES	CA	90031	1.5	0	1.5	0		0	1.5
BAYOU COS INC	5200 CURTIS LN	NEW IBERIA	LA	70560	1.5	0	1.5	0	0	0	1.5

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EASTMAN CHEMICAL CO TENNESSEE OPERATIONS	100 EASTMAN RD	KINGSPORT	TN	37662	0.8315	0.5765	1.408	0.087	0	0.001	1.496
DENSO MANUFACTURING TENNESSEE INC	1720, 1725, 1755 ROBERT C	MARYVILLE	TN	37801	0	1.489	1.489	0	0	0	1.489
TAIYO AMERICA INC	2675 ANTLER DR	CARSON CITY	NV	89701	0.005	1.1285	1.1335	0	0	0.3465	1.48
BRIGHTSMITH LLC	120 ENTERPRISE AVE	MORRISVILLE	PA	19067	0.317	1	1.317	0	0	0.161	1.478
CHROMASOURCE INC	2433 S CR 600 E	COLUMBIA CITY	IN	46725	0	1.453	1.453	0	0	0	1.453
RANBAR ELECTRICAL MATERIALS INC	408 MANOR-HARRISON CIT	HARRISON CITY	PA	15636	0	0.0065	0.0065	0	0	1.444	1.4505
DECOSTAR INDUSTRIES INC	1 DECOMA DR	CARROLLTON	GA	30117	0.125	1.31	1.435	0	0	0	1.435
SONY CHEMICALS COPORATION OF AMERICA	215 SATELLITE BLVD NE SU	SUWANEE	GA	30024	0	0	0	0	0	1.418	1.418
J L CLARK INC	923 23RD AVE	ROCKFORD	IL	61104	0.216	1.2005	1.4165	0	0	0	1.4165
AKZO NOBEL COATINGS INC	1313 WINDSOR AVE	COLUMBUS	OH	43211	0.9105	0.5055	1.416	0	0	0	1.416
INCHEM CORP	800 CEL-RIVER RD	ROCK HILL	SC	29730	0.025	0.1875	0.2125	0		1.2005	1.413
ARMSTRONG WORLD INDUSTRIES INC	4115 N PERKINS RD	STILLWATER	OK	74075	0.566	0.8445	1.4105	0	0	0	1.4105
HENTZEN COATINGS,INC BATAVIA FACILITY	1500 LATHEM ST	BATAVIA	IL	60510	1.2675	0.141	1.4085	0	0	0	1.4085
CARDINAL ALUMINUM CO PLAN T 3	4005 OAKLAWN DR	LOUISVILLE	KY	40219	0.0485	1.354	1.4025	0		0	1.4025
FIVE STAR COATINGS GROUP	36616 89TH ST	TWIN LAKES	WI	53181	0	1.4	1.4	0	0	0	1.4
RG STEEL WHEELING LLC BEECH BOTTOM PLANT	2481 RIVER RD	WELLSBURG	WV	26070	0	1.4	1.4	0	0	0	1.4
TRINKOTE INDUSTRIAL FINISHES INC	1800 PARK PL AVE	FORT WORTH	TX	76110	0	1.37545	1.37545	0	0	0	1.37545
ARANDELL CORP	N82 W13118 LEON RD	MENOMONEE FALL	WI	53051	1.324	0.031	1.355	0	0	0	1.355
CATALYST OILFIELD SERVICES LLC	11999 E HWY 158	GARDENDALE	TX	79758	1.35	0	1.35	0		0	1.35
DUBOIS CHEMICALS INC	3630 E KEMPER RD	SHARONVILLE	OH	45241	0	0	0	0		1.329	1.329
SHEBOYGAN PAINT CO	608 CANAL ST	CEDARTOWN	GA	30125	0.692	0.6285	1.3205	0	0	0	1.3205
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	372 CLEVELAND ST	ROCHESTER	PA	15074	0.517	0.7965	1.3135	0	0	0	1.3135
KELLEY TECHNICAL COATINGS INC	1401 S 15TH ST	LOUISVILLE	KY	40210	1.3	0	1.3	0	0	0	1.3
W W HENRY	150 MOONEY DR	BOURBONNAIS	IL	60914	1.299	0	1.299	0	0	0	1.299
ICL-IP AMERICA INC	11636 HUNTINGTON	GALLIPOLIS FERRY	WV	25515	0.017145	0.356	0.373145	0.8975	0	5.55112E-17	1.270645
GMC TRUCK GROUP ARLINGTON ASSEMBLY PLANT	2525 E ABRAMS ST	ARLINGTON	TX	76010	0.37	0.9	1.27	0		0	1.27
BRUNSWICK CORP MERCURY MARINE DIV	W6250 PIONEER RD	FOND DU LAC	WI	54935	0.127	1.143	1.27	0		0	1.27
KMCO CROSBY PLANT	16503 RAMSEY RD	CROSBY	TX	77532	0.125	0.125	0.25	0	0	1	1.25
WINSLOW-BROWNING INC	215 BROWNSVILLE AVE	LIBERTY	IN	47353	1.2345	0	1.2345	0	0	0	1.2345
WARREN UNILUBE INC	1200 S 8TH ST	WEST MEMPHIS	AR	72301	1.2195	0.0045	1.224	0	0	0	1.224

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
VEOLIA ES TECHNICAL SOLUTIONS LLC PORT ARTHUR FACILITY	HWY 73, 3.5 MILES W OF TA	PORT ARTHUR	TX	77640	0.01137	0.000025	0.011395	0	0	1.2015	1.212895
SUN CHEMICAL CORP	2445 PRODUCTION DR	SAINT CHARLES	IL	60174	0.1815	1.027	1.2085	0	0	0	1.2085
NICHOLS ALUMINUM ALABAMA INC	2001 HWY 20 W	DECATUR	AL	35601	0.9685	0.2385	1.207	0		0	1.207
RYCOLINE PRODUCTS LLC	5540 NW HWY	CHICAGO	IL	60630	0.179	1.015	1.194	0	0	0	1.194
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	701 SHILOH RD	GARLAND	TX	75042	0.701	0.477	1.178	0		0	1.178
MOMENTIVE SPECIALTY CHEMICALS INC	8600 W 71ST ST	BEDFORD PARK	IL	60501	0.202	0.966	1.168	0	0	0	1.168
LOCKHEED MARTIN AERONAUTICS CO	1011 LOCKHEED WAY MZ 0	PALMDALE	CA	93599	0.0475	0.4305	0.478	0		0.6769	1.1549
GENTEK BUILDING PRODUCTS	11 CRAGWOOD RD	AVENEL	NJ	07001	0.1105	1.0205	1.131	0	0	0	1.131
CANBERRA CORP	3610 N HOLLAND-SYLVANIA	TOLEDO	OH	43615	0.75	0.375	1.125	0		0	1.125
HILLYARD INDUSTRIES INC	402 N 3TH ST	SAINT JOSEPH	MO	64501	0.41	0.7075	1.1175	0		0	1.1175
WISMARQ VALENCIA LLC	125 MCFANN RD	VALENCIA	PA	16059	1.0195	0.095	1.1145	0	0	0	1.1145
CROWN CORK & SEAL CO (USA) INC CROWN CLOSURES DIV	940 MILL PARK DR	LANCASTER	OH	43130	0	1.1105	1.1105	0	0	0	1.1105
CELLU TISSUE/CITYFOREST LLC	1215 WORDEN AVE E	LADYSMITH	WI	54848	0	0	0	1.092		0	1.092
GENERAL MOTORS GM VA DETROIT-HAMTRAMCK ASSEMBLY CENTER	2500 E GENERAL MOTORS	DETROIT	MI	48211	0.85	0.21	1.06	0		0.0315	1.0915
POLYMERIC IMAGING INC	117 E 14TH AVE	NORTH KANSAS CIT	MO	64116	0	1.0535	1.0535	0	0	0	1.0535
JOHN DEERE SEEDING & CYLINDER	501 RIVER DR	MOLINE	IL	61265	0	1	1	0	0	0.052	1.052
TESORO REFINING & MARKETING CO - MANDAN REFINERY	900 OLD RED TRAIL NE	MANDAN	ND	58554	1.05	0.0005	1.0505	0	0	0	1.0505
RED SPOT PAINT & VARNISH CO INC	1016 E COLUMBIA ST	EVANSVILLE	IN	47711	0.621	0.426	1.047	0	0	0	1.047
PPG INDUSTRIES OHIO INC (CL)	3800 W 143 ST	CLEVELAND	OH	44111	0.3955	0.647	1.0425	0	0	0	1.0425
PPG ARCHITECTURAL FINISHES EAST POINT	1377 OAKLEIGH DR	EAST POINT	GA	30344	0.0025	0.459	0.4615	0	0	0.5645	1.026
MITSUBISHI MOTORS NORTH AMERICA INC	100 N MITSUBISHI MOTORV	NORMAL	IL	61761	1.0115	0.01	1.0215	0	0	0	1.0215
CP CONVERTERS INC	15 GRUMBACHER RD	YORK	PA	17402	1.01857	0	1.01857	0	0	0	1.01857
TTM TECHNOLOGIES-SANTA CLARA	407 MATHEW ST	SANTA CLARA	CA	95050	0	1.0005	1.0005	0		0	1.0005
POLARTEC LLC	46 STAFFORD ST	LAWRENCE	MA	01841	0.998	0	0.998	0		0	0.998
AKZONOBEL AEROSPACE COATINGS	1 E WATER ST	WAUKEGAN	IL	60085	0.491	0.493	0.984	0	0	0	0.984
SUN CHEMICAL CORP	1380 FORD RD	MAUMEE	OH	43537	0.145	0.821	0.966	0	0	0	0.966
UNITED PAINT & CHEMICAL	24671 TELEGRAPH RD	SOUTHFIELD	MI	48034	0.9615	0	0.9615	0	0	0	0.9615
INTEL CORP - RONLER ACRES CAMPUS	2501 NW 229TH ST	HILLSBORO	OR	97124	0.0025	0.95	0.9525	0		0	0.9525
SPIRALKOTE FLEXIBLE PACKAGING	1200 CENTRAL FLORIDA PI	ORLANDO	FL	32837	0	0.941	0.941	0	0	0	0.941

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
HUNT REFINING CO A CORP	1855 FAIRLAWN RD	TUSCALOOSA	AL	35401	0.932	0	0.932	0		0	0.932
PARKER HANNIFIN	400 S ST	MC COOK	NE	69001	0	0	0	0	0	0.9275	0.9275
COMPLEMENTARY COATINGS CORP	4701 O'DONNELL ST	BALTIMORE	MD	21224	0.9215	0	0.9215	0	0	0	0.9215
3M CO - BROWNWOOD	4501 HWY 377 S	BROWNWOOD	TX	76801	0.06	0.85	0.91	0	0	0.007	0.917
FINISHES UNLIMITED INC	482 WHEELER RD	SUGAR GROVE	IL	60554	0.4455	0.4455	0.891	0		0	0.891
WESTERN METAL DECORATING CO	8875 INDUSTRIAL AVE	RANCHO CUCAMON	CA	91730	0.5	0.375	0.875	0	0	0	0.875
PRECOAT METALS	5888 E COUNTY RD 180	BLYTHEVILLE	AR	72315	0	0.874	0.874	0	0	0	0.874
LEVLAD	9200 MASON AVE	CHATSWORTH	CA	91311	0.00017	0	0.00017	0		0.8475	0.84767
PARISER INDUSTRIES INC	91 MICHIGAN AVE	PATERSON	NJ	07503	0.845	0	0.845	0		0	0.845
CURTIS METAL FINISHING CO	9917 N ALPINE	MACHESNEY PARK	IL	61115	0.594	0.237	0.831	0		0	0.831
GREIF PACKAGING LLC	2400 COOPER AVE	MERCED	CA	95348	0.174	0.652	0.826	0	0	0	0.826
GENERAL MOTORS LLC BOWLING GREEN ASSEMBLY PLANT	600 CORVETTE DR	BOWLING GREEN	KY	42101	0.165	0.65	0.815	0		0	0.815
CCP COMPOSITES US	2434 HOLMES RD	HOUSTON	TX	77051	0.8	0.0026	0.8026	0	0	0	0.8026
ALCOA COMMERCIAL WINDOWS LLC (DBA TRACO)	71 PROGRESS AVE	CRANBERRY TOWN	PA	16066	0.032	0.7645	0.7965	0	0	0	0.7965
TTM TECHNOLOGIES INC	234 CASHMAN DR	CHIPPEWA FALLS	WI	54729	0	0.793	0.793	0		0	0.793
KAWNEER CO INC	7200 DOE AVE	VISALIA	CA	93291	0.054	0.7295	0.7835	0	0	0	0.7835
WATSON STANDARD CO (NEVILLE ISLAND PLANT)	2895 GRAND AVE	PITTSBURGH	PA	15225	0.6695	0.1055	0.775	0	0	0	0.775
CHAMPION TECHNOLOGIES INC	115 PROCTOR	ODESSA	TX	79762	0.2845	0.0085	0.293	0	0	0.4805	0.7735
NICHOLS ALUMINUM DAVENPORT	1725 ROCKINGHAM RD	DAVENPORT	IA	52802	0.217	0.556	0.773	0		0	0.773
SPECTRUM METAL FINISHING	535 BEV RD	YOUNGSTOWN	OH	44512	0.4	0.35	0.75	0	0	0.002	0.752
UNIVAR USA INC HOUSTON FM 529	11235 FM 529	HOUSTON	TX	77041	0.375	0.375	0.75	0		0	0.75
RUST-OLEUM CORP	8105 95TH ST	PLEASANT PRAIRIE	WI	53158	0.375	0.375	0.75	0	0	0	0.75
STEELSCAPE	222 W KALAMA RIVER RD	KALAMA	WA	98625	0.00447	0.731035	0.735505	0	0	0	0.735505
ZEP INC	1310 SEABOARD INDUSTRI	ATLANTA	GA	30318	0.104	0.138	0.242	0.0705		0.4195	0.732
GLASS COATINGS & CONCEPTS	300 LAWTON AVE	MONROE	OH	45050	0.7245	0.0025	0.727	0		0	0.727
BASF CORP	1175 MARTIN ST	GREENVILLE	OH	45331	0.085	0.135	0.22	0	0	0.5	0.72
SYNDICATE SYSTEMS INC	402 N MAIN ST	MIDDLEBURY	IN	46540	0	0.712	0.712	0	0	0	0.712
CHRYSLER GROUP LLC STERLING STAMPING PLANT (PART)	35777 VAN DYKE	STERLING HEIGHTS	MI	48312	0.7	0	0.7	0	0	0	0.7
SPARTAN CHEMICAL CO INC	1110 SPARTAN DR	MAUMEE	OH	43537	0.0675	0	0.0675	0		0.608	0.6755
WORWAG COATINGS LLC NORTH AMERICA	3420 KOSSUTH ST	LAFAYETTE	IN	47905	0.5495	0.125	0.6745	0	0	0	0.6745

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
DIAMOND VOGEL PAINTS	5111 E 36TH ST N	TULSA	OK	74115	0.658	0.0135	0.6715	0	0	0	0.6715
TERNIUM USA INC	2500 RON BEAN BLVD	SHREVEPORT	LA	71115	0.0205	0.65	0.6705	0	0	0	0.6705
UNIVERSAL CHEMICALS & COATINGS INC	1124 ELMHURST RD	ELK GROVE VILLAG	IL	60007	0	0.6585	0.6585	0		0	0.6585
VISTA PAINT CORP	2020 E ORANGETHORPE A	FULLERTON	CA	92831	0.6185	0	0.6185	0	0	0.0395	0.658
SONOCO PRODUCTS CO	1854 CENTRAL FLORIDA PI	ORLANDO	FL	32837	0.4935	0.1645	0.658	0	0	0	0.658
QUESTVAPCO CORP	12255 FM 529	HOUSTON	TX	77041	0.65	0	0.65	0	0	0	0.65
DPIX LLC	1635 AEROPLAZA DR	COLORADO SPRINC	CO	80916	0.4635	0.1855	0.649	0	0	0	0.649
SEYMOUR OF SYCAMORE INC	917 CROSBY AVE	SYCAMORE	IL	60178	0.585	0.0635	0.6485	0	0	0	0.6485
COMMERCIAL MERCHANDISING CORP	1337 J WOOD BRANCH DR	CHARLOTTE	NC	28273	0.32	0.32	0.64	0	0	0	0.64
B-WAY PACKAGING INC	6 LITHO RD	TRENTON	NJ	08648	0.063	0.568	0.631	0	0	0	0.631
PRECOAT METALS	6754 SANTA BARBARA CT	ELKRIDGE	MD	21075	0	0.628695	0.628695	0	0	0	0.628695
SPRAYLAT CORP IL	1701 E 122-ND ST	CHICAGO	IL	60633	0.0315	0.595	0.6265	0	0	0	0.6265
COMPLEX CHEMICALS CO INC	MADISON PARISH INDUSTR	TALLULAH	LA	71282	0.375	0.125	0.5	0.125		0	0.625
BOEING COMMERCIAL AIRPLANE GROUP - RENTON	737 LOGAN AVE N	RENTON	WA	98055	0.462	0.115	0.577	0		0.039	0.616
FORD MOTOR CO CHICAGO ASSEMBLY	12600 S TORRENCE AVE	CHICAGO	IL	60633	0.49	0.125	0.615	0		0	0.615
FLINT GROUP NORTH AMERICA CORP	2675 HENKLE DR	LEBANON	OH	45036	0.604	0.004	0.608	0	0	0	0.608
ROCK TENN CO	2301 S 21ST ST	CLINTON	IA	52732	0.097	0.5095	0.6065	0		0	0.6065
WESTERN EXTRUSIONS CORP	1735 SANDY LAKE RD	CARROLLTON	TX	75006	0.125	0.477	0.602	0.0025		1.11022E-16	0.6045
SUPERIOR OIL CO INC RECLAIMED ENERGY DIV	1500 WESTERN AVE	CONNERSVILLE	IN	47331	0.0725	0.0015	0.074	0	0	0.530225	0.604225
STEELSCAPE INC	7001 ALLISON-BONNET ME	FAIRFIELD	AL	35064	0.003895	0.59948	0.603375	0	0	0	0.603375
WISMARQ CORP	930 ARMOUR RD	OCONOMOWOC	WI	53066	0	0.599	0.599	0	0	0	0.599
NEXEO SOLUTIONS LLC	8500 S WILLOW SPRINGS R	WILLOW SPRINGS	IL	60480	0.541	0.0485	0.5895	0	0	0	0.5895
CORSICANA TECHNOLOGIES INC	2733 E HWY 31	CORSICANA	TX	75109	0.044	0.0025	0.0465	0	0	0.54	0.5865
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	5400 23RD AVE	MOLINE	IL	61265	0.207	0.3685	0.5755	0	0	0	0.5755
DUPONT MOUNT CLEMENS PLANT	400 GROESBECK HWY	MOUNT CLEMENS	MI	48043	0.0025	0.5725	0.575	0	0	0	0.575
SILGAN CONTAINERS MANUFACTURING CORP	12130 LYNN AVE S	SAVAGE	MN	55378	0	0.575	0.575	0	0	0	0.575
TRELLEBORG COATED SYSTEMS US INC / GRACE ADVANCED MATERIALS	715 RAILROAD AVE & HWY	RUTHERFORDTON	NC	28139	0	0.0055	0.0055	0	0	0.5645	0.57
CENTRIA	500 PERTH DR NEW ECON	AMBRIDGE	PA	15003	0	0.559	0.559	0	0	0	0.559
PRIOR COATED METALS	2233 26TH ST SW	ALLENTOWN	PA	18103	0	0.5515	0.5515	0	0	0	0.5515
SIMONIZ USA INC	201 BOSTON TURNPIKE	BOLTON	CT	06043	0.0185	0.001	0.0195	0	0	0.528	0.5475

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SOUTHERN CLAY PRODUCTS INC	1335 S 13TH ST	LOUISVILLE	KY	40210	0.0025	0.125	0.1275	0		0.4175	0.545
ENGINEERED POLYMER SOLUTIONS I NC D/B/A VALSPAR COATINGS	90 CARSON RD	BIRMINGHAM	AL	35215	0.2075	0.331	0.5385	0	0	0	0.5385
SOUTHWEST DISTRIBUTING CO	539 S DREW ST	MESA	AZ	85210	0.006	0	0.006	0	0	0.53	0.536
HYDRITE CHEMICAL CO	114 N MAIN ST	COTTAGE GROVE	WI	53527	0.07	0.46	0.53	0	0	0	0.53
MARY KAY INC	1330 REGAL ROW	DALLAS	TX	75247	0.00026	0	0.00026	0		0.5265	0.52676
VEYANCE TECHNOLOGIES INC	400 N GOODYEAR RD	MOUNT PLEASANT	IA	52641	0.0005	0	0.0005	0		0.522	0.5225
MARCUS PAINT CO	235 E MARKET ST	LOUISVILLE	KY	40202	0.52	0.0025	0.5225	0	0	0	0.5225
CLEVELAND STEEL CONTAINER - PE OTONE FACILITY	117 E LINCOLN ST	PEOTONE	IL	60468	0.0065	0.5115	0.518	0	0	0	0.518
NALCO CO TULSA PLANT 102	6717 S 61ST W AVE	TULSA	OK	74131	0.000435	0.00335	0.003785	0	0	0.512	0.515785
REICHHOLD INC	249 ST LOUIS AVE	VALLEY PARK	MO	63088	0.256615	0.25603	0.512645	0		5E-06	0.51265
BRADLEY COATINGS GROUP	608 W CRAWFORD AVE	CONNELLSVILLE	PA	15425	0.364595	0	0.364595	0	0	0.147295	0.51189
NALCO CO	812 RENAUD DR	SCOTT	LA	70583	0.000325	0.0005335	0.0008585	0	0	0.51	0.5108585
MIDWEST METAL COATINGS	9 KONZEN CT	GRANITE CITY	IL	62040	0.412	0.098	0.51	0	0	0	0.51
BASF CORP	361 SHEEP PASTURE RD	EAST SETAUKET	NY	11733	0.008	0	0.008	0	0	0.5	0.508
KAWNEER CO INC	500 E 12TH ST	BLOOMSBURG	PA	17815	0.3415	0.164	0.5055	0	0	0	0.5055
CLARIANT CORP MARTIN PLANT	788 CHERT QUARRY RD	MARTIN	SC	29836	0.125	0.0025	0.1275	0.375	0	0	0.5025
FERRO CORP	251 W WYLIE AVE	WASHINGTON	PA	15301	0.125	0.375	0.5	0	0	0	0.5
CHEMICAL SPECIALISTS & DEVELOPMENT INC	9733 MEADOR RD	CONROE	TX	77303	0.125	0.375	0.5	0	0	0	0.5
ARKEMA INC	1415 STEELE AVE SW	GRAND RAPIDS	MI	49507	0.375	0.125	0.5	0	0	0	0.5
FORMULA CORP	4432 C ST NE	AUBURN	WA	98002	0.125	0	0.125	0		0.375	0.5
SASOL NORTH AMERICA INC LAKE CHARLES CHEMICAL COMPLEX	2201 OLD SPANISH TRAIL	WESTLAKE	LA	70669	0.3395	0.151	0.4905	0	0	0	0.4905
ALERIS ROLLED PRODUCTS INC	3321 DURHAM RD	ROXBORO	NC	27573	0.0025	0.4795	0.482	0	0	0	0.482
QG LLC	4581 LOWER VALLEY RD	ATGLEN	PA	19310	0.457	0.013	0.47	0	0	0	0.47
WARREN STAMPING PLANT (PART)	22800 MOUND RD	WARREN	MI	48091	0.46	0	0.46	0	0	0	0.46
SHERWIN-WILLIAMS CO	2802 W MILLER RD	GARLAND	TX	75041	0.003	0.025	0.028	0	0	0.421	0.449
KELLEY TECHNICAL COATINGS INC	1445 S 15TH ST	LOUISVILLE	KY	40210	0.445	0.0025	0.4475	0	0	0	0.4475
FORREST PAINT CO	1011 MCKINLEY ST	EUGENE	OR	97402	0.1785	0.2665	0.445	0		0	0.445
ARDAGH METAL PACKAGING USA INC	3030 BIRCH DR HALF MOOI	WEIRTON	WV	26062	0.0695	0.375	0.4445	0	0	0	0.4445
RODDA PAINT CO	6123 N MARINE DR	PORTLAND	OR	97203	0.442	0	0.442	0	0	0	0.442
ENGLERT INC	1200 AMBOY AVE	PERTH AMBOY	NJ	08861	0.1825	0.2595	0.442	0	0	0	0.442

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
ARROW SHED LLC	1 THIRD AVE	HASKELL	NJ	07420	0.0025	0.166	0.1685	0	0	0.2685	0.437
SPRAYLAT CORP	716 S COLUMBUS AVE	MOUNT VERNON	NY	10550	0.0215	0.412	0.4335	0		0	0.4335
SIKA CORP SIKA SARNAFIL DIV	100 DAN RD	CANTON	MA	02021	0	0.433	0.433	0	0	0	0.433
WEST PENN OIL CO,INC130130	2305 MARKET ST EXT.	WARREN	PA	16365	0.4305	0	0.4305	0		0	0.4305
PCCR USA INC	400 E COTTAGE AVE	CARPENTERSVILLE	IL	60110	0.008	0.4215	0.4295	0	0	0	0.4295
PACKAGING CORP OF AMERICA COUNCE MILL	HWY 57	COUNCE	TN	38326	0.025	0	0.025	0.395	0	0.0025	0.4225
DUCKBACK PRODUCTS	2644 HEGAN LN	CHICO	CA	95928	0.4186	0	0.4186	0	0	0	0.4186
NB COATINGS INC	2701 E 170TH ST	LANSING	IL	60438	0.4055	0	0.4055	0	0	0.008	0.4135
WEBB CHEMICAL SERVICE CORP	2708 JARMAN	MUSKEGON HEIGH	MI	49444	0.2605	0	0.2605	0		0.148	0.4085
INTEL CORP	4100 SARA RD M/S RR5-49	RIO RANCHO	NM	87124	0.0025	0.405	0.4075	0		0	0.4075
NAZDAR CHICAGO	1087 N N BRANCH ST	CHICAGO	IL	60622	0.1215	0.2835	0.405	0	0	0	0.405
BASF CORP	100 INDUSTRIAL BLVD	SEAFORD	DE	19973	0.0025	0	0.0025	0		0.3985	0.401
SEWELL PRODUCTS OF FLORIDA LLC	909 MAGNOLIA AVE	AUBURNDALE	FL	33823	0.398	0	0.398	0		0	0.398
THE DOW CHEMICAL CO - LOUISIANA OPERATIONS	21255 LA HWY 1 S	PLAQUEMINE	LA	70764	0.396	0	0.396	0	0	0	0.396
PERMA-PIPE OIL & GAS	5008-11 CURTIS LN	NEW IBERIA	LA	70560	0.395	0	0.395	0	0	0	0.395
AMERICAN METALS CORP	1000 CROCKER RD	WESTLAKE	OH	44145	0	0.391	0.391	0	0	0	0.391
DIVERSIFIED COATING SYSTEMS INC	309 ECHELON RD	GREENVILLE	SC	29605	0.078	0.309	0.387	0	0	0	0.387
VAN CAN CO	1226 S MANUFACTURERS I	TRENTON	TN	38382	0.003815	0.3815	0.385315	0	0	0	0.385315
SPECTRUM CUBIC INC	13 MCCONNELL ST SW	GRAND RAPIDS	MI	49503	0.0185	0.3665	0.385	0	0	0	0.385
3M CO - NEVADA	2120 E AUSTIN BLVD	NEVADA	MO	64772	0.195	0.19	0.385	0		0	0.385
INEOS AMERICAS LLC INEOS OXIDE DIV	21255A HWY 1 S	PLAQUEMINE	LA	70765	0.348	0.036	0.384	0	0	0	0.384
WISCONSIN ALUMINUM FOUNDRY CO INC	838 S 16TH ST	MANITOWOC	WI	54220	0	0.03505	0.03505	0		0.34875	0.3838
METAL COATERS	9133 CENTER AVE	RANCHO CUCAMON	CA	91730	0.03486	0.34859	0.38345	0	0	0	0.38345
BASF CORP	1609 BIDDLE AVE	WYANDOTTE	MI	48192	0.0025	0.0025	0.005	0.0025		0.375	0.3825
EURAMAX INTERNATIONAL INC	450 RICHARDSON DR	LANCASTER	PA	17603	0.01	0.371	0.381	0	0	0	0.381
NASCOTE INDUSTRIES	18310 ENTERPRISE AVE	NASHVILLE	IL	62263	0.132475	0.24667	0.379145	0	0	0	0.379145
ALERIS ROLLED PRODUCTS INC	1 REYNOLDS RD	ASHVILLE	OH	43103	0.0355	0.3435	0.379	0	0	0	0.379
ZSCHIMMER & SCHWARZ	70 GA HWY 22 W	MILLEDGEVILLE	GA	31061	0.0025	0.375	0.3775	0	0	0	0.3775
SANFORD LP LIQUID MANUFACTURING & TECHNOLOGY CENTER	831 VOLUNTEER PKWY	MANCHESTER	TN	37355	0.0025	0.375	0.3775	0	0	0	0.3775

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
QUEST SPECIALTY COATINGS LLC - MENOMONEE FALLS	N92 W14701 ANTHONY AVE	MENOMONEE FALL	WI	53051	0.375	0	0.375	0	0	0	0.375
PATRIOT PAINT LLC	304 S BLAINE PIKE	PORTLAND	IN	47371	0.375	0	0.375	0	0	0	0.375
CHEMICAL SOLVENTS JENNINGS ROAD FACILITY	3751 JENNINGS RD	CLEVELAND	OH	44109	0.125	0.125	0.25	0	0	0.125	0.375
JASPER RUBBER PRODUCTS INC	1010 FIRST AVE	JASPER	IN	47546	0	0	0	0		0.375	0.375
TOWER PRODUCTS INC	2703 FREEMANSBURG AVE	EASTON	PA	18045	0.375	0	0.375	0		0	0.375
HB FULLER CO	7440 W DUPONT RD	MORRIS	IL	60450	0.3745	0	0.3745	0		0	0.3745
FULLER BRUSH CO	ONE FULLER WAY	GREAT BEND	KS	67530	0.1245	0.2485	0.373	0		0	0.373
LINETEC	725 S 75TH AVE	WAUSAU	WI	54401	0.0205	0.3515	0.372	0	0	0	0.372
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	347 CENTRAL AVE	BOWLING GREEN	KY	42101	0.1285	0.2415	0.37	0	0	0	0.37
NALCO CO PLANT 106	7701 US HWY 90A	SUGAR LAND	TX	77478	0.0552903	0.000065	0.0553553	0		0.31436	0.3697153
PFI INC	9215 SANTA FE SPRINGS R	SANTA FE SPRINGS	CA	90670	0.369	0	0.369	0	0	0	0.369
NELCO PRODUCTS INC	1107 E KIMBERLY	ANAHEIM	CA	92801	0.028	0.3355	0.3635	0	0	0	0.3635
COMBE PRODUCTS INC	EL DUQUE INDUSTRIAL PA	NAGUABO	PR	00718	0	0	0	0		0.3615	0.3615
BEHR PROCESS CORP - CHICAGO	270 STATE ST	CHICAGO HEIGHTS	IL	60411	0.32265	0.00325	0.3259	0	0.0335	0	0.3594
DUPONT FORT MADISON PLANT	801 - 35TH ST	FORT MADISON	IA	52627	0	0.357	0.357	0	0	0	0.357
UNIVAR USA INC SALEM BRANCH	COLONIAL RD	SALEM	MA	01970	0.001	0.001	0.002	0	0	0.352	0.354
CELLO PROFESSIONAL PRODUCTS	1354 OLD POST RD	HAVRE DE GRACE	MD	21078	0.3425	0.0015	0.344	0		0	0.344
SHERWIN-WILLIAMS CO	395 BOGGS LN - S	RICHMOND	KY	40475	0.321	0.021	0.342	0	0	0.002	0.344
CHEMGUARD INC	204 S 6TH AVE	MANSFIELD	TX	76063	0.2265	0.1105	0.337	0.002		0	0.339
EVONIK DEGUSSA CORP TIPPECANOE LABORATORIES	1650 LILLY RD	LAFAYETTE	IN	47909	0.235	0.096	0.331	0	0	0	0.331
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	411 N DARLING	FREMONT	MI	49412	0.31	0.0195	0.3295	0	0	0	0.3295
FUCHS LUBRICANTS CO-CORPORATE OFFICE	17050 S LATHROP AVE	HARVEY	IL	60426	0.329	0	0.329	0	0	0	0.329
BEHR PROCESS CORP ATLANTA	130 DECLARATION DR	MC DONOUGH	GA	30253	0.299	0.00155	0.30055	0	0.0235	0	0.32405
ENERGIZER BATTERY MANUFACTURING INC	75 SWANTON RD	SAINT ALBANS	VT	05478	0.0025	0.1595	0.162	0	0	0.1615	0.3235
CHEMCOAT INC	2790 CANFIELDS LN	MONTOURSVILLE	PA	17754	0.0025	0	0.0025	0	0	0.3155	0.318
CNH AMERICA LLC	2701 OAKES RD	STURTEVANT	WI	53177	0.317	0	0.317	0		0	0.317
ACTEGA KELSTAR INC	1050 TAYLORS LN	CINNAMINSON	NJ	08077	0.0025	0.0075	0.01	0	0	0.3	0.31
EASTMAN KODAK CO EASTMAN BUSINESS PARK	1669 LAKE AVE	ROCHESTER	NY	14652	0	0.0035	0.0035	0.0315	0	0.2735	0.3085
AKZONOBEL COATINGS INC	120 FRANKLIN RD	PONTIAC	MI	48341	0.0485	0.012	0.0605	0		0.245	0.3055

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
SIERRA CORP	11400 W 47TH ST	MINNETONKA	MN	55343	0.3015	0	0.3015	0	0	0	0.3015
PPG EUCLID PRETREATMENT & SPECIALTY PRODUCTS	23000 ST CLAIR AVE	EUCLID	OH	44117	0	0	0	0	0	0.2995	0.2995
HADCO (SANMINA) CORP - OWEGO DIV	1200 TAYLOR RD	OWEGO	NY	13827	0.0105	0.1445	0.155	0		0.1439	0.2989
HARCROS CHEMICALS INC	5200 SPEAKER RD	KANSAS CITY	KS	66106	0.014	0.125	0.139	0.0025		0.1525	0.294
METAL COATERS	1150 MARIETTA INDUSTRIA	MARIETTA	GA	30062	0.004	0.287	0.291	0	0	0	0.291
LONGABERGER CO	5565 RAIDERS RD	FRAZEYSBURG	OH	43822	0.164	0	0.164	0	0	0.125	0.289
HENKEL CORP	23343 SHERWOOD AVE	WARREN	MI	48091	0.125	0.125	0.25	0		0.0385	0.2885
SHERWIN-WILLIAMS CO	180 CANAL ST	TERRE HAUTE	IN	47808	0.018	0.0455	0.0635	0	0	0.222	0.2855
TMS MANUFACTURING	3555 W 123RD ST	ALSIP	IL	60803	0.213	0.071	0.284	0	0	0	0.284
ATMI MATERIALS LTD	706 HOUSTON CLINTON DR	BURNET	TX	78611	0.050735	0.000655	0.05139	0	0	0.22084	0.27223
RUST-OLEUM CORP IN MD	16410 INDUSTRIAL LN	WILLIAMSPORT	MD	21795	0.108	0.163	0.271	0	0	0	0.271
STANDARD PAINTS INC	940 S 6TH AVE	MANSFIELD	TX	76063	0	0.22855	0.22855	0	0	0.042	0.27055
VIDEOJET TECHNOLOGIES INC	1855 ESTES AVE	ELK GROVE VILLAG	IL	60007	0	0.269	0.269	0	0	0	0.269
COLWELL INC	231 S PROGRESS DR E	KENDALLVILLE	IN	46755	0.23	0.038	0.268	0	0	0	0.268
MACDERMID PRINTING SOLUTIONS	260 S PACIFIC ST	SAN MARCOS	CA	92078	0	0.2615	0.2615	0		0.000435	0.261935
NEXEO SOLUTIONS LLC	395 JAMES AVE	SAINT PAUL	MN	55102	0.248	0.0135	0.2615	0	0	0	0.2615
IVC INDUSTRIAL COATINGS INC	550-560 W CENTENNIAL BL	CASA GRANDE	AZ	85122	0.052032	0.208128	0.26016	0		5.55112E-17	0.26016
SUMTER COATINGS INC	2410 HWY 15S	SUMTER	SC	29150	0.0545	0.1655	0.22	0	0	0.04	0.26
GATES CORP	630 US HWY 150 E	GALESBURG	IL	61401	0	0	0	0		0.259	0.259
ELPACO COATINGS CORP	1378 KINGSLAND AVE	PAGEDALE	MO	63133	0.1845	0.074	0.2585	0		0	0.2585
GOJO INDUSTRIES INC	3783 STATE RD	CUYAHOGA FALLS	OH	44223	0.0035	0.000287	0.003787	0		0.2545	0.258287
KIK-SOCAL INC	9028 DICE RD	SANTA FE SPRINGS	CA	90670	0.255	0	0.255	0		0	0.255
NEXEO SOLUTIONS LLC CARTERET	350 ROOSEVELT AVE	CARTERET	NJ	07008	0.2295	0.0245	0.254	0	0	0	0.254
TEXAS INSTRUMENTS INC	12201 SW FWY MS600	STAFFORD	TX	77477	0.0025	0.125	0.1275	0	0	0.125	0.2525
MOC PRODUCTS CO INC	12306 MONTAGUE ST	PACOIMA	CA	91331	0.125	0.0025	0.1275	0	0	0.125	0.2525
WR MEADOWS INC	300 INDUSTRIAL DR	HAMPSHIRE	IL	60140	0.2525	0	0.2525	0		0	0.2525
BACHMAN SERVICES INC	2220 S PROSPECT	OKLAHOMA CITY	OK	73129	0.125	0.125	0.25	0	0	0.0025	0.2525
GE WATER & PROCESS TECHNOLOGIES ORANGE FACILITY	3901 WILLIAMS DR	ORANGE	TX	77630	0.125	0.0025	0.1275	0		0.125	0.2525
CONTINENTAL CEMENT CO LLC	10107 HWY 79	HANNIBAL	MO	63401	0.125	0.0025	0.1275	0	0	0.125	0.2525
PPG INDUSTRIES ARCHITECTURAL FINISHES	1886 LYNNBURY WOODS R	DOVER	DE	19904	0.0025	0	0.0025	0		0.25	0.2525

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
WATSON STANDARD CO HARWICK PLANT	616 HITE RD	HARWICK	PA	15049	0.229	0.0215	0.2505	0	0	0	0.2505
QUANTUM COATINGS INC	1337 N WOOD BRANCH DR	CHARLOTTE	NC	28273	0.125	0.125	0.25	0		0	0.25
MISCO PRODUCTS CORP	1048 STINSON DR	READING	PA	19605	0.125	0.125	0.25	0		0	0.25
MALCO PRODUCTS INC	361 FAIRVIEW AVE	BARBERTON	OH	44203	0.125	0.125	0.25	0	0	0	0.25
KEYSTONE ANILINE CORP	2165 HWY 292	INMAN	SC	29349	0.125	0.125	0.25	0	0	0	0.25
EQUILON CARSON TERMINAL	20945 S WILMINGTON AVE	CARSON	CA	90810	0.125	0.125	0.25	0		0	0.25
PREMIER INK SYSTEMS INC	10420 N STATE ST	HARRISON	OH	45030	0.125	0	0.125	0		0.125	0.25
DELEET MERCHANDISING	26 BLANCHARD ST	NEWARK	NJ	07105	0.125	0.125	0.25	0		0	0.25
CERAM TRAZ CORP CERAMIC INDL COATINGS	325 HWY 81	OSSEO	MN	55369	0.125	0.125	0.25	0		0	0.25
BECKER SPECIALTY CORP	15310 ARROW BLVD	FONTANA	CA	92335	0.125	0.125	0.25	0	0	0	0.25
UNIVAR USA INC STRONGSVILLE BRANCH	21600 DRAKE RD	STRONGSVILLE	OH	44136	0.125	0.125	0.25	0		0	0.25
ARCADIA INC	3225 E WASHINGTON BLVD	VERNON	CA	90058	0.125	0.125	0.25	0		0	0.25
UNIVAR USA INC HOUSTON	777 BRISBANE ST	HOUSTON	TX	77061	0.125	0.125	0.25	0	0	0	0.25
SILBOND CORP	9901 SAND CREEK HWY	WESTON	MI	49289	0.125	0.125	0.25	0	0	0	0.25
YENKIN-MAJESTIC PAINT CORPORAT ION	1920 LEONARD AVE	COLUMBUS	OH	43219	0.125	0.125	0.25	0	0	0	0.25
UNIVAR USA INC DALLAS DAN MORTON FACILITY	3636 DAN MORTON DR	DALLAS	TX	75236	0.125	0.125	0.25	0	0	0	0.25
UNIVAR USA INC HAMILTON BRANCH	12 STANDEN DR	HAMILTON	OH	45015	0.125	0.125	0.25	0		0	0.25
POWER SERVICE PRODUCTS INC	513 PEASTER HWY	WEATHERFORD	TX	76086	0.125	0.125	0.25	0	0	0	0.25
BERGQUIST CO	301 WASHINGTON ST W	CANNON FALLS	MN	55009	0.078	0.171	0.249	0	0	0	0.249
NEXEO SOLUTIONS LLC TWINSBURG HIGHLAND	1610 E HIGHLAND RD	TWINSBURG	OH	44087	0.2285	0.0195	0.248	0	0	0	0.248
AMREP INC	990 INDUSTRIAL PARK DR	MARIETTA	GA	30062	0.129	0.115	0.244	0	0	0	0.244
ARLON INC ADHESIVES & FILMS DIV	2811 S HARBOR BLVD	SANTA ANA	CA	92704	0.132	0.1045	0.2365	0	0	0	0.2365
NEXEO SOLUTIONS LLC DORAVILLE	4550 NE EXPRESSWAY	DORAVILLE	GA	30340	0.159	0.0695	0.2285	0	0	0	0.2285
GEMINI COATINGS INC	2300 HOLLOWAY DR	EL RENO	OK	73036	0.219	0.0025	0.2215	0.0025	0	0	0.224
ROLLEX CORP	800 CHASE AVE	ELK GROVE VILLAG	IL	60007	0	0.2235	0.2235	0		0	0.2235
INTEL CORP	4500 S DOBSON RD MAIL S	CHANDLER	AZ	85248	0.0025	0.22	0.2225	0		0	0.2225
DAVIS-FROST INC	3420 CANDLER'S MOUNTAI	LYNCHBURG	VA	24506	0.221	0	0.221	0	0	0	0.221
LAMBERTI USA INC - WHARTON CHEMICAL COMPLEX	HWY 59 AT COUNTY RD 21	HUNGERFORD	TX	77448	0.0495	0	0.0495	0.055	0	0.11	0.2145
HENKEL CORP	923 MAULDIN RD	CALHOUN	GA	30701	0	0.0065	0.0065	0		0.205	0.2115
SERIGRAPH INC	3801 E DECORAH RD	WEST BEND	WI	53095	0.028	0.178	0.206	0		0	0.206

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
RUDD CO INC	1141 NW 50TH ST	SEATTLE	WA	98107	0.1925	0.0125	0.205	0	0	0	0.205
NOV TUBOSCOPE NAVASOTA	9574 FM 1227	NAVASOTA	TX	77868	0.106895	0.09767	0.204565	0	0	0	0.204565
SONOCO FLEXIBLE PACKAGING	6502 S US HWY 31	EDINBURGH	IN	46124	0	0.2045	0.2045	0	0	0	0.2045
SUN CHEMICAL CORP	3301 HUNTING PARK AVE	PHILADELPHIA	PA	19132	0.0305	0.174	0.2045	0	0	0	0.2045
SILGAN WHITE CAP CORP	1701 WILLIAMSBURG PIKE	RICHMOND	IN	47375	0.118	0.084	0.202	0	0	0	0.202
JAMESTOWN COATING TECHNOLOGIES	108 MAIN ST	JAMESTOWN	PA	16134	0.201	0	0.201	0	0	0	0.201
RHODIA INC	577 BANKHEAD HWY	WINDER	GA	30680	0.16	0.0385	0.1985	0		0	0.1985
CAR PRODUCTS INC	630 BEAULIEU ST	HOLYOKE	MA	01040	0.196	0	0.196	0		0	0.196
WM BARR & CO INC	2170 BUOY ST	MEMPHIS	TN	38113	0.0025	0.125	0.1275	0	0	0.068	0.1955
FIRST AMERICAN RESOURCES CO	2030 RIVERVIEW INDUSTRI	MABLETON	GA	30126	0	0.195	0.195	0		0	0.195
NEXEO SOLUTIONS LLC	7710 POLK ST	SAINT LOUIS	MO	63111	0.186	0.0085	0.1945	0	0	0	0.1945
GALATA CHEMICALS LLC - GALATA TAFT FACILITY	471 HWY 3142	HAHNVILLE	LA	70057	0.0345	0.159	0.1935	0	0	0	0.1935
NEXEO SOLUTIONS LLC	3101 WOOD DR	GARLAND	TX	75041	0.152	0.039	0.191	0	0	0	0.191
ENGINEERED POLYMER SOLUTIONS INC (DBA VALSPAR COATINGS)	1717 W ENGLISH RD	HIGH POINT	NC	27261	0.0635	0.1255	0.189	0	0	0	0.189
MAXIM INTEGRATED PRODUCTS INC	9651 WESTOVER HILLS BL	SAN ANTONIO	TX	78251	0	0.188	0.188	0	0	0	0.188
ELEMENTIS SPECIALTIES	400 CLAREMONT AVE	JERSEY CITY	NJ	07304	0.0625	0.1215	0.184	0	0	0	0.184
GREIF INDUSTRIAL PACKAGING & SERVICES LLC	8250 ALMERIA AVE	FONTANA	CA	92335	0.01655	0.16525	0.1818	0	0	0	0.1818
NORTHERN COATINGS & CHEMICAL CO INC	705 6TH AVE	MENOMINEE	MI	49858	0.18	0	0.18	0	0	0	0.18
CERTIFIED ENAMELING INC	3342 EMERY ST	LOS ANGELES	CA	90023	0.0025	0.1765	0.179	0		0	0.179
PPG ARCHITECTURAL FINISHES INC	400 S 13TH ST	LOUISVILLE	KY	40203	0	0.1765	0.1765	0		0.0015	0.178
PPG INDUSTRIES OHIO INC CIRCLEVILLE OH	559 PITTSBURGH RD	CIRCLEVILLE	OH	43113	0.0555	0.122	0.1775	0	0	0	0.1775
3M CO - MEDINA	1030 LAKE RD	MEDINA	OH	44256	0.0365	0.1315	0.168	0	0	0	0.168
ITW PROFESSIONAL AUTOMOTIVE PRODUCTS	3606 CRAFTSMAN BLVD	LAKELAND	FL	33803	0.163	0	0.163	0	0	0	0.163
BOEING COMMERCIAL AIRPLANE GROUP NORTH BOEING FIELD (PART)	7500 E MARGINAL WAY S	SEATTLE	WA	98108	0.0445	0.098	0.1425	0		0.0205	0.163
ENTHONE INC	9809 INDUSTRIAL DR	BRIDGEVIEW	IL	60455	0.0438	0.11826	0.16206	0	0	0	0.16206
SHERWIN-WILLIAMS CO	2150 W SAND LAKE RD	ORLANDO	FL	32809	0	0.0015	0.0015	0	0	0.1575	0.159
SUPERIOR SOLVENTS & CHEMICALS	320 NORTHPOINTE DR	FAIRFIELD	OH	45014	0.004085	0	0.004085	0	0	0.151945	0.15603
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	1991 S WHEELING RD	WHEELING	IL	60090	0.0635	0.0925	0.156	0		0	0.156
AMERIMAX COATED PRODUCTS	215 PHILLIPS 324 RD	HELENA	AR	72342	0	0.154	0.154	0	0	0	0.154

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
BYK USA INC	524 S CHERRY ST	WALLINGFORD	CT	06492	0.15	0.004	0.154	0		0	0.154
SUPERIOR OIL CO INC	400 W REGENT ST	INDIANAPOLIS	IN	46225	0.007065	0	0.007065	0	0	0.14669	0.153755
FRAZEE INDUSTRIES	6625 MIRAMAR RD	SAN DIEGO	CA	92121	0	0.1517	0.1517	0	0	0	0.1517
WR MEADOWS OF ARIZONA INC	4220 S SARIVAL RD	GOODYEAR	AZ	85338	0.1515	0	0.1515	0		0	0.1515
BLENTECH CORP	1305 RYE ST	HOUSTON	TX	77029	0.0125	0.01	0.0225	0		0.125	0.1475
STOUSE INC	300 NEW CENTURY PKWY	NEW CENTURY	KS	66031	0.1475	0	0.1475	0		0	0.1475
NEXEO SOLUTIONS LLC	2011 TURNER ST	LANSING	MI	48906	0.11	0.036	0.146	0	0	0	0.146
ENTHONE INC	350 FRONTAGE RD	WEST HAVEN	CT	06516	0.00284	0.142075	0.144915	0	0	0	0.144915
UNION CARBIDE CORP SOUTH CHARLESTON FACILITY	437 MACCORKLE AVE SW	SOUTH CHARLEST(	WV	25303	0.0745	0.0695	0.144	0		0	0.144
NEXEO SOLUTIONS LLC	3930 GLENWOOD DR	CHARLOTTE	NC	28208	0.085	0.055	0.14	0	0	0	0.14
MEADWESTVACO SOUTH CAROLINA LLC	400 CROSBY RD	DERIDDER	LA	70634	0.05	0.09	0.14	0	0	0	0.14
BJ CHEMICAL SERVICES	707 N LEECH	HOBBS	NM	88240	0.01	0.001905	0.011905	0		0.127845	0.13975
SKF SEALING SOLUTIONS	900 N STATE ST	ELGIN	IL	60123	0	0	0	0	0	0.139	0.139
ACCURATE DISPERSIONS	192 W 155TH ST	SOUTH HOLLAND	IL	60473	0.103	0.0305	0.1335	0		0.0045	0.138
WARREN OIL CO - NC	2340 US 301 N	DUNN	NC	28335	0.137	0.0005	0.1375	0	0	0	0.1375
ARDEX LABORATORIES INC	2050 BYBERRY RD	PHILADELPHIA	PA	19116	0.1365	0	0.1365	0		0	0.1365
SYNGENTA CROP PROTECTION LLC SAINT GABRIEL FACILITY	3905 HWY 75	SAINT GABRIEL	LA	70776	0.0685	0.0645	0.133	0.0005	0	0	0.1335
MID-STATES PAINT & CHEMICAL CO	9315 WATSON INDUSTRIAL	CRESTWOOD	MO	63126	0.1325	0	0.1325	0		0	0.1325
ISP SYNTHETIC ELASTOMERS LP	1615 MAIN ST	PORT NECHES	TX	77651	0	0.132	0.132	0	0	0	0.132
BF GOODRICH TIRE MANUFACTURING	18906 US 24 E	WOODBURN	IN	46797	0.0025	0.0025	0.005	0	0	0.125	0.13
CYTEC INDUSTRIES INC LANGLEY PLANT	403 CARLINE RD	LANGLEY	SC	29834	0.12	0.009	0.129	0		0	0.129
BASF CORP	3455 SOUTHPORT RD	SPARTANBURG	SC	29302	0.125	0.0025	0.1275	0		0	0.1275
BRENNTAG GREAT LAKES LLC	14765 W BOBOLINK AVE	MENOMONEE FALL	WI	53051	0.0025	0.125	0.1275	0	0	0	0.1275
CLEANING SYSTEMS INC	1997 AMERICAN BLVD	DE PERE	WI	54115	0.125	0.0025	0.1275	0		0	0.1275
COASTAL CHEMICAL CO LLC	3520 VETERANS MEMORIA	ABBEVILLE	LA	70510	0.125	0.0025	0.1275	0	0	0	0.1275
US DOD DFSP SAN PEDRO	3171 N GAFFEY ST	SAN PEDRO	CA	90731	0.125	0.0025	0.1275	0		0	0.1275
NICCA USA INC	1044 S NELSON RD	FOUNTAIN INN	SC	29644	0.0025	0.125	0.1275	0		0	0.1275
OAKLEY INC	1 ICON	FOOTHILL RANCH	CA	92610	0.0025	0.125	0.1275	0	0	0	0.1275
PERMATEX SOLON	6875 PARKLAND BLVD	SOLON	OH	44139	0.0025	0.125	0.1275	0		0	0.1275
RR STREET & CO INC	2353 S BLUE ISLAND AVE	CHICAGO	IL	60608	0.0025	0.125	0.1275	0	0	0	0.1275

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
UNITED LABORATORIES INC	320 37TH AVE	SAINT CHARLES	IL	60174	0.125	0.0025	0.1275	0	0	0	0.1275
INTERNATIONAL PAINT LLC	6001 ANTOINE DR	HOUSTON	TX	77091	0.0025	0.125	0.1275	0	0	0	0.1275
COSMETIC LABORATORIES OF AMERICA	20245 SUNBURST ST	CHATSWORTH	CA	91311	0	0.002	0.002	0		0.125	0.127
SACRAMENTO- CAMPBELL SOUP SUPPLY CO	6200 FRANKLIN BLVD	SACRAMENTO	CA	95824	0.125	0	0.125	0		0	0.125
MICHELMAN INC	9080 SHELL RD	CINCINNATI	OH	45236	0	0	0	0		0.125	0.125
FLUID ROUTING SOLUTIONS INC	1921 N BROAD ST	LEXINGTON	TN	38351	0	0	0	0	0	0.125	0.125
MAINTEX INC	13300 E NELSON AVE	CITY OF INDUSTRY	CA	91746	0.125	0	0.125	0		0	0.125
PPG INDUSTRIES INC	500 PITTSBURGH AVE	MCCARRAN	NV	89434	0	0.125	0.125	0		0	0.125
CHEMETALL US INC	13177 HURON RIVER DR	ROMULUS	MI	48174	0	0.125	0.125	0	0	0	0.125
SICPA SECURINK CORP	8000 RESEARCH WAY	SPRINGFIELD	VA	22153	0.125	0	0.125	0	0	0	0.125
TNEMEC CO INC	2300 EDGEWATER AVE	BALTIMORE	MD	21222	0	0.125	0.125	0	0	0	0.125
TNEMEC CO INC	123 W 23RD AVE	NORTH KANSAS CIT	MO	64116	0	0.125	0.125	0	0	0	0.125
KALCOR COATINGS CO	37721 STEVENS BLVD	WILLOUGHBY	OH	44094	0.125	0	0.125	0	0	0	0.125
TYSON FRESH MEATS INC	HWY 50 W	HOLCOMB	KS	67851	0.125	0	0.125	0	0	0	0.125
SAFETY-KLEEN SYSTEMS INC	130 A FRONTAGE RD	LEXINGTON	SC	29073	0	0.125	0.125	0	0	0	0.125
CREE INC	4600 SILICON DR	DURHAM	NC	27703	0	0.125	0.125	0		0	0.125
DANLIN INDUSTRIES CORP	23737 HWY 47	THOMAS	OK	73669	0.125	0	0.125	0		0	0.125
GAGE PRODUCTS CO	625 WANDA AVE	FERNDALE	MI	48220	0	0.125	0.125	0		0	0.125
GOLD EAGLE CO	4400 S KILDARE AVE	CHICAGO	IL	60632	0.125	0	0.125	0	0	0	0.125
COLUMBIA PAINT CORP	641 JACKSON AVE	HUNTINGTON	WV	25704	0.125	0	0.125	0	0	0	0.125
BERRYMAN PRODUCTS INC	3800 E RANDOL MILL RD	ARLINGTON	TX	76011	0.125	0	0.125	0		0	0.125
TRANS CHEMICAL INC	419 E DE SOTO AVE	SAINT LOUIS	MO	63147	0.125	0	0.125	0	0	0	0.125
AVON AUTOMOTIVE PLANT 1	603 W 7TH ST	CADILLAC	MI	49601	0.125	0	0.125	0	0	0	0.125
AKCROS CHEMICALS INC	500 JERSEY AVE	NEW BRUNSWICK	NJ	08901	0	0.125	0.125	0		0	0.125
AKZO NOBEL COATINGS INC	1431 PROGRESS AVE	HIGH POINT	NC	27260	0.125	0	0.125	0	0	0	0.125
INVISTA SARL - ORANGE SITE	3055A FM 1006	ORANGE	TX	77630	0	0.125	0.125	0	0	0	0.125
AMERICAN JETWAY CORP	34136 MYRTLE	WAYNE	MI	48184	0.125	0	0.125	0	0	0	0.125
ARCH CHEMICALS INC	HWY 933	BRANDENBURG	KY	40108	0.065	0.059	0.124	0	0	0	0.124
HOLCIM (US) INC HOLLY HILL PLANT	200 SAFETY ST / HWY 453	HOLLY HILL	SC	29059	0.0045	0.118	0.1225	0	0	0	0.1225
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	3050 HANFORD DR	LEBANON	PA	17046	0.0635	0.059	0.1225	0	0	0	0.1225

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
EXXONMOBIL REFINING & SUPPLY BATON ROUGE REFINERY	4045 SCENIC HWY	BATON ROUGE	LA	70805	0.055	0.0015	0.0565	0.065	0	0	0.1215
AEP INDUSTRIES INC	1201 S PINE HILL RD	GRIFFIN	GA	30224	0.00275	0.1165	0.11925	0		0	0.11925
BUZZI UNICEM USA - GREENCASTLE PLANT	3301 S COUNTY RD 150 W	GREENCASTLE	IN	46135	0.027	0.092	0.119	0	0	0	0.119
AMPHENOL APC INC	91 NORTHEASTERN BLVD	NASHUA	NH	03062	0.0025	0.1157165	0.1182165	0		0	0.1182165
ANCHOR PAINT MANUFACTURING CO INC	6707 E 14TH ST	TULSA	OK	74112	0.1155	0	0.1155	0		0	0.1155
CCI MANUFACTURING IL CORP	15550 CANAL BANK RD	LEMONT	IL	60439	0	0.115	0.115	0	0	0	0.115
TEXAS INSTRUMENTS INC	13500 N CENTRAL EXPRES	DALLAS	TX	75243	0	0.114	0.114	0	0	0	0.114
3M COTTAGE GROVE CENTER	10746 INNOVATION RD	COTTAGE GROVE	MN	55016	0.0005	0.1115	0.112	0	0	0	0.112
MEADWESTVACO SC LLC CHARLESTON CHEMICAL PLANT	5598 VIRGINIA AVE	NORTH CHARLEST	SC	29406	0.111	0.00018	0.11118	0	0	0	0.11118
CHASE PRODUCTS CO	2727 GARDNER RD	BROADVIEW	IL	60155	0.0005	0.1105	0.111	0		0	0.111
TECHNICAL CHEMICAL CO	3327 PIPELINE RD	CLEBURNE	TX	76033	0.1095	0	0.1095	0		0	0.1095
NEXEO SOLUTIONS LLC - EVENDALE	2788 GLENDALE-MILFORD	EVENDALE	OH	45241	0.08	0.028	0.108	0	0	0	0.108
CPJ TECHNOLOGIES	200 TANNER DR	TAYLORS	SC	29687	0.0395	0.0685	0.108	0		0	0.108
DELTA LABORATORIES INC	3710 W COUNTY RD 326	OCALA	FL	34475	0.107	0	0.107	0	0	0	0.107
KEMIRA WATER SOLUTIONS INC	1 CYANAMID RD	MOBILE	AL	36610	0.018	0.0885	0.1065	0	0	0	0.1065
PILOT CHEMICAL CO	11623 N HOUSTON ROSSL	HOUSTON	TX	77086	0.105	0.001	0.106	0.0005		0	0.1065
SHERWIN-WILLIAMS CO	636 E 40TH ST	HOLLAND	MI	49423	0.1045	0.0015	0.106	0	0	0	0.106
BENJAMIN MOORE & CO PELL CITY	109 BAMBERG DR	PELL CITY	AL	35125	0.1038	0.00045	0.10425	0	0	0	0.10425
NEXEO SOLUTIONS LLC MIAMI	200 NE 181ST ST	MIAMI	FL	33162	0.0755	0.0265	0.102	0		0	0.102
HERCULES INC KENEDY TEXAS	ONE MILL ST	KENEDY	TX	78119	0.06448	0.0364755	0.1009555	0		0	0.1009555
NEXEO SOLUTIONS LLC CARSON	20915 S WILMINGTON AVE	CARSON	CA	90810	0.0905	0.0095	0.1	0		0	0.1
ROCKLINE INDUSTRIES	1113 MARYLAND AVE	SHEBOYGAN	WI	53081	0.0995	0	0.0995	0		0	0.0995
CAROLINA SOLVENTS INC	2274 1ST ST SE	HICKORY	NC	28602	0.092	0.0025	0.0945	0.0025	0	0	0.097
AKZO NOBEL COATINGS INC	1000 INDUSTRIAL PARK DR	CLINTON	MS	39056	0.0945	0	0.0945	0	0	0	0.0945
ROHM & HAAS ELECTRONIC MATERIA LS LLC	455 FOREST ST	MARLBOROUGH	MA	01752	0.0025	0.0025	0.005	0		0.0855	0.0905
TWINCO ROMAX	3100 W MILL RD	MILWAUKEE	WI	53209	0.0885	0.002	0.0905	0		0	0.0905
WATSON LABORATORIES INC	575, 577, 579 CHIPETA WAY	SALT LAKE CITY	UT	84108	0.09024	0	0.09024	0		0	0.09024
STEELSCAPE INC RANCHO	11200 ARROW RT	RANCHO CUCAMON	CA	91730	0.00313	0.084505	0.087635	0	0	1.38778E-17	0.087635
MRCG-KRAFTMAID P3	150 GRAND VALLEY AVE	ORWELL	OH	44076	0.0055	0.0645	0.07	0	0	0.0175	0.0875
PLASTI-KOTE INC	1000 LAKE RD	MEDINA	OH	44258	0.0635	0.023	0.0865	0	0	0	0.0865

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
NEXEO SOLUTIONS LLC	5420 SPEAKER RD	KANSAS CITY	KS	66106	0.078	0.008	0.086	0	0	0	0.086
CE BRADLEY LABORATORIES INC	55 BENNETT DR	BRATTLEBORO	VT	05301	0.0845	0	0.0845	0	0	0	0.0845
OLDCASTLE BUILDING ENVELOPE - TENNESSEE FACILITY	920 POTTERTOWN RD	MIDWAY	TN	37809	0	0.0845	0.0845	0	0	0	0.0845
NEXEO SOLUTIONS LLC	400 MAIN ST	TEWKSBURY	MA	01876	0.0755	0.0075	0.083	0	0	0	0.083
EXXONMOBIL CHEMICAL BATON ROUGE CHEMICAL PLANT	4999 SCENIC HWY	BATON ROUGE	LA	70805	0.032	0	0.032	0.05	0	0	0.082
AKZO NOBEL PAINTS PUERTO RICO LLC	65TH INFANTRY AVE KM. 1	CAROLINA	PR	00985	0.047	0.034845	0.081845	0		0	0.081845
ATHEA LABORATORIES INC	7855 N FAULKNER RD	MILWAUKEE	WI	53224	0.0816	0.00006	0.08166	0		0	0.08166
UNIVAR USA INC ROMULUS BRANCH	13395 HURON RIVER DR	ROMULUS	MI	48174	0.034	0.0465	0.0805	0	0	0	0.0805
SOUTH FLORIDA MATERIALS CORP DBA VECENERGY-PORT EVERGLADES	1200 SE 32ND ST	FT LAUDERDALE	FL	33316	0.078	0	0.078	0		0	0.078
LUBRIZOL	9550 W 55TH ST	MC COOK	IL	60525	0	0.0745	0.0745	0		0	0.0745
SUPERIOR SOLVENTS & CHEMICALS	4211 BRAMERS LN	LOUISVILLE	KY	40216	0.0035	0	0.0035	0	0	0.066175	0.069675
PPG INDUSTRIES OHIO INC - DELAWARE	760 PITTSBURGH DR	DELAWARE	OH	43015	0.03892	0.0298	0.06872	0		0	0.06872
PROCTER & GAMBLE HAIR CARE LLC	2200 LOWER MUSCATINE R	IOWA CITY	IA	52240	0.0205	0.009	0.0295	0		0.0375	0.067
MATTHEWS INTERNATIONAL CORP	101 FAIRVIEW AVE	PITTSBURGH	PA	15238	0.0515	0.0155	0.067	0	0	0	0.067
PLAZE INC	105 BOLTE LN	SAINT CLAIR	MO	63077	0.066	0	0.066	0	0	0	0.066
WHITFORD CORP	47 PARK AVE	ELVERSON	PA	19520	0.062295	0.00328	0.065575	0	0	0	0.065575
KARCHER NORTH AMERICA PROCHEM	325 S PRICE RD	CHANDLER	AZ	85224	0.0655	0	0.0655	0		0	0.0655
IMPERIAL PAINT CO INC	2526 NW YEON AVE	PORTLAND	OR	97210	0	0.0635	0.0635	0		0	0.0635
NEXEO SOLUTIONS LLC FAIRFIELD	2461 CROCKER CIR	FAIRFIELD	CA	94533	0.0615	0.001	0.0625	0	0	0	0.0625
VALVOLINE	720 VAIDEN DR	HERNANDO	MS	38632	0.017	0.0445	0.0615	0		0	0.0615
MAXIM INTEGRATED PRODUCTS INC	3725 N FIRST ST	SAN JOSE	CA	95134	0	0.0615	0.0615	0	0	0	0.0615
VEOLIA ES TECHNICAL SOLUTIONS LLC	125 FACTORY LN	MIDDLESEX	NJ	08846	0.045	0.0145	0.0595	0		0.001	0.0605
ADCO CLEANING PRODUCTS LLC	900 W MAIN ST	SEDALIA	MO	65301	0.0195	0.041	0.0605	0	0	0	0.0605
ABC COMPOUNDING CO OF TEXAS INC	1102 AVE J E	GRAND PRAIRIE	TX	75050	0.0025	0.0575	0.06	0	0	0	0.06
KAY CHEMICAL CO	8300 CAPITAL DR	GREENSBORO	NC	27409	0.011	0.0485	0.0595	0		0	0.0595
CLOROX PRODUCTS MANUFACTURING CO	2600 HUNTINGTON DR	FAIRFIELD	CA	94533	0.0585	0.0005	0.059	0		0	0.059
NPA COATINGS INC	11120 BEREA RD	CLEVELAND	OH	44102	0	0.0585	0.0585	0	0	0	0.0585
MINUTEMAN INTERNATIONAL MULTI-CLEAN DIV	600 CARDIGAN RD	SHOREVIEW	MN	55126	0.056	0.0025	0.0585	0		0	0.0585
FRANKLIN INTERNATIONAL	2020 BRUCK ST	COLUMBUS	OH	43207	0.0055	0.052	0.0575	0		0	0.0575

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
MRCG-KRAFTMAID P1	16052 INDUSTRIAL PKWY	MIDDLEFIELD	OH	44062	0	0.047	0.047	0	0	0.01	0.057
ECOLAB INC	942 BAKER RD	MARTINSBURG	WV	25405	0.0415	0.0145	0.056	0		0	0.056
ECOLAB INC	18383 E RAILROAD ST	CITY OF INDUSTRY	CA	91748	0.0195	0.0355	0.055	0		0	0.055
CLEVELAND STEEL CONTAINER - KILGORE	5005 ELDER LAKE RD	KILGORE	TX	75662	0.0025	0.052	0.0545	0	0	0	0.0545
HARLEY-DAVIDSON MOTOR CO OPERATIONS INC	1425 EDEN RD	YORK	PA	17402	0.007	0.0475	0.0545	0		0	0.0545
RECKITT BENCKISER	799 RT 206 & HILLSBOROU	HILLSBOROUGH	NJ	08844	0.0445	0.01	0.0545	0		0	0.0545
VALSPAR SAMUEL CABOT DIV	100 HALE ST	NEWBURYPORT	MA	01950	0.0505	0.002	0.0525	0	0	0	0.0525
CONOCOPHILLIPS PONCA CITY REFINERY	1000 S PINE ST	PONCA CITY	OK	74602	0.0025	0.0495	0.052	0	0	0	0.052
AKZO NOBEL COATINGS INC	1660 CROSS ST SE	SALEM	OR	97302	0.0275	0.0244	0.0519	0		0	0.0519
HUNTSMAN ADVANCED MATERIALS AMERICAS INC	555 HUNTSMAN RD	MC INTOSH	AL	36553	0.0146	0.03655	0.05115	0		0	0.05115
ECOLAB INC	3001 CHANNAHON RD	JOLIET	IL	60436	0.0375	0.013	0.0505	0		0	0.0505
SHERWIN-WILLIAMS CO	630 E 13TH	ANDOVER	KS	67002	0.036	0.0145	0.0505	0	0	0	0.0505
UNIVAR USA INC - TOLEDO SOUTH BRANCH	4051 S AVE	TOLEDO	OH	43615	0.01	0.0405	0.0505	0		0	0.0505
CONOCOPHILLIPS OKLAHOMA CITY PRODUCTS TERMINAL	4700 NE 10TH ST	OKLAHOMA CITY	OK	73117	0.0025	0.0475	0.05	0		0	0.05
DYSTAR LP	209 WATLINGTON INDUSTR	REIDSVILLE	NC	27320	0.035	0.015	0.05	0		0	0.05
HENKEL CORP	137 FOLLY MILL RD	SEABROOK	NH	03874	0.0025	0.04705	0.04955	0	0	0	0.04955
CUSTOM SYNTHESIS LLC	1704 DENVER RD	ANDERSON	SC	29625	0.0025	0.047	0.0495	0	0	0	0.0495
BARTON SOLVENTS INC BETTENDORF	204 36TH ST	BETTENDORF	IA	52722	0.0115	0.0375	0.049	0		0	0.049
SHERWIN-WILLIAMS CO	113 STAGE COACH TRAIL	GREENSBORO	NC	27409	0.015	0.034	0.049	0	0	0	0.049
ELECTRONICS FOR IMAGING INC	1260 JAMES L HART PKWY	YPSILANTI	MI	48197	0.0485	0	0.0485	0	0	0	0.0485
BRENNTAG SOUTHEAST INC	2000 E PETTIGREW ST	DURHAM	NC	27703	0.029	0.017	0.046	0	0	0	0.046
DIC IMAGING PRODUCTS USA LLC	7335 S 10TH ST	OAK CREEK	WI	53154	0.0045	0.0415	0.046	0	0	0	0.046
GRAPHIC CONTROLS LLC	400 EXCHANGE ST	BUFFALO	NY	14204	0.046	0	0.046	0		0	0.046
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	901 W UNION ST	MONTEBELLO	CA	90640	0.037	0.007	0.044	0	0	0	0.044
CHAMPION TECHNOLOGIES INC	3130 FM 521	FRESNO	TX	77545	0.043	0	0.043	0	0	0	0.043
BRENNTAG PACIFIC INC	10747 PATTERSON PL	SANTA FE SPRINGS	CA	90670	0.038	0.0045	0.0425	0	0	0	0.0425
CHAMPION TECHNOLOGIES INC	1816 S JACKSON ST	MAGNOLIA	AR	71753	0.042	0.00005	0.04205	0	0	0	0.04205
ECOLAB INC	261 HWY 155 S	MC DONOUGH	GA	30253	0.0075	0.0335	0.041	0		0	0.041
ENGINEERED POLYMER SOLUTIONS INC D/B/A VALSPAR COATINGS	2000 WESTHALL ST	PITTSBURGH	PA	15233	0.0315	0.009	0.0405	0	0	0	0.0405

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
VALERO THREE RIVERS REFINERY	301 LEROY ST	THREE RIVERS	TX	78071	0.0395	0	0.0395	0	0	0	0.0395
BIOLAB INC	1735 DOGWOOD DR	CONYERS	GA	30012	0.03915	0	0.03915	0	0	0	0.03915
HANNA STEEL CORP	220 HANNA DR	PEKIN	IL	61554	0.0025	0.0355	0.038	0	0	0	0.038
CONOCOPHILLIPS CO EAST ST LOUIS TERMINAL	3300 MISSISSIPPI AVE	CAHOKIA	IL	62206	0	0.036	0.036	0	0.002	0	0.038
BRENNTAG SOUTHWEST INC SAND SPRINGS	206 E MORROW RD	SAND SPRINGS	OK	74063	0.0175	0.02	0.0375	0	0	0	0.0375
LUBRIZOL CORP	29400 LAKELAND BLVD	WICKLIFFE	OH	44092	0.0365	0	0.0365	0	0	0	0.0365
CHAMPION TECHNOLOGIES INC	710 MARVIN A SMITH BLVD	LONGVIEW	TX	75662	0.035	0.0015	0.0365	0	0	0	0.0365
HARCROS CHEMICALS INC	4606 NEW W DR	PASADENA	TX	77507	0.0125	0.0215	0.034	0	0.0025	0	0.0365
KWAL-HOWELLS INC (DBA KWAL PAINT INC)	2430 ALBERT BROADFOOT	BONHAM	TX	75418	0	0.0355	0.0355	0	0	0	0.0355
BARTON SOLVENTS INC DES MOINES	1970 NE BROADWAY	DES MOINES	IA	50313	0.0065	0.029	0.0355	0	0	0	0.0355
BARTON SOLVENTS INC KANSAS CITY	901 S 66TH TERRACE	KANSAS CITY	KS	66111	0.01	0.025	0.035	0	0	0	0.035
BRENNTAG NORTHEAST INC	81 W HULLER LN	READING	PA	19605	0.0177	0.0172	0.0349	0	0	0	0.0349
GEORGIA-PACIFIC CHEMICALS LLC	1429 E LUFKIN AVE	LUFKIN	TX	75901	0.032	0.002	0.034	0		0	0.034
DAUBERT CHEMICAL CO	4700 S CENTRAL AVE	CHICAGO	IL	60638	0.01723	0.015975	0.033205	0	0	0	0.033205
SI GROUP INC	1000 MAIN ST	ROTTERDAM JUNC	NY	12150	0	0.02354	0.02354	0.0095	0	0	0.03304
NEXEO SOLUTIONS LLC TAMPA	5125 W HANNA AVE	TAMPA	FL	33634	0.0015	0.0315	0.033	0	0	0	0.033
BOEING COMMERCIAL AIRPLANE GROUP PLANT 2 (PART)	7755 E MARGINAL WAY S	SEATTLE	WA	98108	0.0305	0	0.0305	0	0.0025	3.46945E-18	0.033
NEXEO SOLUTIONS LLC HOUSTON	8901 OLD GALVESTON RD	HOUSTON	TX	77034	0.005	0.0265	0.0315	0	0	0	0.0315
HENKEL CORP	421 LONDON RD	DELAWARE	OH	43015	0	0.031	0.031	0		0	0.031
BAKER PETROLITE CORP	9100 W 21ST ST	SAND SPRINGS	OK	74063	0.01406	0.00076	0.01482	0	0	0.01577	0.03059
VALERO REFINING CO - TENNESSEE LLC	2385 RIVERPORT RD	MEMPHIS	TN	38109	0.03	0	0.03	0	0	0	0.03
UNIVAR USA INC MORRISVILLE BRANCH	200 DEAN SIEVERS PL	MORRISVILLE	PA	19067	0.0135	0.0165	0.03	0	0	0	0.03
ARKEMA COATINGS & RESINS	13511 MAIN ST	LEMONT	IL	60439	0.0075	0.0225	0.03	0	0	0	0.03
RICHARDSAPEX INC	4202-24 MAIN ST	PHILADELPHIA	PA	19127	0.021111	0	0.021111	0		0.0080495	0.0291605
HEXPOL COMPOUNDING BURTON RUBBER PROCESSING	HWY 353 S	JONESBOROUGH	TN	37659	0	0.0275	0.0275	0	0	0	0.0275
BARTON SOLVENTS INC WEST BEND	800 RAIL WAY	WEST BEND	WI	53095	0.0025	0.024	0.0265	0	0	0	0.0265
SHERWIN-WILLIAMS CO	1025 HOWARD ST	GREENSBORO	NC	27403	0.0055	0.021	0.0265	0		0	0.0265
TYCO FIRE SUPPRESSION & BUILDING PRODUCTS	1 STANTON ST	MARINETTE	WI	54143	0.002595	0.02347	0.026065	0		3.46945E-18	0.026065
BRENNTAG SOUTHWEST INC LONG VIEW	610 FISHER RD	LONGVIEW	TX	75604	0.014	0.012	0.026	0		0	0.026

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
PLAZE INC	1000 INTEGRAM DR	PACIFIC	MO	63069	0.025	0	0.025	0	0	0	0.025
BARTON SOLVENTS INC COUNCIL BLUFFS	2135 9TH AVE	COUNCIL BLUFFS	IA	51502	0.0015	0.0215	0.023	0	0	0	0.023
SHERWIN-WILLIAMS CO	2121 NEW WORLD DR	COLUMBUS	OH	43207	0.008	0.0135	0.0215	0	0	0	0.0215
SHERWIN-WILLIAMS CO	11700 S COTTAGE GROVE	CHICAGO	IL	60628	0	0	0	0	0	0.0215	0.0215
ECOLAB INC	2305 SHERWIN ST	GARLAND	TX	75041	0.0105	0.01	0.0205	0		0	0.0205
HERITAGE-WTI INC	1250 ST GEORGE ST	EAST LIVERPOOL	OH	43920	0.00495	0.00006	0.00501	0		0.015	0.02001
3M CO - SPRINGFIELD	3211 E CHESTNUT EXPY	SPRINGFIELD	MO	65802	0	0.02	0.02	0	0	0	0.02
AFTON CHEMICAL CORP	501 MONSANTO AVE	SAUGET	IL	62201	0.005	0.015	0.02	0		0	0.02
EXXONMOBIL OIL CORP - TORRANCE REFINERY	3700 W 190TH ST	TORRANCE	CA	90509	0.02	0	0.02	0		0	0.02
PRIDE SOLVENTS & CHEMICAL CO OF NEW JERSEY	211 RANDOLPH AVE	AVENEL	NJ	07001	0.005	0.0145	0.0195	0	0	0	0.0195
HEXPOL COMPOUNDING BURTON RUBBER PROCESSING	14330 KINSMAN RD	BURTON	OH	44021	0	0.0195	0.0195	0	0	0	0.0195
BARTON SOLVENTS INC WICHITA	201 S CEDAR	VALLEY CENTER	KS	67147	0.01	0.0095	0.0195	0	0	0	0.0195
UNIVAR USA INC JACKSONVILLE FA CILITY	155 ELLIS RD S	JACKSONVILLE	FL	32254	0.015	0.0045	0.0195	0	0	0	0.0195
ZEP COMMERCIAL	350 JOE FRANK HARRIS PK	EMERSON	GA	30137	0	0.019	0.019	0	0	0	0.019
VALSPAR REFINISH	210 CROSBY ST	PICAYUNE	MS	39466	0	0.019	0.019	0	0	0	0.019
VEOLIA ES TECHNICAL SOLUTIONS LLC	7 MOBILE AVE	SAUGET	IL	62201	0.0015	0.002	0.0035	0	0	0.0155	0.019
BENJAMIN MOORE & CO JOHNSTOWN	UNION AVE EXTENSION	JOHNSTOWN	NY	12095	0.01885	0.0000175	0.0188675	0	0	0	0.0188675
VEYANCE TECHNOLOGIES INC	4021 N 56TH ST	LINCOLN	NE	68504	0.00000135	0.00000005	0.0000014	0		0.0179517	0.0179531
PRC-DESOTO INTERNATIONAL INC	11601 UNITED ST	MOJAVE	CA	93501	0.0075	0.0085	0.016	0	0	0	0.016
PLAZE INC	113 BOLTE LN	SAINT CLAIR	MO	63077	0.016	0	0.016	0	0	0	0.016
DUPONT PARLIN PLANT	CHEESEQUAKE RD	PARLIN	NJ	08859	0.002	0.0135	0.0155	0	0	0	0.0155
CLEARWATER INTERNATIONAL LLC	100 INDUSTRIAL DR (BLDG	LEETSDALE	PA	15056	0.006	0.000085	0.006085	0		0.0092	0.015285
Z TECHNOLOGIES CORP	26500 CAPITOL AVE	REDFORD	MI	48239	0	0.0125	0.0125	0	0	0.0025	0.015
SHERWIN-WILLIAMS CO	6795 S MAIN ST	MORROW	GA	30260	0.004	0.0105	0.0145	0	0	0	0.0145
TOYO INK AMERICA LLC	2400 N HARVEY MITCHELL	BRYAN	TX	77807	0.005	0.009	0.014	0	0	0	0.014
INTERSTATE CHEMICAL CO INC	2797 FREEDLAND RD	HERMITAGE	PA	16148	0.003	0.011	0.014	0		0	0.014
RUSTOLEUM CORP	7850 OHIO RIVER RD	LESAGE	WV	25537	0.001	0.0125	0.0135	0	0	0	0.0135
AIR PRODUCTS PERFORMANCE MANUFACTURING INC	337 VINCENT DR	MILTON	WI	53563	0.0025	0.011	0.0135	0		0	0.0135
DAVIES IMPERIAL COATINGS INC	1275 STATE ST	HAMMOND	IN	46320	0.013	0	0.013	0		0	0.013
VARN INTERNATIONAL	1333 N KIRK RD	BATAVIA	IL	60510	0.008	0.0025	0.0105	0.0025	0	0	0.013

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
GOODWIN CO	700 PROGRESS CENTER A	LAWRENCEVILLE	GA	30043	0.01091	0.002	0.01291	0		0	0.01291
PRIDE SOLVENT & CHEMICAL CO OF NY INC	6 LONG ISLAND AVE	HOLTSVILLE	NY	11742	0.003	0.0095	0.0125	0	0	0	0.0125
SHERWIN-WILLIAMS CO	2325 HOLLINS FERRY RD	BALTIMORE	MD	21230	0.0015	0.0105	0.012	0	0	0	0.012
NEXEO SOLUTIONS LLC TWINSBURG ENTERPRISE	1842 ENTERPRISE PKWY	TWINSBURG	OH	44087	0.002	0.0095	0.0115	0	0	0	0.0115
DSM DESOTECH INC	1101 HWY 27 S	STANLEY	NC	28164	0	0.0112	0.0112	0	0	0	0.0112
RESEARCH SOLUTIONS GROUP INC	133 BAIN DR	LA VERGNE	TN	37086	0.0003	0.01087	0.01117	0		0	0.01117
TRUE VALUE MANUFACTURING	201 JANDUS RD	CARY	IL	60013	0.0025	0.0085	0.011	0	0	0	0.011
DUPONT FRONT ROYAL PLANT	7961 WINCHESTER RD	FRONT ROYAL	VA	22630	0.001	0.01	0.011	0	0	0	0.011
SHERWIN-WILLIAMS CO	26300 FARGO AVE	BEDFORD HEIGHTS	OH	44146	0.0005	0.0015	0.002	0	0	0.009	0.011
HYDRITE CHEMICAL CO	2545 BOND ST	UNIVERSITY PARK	IL	60466	0	0.011	0.011	0	0	0	0.011
GIANT CEMENT CO	HWY 453 & I-26 (654 JUDGE	HARLEYVILLE	SC	29448	0.001	0.001	0.002	0	0	0.0085	0.0105
FERRO CORP WALTON HILLS OPERATIONS	7050 KRICK RD	WALTON HILLS	OH	44146	0.0035	0.0005	0.004	0		0.0065	0.0105
TAKASAGO INTERNATIONAL CORP (USA)	267 UNION ST	NORTHVALE	NJ	07647	0.01	0.0005	0.0105	0		0	0.0105
VOGEL PAINT & WAX CO INC	1020 ALBANY PL SE	ORANGE CITY	IA	51041	0.0025	0.008	0.0105	0	0	0	0.0105
HOLLY OAK CHEMICAL INC	101 CASE ST	FOUNTAIN INN	SC	29644	0.010345	0	0.010345	0		0	0.010345
SHERWIN-WILLIAMS CO	12401 INDUSTRIAL BLVD	VICTORVILLE	CA	92392	0.0045	0.0055	0.01	0	0	0	0.01
UNIVAR USA INC NORCROSS FACILI TY	2145 SKYLAND CT	NORCROSS	GA	30071	0.0035	0.006	0.0095	0		0	0.0095
HUBBARD-HALL INC	563 S LEONARD ST	WATERBURY	CT	06708	0.0005	0.009	0.0095	0		0	0.0095
CARBOLINE CO	900 OPELOUSAS ST	LAKE CHARLES	LA	70601	0	0.0095	0.0095	0	0	0	0.0095
ETHOX CHEMICALS LLC	1801 PERIMETER RD	GREENVILLE	SC	29605	0.0025	0.0065	0.009	0		0	0.009
BUCKLEY OIL CO	1809 ROCK ISLAND ST	DALLAS	TX	75207	0.007	0.002	0.009	0	0	0	0.009
UNIVAR USA INC	7050 W 71ST ST	BEDFORD PARK	IL	60499	0.00472	0.00415	0.00887	0	0	0	0.00887
BERRIDGE MANUFACTURING CO	6515 FRATT RD	SAN ANTONIO	TX	78218	0	0.0085	0.0085	0	0	0	0.0085
GACO WESTERN	1245 CHAPMAN DR	WAUKESHA	WI	53186	0.0085	0	0.0085	0	0	0	0.0085
CHEMOL CO INC	2300 RANDOLPH AVE	GREENSBORO	NC	27406	0	0.00812	0.00812	0		0	0.00812
INTERSTATE CHEMICAL CO INC	23247 W EAMES ST	CHANNAHON	IL	60410	0.002	0.0055	0.0075	0		0	0.0075
CLEAN HARBORS ENVIRONMENTAL SERVICES INC	2247 S HWY 71	KIMBALL	NE	69145	0.005	0.0025	0.0075	0	0	0	0.0075
UNIVAR USA INC NEW BERLIN	2400 S 170TH ST	NEW BERLIN	WI	53151	0.00505	0.00197	0.00702	0	0	0	0.00702
FORD MOTOR CO DEARBORN TOOL & DIE PLANT	3001 MILLER RD	DEARBORN	MI	48121	0.007	0	0.007	0		0	0.007
VERSO PAPER HOLDINGS LLC	ANDROSCOGGIN MILL RILE	JAY	ME	04239	0.0025	0	0.0025	0.0035	0	0.0005	0.0065

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
PROCTER & GAMBLE CO GPDF	5348 VINE ST	CINCINNATI	OH	45217	0.0065	0	0.0065	0	0	0	0.0065
UNIVAR USA INC TAMPA FACILITY	6049 OLD 41A HWY	TAMPA	FL	33619	0.002	0.0045	0.0065	0	0	0	0.0065
UNIVAR USA INC DORAVILLE FACILITY	1 ALCHEMY PL	DORAVILLE	GA	30362	0.003	0.0035	0.0065	0		0	0.0065
SHERWIN-WILLIAMS CO	404 E MALLORY AVE	MEMPHIS	TN	38109	0.002	0.0045	0.0065	0	0	0	0.0065
PPG ARCHITECURAL COATINGS HOUSTON	3530 LANG RD	HOUSTON	TX	77092	0.0025	0.004	0.0065	0	0	0	0.0065
IGM RESINS CHARLOTTE	3300 WESTINGHOUSE BLV	CHARLOTTE	NC	28273	0.0065	0	0.0065	0		0	0.0065
CONOCOCPHILLIPS CO WICHITA TERMINAL	2400 E 37TH ST N	WICHITA	KS	67219	0	0.00648	0.00648	0	0	0	0.00648
BRULIN CORP	2920 DR ANDREW J BROW	INDIANAPOLIS	IN	46205	0.002642	0.003495	0.006137	0		0	0.006137
PROCTER & GAMBLE MANUFACTURING CO	1900 KANSAS AVE	KANSAS CITY	KS	66105	0.005905	0.000205	0.00611	0		0	0.00611
NEW DAWN MANUFACTURING CO	16001 TRADE ZONE AVE	UPPER MARLBORO	MD	20774	0.0060048	0	0.0060048	0		0	0.0060048
UNIVAR USA INC JAMESTOWN FACILITY	108 OAKDALE RD	JAMESTOWN	NC	27282	0.003	0.003	0.006	0		0	0.006
UNIVAR USA INC	2600 S GARFIELD AVE	COMMERCE	CA	90040	0.006	0	0.006	0	0	0	0.006
KING INDUSTRIES INC	SCIENCE RD	NORWALK	CT	06852	0.0031	0.00275	0.00585	0		0	0.00585
LANCO MANUFACTURING CORP	URB.APONTE #5	SAN LORENZO	PR	00754	0.0056	0.00003	0.00563	0		0	0.00563
DIVERSEY INC - WAXDALE FACILITY	8311 16TH ST	STURTEVANT	WI	53177	0.00025	0.005285	0.005535	0		0	0.005535
CHEMTEX LABORATORIES INC	2725 ARMENTROUT DR	CONCORD	NC	28025	0.0055	0	0.0055	0		0	0.0055
OMNIUM	1280 IMPERIAL RD	HAMPTON	IA	50441	0.002	0.0035	0.0055	0	0	0	0.0055
CALLAHAN CHEMICAL CO	200 INDUSTRIAL AVE	RIDGEFIELD PARK	NJ	07660	0.0025	0.003	0.0055	0	0	0	0.0055
INTERNATIONAL PAINT LLC	640 N ROCKY RIVER DR	BEREA	OH	44017	0.0025	0.0025	0.005	0	0	0	0.005
CENTRAL SOLUTIONS INC	401 FUNSTON RD	KANSAS CITY	KS	66115	0	0	0	0	0.005	0	0.005
SARTOMER USA LLC	601 TIGHTSQUEEZE INDUS	CHATHAM	VA	24531	0.0025	0.0025	0.005	0		0	0.005
ANDERSON DEVELOPMENT CO	1415 E MICHIGAN ST	ADRIAN	MI	49221	0.0025	0.0025	0.005	0	0	0	0.005
CUSTOM CHEMICAL FORMULATORS INC	8707 MILLERGROVE DR	SANTA FE SPRINGS	CA	90670	0.005	0	0.005	0		0	0.005
GE WATER & PROCESS TECHNOLOGIES	333 S LOMBARD RD	ADDISON	IL	60101	0.0025	0.0025	0.005	0		0	0.005
CR BRANDS INC	141 VENTURE BLVD	SPARTANBURG	SC	29306	0.0025	0.0025	0.005	0		0	0.005
ACTON TECHNOLOGIES INC	100 THOMPSON ST	PITTSTON	PA	18640	0.005	0	0.005	0		0	0.005
CLOROX PRODUCTS MANUFACTURING CO	17 LAKE MIRROR RD	FOREST PARK	GA	30297	0.0025	0.0025	0.005	0		0	0.005
GE WATER & PROCESS TECHNOLOGIES	2118 REISER AVE SE	NEW PHILADELPHIA	OH	44663	0.0025	0.0025	0.005	0		0	0.005
C P INC	196 S WATER	CONNERSVILLE	IN	47331	0.0025	0.0025	0.005	0	0	0	0.005
INDEPENDENT INK INC	14705 S AVALON BLVD	GARDENA	CA	90248	0.0025	0.0025	0.005	0		0	0.005

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Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
OAKITE PRODUCTS INC (AKA CHEMETALL OAKITE)	16961 KNOTT AVE	LA MIRADA	CA	90638	0.0025	0.0025	0.005	0		0	0.005
PVS NOLWOOD CHEMICALS INC	9000 HUBBELL AVE	DETROIT	MI	48228	0.0025	0.0025	0.005	0	0	0	0.005
SARTOMER USA LLC	610 S BOLMAR ST	WEST CHESTER	PA	19382	0.0025	0.0025	0.005	0		0	0.005
GOODWIN CO	12361 MONARCH ST	GARDEN GROVE	CA	92841	0.004	0.001	0.005	0		0	0.005
BRAIN POWER INC	4470 SW 74TH AVE	MIAMI	FL	33155	0.0025	0.0025	0.005	0		0	0.005
REICHHOLD INC - AZUSA PLANT	237 S MOTOR AVE	AZUSA	CA	91702	0.0025	0.0025	0.005	0	0	0	0.005
EDCO PRODUCTS INC	8700 EXCELSIOR BLVD	HOPKINS	MN	55343	0	0.0045	0.0045	0	0	0	0.0045
EVONIK DEGUSSA CORP	4201 DEGUSSA RD	THEODORE	AL	36582	0.004	0.0005	0.0045	0	0	0	0.0045
LUBRIZOL CORP PAINESVIL LE PLANT	155 FREEDOM RD	PAINESVILLE	OH	44077	0.004	0.0005	0.0045	0		0	0.0045
RESEARCH SOLUTIONS GROUP INC	402 INDUSTRIAL PARK DR	PELHAM	AL	35124	0.00241	0.00184	0.00425	0	0	0	0.00425
TRANSTAR AUTOBODY TECHNOLOGIES	2040 HEISERMAN DR	BRIGHTON	MI	48114	0.00211	0.00207	0.00418	0	0	0	0.00418
PRESTONE PRODUCTS CORP	250 HALLS MILL RD	FREEHOLD	NJ	07728	0.002	0.002	0.004	0	0	0	0.004
MACDERMID INC	1221 FARROW AVE	FERNDALE	MI	48220	0.00178	0.00196	0.00374	0		0	0.00374
UNIVAR USA INC SANTA FE SPRINGS	13900 CARMENITA RD	SANTA FE SPRINGS	CA	90670	0.0005	0.003	0.0035	0	0	0	0.0035
PENRAY COS INC	1801 ESTES AVE	ELK GROVE VILLAG	IL	60007	0.0005	0.0005	0.001	0.0025		0	0.0035
SHERWIN-WILLIAMS CO	14 INDUSTRIAL PARK	FLORA	IL	62839	0.0015	0.002	0.0035	0	0	0	0.0035
BOEHRINGER INGELHEIM CHEMICALS INC	2820 N NORMANDY DR	PETERSBURG	VA	23805	0.0015	0.002	0.0035	0	0	0	0.0035
CLARIANT CORP CLEAR LAKE PLANT	9502 BAYPORT BLVD - ETO	PASADENA	TX	77507	0.0031	0	0.0031	0		0	0.0031
HENTZEN COATINGS,INC	6937 W MILL RD	MILWAUKEE	WI	53218	0.00125	0.00185	0.0031	0	0	0	0.0031
SUN CHEMICAL CORP	135 W LAKE ST	NORTHLAKE	IL	60164	0.0005	0.0025	0.003	0	0	0	0.003
AVANTOR PERFORMANCE MATERIALS	600 N BROAD ST	PHILLIPSBURG	NJ	08865	0.003	0	0.003	0	0	0	0.003
CONOCOPHILLIPS MT VERNON PRODUCTS TERMINAL	15138 HWY 96	MOUNT VERNON	MO	65712	0	0.003	0.003	0	0	0	0.003
BRAINERD CHEMICAL CO INC	1200 N PEORIA	TULSA	OK	74147	0	0.0025	0.0025	0		0	0.0025
ECP INC WOODRIDGE	11210 KATHERINE'S CROS	WOODRIDGE	IL	60517	0.0025	0	0.0025	0		0	0.0025
WYNNEWOOD REFINING CO	906 S POWELL	WYNNEWOOD	OK	73098	0	0.0025	0.0025	0	0	0	0.0025
US DOD DFSP VERONA	5449 W MAIN ST	VERONA	NY	13478	0.0025	0	0.0025	0	0	0	0.0025
UNION SPECIALTIES INC	3 MALCOLM HOYT DR	NEWBURYPORT	MA	01950	0.0005	0.002	0.0025	0	0	0	0.0025
RENESSENZ LLC JACKSONVILLE	601 CRESTWOOD ST	JACKSONVILLE	FL	32208	0.0025	0	0.0025	0	0	0	0.0025
NOV TUBOSCOPE HOLMES ROAD	2811 HOLMES RD	HOUSTON	TX	77051	0.0025	0	0.0025	0	0	0	0.0025
NIACET CORP	400 47TH ST	NIAGARA FALLS	NY	14304	0.0025	0	0.0025	0	0	0	0.0025

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
KEYSTONE CEMENT CO	RT 329	BATH	PA	18014	0	0.0025	0.0025	0	0	0	0.0025
HERCULES INC	1111 HERCULES RD	HOPEWELL	VA	23860	0.0025	0	0.0025	0		0	0.0025
HARWICK STANDARD DISTRIBUTION CORP	60 S SEIBERLING ST	AKRON	OH	44305	0.0025	0	0.0025	0		0	0.0025
A BRITE CO	3217 WOOD DR	GARLAND	TX	75041	0.0025	0	0.0025	0		0	0.0025
FINGER LAKES CHEMICAL INC	418-424 ST PAUL ST	ROCHESTER	NY	14605	0.0025	0	0.0025	0		0	0.0025
ATOTECH USA	1750 OVERVIEW DR	ROCK HILL	SC	29730	0.0025	0	0.0025	0	0	0	0.0025
DUPONT EKC TECHNOLOGY	2520 BARRINGTON CT	HAYWARD	CA	94545	0.0005	0.002	0.0025	0		0	0.0025
CR BRANDS INC	230 OLD CONVERSE RD	SPARTANBURG	SC	29307	0.0025	0	0.0025	0		0	0.0025
CHEMICAL SOLVENTS INC--DENISON FACILITY	1010 OLD DENISON AVE	CLEVELAND	OH	44109	0.0025	0	0.0025	0	0	0	0.0025
BRENNTAG SOUTHEAST INC	11750 FRUEHAUF DR	CHARLOTTE	NC	28273	0.001	0.0015	0.0025	0	0	0	0.0025
FISHER SCIENTIFIC INTERNATIONAL MTN DIAGNOSTICS PLANT	8365 VALLEY PIKE	MIDDLETOWN	VA	22645	0	0.0025	0.0025	0	0	0	0.0025
ASTRO CHEMICALS INC	126 MEMORIAL DR	SPRINGFIELD	MA	01104	0.0015	0.0005	0.002	0	0	0	0.002
CALLAHAN CHEMICAL CO	18 INDUSTRIAL RD	WALPOLE	MA	02081	0.001	0.001	0.002	0	0	0	0.002
FORD MOTOR CO DEARBORN DIVERSIFIED MANUFACTURING	3001 MILLER RD	DEARBORN	MI	48121	0.002	0	0.002	0	0	0	0.002
INTERCOASTAL PAINT CO INC	14029 W HARDY	HOUSTON	TX	77060	0.002	0	0.002	0		0	0.002
MARATHON PETROLEUM CO - SPEEDWAY IN TERMINAL	1304 OLIN AVE	INDIANAPOLIS	IN	46222	0.002	0	0.002	0		0	0.002
GENERAL DYNAMICS ORDNANCE & TACTICAL SYSTEMS GARLAND	1200 N GLENBROOK	GARLAND	TX	75040	0.00199	0.000005	0.001995	0	0	4.33681E-19	0.001995
UNIVAR USA INC - TOLEDO BRANCH	30450 TRACY RD	WALBRIDGE	OH	43465	0.001005	0.000885	0.00189	0		0	0.00189
VOLTAIX LLC	197 MEISTER AVE	BRANCHBURG	NJ	08876	0.0005	0.001	0.0015	0	0	0	0.0015
ROHM & HAAS CHEMICALS LLC	2401 E PRATT BLVD	ELK GROVE VILLAG	IL	60007	0	0.0015	0.0015	0	0	0	0.0015
PENRAY COS INC	440 DENNISTON CT	WHEELING	IL	60090	0.0005	0.0005	0.001	0.0005		0	0.0015
HYDRITE CHEMICAL CO	7300 W BRADLEY RD	MILWAUKEE	WI	53223	0.0005	0.001	0.0015	0		0	0.0015
ENGINEERED POLYMER SOLUTIONS INC	5501 E SLAUSON AVE	CITY OF COMMERC	CA	90040	0	0.0015	0.0015	0	0	0	0.0015
BUCKMAN LABORATORIES INC	1256 N MCLEAN BLVD	MEMPHIS	TN	38108	0	0.0015	0.0015	0		0	0.0015
DYNASOL INC	330 PINE ST	CANTON	MA	02021	0.00145	0	0.00145	0		0	0.00145
BENJAMIN MOORE & CO - NEWARK	134 LISTER AVE	NEWARK	NJ	07105	0.00135	0	0.00135	0	0	0	0.00135
BENJAMIN MOORE & CO - DALLAS	700 W KEARNEY	MESQUITE	TX	75149	0.001315	0.000012	0.001327	0	0	0	0.001327
NORLITE CORP	628 S SARATOGA ST	COHOES	NY	12047	0.00108	0.000205	0.001285	0	0	0	0.001285
CRODA INC	315 CHERRY LN	NEW CASTLE	DE	19720	0.000645	0.0005	0.001145	0		0	0.001145

Table B-3. 2011 Emissions Inventory: Non-Zero Certain Glycol Ether Reported Releases

Facility Name	Address	City	State	Zip Code	Onsite Point Source Emissions (tpy)	Onsite Fugitive Emissions (tpy)	Total Air Emissions (tpy)	Total Releases to Surface Water (tpy)[a]	Total Releases to Soil (tpy)[b]	Total Releases to Other Media (tpy)[c]	Total Emissions (tpy)
FUJIFILM HUNT CHEMICALS USA INC	900 CARNEGIE ST	ROLLING MEADOWS	IL	60008	0.00095	0.00017	0.00112	0		2.1684E-19	0.00112
MANN DISTRIBUTION	3134 POST RD	WARWICK	RI	02886	0.001055	0	0.001055	0		0	0.001055
SINCLAIR WYOMING REFINING CO	100 E LINCOLN AVE	SINCLAIR	WY	82334	0.0005	0.0005	0.001	0	0	0	0.001
SDC TECHNOLOGIES INC	45 PARKER	IRVINE	CA	92618	0.0005	0.0005	0.001	0	0	0	0.001
OMNOVA SOLUTIONS INC	1455 J A COCHRAN BY-PAS	CHESTER	SC	29706	0.000955	0.000025	0.00098	0		0	0.00098
RIKER PRODUCTS INC	4901 STICKNEY AVE	TOLEDO	OH	43612	0.000945	0	0.000945	0	0	0	0.000945
PPG ARCHITECTURAL COATINGS	6804 ENTERPRISE DR	LOUISVILLE	KY	40214	0	0.0007	0.0007	0	0	0	0.0007
LAMBERTI SYNTHESIS USA INC	4001 N HAWTHORNE ST	CHATTANOOGA	TN	37406	0.0005255	0	0.0005255	0	0	0	0.0005255
BP PRODUCTS NORTH AMERICA WHITING	2815 INDIANAPOLIS BLVD	WHITING	IN	46394	0.0005	0	0.0005	0	0	0	0.0005
NATIONAL INDUSTRIAL COATINGS INC DBA NICOAT INC	1600 GLENLAKE AVE	ITASCA	IL	60143	0.0005	0	0.0005	0	0	0	0.0005
NALCO CO	3901 TERRY ST	TEXARKANA	TX	75501	0	0.0005	0.0005	0		0	0.0005
BAKER PETROLITE-RAYNE FACILITY	135 INDUSTRIAL DR	RAYNE	LA	70578	0	0.0005	0.0005	0		0	0.0005
IFF AUGUSTA LTD	3005 INTERNATIONAL BLVD	AUGUSTA	GA	30906	0	0.0004385	0.0004385	0	0	0	0.0004385
PARKER HANNIFIN TECH SEAL DIV	2600 WILCO BLVD	WILSON	NC	27893	0	0.000405	0.000405	0		0	0.000405
GLIDDEN CO	1900 N JOSEY LN	CARROLLTON	TX	75006	0	0.000285	0.000285	0	0	0	0.000285
BAKER PETROLITE KILGORE BLEND PLANT	806 PALUXY ST	KILGORE	TX	75662	0.0001935	0.000079	0.0002725	0	0	0	0.0002725
BAKER PETROLITE CORP	16950 WALLISVILLE RD	HOUSTON	TX	77049	0.000048	0.000171	0.000219	0	0	0	0.000219
CHEMETALL US INC	1610 CLARA ST	JACKSON	MI	49203	0.0000441	0.0001213	0.0001654	0	0	0	0.0001654
BAKER PETROLITE BAYPORT FACILI TY	13200 BAYPARK RD	PASADENA	TX	77507	0	0.0001595	0.0001595	0	0	0	0.0001595
MULTI-COLOR CORP	2281 S US 31	SCOTTSBURG	IN	47170	0	0.000156929	0.000156929	0		0	0.000156929
NALCO CO	125 NALCO WAY/RT 65	ELLWOOD CITY	PA	16117	0.00000224	0.00007	0.00007224	0	0	0	0.00007224
EMERALD SERVICES INC	1825 E ALEXANDER AVE	TACOMA	WA	98421	0	0.00001	0.00001	0	0	0.00002	0.00003
AIR PRODUCTS PERFORMANCE MANUFACTURING INC	474 W 19TH ST	RESERVE	LA	70084	0	0.0000025	0.0000025	0		0	0.0000025

a. Releases to Surface Water reported as "On-Site Releases to Surface Water"
b. Releases to Soil is the sum of reported releases to onsite and offsite releases to land treatment and other land disposal.
c. Releases to other media include reported releases to on-site and offsite groundwater and landfills.
tpy: tons per year

APPENDIX C

Outcome of Screening Procedure for Long-Term Exposures

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	WINSTON-SALEM	North Carolina	27107	172.2405	Retain
	WILLIAMSBURG	Virginia	23185	167	Retain
	FINDLAY	Ohio	45840	154.5	Retain
	FREMONT	Ohio	43420	120.081	Retain
	OWATONNA	Minnesota	55060	117.0605	Retain
	AURORA	Indiana	47001	107.6265	Retain
	WEIRTON	West Virginia	26062	101.1455	Retain
	BISHOPVILLE	South Carolina	29010	96.4635	Retain
	SAINT PAUL	Minnesota	55107	93.5265	Retain
	DEARBORN	Michigan	48121	88.8	Retain
	OLIVE BRANCH	Mississippi	38654	88.089	Retain
	KENT	Washington	98032	87.962	Retain
	REIDSVILLE	North Carolina	27320	77	Retain
	LAWRENCE	Massachusetts	01843	72.1775	Retain
	GREER	South Carolina	29651	70.632	Retain
	COLUMBUS	Ohio	43213	70	Retain
	BRADLEY	Illinois	60915	68.5545	Retain
	OLYMPIA	Washington	98501	68.4155	Retain
	LA PORTE	Indiana	46350	67	Retain
	LONGVIEW	Texas	75604	66.9795	Retain
	CHICAGO	Illinois	60609	65.3755	Retain
	JACKSONVILLE	Florida	32254	61.44	Retain
	WINDSOR	Colorado	80550	57.504	Retain
	MARION	Ohio	43302	55.801	Retain
	CHATSWORTH	California	91311	54.6345	Retain
	PLOVER	Wisconsin	54467	50.75	Retain
	ROME	Georgia	30161	49.5	Retain
	WHITEHOUSE	Ohio	43571	48.081	Retain
	NEW WINDSOR	New York	12553	46.4585	Retain
	MARYSVILLE	Ohio	43040	44.873	Retain
	WORLAND	Wyoming	82401	44.5215	Retain
	ARNOLD	Missouri	63010	44.1865	Retain
	MILWAUKEE	Wisconsin	53224	42.5	Retain
	CLAYCOMO	Missouri	64119	41.75	Retain
	HARRISONBURG	Virginia	22802	40.417	Retain
	PHOENIX	Arizona	85043	39.648	Retain
	FENTON	Missouri	63026	37.5	Retain
	FREMONT	California	94538	37.124	Retain
	WEIRTON	West Virginia	26062	37	Retain
	GOLDEN	Colorado	80401	36.5	Retain
	MONTICELLO	Indiana	47960	36	Retain
	FLINT	Michigan	48551	35.79	Retain
	CLYDE	Ohio	43410	35.3585	Retain
	CONROE	Texas	77305	34.066	Retain
	BALTIMORE	Maryland	21221	33.9615	Retain
	TORRANCE	California	90503	33.65	Retain
	OKLAHOMA CITY	Oklahoma	73179	33.5495	Retain
	LOUISVILLE	Kentucky	40241	33.4	Retain
	SMYRNA	Tennessee	37167	33.318	Retain
	MIRA LOMA	California	91752	32.785	Retain
	SUGAR LAND	Texas	77478	32.1695	Retain
	FAIRFIELD	California	94533	31.5	Retain
	GOLDEN	Colorado	80403	31.5	Retain
	CHICAGO HEIGHTS	Illinois	60411	31.3915	Retain
	BUTLER	Indiana	46721	31.029	Retain
	CAROLINA	Puerto Rico	00985	30.1245	Retain
	BARABOO	Wisconsin	53913	29.8385	Retain
	EAST LIBERTY	Ohio	43319	29.45	Retain
	MONETT	Missouri	65708	29.234	Retain
	FLORENCE	Kentucky	41042	27.5305	Retain
	TAMPA	Florida	33617	27	Retain
	CANTON	Mississippi	39046	26.619	Retain
	DETROIT	Michigan	48215	26.5	Retain
	HANOVER	Pennsylvania	17331	25.986	Retain
	CHICAGO	Illinois	60609	25.7385	Retain
	BATESVILLE	Mississippi	38606	25.251	Retain
	LA CROSSE	Wisconsin	54603	24.5255	Retain
	YANKTON	South Dakota	57078	24.4475	Retain
	TOLEDO	Ohio	43608	23.95	Retain
	PONCA CITY	Oklahoma	74601	23.856	Retain
	SHAWNEE	Oklahoma	74804	23.375	Retain

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	FINDLAY	Ohio	45840	22.8465	Retain
	RED WING	Minnesota	55066	22.8265	Retain
	CHERAW	South Carolina	29520	22.1215	Retain
	LAFAYETTE	Indiana	47905	22.12	Retain
	MANCHESTER	Tennessee	37355	21.7615	Retain
	PASADENA	Texas	77503	20.685	Retain
	HOMERVILLE	Georgia	31634	19.6085	Retain
	CONROE	Texas	77303	18.6	Retain
	YOUNGSTOWN	Ohio	44512	18.42	Retain
	GREENFIELD	Indiana	46140	18.351	Retain
	SARATOGA SPRINGS	New York	12866	18.3	Retain
	WHITE PIGEON	Michigan	49099	18.265	Retain
	SPRING HILL	Tennessee	37174	18.175	Retain
	TERRELL	Texas	75160	17.65	Retain
	SEADRIFT	Texas	77983	17.0355	Retain
	LINCOLN	Alabama	35096	16.753	Retain
	GRAPELAND	Texas	75844	16.437	Retain
	CLEVELAND	Ohio	44105	16.0815	Retain
	PRINCETON	Indiana	47670	16.069	Retain
	HARVEY	Illinois	60426	15.9335	Retain
	WARREN	Ohio	44483	15.922	Retain
	OAK CREEK	Wisconsin	53154	15.854	Retain
	BUSHNELL	Florida	33513	15.8185	Retain
	EVERETT	Washington	98204	15.6	Retain
	WEST HENRIETTA	New York	14586	15.118	Retain
	WESTBROOK	Maine	04098	15.0015	Retain
	TARBORO	North Carolina	27886	14.9185	Retain
	MILWAUKEE	Wisconsin	53212	14.8525	Retain
	PELLA	Iowa	50219	14.569	Retain
	FORT ATKINSON	Wisconsin	53538	14.55	Retain
	NEWBURGH	Indiana	47629	14.5275	Retain
	PIGGOTT	Arkansas	72454	14.37	Retain
	HUNTSVILLE	Alabama	35811	14.2525	Retain
	URBANA	Ohio	43078	14.069	Retain
	FAIRFIELD	California	94533	13.981	Retain
	LONGVIEW	Texas	75602	13.8	Retain
	ALBERTVILLE	Alabama	35950	13.784	Retain
	CRAWFORDSVILLE	Indiana	47933	13.7785	Retain
	CHATTANOOGA	Tennessee	37402	13.7535	Retain
	JACKSON	Mississippi	39272	13.624	Retain
	QUINCY	Illinois	62305	13.111	Retain
	SHEBOYGAN FALLS	Wisconsin	53085	13.105	Retain
	MIDDLETOWN	New York	10940	13	Retain
	FORT WORTH	Texas	76140	13	Retain
	BLANDON	Pennsylvania	19510	12.769	Retain
	MOUNT VERNON	Missouri	65712	12.7475	Retain
	KAPOLEI	Hawaii	96707	12.7	Retain
	FLAT ROCK	Michigan	48134	12.6	Retain
	MANNS CHOICE	Pennsylvania	15550	12.572	Retain
	HARTFORD	Wisconsin	53027	12.4	Retain
	LORDSTOWN	Ohio	44481	12.22	Retain
	VANCE	Alabama	35490	12.209	Retain
	LOUISVILLE	Kentucky	40213	12.125	Retain
	HARRODSBURG	Kentucky	40330	12.019	Retain
	LEEDS	Alabama	35094	11.995	Retain
	HANOVER	Pennsylvania	17331	11.4075	Retain
	BEREA	Kentucky	40403	11.303	Retain
	NORFOLK	Nebraska	68701	11.3	Retain
	BIRMINGHAM	Alabama	35234	11.2995	Retain
	MEBANE	North Carolina	27302	11.2585	Retain
	TOLEDO	Ohio	43612	11.215	Retain
	SIDNEY	Ohio	45365	11.167	Retain
	BLOOMINGTON	Indiana	47404	11.046	Retain
	WOOSTER	Ohio	44691	10.837	Retain
	HARTFORD	Wisconsin	53027	10.75	Retain
	ATHENS	Georgia	30607	10.75	Retain
	SWEETWATER	Tennessee	37874	10.7105	Retain
	FRANKLIN	Pennsylvania	16323	10.7	Retain
	MILAN	Tennessee	38358	10.578	Retain
	CINCINNATI	Ohio	45242	10.48	Retain
	CHEMUNG	New York	14825	10.322	Retain
	CHICAGO	Illinois	60623	10.2385	Retain

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	ELGIN	Illinois	60120	10.15	Retain
	PHILADELPHIA	Pennsylvania	19120	10.1045	Retain
	SPRINGDALE	Arkansas	72764	10.0795	Retain
	NORWALK	Ohio	44857	10	Retain
	DUBLIN	Georgia	31021	9.892	Retain
	CRAWFORDSVILLE	Indiana	47933	9.892	Retain
	WHITE HALL	Arkansas	71602	9.8915	Retain
	LAKELAND	Florida	33810	9.8475	Retain
	CHICAGO	Illinois	60608	9.75	Retain
	MARION	Virginia	24354	9.553	Retain
	AGUADILLA	Puerto Rico	00605	9.53	Retain
	GUIN	Alabama	35563	9.501	Retain
	NEW BRITAIN	Connecticut	06052	9.46	Retain
	FLORENCE	South Carolina	29501	9.4365	Retain
	MYRTLE BEACH	South Carolina	29577	9.3805	Retain
	LAKELAND	Florida	33801	9.34	Retain
	BOARDMAN	Ohio	44512	9.2125	Retain
	SUSSEX	Wisconsin	53089	9.2	Retain
	SAINT JOSEPH	Missouri	64504	9.19	Retain
	MILWAUKEE	Wisconsin	53224	9.148	Retain
	MAXTON	North Carolina	28364	9.125	Retain
	NAPOLEON	Ohio	43545	9.009	Retain
	LEXINGTON	Kentucky	40511	9.0085	Retain
	BRIMFIELD	Ohio	44240	9	Retain
	AURORA	Illinois	60504	8.8715	Retain
	OCONOMOWOC	Wisconsin	53066	8.8	Retain
	LANSING	Michigan	48917	8.73	Retain
	MC DONOUGH	Georgia	30253	8.7	Retain
	EVANSVILLE	Indiana	47710	8.65	Retain
	SAN ANTONIO	Texas	78264	8.625	Retain
	WAYNE	Michigan	48184	8.585	Retain
	CLEVELAND	Tennessee	37311	8.5585	Retain
	CARSON	California	90745	8.482	Retain
	WILLARD	Ohio	44890	8.4475	Retain
	BRIDGEVIEW	Illinois	60455	8.4	Retain
	CLARENDON	Pennsylvania	16313	8.368	Retain
	ARTHUR	Illinois	61911	8.25	Retain
	PARIS	Texas	75460	8.162	Retain
	MASON	Ohio	45040	7.883	Retain
	DAYTON	Tennessee	37321	7.823	Retain
	TOLEDO	Ohio	43607	7.608	Retain
	MERCED	California	95348	7.557	Retain
	ROANOKE	Indiana	46783	7.475	Retain
	AKRON	New York	14001	7.4105	Retain
	MADISON HEIGHTS	Michigan	48071	7.358	Retain
	EDISON	New Jersey	08817	7.35	Retain
	ORION	Michigan	48359	7.3	Retain
	CHICAGO	Illinois	60623	7.2515	Retain
	MENOMONIE	Wisconsin	54751	7.25	Retain
	NASHVILLE	Tennessee	37218	7.2	Retain
	CHICAGO	Illinois	60623	7.19	Retain
	LUFKIN	Texas	75904	7.1205	Retain
	GASTONIA	North Carolina	28052	7.1025	Retain
	LANCASTER	Pennsylvania	17601	7.0965	Retain
	FORT PAYNE	Alabama	35967	6.923	Retain
	NEW ORLEANS	Louisiana	70123	6.8535	Retain
	MEMPHIS	Tennessee	38113	6.841	Retain
	ELK GROVE VILLAGE	Illinois	60007	6.794	Retain
	PASADENA	Texas	77507	6.7625	Retain
	CHICAGO	Illinois	60624	6.7335	Retain
	WARREN	Michigan	48091	6.7	Retain
	TERMINAL ISLAND	California	90731	6.7	Retain
	HARRISBURG	North Carolina	28075	6.6745	Retain
	LANSING	Michigan	48921	6.65	Retain
	SAINT FRANCIS	Wisconsin	53235	6.6085	Retain
	ONEIDA	Tennessee	37841	6.568	Retain
	DOVER	Delaware	19904	6.516	Retain
	DYERSBURG	Tennessee	38024	6.3705	Retain
	NEWTON	Mississippi	39345	6.312	Retain
	EAST MOLINE	Illinois	61244	6.29	Retain
	EFFINGHAM	Illinois	62401	6.155	Retain

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	BAXTER SPRINGS	Kansas	66713	6.15	Retain
	SHREVEPORT	Louisiana	71129	6.105	Retain
	MARION	New York	14505	6.103	Retain
	MISSOURI VALLEY	Iowa	51555	6.013	Retain
	HAMMOND	Indiana	46320	6	Retain
	CEDAR FALLS	Iowa	50613	5.991	Retain
	ROSSFORD	Ohio	43460	5.952	Retain
	SAINT JOE	Indiana	46785	5.906	Retain
	SARATOGA SPRINGS	New York	12866	5.9	Retain
	LOWVILLE	New York	13367	5.8595	Retain
	MIDDLEVILLE	Michigan	49333	5.837	Retain
	WARREN	Ohio	44483	5.7945	Retain
	OWENSVILLE	Missouri	65066	5.7815	Retain
	SHANNON	Mississippi	38868	5.7565	Retain
	WINTER GARDEN	Florida	34787	5.754	Retain
	TINKER A F B	Oklahoma	73145	5.75	Retain
	LANCASTER	Pennsylvania	17601	5.6915	Retain
	WEIRTON	West Virginia	26062	5.684	Retain
	BURLINGTON	Iowa	52601	5.675	Retain
	ORANGEBURG	South Carolina	29116	5.64	Retain
	SPRINGFIELD	Ohio	45502	5.6	Retain
	GRANITE CITY	Illinois	62040	5.559	Retain
	RUSSELLVILLE	Kentucky	42276	5.544	Retain
	SPRINGDALE	Pennsylvania	15144	5.524	Retain
	ALSIP	Illinois	60803	5.5095	Retain
	CLAIRTON	Pennsylvania	15025	5.5	Retain
	DURHAM	North Carolina	27703	5.4965	Retain
	GEORGETOWN	Kentucky	40324	5.475	Retain
	HARTLAND	Maine	04943	5.435	Retain
	SHAWNEE	Kansas	66227	5.4105	Retain
	OAKDALE	California	95361	5.4	Retain
	STARR	South Carolina	29684	5.3545	Retain
	SALEM	Virginia	24153	5.296	Retain
	COTTONWOOD	Minnesota	56229	5.2865	Retain
	LENOIR	North Carolina	28645	5.286	Retain
	SACRAMENTO	California	95824	5.271	Retain
	CHILTON	Wisconsin	53014	5.258	Retain
	COLUMBUS	Indiana	47201	5.25	Retain
	ZACHARY	Louisiana	70791	5.145	Retain
	JACKSON	Mississippi	39272	5.1255	Retain
	WACONIA	Minnesota	55387	5.0815	Retain
	HOUSTON	Texas	77015	5.075	Retain
	HOPKINSVILLE	Kentucky	42240	5.07	Retain
	LAKE BLUFF	Illinois	60044	5.058	Retain
	LA PORTE	Indiana	46350	5.028	Retain
	LONGMONT	Colorado	80501	4.95	Retain
	SAINT LOUIS	Missouri	63104	4.8465	Screened Out
	ASHLEY	Indiana	46705	4.825	Screened Out
	INDEPENDENCE	Missouri	64051	4.7265	Screened Out
	DIXON	California	95620	4.7155	Screened Out
	SAINT CLOUD	Minnesota	56303	4.709	Screened Out
	SAINT MARYS	Ohio	45885	4.6885	Screened Out
	ERIE	Pennsylvania	16502	4.674	Screened Out
	SIDNEY	Ohio	45365	4.6175	Screened Out
	YORK	South Carolina	29745	4.5795	Screened Out
	WENTZVILLE	Missouri	63385	4.5	Screened Out
	GENEVA	Alabama	36340	4.4905	Screened Out
	WAUPACA	Wisconsin	54981	4.4685	Screened Out
	REDMOND	Washington	98052	4.415	Screened Out
	MOUNT VERNON	Indiana	47620	4.4	Screened Out
	ENDICOTT	New York	13760	4.3655	Screened Out
	WASECA	Minnesota	56093	4.3235	Screened Out
	KANSAS CITY	Missouri	64120	4.24	Screened Out
	BATESVILLE	Mississippi	38606	4.23	Screened Out
	LA PORTE	Texas	77571	4.2185	Screened Out
	MENOMONEE FALLS	Wisconsin	53051	4.2	Screened Out
	PORTAGE	Indiana	46368	4.182	Screened Out
	DANVILLE	Kentucky	40422	4.1565	Screened Out
	WOODSTOCK	Illinois	60098	4.125	Screened Out
	RIVERBANK	California	95367	4.1055	Screened Out
	OLIVE BRANCH	Mississippi	38654	4.097	Screened Out
	FONTANA	California	92337	4.05	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	STILLWATER	Oklahoma	74075	3.9275	Screened Out
	ARLINGTON	Texas	76011	3.9255	Screened Out
	AIKEN	South Carolina	29801	3.88	Screened Out
	LEWISPORT	Kentucky	42351	3.8235	Screened Out
	WEIRTON	West Virginia	26062	3.802	Screened Out
	TORRANCE	California	90502	3.7925	Screened Out
	EAST GREENVILLE	Pennsylvania	18041	3.7365	Screened Out
	LA CROSSE	Wisconsin	54601	3.7245	Screened Out
	ORANGEBURG	South Carolina	29115	3.705	Screened Out
	NORTH BRUNSWICK	New Jersey	08902	3.6765	Screened Out
	TOLEDO	Ohio	43607	3.674	Screened Out
	NORTH KANSAS CITY	Missouri	64116	3.547	Screened Out
	STRONGSVILLE	Ohio	44149	3.535	Screened Out
	BATESVILLE	Indiana	47006	3.504	Screened Out
	FOREST GROVE	Oregon	97116	3.485	Screened Out
	SALINA	Kansas	67401	3.4845	Screened Out
	CINCINNATI	Ohio	45244	3.48	Screened Out
	SAINT PAUL	Minnesota	55116	3.41	Screened Out
	STAFFORD	Connecticut	06075	3.403	Screened Out
	PONTIAC	Michigan	48341	3.385	Screened Out
	KENTLAND	Indiana	47951	3.38	Screened Out
	LEBANON	Ohio	45036	3.376	Screened Out
	WINCHESTER	Virginia	22603	3.3515	Screened Out
	LYONS	New York	14489	3.3	Screened Out
	LINCOLN	Nebraska	68524	3.196	Screened Out
	MARINETTE	Wisconsin	54143	3.1955	Screened Out
	PORTLAND	Oregon	97203	3.1635	Screened Out
	GREENCASTLE	Indiana	46135	3.104	Screened Out
	ROCHELLE	Illinois	61068	3.0715	Screened Out
	HAUPPAUGE	New York	11788	2.97	Screened Out
	ADA	Michigan	49355	2.947	Screened Out
	OLATHE	Kansas	66061	2.9415	Screened Out
	SAN ANTONIO	Texas	78251	2.9395	Screened Out
	GAINESVILLE	Georgia	30504	2.926	Screened Out
	HUEYTOWN	Alabama	35023	2.8985	Screened Out
	COLUMBUS	Ohio	43228	2.88	Screened Out
	WOODBRIDGE	New Jersey	07095	2.877	Screened Out
	STERLING HEIGHTS	Michigan	48313	2.852	Screened Out
	BESSEMER	Alabama	35023	2.85	Screened Out
	DETROIT	Michigan	48211	2.8215	Screened Out
	SPRINGDALE	Arkansas	72764	2.815	Screened Out
	SAN JOSE	California	95134	2.785	Screened Out
	HUTCHINSON	Minnesota	55350	2.767	Screened Out
	ATGLEN	Pennsylvania	19310	2.704	Screened Out
	STRASBURG	Virginia	22657	2.7	Screened Out
	MIDLAND	Michigan	48667	2.695	Screened Out
	CAMBRIDGE	Ohio	43725	2.6515	Screened Out
	LOS ANGELES	California	90031	2.6	Screened Out
	LANCASTER	South Carolina	29721	2.561	Screened Out
	WINFIELD	Kansas	67156	2.5505	Screened Out
	ROBINS AFB	Georgia	31098	2.527	Screened Out
	CAROL STREAM	Illinois	60188	2.5185	Screened Out
	CARROLLTON	Texas	75006	2.4885	Screened Out
	CLARKSVILLE	Tennessee	37040	2.47	Screened Out
	ZANESVILLE	Ohio	43701	2.45	Screened Out
	FOND DU LAC	Wisconsin	54935	2.424	Screened Out
	MARYVILLE	Tennesee	37801	2.3935	Screened Out
	BRILLION	Wisconsin	54110	2.392	Screened Out
	VEEDERSBURG	Indiana	47987	2.373	Screened Out
	SHELBYVILLE	Tennessee	37160	2.351	Screened Out
	FOSTORIA	Ohio	44830	2.3295	Screened Out
	YORK	Pennsylvania	17404	2.3125	Screened Out
	SAINT CHARLES	Illinois	60174	2.2915	Screened Out
	BROWNWOOD	Texas	76801	2.265	Screened Out
	HOUSTON	Texas	77054	2.265	Screened Out
	LEXINGTON	South Carolina	29073	2.216	Screened Out
	FRIENDLY	West Virginia	26146	2.2095	Screened Out
	HERNANDO	Mississippi	38632	2.207	Screened Out
	CARTHAGE	Tennessee	37030	2.205	Screened Out
	LUFKIN	Texas	75901	2.181	Screened Out
	BROADVIEW	Illinois	60153	2.125	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	SAN MARCOS	California	92078	2.122	Screened Out
	SOUTH CHARLESTON	West Virginia	25303	2.1175	Screened Out
	CRANBERRY TOWNSHIP	Pennsylvania	16066	2.11	Screened Out
	NILES	Michigan	49120	2.1075	Screened Out
	SAINT LOUIS	Missouri	63116	2.093	Screened Out
	CHARLOTTE	North Carolina	28273	2.056	Screened Out
	BUFFALO	New York	14207	2.053	Screened Out
	TOMAH	Wisconsin	54660	2.0475	Screened Out
	WYANDOTTE	Michigan	48192	2.036	Screened Out
	CONWAY	South Carolina	29526	1.973	Screened Out
	ANTIOCH	California	94509	1.9645	Screened Out
	FAIRFIELD	Alabama	35064	1.954	Screened Out
	PASADENA	Texas	77507	1.9505	Screened Out
	SEATTLE	Washington	98108	1.95	Screened Out
	PINEVILLE	North Carolina	28134	1.948	Screened Out
	LOS ALAMITOS	California	90720	1.925	Screened Out
	WEST MEMPHIS	Arkansas	72301	1.9155	Screened Out
	MONTGOMERY	Alabama	36105	1.8995	Screened Out
	ALLENTOWN	Pennsylvania	18103	1.886	Screened Out
	FONDA	New York	12068	1.8835	Screened Out
	MARYLAND HEIGHTS	Missouri	63043	1.8765	Screened Out
	MARENGO	Iowa	52301	1.8675	Screened Out
	WEIRTON	West Virginia	26062	1.8185	Screened Out
	STRUTHERS	Ohio	44471	1.8	Screened Out
	FRIDLEY	Minnesota	55432	1.79	Screened Out
	JACKSONVILLE	Texas	75766	1.779	Screened Out
	AVON LAKE	Ohio	44012	1.77	Screened Out
	PENSACOLA	Florida	32502	1.7345	Screened Out
	FORT RECOVERY	Ohio	45846	1.7285	Screened Out
	FAIRFIELD	Alabama	35064	1.7175	Screened Out
	CHARLESTOWN	Indiana	47111	1.7085	Screened Out
	RENTON	Washington	98055	1.7035	Screened Out
	ARLINGTON	Texas	76010	1.7	Screened Out
	RENO	Nevada	89512	1.679	Screened Out
	JEFFERSON CITY	Missouri	65109	1.6575	Screened Out
	EDGEWATER	Florida	32132	1.639	Screened Out
	TAUNTON	Massachusetts	02780	1.637	Screened Out
	STERLING HEIGHTS	Michigan	48312	1.6	Screened Out
	LOUISVILLE	Kentucky	40210	1.59	Screened Out
	HILL AFB	Utah	84056	1.5525	Screened Out
	WAUKEGAN	Illinois	60085	1.5515	Screened Out
	TAFT	Louisiana	70057	1.545	Screened Out
	ELKTON	Virginia	22827	1.51	Screened Out
	KANKAKEE	Illinois	60901	1.5035	Screened Out
	MIDLAND	Texas	79703	1.4975	Screened Out
	INDIANAPOLIS	Indiana	46218	1.4785	Screened Out
	MOUNT VERNON	Illinois	62864	1.467	Screened Out
	PORTLAND	Oregon	97218	1.4665	Screened Out
	MILWAUKEE	Wisconsin	53214	1.466	Screened Out
	HOUSTON	Texas	77041	1.4635	Screened Out
	MENOMONEE FALLS	Wisconsin	53051	1.451	Screened Out
	WELLSBURG	West Virginia	26070	1.45	Screened Out
	LOUISVILLE	Kentucky	40219	1.4355	Screened Out
	FONTANA	California	92335	1.433	Screened Out
	CARROLLTON	Georgia	30117	1.432	Screened Out
	ASHVILLE	Ohio	43103	1.416	Screened Out
	NORMAL	Illinois	61761	1.4135	Screened Out
	COLUMBUS	Nebraska	68601	1.4005	Screened Out
	KINGSPORT	Tennessee	37662	1.3975	Screened Out
	ROCHESTER	Pennsylvania	15074	1.3895	Screened Out
	BOURBONNAIS	Illinois	60914	1.3725	Screened Out
	MOLINE	Illinois	61265	1.353	Screened Out
	FARIBAULT	Minnesota	55021	1.3495	Screened Out
	KANSAS CITY	Kansas	66115	1.3175	Screened Out
	MULBERRY	Florida	33860	1.313	Screened Out
	HAZLETON	Pennsylvania	18201	1.3	Screened Out
	COLUMBUS	Ohio	43211	1.3	Screened Out
	LANCASTER	Pennsylvania	17603	1.29	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	DETROIT	Michigan	48211	1.29	Screened Out
	BEDFORD PARK	Illinois	60638	1.2635	Screened Out
	TOLEDO	Ohio	43612	1.255	Screened Out
	CEDARTOWN	Georgia	30125	1.241	Screened Out
	AVON	Connecticut	06001	1.2325	Screened Out
	COLUMBIA	South Carolina	29201	1.23	Screened Out
	BELVIDERE	Illinois	61008	1.22	Screened Out
	MADISON	Alabama	35756	1.217	Screened Out
	NILES	Ohio	44446	1.2045	Screened Out
	LOGAN	Utah	84321	1.199	Screened Out
	HERMITAGE	Pennsylvania	16148	1.189	Screened Out
	LAFAYETTE	Indiana	47905	1.175	Screened Out
	LIBERTY	Indiana	47353	1.148	Screened Out
	ROCKFORD	Illinois	61104	1.1455	Screened Out
	KILLONA	Louisiana	70066	1.1455	Screened Out
	NAVASOTA	Texas	77868	1.1425	Screened Out
	ELKRIDGE	Maryland	21075	1.1415	Screened Out
	DECATUR	Alabama	35601	1.1375	Screened Out
	AVENEL	New Jersey	07001	1.1335	Screened Out
	BRYAN	Ohio	43506	1.126	Screened Out
	WESTLAND	Michigan	48186	1.111	Screened Out
	HOUSTON	Texas	77073	1.1105	Screened Out
	MANDAN	North Dakota	58554	1.1005	Screened Out
	CANFIELD	Ohio	44406	1.1	Screened Out
	DALTON	Georgia	30721	1.0865	Screened Out
	GRAND RAPIDS	Michigan	49507	1.085	Screened Out
	GARLAND	Texas	75042	1.0845	Screened Out
	NORTH KANSAS CITY	Missouri	64116	1.0705	Screened Out
	WARMINSTER	Pennsylvania	18974	1.0505	Screened Out
	TOLEDO	Ohio	43615	1.05	Screened Out
	SAGINAW	Michigan	48601	1.043	Screened Out
	LOS ANGELES	California	90016	1.04	Screened Out
	HAWESVILLE	Kentucky	42348	1.032	Screened Out
	EVANSVILLE	Indiana	47711	1.0225	Screened Out
	ELIZABETHTON	Tennessee	37643	1.019	Screened Out
	SEATTLE	Washington	98108	1.009	Screened Out
	COTTAGE GROVE	Wisconsin	53527	1	Screened Out
	STILLWATER	Oklahoma	74075	0.998	Screened Out
	SANTA CLARA	California	95050	0.9555	Screened Out
	HOUSTON	Texas	77051	0.9265	Screened Out
	LAWRENCEVILLE	Georgia	30043	0.924	Screened Out
	NEVILLE ISLAND	Pennsylvania	15225	0.91	Screened Out
	OWEGO	New York	13827	0.9025	Screened Out
	DALLAS	Texas	75244	0.9005	Screened Out
	MIDDLEBURY	Indiana	46540	0.8555	Screened Out
	SAUKVILLE	Wisconsin	53080	0.848	Screened Out
	TRENTON	New Jersey	08648	0.848	Screened Out
	LAFAYETTE	Indiana	47909	0.825	Screened Out
	CHICAGO	Illinois	60633	0.818	Screened Out
	STERLING HEIGHTS	Michigan	48314	0.8135	Screened Out
	JEFFERSONVILLE	Indiana	47130	0.8125	Screened Out
	ROSEMOUNT	Minnesota	55068	0.8	Screened Out
	BALTIMORE	Maryland	21224	0.8	Screened Out
	ARLINGTON	Texas	76011	0.8	Screened Out
	TULSA	Oklahoma	74116	0.8	Screened Out
	CARSON CITY	Nevada	89701	0.7935	Screened Out
	EAST POINT	Georgia	30344	0.792	Screened Out
	GRAYSLAKE	Illinois	60030	0.79	Screened Out
	BOWLING GREEN	Kentucky	42101	0.785	Screened Out
	MESQUITE	Texas	75149	0.782	Screened Out
	MAUMEE	Ohio	43537	0.7595	Screened Out
	SOUTHFIELD	Michigan	48034	0.7525	Screened Out
	NEWARK	New Jersey	07105	0.75	Screened Out
	HOUSTON	Texas	77007	0.749	Screened Out
	HOUSTON	Texas	77053	0.742	Screened Out
	VISALIA	California	93291	0.7255	Screened Out
	TUSCALOOSA	Alabama	35401	0.7205	Screened Out
	CHICAGO	Illinois	60630	0.7195	Screened Out
	HATFIELD	Pennsylvania	19440	0.7045	Screened Out
	LOUISVILLE	Kentucky	40202	0.7025	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	JERSEY CITY	New Jersey	07304	0.7	Screened Out
	CARROLLTON	Texas	75006	0.6985	Screened Out
	BLOOMSBURG	Pennsylvania	17815	0.696	Screened Out
	PEOTONE	Illinois	60468	0.6945	Screened Out
	WARREN	Pennsylvania	16365	0.6945	Screened Out
	SHREVEPORT	Louisiana	71115	0.6905	Screened Out
	ORLANDO	Florida	32837	0.677	Screened Out
	WASHINGTON	Pennsylvania	15301	0.6735	Screened Out
	FULLERTON	California	92831	0.673	Screened Out
	SUGAR GROVE	Illinois	60554	0.665	Screened Out
	COVINGTON	Georgia	30014	0.661	Screened Out
	FRANKLIN	Pennsylvania	16323	0.659	Screened Out
	MARIETTA	Ohio	45750	0.648	Screened Out
	SAVAGE	Minnesota	55378	0.642	Screened Out
	SCHOFIELD	Wisconsin	54476	0.6405	Screened Out
	KENEDY	Texas	78119	0.635	Screened Out
	AMBRIDGE	Pennsylvania	15003	0.635	Screened Out
	FORT WORTH	Texas	76110	0.628	Screened Out
	ROXBORO	North Carolina	27573	0.6265	Screened Out
	COLUMBIA CITY	Indiana	46725	0.621	Screened Out
	OSHKOSH	Wisconsin	54903	0.619	Screened Out
	LUBBOCK	Texas	79415	0.616	Screened Out
	LA PORTE	Texas	77571	0.5975	Screened Out
	WILLOW SPRINGS	Illinois	60480	0.586	Screened Out
	CLINTON	Iowa	52732	0.585	Screened Out
	STREETSBORO	Ohio	44241	0.5795	Screened Out
	FONTANA	California	92335	0.5785	Screened Out
	DAVENPORT	Iowa	52802	0.567	Screened Out
	TEXARKANA	Texas	75501	0.5505	Screened Out
	STERLING HEIGHTS	Michigan	48312	0.55	Screened Out
	BLUE ASH	Ohio	45242	0.5465	Screened Out
	ANNISTON	Alabama	36207	0.53	Screened Out
	MONROE	Ohio	45050	0.5265	Screened Out
	VALENCIA	Pennsylvania	16059	0.5245	Screened Out
	BATAVIA	Illinois	60510	0.52	Screened Out
	EUGENE	Oregon	97402	0.513	Screened Out
	PLAQUEMINE	Louisiana	70765	0.506	Screened Out
	PALMDALE	California	93599	0.5025	Screened Out
	KALAMA	Washington	98625	0.5025	Screened Out
	TALLULAH	Louisiana	71282	0.5	Screened Out
	STURTEVANT	Wisconsin	53177	0.5	Screened Out
	PLEASANT PRAIRIE	Wisconsin	53158	0.5	Screened Out
	WESTON	Michigan	49289	0.5	Screened Out
	VERNON	California	90023	0.5	Screened Out
	CHEEKTOWAGA	New York	14225	0.4975	Screened Out
	BEDFORD PARK	Illinois	60501	0.4925	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.49	Screened Out
	CHIPPEWA FALLS	Wisconsin	54729	0.4895	Screened Out
	BIRMINGHAM	Alabama	35215	0.485	Screened Out
	ALGONA	Iowa	50511	0.4705	Screened Out
	CASA GRANDE	Arizona	85222	0.4545	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.4505	Screened Out
	SAINT GABRIEL	Louisiana	70776	0.45	Screened Out
	MOUNT CLEMENS	Michigan	48043	0.4495	Screened Out
	FRAZEYSBURG	Ohio	43822	0.4465	Screened Out
	CHICAGO	Illinois	60622	0.4365	Screened Out
	ATLANTA	Georgia	30318	0.4305	Screened Out
	SANTA FE SPRINGS	California	90670	0.42	Screened Out
	RICHMOND	Indiana	47375	0.4175	Screened Out
	MILWAUKEE	Wisconsin	53223	0.415	Screened Out
	WAXAHACHIE	Texas	75165	0.4075	Screened Out
	LANCASTER	Pennsylvania	17603	0.402	Screened Out
	TULSA	Oklahoma	74115	0.3975	Screened Out
	WESTLAKE	Ohio	44145	0.3955	Screened Out
	LANSING	Illinois	60438	0.395	Screened Out
	MORRIS	Illinois	60450	0.3905	Screened Out
	CONNELLSVILLE	Pennsylvania	15425	0.389	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.387	Screened Out
	MANSFIELD	Texas	76063	0.3865	Screened Out
	CLEARWATER	Florida	33760	0.384	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	MORROW	Georgia	30260	0.3775	Screened Out
	WYANDOTTE	Michigan	48192	0.3775	Screened Out
	HOUSTON	Texas	77091	0.3775	Screened Out
	EASTON	Pennsylvania	18045	0.375	Screened Out
	PORTLAND	Oregon	97203	0.375	Screened Out
	HOUSTON	Texas	77041	0.375	Screened Out
	PATERSON	New Jersey	07503	0.375	Screened Out
	SAINT JOSEPH	Missouri	64501	0.3675	Screened Out
	CANTON	Massachusetts	02021	0.366	Screened Out
	NASHVILLE	Illinois	62263	0.365	Screened Out
	WAVERLY	Ohio	45690	0.358	Screened Out
	GREAT BEND	Kansas	67530	0.3555	Screened Out
	SALT LAKE CITY	Utah	84108	0.353	Screened Out
	CHRISTIANSTED	Virgin Islands	00820	0.351	Screened Out
	RICHMOND	Kentucky	40475	0.35	Screened Out
	HIGH POINT	North Carolina	27261	0.349	Screened Out
	ANAHEIM	California	92801	0.348	Screened Out
	MORRISVILLE	Pennsylvania	19067	0.346	Screened Out
	MOLINE	Illinois	61265	0.341	Screened Out
	BLYTHEVILLE	Arkansas	72315	0.334	Screened Out
	BIRMINGHAM	Alabama	35234	0.3325	Screened Out
	FREMONT	Michigan	49412	0.3275	Screened Out
	HIGH POINT	North Carolina	27261	0.327	Screened Out
	SANTA FE SPRINGS	California	90670	0.3255	Screened Out
	WEST HAVEN	Connecticut	06516	0.313	Screened Out
	RANCHO CUCAMONGA	California	91730	0.311	Screened Out
	HOUSTON	Texas	77086	0.3105	Screened Out
	CORDOVA	Illinois	61242	0.3085	Screened Out
	CLEVELAND	Ohio	44111	0.304	Screened Out
	BREMEN	Indiana	46506	0.3	Screened Out
	PAINESVILLE	Ohio	44077	0.298	Screened Out
	CHICO	California	95928	0.298	Screened Out
	MINNETONKA	Minnesota	55343	0.2975	Screened Out
	WAUSAU	Wisconsin	54401	0.296	Screened Out
	LOS ANGELES	California	90023	0.2905	Screened Out
	LANCASTER	Ohio	43130	0.2905	Screened Out
	LOUISVILLE	Kentucky	40203	0.2895	Screened Out
	HAVRE DE GRACE	Maryland	21078	0.281	Screened Out
	CHICAGO	Illinois	60633	0.28	Screened Out
	WEST BEND	Wisconsin	53095	0.2795	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.275	Screened Out
	LAKELAND	Florida	33803	0.272	Screened Out
	HARVEY	Illinois	60426	0.2675	Screened Out
	ROSEVILLE	California	95678	0.2665	Screened Out
	BRISTOL	Pennsylvania	19007	0.266	Screened Out
	CALEDONIA	Michigan	49316	0.265	Screened Out
	MC KEESPORT	Pennsylvania	15132	0.264	Screened Out
	MIDWAY	Tennessee	37809	0.2615	Screened Out
	YORK	Pennsylvania	17402	0.2605	Screened Out
	SAINT PAUL	Minnesota	55102	0.2595	Screened Out
	CARPENTERSVILLE	Illinois	60110	0.2585	Screened Out
	NASHVILLE	Tennessee	37209	0.254	Screened Out
	BROADVIEW	Illinois	60155	0.2535	Screened Out
	SUMTER	South Carolina	29150	0.252	Screened Out
	CARTERET	New Jersey	07008	0.252	Screened Out
	ROCK HILL	South Carolina	29730	0.25	Screened Out
	GREENVILLE	Ohio	45331	0.25	Screened Out
	OKLAHOMA CITY	Oklahoma	73129	0.25	Screened Out
	VALLEY PARK	Missouri	63088	0.25	Screened Out
	CANNON FALLS	Minnesota	55009	0.25	Screened Out
	READING	Pennsylvania	19605	0.25	Screened Out
	TAYLORS	South Carolina	29687	0.25	Screened Out
	CARSON	California	90810	0.25	Screened Out
	CONROE	Texas	77303	0.25	Screened Out
	BERKELEY	Missouri	63134	0.25	Screened Out
	BARBERTON	Ohio	44203	0.25	Screened Out
	GREENSBURG	Indiana	47240	0.25	Screened Out
	CHARLOTTE	North Carolina	28273	0.25	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	COLUMBUS	Ohio	43219	0.25	Screened Out
	MARYLAND HEIGHTS	Missouri	63043	0.25	Screened Out
	TWINSBURG	Ohio	44087	0.248	Screened Out
	BATON ROUGE	Louisiana	70805	0.2465	Screened Out
	NORFOLK	Nebraska	68701	0.2445	Screened Out
	ATLANTA	Georgia	30339	0.24	Screened Out
	HOLYOKE	Massachusetts	01040	0.236	Screened Out
	BOWLING GREEN	Kentucky	42101	0.233	Screened Out
	WARREN	Michigan	48091	0.23	Screened Out
	MARIETTA	Georgia	30062	0.228	Screened Out
	GALLIPOLIS FERRY	West Virginia	25515	0.222	Screened Out
	HASKELL	New Jersey	07420	0.2215	Screened Out
	NEW IBERIA	Louisiana	70560	0.22	Screened Out
	WAXAHACHIE	Texas	75165	0.2115	Screened Out
	KENDALLVILLE	Indiana	46755	0.21	Screened Out
	MOREHEAD	Kentucky	40351	0.203	Screened Out
	DORAVILLE	Georgia	30340	0.2025	Screened Out
	CHARLESTON	Missouri	63834	0.1985	Screened Out
	KILGORE	Texas	75662	0.196	Screened Out
	WINDER	Georgia	30680	0.1935	Screened Out
	SHEBOYGAN	Wisconsin	53081	0.193	Screened Out
	MABLETON	Georgia	30126	0.191	Screened Out
	WESTLAKE	Louisiana	70669	0.1885	Screened Out
	SEATTLE	Washington	98107	0.1875	Screened Out
	SAINT LOUIS	Missouri	63111	0.186	Screened Out
	MACHESNEY PARK	Illinois	61115	0.1855	Screened Out
	GARLAND	Texas	75041	0.182	Screened Out
	PAGEDALE	Missouri	63133	0.182	Screened Out
	JAMESTOWN	Pennsylvania	16134	0.1795	Screened Out
	WHEELING	Illinois	60090	0.177	Screened Out
	CHANDLER	Arizona	85226	0.177	Screened Out
	ORANGEBURG	New York	10962	0.176	Screened Out
	BATON ROUGE	Louisiana	70805	0.176	Screened Out
	SAINT CLAIR	Missouri	63077	0.1745	Screened Out
	SAINT ALBANS	Vermont	05478	0.174	Screened Out
	WALLINGFORD	Connecticut	06492	0.173	Screened Out
	BATON ROUGE	Louisiana	70815	0.173	Screened Out
	FREEPORT	Texas	77541	0.168	Screened Out
	FRONT ROYAL	Virginia	22630	0.168	Screened Out
	TULSA	Oklahoma	74112	0.167	Screened Out
	MARCUS HOOK	Pennsylvania	19061	0.1615	Screened Out
	INDIAN TRAIL	North Carolina	28079	0.161	Screened Out
	STATESVILLE	North Carolina	28625	0.156	Screened Out
	EDINBURGH	Indiana	46124	0.1545	Screened Out
	NEW CENTURY	Kansas	66031	0.154	Screened Out
	DUNN	North Carolina	28335	0.153	Screened Out
	BATAVIA	Illinois	60510	0.151	Screened Out
	NORTH KANSAS CITY	Missouri	64116	0.1465	Screened Out
	CIRCLEVILLE	Ohio	43113	0.1455	Screened Out
	DETROIT	Michigan	48234	0.145	Screened Out
	CLEARWATER	Florida	33760	0.142	Screened Out
	CRESTWOOD	Missouri	63126	0.1415	Screened Out
	DEEPWATER	New Jersey	08023	0.14	Screened Out
	BURLINGTON	North Carolina	27215	0.14	Screened Out
	PLAQUEMINE	Louisiana	70765	0.139	Screened Out
	FORT MADISON	Iowa	52627	0.135	Screened Out
	MEMPHIS	Tennessee	38113	0.1345	Screened Out
	SAND SPRINGS	Oklahoma	74063	0.1325	Screened Out
	MARIETTA	Georgia	30062	0.1315	Screened Out
	LEBANON	Pennsylvania	17046	0.1315	Screened Out
	PONTIAC	Michigan	48341	0.131	Screened Out
	CHICAGO HEIGHTS	Illinois	60411	0.1295	Screened Out
	STAFFORD	Texas	77477	0.1275	Screened Out
	LOUISVILLE	Kentucky	40210	0.1275	Screened Out
	MARTIN	South Carolina	29836	0.1275	Screened Out
	PACOIMA	California	91331	0.1275	Screened Out
	WOODBURN	Indiana	46797	0.1275	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	BATAVIA	Illinois	60510	0.1275	Screened Out
	CHICAGO	Illinois	60608	0.1275	Screened Out
	SAINT CHARLES	Illinois	60174	0.1275	Screened Out
	SAINT LOUIS	Missouri	63147	0.1275	Screened Out
	LA VERGNE	Tennessee	37086	0.1275	Screened Out
	PELHAM	Alabama	35124	0.1275	Screened Out
	MENOMONEE FALLS	Wisconsin	53051	0.1275	Screened Out
	ORANGE	Texas	77630	0.1275	Screened Out
	FOOTHILL RANCH	California	92610	0.1275	Screened Out
	FOUNTAIN INN	South Carolina	29644	0.1275	Screened Out
	BAYTOWN	Texas	77520	0.1275	Screened Out
	WEATHERFORD	Texas	76086	0.1275	Screened Out
	SPARTANBURG	South Carolina	29302	0.1275	Screened Out
	SOLON	Ohio	44139	0.1275	Screened Out
	PONCA CITY	Oklahoma	74601	0.1275	Screened Out
	OKLAHOMA CITY	Oklahoma	73117	0.1275	Screened Out
	ABBEVILLE	Louisiana	70510	0.1275	Screened Out
	NORTHVALE	New Jersey	07647	0.1275	Screened Out
	HARWICK	Pennsylvania	15049	0.1275	Screened Out
	CROYDON	Pennsylvania	19021	0.1275	Screened Out
	RUTHERFORDTON	North Carolina	28139	0.125	Screened Out
	MONTOURSVILLE	Pennsylvania	17754	0.125	Screened Out
	MCCARRAN	Nevada	89434	0.125	Screened Out
	DALTON	Georgia	30720	0.125	Screened Out
	PHOENIX	Arizona	85043	0.125	Screened Out
	HARRISON	Ohio	45030	0.125	Screened Out
	ODESSA	Texas	79765	0.125	Screened Out
	HIGH POINT	North Carolina	27261	0.125	Screened Out
	CHICAGO	Illinois	60632	0.125	Screened Out
	MEMPHIS	Tennessee	38113	0.125	Screened Out
	HOMEWOOD	Illinois	60430	0.125	Screened Out
	HUNTINGTON	West Virginia	25704	0.125	Screened Out
	OSSEO	Minnesota	55369	0.125	Screened Out
	SPRINGFIELD	Virginia	22153	0.125	Screened Out
	DE PERE	Wisconsin	54115	0.125	Screened Out
	ROMULUS	Michigan	48174	0.125	Screened Out
	HOUSTON	Texas	77051	0.125	Screened Out
	PITTSTON	Pennsylvania	18640	0.125	Screened Out
	NEW BRUNSWICK	New Jersey	08901	0.125	Screened Out
	WAXAHACHIE	Texas	75165	0.125	Screened Out
	WILLOUGHBY	Ohio	44094	0.125	Screened Out
	THOMAS	Oklahoma	73669	0.125	Screened Out
	DALLAS	Texas	75236	0.125	Screened Out
	HOLCOMB	Kansas	67851	0.125	Screened Out
	SAINT LOUIS	Missouri	63147	0.125	Screened Out
	YPSILANTI	Michigan	48197	0.124	Screened Out
	INMAN	South Carolina	29349	0.123	Screened Out
	LOUISVILLE	Kentucky	40211	0.121	Screened Out
	HICKORY	North Carolina	28602	0.1185	Screened Out
	CHARLOTTE	North Carolina	28208	0.118	Screened Out
	GRIFFIN	Georgia	30224	0.1175	Screened Out
	WILMERDING	Pennsylvania	15148	0.1165	Screened Out
	SOUTH HOLLAND	Illinois	60473	0.116	Screened Out
	YUMA	Arizona	85369	0.1145	Screened Out
	CLEBURNE	Texas	76033	0.1135	Screened Out
	PHILADELPHIA	Pennsylvania	19116	0.1125	Screened Out
	EVENDALE	Ohio	45241	0.1125	Screened Out
	GREENSBORO	North Carolina	27403	0.11	Screened Out
	NEVADA	Missouri	64772	0.11	Screened Out
	OCALA	Florida	34475	0.109	Screened Out
	HOLLAND	Michigan	49423	0.106	Screened Out
	SAN DIEGO	California	92121	0.103	Screened Out
	PARIS	Kentucky	40361	0.103	Screened Out
	FAIRFIELD	California	94533	0.1025	Screened Out
	RANCHO CUCAMONGA	California	91730	0.101	Screened Out
	CARSON	California	90810	0.098	Screened Out
	LANGLEY	South Carolina	29834	0.0935	Screened Out
	MIAMI	Florida	33162	0.093	Screened Out
	BRATTLEBORO	Vermont	05301	0.093	Screened Out
	SCOTTSBURG	Indiana	47170	0.091	Screened Out
	MILWAUKEE	Wisconsin	53224	0.0905	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	WARREN	Michigan	48091	0.088	Screened Out
	KANSAS CITY	Kansas	66106	0.0875	Screened Out
	SANTA FE SPRINGS	California	90670	0.0875	Screened Out
	OAK CREEK	Wisconsin	53154	0.086	Screened Out
	MENOMINEE	Michigan	49858	0.085	Screened Out
	LEMONT	Illinois	60439	0.0835	Screened Out
	ALEXANDRIA	Louisiana	71303	0.0835	Screened Out
	CORPUS CHRISTI	Texas	78405	0.0825	Screened Out
	TEWKSBURY	Massachusetts	01876	0.082	Screened Out
	CRESSON	Texas	76035	0.08	Screened Out
	ORWELL	Ohio	44076	0.0795	Screened Out
	GREENCASTLE	Indiana	46135	0.0795	Screened Out
	SCHERERVILLE	Indiana	46375	0.0795	Screened Out
	DALLAS	Texas	75243	0.0795	Screened Out
	PORT NECHES	Texas	77651	0.079	Screened Out
	CITY OF INDUSTRY	California	91748	0.079	Screened Out
	MC COOK	Illinois	60525	0.078	Screened Out
	BRANDENBURG	Kentucky	40108	0.078	Screened Out
	SAINT CLAIR	Missouri	63077	0.078	Screened Out
	KANSAS CITY	Kansas	66106	0.0775	Screened Out
	CLINTON	Mississippi	39056	0.0765	Screened Out
	PITTSBURGH	Pennsylvania	15238	0.0765	Screened Out
	FAIRFIELD	California	94533	0.0745	Screened Out
	MOUNT VERNON	New York	10550	0.074	Screened Out
	PITTSBURGH	Pennsylvania	15233	0.0735	Screened Out
	SALEM	Oregon	97302	0.073	Screened Out
	PETERSBURG	Virginia	23805	0.0725	Screened Out
	CLEVELAND	Ohio	44109	0.072	Screened Out
	PORT ARTHUR	Texas	77640	0.071	Screened Out
	SEDALIA	Missouri	65301	0.071	Screened Out
	AMARILLO	Texas	79187	0.07	Screened Out
	WARSAW	Indiana	46580	0.07	Screened Out
	MONTEBELLO	California	90640	0.07	Screened Out
	MAUMEE	Ohio	43537	0.0675	Screened Out
	CONNERSVILLE	Indiana	47331	0.066	Screened Out
	SOUTH EL MONTE	California	91733	0.066	Screened Out
	SHOREVIEW	Minnesota	55126	0.0655	Screened Out
	MEREDITH	New Hampshire	03253	0.0635	Screened Out
	CHANDLER	Arizona	85224	0.0625	Screened Out
	CAROLINA	Puerto Rico	00985	0.0615	Screened Out
	LEMONT	Illinois	60439	0.061	Screened Out
	GROTTOES	Virginia	24441	0.0595	Screened Out
	TERRE HAUTE	Indiana	47808	0.0585	Screened Out
	DURHAM	North Carolina	27703	0.058	Screened Out
	CAHOKIA	Illinois	62206	0.0575	Screened Out
	DELAWARE	Ohio	43015	0.057	Screened Out
	HANNIBAL	Missouri	63401	0.057	Screened Out
	MC DONOUGH	Georgia	30253	0.057	Screened Out
	MAULDIN	South Carolina	29662	0.057	Screened Out
	ALLENTOWN	Pennsylvania	18106	0.0565	Screened Out
	CORPUS CHRISTI	Texas	78410	0.055	Screened Out
	MOUNT HOLLY	North Carolina	28120	0.0545	Screened Out
	BUFFALO	New York	14204	0.054	Screened Out
	BEDFORD PARK	Illinois	60499	0.0535	Screened Out
	GRAND PRAIRIE	Texas	75050	0.0535	Screened Out
	PEKIN	Illinois	61554	0.053	Screened Out
	BURNET	Texas	78611	0.0515	Screened Out
	REIDSVILLE	North Carolina	27320	0.05	Screened Out
	BENTON	Arkansas	72015	0.0495	Screened Out
	MANITOWOC	Wisconsin	54220	0.049	Screened Out
	BETTENDORF	Iowa	52722	0.049	Screened Out
	MIDDLEFIELD	Ohio	44062	0.0485	Screened Out
	VERNON	California	90058	0.0485	Screened Out
	ELVERSON	Pennsylvania	19520	0.0485	Screened Out
	TOMBALL	Texas	77375	0.0485	Screened Out
	GREENSBORO	North Carolina	27409	0.048	Screened Out
	TAMPA	Florida	33634	0.047	Screened Out
	COLUMBUS	Ohio	43207	0.047	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	HILLSBOROUGH	New Jersey	08844	0.046	Screened Out
	BARDSTOWN	Kentucky	40004	0.044	Screened Out
	JOLIET	Illinois	60436	0.043	Screened Out
	DENVER	Colorado	80216	0.042	Screened Out
	BRIDGEVIEW	Illinois	60455	0.0415	Screened Out
	WAYNE	Michigan	48184	0.0405	Screened Out
	TUSCALOOSA	Alabama	35401	0.0395	Screened Out
	CONYERS	Georgia	30012	0.039	Screened Out
	VALLEY CENTER	Kansas	67147	0.039	Screened Out
	KANSAS CITY	Kansas	66111	0.039	Screened Out
	ANDOVER	Kansas	67002	0.0385	Screened Out
	PASADENA	Texas	77507	0.038	Screened Out
	HOUSTON	Texas	77047	0.0375	Screened Out
	EL DORADO	Arkansas	71730	0.037	Screened Out
	HEBRON	Ohio	43025	0.037	Screened Out
	FAIRFIELD	Ohio	45014	0.0365	Screened Out
	JONESBOROUGH	Tennessee	37659	0.0365	Screened Out
	MILTON	Wisconsin	53563	0.036	Screened Out
	STURTEVANT	Wisconsin	53177	0.0355	Screened Out
	MARTINSBURG	West Virginia	25405	0.0355	Screened Out
	MC INTOSH	Alabama	36553	0.0355	Screened Out
	LANCASTER	Texas	75134	0.035	Screened Out
	GREENVILLE	South Carolina	29605	0.035	Screened Out
	GARLAND	Texas	75041	0.0345	Screened Out
	READING	Pennsylvania	19605	0.0335	Screened Out
	WICKLIFFE	Ohio	44092	0.033	Screened Out
	PARLIN	New Jersey	08859	0.032	Screened Out
	WEST BEND	Wisconsin	53095	0.0315	Screened Out
	KNOXVILLE	Iowa	50138	0.0315	Screened Out
	INDIANAPOLIS	Indiana	46219	0.0305	Screened Out
	FERNDALE	Michigan	48220	0.0285	Screened Out
	DERIDDER	Louisiana	70634	0.028	Screened Out
	LAKE CHARLES	Louisiana	70601	0.028	Screened Out
	LANSING	Michigan	48906	0.0275	Screened Out
	HAMILTON	Ohio	45015	0.027	Screened Out
	GARLAND	Texas	75041	0.0265	Screened Out
	TOLEDO	Ohio	43615	0.0265	Screened Out
	DES MOINES	Iowa	50313	0.026	Screened Out
	MIDDLESEX	New Jersey	08846	0.026	Screened Out
	NASHUA	New Hampshire	03062	0.026	Screened Out
	MOBILE	Alabama	36614	0.0255	Screened Out
	PHILADELPHIA	Pennsylvania	19127	0.025	Screened Out
	FOUNTAIN INN	South Carolina	29644	0.025	Screened Out
	CORSICANA	Texas	75109	0.0245	Screened Out
	DYERSBURG	Tennessee	38024	0.0245	Screened Out
	HOUSTON	Texas	77034	0.0245	Screened Out
	GREENSBORO	North Carolina	27409	0.0245	Screened Out
	ROTTERDAM JUNCTION	New York	12150	0.0235	Screened Out
	NORCROSS	Georgia	30071	0.0235	Screened Out
	MANOR	Pennsylvania	15665	0.023	Screened Out
	COUNCIL BLUFFS	Iowa	51502	0.023	Screened Out
	SAN JOSE	California	95133	0.023	Screened Out
	THREE RIVERS	Texas	78071	0.023	Screened Out
	AVENEL	New Jersey	07001	0.0225	Screened Out
	WALBRIDGE	Ohio	43465	0.0225	Screened Out
	CHICAGO	Illinois	60638	0.022	Screened Out
	COUNCE	Tennessee	38326	0.0205	Screened Out
	BELVIDERE	New Jersey	07823	0.02	Screened Out
	SPRINGFIELD	Missouri	65802	0.02	Screened Out
	BEDFORD PARK	Illinois	60501	0.0195	Screened Out
	FERNDALE	Michigan	48220	0.0195	Screened Out
	PICAYUNE	Mississippi	39466	0.019	Screened Out
	MIDDLETOWN	Virginia	22645	0.019	Screened Out
	EMERSON	Georgia	30137	0.019	Screened Out
	BONHAM	Texas	75418	0.0185	Screened Out
	BUTLER	Indiana	46721	0.0185	Screened Out
	BRIGHTON	Michigan	48114	0.018	Screened Out
	ROCHESTER	New York	14652	0.0175	Screened Out
	TWINSBURG	Ohio	44087	0.017	Screened Out
	LAWRENCE	Massachusetts	01843	0.0165	Screened Out
	SANTA ANA	California	92704	0.0165	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	SAINT GABRIEL	Louisiana	70776	0.0155	Screened Out
	HILLSDALE	Illinois	61257	0.015	Screened Out
	COLUMBUS	Ohio	43207	0.015	Screened Out
	IOWA CITY	Iowa	52240	0.015	Screened Out
	ENOREE	South Carolina	29335	0.015	Screened Out
	MARINETTE	Wisconsin	54143	0.0145	Screened Out
	MUSCATINE	Iowa	52761	0.0145	Screened Out
	MORROW	Georgia	30260	0.0145	Screened Out
	JOHNSTOWN	New York	12095	0.014	Screened Out
	HOUSTON	Texas	77029	0.014	Screened Out
	HOLTSVILLE	New York	11742	0.014	Screened Out
	BOLTON	Connecticut	06043	0.0135	Screened Out
	JAY	Maine	04239	0.0125	Screened Out
	INDIANAPOLIS	Indiana	46205	0.0125	Screened Out
	THEODORE	Alabama	36582	0.0125	Screened Out
	COMMERCE	California	90040	0.0125	Screened Out
	WATERBURY	Connecticut	06708	0.012	Screened Out
	HUNGERFORD	Texas	77448	0.0115	Screened Out
	INDIANAPOLIS	Indiana	46268	0.0115	Screened Out
	SAINT LOUIS	Missouri	63111	0.0115	Screened Out
	LAWRENCEVILLE	Georgia	30043	0.0115	Screened Out
	DELAWARE	Ohio	43015	0.0115	Screened Out
	BALTIMORE	Maryland	21230	0.0105	Screened Out
	TUSCALOOSA	Alabama	35401	0.01	Screened Out
	MOJAVE	California	93501	0.01	Screened Out
	SAN ANTONIO	Texas	78218	0.01	Screened Out
	DALLAS	Texas	75207	0.01	Screened Out
	GREENSBORO	North Carolina	27406	0.0095	Screened Out
	UNIVERSITY PARK	Illinois	60466	0.0095	Screened Out
	CARY	Illinois	60013	0.0095	Screened Out
	HAMMOND	Indiana	46320	0.0095	Screened Out
	SANTA FE SPRINGS	California	90670	0.0095	Screened Out
	SANTA ANA	California	92704	0.009	Screened Out
	ONTARIO	California	91761	0.009	Screened Out
	PELL CITY	Alabama	35125	0.0085	Screened Out
	LUFKIN	Texas	75901	0.0085	Screened Out
	HOBBS	New Mexico	88240	0.008	Screened Out
	NEW CASTLE	Delaware	19720	0.008	Screened Out
	PORTLAND	Oregon	97227	0.008	Screened Out
	CHANNAHON	Illinois	60410	0.008	Screened Out
	TULSA	Oklahoma	74131	0.0075	Screened Out
	STANLEY	North Carolina	28164	0.0075	Screened Out
	UPPER MARLBORO	Maryland	20774	0.0075	Screened Out
	LESAGE	West Virginia	25537	0.0075	Screened Out
	VICTORVILLE	California	92392	0.0075	Screened Out
	INDIANAPOLIS	Indiana	46226	0.0075	Screened Out
	PAINESVILLE	Ohio	44077	0.0075	Screened Out
	FOREST PARK	Georgia	30297	0.007	Screened Out
	SANTA FE SPRINGS	California	90670	0.007	Screened Out
	CINNAMINSON	New Jersey	08077	0.0065	Screened Out
	CHANNAHON	Illinois	60410	0.0065	Screened Out
	CALHOUN	Georgia	30701	0.0065	Screened Out
	SAN JOSE	California	95131	0.0065	Screened Out
	BATH	Pennsylvania	18014	0.0065	Screened Out
	KANSAS CITY	Kansas	66105	0.006	Screened Out
	INDIANAPOLIS	Indiana	46225	0.006	Screened Out
	SOMERVILLE	New Jersey	08876	0.0055	Screened Out
	RIDGEFIELD PARK	New Jersey	07660	0.0055	Screened Out
	LA PLACE	Louisiana	70068	0.005	Screened Out
	DOVER	Delaware	19904	0.005	Screened Out
	EAST LIVERPOOL	Ohio	43920	0.005	Screened Out
	MARLBOROUGH	Massachusetts	01752	0.005	Screened Out
	WOODRIDGE	Illinois	60517	0.005	Screened Out
	CHATHAM	Virginia	24531	0.005	Screened Out
	LAKEVILLE	Minnesota	55044	0.005	Screened Out
	MIAMI	Florida	33155	0.005	Screened Out
	WEST CHESTER	Pennsylvania	19382	0.005	Screened Out
	HILLSBORO	Oregon	97124	0.005	Screened Out
	CONNERSVILLE	Indiana	47331	0.005	Screened Out
	GARDEN GROVE	California	92841	0.005	Screened Out
	CHANDLER	Arizona	85248	0.005	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	INDIANAPOLIS	Indiana	46203	0.005	Screened Out
	GARDENA	California	90248	0.005	Screened Out
	ANDERSON	South Carolina	29625	0.005	Screened Out
	SPARTANBURG	South Carolina	29306	0.005	Screened Out
	DUDLEY	Massachusetts	01571	0.005	Screened Out
	WAYNE	New Jersey	07470	0.005	Screened Out
	LAFAYETTE	Indiana	47905	0.005	Screened Out
	MORRISVILLE	Pennsylvania	19067	0.0045	Screened Out
	INDIANAPOLIS	Indiana	46225	0.0045	Screened Out
	CLEARFIELD	Utah	84016	0.0045	Screened Out
	ROCKFORD	Illinois	61104	0.0045	Screened Out
	LOUISVILLE	Kentucky	40216	0.004	Screened Out
	HAMPTON	Iowa	50441	0.004	Screened Out
	CHARLOTTE	North Carolina	28273	0.004	Screened Out
	NORWALK	Connecticut	06852	0.004	Screened Out
	HOUSTON	Texas	77061	0.0035	Screened Out
	WALPOLE	Massachusetts	02081	0.0035	Screened Out
	CITY OF COMMERCE	California	90040	0.0035	Screened Out
	WINDSOR	Colorado	80550	0.0035	Screened Out
	PASADENA	Texas	77507	0.0035	Screened Out
	GARLAND	Texas	75040	0.003	Screened Out
	BAKERSFIELD	California	93308	0.003	Screened Out
	COHOES	New York	12047	0.003	Screened Out
	DEARBORN	Michigan	48121	0.003	Screened Out
	PALMYRA	New Jersey	08065	0.003	Screened Out
	LYNWOOD	California	90262	0.003	Screened Out
	CANTON	Massachusetts	02021	0.003	Screened Out
	KNOXVILLE	Tennessee	37921	0.0025	Screened Out
	ELMENDORF	Texas	78112	0.0025	Screened Out
	FERNLEY	Nevada	89408	0.0025	Screened Out
	MEMPHIS	Tennessee	38118	0.0025	Screened Out
	CHAGRIN FALLS	Ohio	44023	0.0025	Screened Out
	ROBSTOWN	Texas	78380	0.0025	Screened Out
	HOUSTON	Texas	77049	0.0025	Screened Out
	ROCHESTER	New York	14605	0.0025	Screened Out
	MEMPHIS	Tennessee	38118	0.0025	Screened Out
	NIAGARA FALLS	New York	14304	0.0025	Screened Out
	HOPEWELL	Virginia	23860	0.0025	Screened Out
	LINDEN	New Jersey	07036	0.0025	Screened Out
	SEAFORD	Delaware	19973	0.0025	Screened Out
	CITY OF INDUSTRY	California	91746	0.0025	Screened Out
	PHILLIPSBURG	New Jersey	08865	0.0025	Screened Out
	RIO RANCHO	New Mexico	87124	0.0025	Screened Out
	ROCK HILL	South Carolina	29730	0.0025	Screened Out
	SINCLAIR	Wyoming	82334	0.0025	Screened Out
	DENVER	Colorado	80216	0.0025	Screened Out
	NEWBURYPORT	Massachusetts	01950	0.0025	Screened Out
	YOUNGSTOWN	Ohio	44502	0.0025	Screened Out
	SPARTANBURG	South Carolina	29307	0.0025	Screened Out
	WAXAHACHIE	Texas	75165	0.0025	Screened Out
	WYNNEWOOD	Oklahoma	73098	0.0025	Screened Out
	MOUNT VERNON	Missouri	65712	0.0025	Screened Out
	CONCORD	North Carolina	28025	0.0025	Screened Out
	WOODRIDGE	Illinois	60517	0.0025	Screened Out
	KIMBALL	Nebraska	69145	0.0025	Screened Out
	SALEM	Massachusetts	01970	0.002	Screened Out
	CHATSWORTH	California	91311	0.002	Screened Out
	HARLEYVILLE	South Carolina	29448	0.002	Screened Out
	BEDFORD HEIGHTS	Ohio	44146	0.002	Screened Out
	COTTAGE GROVE	Minnesota	55016	0.002	Screened Out
	MIDLOTHIAN	Illinois	60445	0.002	Screened Out
	MILWAUKEE	Wisconsin	53207	0.002	Screened Out
	HAYWARD	California	94545	0.002	Screened Out
	CINCINNATI	Ohio	45246	0.002	Screened Out
	SPRINGFIELD	Massachusetts	01104	0.002	Screened Out
	ROLLING MEADOWS	Illinois	60008	0.002	Screened Out
	ORLANDO	Florida	32809	0.0015	Screened Out
	LEETSDALE	Pennsylvania	15056	0.0015	Screened Out
	DEER PARK	Texas	77536	0.0015	Screened Out
	MEMPHIS	Tennessee	38108	0.0015	Screened Out

Table C-1. Comparisons of 2009 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2009 Air Emissions (tpy)	Outcome
[redacted]	MILWAUKEE	Wisconsin	53223	0.0015	Screened Out
	SAN CARLOS	California	94070	0.0015	Screened Out
	CLEVELAND	Ohio	44109	0.0015	Screened Out
	RAYNE	Louisiana	70578	0.0015	Screened Out
	DAYTON	Texas	77535	0.001	Screened Out
	DEARBORN	Michigan	48121	0.001	Screened Out
	WHEELING	Illinois	60090	0.001	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.001	Screened Out
	MILWAUKEE	Wisconsin	53226	0.001	Screened Out
	FRANKFORT	Indiana	46041	0.001	Screened Out
	OLIVE BRANCH	Mississippi	38654	0.001	Screened Out
	MEMPHIS	Tennessee	38109	0.001	Screened Out
	BRANCHBURG	New Jersey	08876	0.001	Screened Out
	TEXARKANA	Texas	75501	0.001	Screened Out
	FREEHOLD	New Jersey	07728	0.001	Screened Out
	CHARLOTTE	North Carolina	28273	0.001	Screened Out
	LOUISVILLE	Kentucky	40214	0.001	Screened Out
	MILWAUKEE	Wisconsin	53218	0.001	Screened Out
	TOLEDO	Ohio	43612	0.001	Screened Out
	MOUNT PLEASANT	Iowa	52641	0.0005	Screened Out
	CHATSWORTH	California	91311	0.0005	Screened Out
	DALLAS	Texas	75247	0.0005	Screened Out
	UNION CITY	Tennessee	38261	0.0005	Screened Out
	LINDEN	New Jersey	07036	0.0005	Screened Out
	PASADENA	Texas	77507	0.0005	Screened Out
	ITASCA	Illinois	60143	0.0005	Screened Out
	AUGUSTA	Georgia	30906	0.0005	Screened Out
	SACRAMENTO	California	95826	0.0005	Screened Out
	FLORA	Illinois	62839	0.0005	Screened Out
	SAN LORENZO	Puerto Rico	00754	0.0005	Screened Out
	NORTH CHARLESTON	South Carolina	29406	0.0005	Screened Out
	ARVONIA	Virginia	23004	0.0005	Screened Out
	CHATTANOOGA	Tennessee	37406	0.0005	Screened Out

tpy: tons per year

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	WINSTON-SALEM	North Carolina	27107	188.7835	Retain
	WILLIAMSBURG	Virginia	23185	178.5	Retain
	FINDLAY	Ohio	45840	155	Retain
	OWATONNA	Minnesota	55060	122.646	Retain
	FREMONT	Ohio	43420	106.3225	Retain
	BISHOPVILLE	South Carolina	29010	96.762	Retain
	WEIRTON	West Virginia	26062	96.088	Retain
	REIDSVILLE	North Carolina	27320	94.5	Retain
	GREER	South Carolina	29651	91.2125	Retain
	SAINT PAUL	Minnesota	55107	89.498	Retain
	KENT	Washington	98032	83.081	Retain
	OLYMPIA	Washington	98501	77.6895	Retain
	OLIVE BRANCH	Mississippi	38654	76.824	Retain
	COLUMBUS	Ohio	43213	76.5	Retain
	LA PORTE	Indiana	46350	68.35	Retain
	AURORA	Indiana	47001	68.17917	Retain
	CHICAGO	Illinois	60609	68.005	Retain
	WHITEHOUSE	Ohio	43571	67.836	Retain
	DEARBORN	Michigan	48121	66.5	Retain
	BRADLEY	Illinois	60915	64.0775	Retain
	LAWRENCE	Massachusetts	01843	62.726	Retain
	LONGVIEW	Texas	75604	57.4525	Retain
	MARION	Ohio	43302	57.2125	Retain
	ROME	Georgia	30161	55.5	Retain
	WINDSOR	Colorado	80550	54.9985	Retain
	CLAYCOMO	Missouri	64119	51.5	Retain
	WORLAND	Wyoming	82401	51.128	Retain
	EAST LIBERTY	Ohio	43319	47.2	Retain
	ARNOLD	Missouri	63010	46.317	Retain
	HOMERVILLE	Georgia	31634	45.9635	Retain
	CHATSWORTH	California	91311	44.4135	Retain
	CHICAGO	Illinois	60609	43.1447	Retain
	HARRISONBURG	Virginia	22802	42.3835	Retain
	MARYSVILLE	Ohio	43040	42.3	Retain
	NEW WINDSOR	New York	12553	42.266	Retain
	PHOENIX	Arizona	85043	38.161	Retain
	MILWAUKEE	Wisconsin	53224	38	Retain
	TOLEDO	Ohio	43608	37.65	Retain
	CHICAGO HEIGHTS	Illinois	60411	37.48	Retain
	CONROE	Texas	77305	35.875	Retain
	LAFAYETTE	Indiana	47905	35.69	Retain
	DETROIT	Michigan	48215	35.6	Retain
	SMYRNA	Tennessee	37167	35.5795	Retain
	GOLDEN	Colorado	80401	35.5	Retain
	LOUISVILLE	Kentucky	40241	35.4	Retain
	PLOVER	Wisconsin	54467	35.35	Retain
	JACKSONVILLE	Florida	32254	34.9825	Retain
	FLORENCE	Kentucky	41042	34.946	Retain
	BALTIMORE	Maryland	21221	34.066	Retain
	SUGAR LAND	Texas	77478	32.335	Retain
	MIRA LOMA	California	91752	32.253	Retain
	TORRANCE	California	90503	32	Retain
	HARRISBURG	North Carolina	28075	31.510045	Retain
	BARABOO	Wisconsin	53913	30.575	Retain
	BUTLER	Indiana	46721	29.7775	Retain
	GOLDEN	Colorado	80403	29	Retain
	MONTICELLO	Indiana	47960	28.5	Retain
	CAROLINA	Puerto Rico	00985	27.6395	Retain
	RED WING	Minnesota	55066	27.586	Retain
	WHITE PIGEON	Michigan	49099	26.3225	Retain
	VANCE	Alabama	35490	25.946605	Retain
	OAK CREEK	Wisconsin	53154	25.631	Retain
	CINCINNATI	Ohio	45242	25.585	Retain

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	HARVEY	Illinois	60426	25.519	Retain
	CHICAGO	Illinois	60623	25.49802	Retain
	FLINT	Michigan	48551	24.95	Retain
	GREENFIELD	Indiana	46140	24.2775	Retain
	HANOVER	Pennsylvania	17331	24.2	Retain
	PRINCETON	Indiana	47670	24.1785	Retain
	CHERAW	South Carolina	29520	24.1435	Retain
	TAMPA	Florida	33617	24	Retain
	LINCOLN	Alabama	35096	23.9835	Retain
	LA CROSSE	Wisconsin	54603	23.799	Retain
	WESTBROOK	Maine	04098	23.5025	Retain
	LANSING	Michigan	48917	23.5	Retain
	CLYDE	Ohio	43410	23.358	Retain
	ALSIP	Illinois	60803	23.257	Retain
	WEIRTON	West Virginia	26062	22.5	Retain
	BATESVILLE	Mississippi	38606	22.4855	Retain
	FINDLAY	Ohio	45840	22.375	Retain
	SHAWNEE	Oklahoma	74804	21.875	Retain
	HARRISBURG	PENNSYLVANIA	17104	21.639	Retain
	PASADENA	Texas	77503	21.563	Retain
	CLEVELAND	Ohio	44105	21.231	Retain
	FORT ATKINSON	Wisconsin	53538	20.85	Retain
	PONCA CITY	Oklahoma	74601	20.6415	Retain
	PELLA	Iowa	50219	20.3955	Retain
	SARATOGA SPRINGS	New York	12866	20.35	Retain
	OAK CREEK	WISCONSIN	53154	20.3365	Retain
	MANCHESTER	Tennessee	37355	20.3255	Retain
	MILAN	Tennessee	38358	20.165	Retain
	FAIRFIELD	California	94533	19.5	Retain
	CRAWFORDSVILLE	Indiana	47933	18.97	Retain
	CONROE	Texas	77303	18.55	Retain
	HIGH POINT	NORTH CAROLINA	27263	17.92	Retain
	SEADRIFT	Texas	77983	17.4725	Retain
	TARBORO	North Carolina	27886	16.7595	Retain
	NASHVILLE	Tennessee	37218	16.7	Retain
	CHATTANOOGA	Tennessee	37402	16.67	Retain
	TERRELL	Texas	75160	16.5975	Retain
	YOUNGSTOWN	Ohio	44512	16.53	Retain
	BEREA	Kentucky	40403	16.4665	Retain
	MILWAUKEE	Wisconsin	53212	15.463	Retain
	BUSHNELL	Florida	33513	14.8635	Retain
	FREMONT	California	94538	14.564	Retain
	LONGVIEW	Texas	75602	14.5535	Retain
	CLAIRTON	Pennsylvania	15025	14.5	Retain
	CHICAGO	Illinois	60608	14.275	Retain
	URBANA	Ohio	43078	14.1725	Retain
	MANNS CHOICE	Pennsylvania	15550	14.104	Retain
	MIDDLETOWN	New York	10940	14	Retain
	HARTFORD	Wisconsin	53027	13.935	Retain
	SHEBOYGAN FALLS	Wisconsin	53085	13.9125	Retain
	EVANSVILLE	Indiana	47710	13.9	Retain
	TOLEDO	Ohio	43612	13.8175	Retain
	WOOSTER	Ohio	44691	13.79	Retain
	MARION	Virginia	24354	13.7645	Retain
	MC DONOUGH	Georgia	30253	13.7	Retain
	LEEDS	Alabama	35094	13.661	Retain
	HUNTSVILLE	Alabama	35811	13.637	Retain
	QUINCY	Illinois	62305	13.6135	Retain
	HANOVER	Pennsylvania	17331	13.5285	Retain
	GRAPELAND	Texas	75844	13.507	Retain
	FORT WORTH	Texas	76140	13.5	Retain
	TOLEDO	Ohio	43607	13.32944	Retain
	PIGGOTT	Arkansas	72454	13.31	Retain
	AIKEN	South Carolina	29801	13.1095	Retain
	KAPOLEI	Hawaii	96707	12.8	Retain
	GUIN	Alabama	35563	12.751	Retain
	GEORGETOWN	Kentucky	40324	12.677	Retain
	SIDNEY	Ohio	45365	12.659	Retain
	LAKELAND	Florida	33810	12.3785	Retain
	CHEMUNG	New York	14825	12.2325	Retain

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	SWEETWATER	Tennessee	37874	12.168	Retain
	ROANOKE	Indiana	46783	12.15	Retain
	WARREN	Ohio	44483	12.122	Retain
	MASON	Ohio	45040	11.7955	Retain
	MADISON HEIGHTS	Michigan	48071	11.7535	Retain
	MOUNT VERNON	Missouri	65712	11.677	Retain
	FRANKLIN	Pennsylvania	16323	11.6	Retain
	CHICAGO	Illinois	60623	11.337	Retain
	LAVONIA	GEORGIA	30553	11.244	Retain
	CHICAGO	Illinois	60623	11.1945	Retain
	WAYNE	Michigan	48184	11.125	Retain
	JACKSON	Mississippi	39272	11.0325	Retain
	EVERETT	Washington	98204	11	Retain
	HAGERSTOWN	MARYLAND	21742	11	Retain
	BLOOMINGTON	Indiana	47404	11	Retain
	MEXIA	TEXAS	76667	10.7145	Retain
	CONROE	TEXAS	77301	10.5724638	Retain
	ELK GROVE VILLAGE	Illinois	60007	10.445	Retain
	ASHLAND CITY	TENNESSEE	37015	10.4155	Retain
	VICKSBURG	MISSISSIPPI	39181	10.4095	Retain
	NORFOLK	Nebraska	68701	10.26	Retain
	MAXTON	North Carolina	28364	10.1855	Retain
	SYCAMORE	ILLINOIS	60178	10.144	Retain
	ASHLEY	Indiana	46705	10.1	Retain
	WHITE HALL	Arkansas	71602	10.0855	Retain
	NEW BRITAIN	Connecticut	06052	9.969	Retain
	OCONOMOWOC	Wisconsin	53066	9.95	Retain
	WILLARD	Ohio	44890	9.915	Retain
	BIRMINGHAM	Alabama	35234	9.895	Retain
	BLANDON	Pennsylvania	19510	9.889	Retain
	FENTON	MISSOURI	63026	9.812685	Retain
	FLORENCE	South Carolina	29501	9.777	Retain
	LEXINGTON	South Carolina	29073	9.7255	Retain
	FORT PAYNE	Alabama	35967	9.6915	Retain
	DUBLIN	Georgia	31021	9.616	Retain
	SUSSEX	Wisconsin	53089	9.595	Retain
	BRIDGEVIEW	Illinois	60455	9.5	Retain
	LEXINGTON	Kentucky	40511	9.4845	Retain
	FAIRFIELD	California	94533	9.37	Retain
	MILWAUKEE	Wisconsin	53224	9.296	Retain
	GALESBURG	ILLINOIS	61401	9.247	Retain
	SAINT JOSEPH	Missouri	64504	9.015	Retain
	NEW ORLEANS	Louisiana	70123	8.708	Retain
	WAUPACA	Wisconsin	54981	8.605	Retain
	DAYTON	Tennessee	37321	8.57306025	Retain
	NEWTON	Mississippi	39345	8.5565	Retain
	GOODFIELD	ILLINOIS	61742	8.4305	Retain
	AKRON	New York	14001	8.413	Retain
	LAKELAND	Florida	33801	8.3945	Retain
	ELGIN	Illinois	60120	8.35	Retain
	NAPOLEON	Ohio	43545	8.3375	Retain
	LUFKIN	Texas	75904	8.303	Retain
	SPRINGDALE	Arkansas	72764	8.213	Retain
	MISHAWAKA	INDIANA	46545	8.1875	Retain
	BURLINGTON	Iowa	52601	8.175	Retain
	MENOMONIE	Wisconsin	54751	7.85	Retain
	AURORA	Illinois	60504	7.8365	Retain
	MISSOURI VALLEY	Iowa	51555	7.834	Retain
	HARTFORD	Wisconsin	53027	7.737	Retain
	LA PORTE	Indiana	46350	7.7325	Retain
	OWENSVILLE	Missouri	65066	7.665	Retain
	LANSING	Michigan	48921	7.55	Retain
	WINFIELD	Kansas	67156	7.533	Retain
	MANSFIELD	MISSOURI	65704	7.505	Retain
	WINNEMUCCA	NEVADA	89445	7.4985	Retain
	ROSSFORD	Ohio	43460	7.4105	Retain
	EL RENO	OKLAHOMA	73036	7.409	Retain
	PASADENA	Texas	77507	7.4035	Retain
	SAINT CLOUD	Minnesota	56303	7.33722	Retain

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	WARREN	Ohio	44483	7.305	Retain
	FAYETTEVILLE	ARKANSAS	72701	7.3	Retain
	TINKER A F B	Oklahoma	73145	7.3	Retain
	BELVIDERE	Illinois	61008	7.3	Retain
	WENTZVILLE	Missouri	63385	7.25	Retain
	WEIRTON	West Virginia	26062	7.2295	Retain
	GASTONIA	North Carolina	28052	7.2025	Retain
	CARSON	California	90745	7.184775	Retain
	CRAWFORDSVILLE	Indiana	47933	7.1225	Retain
	SAINT FRANCIS	Wisconsin	53235	7.09505	Retain
	ANKENY	IOWA	50023	7.0485	Retain
	LENOIR	North Carolina	28645	7.0455	Retain
	NEWBURGH	Indiana	47629	7	Retain
	PARIS	Texas	75460	6.953	Retain
	COLUMBUS	Indiana	47201	6.95	Retain
	PHILADELPHIA	Pennsylvania	19120	6.9415	Retain
	WOODBRIDGE	New Jersey	07095	6.8305	Retain
	WEST HENRIETTA	New York	14586	6.7935	Retain
	MC DONOUGH	GEORGIA	30253	6.7395	Retain
	ROGERS	ARKANSAS	72756	6.735	Retain
	SAINT MARYS	Ohio	45885	6.7315	Retain
	CLARENDON	Pennsylvania	16313	6.726985	Retain
	MARION	New York	14505	6.6935	Retain
	LANCASTER	Pennsylvania	17601	6.6375	Retain
	DURHAM	North Carolina	27703	6.601	Retain
	ORANGEBURG	South Carolina	29116	6.56	Retain
	STARR	South Carolina	29684	6.559	Retain
	PINE BLUFF	ARKANSAS	71602	6.5	Retain
	FORT DODGE	IOWA	50501	6.49178	Retain
	CHICAGO	ILLINOIS	60632	6.45	Retain
	SAINT JOE	Indiana	46785	6.3715	Retain
	CANTON	Mississippi	39046	6.3555	Retain
	HAMMOND	Indiana	46320	6.331	Retain
	YANKTON	South Dakota	57078	6.31004485	Retain
	MIDDLEVILLE	Michigan	49333	6.2995	Retain
	CLEVELAND	Tennessee	37311	6.25	Retain
	MONETT	Missouri	65708	6.1935	Retain
	SHANNON	Mississippi	38868	6.164015	Retain
	SPRINGFIELD	Ohio	45502	6.1	Retain
	SACRAMENTO	California	95824	6.085	Retain
	WICHITA	KANSAS	67219	6.051	Retain
	GWINNER	NORTH DAKOTA	58040	5.964	Retain
	BAXTER SPRINGS	Kansas	66713	5.9425	Retain
	WARREN	Michigan	48091	5.915	Retain
	MERCED	California	95348	5.866	Retain
	MYRTLE BEACH	South Carolina	29577	5.8645	Retain
	SAINT LOUIS	Missouri	63104	5.84243	Retain
	CHILTON	Wisconsin	53014	5.8315	Retain
	ROCHELLE	Illinois	61068	5.806	Retain
	SHAWNEE	Kansas	66227	5.745	Retain
	WINCHESTER	Virginia	22603	5.73718	Retain
	CRANSTON	RHODE ISLAND	02920	5.7195	Retain
	CEDAR FALLS	Iowa	50613	5.66847	Retain
	DIXON	California	95620	5.621	Retain
	GRANITE CITY	Illinois	62040	5.6115	Retain
	EDISON	New Jersey	08817	5.55	Retain
	ZACHARY	Louisiana	70791	5.545	Retain
	CAROL STREAM	Illinois	60188	5.496	Retain
	RUSSELLVILLE	Kentucky	42276	5.398	Retain
	NAVASOTA	Texas	77868	5.391	Retain
	DETROIT	MICHIGAN	48207	5.384	Retain
	LOWVILLE	New York	13367	5.3625	Retain
	SPRINGDALE	Pennsylvania	15144	5.3045	Retain
	BATESVILLE	Indiana	47006	5.297	Retain
	FLAT ROCK	Michigan	48134	5.28	Retain
	ONEIDA	Tennessee	37841	5.22175	Retain

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	INDEPENDENCE	Missouri	64051	5.166	Retain
	GENEVA	Alabama	36340	5.1155	Retain
	CARROLL	IOWA	51401	5.05	Retain
	MONETT	MISSOURI	65708	5.0365	Retain
	SIDNEY	Ohio	45365	5.0325	Retain
	LANCASTER	Pennsylvania	17601	4.8597	Screened Out
	LONGMONT	Colorado	80501	4.85	Screened Out
	HOUSTON	Texas	77015	4.815	Screened Out
	NORTH BRUNSWICK	New Jersey	08902	4.773	Screened Out
	RIVERBANK	California	95367	4.728	Screened Out
	FARIBAULT	Minnesota	55021	4.7155	Screened Out
	MONTGOMERY	Alabama	36105	4.714	Screened Out
	ZANESVILLE	Ohio	43701	4.7	Screened Out
	CHICAGO	Illinois	60624	4.65	Screened Out
	SAINT LOUIS	Missouri	63116	4.6395	Screened Out
	SAINT PAUL	Minnesota	55116	4.59	Screened Out
	HARTLAND	Maine	04943	4.587	Screened Out
	HOUSTON	TEXAS	77043	4.5785	Screened Out
	DUBLIN	VIRGINIA	24084	4.55	Screened Out
	DANVILLE	Kentucky	40422	4.5025	Screened Out
	WEIRTON	West Virginia	26062	4.485	Screened Out
	TERMINAL ISLAND	California	90731	4.475	Screened Out
	WASECA	Minnesota	56093	4.474	Screened Out
	STERLING HEIGHTS	Michigan	48313	4.4615	Screened Out
	YORK	South Carolina	29745	4.4225	Screened Out
	CLARKSVILLE	Tennessee	37040	4.3865	Screened Out
	ENDICOTT	New York	13760	4.3655	Screened Out
	LOGAN	Utah	84321	4.32	Screened Out
	FOREST GROVE	Oregon	97116	4.273	Screened Out
	LA CROSSE	Wisconsin	54601	4.2335	Screened Out
	GAINESVILLE	Georgia	30504	4.226	Screened Out
	MONTROSS	VIRGINIA	22520	4.1765	Screened Out
	REDMOND	Washington	98052	4.14645	Screened Out
	PORTAGE	Indiana	46368	4.1135	Screened Out
	WOODSTOCK	Illinois	60098	4.005	Screened Out
	JACKSON	Mississippi	39272	3.9925	Screened Out
	DOVER	Delaware	19904	3.984	Screened Out
	OAKDALE	California	95361	3.984	Screened Out
	MENOMONEE FALLS	Wisconsin	53051	3.95	Screened Out
	LORDSTOWN	Ohio	44481	3.9	Screened Out
	TOLEDO	Ohio	43607	3.885	Screened Out
	EFFINGHAM	Illinois	62401	3.83	Screened Out
	NEWAYGO	MICHIGAN	49337	3.8065	Screened Out
	SHREVEPORT	Louisiana	71129	3.745	Screened Out
	FONTANA	California	92337	3.7	Screened Out
	PORTLAND	Oregon	97203	3.6305	Screened Out
	WARMINSTER	Pennsylvania	18974	3.5965	Screened Out
	EAST GREENVILLE	Pennsylvania	18041	3.5415	Screened Out
	ORANGEBURG	South Carolina	29115	3.5095	Screened Out
	MATTOON	ILLINOIS	61938	3.465	Screened Out
	BESSEMER	Alabama	35023	3.42	Screened Out
	STAFFORD	Connecticut	06075	3.3675	Screened Out
	TOMAH	Wisconsin	54660	3.331	Screened Out
	LEWISPORT	Kentucky	42351	3.3235	Screened Out
	STRONGSVILLE	Ohio	44149	3.316	Screened Out
	BRILLION	Wisconsin	54110	3.30905	Screened Out
	LYONS	New York	14489	3.2625	Screened Out
	SPRING HILL	Tennessee	37174	3.2565	Screened Out
	WEST ALLIS	WISCONSIN	53214	3.255	Screened Out
	BATESVILLE	Mississippi	38606	3.2525	Screened Out
	HUEYTOWN	Alabama	35023	3.2315	Screened Out
	MIDDLEBURY	INDIANA	46540	3.2215	Screened Out
	LEBANON	Ohio	45036	3.186	Screened Out
	WYANDOTTE	Michigan	48192	3.136775	Screened Out
	MEMPHIS	Tennessee	38113	3.122	Screened Out
	STRASBURG	Virginia	22657	3.1	Screened Out
	PASADENA	Texas	77507	3.079167767	Screened Out
	LOS ANGELES	California	90016	3.075	Screened Out
	TORRANCE	California	90502	3.0235	Screened Out
	CRAIGSVILLE	WEST VIRGINIA	26205	3.0215	Screened Out
	LINCOLN	Nebraska	68524	2.951	Screened Out
	COLUMBUS	Ohio	43228	2.8845	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	MIDLAND	Michigan	48667	2.85	Screened Out
	LOMIRA	WISCONSIN	53048	2.843	Screened Out
	SAN ANTONIO	Texas	78264	2.8200666	Screened Out
	ROBINS AFB	Georgia	31098	2.7925	Screened Out
	KANSAS CITY	Kansas	66115	2.782	Screened Out
	LANCASTER	South Carolina	29721	2.758	Screened Out
	WEST POINT	GEORGIA	31833	2.7465	Screened Out
	CHARLOTTE	North Carolina	28273	2.6575	Screened Out
	OLATHE	Kansas	66061	2.612	Screened Out
	AVON LAKE	Ohio	44012	2.595	Screened Out
	MULBERRY	Florida	33860	2.5845	Screened Out
	CHEEKTOWAGA	New York	14225	2.58	Screened Out
	MARINETTE	Wisconsin	54143	2.5585	Screened Out
	TULSA	Oklahoma	74116	2.55	Screened Out
	CINCINNATI	Ohio	45244	2.54489	Screened Out
	FOND DU LAC	Wisconsin	54935	2.5235	Screened Out
	ADA	Michigan	49355	2.5035	Screened Out
	LOS ANGELES	California	90031	2.5	Screened Out
	ATHENS	Georgia	30607	2.4385	Screened Out
	MARENGO	Iowa	52301	2.429	Screened Out
	CAMBRIDGE	Ohio	43725	2.4205	Screened Out
	FRIDLEY	Minnesota	55432	2.42	Screened Out
	AGUADILLA	Puerto Rico	00605	2.373	Screened Out
	EAST LONGMEADOW	MASSACHUSETTS	01028	2.3645	Screened Out
	RICHMOND	VIRGINIA	23228	2.34746	Screened Out
	FOSTORIA	Ohio	44830	2.345	Screened Out
	HERMITAGE	Pennsylvania	16148	2.332	Screened Out
	LUFKIN	Texas	75901	2.304	Screened Out
	LAWRENCEVILLE	Georgia	30043	2.288	Screened Out
	CARTHAGE	Tennessee	37030	2.279	Screened Out
	NILES	Michigan	49120	2.275	Screened Out
	MARYVILLE	Tennesee	37801	2.2585	Screened Out
	HUTCHINSON	Minnesota	55350	2.2255	Screened Out
	GREENSBURG	Indiana	47240	2.2	Screened Out
	FRIENDLY	West Virginia	26146	2.1965	Screened Out
	INDIAN TRAIL	North Carolina	28079	2.1845	Screened Out
	LA PORTE	Texas	77571	2.1395	Screened Out
	MOUNT VERNON	Illinois	62864	2.1145	Screened Out
	WESTLAND	Michigan	48186	2.104	Screened Out
	MIDLAND	Texas	79703	2.103	Screened Out
	MOUNT VERNON	Indiana	47620	2.1	Screened Out
	MANASSAS	VIRGINIA	20109	2.0505	Screened Out
	PORTLAND	Oregon	97218	2.02415295	Screened Out
	NILES	Ohio	44446	2.021	Screened Out
	BUFFALO	New York	14207	2.0045	Screened Out
	QUAKERTOWN	PENNSYLVANIA	18951	1.995	Screened Out
	FONDA	New York	12068	1.9865	Screened Out
	KANKAKEE	Illinois	60901	1.9835	Screened Out
	STRUTHERS	Ohio	44471	1.952	Screened Out
	PENSACOLA	Florida	32502	1.9355	Screened Out
	TAMPA	FLORIDA	33611	1.9325	Screened Out
	COLUMBIA	South Carolina	29201	1.925	Screened Out
	WEST MEMPHIS	Arkansas	72301	1.899	Screened Out
	FAIRFIELD	Alabama	35064	1.8805	Screened Out
	WEIRTON	West Virginia	26062	1.873	Screened Out
	MADISON	Alabama	35756	1.859	Screened Out
	WAUKEGAN	Illinois	60085	1.834	Screened Out
	DETROIT	Michigan	48211	1.8155	Screened Out
	LOUISVILLE	Kentucky	40213	1.815	Screened Out
	RENO	Nevada	89512	1.8	Screened Out
	DETROIT	Michigan	48211	1.79	Screened Out
	SPRINGDALE	Arkansas	72764	1.79	Screened Out
	LOUISVILLE	Kentucky	40210	1.765	Screened Out
	COLUMBUS	Nebraska	68601	1.753	Screened Out
	KINGSPORT	Tennessee	37662	1.726	Screened Out
	PINEVILLE	North Carolina	28134	1.717	Screened Out
	FAIRFIELD	Alabama	35064	1.71311	Screened Out
	ANTIOCH	California	94509	1.7065	Screened Out
	NORTH KANSAS CITY	Missouri	64116	1.683	Screened Out
	TAUNTON	Massachusetts	02780	1.637	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	TOLEDO	Ohio	43612	1.60765	Screened Out
	JEFFERSON CITY	Missouri	65109	1.572395	Screened Out
	ROCKFORD	Illinois	61104	1.5395	Screened Out
	PLAQUEMINE	Louisiana	70765	1.538	Screened Out
	DYERSBURG	Tennessee	38024	1.529	Screened Out
	HAZLETON	Pennsylvania	18201	1.5	Screened Out
	JACKSONVILLE	Texas	75766	1.4775	Screened Out
	CARROLLTON	Texas	75006	1.4565	Screened Out
	TAFT	Louisiana	70057	1.4555	Screened Out
	STERLING HEIGHTS	Michigan	48312	1.45	Screened Out
	STILLWATER	Oklahoma	74075	1.448	Screened Out
	CHARLESTOWN	Indiana	47111	1.4255	Screened Out
	NEW IBERIA	LOUISIANA	70560	1.4245	Screened Out
	DECATUR	Alabama	35601	1.414	Screened Out
	ARLINGTON	Texas	76010	1.41	Screened Out
	LOUISVILLE	Kentucky	40219	1.4025	Screened Out
	WELLSBURG	West Virginia	26070	1.4	Screened Out
	BRYAN	Ohio	43506	1.388	Screened Out
	ARLINGTON	Texas	76011	1.375	Screened Out
	ROCHESTER	Pennsylvania	15074	1.3745	Screened Out
	COLUMBIA CITY	Indiana	46725	1.338	Screened Out
	BEDFORD PARK	Illinois	60638	1.3125	Screened Out
	CEDARTOWN	Georgia	30125	1.312	Screened Out
	GRAND RAPIDS	Michigan	49507	1.312	Screened Out
	CARSON CITY	Nevada	89701	1.295	Screened Out
	AVON	Connecticut	06001	1.2875	Screened Out
	PEOTONE	Illinois	60468	1.267	Screened Out
	LAFAYETTE	Indiana	47905	1.2555	Screened Out
	AVENEL	New Jersey	07001	1.248	Screened Out
	SAINT CHARLES	Illinois	60174	1.234	Screened Out
	COLUMBUS	Ohio	43211	1.225	Screened Out
	ORLANDO	FLORIDA	32837	1.2105	Screened Out
	SAUKVILLE	Wisconsin	53080	1.202	Screened Out
	CHICAGO	Illinois	60633	1.201	Screened Out
	HOUSTON	Texas	77054	1.19	Screened Out
	WAVERLY	Ohio	45690	1.173	Screened Out
	YORK	PENNSYLVANIA	17402	1.17007	Screened Out
	MILWAUKEE	Wisconsin	53214	1.159	Screened Out
	EVANSVILLE	Indiana	47711	1.156	Screened Out
	MOLINE	Illinois	61265	1.15	Screened Out
	MENOMONEE FALLS	Wisconsin	53051	1.1195	Screened Out
	BOURBONNAIS	Illinois	60914	1.1105	Screened Out
	DALTON	Georgia	30721	1.1095	Screened Out
	MANDAN	North Dakota	58554	1.1005	Screened Out
	INDIANAPOLIS	Indiana	46218	1.0982	Screened Out
	MARIETTA	Ohio	45750	1.078	Screened Out
	LIBERTY	Indiana	47353	1.077	Screened Out
	GARLAND	Texas	75042	1.068	Screened Out
	NORTH KANSAS CITY	Missouri	64116	1.0665	Screened Out
	BROWNWOOD	Texas	76801	1.0435	Screened Out
	BALTIMORE	Maryland	21224	1.029	Screened Out
	SOUTHFIELD	Michigan	48034	1.023	Screened Out
	HOUSTON	Texas	77051	1.019	Screened Out
	CHIPPEWA FALLS	Wisconsin	54729	1.002	Screened Out
	BOWLING GREEN	Kentucky	42101	1	Screened Out
	SANTA CLARA	California	95050	0.9985	Screened Out
	DAVENPORT	Iowa	52802	0.9965	Screened Out
	CRANBERRY TOWNSHIP	Pennsylvania	16066	0.9945	Screened Out
	TOLEDO	Ohio	43615	0.975	Screened Out
	CLEVELAND	Ohio	44111	0.9675	Screened Out
	TRENTON	New Jersey	08648	0.952	Screened Out
	RANCHO CUCAMONGA	CALIFORNIA	91730	0.925	Screened Out
	SAINT JOSEPH	Missouri	64501	0.9205	Screened Out
	MORRIS	Illinois	60450	0.896	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	VALENCIA	Pennsylvania	16059	0.893	Screened Out
	SCHOFIELD	Wisconsin	54476	0.89296195	Screened Out
	TUSCALOOSA	Alabama	35401	0.8905	Screened Out
	LAWRENCE	MASSACHUSETTS	1841	0.89	Screened Out
	MAUMEE	Ohio	43537	0.8875	Screened Out
	SUGAR GROVE	Illinois	60554	0.876	Screened Out
	HOUSTON	TEXAS	77041	0.875	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.8735	Screened Out
	COVINGTON	Georgia	30014	0.863	Screened Out
	STILLWATER	Oklahoma	74075	0.85822	Screened Out
	NORMAL	Illinois	61761	0.8485	Screened Out
	GRAYSLAKE	Illinois	60030	0.82	Screened Out
	LANCASTER	Ohio	43130	0.8195	Screened Out
	PAINESVILLE	Ohio	44077	0.81	Screened Out
	ORLANDO	Florida	32837	0.81	Screened Out
	SAGINAW	Michigan	48601	0.8	Screened Out
	TWIN LAKES	WISCONSIN	53181	0.798	Screened Out
	PEORIA	Illinois	61615	0.7925	Screened Out
	BATAVIA	Illinois	60510	0.786	Screened Out
	HOUSTON	Texas	77073	0.785	Screened Out
	SAVAGE	Minnesota	55378	0.785	Screened Out
	BLOOMSBURG	Pennsylvania	17815	0.7755	Screened Out
	LUBBOCK	Texas	79415	0.7665	Screened Out
	CORDOVA	Illinois	61242	0.765	Screened Out
	JEFFERSONVILLE	Indiana	47130	0.763	Screened Out
	LAFAYETTE	Indiana	47905	0.7535	Screened Out
	PLEASANT PRAIRIE	Wisconsin	53158	0.75	Screened Out
	MIDDLEBURY	Indiana	46540	0.733	Screened Out
	LOUISVILLE	Kentucky	40202	0.7075	Screened Out
	FONTANA	California	92335	0.70305	Screened Out
	CHRISTIANSTED	Virgin Islands	00820	0.702	Screened Out
	HARWICK	Pennsylvania	15049	0.6935	Screened Out
	EAST POINT	Georgia	30344	0.691	Screened Out
	CARROLLTON	Texas	75006	0.69	Screened Out
	WARREN	Pennsylvania	16365	0.678	Screened Out
	HOUSTON	Texas	77007	0.672	Screened Out
	WESTLAKE	Louisiana	70669	0.6685	Screened Out
	MESQUITE	Texas	75149	0.663	Screened Out
	VISALIA	California	93291	0.658	Screened Out
	BLYTHEVILLE	Arkansas	72315	0.6505	Screened Out
	ELKRIDGE	Maryland	21075	0.634	Screened Out
	KALAMA	Washington	98625	0.632015	Screened Out
	FORT WORTH	Texas	76110	0.628	Screened Out
	LEBANON	Ohio	45036	0.608	Screened Out
	CHICAGO	Illinois	60630	0.6065	Screened Out
	BATON ROUGE	Louisiana	70805	0.6	Screened Out
	MONROE	Ohio	45050	0.5925	Screened Out
	HOUSTON	Texas	77053	0.59	Screened Out
	BIRMINGHAM	Alabama	35215	0.5885	Screened Out
	ASHVILLE	Ohio	43103	0.5885	Screened Out
	WILLOW SPRINGS	Illinois	60480	0.586	Screened Out
	HAWESVILLE	Kentucky	42348	0.58	Screened Out
	TULSA	Oklahoma	74115	0.5795	Screened Out
	ALLENTOWN	Pennsylvania	18103	0.568	Screened Out
	CHICO	California	95928	0.5605	Screened Out
	CEDAR RAPIDS	IOWA	52404	0.55984	Screened Out
	COTTAGE GROVE	Wisconsin	53527	0.55	Screened Out
	ROSEMOUNT	Minnesota	55068	0.55	Screened Out
	VALLEY PARK	Missouri	63088	0.549875	Screened Out
	FORT MADISON	Iowa	52627	0.544	Screened Out
	AMBRIDGE	Pennsylvania	15003	0.5315	Screened Out
	PATERSON	New Jersey	07503	0.5275	Screened Out
	MOUNT CLEMENS	Michigan	48043	0.5265	Screened Out
	TALLULAH	Louisiana	71282	0.525	Screened Out
	SAN ANTONIO	Texas	78251	0.517	Screened Out
	PALMDALE	California	93599	0.514	Screened Out
	ROXBORO	North Carolina	27573	0.513	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	SAINT CLAIR	Missouri	63077	0.509	Screened Out
	SHREVEPORT	Louisiana	71115	0.5085	Screened Out
	STURTEVANT	Wisconsin	53177	0.5	Screened Out
	WESTON	Michigan	49289	0.5	Screened Out
	WASHINGTON	Pennsylvania	15301	0.5	Screened Out
	LAFAYETTE	Indiana	47909	0.5	Screened Out
	VERNON	California	90023	0.5	Screened Out
	HOPKINSVILLE	Kentucky	42240	0.48455	Screened Out
	GREAT BEND	Kansas	67530	0.4825	Screened Out
	COLORADO SPRINGS	COLORADO	80916	0.475	Screened Out
	CHICAGO	Illinois	60622	0.4735	Screened Out
	ALGONA	Iowa	50511	0.4705	Screened Out
	MOLINE	Illinois	61265	0.47	Screened Out
	STREETSBORO	Ohio	44241	0.468	Screened Out
	CLINTON	Iowa	52732	0.466	Screened Out
	FREEPORT	Texas	77541	0.4635	Screened Out
	BEDFORD PARK	Illinois	60501	0.458	Screened Out
	EUGENE	Oregon	97402	0.437	Screened Out
	SYCAMORE	ILLINOIS	60178	0.434	Screened Out
	SANTA FE SPRINGS	California	90670	0.43	Screened Out
	PORTLAND	Oregon	97203	0.4295	Screened Out
	ANAHEIM	California	92801	0.428	Screened Out
	JERSEY CITY	New Jersey	07304	0.428	Screened Out
	NASHVILLE	Illinois	62263	0.42766	Screened Out
	BIRMINGHAM	Alabama	35234	0.4215	Screened Out
	LANSING	Illinois	60438	0.40825	Screened Out
	FULLERTON	California	92831	0.4065	Screened Out
	EL RENO	OKLAHOMA	73036	0.403	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.3955	Screened Out
	CANTON	Massachusetts	02021	0.3895	Screened Out
	ELKTON	Virginia	22827	0.38	Screened Out
	MORROW	Georgia	30260	0.3775	Screened Out
	DES PLAINES	ILLINOIS	60016	0.3775	Screened Out
	MILLEDGEVILLE	GEORGIA	31061	0.3775	Screened Out
	HOUSTON	Texas	77091	0.3775	Screened Out
	EASTON	Pennsylvania	18045	0.375	Screened Out
	HOUSTON	Texas	77041	0.375	Screened Out
	PORTLAND	INDIANA	47371	0.375	Screened Out
	HARVEY	Illinois	60426	0.3715	Screened Out
	ANNISTON	Alabama	36207	0.37	Screened Out
	RANCHO CUCAMONGA	California	91730	0.368665	Screened Out
	GRANITE CITY	ILLINOIS	62040	0.367	Screened Out
	BRAZIL	INDIANA	47834	0.36605	Screened Out
	HAVRE DE GRACE	Maryland	21078	0.354	Screened Out
	GALLIPOLIS FERRY	West Virginia	25515	0.3506	Screened Out
	CHICAGO	Illinois	60633	0.35	Screened Out
	PLAQUEMINE	Louisiana	70765	0.347535	Screened Out
	MENOMONEE FALLS	WISCONSIN	53051	0.3475	Screened Out
	GREENVILLE SOUTH	SOUTH CAROLINA	29605	0.3375	Screened Out
	MINNETONKA	Minnesota	55343	0.336	Screened Out
	RICHMOND	Kentucky	40475	0.336	Screened Out
	ATLANTA	Georgia	30318	0.3355	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.335	Screened Out
	LANCASTER	Pennsylvania	17603	0.3325	Screened Out
	FREMONT	Michigan	49412	0.331	Screened Out
	PERTH AMBOY	NEW JERSEY	08861	0.3185	Screened Out
	HELENA	ARKANSAS	72342	0.30835	Screened Out
	MACHESNEY PARK	Illinois	61115	0.3075	Screened Out
	WAUSAU	Wisconsin	54401	0.302	Screened Out
	WAYNE	Michigan	48184	0.3015	Screened Out
	BREMEN	Indiana	46506	0.3	Screened Out
	WESTLAKE	Ohio	44145	0.296	Screened Out
	SAN JOSE	California	95134	0.295	Screened Out
	MILWAUKEE	Wisconsin	53223	0.29	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.287	Screened Out
	PAGEDALE	Missouri	63133	0.2865	Screened Out
	WEST HAVEN	Connecticut	06516	0.28527	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	FRANKLIN	Pennsylvania	16323	0.284	Screened Out
	CONNELLSVILLE	Pennsylvania	15425	0.28171	Screened Out
	MOUNT VERNON	New York	10550	0.274	Screened Out
	RIO RANCHO	New Mexico	87124	0.273	Screened Out
	LAKELAND	Florida	33803	0.268	Screened Out
	LOUISVILLE	Kentucky	40203	0.2655	Screened Out
	MORRISVILLE	Pennsylvania	19067	0.265	Screened Out
	WEST BEND	Wisconsin	53095	0.2645	Screened Out
	CASA GRANDE	Arizona	85222	0.2600625	Screened Out
	SAYRE	PENNSYLVANIA	18840	0.26	Screened Out
	SAINT PAUL	Minnesota	55102	0.2595	Screened Out
	CARTERET	New Jersey	07008	0.2595	Screened Out
	BATAVIA	Illinois	60510	0.259455	Screened Out
	BRISTOL	Pennsylvania	19007	0.255	Screened Out
	TWINSBURG	Ohio	44087	0.2505	Screened Out
	GREENVILLE	Ohio	45331	0.25	Screened Out
	MANCHESTER	TENNESSEE	37355	0.25	Screened Out
	SEARCY	ARKANSAS	72143	0.25	Screened Out
	WARREN	Michigan	48091	0.25	Screened Out
	OKLAHOMA CITY	Oklahoma	73129	0.25	Screened Out
	COLUMBUS	Ohio	43219	0.25	Screened Out
	PELHAM	Alabama	35124	0.25	Screened Out
	READING	Pennsylvania	19605	0.25	Screened Out
	MARIETTA	Georgia	30062	0.25	Screened Out
	BARBERTON	Ohio	44203	0.25	Screened Out
	INDEPENDENCE	KENTUCKY	41051	0.25	Screened Out
	INMAN	South Carolina	29349	0.25	Screened Out
	CARSON	California	90810	0.25	Screened Out
	CONROE	Texas	77303	0.25	Screened Out
	FONTANA	California	92335	0.25	Screened Out
	FAYETTEVILLE	NORTH CAROLINA	28306	0.247	Screened Out
	CARPENTERSVILLE	Illinois	60110	0.246	Screened Out
	MANSFIELD	Texas	76063	0.239	Screened Out
	ATGLEN	Pennsylvania	19310	0.238	Screened Out
	HOLYOKE	Massachusetts	01040	0.238	Screened Out
	SANTA FE SPRINGS	California	90670	0.2365	Screened Out
	CLEARWATER	Florida	33760	0.236	Screened Out
	CANNON FALLS	Minnesota	55009	0.236	Screened Out
	HATFIELD	Pennsylvania	19440	0.234	Screened Out
	PHILADELPHIA	Pennsylvania	19132	0.234	Screened Out
	SUMTER	South Carolina	29150	0.2335	Screened Out
	KILLONA	Louisiana	70066	0.232	Screened Out
	BURLINGTON	North Carolina	27215	0.230497	Screened Out
	STERLING HEIGHTS	Michigan	48312	0.228	Screened Out
	CIRCLEVILLE	Ohio	43113	0.226	Screened Out
	FRAZEYSBURG	Ohio	43822	0.22475	Screened Out
	LOS ANGELES	California	90023	0.2225	Screened Out
	NEW IBERIA	Louisiana	70560	0.22	Screened Out
	WINDER	Georgia	30680	0.216	Screened Out
	KENDALLVILLE	Indiana	46755	0.215	Screened Out
	SAINT GABRIEL	Louisiana	70776	0.2125	Screened Out
	DORAVILLE	Georgia	30340	0.2115	Screened Out
	ATLANTA	Georgia	30339	0.21	Screened Out
	DUNN	North Carolina	28335	0.208	Screened Out
	SOUTH CHARLESTON	West Virginia	25303	0.2045	Screened Out
	MABLETON	Georgia	30126	0.203	Screened Out
	MARCUS HOOK	Pennsylvania	19061	0.2015	Screened Out
	RENTON	Washington	98055	0.1975	Screened Out
	SEATTLE	Washington	98107	0.1975	Screened Out
	ELGIN	ILLINOIS	60123	0.196	Screened Out
	HASKELL	New Jersey	07420	0.195	Screened Out
	HILLSBORO	Oregon	97124	0.1925	Screened Out
	GARLAND	Texas	75041	0.187	Screened Out
	WHEELING	Illinois	60090	0.18	Screened Out
	OWEGO	New York	13827	0.177	Screened Out
	NASHVILLE	TENNESSEE	37207	0.177	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	RICHMOND	Indiana	47375	0.175	Screened Out
	WALLINGFORD	Connecticut	06492	0.174	Screened Out
	BATON ROUGE	Louisiana	70815	0.1735	Screened Out
	ODESSA	Texas	79762	0.1695	Screened Out
	SAINT LOUIS	Missouri	63111	0.1685	Screened Out
	GREENSBORO	North Carolina	27409	0.165	Screened Out
	MARIETTA	Georgia	30062	0.1625	Screened Out
	BATON ROUGE	Louisiana	70805	0.1615	Screened Out
	HIGH POINT	North Carolina	27261	0.16	Screened Out
	TULSA	Oklahoma	74112	0.16	Screened Out
	SAINT ALBANS	Vermont	05478	0.1595	Screened Out
	SEATTLE	Washington	98108	0.1595	Screened Out
	CHANDLER	Arizona	85248	0.1565	Screened Out
	SAINT CLAIR	Missouri	63077	0.152	Screened Out
	CRESTWOOD	Missouri	63126	0.151	Screened Out
	EDINBURGH	Indiana	46124	0.14951	Screened Out
	PARIS	Kentucky	40361	0.1475	Screened Out
	BROADVIEW	Illinois	60155	0.1455	Screened Out
	NORFOLK	Nebraska	68701	0.145215	Screened Out
	LYNCHBURG	VIRGINIA	24506	0.1415	Screened Out
	PORT NECHES	Texas	77651	0.141	Screened Out
	SAND SPRINGS	Oklahoma	74063	0.1368	Screened Out
	LEBANON	Pennsylvania	17046	0.136	Screened Out
	ORANGEBURG	New York	10962	0.135135	Screened Out
	KENEDY	Texas	78119	0.13416	Screened Out
	PORT NECHES	TEXAS	77651	0.132	Screened Out
	MEMPHIS	Tennessee	38113	0.13	Screened Out
	STAFFORD	Texas	77477	0.1275	Screened Out
	LOUISVILLE	Kentucky	40210	0.1275	Screened Out
	MARTIN	South Carolina	29836	0.1275	Screened Out
	ROCK HILL	South Carolina	29730	0.1275	Screened Out
	PACOIMA	California	91331	0.1275	Screened Out
	WOODBURN	Indiana	46797	0.1275	Screened Out
	LONG BEACH	CALIFORNIA	90810	0.1275	Screened Out
	SAINT CHARLES	Illinois	60174	0.1275	Screened Out
	CHICAGO	Illinois	60608	0.1275	Screened Out
	LA VERGNE	Tennessee	37086	0.1275	Screened Out
	WEATHERFORD	Texas	76086	0.1275	Screened Out
	SOLON	Ohio	44139	0.1275	Screened Out
	CLEARWATER	FLORIDA	33760	0.1275	Screened Out
	FOOTHILL RANCH	California	92610	0.1275	Screened Out
	FOUNTAIN INN	South Carolina	29644	0.1275	Screened Out
	ORANGE	Texas	77630	0.1275	Screened Out
	CARROLLTON	TEXAS	75006	0.1275	Screened Out
	SAINT LOUIS	Missouri	63147	0.1275	Screened Out
	DEER PARK	Texas	77536	0.1275	Screened Out
	ABBEVILLE	Louisiana	70510	0.1275	Screened Out
	BAYTOWN	Texas	77520	0.1275	Screened Out
	MENOMONEE FALLS	Wisconsin	53051	0.1275	Screened Out
	SPARTANBURG	South Carolina	29302	0.1275	Screened Out
	CHARLOTTE	North Carolina	28208	0.1255	Screened Out
	MONTOURSVILLE	Pennsylvania	17754	0.125	Screened Out
	AUBURN	WASHINGTON	98002	0.125	Screened Out
	HARRISON	Ohio	45030	0.125	Screened Out
	MEMPHIS	Tennessee	38118	0.125	Screened Out
	SANDUSKY	OHIO	44870	0.125	Screened Out
	MEMPHIS	TENNESSEE	38113	0.125	Screened Out
	HOLCOMB	Kansas	67851	0.125	Screened Out
	SAINT LOUIS	Missouri	63147	0.125	Screened Out
	NORTH KANSAS CITY	Missouri	64116	0.125	Screened Out
	SPRINGFIELD	Virginia	22153	0.125	Screened Out
	MCCARRAN	Nevada	89434	0.125	Screened Out
	MENOMINEE	Michigan	49858	0.125	Screened Out
	CITY OF INDUSTRY	California	91746	0.125	Screened Out
	WAXAHACHIE	Texas	75165	0.125	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	WILLOUGHBY	Ohio	44094	0.125	Screened Out
	ORANGE	TEXAS	77630	0.125	Screened Out
	HOPEWELL	Virginia	23860	0.125	Screened Out
	MIDDLEFIELD	OHIO	44062	0.125	Screened Out
	CHICAGO	Illinois	60632	0.125	Screened Out
	TORRANCE	CALIFORNIA	90509	0.125	Screened Out
	THOMAS	Oklahoma	73669	0.125	Screened Out
	HUNTINGTON	West Virginia	25704	0.125	Screened Out
	DE PERE	Wisconsin	54115	0.125	Screened Out
	ROMULUS	Michigan	48174	0.125	Screened Out
	OSSEO	Minnesota	55369	0.125	Screened Out
	ARLINGTON	Texas	76011	0.125	Screened Out
	WAYNE	MICHIGAN	48184	0.125	Screened Out
	HIGH POINT	North Carolina	27261	0.125	Screened Out
	NEW BRUNSWICK	New Jersey	08901	0.125	Screened Out
	PITTSTON	Pennsylvania	18640	0.125	Screened Out
	SALT LAKE CITY	Utah	84108	0.124456	Screened Out
	CLEBURNE	Texas	76033	0.123	Screened Out
	LANGLEY	South Carolina	29834	0.123	Screened Out
	GRIFFIN	Georgia	30224	0.12275	Screened Out
	EVENDALE	Ohio	45241	0.1215	Screened Out
	SAN DIEGO	California	92121	0.12	Screened Out
	PHILADELPHIA	Pennsylvania	19116	0.119	Screened Out
	NEW CENTURY	Kansas	66031	0.118	Screened Out
	JACKSONVILLE	FLORIDA	32212	0.115	Screened Out
	HOUSTON	Texas	77086	0.1105	Screened Out
	YPSILANTI	Michigan	48197	0.11	Screened Out
	DALLAS	Texas	75243	0.1095	Screened Out
	OCALA	Florida	34475	0.1085	Screened Out
	BOWLING GREEN	Kentucky	42101	0.108	Screened Out
	HOLLAND	Michigan	49423	0.106	Screened Out
	HICKORY	North Carolina	28602	0.104	Screened Out
	LEMONT	Illinois	60439	0.1035	Screened Out
	SOUTH HOLLAND	Illinois	60473	0.1035	Screened Out
	MIAMI	Florida	33162	0.102	Screened Out
	MILWAUKEE	WISCONSIN	53209	0.10066	Screened Out
	GREENCASTLE	Indiana	46135	0.1	Screened Out
	SANTA FE SPRINGS	California	90670	0.1	Screened Out
	CARSON	California	90810	0.1	Screened Out
	BRANDENBURG	Kentucky	40108	0.1	Screened Out
	PONTIAC	Michigan	48341	0.099	Screened Out
	BRATTLEBORO	Vermont	05301	0.0985	Screened Out
	KANSAS CITY	Kansas	66106	0.097	Screened Out
	MIDWAY	Tennessee	37809	0.0945	Screened Out
	WILMERDING	Pennsylvania	15148	0.0945	Screened Out
	TAYLORS	South Carolina	29687	0.092	Screened Out
	BALTIMORE	Maryland	21222	0.09	Screened Out
	RANCHO CUCAMONGA	California	91730	0.089945	Screened Out
	MILWAUKEE	Wisconsin	53224	0.0888	Screened Out
	FAIRFIELD	California	94533	0.0855	Screened Out
	KANSAS CITY	Kansas	66106	0.084	Screened Out
	TERRE HAUTE	Indiana	47808	0.0835	Screened Out
	CLINTON	Mississippi	39056	0.082	Screened Out
	MUSKEGON HEIGHTS	MICHIGAN	49444	0.08	Screened Out
	TEWKSBURY	Massachusetts	01876	0.0795	Screened Out
	CHICAGO HEIGHTS	Illinois	60411	0.0787	Screened Out
	PITTSBURGH	Pennsylvania	15238	0.0775	Screened Out
	CAROLINA	Puerto Rico	00985	0.077225	Screened Out
	CORSICANA	Texas	75109	0.07708	Screened Out
	PORTLAND	OREGON	97210	0.076	Screened Out
	CONNERSVILLE	Indiana	47331	0.075	Screened Out
	SALEM	Oregon	97302	0.07415	Screened Out
	CLEVELAND	Ohio	44109	0.07396	Screened Out
	ELVERSON	Pennsylvania	19520	0.0729	Screened Out
	MANATI	PUERTO RICO	00674	0.0725	Screened Out
	BROUSSARD	Louisiana	70518	0.072	Screened Out
	DELAWARE	Ohio	43015	0.06956	Screened Out
	ORWELL	Ohio	44076	0.069	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	WARSAW	Indiana	46580	0.069	Screened Out
	MAUMEE	Ohio	43537	0.0675	Screened Out
	MC COOK	Illinois	60525	0.067	Screened Out
	SOUTH EL MONTE	California	91733	0.067	Screened Out
	SEDALIA	Missouri	65301	0.0665	Screened Out
	MONTEBELLO	California	90640	0.0655	Screened Out
	WARREN	Michigan	48091	0.06	Screened Out
	MIDDLESEX	New Jersey	08846	0.0595	Screened Out
	CHANDLER	Arizona	85224	0.0595	Screened Out
	GRAND PRAIRIE	Texas	75050	0.059	Screened Out
	NASHUA	New Hampshire	03062	0.0574235	Screened Out
	SHOREVIEW	Minnesota	55126	0.057	Screened Out
	JOLIET	Illinois	60436	0.057	Screened Out
	CORPUS CHRISTI	Texas	78405	0.05615	Screened Out
	MOUNT HOLLY	North Carolina	28120	0.0555	Screened Out
	MIDDLEFIELD	Ohio	44062	0.0555	Screened Out
	PASCAGOULA	MISSISSIPPI	39581	0.055	Screened Out
	COMMERCE	California	90040	0.0545	Screened Out
	KILGORE	TEXAS	75662	0.0545	Screened Out
	YORK	Pennsylvania	17402	0.05435	Screened Out
	NEVADA	Missouri	64772	0.054	Screened Out
	WALBRIDGE	Ohio	43465	0.0535	Screened Out
	SHEBOYGAN	Wisconsin	53081	0.0535	Screened Out
	COLUMBUS	Ohio	43207	0.0535	Screened Out
	FAIRFIELD	California	94533	0.0535	Screened Out
	MARTINSBURG	West Virginia	25405	0.053	Screened Out
	MC DONOUGH	Georgia	30253	0.0525	Screened Out
	BURNET	Texas	78611	0.05151	Screened Out
	PEKIN	Illinois	61554	0.05061	Screened Out
	REIDSVILLE	North Carolina	27320	0.05	Screened Out
	OKLAHOMA CITY	Oklahoma	73117	0.05	Screened Out
	PELL CITY	Alabama	35125	0.05	Screened Out
	FRESNO	Texas	77545	0.0496	Screened Out
	BENTON	Arkansas	72015	0.0495	Screened Out
	MEMPHIS	TENNESSEE	38109	0.0495	Screened Out
	HAMILTON	Ohio	45015	0.049	Screened Out
	BETTENDORF	Iowa	52722	0.049	Screened Out
	CALVERT CITY	Kentucky	42029	0.049	Screened Out
	JONESBOROUGH	Tennessee	37659	0.0485	Screened Out
	BUFFALO	New York	14204	0.048	Screened Out
	INDIANAPOLIS	Indiana	46225	0.0465	Screened Out
	HILLSBOROUGH	New Jersey	08844	0.0455	Screened Out
	WICKLIFFE	Ohio	44092	0.0455	Screened Out
	NEVILLE ISLAND	Pennsylvania	15225	0.044	Screened Out
	DURHAM	North Carolina	27703	0.044	Screened Out
	DALLAS	Texas	75236	0.0435	Screened Out
	LANCASTER	Texas	75134	0.0425	Screened Out
	ANDERSON	South Carolina	29625	0.0425	Screened Out
	TAMPA	Florida	33634	0.042	Screened Out
	KANSAS CITY	Kansas	66111	0.0415	Screened Out
	ANDOVER	Kansas	67002	0.041	Screened Out
	HUNGERFORD	Texas	77448	0.0405	Screened Out
	PASADENA	Texas	77507	0.0405	Screened Out
	TUSCALOOSA	Alabama	35401	0.04	Screened Out
	SAND SPRINGS	Oklahoma	74063	0.04	Screened Out
	PITTSBURGH	Pennsylvania	15233	0.0395	Screened Out
	MILTON	Wisconsin	53563	0.0395	Screened Out
	CONYERS	Georgia	30012	0.03915	Screened Out
	MC INTOSH	Alabama	36553	0.0388	Screened Out
	ROMULUS	Michigan	48174	0.038	Screened Out
	MOBILE	Alabama	36614	0.0365	Screened Out
	CAHOKIA	Illinois	62206	0.0355	Screened Out
	HANNIBAL	Missouri	63401	0.035125	Screened Out
	READING	Pennsylvania	19605	0.03375	Screened Out
	BERKELEY	Missouri	63134	0.033	Screened Out
	BRIGHTON	Michigan	48114	0.032545	Screened Out
	PICAYUNE	Mississippi	39466	0.0315	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	PARLIN	New Jersey	08859	0.031	Screened Out
	LANSING	Michigan	48906	0.031	Screened Out
	TOMBALL	Texas	77375	0.0305	Screened Out
	GARLAND	Texas	75041	0.03	Screened Out
	LEMONT	Illinois	60439	0.03	Screened Out
	LUFKIN	Texas	75901	0.0295	Screened Out
	CITY OF INDUSTRY	California	91748	0.0295	Screened Out
	BONHAM	Texas	75418	0.029	Screened Out
	DES MOINES	Iowa	50313	0.029	Screened Out
	GREENSBORO	North Carolina	27409	0.0285	Screened Out
	WEST BEND	Wisconsin	53095	0.028	Screened Out
	HOUSTON	Texas	77034	0.0275	Screened Out
	PORT ARTHUR	Texas	77640	0.026795	Screened Out
	PHILADELPHIA	Pennsylvania	19127	0.02673425	Screened Out
	OAK CREEK	Wisconsin	53154	0.026	Screened Out
	MANITOWOC	Wisconsin	54220	0.025225	Screened Out
	HOUSTON	Texas	77047	0.025	Screened Out
	ROTTERDAM JUNCTION	New York	12150	0.0245	Screened Out
	NORTHLAKE	ILLINOIS	60164	0.0245	Screened Out
	THREE RIVERS	Texas	78071	0.023	Screened Out
	VALLEY CENTER	Kansas	67147	0.023	Screened Out
	COUNCIL BLUFFS	Iowa	51502	0.023	Screened Out
	CHICAGO	Illinois	60638	0.02295	Screened Out
	FAIRFIELD	Ohio	45014	0.02254	Screened Out
	DENVER	Colorado	80216	0.0225	Screened Out
	SANTA ANA	California	92704	0.0225	Screened Out
	COUNCE	Tennessee	38326	0.0215	Screened Out
	FERNDALE	Michigan	48220	0.0215	Screened Out
	GREENSBORO	North Carolina	27403	0.021	Screened Out
	BELVIDERE	New Jersey	07823	0.02	Screened Out
	AVENEL	New Jersey	07001	0.02	Screened Out
	BURTON	OHIO	44021	0.02	Screened Out
	SAUGET	ILLINOIS	62201	0.02	Screened Out
	SPRINGFIELD	Missouri	65802	0.02	Screened Out
	TOLEDO	Ohio	43615	0.019	Screened Out
	BUTLER	Indiana	46721	0.0185	Screened Out
	GARLAND	Texas	75041	0.0185	Screened Out
	EMERSON	Georgia	30137	0.018	Screened Out
	JACKSONVILLE	Florida	32254	0.018	Screened Out
	ALLENTOWN	Pennsylvania	18106	0.0179	Screened Out
	NORTHVALE	New Jersey	07647	0.01762	Screened Out
	HILLSDALE	Illinois	61257	0.0175	Screened Out
	STRONGSVILLE	Ohio	44136	0.0175	Screened Out
	MORROW	Georgia	30260	0.0175	Screened Out
	COLUMBUS	Ohio	43207	0.0175	Screened Out
	HAMMOND	Indiana	46320	0.0175	Screened Out
	HOBBS	New Mexico	88240	0.01735	Screened Out
	IOWA CITY	Iowa	52240	0.0165	Screened Out
	WILLIAMSPORT	MARYLAND	21795	0.0165	Screened Out
	DELAWARE	Ohio	43015	0.0165	Screened Out
	SCHERERVILLE	Indiana	46375	0.016	Screened Out
	FOUNTAIN INN	South Carolina	29644	0.0153	Screened Out
	HOUSTON	Texas	77029	0.015	Screened Out
	TWINSBURG	Ohio	44087	0.015	Screened Out
	JOHNSTOWN	New York	12095	0.014811	Screened Out
	INDIANAPOLIS	Indiana	46219	0.0145	Screened Out
	BOLTON	Connecticut	06043	0.0145	Screened Out
	HOLTSVILLE	New York	11742	0.0145	Screened Out
	DERIDDER	Louisiana	70634	0.0145	Screened Out
	GREENVILLE	South Carolina	29605	0.0145	Screened Out
	HERMITAGE	PENNSYLVANIA	16148	0.014	Screened Out
	MAULDIN	South Carolina	29662	0.014	Screened Out
	LAWRENCE	Massachusetts	01843	0.01365	Screened Out
	MOJAVE	California	93501	0.0135	Screened Out
	DYERSBURG	Tennessee	38024	0.0135	Screened Out
	LAKE CHARLES	Louisiana	70601	0.0135	Screened Out
	TAMPA	Florida	33619	0.013	Screened Out
	MEDINA	OHIO	44258	0.0125	Screened Out
	LAWRENCEVILLE	Georgia	30043	0.0125	Screened Out
	CARY	Illinois	60013	0.01213	Screened Out
	CINNAMINSON	New Jersey	08077	0.0115	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	SAN JOSE	California	95131	0.0115	Screened Out
	THEODORE	Alabama	36582	0.0115	Screened Out
	STURTEVANT	Wisconsin	53177	0.010815	Screened Out
	DAKOTA CITY	NEBRASKA	68731	0.01	Screened Out
	BATAVIA	Illinois	60510	0.01	Screened Out
	KIMBALL	Nebraska	69145	0.01	Screened Out
	DALLAS	Texas	75207	0.01	Screened Out
	SAN ANTONIO	Texas	78218	0.01	Screened Out
	EL DORADO	Arkansas	71730	0.0098	Screened Out
	GREENSBORO	North Carolina	27406	0.009535	Screened Out
	BALTIMORE	Maryland	21230	0.0095	Screened Out
	UNIVERSITY PARK	Illinois	60466	0.0095	Screened Out
	CALHOUN	Georgia	30701	0.0095	Screened Out
	STANLEY	North Carolina	28164	0.0093	Screened Out
	SCOTTSBURG	Indiana	47170	0.008625	Screened Out
	TEXAS CITY	Texas	77590	0.0085	Screened Out
	EAST SETAUKET	NEW YORK	11733	0.008	Screened Out
	FOREST PARK	Georgia	30297	0.00797	Screened Out
	CORPUS CHRISTI	Texas	78410	0.0075	Screened Out
	ELMENDORF AFB	ALASKA	99506	0.0075	Screened Out
	LESAGE	West Virginia	25537	0.0075	Screened Out
	PHILLIPSBURG	New Jersey	08865	0.0075	Screened Out
	CHANNAHON	Illinois	60410	0.0075	Screened Out
	INDIANAPOLIS	Indiana	46226	0.0075	Screened Out
	INDIANAPOLIS	Indiana	46225	0.007465	Screened Out
	INDIANAPOLIS	Indiana	46205	0.0072575	Screened Out
	TUSCALOOSA	Alabama	35401	0.007	Screened Out
	SAINT LOUIS	Missouri	63111	0.007	Screened Out
	INDIANAPOLIS	Indiana	46222	0.007	Screened Out
	FREEHOLD	New Jersey	07728	0.007	Screened Out
	DEARBORN	Michigan	48121	0.007	Screened Out
	SAN LORENZO	Puerto Rico	00754	0.00684	Screened Out
	UPPER MARLBORO	Maryland	20774	0.006732805	Screened Out
	NORCROSS	Georgia	30071	0.0065	Screened Out
	VICTORVILLE	California	92392	0.0065	Screened Out
	RUTHERFORDTON	North Carolina	28139	0.00625	Screened Out
	KANSAS CITY	Kansas	66105	0.006095	Screened Out
	LA PLACE	Louisiana	70068	0.006	Screened Out
	MANOR	Pennsylvania	15665	0.006	Screened Out
	WHITING	Indiana	46394	0.006	Screened Out
	WICHITA	KANSAS	67219	0.0059	Screened Out
	HOMEWOOD	Illinois	60430	0.00566	Screened Out
	CHARLESTON	Missouri	63834	0.0056	Screened Out
	BUNOLA	Pennsylvania	15020	0.0055	Screened Out
	PAINESVILLE	Ohio	44077	0.0055	Screened Out
	WATERBURY	Connecticut	06708	0.0055	Screened Out
	GARDEN GROVE	California	92841	0.0055	Screened Out
	RIDGEFIELD PARK	New Jersey	07660	0.0055	Screened Out
	BRIDGEVIEW	Illinois	60455	0.005295	Screened Out
	EAST LIVERPOOL	Ohio	43920	0.005065	Screened Out
	MARLBOROUGH	Massachusetts	01752	0.005	Screened Out
	DOVER	Delaware	19904	0.005	Screened Out
	WYANDOTTE	Michigan	48192	0.005	Screened Out
	LAKEVILLE	Minnesota	55044	0.005	Screened Out
	DUDLEY	Massachusetts	01571	0.005	Screened Out
	WEST CHESTER	Pennsylvania	19382	0.005	Screened Out
	CHATHAM	Virginia	24531	0.005	Screened Out
	DETROIT	MICHIGAN	48228	0.005	Screened Out
	BEREA	OHIO	44017	0.005	Screened Out
	GARDENA	California	90248	0.005	Screened Out
	BAKERSFIELD	CALIFORNIA	93308	0.005	Screened Out
	NEW PHILADELPHIA	OHIO	44663	0.005	Screened Out
	ADDISON	ILLINOIS	60101	0.005	Screened Out
	DEARBORN	Michigan	48121	0.005	Screened Out
	SPARTANBURG	South Carolina	29306	0.005	Screened Out
	CONNERSVILLE	Indiana	47331	0.005	Screened Out
	MIAMI	Florida	33155	0.005	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	WAYNE	New Jersey	07470	0.005	Screened Out
	PASADENA	Texas	77507	0.004635	Screened Out
	ROCHESTER	New York	14652	0.0045	Screened Out
	LOUISVILLE	Kentucky	40216	0.0045	Screened Out
	NORTH CHARLESTON	South Carolina	29406	0.0045	Screened Out
	FREDONIA	KANSAS	66736	0.0045	Screened Out
	CHARLOTTE	North Carolina	28273	0.0045	Screened Out
	HOPKINS	MINNESOTA	55343	0.0045	Screened Out
	BELLEVILLE	MICHIGAN	48111	0.004	Screened Out
	WALTON HILLS	OHIO	44146	0.004	Screened Out
	HAMPTON	Iowa	50441	0.004	Screened Out
	SANTA FE SPRINGS	California	90670	0.004	Screened Out
	CONCORD	North Carolina	28025	0.004	Screened Out
	TONAWANDA	New York	14150	0.004	Screened Out
	COHOES	New York	12047	0.00378	Screened Out
	BAKERSFIELD	California	93308	0.00346	Screened Out
	SAUGET	ILLINOIS	62201	0.003	Screened Out
	ORANGE CITY	Iowa	51041	0.003	Screened Out
	CINCINNATI	Ohio	45246	0.003	Screened Out
	DENVER	Colorado	80216	0.003	Screened Out
	PORTLAND	Oregon	97210	0.003	Screened Out
	MEMPHIS	Tennessee	38109	0.003	Screened Out
	COTTAGE GROVE	Minnesota	55016	0.003	Screened Out
	GARLAND	Texas	75040	0.00299	Screened Out
	MOUNT VERNON	Missouri	65712	0.00296	Screened Out
	FERNDALE	Michigan	48220	0.00275	Screened Out
	PONCA CITY	Oklahoma	74601	0.00266	Screened Out
	WAXAHACHIE	Texas	75165	0.0025	Screened Out
	FERNLEY	Nevada	89408	0.0025	Screened Out
	MEMPHIS	TENNESSEE	38109	0.0025	Screened Out
	MANSFIELD	OHIO	44903	0.0025	Screened Out
	SEAFORD	Delaware	19973	0.0025	Screened Out
	JAY	Maine	04239	0.0025	Screened Out
	WYNNEWOOD	Oklahoma	73098	0.0025	Screened Out
	NEWBURYPORT	Massachusetts	01950	0.0025	Screened Out
	HOUSTON	Texas	77092	0.0025	Screened Out
	HOUSTON	Texas	77051	0.0025	Screened Out
	NIAGARA FALLS	New York	14304	0.0025	Screened Out
	MILWAUKEE	Wisconsin	53207	0.0025	Screened Out
	BATH	Pennsylvania	18014	0.0025	Screened Out
	ROCHESTER	New York	14605	0.0025	Screened Out
	WOODRIDGE	Illinois	60517	0.0025	Screened Out
	MIDLOTHIAN	Illinois	60445	0.0025	Screened Out
	SPARTANBURG	South Carolina	29307	0.0025	Screened Out
	LINDEN	New Jersey	07036	0.0025	Screened Out
	CLEVELAND	Ohio	44109	0.0025	Screened Out
	TULSA	OKLAHOMA	74147	0.0025	Screened Out
	ASHLEY	INDIANA	46705	0.0025	Screened Out
	ROCK HILL	South Carolina	29730	0.0025	Screened Out
	SPRINGFIELD	Massachusetts	01104	0.0025	Screened Out
	HOUSTON	Texas	77049	0.0024345	Screened Out
	NORWALK	Connecticut	06852	0.0024	Screened Out
	IOLA	KANSAS	66749	0.0023	Screened Out
	PASADENA	Texas	77507	0.0023	Screened Out
	MILWAUKEE	Wisconsin	53218	0.002185	Screened Out
	CANTON	Massachusetts	02021	0.00215	Screened Out
	WINDSOR	Colorado	80550	0.002	Screened Out
	DAYTON	Texas	77535	0.002	Screened Out
	SALEM	Massachusetts	01970	0.002	Screened Out
	ORLANDO	Florida	32809	0.002	Screened Out
	CHATSWORTH	California	91311	0.002	Screened Out
	BEDFORD HEIGHTS	Ohio	44146	0.002	Screened Out
	SANTA FE SPRINGS	California	90670	0.002	Screened Out
	HAYWARD	California	94545	0.002	Screened Out
	WALPOLE	Massachusetts	02081	0.002	Screened Out
	CLEARFIELD	Utah	84016	0.002	Screened Out
	NEW CASTLE	Delaware	19720	0.001905	Screened Out
	PORTLAND	Oregon	97227	0.001825	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome
[redacted]	CUYAHOGA FALLS	OHIO	44223	0.0016295	Screened Out
	BRANCHBURG	New Jersey	08876	0.0015	Screened Out
	SAN CARLOS	California	94070	0.0015	Screened Out
	MILWAUKEE	Wisconsin	53223	0.0015	Screened Out
	HARLEYVILLE	South Carolina	29448	0.0015	Screened Out
	MEMPHIS	Tennessee	38108	0.0015	Screened Out
	RAYNE	Louisiana	70578	0.0015	Screened Out
	ROLLING MEADOWS	Illinois	60008	0.00125	Screened Out
	MILWAUKEE	Wisconsin	53226	0.00125	Screened Out
	WARWICK	Rhode Island	02886	0.00112	Screened Out
	SEATTLE	Washington	98108	0.001	Screened Out
	ELK GROVE VILLAGE	Illinois	60007	0.001	Screened Out
	WHEELING	Illinois	60090	0.001	Screened Out
	FLORA	Illinois	62839	0.001	Screened Out
	MUSCATINE	Iowa	52761	0.001	Screened Out
	PAULDING	OHIO	45879	0.001	Screened Out
	LA PORTE	TEXAS	77571	0.001	Screened Out
	CHARLOTTE	North Carolina	28273	0.001	Screened Out
	NEWARK	New Jersey	07105	0.001	Screened Out
	LOUISVILLE	Kentucky	40214	0.0008	Screened Out
	CHESTER	South Carolina	29706	0.00077	Screened Out
	MOUNT PLEASANT	Iowa	52641	0.0005	Screened Out
	POPLAR BLUFF	MISSOURI	63901	0.0005	Screened Out
	MESA	Arizona	85210	0.0005	Screened Out
	ITASCA	Illinois	60143	0.0005	Screened Out
	TEXARKANA	Texas	75501	0.0005	Screened Out
	AKRON	Ohio	44305	0.0005	Screened Out
	ALBANY	New York	12204	0.000485	Screened Out
	SCOTT	Louisiana	70583	0.0003385	Screened Out
	BUCKSPORT	MAINE	4416	0.0003	Screened Out
	WILSON	North Carolina	27893	0.00029	Screened Out
	DALLAS	Texas	75247	0.00026	Screened Out
	CHATTANOOGA	Tennessee	37406	0.0002205	Screened Out
	CHATSWORTH	California	91311	0.000185	Screened Out
	JACKSON	Michigan	49203	0.0001654	Screened Out
	WATERTOWN	Wisconsin	53094	0.00014	Screened Out
	AUGUSTA	Georgia	30906	0.000085	Screened Out
	TOLEDO	Ohio	43612	0.000082	Screened Out
	KILGORE	Texas	75662	0.0000807	Screened Out
	ELLWOOD CITY	Pennsylvania	16117	0.0000118	Screened Out
	TACOMA	Washington	98421	0.000005	Screened Out
	RESERVE	Louisiana	70084	0.000002	Screened Out
	LINCOLN	Nebraska	68504	0.00000001	Screened Out

Table C-2. Comparisons of 2010 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	City	State	Zip Code	2010 Air Emissions (tpy)	Outcome

tpy: tons per year

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	1202 FONES RD	OLYMPIA	WA	98501	63.9665	Retain
	3003 W CASINO RD	EVERETT	WA	98204	20.45	Retain
	1220 N SECOND AVE	KENT	WA	98032	82.946	Retain
	91-320 KOMOHANA ST	KAPOLEI	HI	96707	10.95	Retain
	6200 FRANKLIN BLVD SUITE #100	SACRAMENTO	CA	95824	5.0385	Retain
	3250 PATTERSON RD	RIVERBANK	CA	95367	7.8095	Retain
	2433 CROCKER CIR	FAIRFIELD	CA	94533	9.161	Retain
	2400 HUNTINGTON DR	FAIRFIELD	CA	94533	21.5	Retain
	10980 INLAND AVE	MIRA LOMA	CA	91752	31.1755	Retain
	20730 PRAIRIE ST	CHATSWORTH	CA	91311	29.0045	Retain
	500 CRENSHAW BLVD	TORRANCE	CA	90503	16.65	Retain
	5300 WESTMORELAND RD	WINNEMUCCA	NV	89445	5.0015	Retain
	211 N 51AVE	PHOENIX	AZ	85043	41.904	Retain
	710 N 600 W	LOGAN	UT	84321	5.851	Retain
	620 N 4TH ST	WORLAND	WY	82401	53.3405	Retain
	1201 METAL CONTAINER CT	WINDSOR	CO	80550	54.2575	Retain
	120 9TH AVE	LONGMONT	CO	80501	5	Retain
	4525 INDIANA ST	GOLDEN	CO	80403	31.5	Retain
	17755 W 32ND AVE	GOLDEN	CO	80401	33.5	Retain
	1 LONE STAR PASS	SAN ANTONIO	TX	78264	9.93683575	Retain
	7501 N HWY 185	SEADRIFT	TX	77983	17.666	Retain
	10850 STRANG RD	LA PORTE	TX	77571	5.00805	Retain
	5761 UNDERWOOD RD	PASADENA	TX	77507	5.2385	Retain
	3000 N S ST	PASADENA	TX	77503	23.8115	Retain
	12910 JESS PIRTLE BLVD	SUGAR LAND	TX	77478	31.488	Retain
	2501 N FRAZIER ST	CONROE	TX	77303	32.064	Retain
	1001 N FM 3083 E	CONROE	TX	77303	17.15	Retain
	699 F.M. 3083	CONROE	TX	77301	6.9444811	Retain
	6600 WILL ROGERS BLVD	FORT WORTH	TX	76140	12.5	Retain
	175 COUNTY RD 2345	GRAPELAND	TX	75844	12.204	Retain
	300 KODAK BLVD	LONGVIEW	TX	75602	15.3195	Retain
	1001 FISHER RD	LONGVIEW	TX	75604	52.485	Retain
	500 NW LOOP 286 SUITE 101	PARIS	TX	75460	6.6505	Retain
	803 AIRPORT RD	TERRELL	TX	75160	15.309	Retain
	41501 WOLVERINE RD	SHAWNEE	OK	74804	19.075	Retain
	900 DARR PARK DR	PONCA CITY	OK	74601	19.8795	Retain
	72 CEG/CEA 7535 FIFTH ST	TINKER AFB	OK	73145	5.1	Retain
	500 SE 27TH	EL RENO	OK	73036	7.514	Retain
	10300 ROBERTS BLVD	FORT SMITH	AR	72916	13.2445	Retain
	600 KAWNEER DR	SPRINGDALE	AR	72764	9.9965	Retain
	1301 N DIXIELAND RD	ROGERS	AR	72756	12.883	Retain
	1901 E BORICK DR	FAYETTEVILLE	AR	72701	10.9685	Retain
	HWY 49 S	PIGGOTT	AR	72454	5.4585	Retain
	4708 KRUEGER DR	JONESBORO	AR	72401	5.85	Retain
	4950 N COUNTY RD 967	BLYTHEVILLE	AR	72315	11.16161105	Retain
	5411 INDUSTRIAL DR S	PINE BLUFF	AR	71602	6	Retain
	3300 N HUTCHINSON ST	WHITE HALL	AR	71602	8.5085	Retain
	111 W IRENE RD	ZACHARY	LA	70791	5.355	Retain
	6000 JEFFERSON HWY	NEW ORLEANS	LA	70123	9.5545	Retain
	1601 W OMAHA AVE	NORFOLK	NE	68701	10.25	Retain
	7002 N 288TH ST	VALLEY	NE	68064	5	Retain
	3600 N HYDRAULIC	WICHITA	KS	67219	5.858	Retain

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	7604 RAILROAD AVE	WINFIELD	KS	67156	9.1095	Retain
	1005 COMMERCIAL DR	OWENSVILLE	MO	65066	5.0775	Retain
	2115 SW LOWER LAKE RD	SAINT JOSEPH	MO	64504	8.9735	Retain
	8121 E U.S. HWY 69	CLAYCOMO	MO	64119	56.55	Retain
	1500 E RT A	WENTZVILLE	MO	63385	9.05	Retain
	101 S ELM	WARRENTON	MO	63383	21.4795	Retain
	102 BARTON ST	SAINT LOUIS	MO	63104	6.34465	Retain
	2391 CASSENS DR	FENTON	MO	63026	9.628	Retain
	42 TENBROOK INDUSTRIAL PARK	ARNOLD	MO	63010	42.0245	Retain
	1848 WESTPHALIA STRASSE	QUINCY	IL	62305	16.081	Retain
	25 NORTHGATE INDUSTRIAL DR	GRANITE CITY	IL	62040	5.2675	Retain
	600 E PEORIA ST	GOODFIELD	IL	61742	16.723	Retain
	604 US HWY 150 E	GALESBURG	IL	61401	7.3525	Retain
	400 N 15TH ST	ROCHELLE	IL	61068	11.045	Retain
	100 A.J. HARLE DR	GALENA	IL	61036	12.185	Retain
	3000 W CHRYSLER DR	BELVIDERE	IL	61008	11.15	Retain
	1035 E N ST	BRADLEY	IL	60915	64.844	Retain
	4300 W 130TH ST	ALSIP	IL	60803	18.7305	Retain
	4900 S KILBOURN AVE	CHICAGO	IL	60632	8.8	Retain
	4242 W FILLMORE	CHICAGO	IL	60624	5.4	Retain
	2000 S KILBOURN AVE	CHICAGO	IL	60623	12.2775	Retain
	3200 S KILBOURN AVE	CHICAGO	IL	60623	22.99445	Retain
	1846 S KILBOURN AVE	CHICAGO	IL	60623	10.8335	Retain
	1101 W 43RD ST	CHICAGO	IL	60609	33.1715	Retain
	4400 S PACKER	CHICAGO	IL	60609	33.9425	Retain
	3737 E EXCHANGE AVE	AURORA	IL	60504	5.7695	Retain
	7701 W 71ST ST	BRIDGEVIEW	IL	60455	8.35	Retain
	16100 S LATHROP AVE	HARVEY	IL	60426	6.864	Retain
	211 E MAIN ST	CHICAGO HEIGHTS	IL	60411	35.8595	Retain
	475 RANDY RD	CAROL STREAM	IL	60188	8.80855	Retain
	449 N CALIFORNIA ST	SYCAMORE	IL	60178	6.722	Retain
	11595 MCCONNELL RD	WOODSTOCK	IL	60098	6.265	Retain
	1595 E OAKTON ST	ELK GROVE VILLAGE	IL	60007	8.79	Retain
	7000 SAUKVIEW DR	SAINT CLOUD	MN	56303	5.856965	Retain
	2300 BROWN AVE	WASECA	MN	56093	6.7615	Retain
	5005 COUNTY RD 25	MINNEAPOLIS	MN	55416	6.3187	Retain
	966 S MISSISSIPPI RIVER BLVD	SAINT PAUL	MN	55116	7.08	Retain
	139 EVA ST	SAINT PAUL	MN	55107	78.8155	Retain
	805 BENCH ST	RED WING	MN	55066	24.362	Retain
	2929 W BRIDGE ST	OWATONNA	MN	55060	127.5625	Retain
	N 2467 VAUGHAN RD	WAUPACA	WI	54981	10.415	Retain
	1416 INDIANHEAD DR	MENOMONIE	WI	54751	7.75	Retain
	200 SIME AVE	TOMAH	WI	54660	5.426	Retain
	1501 ST JAMES ST	LA CROSSE	WI	54603	25.777	Retain
	801 SAUK AVE	BARABOO	WI	53913	25.711	Retain
	105 E BLACKHAWK DR	FORT ATKINSON	WI	53538	11.95	Retain
	8500 W TOWER AVE	MILWAUKEE	WI	53224	35	Retain
	8448 N 87TH ST	MILWAUKEE	WI	53224	9.352	Retain
	2529 E NORWICH AVE	SAINT FRANCIS	WI	53235	9.7653	Retain
	10800 S 13TH ST	OAK CREEK	WI	53154	35.58	Retain
	8570 S CHICAGO RD	OAK CREEK	WI	53154	18.578	Retain
	N61 W23044 HARRY'S WAY ATTN: ENVIRONMENTAL	SUSSEX	WI	53089	12.85	Retain
	300 MILL ST	SHEBOYGAN FALLS	WI	53085	12.7415	Retain
	520 W 2ND ST	OCONOMOWOC	WI	53066	6.475	Retain
	N11896 HWY 175 PO BOX 2718	LOMIRA	WI	53048	5.3675	Retain
	300 N VINE ST	HORICON	WI	53032	5.5	Retain
	1900 W SUMNER ST	HARTFORD	WI	53027	11.85	Retain
	926 W STATE ST	HARTFORD	WI	53027	8.7795	Retain
	300 E BREED ST	CHILTON	WI	53014	5.270385	Retain
	476 CLAY ST	CHILTON	WI	53014	6.272	Retain
	1930 DES MOINES AVE	BURLINGTON	IA	52601	11.18	Retain
	1965 HWY 30	MISSOURI VALLEY	IA	51555	5.464	Retain
	1750 E US HWY 30 E	CARROLL	IA	51401	5.5825	Retain

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	3591 MAPLE DR	FORT DODGE	IA	50501	13.686535	Retain
	102 MAIN ST	PELLA	IA	50219	19.5195	Retain
	825 SW IRVINEDALE DR	ANKENY	IA	50023	21.1695	Retain
	200 LAFAYETTE ST	MIDDLEVILLE	MI	49333	7.1365	Retain
	501 S MILLER DR	WHITE PIGEON	MI	49099	16.1035	Retain
	1500 N PITCHER ST	KALAMAZOO	MI	49007	8.6	Retain
	920 TOWNSEND ST MAIL CODE: 489-066-600	LANSING	MI	48921	5.8	Retain
	8175 MILLETT HWY	LANSING	MI	48917	24.55	Retain
	2100 BRISTOL RD	FLINT	MI	48552	26.1855	Retain
	2101 CONNOR AVE	DETROIT	MI	48215	56	Retain
	4651 BELLEVUE AVE	DETROIT	MI	48207	7.4295	Retain
	38303 MICHIGAN AVE	WAYNE	MI	48184	6.065	Retain
	3001 MILLER RD	DEARBORN	MI	48121	66.15	Retain
	21500 MOUND RD	WARREN	MI	48091	8.655	Retain
	6645 SIMS DR	STERLING HEIGHTS	MI	48313	6.169	Retain
	32565 DEQUINDRE	MADISON HEIGHTS	MI	48071	12.3605	Retain
	501 N SIXTH ST	MONTICELLO	IN	47960	33	Retain
	1009 SLOAN ST	CRAWFORDSVILLE	IN	47933	6.608	Retain
	400 N WALNUT ST	CRAWFORDSVILLE	IN	47933	21.597	Retain
	5500 STATE RD 38E	LAFAYETTE	IN	47905	29.635	Retain
	2201 W MARYLAND ST	EVANSVILLE	IN	47710	15.4125	Retain
	4000 TULIP TREE DR	PRINCETON	IN	47670	17.969	Retain
	HWYS 66 & 61	NEWBURGH	IN	47629	8.5	Retain
	1 LEXAN LN	MOUNT VERNON	IN	47620	5.25	Retain
	310 S WABASH	ASHLEY	IN	46705	6	Retain
	301 N CURRY PIKE	BLOOMINGTON	IN	47404	6.5	Retain
	2900 W INWOOD DR	COLUMBUS	IN	47201	6	Retain
	1000 E PEARL ST	BATESVILLE	IN	47006	5.3525	Retain
	6610 COUNTY RD 60	SAINT JOE	IN	46785	8.231	Retain
	12200 LAFAYETTE CENTER RD	ROANOKE	IN	46783	15.2	Retain
	601 RE JONES RD	BUTLER	IN	46721	24.3635	Retain
	101 JOAN DR	MIDDLEBURY	IN	46540	5.3965	Retain
	US HWY 12 AT RT 249	PORTAGE	IN	46368	4.9	Screened Out
	300 N FAIL RD	LA PORTE	IN	46350	65.4225	Retain
	858 E HUPP RD	LA PORTE	IN	46350	6.935	Retain
	2501 165TH ST	HAMMOND	IN	46320	5.873	Retain
	1950 E MAIN ST	GREENFIELD	IN	46140	7.843	Retain
	2600 E STATE RD 240	GREENCASTLE	IN	46135	6.75701	Retain
	1100 MCKINLEY RD	SAINT MARYS	OH	45885	7.502	Retain
	4901 N MAIN ST	FINDLAY	OH	45840	21.509	Retain
	12340 TOWNSHIP RD 99 E	FINDLAY	OH	45840	160.5	Retain
	1501 W MICHIGAN ST	SIDNEY	OH	45365	11.892	Retain
	2615 CAMPBELL RD	SIDNEY	OH	45365	12.155	Retain
	9017 BLUE ASH RD	CINCINNATI	OH	45242	32.5	Retain
	1229 CASTLE DR	MASON	OH	45040	12.689	Retain
	1145 CONWELL AVE	WILLARD	OH	44890	8.7445	Retain
	1425 E BOWMAN ST	WOOSTER	OH	44691	13.3625	Retain
	390 GRISWOLD ST NE	WARREN	OH	44483	14.966	Retain
	2100 GRISWOLD NE	WARREN	OH	44483	7.365	Retain
	2300 HALLOCK-YOUNG RD	LORDSTOWN	OH	44481	5	Retain
	3765 SUNNYBROOK RD	BRIMFIELD	OH	44240	5	Retain
	8806 CRANE AVE	CLEVELAND	OH	44105	17.316	Retain
	1724 LINDEN AVE	ZANESVILLE	OH	43701	6	Retain
	5201 ENTERPRISE BLVD	TOLEDO	OH	43612	12.7245	Retain
	3770 STICKNEY AVE	TOLEDO	OH	43612	16.5510995	Retain
	2900 HILL AVE	TOLEDO	OH	43607	13.1405	Retain
	10444 WATERVILLE	WHITEHOUSE	OH	43571	76.328	Retain

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	12-773 ST RT 110	NAPOLEON	OH	43545	12.7305	Retain
	63 DIXIE HWY	ROSSFORD	OH	43460	7.819	Retain
	2145 CEDAR	FREMONT	OH	43420	126.955	Retain
	11000 STATE RT 347	EAST LIBERTY	OH	43319	38.3	Retain
	1300 MARION-AGOSTA RD	MARION	OH	43302	51.461	Retain
	350 MCCORMICK BLVD	COLUMBUS	OH	43213	82	Retain
	24000 HONDA PKWY	MARYSVILLE	OH	43040	40.2	Retain
	2604 RIVER RD	HAWESVILLE	KY	42348	5.218	Retain
	US HWY 431 N	RUSSELLVILLE	KY	42276	4.9495	Retain
	7425 INDUSTRIAL RD	FLORENCE	KY	41042	34.7245	Retain
	1601 MERCER RD	LEXINGTON	KY	40511	9.092	Retain
	301 MAYDE RD	BEREA	KY	40403	14.7982	Retain
	1001 CHERRY BLOSSOM WAY	GEORGETOWN	KY	40324	9.387	Retain
	3001 CHAMBERLAIN LN	LOUISVILLE	KY	40241	44.25	Retain
	9098 EASTSIDE DR EXT.	NEWTON	MS	39345	9.578	Retain
	1095 MENDELL DAVIS DR	JACKSON	MS	39272	10.9045	Retain
	1725 N WASHINGTON ST	VICKSBURG	MS	39181	14.1275	Retain
	300 NISSAN DR	CANTON	MS	39046	9.612	Retain
	RT. 2 LEE INDUSTRIAL PARK E	SHANNON	MS	38868	6.1565	Retain
	10800 MARINA DR	OLIVE BRANCH	MS	38654	82.2945	Retain
	195 CROWN RD	BATESVILLE	MS	38606	22.1595	Retain
	9159 TELECOM DR	MILAN	TN	38358	16.754	Retain
	2000 N 5TH ST	UNION CITY	TN	38261	5.347	Retain
	751 DUPREE ST	BROWNSVILLE	TN	38012	6.669	Retain
	177 INDUSTRIAL PARK RD	SWEETWATER	TN	37874	13.094	Retain
	8001 VOLKSWAGEN DR	CHATTANOOGA	TN	37416	11.0214265	Retain
	1119 RIVERFRONT PKWY	CHATTANOOGA	TN	37402	23.9355	Retain
	175 MONOGARD DR	MANCHESTER	TN	37355	34.1765	Retain
	500 WALNUT GROVE RD	DAYTON	TN	37321	6.58324085	Retain
	740 KING EDWARD AVE SE	CLEVELAND	TN	37311	6.264	Retain
	1604 COUNTY HOSPITAL RD	NASHVILLE	TN	37218	18.35	Retain
	2947 BRICK CHURCH PIKE	NASHVILLE	TN	37207	7.102	Retain
	983 NISSAN DR	SMYRNA	TN	37167	30.74138035	Retain
	500 TENNESSEE WALTZ PKWY	ASHLAND CITY	TN	37015	9.4075	Retain
	HWY 27 N	GENEVA	AL	36340	12.793	Retain
	1101 TECHNOLOGY DR	DOTHAN	AL	36303	5.3	Retain
	7205 GAULT AVE N	FORT PAYNE	AL	35967	6.3425	Retain
	4910 MOORES MILL RD	HUNTSVILLE	AL	35811	8.525	Retain
	3101 SEXTON RD	DECATUR	AL	35603	19.2556	Retain
	6675 US HWY 43	GUIN	AL	35563	12.501	Retain
	1 MERCEDES DR	VANCE	AL	35490	28.302	Retain
	1629 VANDERBILT RD	BIRMINGHAM	AL	35234	12.3625	Retain
	1800 HONDA DR	LINCOLN	AL	35096	25.27	Retain
	1313 PKWY DR SE	LEEDS	AL	35094	13.472	Retain
	2540 KNIGHTS STATION RD	LAKELAND	FL	33810	8.999	Retain
	2525 S COMBEE RD	LAKELAND	FL	33801	8.3575	Retain
	4700 WHITEWAY DR	TAMPA	FL	33617	17	Retain
	400 W WALKER AVE	BUSHNELL	FL	33513	10.6975	Retain
	1100 N ELLIS RD	JACKSONVILLE	FL	32254	25.615	Retain
	7777 KIA PKWY	WEST POINT	GA	31833	4.9645	Retain
	1601 VALDOSTA HWY	HOMERVILLE	GA	31634	7.80461	Retain
	1229 HWY 441 N BYPASS	DUBLIN	GA	31021	9.392	Retain
	200 NEWTON BRIDGE RD	ATHENS	GA	30607	5.246	Retain
	101 JOE HARVEY ST	LAVONIA	GA	30553	17.346	Retain
	1131 HWY 155 S	MC DONOUGH	GA	30253	11.15	Retain
	535 MACON RD	MC DONOUGH	GA	30253	9.043	Retain
	110 BALL DR	ROME	GA	30161	44.5	Retain
	2556 WAGENER RD	AIKEN	SC	29801	14.516	Retain

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	1400 HWY 101 S	GREER	SC	29651	152.52	Retain
	100 EVANS ROW	CHERAW	SC	29520	23.876	Retain
	1501 W DARLINGTON ST	FLORENCE	SC	29501	12.2435	Retain
	172 OLD ELLOREE RD	ORANGEBURG	SC	29116	6.604	Retain
	609 COUSAR ST	BISHOPVILLE	SC	29010	89.26	Retain
	950 GERMAN ST	LENOIR	NC	28645	5.734	Retain
	2120 NC HWY N UNIT A	MAXTON	NC	28364	9.7895	Retain
	12180 UNIVERSITY CITY BLVD	HARRISBURG	NC	28075	5.351	Retain
	2900 NW BLVD	GASTONIA	NC	28052	5.9525	Retain
	3301 N MAIN ST	TARBORO	NC	27886	16.5235	Retain
	1900 BARNES ST	REIDSVILLE	NC	27320	102	Retain
	715 W FAIRFIELD RD	HIGH POINT	NC	27263	15.9935	Retain
	4000 OLD MILWAUKEE LN	WINSTON-SALEM	NC	27107	136.173	Retain
	3011 BIRCH DR	WEIRTON	WV	26062	92.2445	Retain
	3010 BIRCH DR	WEIRTON	WV	26062	13.25	Retain
	135 BEAR CREEK RD	MARION	VA	24354	8.9435	Retain
	300 E GRAYSON ST	GALAX	VA	24333	4.99620635	Retain
	8935 POCAHONTAS TRAIL JAMES RIVER COMMERCE CENTER	WILLIAMSBURG	VA	23185	173	Retain
	2347 KRATZER RD	HARRISONBURG	VA	22802	48.2645	Retain
	18249 PHOENIX DR	HAGERSTOWN	MD	21742	8.5	Retain
	8801 CITATION RD	BALTIMORE	MD	21221	34.548	Retain
	326 JUNE AVE	BLANDON	PA	19510	6.5965	Retain
	695 LOUIS DR	WARMINSTER	PA	18974	6.028	Retain
	1220 INDUSTRIAL BLVD	SOUTHAMPTON	PA	18966	7.5855	Retain
	216 GREENFIELD RD	LANCASTER	PA	17601	7.936	Retain
	1375 HARRISBURG PIKE	LANCASTER	PA	17601	9.08235	Retain
	500 E MIDDLE ST	HANOVER	PA	17331	28.0405	Retain
	1650 BROADWAY	HANOVER	PA	17331	5.2265	Retain
	1500 S CAMERON ST	HARRISBURG	PA	17104	27.6195	Retain
	600 ATLANTIC AVE	FRANKLIN	PA	16323	8.5	Retain
	7676 ALLEGHENY RD	MANNS CHOICE	PA	15550	14.205	Retain
	125 COLFAX ST	SPRINGDALE	PA	15144	5.8125	Retain
	400 STATE ST	CLAIRTON	PA	15025	41	Retain
	5362 RAILROAD ST	CHEMUNG	NY	14825	10.4555	Retain
	200 LUCIUS GORDON DR	WEST HENRIETTA	NY	14586	8.2645	Retain
	3709 MILL ST	MARION	NY	14505	5.423	Retain
	113 CEDAR ST	AKRON	NY	14001	11.6965	Retain
	11 ADAMS RD	SARATOGA SPRINGS	NY	12866	19.25	Retain
	130 BREUNIG RD	NEW WINDSOR	NY	12553	40.4295	Retain
	95 BALLARD RD	MIDDLETOWN	NY	10940	17.5	Retain
	135 NATIONAL RD	EDISON	NJ	08817	4.995	Retain
	14 CONVERY BLVD	WOODBRIDGE	NJ	07095	8.8765	Retain
	600 MYRTLE ST	NEW BRITAIN	CT	06052	10.5515	Retain
	89 CUMBERLAND ST	WESTBROOK	ME	04098	35.20941	Retain
	1160 CRANSTON ST	CRANSTON	RI	02920	5.7265	Retain
	GLEN & SHEPARD ST	LAWRENCE	MA	01843	70.1775	Retain
	380 CALLE FABRIL ST KM 126 PR-3, PR INDUSTRIAL PARK	CAROLINA	PR	00985	24.194	Retain
	3211 E CHESTNUT EXPY	SPRINGFIELD	MO	65802	0.02	Screened Out
	261 HWY 155 S	MC DONOUGH	GA	30253	0.041	Screened Out
	2811 S HARBOR BLVD	SANTA ANA	CA	92704	0.2365	Screened Out
	2701 OAKES RD	STURTEVANT	WI	53177	0.317	Screened Out
	22614 RT 84 N	CORDOVA	IL	61242	0.614	Screened Out
	4501 HWY 377 S	BROWNWOOD	TX	76801	0.91	Screened Out
	905/915 ADAMS ST SE	HUTCHINSON	MN	55350	1.585	Screened Out
	1030 LAKE RD	MEDINA	OH	44256	0.168	Screened Out
	2120 E AUSTIN BLVD	NEVADA	MO	64772	0.385	Screened Out
	10746 INNOVATION RD	COTTAGE GROVE	MN	55016	0.112	Screened Out
	3217 WOOD DR	GARLAND	TX	75041	0.0025	Screened Out
	6970 JONESBORO RD	MORROW	GA	30260	0.3775	Screened Out
	1102 AVE J E	GRAND PRAIRIE	TX	75050	0.06	Screened Out
	7575 FULTON ST E	ADA	MI	49355	1.9855	Screened Out
	192 W 155TH ST	SOUTH HOLLAND	IL	60473	0.1335	Screened Out
	1050 TAYLORS LN	CINNAMINSON	NJ	08077	0.01	Screened Out
	100 THOMPSON ST	PITTSTON	PA	18640	0.005	Screened Out
	900 W MAIN ST	SEDALIA	MO	65301	0.0605	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	1201 S PINE HILL RD	GRIFFIN	GA	30224	0.11925	Screened Out
	501 MONSANTO AVE	SAUGET	IL	62201	0.02	Screened Out
	725 CANNON BRIDGE RD	ORANGEBURG	SC	29115	3.301	Screened Out
	474 W 19TH ST	RESERVE	LA	70084	0.0000025	Screened Out
	337 VINCENT DR	MILTON	WI	53563	0.0135	Screened Out
	500 JERSEY AVE	NEW BRUNSWICK	NJ	08901	0.125	Screened Out
	1660 CROSS ST SE	SALEM	OR	97302	0.0519	Screened Out
	1000 INDUSTRIAL PARK DR	CLINTON	MS	39056	0.0945	Screened Out
	1431 PROGRESS AVE	HIGH POINT	NC	27260	0.125	Screened Out
	1313 WINDSOR AVE	COLUMBUS	OH	43211	1.416	Screened Out
	65TH INFANTRY AVE KM. 13.4	CAROLINA	PR	00985	0.081845	Screened Out
	15200 ALMEDA RD	HOUSTON	TX	77053	0.174	Screened Out
	1872 HWY 9 BYPASS W	LANCASTER	SC	29720	2.6435	Screened Out
	1 E WATER ST	WAUKEGAN	IL	60085	0.984	Screened Out
	120 FRANKLIN RD	PONTIAC	MI	48341	0.0605	Screened Out
	71 PROGRESS AVE	CRANBERRY TOWNS	PA	16066	0.7965	Screened Out
	1 REYNOLDS RD	ASHVILLE	OH	43103	0.379	Screened Out
	3321 DURHAM RD	ROXBORO	NC	27573	0.482	Screened Out
	1372 KY HWY 1957	LEWISPORT	KY	42351	2.696	Screened Out
	810 E S ST	MARENGO	IA	52301	2.1595	Screened Out
	3001 ATKINSON DR	LUFKIN	TX	75901	1.7455	Screened Out
	34136 MYRTLE	WAYNE	MI	48184	0.125	Screened Out
	1000 CROCKER RD	WESTLAKE	OH	44145	0.391	Screened Out
	215 PHILLIPS 324 RD	HELENA	AR	72342	0.154	Screened Out
	91 NORTHEASTERN BLVD	NASHUA	NH	03062	0.1182165	Screened Out
	990 INDUSTRIAL PARK DR	MARIETTA	GA	30062	0.244	Screened Out
	6707 E 14TH ST	TULSA	OK	74112	0.1155	Screened Out
	1415 E MICHIGAN ST	ADRIAN	MI	49221	0.005	Screened Out
	N82 W13118 LEON RD	MENOMONEE FALLS	WI	53051	1.355	Screened Out
	3225 E WASHINGTON BLVD	VERNON	CA	90058	0.25	Screened Out
	HWY 933	BRANDENBURG	KY	40108	0.124	Screened Out
	3030 BIRCH DR HALF MOON INDUSTRIAL PARK	WEIRTON	WV	26062	0.4445	Screened Out
	936 BARRACUDA ST	TERMINAL ISLAND	CA	90731	4.175	Screened Out
	2050 BYBERRY RD	PHILADELPHIA	PA	19116	0.1365	Screened Out
	340 RAILROAD ST	SAUKVILLE	WI	53080	0.9005	Screened Out
	13511 MAIN ST	LEMONT	IL	60439	0.03	Screened Out
	1415 STEELE AVE SW	GRAND RAPIDS	MI	49507	0.5	Screened Out
	565 HARTCO DR	ONEIDA	TN	37841	4.7345	Screened Out
	4115 N PERKINS RD	STILLWATER	OK	74075	1.4105	Screened Out
	4800 STATE RD 60 E	MULBERRY	FL	33860	2.9015	Screened Out
	1 THIRD AVE	HASKELL	NJ	07420	0.1685	Screened Out
	801 RAILROAD AVE	YORK	SC	29745	4.894	Screened Out
	126 MEMORIAL DR	SPRINGFIELD	MA	01104	0.002	Screened Out
	27 MAIN ST	STRUTHERS	OH	44471	2.651	Screened Out
	7855 N FAULKNER RD	MILWAUKEE	WI	53224	0.08166	Screened Out
	706 HOUSTON CLINTON DR	BURNET	TX	78611	0.05139	Screened Out
	1750 OVERVIEW DR	ROCK HILL	SC	29730	0.0025	Screened Out
	1 INTERNATIONAL DR	FLAT ROCK	MI	48134	4.85	Screened Out
	7700 MICHIGAN AVE	SALINE	MI	48176	3.56	Screened Out
	600 N BROAD ST	PHILLIPSBURG	NJ	08865	0.003	Screened Out
	17700 FOLTZ INDUSTRIAL PKWY	STRONGSVILLE	OH	44149	3.246	Screened Out
	603 W 7TH ST	CADILLAC	MI	49601	0.125	Screened Out
	801 17TH AVE S	MYRTLE BEACH	SC	29577	2.6925	Screened Out
	2220 S PROSPECT	OKLAHOMA CITY	OK	73129	0.25	Screened Out
	13200 BAYPARK RD	PASADENA	TX	77507	0.0001595	Screened Out
	16950 WALLISVILLE RD	HOUSTON	TX	77049	0.000219	Screened Out
	9100 W 21ST ST	SAND SPRINGS	OK	74063	0.01482	Screened Out
	806 PALUXY ST	KILGORE	TX	75662	0.0002725	Screened Out
	135 INDUSTRIAL DR	RAYNE	LA	70578	0.0005	Screened Out
	1717 GIFFORD RD	ELGIN	IL	60120	1.838	Screened Out
	1200 S CRUTCHER ST	SPRINGDALE	AR	72764	2.13	Screened Out
	300 W GREGER RD	OAKDALE	CA	95361	3.552	Screened Out
	204 36TH ST	BETTENDORF	IA	52722	0.049	Screened Out
	2135 9TH AVE	COUNCIL BLUFFS	IA	51502	0.023	Screened Out
	1970 NE BROADWAY	DES MOINES	IA	50313	0.0355	Screened Out
	901 S 66TH TERRACE	KANSAS CITY	KS	66111	0.035	Screened Out
	800 RAIL WAY	WEST BEND	WI	53095	0.0265	Screened Out
	201 S CEDAR	VALLEY CENTER	KS	67147	0.0195	Screened Out
	100 INDUSTRIAL BLVD	SEAFORD	DE	19973	0.0025	Screened Out
	1609 BIDDLE AVE	WYANDOTTE	MI	48192	0.005	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	361 SHEEP PASTURE RD	EAST SETAUKET	NY	11733	0.008	Screened Out
	3455 SOUTHPORT RD	SPARTANBURG	SC	29302	0.1275	Screened Out
	1175 MARTIN ST	GREENVILLE	OH	45331	0.22	Screened Out
	310 CROWN RD	BATESVILLE	MS	38606	3.796	Screened Out
	5200 CURTIS LN	NEW IBERIA	LA	70560	1.5	Screened Out
	15310 ARROW BLVD	FONTANA	CA	92335	0.25	Screened Out
	270 STATE ST	CHICAGO HEIGHTS	IL	60411	0.3259	Screened Out
	130 DECLARATION DR	MC DONOUGH	GA	30253	0.30055	Screened Out
	4113 W INDUSTRIAL AVE	MIDLAND	TX	79703	3.7855	Screened Out
	700 W KEARNEY	MESQUITE	TX	75149	0.001327	Screened Out
	134 LISTER AVE	NEWARK	NJ	07105	0.00135	Screened Out
	UNION AVE EXTENSION	JOHNSTOWN	NY	12095	0.0188675	Screened Out
	109 BAMBERG DR	PELL CITY	AL	35125	0.10425	Screened Out
	31 RAILROAD ST	CLARENDON	PA	16313	4.429515	Screened Out
	301 WASHINGTON ST W	CANNON FALLS	MN	55009	0.249	Screened Out
	6515 FRATT RD	SAN ANTONIO	TX	78218	0.0085	Screened Out
	3800 E RANDOL MILL RD	ARLINGTON	TX	76011	0.125	Screened Out
	1001 BROWN AVE	TOLEDO	OH	43607	3.69	Screened Out
	18906 US 24 E	WOODBURN	IN	46797	0.005	Screened Out
	1735 DOGWOOD DR	CONYERS	GA	30012	0.03915	Screened Out
	707 N LEECH	HOBBS	NM	88240	0.011905	Screened Out
	1305 RYE ST	HOUSTON	TX	77029	0.0225	Screened Out
	2820 N NORMANDY DR	PETERSBURG	VA	23805	0.0035	Screened Out
	737 LOGAN AVE N	RENTON	WA	98055	0.577	Screened Out
	7500 E MARGINAL WAY S	SEATTLE	WA	98108	0.1425	Screened Out
	7755 E MARGINAL WAY S	SEATTLE	WA	98108	0.0305	Screened Out
	HWY 53 BONNELL RD	CARTHAGE	TN	37030	1.873	Screened Out
	2815 INDIANAPOLIS BLVD	WHITING	IN	46394	0.0005	Screened Out
	608 W CRAWFORD AVE	CONNELLSVILLE	PA	15425	0.364595	Screened Out
	4470 SW 74TH AVE	MIAMI	FL	33155	0.005	Screened Out
	1200 N PEORIA	TULSA	OK	74147	0.0025	Screened Out
	14765 W BOBOLINK AVE	MENOMONEE FALLS	WI	53051	0.1275	Screened Out
	81 W HULLER LN	READING	PA	19605	0.0349	Screened Out
	10747 PATTERSON PL	SANTA FE SPRINGS	CA	90670	0.0425	Screened Out
	11750 FRUEHAUF DR	CHARLOTTE	NC	28273	0.0025	Screened Out
	2000 E PETTIGREW ST	DURHAM	NC	27703	0.046	Screened Out
	704 E WINTERGREEN RD	LANCASTER	TX	75134	0.0475	Screened Out
	610 FISHER RD	LONGVIEW	TX	75604	0.026	Screened Out
	206 E MORROW RD	SAND SPRINGS	OK	74063	0.0375	Screened Out
	120 ENTERPRISE AVE	MORRISVILLE	PA	19067	1.317	Screened Out
	200 PARK AVE	BRILLION	WI	54110	2.93465	Screened Out
	668 GRAVEL PIKE	EAST GREENVILLE	PA	18041	3.38	Screened Out
	2920 DR ANDREW J BROWN AVE	INDIANAPOLIS	IN	46205	0.006137	Screened Out
	W6250 PIONEER RD	FOND DU LAC	WI	54935	1.27	Screened Out
	2700 WAGNER PL	MARYLAND HEIGHTS	MO	63043	1.7395	Screened Out
	1809 ROCK ISLAND ST	DALLAS	TX	75207	0.009	Screened Out
	1256 N MCLEAN BLVD	MEMPHIS	TN	38108	0.0015	Screened Out
	3301 S COUNTY RD 150 W	GREENCASTLE	IN	46135	0.119	Screened Out
	1202 AIRPORT RD	NORTH BRUNSWICK	NJ	08902	2.096	Screened Out
	8200 BROADWELL RD	CINCINNATI	OH	45244	1.61336	Screened Out
	6 LITHO RD	TRENTON	NJ	08648	0.631	Screened Out
	524 S CHERRY ST	WALLINGFORD	CT	06492	0.154	Screened Out
	196 S WATER	CONNERSVILLE	IN	47331	0.005	Screened Out
	3715 11TH ST	WYANDOTTE	MI	48192	3.118	Screened Out
	18 INDUSTRIAL RD	WALPOLE	MA	02081	0.002	Screened Out
	200 INDUSTRIAL AVE	RIDGEFIELD PARK	NJ	07660	0.0055	Screened Out
	1851 E 32ND AVE	COLUMBUS	NE	68601	1.94	Screened Out
	3610 N HOLLAND-SYLVANIA RD	TOLEDO	OH	43615	1.125	Screened Out
	460 W MAIN ST	CANFIELD	OH	44406	2	Screened Out
	630 BEAULIEU ST	HOLYOKE	MA	01040	0.196	Screened Out
	900 OPELOUSAS ST	LAKE CHARLES	LA	70601	0.0095	Screened Out
	4005 OAKLAWN DR	LOUISVILLE	KY	40219	1.4025	Screened Out
	5660 RISING SUN AVE	PHILADELPHIA	PA	19120	4.65	Screened Out
	2000 HOWARD SMITH AVE W C42	WINDSOR	CO	80550	0.0015	Screened Out
	2274 1ST ST SE	HICKORY	NC	28602	0.0945	Screened Out
	159 INDUSTRIAL PARK RD	MONTROSS	VA	22520	3.925	Screened Out
	11999 E HWY 158	GARDENDALE	TX	79758	1.35	Screened Out
	3701 STATE RD 26 E	LAFAYETTE	IN	47905	1.975	Screened Out
	15550 CANAL BANK RD	LEMONT	IL	60439	0.115	Screened Out
	ONE LLODIO DR	HERMITAGE	PA	16148	2.4165	Screened Out
	2434 HOLMES RD	HOUSTON	TX	77051	0.8026	Screened Out
	55 BENNETT DR	BRATTLEBORO	VT	05301	0.0845	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	1354 OLD POST RD	HAVRE DE GRACE	MD	21078	0.344	Screened Out
	500 PERTH DR NEW ECONOMY BUSINESS PARK	AMBRIDGE	PA	15003	0.559	Screened Out
	530 N SECOND ST	CAMBRIDGE	OH	43725	2.746	Screened Out
	HWY 69 S	JACKSONVILLE	TX	75766	1.696	Screened Out
	325 HWY 81	OSSEO	MN	55369	0.25	Screened Out
	3342 EMERY ST	LOS ANGELES	CA	90023	0.179	Screened Out
	710 MARVIN A SMITH BLVD	LONGVIEW	TX	75662	0.0365	Screened Out
	1816 S JACKSON ST	MAGNOLIA	AR	71753	0.04205	Screened Out
	3130 FM 521	FRESNO	TX	77545	0.043	Screened Out
	115 PROCTOR	ODESSA	TX	79762	0.293	Screened Out
	2727 GARDNER RD	BROADVIEW	IL	60155	0.111	Screened Out
	2790 CANFIELDS LN	MONTOURSVILLE	PA	17754	0.0025	Screened Out
	1610 CLARA ST	JACKSON	MI	49203	0.0001654	Screened Out
	13177 HURON RIVER DR	ROMULUS	MI	48174	0.125	Screened Out
	204 S 6TH AVE	MANSFIELD	TX	76063	0.337	Screened Out
	1010 OLD DENISON AVE	CLEVELAND	OH	44109	0.0025	Screened Out
	3751 JENNINGS RD	CLEVELAND	OH	44109	0.25	Screened Out
	9733 MEADOR RD	CONROE	TX	77303	0.5	Screened Out
	2300 RANDOLPH AVE	GREENSBORO	NC	27406	0.00812	Screened Out
	2725 ARMENTROUT DR	CONCORD	NC	28025	0.0055	Screened Out
	2433 S CR 600 E	COLUMBIA CITY	IN	46725	1.453	Screened Out
	35777 VAN DYKE	STERLING HEIGHTS	MI	48312	0.7	Screened Out
	38111 VAN DYKE	STERLING HEIGHTS	MI	48312	4.34	Screened Out
	9502 BAYPORT BLVD - ETOX UNIT	PASADENA	TX	77507	0.0031	Screened Out
	788 CHERT QUARRY RD	MARTIN	SC	29836	0.1275	Screened Out
	2247 S HWY 71	KIMBALL	NE	69145	0.0075	Screened Out
	5 MILES E & 1 MILE N OF JUNCTION US HWYS 412 & 281	WAYNOKA	OK	73860	0.00165	Screened Out
	1997 AMERICAN BLVD	DE PERE	WI	54115	0.1275	Screened Out
	11200 BAY AREA BLVD	PASADENA	TX	77507	3.03655	Screened Out
	100 INDUSTRIAL DR (BLDG 180, 150, & 76)	LEETSDALE	PA	15056	0.006085	Screened Out
	5005 ELDER LAKE RD	KILGORE	TX	75662	0.0545	Screened Out
	115 ERIE ST	NILES	OH	44446	2.9905	Screened Out
	117 E LINCOLN ST	PEOTONE	IL	60468	0.518	Screened Out
	350 MILL ST	QUAKERTOWN	PA	18951	4.075	Screened Out
	10048 AURORA-HUDSON RD	STREETSBORO	OH	44241	2.7175	Screened Out
	17 LAKE MIRROR RD	FOREST PARK	GA	30297	0.005	Screened Out
	2600 HUNTINGTON DR	FAIRFIELD	CA	94533	0.059	Screened Out
	3520 VETERANS MEMORIAL BLVD	ABBEVILLE	LA	70510	0.1275	Screened Out
	1630 W HILL ST	LOUISVILLE	KY	40210	2.2275	Screened Out
	641 JACKSON AVE	HUNTINGTON	WV	25704	0.125	Screened Out
	231 S PROGRESS DR E	KENDALLVILLE	IN	46755	0.268	Screened Out
	1337 J WOOD BRANCH DR	CHARLOTTE	NC	28273	0.64	Screened Out
	4701 O'DONNELL ST	BALTIMORE	MD	21224	0.9215	Screened Out
	MADISON PARISH INDUSTRIAL PARK 177 COMPLEX CHEMICAL RD	TALLULAH	LA	71282	0.5	Screened Out
	2400 E 37TH ST N	WICHITA	KS	67219	0.00648	Screened Out
	3300 MISSISSIPPI AVE	CAHOKIA	IL	62206	0.036	Screened Out
	15138 HWY 96	MOUNT VERNON	MO	65712	0.003	Screened Out
	4700 NE 10TH ST	OKLAHOMA CITY	OK	73117	0.05	Screened Out
	1000 S PINE ST	PONCA CITY	OK	74602	0.052	Screened Out
	650 ROSEWOOD DR	COLUMBIA	SC	29201	2.0475	Screened Out
	10107 HWY 79	HANNIBAL	MO	63401	0.1275	Screened Out
	2449 RIVERSIDE PKWY	GRAND JUNCTION	CO	81505	4.8425	Screened Out
	2733 E HWY 31	CORSICANA	TX	75109	0.0465	Screened Out
	20245 SUNBURST ST	CHATSWORTH	CA	91311	0.002	Screened Out
	15 GRUMBACHER RD	YORK	PA	17402	1.01857	Screened Out
	200 TANNER DR	TAYLORS	SC	29687	0.108	Screened Out
	230 OLD CONVERSE RD	SPARTANBURG	SC	29307	0.0025	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	141 VENTURE BLVD	SPARTANBURG	SC	29306	0.005	Screened Out
	4600 SILICON DR	DURHAM	NC	27703	0.125	Screened Out
	315 CHERRY LN	NEW CASTLE	DE	19720	0.001145	Screened Out
	4TH ST & PARK AVE	FARIBAULT	MN	55021	4.089	Screened Out
	940 MILL PARK DR	LANCASTER	OH	43130	1.1105	Screened Out
	10200 N LOMBARD ST	PORTLAND	OR	97203	2.759	Screened Out
	2608 ROSS AVE	SCHOFIELD	WI	54476	1.5361434	Screened Out
	1400 73RD AVE NE	FRIDLEY	MN	55432	2.4	Screened Out
	9917 N ALPINE	MACHESNEY PARK	IL	61115	0.831	Screened Out
	8707 MILLERGROVE DR	SANTA FE SPRINGS	CA	90670	0.005	Screened Out
	1704 DENVER RD	ANDERSON	SC	29625	0.0495	Screened Out
	403 CARLINE RD	LANGLEY	SC	29834	0.129	Screened Out
	23737 HWY 47	THOMAS	OK	73669	0.125	Screened Out
	4700 S CENTRAL AVE	CHICAGO	IL	60638	0.033205	Screened Out
	1275 STATE ST	HAMMOND	IN	46320	0.013	Screened Out
	3420 CANDLER'S MOUNTAIN RD	LYNCHBURG	VA	24506	0.221	Screened Out
	1 DECOMA DR	CARROLLTON	GA	30117	1.435	Screened Out
	26 BLANCHARD ST	NEWARK	NJ	07105	0.25	Screened Out
	3710 W COUNTY RD 326	OCALA	FL	34475	0.107	Screened Out
	1720, 1725, 1755 ROBERT C JACKSON DR	MARYVILLE	TN	37801	1.489	Screened Out
	3350 UNION RD	CHEEKTOWAGA	NY	14225	2.1335	Screened Out
	5111 E 36TH ST N	TULSA	OK	74115	0.6715	Screened Out
	7335 S 10TH ST	OAK CREEK	WI	53154	0.046	Screened Out
	316 HART ST	WATERTOWN	WI	53094	0.00012	Screened Out
	8311 16TH ST	STURTEVANT	WI	53177	0.005535	Screened Out
	309 ECHELON RD	GREENVILLE	SC	29605	0.387	Screened Out
	2301 N BRAZOSPORT BLVD	FREEPORT	TX	77541	0.015	Screened Out
	1635 AEROPLAZA DR	COLORADO SPRINGS	CO	80916	0.649	Screened Out
	1101 HWY 27 S	STANLEY	NC	28164	0.0112	Screened Out
	2644 HEGAN LN	CHICO	CA	95928	0.4186	Screened Out
	RT 130	DEEPWATER	NJ	08023	0.1615	Screened Out
	2520 BARRINGTON CT	HAYWARD	CA	94545	0.0025	Screened Out
	801 - 35TH ST	FORT MADISON	IA	52627	0.357	Screened Out
	7961 WINCHESTER RD	FRONT ROYAL	VA	22630	0.011	Screened Out
	400 GROESBECK HWY	MOUNT CLEMENS	MI	48043	0.575	Screened Out
	CHEESEQUAKE RD	PARLIN	NJ	08859	0.0155	Screened Out
	586 HWY 44	LA PLACE	LA	70068	0.0075	Screened Out
	192 PATTERSON BLVD	TOWANDA	PA	18848	2.2885	Screened Out
	3115 RIVER RD	BUFFALO	NY	14207	1.8625	Screened Out
	26655 PEOPLES RD	MADISON	AL	35756	2.03725	Screened Out
	330 PINE ST	CANTON	MA	02021	0.00145	Screened Out
	209 WATLINGTON INDUSTRIAL DR	REIDSVILLE	NC	27320	0.05	Screened Out
	100 EASTMAN RD	KINGSPORT	TN	37662	1.408	Screened Out
	1669 LAKE AVE	ROCHESTER	NY	14652	0.0035	Screened Out
	2305 SHERWIN ST	GARLAND	TX	75041	0.0205	Screened Out
	3001 CHANNAHON RD	JOLIET	IL	60436	0.0505	Screened Out
	18383 E RAILROAD ST	CITY OF INDUSTRY	CA	91748	0.055	Screened Out
	942 BAKER RD	MARTINSBURG	WV	25405	0.056	Screened Out
	11210 KATHERINE'S CROSSING SUITE 100	WOODRIDGE	IL	60517	0.0025	Screened Out
	8700 EXCELSIOR BLVD	HOPKINS	MN	55343	0.0045	Screened Out
	1000 COUNTY RD	MONETT	MO	65708	1.696	Screened Out
	1260 JAMES L HART PKWY	YPSILANTI	MI	48197	0.0485	Screened Out
	400 CLAREMONT AVE	JERSEY CITY	NJ	07304	0.184	Screened Out
	1378 KINGSLAND AVE	PAGEDALE	MO	63133	0.2585	Screened Out
	1825 E ALEXANDER AVE	TACOMA	WA	98421	0.00001	Screened Out
	1093 CLARK ST	ENDICOTT	NY	13760	4.3655	Screened Out
	75 SWANTON RD	SAINT ALBANS	VT	05478	0.162	Screened Out
	90 CARSON RD	BIRMINGHAM	AL	35215	0.5385	Screened Out
	5501 E SLAUSON AVE	CITY OF COMMERCE	CA	90040	0.0015	Screened Out
	1717 W ENGLISH RD	HIGH POINT	NC	27261	0.189	Screened Out
	2000 WESTHALL ST	PITTSBURGH	PA	15233	0.0405	Screened Out
	901 W UNION ST	MONTEBELLO	CA	90640	0.044	Screened Out
	3050 HANFORD DR	LEBANON	PA	17046	0.1225	Screened Out
	1991 S WHEELING RD	WHEELING	IL	60090	0.156	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	411 N DARLING	FREMONT	MI	49412	0.3295	Screened Out
	347 CENTRAL AVE	BOWLING GREEN	KY	42101	0.37	Screened Out
	5400 23RD AVE	MOLINE	IL	61265	0.5755	Screened Out
	701 SHILOH RD	GARLAND	TX	75042	1.178	Screened Out
	372 CLEVELAND ST	ROCHESTER	PA	15074	1.3135	Screened Out
	901 N GREENWOOD AVE	KANKAKEE	IL	60901	1.8015	Screened Out
	1200 AMBOY AVE	PERTH AMBOY	NJ	08861	0.442	Screened Out
	350 FRONTAGE RD	WEST HAVEN	CT	06516	0.144915	Screened Out
	9809 INDUSTRIAL DR	BRIDGEVIEW	IL	60455	0.16206	Screened Out
	1923 FREDERICK	DETROIT	MI	48211	1.778	Screened Out
	20945 S WILMINGTON AVE	CARSON	CA	90810	0.25	Screened Out
	1801 PERIMETER RD	GREENVILLE	SC	29605	0.009	Screened Out
	450 RICHARDSON DR	LANCASTER	PA	17603	0.381	Screened Out
	4201 DEGUSSA RD	THEODORE	AL	36582	0.0045	Screened Out
	1650 LILLY RD	LAFAYETTE	IN	47909	0.331	Screened Out
	4999 SCENIC HWY	BATON ROUGE	LA	70805	0.032	Screened Out
	3700 W 190TH ST	TORRANCE	CA	90509	0.02	Screened Out
	4045 SCENIC HWY	BATON ROUGE	LA	70805	0.0565	Screened Out
	251 W WYLIE AVE	WASHINGTON	PA	15301	0.5	Screened Out
	7050 KRICK RD	WALTON HILLS	OH	44146	0.004	Screened Out
	5492 BOSTWICK ST	LOWVILLE	NY	13367	4.4445	Screened Out
	418-424 ST PAUL ST	ROCHESTER	NY	14605	0.0025	Screened Out
	482 WHEELER RD	SUGAR GROVE	IL	60554	0.891	Screened Out
	2030 RIVERVIEW INDUSTRIAL DR	MABLETON	GA	30126	0.195	Screened Out
	8365 VALLEY PIKE	MIDDLETOWN	VA	22645	0.0025	Screened Out
	36616 89TH ST	TWIN LAKES	WI	53181	1.4	Screened Out
	2675 HENKLE DR	LEBANON	OH	45036	0.608	Screened Out
	2825 SUNTIDE RD	CORPUS CHRISTI	TX	78409	0.1435	Screened Out
	650 MILLER RD	AVON LAKE	OH	44012	3.395	Screened Out
	12600 S TORRENCE AVE	CHICAGO	IL	60633	0.615	Screened Out
	3001 MILLER RD	DEARBORN	MI	48121	0.002	Screened Out
	3001 MILLER RD	DEARBORN	MI	48121	0.007	Screened Out
	4432 C ST NE	AUBURN	WA	98002	0.125	Screened Out
	1011 MCKINLEY ST	EUGENE	OR	97402	0.445	Screened Out
	2020 BRUCK ST	COLUMBUS	OH	43207	0.0575	Screened Out
	6625 MIRAMAR RD	SAN DIEGO	CA	92121	0.1517	Screened Out
	17050 S LATHROP AVE	HARVEY	IL	60426	0.329	Screened Out
	900 CARNEGIE ST	ROLLING MEADOWS	IL	60008	0.00112	Screened Out
	211 PUCKETTS FERRY RD	GREENWOOD	SC	29649	1.56	Screened Out
	20 W 14TH AVE	NORTH KANSAS CITY	MO	64116	1.677	Screened Out
	ONE FULLER WAY	GREAT BEND	KS	67530	0.373	Screened Out
	1245 CHAPMAN DR	WAUKESHA	WI	53186	0.0085	Screened Out
	625 WANDA AVE	FERNDALE	MI	48220	0.125	Screened Out
	471 HWY 3142	HAHNVILLE	LA	70057	0.1935	Screened Out
	1650 ROWE PKWY	POPLAR BLUFF	MO	63901	0.001	Screened Out
	1450 MONTANA RD	IOLA	KS	66749	0.00295	Screened Out
	1300 S PLANT RD	CHARLESTON	MO	63834	0.00555	Screened Out
	333 S LOMBARD RD	ADDISON	IL	60101	0.005	Screened Out
	2118 REISER AVE SE	NEW PHILADELPHIA	OH	44663	0.005	Screened Out
	3901 WILLIAMS DR	ORANGE	TX	77630	0.1275	Screened Out
	2300 HOLLOWAY DR	EL RENO	OK	73036	0.2215	Screened Out
	1200 N GLENBROOK	GARLAND	TX	75040	0.001995	Screened Out
	2500 E GENERAL MOTORS BLVD	DETROIT	MI	48211	1.06	Screened Out
	600 CORVETTE DR	BOWLING GREEN	KY	42101	0.815	Screened Out
	11 CRAGWOOD RD	AVENEL	NJ	07001	1.131	Screened Out
	1429 E LUFKIN AVE	LUFKIN	TX	75901	0.034	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	333 BARRON BLVD	GRAYSLAKE	IL	60030	1.075	Screened Out
	HWY 453 & I-26 (654 JUDGE ST)	HARLEYVILLE	SC	29448	0.002	Screened Out
	300 LAWTON AVE	MONROE	OH	45050	0.727	Screened Out
	1900 N JOSEY LN	CARROLLTON	TX	75006	0.000285	Screened Out
	3201 FAIRFAX TRAFFICWAY	KANSAS CITY	KS	66115	3.45	Screened Out
	4555 GIDDINGS RD	LAKE ORION	MI	48359	1.75	Screened Out
	2525 E ABRAMS ST	ARLINGTON	TX	76010	1.27	Screened Out
	7600 GENERAL MOTORS BLVD	SHREVEPORT	LA	71129	2.575	Screened Out
	3783 STATE RD	CUYAHOGA FALLS	OH	44223	0.003787	Screened Out
	4400 S KILDARE AVE	CHICAGO	IL	60632	0.125	Screened Out
	12361 MONARCH ST	GARDEN GROVE	CA	92841	0.005	Screened Out
	700 PROGRESS CENTER AVE	LAWRENCEVILLE	GA	30043	0.01291	Screened Out
	400 EXCHANGE ST	BUFFALO	NY	14204	0.046	Screened Out
	8250 ALMERIA AVE	FONTANA	CA	92335	0.1818	Screened Out
	2400 COOPER AVE	MERCED	CA	95348	0.826	Screened Out
	1200 TAYLOR RD	OWEGO	NY	13827	0.155	Screened Out
	5851 W 73RD ST	BEDFORD PARK	IL	60638	1.327	Screened Out
	220 HANNA DR	PEKIN	IL	61554	0.038	Screened Out
	3812 COMMERCE AVE	FAIRFIELD	AL	35064	2.1105	Screened Out
	4606 NEW W DR	PASADENA	TX	77507	0.034	Screened Out
	5200 SPEAKER RD	KANSAS CITY	KS	66106	0.139	Screened Out
	1425 EDEN RD	YORK	PA	17402	0.0545	Screened Out
	60 S SEIBERLING ST	AKRON	OH	44305	0.0025	Screened Out
	7440 W DUPONT RD	MORRIS	IL	60450	0.3745	Screened Out
	923 MAULDIN RD	CALHOUN	GA	30701	0.0065	Screened Out
	421 LONDON RD	DELAWARE	OH	43015	0.031	Screened Out
	137 FOLLY MILL RD	SEABROOK	NH	03874	0.04955	Screened Out
	23343 SHERWOOD AVE	WARREN	MI	48091	0.25	Screened Out
	6937 W MILL RD	MILWAUKEE	WI	53218	0.0031	Screened Out
	1500 LATHEM ST	BATAVIA	IL	60510	1.4085	Screened Out
	1111 HERCULES RD	HOPEWELL	VA	23860	0.0025	Screened Out
	ONE MILL ST	KENEDY	TX	78119	0.1009555	Screened Out
	1250 ST GEORGE ST	EAST LIVERPOOL	OH	43920	0.00501	Screened Out
	HWY 110 N KM 5.1	AGUADILLA	PR	00605	3.2155	Screened Out
	14330 KINSMAN RD	BURTON	OH	44021	0.0195	Screened Out
	HWY 353 S	JONESBOROUGH	TN	37659	0.0275	Screened Out
	402 N 3TH ST	SAINT JOSEPH	MO	64501	1.1175	Screened Out
	1525 MCKEE RD	DOVER	DE	19904	2.6355	Screened Out
	200 SAFETY ST / HWY 453	HOLLY HILL	SC	29059	0.1225	Screened Out
	101 CASE ST	FOUNTAIN INN	SC	29644	0.010345	Screened Out
	2755 N MICHIGAN AVE	GREENSBURG	IN	47240	2.282	Screened Out
	563 S LEONARD ST	WATERBURY	CT	06708	0.0095	Screened Out
	1855 FAIRLAWN RD	TUSCALOOSA	AL	35401	0.932	Screened Out
	555 HUNTSMAN RD	MC INTOSH	AL	36553	0.05115	Screened Out
	3892 US HWY 90	DAYTON	TX	77535	0.001	Screened Out
	6001 HWY 366	PORT NECHES	TX	77651	0.11	Screened Out
	7300 W BRADLEY RD	MILWAUKEE	WI	53223	0.0015	Screened Out
	2545 BOND ST	UNIVERSITY PARK	IL	60466	0.011	Screened Out
	114 N MAIN ST	COTTAGE GROVE	WI	53527	0.53	Screened Out
	700 HYUNDAI BLVD	MONTGOMERY	AL	36105	4.1085	Screened Out
	2322 N MINGO RD	TULSA	OK	74116	2.65	Screened Out
	11636 HUNTINGTON	GALLIPOLIS FERRY	WV	25515	0.373145	Screened Out
	3005 INTERNATIONAL BLVD	AUGUSTA	GA	30906	0.0004385	Screened Out
	3300 WESTINGHOUSE BLVD	CHARLOTTE	NC	28273	0.0065	Screened Out
	2526 NW YEON AVE	PORTLAND	OR	97210	0.0635	Screened Out
	800 CEL-RIVER RD	ROCK HILL	SC	29730	0.2125	Screened Out
	1300 BRASS MILL RD	BELCAMP	MD	21017	1.52745	Screened Out
	14705 S AVALON BLVD	GARDENA	CA	90248	0.005	Screened Out
	21255A HWY 1 S	PLAQUEMINE	LA	70765	0.384	Screened Out
	2009 W AVE S	LA CROSSE	WI	54601	4.133	Screened Out
	4500 S DOBSON RD MAIL STOP: OC4-005	CHANDLER	AZ	85248	0.2225	Screened Out
	4100 SARA RD M/S RR5-491	RIO RANCHO	NM	87124	0.4075	Screened Out
	2501 NW 229TH ST	HILLSBORO	OR	97124	0.9525	Screened Out
	14029 W HARDY	HOUSTON	TX	77060	0.002	Screened Out
	640 N ROCKY RIVER DR	BEREA	OH	44017	0.005	Screened Out
	6001 ANTOINE DR	HOUSTON	TX	77091	0.1275	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	7600 HWY 10 W	PINE HILL	AL	36769	0.058	Screened Out
	23247 W EAMES ST	CHANNAHON	IL	60410	0.0075	Screened Out
	2797 FREEDLAND RD	HERMITAGE	PA	16148	0.014	Screened Out
	3055A FM 1006	ORANGE	TX	77630	0.125	Screened Out
	405 INDUSTRIAL WAY	DIXON	CA	95620	4.3915	Screened Out
	1615 MAIN ST	PORT NECHES	TX	77651	0.132	Screened Out
	805 E OLD 56 HWY	OLATHE	KS	66061	2.002	Screened Out
	3606 CRAFTSMAN BLVD	LAKELAND	FL	33803	0.163	Screened Out
	550-560 W CENTENNIAL BLVD	CASA GRANDE	AZ	85122	0.26016	Screened Out
	1825 E NATIONAL AVE	BRAZIL	IN	47834	2.88926	Screened Out
	875 PROGRESS CENTER AVE	LAWRENCEVILLE	GA	30043	2.6895	Screened Out
	923 23RD AVE	ROCKFORD	IL	61104	1.4165	Screened Out
	108 MAIN ST	JAMESTOWN	PA	16134	0.201	Screened Out
	501 RIVER DR	MOLINE	IL	61265	1	Screened Out
	37721 STEVENS BLVD	WILLOUGHBY	OH	44094	0.125	Screened Out
	325 S PRICE RD	CHANDLER	AZ	85224	0.0655	Screened Out
	500 E 12TH ST	BLOOMSBURG	PA	17815	0.5055	Screened Out
	7200 DOE AVE	VISALIA	CA	93291	0.7835	Screened Out
	57 KAY INDUSTRIAL DR	LAKE ORION	MI	48359	2.2135	Screened Out
	8300 CAPITAL DR	GREENSBORO	NC	27409	0.0595	Screened Out
	1445 S 15TH ST	LOUISVILLE	KY	40210	0.4475	Screened Out
	1401 S 15TH ST	LOUISVILLE	KY	40210	1.3	Screened Out
	1 CYANAMID RD	MOBILE	AL	36610	0.1065	Screened Out
	1188 CAYADUTTA ST RT 334	FONDA	NY	12068	2.105	Screened Out
	2165 HWY 292	INMAN	SC	29349	0.25	Screened Out
	RT 329	BATH	PA	18014	0.0025	Screened Out
	9028 DICE RD	SANTA FE SPRINGS	CA	90670	0.255	Screened Out
	SCIENCE RD	NORWALK	CT	06852	0.00585	Screened Out
	16503 RAMSEY RD	CROSBY	TX	77532	0.25	Screened Out
	2430 ALBERT BROADFOOT ST	BONHAM	TX	75418	0.0355	Screened Out
	1600 S LAFLIN ST	CHICAGO	IL	60608	3.25	Screened Out
	4001 N HAWTHORNE ST	CHATTANOOGA	TN	37406	0.0005255	Screened Out
	HWY 59 AT COUNTY RD 212	HUNGERFORD	TX	77448	0.0495	Screened Out
	URB.APONTE #5	SAN LORENZO	PR	00754	0.00563	Screened Out
	9200 MASON AVE	CHATSWORTH	CA	91311	0.00017	Screened Out
	725 S 75TH AVE	WAUSAU	WI	54401	0.372	Screened Out
	1011 LOCKHEED WAY MZ 0824	PALMDALE	CA	93599	0.478	Screened Out
	5565 RAIDERS RD	FRAZEYSBURG	OH	43822	0.164	Screened Out
	9550 W 55TH ST	MC COOK	IL	60525	0.0745	Screened Out
	29400 LAKELAND BLVD	WICKLIFFE	OH	44092	0.0365	Screened Out
	155 FREEDOM RD	PAINESVILLE	OH	44077	0.0045	Screened Out
	1221 FARROW AVE	FERNDALE	MI	48220	0.00374	Screened Out
	260 S PACIFIC ST	SAN MARCOS	CA	92078	0.2615	Screened Out
	700 S PARK DR	NEWAYGO	MI	49337	2.673	Screened Out
	100 W STERRETT RD	WAXAHACHIE	TX	75165	0.125	Screened Out
	13300 E NELSON AVE	CITY OF INDUSTRY	CA	91746	0.125	Screened Out
	361 FAIRVIEW AVE	BARBERTON	OH	44203	0.25	Screened Out
	3134 POST RD	WARWICK	RI	02886	0.001055	Screened Out
	1304 OLIN AVE	INDIANAPOLIS	IN	46222	0.002	Screened Out
	235 E MARKET ST	LOUISVILLE	KY	40202	0.5225	Screened Out
	1330 REGAL ROW	DALLAS	TX	75247	0.00026	Screened Out
	1002 EISENHOWER DR N	GOSHEN	IN	46526	4.193	Screened Out
	101 FAIRVIEW AVE	PITTSBURGH	PA	15238	0.067	Screened Out
	3725 N FIRST ST	SAN JOSE	CA	95134	0.0615	Screened Out
	9651 WESTOVER HILLS BLVD	SAN ANTONIO	TX	78251	0.188	Screened Out
	7411 OAKWOOD ST	MEBANE	NC	27302	2.9255	Screened Out
	5598 VIRGINIA AVE	NORTH CHARLESTON	SC	29406	0.11118	Screened Out
	400 CROSBY RD	DERIDDER	LA	70634	0.14	Screened Out
	1150 MARIETTA INDUSTRIAL DR NE	MARIETTA	GA	30062	0.291	Screened Out
	9133 CENTER AVE	RANCHO CUCAMONG	CA	91730	0.38345	Screened Out
	951 PRISOCK RD	JACKSON	MS	39272	4.4805	Screened Out
	9315 WATSON INDUSTRIAL PARK	CRESTWOOD	MO	63126	0.1325	Screened Out
	9 KONZEN CT	GRANITE CITY	IL	62040	0.51	Screened Out
	600 CARDIGAN RD	SHOREVIEW	MN	55126	0.0585	Screened Out
	1048 STINSON DR	READING	PA	19605	0.25	Screened Out
	2434 BIRKDALE ST	LOS ANGELES	CA	90031	1.5	Screened Out
	100 N MITSUBISHI MOTORWAY	NORMAL	IL	61761	1.0215	Screened Out
	12306 MONTAGUE ST	PACOIMA	CA	91331	0.1275	Screened Out
	8600 W 71ST ST	BEDFORD PARK	IL	60501	1.168	Screened Out
	1323 S 65TH	MILWAUKEE	WI	53214	1.5915	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	3500 S STATE RT 2	FRIENDLY	WV	26146	2.197	Screened Out
	16052 INDUSTRIAL PKWY	MIDDLEFIELD	OH	44062	0.047	Screened Out
	150 GRAND VALLEY AVE	ORWELL	OH	44076	0.07	Screened Out
	2281 S US 31	SCOTTSBURG	IN	47170	0.000156929	Screened Out
	125 NALCO WAY/RT 65	ELLWOOD CITY	PA	16117	0.00007224	Screened Out
	3901 TERRY ST	TEXARKANA	TX	75501	0.0005	Screened Out
	812 RENAUD DR	SCOTT	LA	70583	0.0008585	Screened Out
	7701 US HWY 90A	SUGAR LAND	TX	77478	0.0553553	Screened Out
	6717 S 61ST W AVE	TULSA	OK	74131	0.003785	Screened Out
	18310 ENTERPRISE AVE	NASHVILLE	IL	62263	0.379145	Screened Out
	1600 GLENLAKE AVE	ITASCA	IL	60143	0.0005	Screened Out
	6125 URBANA RD	SPRINGFIELD	OH	45502	3.815	Screened Out
	1087 N N BRANCH ST	CHICAGO	IL	60622	0.405	Screened Out
	8501 HEDGE LN TERRACE	SHAWNEE	KS	66227	3.6515	Screened Out
	2701 E 170TH ST	LANSING	IL	60438	0.4055	Screened Out
	225 FORT ST	NILES	MI	49120	2.1685	Screened Out
	1107 E KIMBERLY	ANAHEIM	CA	92801	0.3635	Screened Out
	1000 HAMILTON RD	WEIRTON	WV	26062	1.577	Screened Out
	16001 TRADE ZONE AVE	UPPER MARLBORO	MD	20774	0.0060048	Screened Out
	400 MAIN ST	TEWKSBURY	MA	01876	0.083	Screened Out
	5420 SPEAKER RD	KANSAS CITY	KS	66106	0.086	Screened Out
	3930 GLENWOOD DR	CHARLOTTE	NC	28208	0.14	Screened Out
	2011 TURNER ST	LANSING	MI	48906	0.146	Screened Out
	3101 WOOD DR	GARLAND	TX	75041	0.191	Screened Out
	7710 POLK ST	SAINT LOUIS	MO	63111	0.1945	Screened Out
	395 JAMES AVE	SAINT PAUL	MN	55102	0.2615	Screened Out
	8500 S WILLOW SPRINGS RD	WILLOW SPRINGS	IL	60480	0.5895	Screened Out
	2788 GLENDALE-MILFORD RD	EVENDALE	OH	45241	0.108	Screened Out
	20915 S WILMINGTON AVE	CARSON	CA	90810	0.1	Screened Out
	350 ROOSEVELT AVE	CARTERET	NJ	07008	0.254	Screened Out
	4550 NE EXPRESSWAY	DORAVILLE	GA	30340	0.2285	Screened Out
	2461 CROCKER CIR	FAIRFIELD	CA	94533	0.0625	Screened Out
	8901 OLD GALVESTON RD	HOUSTON	TX	77034	0.0315	Screened Out
	200 NE 181ST ST	MIAMI	FL	33162	0.102	Screened Out
	5125 W HANNA AVE	TAMPA	FL	33634	0.033	Screened Out
	1842 ENTERPRISE PKWY	TWINSBURG	OH	44087	0.0115	Screened Out
	1610 E HIGHLAND RD	TWINSBURG	OH	44087	0.248	Screened Out
	3900 HOLLAND RD	SAGINAW	MI	48601	2.0835	Screened Out
	400 47TH ST	NIAGARA FALLS	NY	14304	0.0025	Screened Out
	1044 S NELSON RD	FOUNTAIN INN	SC	29644	0.1275	Screened Out
	2001 HWY 20 W	DECATUR	AL	35601	1.207	Screened Out
	1725 ROCKINGHAM RD	DAVENPORT	IA	52802	0.773	Screened Out
	628 S SARATOGA ST	COHOES	NY	12047	0.001285	Screened Out
	705 6TH AVE	MENOMINEE	MI	49858	0.18	Screened Out
	5800 W DR	MANITOWOC	WI	54220	2.588	Screened Out
	2811 HOLMES RD	HOUSTON	TX	77051	0.0025	Screened Out
	9574 FM 1227	NAVASOTA	TX	77868	0.204565	Screened Out
	11120 BEREA RD	CLEVELAND	OH	44102	0.0585	Screened Out
	16961 KNOTT AVE	LA MIRADA	CA	90638	0.005	Screened Out
	1 ICON	FOOTHILL RANCH	CA	92610	0.1275	Screened Out
	ONE TOY ST	BRYAN	OH	43506	1.884	Screened Out
	920 POTTERTOWN RD	MIDWAY	TN	37809	0.0845	Screened Out
	TWO MILE RUN RD	FRANKLIN	PA	16323	0.248	Screened Out
	1280 IMPERIAL RD	HAMPTON	IA	50441	0.0055	Screened Out
	1455 J A COCHRAN BY-PASS	CHESTER	SC	29706	0.00098	Screened Out
	4837 HWY 81 S	STARR	SC	29684	4.7895	Screened Out
	HWY 57	COUNCE	TN	38326	0.025	Screened Out
	91 MICHIGAN AVE	PATERSON	NJ	07503	0.845	Screened Out
	2600 WILCO BLVD	WILSON	NC	27893	0.000405	Screened Out
	304 S BLAINE PIKE	PORTLAND	IN	47371	0.375	Screened Out
	400 E COTTAGE AVE	CARPENTERSVILLE	IL	60110	0.4295	Screened Out
	2755 BERGEY RD	HATFIELD	PA	19440	3.016805	Screened Out
	1801 ESTES AVE	ELK GROVE VILLAGE	IL	60007	0.001	Screened Out
	440 DENNISTON CT	WHEELING	IL	60090	0.001	Screened Out
	5008-11 CURTIS LN	NEW IBERIA	LA	70560	0.395	Screened Out
	6875 PARKLAND BLVD	SOLON	OH	44139	0.1275	Screened Out
	9215 SANTA FE SPRINGS RD	SANTA FE SPRINGS	CA	90670	0.369	Screened Out
	11623 N HOUSTON ROSSLYN RD	HOUSTON	TX	77086	0.106	Screened Out
	1000 LAKE RD	MEDINA	OH	44258	0.0865	Screened Out
	113 BOLTE LN	SAINT CLAIR	MO	63077	0.016	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	1000 INTEGRAM DR	PACIFIC	MO	63069	0.025	Screened Out
	105 BOLTE LN	SAINT CLAIR	MO	63077	0.066	Screened Out
	46 STAFFORD ST	LAWRENCE	MA	01841	0.998	Screened Out
	117 E 14TH AVE	NORTH KANSAS CITY	MO	64116	1.0535	Screened Out
	513 PEASTER HWY	WEATHERFORD	TX	76086	0.25	Screened Out
	6804 ENTERPRISE DR	LOUISVILLE	KY	40214	0.0007	Screened Out
	1377 OAKLEIGH DR	EAST POINT	GA	30344	0.4615	Screened Out
	400 S 13TH ST	LOUISVILLE	KY	40203	0.1765	Screened Out
	3530 LANG RD	HOUSTON	TX	77092	0.0065	Screened Out
	1886 LYNNBURY WOODS RD	DOVER	DE	19904	0.0025	Screened Out
	1020 OLYMPIC DR	BATAVIA	IL	60510	0.821	Screened Out
	500 PITTSBURGH AVE	MCCARRAN	NV	89434	0.125	Screened Out
	760 PITTSBURGH DR	DELAWARE	OH	43015	0.06872	Screened Out
	3800 W 143 ST	CLEVELAND	OH	44111	1.0425	Screened Out
	559 PITTSBURGH RD	CIRCLEVILLE	OH	43113	0.1775	Screened Out
	11601 UNITED ST	MOJAVE	CA	93501	0.016	Screened Out
	6754 SANTA BARBARA CT	ELKRIDGE	MD	21075	0.628695	Screened Out
	5888 E COUNTY RD 180	BLYTHEVILLE	AR	72315	0.874	Screened Out
	3399 DAVEY ALLISON BLVD	HUEYTOWN	AL	35023	2.5915	Screened Out
	4502 FREEDOM WAY	WEIRTON	WV	26062	2.6315	Screened Out
	4301 S SPRING AVE	SAINT LOUIS	MO	63116	3.355	Screened Out
	16402 JACINTOPORT BLVD	HOUSTON	TX	77015	4.652	Screened Out
	10420 N STATE ST	HARRISON	OH	45030	0.125	Screened Out
	250 HALLS MILL RD	FREEHOLD	NJ	07728	0.004	Screened Out
	6 LONG ISLAND AVE	HOLTSVILLE	NY	11742	0.0125	Screened Out
	211 RANDOLPH AVE	AVENEL	NJ	07001	0.0195	Screened Out
	2233 26TH ST SW	ALLENTOWN	PA	18103	0.5515	Screened Out
	401 N GREAT SW PKWY	ARLINGTON	TX	76011	3.266895	Screened Out
	5348 VINE ST	CINCINNATI	OH	45217	0.0065	Screened Out
	2200 LOWER MUSCATINE RD	IOWA CITY	IA	52240	0.0295	Screened Out
	1900 KANSAS AVE	KANSAS CITY	KS	66105	0.00611	Screened Out
	TWO NICE-PAK PARK	ORANGEBURG	NY	10962	0.129005	Screened Out
	9000 HUBBELL AVE	DETROIT	MI	48228	0.005	Screened Out
	4581 LOWER VALLEY RD	ATGLEN	PA	19310	0.47	Screened Out
	420 W INDUSTRIAL AVE	EFFINGHAM	IL	62401	2.445	Screened Out
	100 W AIRPORT RD	STILLWATER	OK	74075	2.0405	Screened Out
	160 CENTURY LN STONEWALL INDUSTRIAL PARK	WINCHESTER	VA	22603	4.053425	Screened Out
	50 JOHN HANCOCK RD	TAUNTON	MA	02780	1.9616	Screened Out
	100 DUPLAINVILLE RD	THE ROCK	GA	30285	2.395	Screened Out
	555 S 108TH ST	WEST ALLIS	WI	53214	3.505	Screened Out
	56 DUPLAINVILLE RD	SARATOGA SPRINGS	NY	12866	3.8675	Screened Out
	1337 N WOOD BRANCH DR	CHARLOTTE	NC	28273	0.25	Screened Out
	N92 W14701 ANTHONY AVE	MENOMONEE FALLS	WI	53051	0.375	Screened Out
	12255 FM 529	HOUSTON	TX	77041	0.65	Screened Out
	3201 LEBANON RD	DANVILLE	KY	40422	4.1715	Screened Out
	600 RADIATOR RD	INDIAN TRAIL	NC	28079	0.146	Screened Out
	408 MANOR-HARRISON CITY RD	HARRISON CITY	PA	15636	0.0065	Screened Out
	799 RT 206 & HILLSBOROUGH RD	HILLSBOROUGH	NJ	08844	0.0545	Screened Out
	1016 E COLUMBIA ST	EVANSVILLE	IN	47711	1.047	Screened Out
	550 S EDWIN ST	WESTLAND	MI	48186	2.7255	Screened Out
	249 ST LOUIS AVE	VALLEY PARK	MO	63088	0.512645	Screened Out
	425 S PACE BLVD	PENSACOLA	FL	32502	1.7695	Screened Out
	237 S MOTOR AVE	AZUSA	CA	91702	0.005	Screened Out
	601 CRESTWOOD ST	JACKSONVILLE	FL	32208	0.0025	Screened Out
	402 INDUSTRIAL PARK DR	PELHAM	AL	35124	0.00425	Screened Out
	133 BAIN DR	LA VERGNE	TN	37086	0.01117	Screened Out
	2481 RIVER RD	WELLSBURG	WV	26070	1.4	Screened Out
	2ND ST & BLUEBALL AVE	MARCUS HOOK	PA	19061	0.192	Screened Out
	577 BANKHEAD HWY	WINDER	GA	30680	0.1985	Screened Out
	4202-24 MAIN ST	PHILADELPHIA	PA	19127	0.021111	Screened Out
	4901 STICKNEY AVE	TOLEDO	OH	43612	0.000945	Screened Out
	1100 US HWY 271 S	GILMER	TX	75644	0.041	Screened Out
	2301 S 21ST ST	CLINTON	IA	52732	0.6065	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	1113 MARYLAND AVE	SHEBOYGAN	WI	53081	0.0995	Screened Out
	6123 N MARINE DR	PORTLAND	OR	97203	0.442	Screened Out
	2401 E PRATT BLVD	ELK GROVE VILLAGE	IL	60007	0.0015	Screened Out
	200 RT 413	BRISTOL	PA	19007	0.2424	Screened Out
	455 FOREST ST	MARLBOROUGH	MA	01752	0.005	Screened Out
	800 CHASE AVE	ELK GROVE VILLAGE	IL	60007	0.2235	Screened Out
	1602 N UNION ST	FOSTORIA	OH	44830	2.8505	Screened Out
	100 QUALITY CT	CHARLESTOWN	IN	47111	2.103	Screened Out
	60 SECURITY DR	AVON	CT	06001	1.5765	Screened Out
	6821 E COUNTY RD 1100 N	MATTOON	IL	61938	2.1105	Screened Out
	10519 INDUSTRIAL DR	PINEVILLE	NC	28134	1.9455	Screened Out
	321 WILSON DR	JEFFERSON CITY	MO	65109	1.82586	Screened Out
	1300 SAUK AVE	BARABOO	WI	53913	4.422	Screened Out
	19681 PACIFIC GATEWAY DR	TORRANCE	CA	90502	2.433	Screened Out
	ONE SHENANDOAH VALLEY DR	STRASBURG	VA	22657	3.14	Screened Out
	1645 W SAM HOUSTON PKWY N	HOUSTON	TX	77043	4.7265	Screened Out
	2353 S BLUE ISLAND AVE	CHICAGO	IL	60608	0.1275	Screened Out
	7401 KILMER LN	MAPLE GROVE	MN	55369	4.038	Screened Out
	1141 NW 50TH ST	SEATTLE	WA	98107	0.205	Screened Out
	7850 OHIO RIVER RD	LESAGE	WV	25537	0.0135	Screened Out
	8105 95TH ST	PLEASANT PRAIRIE	WI	53158	0.75	Screened Out
	16410 INDUSTRIAL LN	WILLIAMSPORT	MD	21795	0.271	Screened Out
	5540 NW HWY	CHICAGO	IL	60630	1.194	Screened Out
	6200 FRANKLIN BLVD	SACRAMENTO	CA	95824	0.125	Screened Out
	130 A FRONTAGE RD	LEXINGTON	SC	29073	0.125	Screened Out
	831 VOLUNTEER PKWY	MANCHESTER	TN	37355	0.3775	Screened Out
	2905 OLD OAKWOOD RD	GAINESVILLE	GA	30504	2.317	Screened Out
	2500 ALUMAX RD	YANKTON	SD	57078	2.4011901	Screened Out
	5325 NE SKYPORT WAY	PORTLAND	OR	97218	1.71267935	Screened Out
	601 TIGHTSQUEEZE INDUSTRIAL RD	CHATHAM	VA	24531	0.005	Screened Out
	610 S BOLMAR ST	WEST CHESTER	PA	19382	0.005	Screened Out
	2201 OLD SPANISH TRAIL	WESTLAKE	LA	70669	0.4905	Screened Out
	8311 16TH ST	STURTEVANT	WI	53177	0.5	Screened Out
	1990 SANDIFER BLVD	SENECA	SC	29678	2.35	Screened Out
	45 PARKER	IRVINE	CA	92618	0.001	Screened Out
	227 S TOWN E BLVD	MESQUITE	TX	75149	1.963	Screened Out
	3801 E DECORAH RD	WEST BEND	WI	53095	0.206	Screened Out
	909 MAGNOLIA AVE	AUBURNDALE	FL	33823	0.398	Screened Out
	917 CROSBY AVE	SYCAMORE	IL	60178	0.6485	Screened Out
	608 CANAL ST	CEDARTOWN	GA	30125	1.3205	Screened Out
	2150 W SAND LAKE RD	ORLANDO	FL	32809	0.0015	Screened Out
	26300 FARGO AVE	BEDFORD HEIGHTS	OH	44146	0.002	Screened Out
	14 INDUSTRIAL PARK	FLORA	IL	62839	0.0035	Screened Out
	404 E MALLORY AVE	MEMPHIS	TN	38109	0.0065	Screened Out
	12401 INDUSTRIAL BLVD	VICTORVILLE	CA	92392	0.01	Screened Out
	2325 HOLLINS FERRY RD	BALTIMORE	MD	21230	0.012	Screened Out
	6795 S MAIN ST	MORROW	GA	30260	0.0145	Screened Out
	2121 NEW WORLD DR	COLUMBUS	OH	43207	0.0215	Screened Out
	1025 HOWARD ST	GREENSBORO	NC	27403	0.0265	Screened Out
	2802 W MILLER RD	GARLAND	TX	75041	0.028	Screened Out
	113 STAGE COACH TRAIL	GREENSBORO	NC	27409	0.049	Screened Out
	630 E 13TH	ANDOVER	KS	67002	0.0505	Screened Out
	180 CANAL ST	TERRE HAUTE	IN	47808	0.0635	Screened Out
	636 E 40TH ST	HOLLAND	MI	49423	0.106	Screened Out
	395 BOGGS LN - S	RICHMOND	KY	40475	0.342	Screened Out
	1000 MAIN ST	ROTTERDAM JUNCTI	NY	12150	0.02354	Screened Out
	8000 RESEARCH WAY	SPRINGFIELD	VA	22153	0.125	Screened Out
	11400 W 47TH ST	MINNETONKA	MN	55343	0.3015	Screened Out
	100 DAN RD	CANTON	MA	02021	0.433	Screened Out
	9901 SAND CREEK HWY	WESTON	MI	49289	0.25	Screened Out
	12130 LYNN AVE S	SAVAGE	MN	55378	0.575	Screened Out
	2200 WILBUR AVE	ANTIOCH	CA	94509	2.067	Screened Out
	8673 LYONS-MARENGO RD	LYONS	NY	14489	4.034	Screened Out
	N90 W14600 COMMERCE DR	MENOMONEE FALLS	WI	53051	4.2	Screened Out
	1400 PLOVER RD	PLOVER	WI	54467	4.47	Screened Out
	1701 WILLIAMSBURG PIKE	RICHMOND	IN	47375	0.202	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	350 JAYCEE DR VALMONT INDUSTRIAL PARK	HAZLETON	PA	18201	1.8125	Screened Out
	201 BOSTON TURNPIKE	BOLTON	CT	06043	0.0195	Screened Out
	100 E LINCOLN AVE	SINCLAIR	WY	82334	0.001	Screened Out
	2600 US HWY 18 E	ALGONA	IA	50511	0.1205	Screened Out
	6502 S US HWY 31	EDINBURGH	IN	46124	0.2045	Screened Out
	1854 CENTRAL FLORIDA PKWY	ORLANDO	FL	32837	0.658	Screened Out
	2755 HARBOR AVE	MEMPHIS	TN	38113	1.7065	Screened Out
	1200 SE 32ND ST	FT LAUDERDALE	FL	33316	0.078	Screened Out
	1335 S 13TH ST	LOUISVILLE	KY	40210	0.1275	Screened Out
	539 S DREW ST	MESA	AZ	85210	0.006	Screened Out
	1110 SPARTAN DR	MAUMEE	OH	43537	0.0675	Screened Out
	13 MCCONNELL ST SW	GRAND RAPIDS	MI	49503	0.385	Screened Out
	535 BEV RD	YOUNGSTOWN	OH	44512	0.75	Screened Out
	1200 CENTRAL FLORIDA PKWY	ORLANDO	FL	32837	0.941	Screened Out
	716 S COLUMBUS AVE	MOUNT VERNON	NY	10550	0.4335	Screened Out
	3465 S LA CIENAGA BLVD	LOS ANGELES	CA	90016	3.358	Screened Out
	1701 E 122-ND ST	CHICAGO	IL	60633	0.6265	Screened Out
	355 LA HWY 3142 (GATE 1)	TAFT	LA	70057	1.67	Screened Out
	940 S 6TH AVE	MANSFIELD	TX	76063	0.22855	Screened Out
	5134 LOOP RD	JEFFERSONVILLE	IN	47130	1.87	Screened Out
	222 W KALAMA RIVER RD	KALAMA	WA	98625	0.735505	Screened Out
	7001 ALLISON-BONNET MEMORIAL D	FAIRFIELD	AL	35064	0.603375	Screened Out
	11200 ARROW RT	RANCHO CUCAMONG	CA	91730	0.087635	Screened Out
	300 NEW CENTURY PKWY	NEW CENTURY	KS	66031	0.1475	Screened Out
	477 LEXINGTON AVE	PAINESVILLE	OH	44077	1.0615	Screened Out
	2410 HWY 15S	SUMTER	SC	29150	0.22	Screened Out
	135 W LAKE ST	NORTHLAKE	IL	60164	0.003	Screened Out
	3301 HUNTING PARK AVE	PHILADELPHIA	PA	19132	0.2045	Screened Out
	1380 FORD RD	MAUMEE	OH	43537	0.966	Screened Out
	2445 PRODUCTION DR	SAINT CHARLES	IL	60174	1.2085	Screened Out
	400 W REGENT ST	INDIANAPOLIS	IN	46225	0.007065	Screened Out
	1500 WESTERN AVE	CONNERSVILLE	IN	47331	0.074	Screened Out
	4211 BRAMERS LN	LOUISVILLE	KY	40216	0.0035	Screened Out
	320 NORTHPOINTE DR	FAIRFIELD	OH	45014	0.004085	Screened Out
	402 N MAIN ST	MIDDLEBURY	IN	46540	0.712	Screened Out
	3905 HWY 75	SAINT GABRIEL	LA	70776	0.133	Screened Out
	2675 ANTLER DR	CARSON CITY	NV	89701	1.1335	Screened Out
	267 UNION ST	NORTHVALE	NJ	07647	0.0105	Screened Out
	4501 BRADLEY ST	LUBBOCK	TX	79415	4.36875	Screened Out
	3327 PIPELINE RD	CLEBURNE	TX	76033	0.1095	Screened Out
	18700 NE 65TH ST	REDMOND	WA	98052	4.7679	Screened Out
	2500 RON BEAN BLVD	SHREVEPORT	LA	71115	0.6705	Screened Out
	900 OLD RED TRAIL NE	MANDAN	ND	58554	1.0505	Screened Out
	1801 SURVEYOR BLVD	CARROLLTON	TX	75006	1.676	Screened Out
	13500 N CENTRAL EXPRESSWAY	DALLAS	TX	75243	0.114	Screened Out
	12201 SW FWY MS600	STAFFORD	TX	77477	0.1275	Screened Out
	6901 MCKISSOCK AVE	SAINT LOUIS	MO	63147	0.162	Screened Out
	1790 BUILDING	MIDLAND	MI	48667	2.29	Screened Out
	21255 LA HWY 1 S	PLAQUEMINE	LA	70764	0.396	Screened Out
	2025 EXCHANGE PL	BESSEMER	AL	35023	3.59	Screened Out
	3555 W 123RD ST	ALSIP	IL	60803	0.284	Screened Out
	2300 EDGEWATER AVE	BALTIMORE	MD	21222	0.125	Screened Out
	123 W 23RD AVE	NORTH KANSAS CITY	MO	64116	0.125	Screened Out
	2703 FREEMANSBURG AVE	EASTON	PA	18045	0.375	Screened Out
	2400 N HARVEY MITCHELL PKWY	BRYAN	TX	77807	0.014	Screened Out
	4343 KENNEDY AVE	EAST CHICAGO	IN	46312	0.4655	Screened Out
	419 E DE SOTO AVE	SAINT LOUIS	MO	63147	0.125	Screened Out
	2040 HEISERMAN DR	BRIGHTON	MI	48114	0.00418	Screened Out
	715 RAILROAD AVE & HWY 74	RUTHERFORDTON	NC	28139	0.0055	Screened Out
	1902 RANKIN RD	HOUSTON	TX	77073	0.5125	Screened Out
	1800 PARK PL AVE	FORT WORTH	TX	76110	1.37545	Screened Out
	201 JANDUS RD	CARY	IL	60013	0.011	Screened Out
	4 OLD MONSON RD	STAFFORD	CT	06075	3.9505	Screened Out
	234 CASHMAN DR	CHIPPEWA FALLS	WI	54729	0.793	Screened Out
	407 MATHEW ST	SANTA CLARA	CA	95050	1.0005	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	3100 W MILL RD	MILWAUKEE	WI	53209	0.0905	Screened Out
	1 STANTON ST	MARINETTE	WI	54143	0.026065	Screened Out
	5000 N FM 1912	AMARILLO	TX	79108	0.02	Screened Out
	HWY 50 W	HOLCOMB	KS	67851	0.125	Screened Out
	437 MACCORKLE AVE SW	SOUTH CHARLESTON	WV	25303	0.144	Screened Out
	3 MALCOLM HOYT DR	NEWBURYPORT	MA	01950	0.0025	Screened Out
	320 37TH AVE	SAINT CHARLES	IL	60174	0.1275	Screened Out
	24671 TELEGRAPH RD	SOUTHFIELD	MI	48034	0.9615	Screened Out
	2600 S GARFIELD AVE	COMMERCE	CA	90040	0.006	Screened Out
	7050 W 71ST ST	BEDFORD PARK	IL	60499	0.00887	Screened Out
	4051 S AVE	TOLEDO	OH	43615	0.0505	Screened Out
	328 BUNOLA RIVER RD	BUNOLA	PA	15020	0.1275	Screened Out
	COLONIAL RD	SALEM	MA	01970	0.002	Screened Out
	30450 TRACY RD	WALBRIDGE	OH	43465	0.00189	Screened Out
	3636 DAN MORTON DR	DALLAS	TX	75236	0.25	Screened Out
	1 ALCHEMY PL	DORAVILLE	GA	30362	0.0065	Screened Out
	12 STANDEN DR	HAMILTON	OH	45015	0.25	Screened Out
	777 BRISBANE ST	HOUSTON	TX	77061	0.25	Screened Out
	11235 FM 529	HOUSTON	TX	77041	0.75	Screened Out
	155 ELLIS RD S	JACKSONVILLE	FL	32254	0.0195	Screened Out
	108 OAKDALE RD	JAMESTOWN	NC	27282	0.006	Screened Out
	200 DEAN SIEVERS PL	MORRISVILLE	PA	19067	0.03	Screened Out
	2400 S 170TH ST	NEW BERLIN	WI	53151	0.00702	Screened Out
	2145 SKYLAND CT	NORCROSS	GA	30071	0.0095	Screened Out
	13395 HURON RIVER DR	ROMULUS	MI	48174	0.0805	Screened Out
	13900 CARMENITA RD	SANTA FE SPRINGS	CA	90670	0.0035	Screened Out
	21600 DRAKE RD	STRONGSVILLE	OH	44136	0.25	Screened Out
	6049 OLD 41A HWY	TAMPA	FL	33619	0.0065	Screened Out
	1124 ELMHURST RD	ELK GROVE VILLAGE	IL	60007	0.6585	Screened Out
	INTERSECTION OF MO HWYS 7 & 78	INDEPENDENCE	MO	64051	4.095	Screened Out
	3171 N GAFFEY ST	SAN PEDRO	CA	90731	0.1275	Screened Out
	5449 W MAIN ST	VERONA	NY	13478	0.0025	Screened Out
	2385 RIVERPORT RD	MEMPHIS	TN	38109	0.03	Screened Out
	301 LEROY ST	THREE RIVERS	TX	78071	0.0395	Screened Out
	210 CROSBY ST	PICAYUNE	MS	39466	0.019	Screened Out
	100 HALE ST	NEWBURYPORT	MA	01950	0.0525	Screened Out
	720 VAIDEN DR	HERNANDO	MS	38632	0.0615	Screened Out
	1226 S MANUFACTURERS ROW	TRENTON	TN	38382	0.385315	Screened Out
	10837 ETIWANDA AVE	FONTANA	CA	92337	2.825	Screened Out
	1700 S SHAWNEE ST	MOUNT VERNON	IL	62864	2.818	Screened Out
	1409 GREENE ST	MARIETTA	OH	45750	1.965	Screened Out
	1333 N KIRK RD	BATAVIA	IL	60510	0.0105	Screened Out
	7 MOBILE AVE	SAUGET	IL	62201	0.0035	Screened Out
	125 FACTORY LN	MIDDLESEX	NJ	08846	0.0595	Screened Out
	HWY 73, 3.5 MILES W OF TAYLOR BAYOU	PORT ARTHUR	TX	77640	0.011395	Screened Out
	ANDROSCOGGIN MILL RILEY RD	JAY	ME	04239	0.0025	Screened Out
	7619 DOANE DR	MANASSAS	VA	20109	2.198	Screened Out
	4646 S GRADY AVE	TAMPA	FL	33611	1.9875	Screened Out
	10911 GRANITE ST	CHARLOTTE	NC	28273	2.0745	Screened Out
	4051 FONDORF DR	COLUMBUS	OH	43228	2.43	Screened Out
	4021 N 56TH ST	LINCOLN	NE	68504	0.0000014	Screened Out
	400 N GOODYEAR RD	MOUNT PLEASANT	IA	52641	0.0005	Screened Out
	2701 W OMAHA AVE	NORFOLK	NE	68701	0.146845	Screened Out
	1521 POPLAR LN	FOREST GROVE	OR	97116	3.6475	Screened Out
	1855 ESTES AVE	ELK GROVE VILLAGE	IL	60007	0.269	Screened Out
	2020 E ORANGETHORPE AVE	FULLERTON	CA	92831	0.6185	Screened Out
	1020 ALBANY PL SE	ORANGE CITY	IA	51041	0.0105	Screened Out
	197 MEISTER AVE	BRANCHBURG	NJ	08876	0.0015	Screened Out
	150 MOONEY DR	BOURBONNAIS	IL	60914	1.299	Screened Out
	2340 US 301 N	DUNN	NC	28335	0.1375	Screened Out
	22800 MOUND RD	WARREN	MI	48091	0.46	Screened Out
	1200 S 8TH ST	WEST MEMPHIS	AR	72301	1.224	Screened Out
	575, 577, 579 CHIPETA WAY	SALT LAKE CITY	UT	84108	0.09024	Screened Out
	2895 GRAND AVE	PITTSBURGH	PA	15225	0.775	Screened Out
	616 HITE RD	HARWICK	PA	15049	0.2505	Screened Out
	2708 JARMAN	MUSKEGON HEIGHTS	MI	49444	0.2605	Screened Out
	2305 MARKET ST EXT.	WARREN	PA	16365	0.4305	Screened Out
	1735 SANDY LAKE RD	CARROLLTON	TX	75006	0.602	Screened Out
	8875 INDUSTRIAL AVE	RANCHO CUCAMONG	CA	91730	0.875	Screened Out
	47 PARK AVE	ELVERSON	PA	19520	0.065575	Screened Out
	215 BROWNSVILLE AVE	LIBERTY	IN	47353	1.2345	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome
[redacted]	838 S 16TH ST	MANITOWOC	WI	54220	0.03505	Screened Out
	930 ARMOUR RD	OCONOMOWOC	WI	53066	0.599	Screened Out
	11440 W ADDISON AVE	FRANKLIN PARK	IL	60131	1.7385	Screened Out
	125 MCFANN RD	VALENCIA	PA	16059	1.1145	Screened Out
	2170 BUOY ST	MEMPHIS	TN	38113	0.1275	Screened Out
	3420 KOSSUTH ST	LAFAYETTE	IN	47905	0.6745	Screened Out
	300 INDUSTRIAL DR	HAMPSHIRE	IL	60140	0.2525	Screened Out
	4220 S SARIVAL RD	GOODYEAR	AZ	85338	0.1515	Screened Out
	906 S POWELL	WYNNEWOOD	OK	73098	0.0025	Screened Out
	1920 LEONARD AVE	COLUMBUS	OH	43219	0.25	Screened Out
	26500 CAPITOL AVE	REDFORD	MI	48239	0.0125	Screened Out
	350 JOE FRANK HARRIS PKWY	EMERSON	GA	30137	0.019	Screened Out
	1310 SEABOARD INDUSTRIAL BLVD	ATLANTA	GA	30318	0.242	Screened Out
	70 GA HWY 22 W	MILLEDGEVILLE	GA	31061	0.3775	Screened Out

Table C-3. Comparisons of 2011 TRI Air Emissions Data for Certain Glycol Ethers to the Step A Screening Value of 4.9 tpy

Facility Name	Address	City	State	Zip Code	2011 Air Emissions (tpy)	Outcome

tpy: tons per year

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	AGUADILLA	PR	N	00605	0.1	9.4	9.5	0.1	2.2	2.4	0.0	3.2	3.2
	CAROLINA	PR	N	00985	7.5	22.6	30.1	6.9	20.7	27.6	6.0	18.1	24.2
	MANATI	PR	N	00674	NR	NR	NR	0.0	0.1	0.1	NR	NR	NR
	CHRISTIANSTED	V Isl	N	00820	0.4	0.0	0.4	0.7	0.0	0.7	NR	NR	NR
	EAST LONGMEADOW	MA	N	01028	NR	NR	NR	2.3	0.1	2.4	NR	NR	NR
	DUDLEY	MA	N	01571	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	LAWRENCE	MA	N	01841	NR	NR	NR	0.9	0.0	0.9	1.0	0.0	1.0
	LAWRENCE	MA	N	01843	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	LAWRENCE	MA	Y	01843	18.0	54.1	72.2	15.7	47.0	62.7	17.5	52.6	70.2
	NEWBURYPORT	MA	N	01950	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1
	WARWICK	RI	N	02886	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CRANSTON	RI	N	02920	NR	NR	NR	0.1	5.7	5.7	0.1	5.7	5.7
	MEREDITH	NH	N	03253	0.0	0.1	0.1	NR	NR	NR	NR	NR	NR
	SEABROOK	NH	N	03874	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	WESTBROOK	ME	N	04098	0.0	15.0	15.0	0.0	23.5	23.5	0.0	35.2	35.2
	BUCKSPORT	ME	N	4416	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	HARTLAND	ME	N	04943	0.1	5.3	5.4	0.1	4.5	4.6	NR	NR	NR
	NEW BRITAIN	CT	N	06052	0.9	8.5	9.5	1.0	9.0	10.0	1.1	9.5	10.6
	LINDEN	NJ	N	07036	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	LINDEN	NJ	N	07036	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	WOODBRIDGE	NJ	N	07095	0.0	2.9	2.9	0.1	6.8	6.8	0.1	8.8	8.9
	NEWARK	NJ	N	07105	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	NEWARK	NJ	N	07105	0.4	0.4	0.8	NR	NR	NR	0.1	0.1	0.3
	WAYNE	NJ	N	07470	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	BELVIDERE	NJ	N	07823	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	DEEPWATER	NJ	N	08023	0.1	0.0	0.1	NR	NR	NR	0.1	0.1	0.2
	PALMYRA	NJ	N	08065	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	EDISON	NJ	N	08817	6.0	1.4	7.4	4.5	1.1	5.6	4.0	1.0	5.0
	PERTH AMBOY	NJ	N	08861	NR	NR	NR	0.1	0.2	0.3	0.2	0.3	0.4
	SOMERVILLE	NJ	N	08876	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	MIDDLETOWN	NY	Y	10940	6.0	7.0	13.0	6.5	7.5	14.0	8.0	9.5	17.5
	EAST SETAUKET	NY	N	11733	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	HAUPPAUGE	NY	N	11788	0.7	2.2	3.0	NR	NR	NR	NR	NR	NR
	ALBANY	NY	N	12204	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	NEW WINDSOR	NY	Y	12553	12.1	34.4	46.5	11.5	30.8	42.3	11.0	29.4	40.4
	SARATOGA SPRINGS	NY	Y	12866	3.3	15.0	18.3	3.4	17.0	20.4	3.3	16.0	19.3
	SARATOGA SPRINGS	NY	N	12866	5.6	0.3	5.9	NR	NR	NR	3.7	0.2	3.9
	LOWVILLE	NY	N	13367	0.1	5.8	5.9	0.1	5.3	5.4	0.1	4.4	4.4
	VERONA	NY	N	13478	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	AKRON	NY	N	14001	0.0	7.4	7.4	0.0	8.4	8.4	0.0	11.7	11.7
	TONAWANDA	NY	N	14150	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	MARION	NY	N	14505	0.0	6.1	6.1	0.0	6.7	6.7	0.0	5.4	5.4
	WEST HENRIETTA	NY	N	14586	0.0	15.1	15.1	0.0	6.8	6.8	0.0	8.3	8.3
	CHEMUNG	NY	N	14825	4.5	5.8	10.3	5.1	7.1	12.2	4.0	6.5	10.5
	BUNOLA	PA	N	15020	NR	NR	NR	0.0	0.0	0.0	0.1	0.0	0.1
	CLAIRTON	PA	N	15025	5.5	0.0	5.5	14.5	0.0	14.5	41.0	0.0	41.0
	LEETSDALE	PA	N	15056	0.0	0.0	0.0	NR	NR	NR	0.0	0.0	0.0
	MC KEESPORT	PA	N	15132	0.2	0.1	0.3	NR	NR	NR	NR	NR	NR
	SPRINGDALE	PA	N	15144	5.5	0.0	5.5	5.2	0.1	5.3	5.8	0.1	5.8
	WILMERDING	PA	N	15148	0.0	0.1	0.1	0.0	0.1	0.1	NR	NR	NR
	MANNS CHOICE	PA	N	15550	1.3	11.3	12.6	1.4	12.7	14.1	1.4	12.8	14.2
	ELLWOOD CITY	PA	N	16117	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	JAMESTOWN	PA	N	16134	0.2	0.0	0.2	NR	NR	NR	0.2	0.0	0.2
	HERMITAGE	PA	N	16148	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CLARENDON	PA	N	16313	0.1	8.3	8.4	0.1	6.7	6.7	0.1	4.3	4.4
	FRANKLIN	PA	N	16323	10.7	0.0	10.7	11.6	0.0	11.6	8.5	0.0	8.5
	ERIE	PA	N	16502	4.7	0.0	4.7	NR	NR	NR	NR	NR	NR
	HARRISBURG	PA	N	17104	NR	NR	NR	1.1	20.6	21.6	1.4	26.2	27.6
	HANOVER	PA	N	17331	2.9	8.6	11.4	3.4	10.1	13.5	1.3	3.9	5.2
	HANOVER	PA	N	17331	0.0	26.0	26.0	0.0	24.2	24.2	0.0	28.0	28.0
	YORK	PA	N	17404	2.1	0.2	2.3	NR	NR	NR	NR	NR	NR
	YORK	PA	N	17402	NR	NR	NR	1.2	0.0	1.2	1.0	0.0	1.0
	LANCASTER	PA	N	17601	6.7	0.4	7.1	4.6	0.3	4.9	8.5	0.6	9.1
	LANCASTER	PA	N	17601	5.3	0.4	5.7	6.2	0.4	6.6	7.4	0.5	7.9

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	LANCASTER	PA	N	17603	0.9	0.4	1.3	NR	NR	NR	NR	NR	NR
	ALLENTOWN	PA	N	18106	0.0	0.0	0.1	0.0	0.0	0.0	NR	NR	NR
	SAYRE	PA	N	18840	NR	NR	NR	0.0	0.3	0.3	NR	NR	NR
	TOWANDA	PA	N	18848	NR	NR	NR	NR	NR	NR	0.3	2.0	2.3
	QUAKERTOWN	PA	N	18951	NR	NR	NR	0.0	2.0	2.0	0.0	4.0	4.1
	SOUTHAMPTON	PA	N	18966	NR	NR	NR	NR	NR	NR	0.0	7.5	7.6
	WARMINSTER	PA	N	18974	0.4	0.7	1.1	2.1	1.5	3.6	3.1	3.0	6.0
	CROYDON	PA	N	19021	0.1	0.0	0.1	NR	NR	NR	NR	NR	NR
	MORRISVILLE	PA	N	19067	0.0	0.0	0.0	NR	NR	NR	0.0	0.0	0.0
	PHILADELPHIA	PA	N	19120	2.0	8.1	10.1	1.4	5.6	6.9	0.8	3.8	4.7
	PHILADELPHIA	PA	N	19132	NR	NR	NR	0.0	0.2	0.2	0.0	0.2	0.2
	BLANDON	PA	N	19510	3.2	9.6	12.8	2.7	7.2	9.9	1.7	4.9	6.6
	DOVER	DE	N	19904	0.0	6.5	6.5	0.0	4.0	4.0	0.0	2.6	2.6
	BELCAMP	MD	N	21017	NR	NR	NR	NR	NR	NR	0.0	1.5	1.5
	BALTIMORE	MD	N	21221	8.5	25.5	34.0	8.5	25.5	34.1	8.6	25.9	34.5
	BALTIMORE	MD	N	21222	NR	NR	NR	0.0	0.1	0.1	0.0	0.1	0.1
	WILLIAMSPORT	MD	N	21795	NR	NR	NR	0.0	0.0	0.0	0.1	0.2	0.3
	HAGERSTOWN	MD	N	21742	NR	NR	NR	11.0	0.0	11.0	8.5	0.0	8.5
	MANASSAS	VA	N	20109	NR	NR	NR	2.0	0.1	2.1	2.1	0.1	2.2
	MONTROSS	VA	N	22520	NR	NR	NR	0.0	4.2	4.2	0.0	3.9	3.9
	WINCHESTER	VA	N	22603	3.2	0.1	3.4	5.5	0.3	5.7	3.9	0.2	4.1
	FRONT ROYAL	VA	N	22630	0.0	0.2	0.2	NR	NR	NR	0.0	0.0	0.0
	MIDDLETOWN	VA	N	22645	0.0	0.0	0.0	NR	NR	NR	0.0	0.0	0.0
	HARRISONBURG	VA	Y	22802	36.1	4.3	40.4	38.8	3.6	42.4	45.2	3.1	48.3
	ELKTON	VI	N	22827	0.7	0.8	1.5	0.2	0.2	0.4	NR	NR	NR
	ARVONIA	VI	N	23004	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	WILLIAMSBURG	VA	Y	23185	27.0	140.0	167.0	28.5	150.0	178.5	28.0	145.0	173.0
	RICHMOND	VI	N	23228	NR	NR	NR	2.2	0.1	2.3	NR	NR	NR
	PETERSBURG	VA	N	23805	0.0	0.1	0.1	NR	NR	NR	0.0	0.0	0.0
	DUBLIN	VI	N	24084	NR	NR	NR	2.2	2.4	4.6	NR	NR	NR

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	SALEM	VI	N	24153	5.3	0.0	5.3	NR	NR	NR	NR	NR	NR
	GALAX	VA	N	24333	NR	NR	NR	NR	NR	NR	0.7	4.2	5.0
	MARION	VA	N	24354	0.4	9.2	9.6	0.7	13.1	13.8	0.4	8.5	8.9
	GROTTOES	VI	N	24441	0.0	0.0	0.1	NR	NR	NR	NR	NR	NR
	LYNCHBURG	VA	N	24506	NR	NR	NR	0.1	0.0	0.1	0.2	0.0	0.2
	WEIRTON	WV	N	26062	25.5	11.5	37.0	14.5	8.0	22.5	10.0	3.3	13.3
	WEIRTON	WV	Y	26062	37.9	63.3	101.1	36.0	60.1	96.1	34.5	57.7	92.2
	WEIRTON	WV	N	26062	0.0	5.7	5.7	0.0	7.2	7.2	0.0	2.6	2.6
	CRAIGSVILLE	WV	N	26205	NR	NR	NR	0.1	2.9	3.0	NR	NR	NR
	WINSTON-SALEM	NC	Y	27107	28.3	143.9	172.2	31.2	157.6	188.8	25.7	110.5	136.2
	BURLINGTON	NC	N	27215	0.1	0.0	0.1	0.2	0.0	0.2	NR	NR	NR
	HIGH POINT	NC	N	27261	0.1	0.3	0.3	NR	NR	NR	NR	NR	NR
	HIGH POINT	NC	N	27263	NR	NR	NR	0.0	17.9	17.9	0.0	16.0	16.0
	JAMESTOWN	NC	N	27282	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	MEBANE	NC	N	27302	11.3	0.0	11.3	NR	NR	NR	2.9	0.0	2.9
	REIDSVILLE	NC	Y	27320	12.0	65.0	77.0	14.5	80.0	94.5	17.0	85.0	102.0
	DURHAM	NC	N	27703	1.3	4.2	5.5	0.0	6.6	6.6	0.0	0.1	0.1
	TARBORO	NC	N	27886	0.2	14.8	14.9	0.2	16.6	16.8	0.2	16.4	16.5
	WILSON	NC	N	27893	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	GASTONIA	NC	N	28052	0.0	7.1	7.1	0.0	7.2	7.2	0.0	6.0	6.0
	HARRISBURG	NC	N	28075	0.0	6.7	6.7	0.0	31.5	31.5	0.0	5.4	5.4
	MOUNT HOLLY	NC	N	28120	0.0	0.1	0.1	0.0	0.1	0.1	NR	NR	NR
	CHARLOTTE	NC	N	28273	0.1	0.1	0.3	NR	NR	NR	0.1	0.1	0.3
	CHARLOTTE	NC	N	28273	NR	NR	NR	NR	NR	NR	0.3	0.3	0.6
	FAYETTEVILLE	NC	N	28306	NR	NR	NR	0.2	0.0	0.2	NR	NR	NR
	MAXTON	NC	N	28364	3.0	6.2	9.1	3.2	7.0	10.2	3.1	6.7	9.8
	LENOIR	NC	N	28645	3.7	1.6	5.3	5.7	1.3	7.0	4.7	1.1	5.7

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					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	STATESVILLE	NC	N	28625	0.1	0.1	0.2	NR	NR	NR	NR	NR	NR
	BISHOPVILLE	SC	Y	29010	14.5	82.0	96.5	14.5	82.2	96.8	13.4	75.9	89.3
	HOLLY HILL	SC	N	29059	NR	NR	NR	NR	NR	NR	0.0	0.1	0.1
	LEXINGTON	SC	N	29073	0.0	2.2	2.2	0.0	9.7	9.7	0.0	0.1	0.1
	ORANGEBURG	SC	N	29116	0.1	5.5	5.6	0.1	6.4	6.6	0.1	6.5	6.6
	ENOREE	SC	N	29335	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	FLORENCE	SC	N	29501	8.5	0.9	9.4	8.9	0.8	9.8	11.0	1.3	12.2
	CHERAW	SC	N	29520	19.6	2.5	22.1	21.4	2.7	24.1	21.2	2.7	23.9
	CONWAY	SC	N	29526	0.9	1.1	2.0	NR	NR	NR	NR	NR	NR
	MYRTLE BEACH	SC	Y	29577	7.2	2.1	9.4	3.4	2.5	5.9	1.7	1.0	2.7
	GREENVILLE	SC	N	29605	NR	NR	NR	0.0	0.3	0.3	0.1	0.3	0.4
	STARR	SC	N	29684	0.5	4.8	5.4	0.7	5.9	6.6	0.5	4.3	4.8
	GREENWOOD	SC	N	29649	NR	NR	NR	NR	NR	NR	0.0	1.6	1.6
	GREER	SC	Y	29651	3.5	67.1	70.6	1.8	89.4	91.2	2.5	150.0	152.5
	MAULDIN	SC	N	29662	0.0	0.0	0.1	0.0	0.0	0.0	NR	NR	NR
	SENECA	SC	N	29678	NR	NR	NR	NR	NR	NR	0.0	2.4	2.4
	CHESTER	SC	N	29706	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	AIKEN	SC	N	29801	3.0	0.9	3.9	10.0	3.1	13.1	12.2	2.3	14.5
	CARROLLTON	GA	N	30117	0.1	1.3	1.4	NR	NR	NR	0.1	1.3	1.4
	ROME	GA	Y	30161	34.5	15.0	49.5	33.5	22.0	55.5	31.0	13.5	44.5
	COVINGTON	GA	N	30014	0.4	0.3	0.7	0.6	0.3	0.9	NR	NR	NR
	MC DONOUGH	GA	N	30253	NR	NR	NR	NR	NR	NR	0.3	0.0	0.3
	MC DONOUGH	GA	N	30253	0.0	0.0	0.1	0.0	0.0	0.1	NR	NR	NR
	MC DONOUGH	GA	N	30253	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	MC DONOUGH	GA	N	30253	NR	NR	NR	0.0	6.7	6.7	0.0	9.0	9.0
	MC DONOUGH	GA	N	30253	0.0	8.7	8.7	0.0	13.7	13.7	0.0	11.2	11.2
	THE ROCK	GA	N	30285	NR	NR	NR	NR	NR	NR	2.3	0.1	2.4
	ATLANTA	GA	N	30339	0.1	0.1	0.2	0.1	0.1	0.2	NR	NR	NR
	DORAVILLE	GA	N	30362	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	LAVONIA	GA	N	30553	NR	NR	NR	0.0	11.2	11.2	0.0	17.3	17.3
	ATHENS	GA	N	30607	0.0	10.8	10.8	0.0	2.4	2.4	0.0	5.2	5.2

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[redacted]	DALTON	GA	N	30721	0.0	1.1	1.1	0.0	1.1	1.1	NR	NR	NR
	DALTON	GA	N	30720	0.1	0.0	0.1	NR	NR	NR	NR	NR	NR
	DUBLIN	GA	N	31021	9.5	0.4	9.9	9.3	0.3	9.6	9.0	0.4	9.4
	MILLEDGEVILLE	GA	N	31061	NR	NR	NR	0.0	0.4	0.4	0.0	0.4	0.4
	ROBINS AFB	GA	N	31098	1.6	0.9	2.5	2.4	0.4	2.8	NR	NR	NR
	HOMERVILLE	GA	N	31634	19.2	0.4	19.6	37.1	8.9	46.0	6.0	1.8	7.8
	WEST POINT	GA	N	31833	NR	NR	NR	0.1	2.7	2.7	0.1	4.9	5.0
	EDGEWATER	FL	N	32132	1.6	0.0	1.6	NR	NR	NR	NR	NR	NR
	JACKSONVILLE	FL	N	32254	6.9	54.6	61.4	7.0	28.0	35.0	6.5	19.2	25.6
	JACKSONVILLE	FL	N	32208	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	JACKSONVILLE	FL	N	32212	NR	NR	NR	0.1	0.0	0.1	NR	NR	NR
	JACKSONVILLE	FL	N	32254	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	WINTER GARDEN	FL	N	34787	1.3	4.4	5.8	NR	NR	NR	NR	NR	NR
	ORLANDO	FL	N	32837	NR	NR	NR	0.0	1.2	1.2	0.0	0.9	0.9
	FT LAUDERDALE	FL	N	33316	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1
	BUSHNELL	FL	N	33513	0.1	15.7	15.8	0.1	14.8	14.9	0.1	10.6	10.7
	TAMPA	FL	N	33617	11.5	15.5	27.0	9.0	15.0	24.0	8.0	9.0	17.0
	TAMPA	FL	N	33619	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	TAMPA	FL	N	33611	NR	NR	NR	1.8	0.2	1.9	1.8	0.2	2.0
	CLEARWATER	FL	N	33760	0.4	0.0	0.4	NR	NR	NR	NR	NR	NR
	LAKELAND	FL	N	33801	9.3	0.0	9.3	8.4	0.0	8.4	8.4	0.0	8.4
	LAKELAND	FL	N	33810	0.5	9.4	9.8	0.6	11.8	12.4	0.5	8.5	9.0
	AUBURNDALE	FL	N	33823	NR	NR	NR	NR	NR	NR	0.4	0.0	0.4
	CLEARWATER	FL	N	33760	NR	NR	NR	0.0	0.1	0.1	NR	NR	NR
	CLEARWATER	FL	N	33760	0.0	0.1	0.1	0.0	0.2	0.2	NR	NR	NR
	LEEDS	AL	N	35094	2.4	9.6	12.0	2.7	10.9	13.7	2.7	10.8	13.5
	LINCOLN	AL	N	35096	0.2	16.6	16.8	0.5	23.5	24.0	0.5	24.8	25.3
	BIRMINGHAM	AL	N	35234	11.1	0.2	11.3	9.8	0.1	9.9	12.2	0.2	12.4
	BIRMINGHAM	AL	N	35234	0.3	0.0	0.3	0.4	0.0	0.4	NR	NR	NR

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[redacted]	TUSCALOOSA	AL	N	35401	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	TUSCALOOSA	AL	N	35401	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	VANCE	AL	N	35490	2.3	9.9	12.2	0.4	25.6	25.9	0.5	27.8	28.3
	GUIN	AL	N	35563	0.0	9.5	9.5	0.0	12.8	12.8	NR	NR	NR
	GUIN	AL	N	35563	NR	NR	NR	NR	NR	NR	0.0	12.5	12.5
	DECATUR	AL	N	35603	NR	NR	NR	NR	NR	NR	1.0	18.3	19.3
	HUNTSVILLE	AL	N	35811	0.9	13.4	14.3	0.8	12.8	13.6	0.6	7.9	8.5
	ALBERTVILLE	AL	N	35950	6.9	6.9	13.8	NR	NR	NR	NR	NR	NR
	FORT PAYNE	AL	N	35967	5.1	1.8	6.9	6.1	3.6	9.7	3.7	2.7	6.3
	ANNISTON	AL	N	36207	0.3	0.3	0.5	0.2	0.2	0.4	NR	NR	NR
	DOTHAN	AL	N	36303	NR	NR	NR	NR	NR	NR	0.0	5.3	5.3
	GENEVA	AL	N	36340	0.0	4.5	4.5	0.0	5.1	5.1	0.1	12.7	12.8
	PINE HILL	AL	N	36769	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1
	ASHLAND CITY	TN	N	37015	NR	NR	NR	0.1	10.3	10.4	0.1	9.3	9.4
	CLARKSVILLE	TN	N	37040	2.4	0.1	2.5	3.8	0.6	4.4	NR	NR	NR
	SHELBYVILLE	TN	N	37160	0.1	2.2	2.4	NR	NR	NR	NR	NR	NR
	SMYRNA	TN	N	37167	1.4	31.9	33.3	1.3	34.3	35.6	0.0	30.7	30.7
	SPRING HILL	TN	N	37174	0.2	18.0	18.2	0.0	3.3	3.3	NR	NR	NR
	NASHVILLE	TN	N	37207	NR	NR	NR	0.2	0.0	0.2	6.4	0.7	7.1
	NASHVILLE	TN	N	37209	0.2	0.0	0.3	NR	NR	NR	NR	NR	NR
	NASHVILLE	TN	N	37218	0.7	6.5	7.2	1.7	15.0	16.7	16.5	1.9	18.4
	CLEVELAND	TN	N	37311	0.0	8.6	8.6	0.0	6.3	6.3	0.0	6.3	6.3
	DAYTON	TN	N	37321	0.0	7.8	7.8	0.0	8.6	8.6	0.0	6.6	6.6
	MANCHESTER	TN	N	37355	1.1	20.7	21.8	1.0	19.3	20.3	1.7	32.5	34.2
	MANCHESTER	TN	N	37355	NR	NR	NR	0.1	0.1	0.3	0.0	0.4	0.4
	CHATTANOOGA	TN	N	37402	13.8	0.0	13.8	16.7	0.0	16.7	23.9	0.0	23.9
	CHATTANOOGA	TN	N	37416	NR	NR	NR	NR	NR	NR	0.0	11.0	11.0
	ELIZABETHTON	TN	N	37643	0.0	1.0	1.0	NR	NR	NR	NR	NR	NR

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[redacted]	ONEIDA	TN	N	37841	0.0	6.6	6.6	0.0	5.2	5.2	0.0	4.7	4.7
	SWEETWATER	TN	N	37874	10.7	0.0	10.7	12.2	0.0	12.2	13.1	0.0	13.1
	KNOXVILLE	TN	N	37921	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	BROWNSVILLE	TN	N	38012	NR	NR	NR	NR	NR	NR	0.0	6.7	6.7
	DYERSBURG	TN	N	38024	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	DYERSBURG	TN	N	38024	6.3	0.1	6.4	1.4	0.1	1.5	NR	NR	NR
	MEMPHIS	TN	N	38109	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	MEMPHIS	TN	N	38109	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	MEMPHIS	TN	N	38113	0.1	0.0	0.1	0.1	0.0	0.1	NR	NR	NR
	MEMPHIS	TN	N	38113	0.0	6.8	6.8	0.0	3.1	3.1	0.0	1.7	1.7
	MEMPHIS	TN	N	38113	0.0	0.1	0.1	NR	NR	NR	NR	NR	NR
	MEMPHIS	TN	N	38118	0.0	0.0	0.0	0.0	0.1	0.1	NR	NR	NR
	MEMPHIS	TN	N	38118	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	MEMPHIS	TN	N	38113	NR	NR	NR	0.0	0.1	0.1	0.0	0.1	0.1
	UNION CITY	TN	N	38261	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	UNION CITY	TN	N	38261	NR	NR	NR	NR	NR	NR	0.5	4.8	5.3
	MILAN	TN	N	38358	5.3	5.3	10.6	10.1	10.1	20.2	8.4	8.4	16.8
	TRENTON	TN	N	38382	NR	NR	NR	NR	NR	NR	0.0	0.4	0.4
	BATESVILLE	MS	N	38606	22.5	2.7	25.3	19.6	2.9	22.5	19.3	2.9	22.2
	HERNANDO	MS	N	38632	0.2	2.0	2.2	NR	NR	NR	NR	NR	NR
	HERNANDO	MS	N	38632	NR	NR	NR	NR	NR	NR	0.0	0.0	0.1
	OLIVE BRANCH	MS	Y	38654	19.6	68.4	88.1	20.6	56.3	76.8	18.8	63.5	82.3
	OLIVE BRANCH	MS	N	38654	0.4	3.7	4.1	NR	NR	NR	NR	NR	NR
	OLIVE BRANCH	MS	N	38654	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	SHANNON	MS	N	38868	0.3	5.5	5.8	0.3	5.9	6.2	0.3	5.9	6.2
	CANTON	MS	N	39046	2.0	24.6	26.6	2.5	3.8	6.4	7.6	2.0	9.6
	VICKSBURG	MS	N	39181	NR	NR	NR	10.4	0.0	10.4	14.1	0.0	14.1
	JACKSON	MS	N	39272	0.0	5.1	5.1	0.0	4.0	4.0	0.0	4.5	4.5
	JACKSON	MS	N	39272	12.3	1.3	13.6	10.1	0.9	11.0	9.9	1.0	10.9
	NEWTON	MS	N	39345	6.3	0.0	6.3	8.6	0.0	8.6	9.6	0.0	9.6
	PASCAGOULA	MS	N	39581	NR	NR	NR	0.1	0.0	0.1	NR	NR	NR

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[redacted]	BARDSTOWN	KY	N	40004	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	LOUISVILLE	KY	N	40210	NR	NR	NR	NR	NR	NR	0.4	0.0	0.4
	LOUISVILLE	KY	N	40211	0.1	0.0	0.1	NR	NR	NR	NR	NR	NR
	LOUISVILLE	KY	N	40213	0.1	12.0	12.1	0.2	1.6	1.8	NR	NR	NR
	LOUISVILLE	KY	N	40210	NR	NR	NR	NR	NR	NR	1.3	0.0	1.3
	LOUISVILLE	KY	Y	40241	0.9	32.5	33.4	2.4	33.0	35.4	3.3	41.0	44.3
	GEORGETOWN	KY	N	40324	0.1	5.4	5.5	0.4	12.3	12.7	0.2	9.2	9.4
	HARRODSBURG	KY	N	40330	1.2	10.8	12.0	NR	NR	NR	NR	NR	NR
	MOREHEAD	KY	N	40351	0.0	0.2	0.2	NR	NR	NR	NR	NR	NR
	PARIS	KY	N	40361	0.0	0.1	0.1	0.0	0.1	0.1	NR	NR	NR
	BEREA	KY	N	40403	0.2	11.1	11.3	0.3	16.1	16.5	0.1	14.7	14.8
	LEXINGTON	KY	N	40511	0.0	9.0	9.0	0.0	9.5	9.5	0.1	9.0	9.1
	FLORENCE	KY	N	41042	1.4	26.2	27.5	1.7	33.2	34.9	3.5	31.3	34.7
	INDEPENDENCE	KY	N	41051	NR	NR	NR	0.1	0.1	0.3	NR	NR	NR
	CALVERT CITY	KY	N	42029	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	HOPKINSVILLE	KY	N	42240	0.0	5.1	5.1	0.0	0.5	0.5	NR	NR	NR
	RUSSELLVILLE	KY	N	42276	0.0	5.5	5.5	0.0	5.4	5.4	0.0	4.9	4.9
	HAWESVILLE	KY	N	42348	0.0	1.0	1.0	0.0	0.6	0.6	0.0	5.2	5.2
	HEBRON	OH	N	43025	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	MARYSVILLE	OH	N	43040	10.1	34.8	44.9	3.8	38.5	42.3	2.7	37.5	40.2
	URBANA	OH	N	43078	0.0	14.1	14.1	0.0	14.2	14.2	NR	NR	NR
	COLUMBUS	OH	Y	43213	20.0	50.0	70.0	11.5	65.0	76.5	12.0	70.0	82.0
	MARION	OH	Y	43302	0.1	55.8	55.8	0.1	57.2	57.2	0.1	51.4	51.5
	EAST LIBERTY	OH	N	43319	2.0	27.5	29.5	2.2	45.0	47.2	2.3	36.0	38.3
	CLYDE	OH	N	43410	1.1	34.3	35.4	0.7	22.6	23.4	NR	NR	NR
	FREMONT	OH	Y	43420	17.9	102.2	120.1	15.9	90.4	106.3	19.0	107.9	127.0
	ROSSFORD	OH	N	43460	0.0	6.0	6.0	0.0	7.4	7.4	0.0	7.8	7.8
	NAPOLEON	OH	N	43545	2.4	6.6	9.0	2.3	6.0	8.3	5.4	7.4	12.7
	WHITEHOUSE	OH	Y	43571	16.5	31.6	48.1	23.2	44.6	67.8	24.9	51.5	76.3

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					2009			2010			2011		
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[redacted]	TOLEDO	OH	N	43607	7.6	0.0	7.6	13.3	0.0	13.3	13.1	0.0	13.1
	TOLEDO	OH	N	43608	3.0	21.0	24.0	4.7	33.0	37.7	NR	NR	NR
	TOLEDO	OH	N	43612	0.4	0.9	1.3	0.5	1.1	1.6	2.1	14.5	16.6
	TOLEDO	OH	N	43612	2.8	8.4	11.2	3.5	10.4	13.8	3.2	9.5	12.7
	ZANESVILLE	OH	N	43701	0.0	2.5	2.5	0.0	4.7	4.7	0.0	6.0	6.0
	BEREA	OH	N	44017	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	BURTON	OH	N	44021	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CHAGRIN FALLS	OH	N	44023	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	MIDDLEFIELD	OH	N	44062	NR	NR	NR	0.1	0.0	0.1	NR	NR	NR
	CLEVELAND	OH	N	44105	0.0	16.1	16.1	0.0	21.2	21.2	0.0	17.3	17.3
	CLEVELAND	OH	N	44102	NR	NR	NR	NR	NR	NR	0.0	0.1	0.1
	STRONGSVILLE	OH	N	44136	NR	NR	NR	0.0	0.0	0.0	0.1	0.1	0.3
	WALTON HILLS	OH	N	44146	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CUYAHOGA FALLS	OH	N	44223	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	BRIMFIELD	OH	N	44240	9.0	0.0	9.0	NR	NR	NR	5.0	0.0	5.0
	MEDINA	OH	N	44258	NR	NR	NR	0.0	0.0	0.0	0.1	0.0	0.1
	MEDINA	OH	N	44256	NR	NR	NR	NR	NR	NR	0.0	0.1	0.2
	AKRON	OH	N	44305	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CANFIELD	OH	N	44406	0.0	1.1	1.1	NR	NR	NR	0.0	2.0	2.0
	LORDSTOWN	OH	N	44481	12.0	0.2	12.2	3.2	0.8	3.9	4.0	1.1	5.0
	WARREN	OH	N	44483	2.1	3.7	5.8	1.6	5.7	7.3	1.6	5.8	7.4
	WARREN	OH	N	44483	4.7	11.3	15.9	3.5	8.6	12.1	4.6	10.4	15.0
	YOUNGSTOWN	OH	N	44502	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	BOARDMAN	OH	N	44512	0.8	8.4	9.2	NR	NR	NR	NR	NR	NR
	YOUNGSTOWN	OH	N	44512	0.4	18.1	18.4	0.3	16.2	16.5	0.4	0.4	0.8
	NEW PHILADELPHIA	OH	N	44663	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	WOOSTER	OH	N	44691	0.3	10.5	10.8	0.4	13.4	13.8	0.4	13.0	13.4
	NORWALK	OH	N	44857	0.0	10.0	10.0	NR	NR	NR	NR	NR	NR
	SANDUSKY	OH	N	44870	NR	NR	NR	0.1	0.0	0.1	NR	NR	NR

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[redacted]	WILLARD	OH	N	44890	6.1	2.4	8.4	7.5	2.4	9.9	6.9	1.9	8.7
	MANSFIELD	OH	N	44903	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	LEBANON	OH	N	45036	NR	NR	NR	0.6	0.0	0.6	0.6	0.0	0.6
	LEBANON	OH	N	45036	2.9	0.4	3.4	3.1	0.1	3.2	NR	NR	NR
	MASON	OH	N	45040	0.4	7.5	7.9	0.1	11.7	11.8	0.1	12.6	12.7
	CINCINNATI	OH	N	45217	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	BLUE ASH	OH	N	45242	0.5	0.0	0.5	NR	NR	NR	NR	NR	NR
	CINCINNATI	OH	N	45242	2.5	7.9	10.5	5.7	19.9	25.6	7.5	25.0	32.5
	CINCINNATI	OH	N	45246	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	SIDNEY	OH	N	45365	0.7	4.0	4.6	0.8	4.2	5.0	0.7	11.5	12.2
	SIDNEY	OH	N	45365	0.0	11.2	11.2	0.0	12.7	12.7	0.0	11.9	11.9
	SPRINGFIELD	OH	N	45502	0.6	5.0	5.6	0.6	5.5	6.1	0.4	3.4	3.8
	WAVERLY	OH	N	45690	0.0	0.4	0.4	0.0	1.2	1.2	NR	NR	NR
	FINDLAY	OH	Y	45840	24.5	130.0	154.5	25.0	130.0	155.0	25.5	135.0	160.5
	FINDLAY	OH	N	45840	2.3	20.6	22.8	2.2	20.1	22.4	2.2	19.4	21.5
	FORT RECOVERY	OH	N	45846	0.0	1.7	1.7	NR	NR	NR	NR	NR	NR
	PAULDING	OH	N	45879	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	SAINT MARYS	OH	N	45885	0.0	4.7	4.7	0.0	6.7	6.7	0.0	7.5	7.5
	FRANKFORT	IN	N	46041	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	GREENCASTLE	IN	N	46135	0.0	3.1	3.1	NR	NR	NR	1.4	5.4	6.8
	GREENFIELD	IN	N	46140	0.0	18.3	18.4	0.0	24.3	24.3	0.0	7.8	7.8
	INDIANAPOLIS	IN	N	46203	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	INDIANAPOLIS	IN	N	46218	0.3	1.2	1.5	0.2	0.9	1.1	NR	NR	NR
	INDIANAPOLIS	IN	N	46219	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	INDIANAPOLIS	IN	N	46222	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	INDIANAPOLIS	IN	N	46225	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	INDIANAPOLIS	IN	N	46226	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	INDIANAPOLIS	IN	N	46268	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	EAST CHICAGO	IN	N	46312	NR	NR	NR	NR	NR	NR	0.5	0.0	0.5

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[redacted]	HAMMOND	IN	N	46320	0.0	6.0	6.0	0.0	6.3	6.3	0.0	5.9	5.9
	LA PORTE	IN	N	46350	0.0	5.0	5.0	0.0	7.7	7.7	0.0	6.9	6.9
	LA PORTE	IN	Y	46350	12.5	54.5	67.0	12.9	55.5	68.4	12.2	53.2	65.4
	SCHERERVILLE	IN	N	46375	0.1	0.0	0.1	0.0	0.0	0.0	NR	NR	NR
	WHITING	IN	N	46394	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	BREMEN	IN	N	46506	0.0	0.3	0.3	0.0	0.3	0.3	NR	NR	NR
	GOSHEN	IN	N	46526	NR	NR	NR	NR	NR	NR	0.0	4.2	4.2
	MIDDLEBURY	IN	N	46540	NR	NR	NR	0.0	3.2	3.2	0.0	5.4	5.4
	MISHAWAKA	IN	N	46545	NR	NR	NR	0.0	8.2	8.2	NR	NR	NR
	WARSAW	IN	N	46580	0.0	0.0	0.1	0.0	0.0	0.1	NR	NR	NR
	ASHLEY	IN	N	46705	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	BUTLER	IN	N	46721	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	BUTLER	IN	N	46721	0.0	31.0	31.0	0.0	29.8	29.8	0.0	24.4	24.4
	ROANOKE	IN	N	46783	0.5	7.0	7.5	0.7	11.5	12.2	0.7	14.5	15.2
	SAINT JOE	IN	N	46785	4.2	1.7	5.9	3.6	2.8	6.4	2.9	5.4	8.2
	AURORA	IN	N	47001	0.0	107.6	107.6	0.0	68.2	68.2	NR	NR	NR
	BATESVILLE	IN	N	47006	0.2	3.3	3.5	0.3	5.0	5.3	0.3	5.1	5.4
	COLUMBUS	IN	N	47201	0.0	5.3	5.3	0.0	7.0	7.0	0.0	6.0	6.0
	PORTLAND	IN	N	47371	NR	NR	NR	0.4	0.0	0.4	0.4	0.0	0.4
	BLOOMINGTON	IN	N	47404	0.0	11.0	11.0	0.0	11.0	11.0	0.0	6.5	6.5
	ASHLEY	IN	N	46705	0.5	4.4	4.8	1.1	9.1	10.1	0.6	5.4	6.0
	MOUNT VERNON	IN	N	47620	2.7	1.7	4.4	1.3	0.8	2.1	3.2	2.1	5.3
	NEWBURGH	IN	N	47629	0.0	14.5	14.5	0.0	7.0	7.0	0.0	8.5	8.5
	PRINCETON	IN	N	47670	9.8	6.3	16.1	10.3	13.8	24.2	12.6	5.4	18.0
	EVANSVILLE	IN	N	47710	1.9	6.8	8.7	11.2	2.8	13.9	11.7	3.7	15.4
	BRAZIL	IN	N	47834	NR	NR	NR	0.1	0.3	0.4	0.6	2.3	2.9
	LAFAYETTE	IN	N	47905	0.2	21.9	22.1	0.4	35.3	35.7	0.3	29.3	29.6
	CRAWFORDSVILLE	IN	N	47933	10.0	3.7	13.8	13.8	5.2	19.0	15.7	5.9	21.6

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[redacted]	CRAWFORDSVILLE	IN	N	47933	5.1	4.8	9.9	6.8	0.3	7.1	6.3	0.3	6.6
	KENTLAND	IN	N	47951	0.3	3.1	3.4	NR	NR	NR	NR	NR	NR
	MONTICELLO	IN	N	47960	26.0	10.0	36.0	12.5	16.0	28.5	14.5	18.5	33.0
	VEEDERSBURG	IN	N	47987	0.0	2.3	2.4	NR	NR	NR	NR	NR	NR
	LAKE ORION	MI	N	48359	6.5	0.8	7.3	NR	NR	NR	0.9	0.9	1.8
	LAKE ORION	MI	N	48359	NR	NR	NR	NR	NR	NR	0.0	2.2	2.2
	PONTIAC	MI	N	48341	0.3	3.1	3.4	NR	NR	NR	NR	NR	NR
	MADISON HEIGHTS	MI	N	48071	0.0	7.4	7.4	0.0	11.8	11.8	0.0	12.4	12.4
	STERLING HEIGHTS	MI	N	48313	2.0	0.8	2.9	3.2	1.3	4.5	4.4	1.8	6.2
	STERLING HEIGHTS	MI	N	48314	0.0	0.8	0.8	NR	NR	NR	NR	NR	NR
	WARREN	MI	N	48091	6.0	0.7	6.7	5.5	0.4	5.9	8.5	0.2	8.7
	BELLEVILLE	MI	N	48111	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	DEARBORN	MI	Y	48121	3.8	85.0	88.8	1.5	65.0	66.5	1.2	65.0	66.2
	FLAT ROCK	MI	N	48134	0.0	12.6	12.6	0.5	4.8	5.3	0.2	4.7	4.9
	ROMULUS	MI	N	48174	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.1
	SALINE	MI	N	48176	NR	NR	NR	NR	NR	NR	0.1	3.5	3.6
	WAYNE	MI	N	48184	0.1	8.5	8.6	0.1	11.0	11.1	NR	NR	NR
	WAYNE	MI	N	48184	0.0	0.0	0.0	0.0	0.3	0.3	0.1	6.0	6.1
	WAYNE	MI	N	48184	NR	NR	NR	0.1	0.0	0.1	0.1	0.0	0.1
	DETROIT	MI	N	48207	NR	NR	NR	0.0	5.4	5.4	0.0	7.4	7.4
	DETROIT	MI	N	48215	6.5	20.0	26.5	4.1	31.5	35.6	6.0	50.0	56.0
	DETROIT	MI	N	48228	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	REDFORD	MI	N	48239	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	DETROIT	MI	N	48234	0.1	0.0	0.1	NR	NR	NR	NR	NR	NR
	FLINT	MI	N	48552	0.3	35.5	35.8	0.5	24.5	25.0	0.7	25.5	26.2

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[redacted]	LANSING	MI	N	48917	0.2	8.5	8.7	0.5	23.0	23.5	0.6	24.0	24.6
	LANSING	MI	N	48921	3.6	3.1	6.7	3.5	4.1	7.6	2.6	3.2	5.8
	KALAMAZOO	MI	N	49007	NR	NR	NR	NR	NR	NR	0.0	8.6	8.6
	WHITE PIGEON	MI	N	49099	0.0	18.3	18.3	0.0	26.3	26.3	0.0	16.1	16.1
	JACKSON	MI	N	49203	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	ADRIAN	MI	N	49221	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	CALEDONIA	MI	N	49316	0.2	0.1	0.3	NR	NR	NR	NR	NR	NR
	MIDDLEVILLE	MI	N	49333	0.0	5.8	5.8	0.0	6.3	6.3	0.0	7.1	7.1
	NEWAYGO	MI	N	49337	NR	NR	NR	1.1	2.7	3.8	1.5	1.2	2.7
	MUSKEGON HEIGHTS	MI	N	49444	NR	NR	NR	0.1	0.0	0.1	0.3	0.0	0.3
	GRAND RAPIDS	MI	N	49503	NR	NR	NR	NR	NR	NR	0.0	0.4	0.4
	CADILLAC	MI	N	49601	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1
	ANKENY	IA	N	50023	NR	NR	NR	0.0	7.0	7.0	0.0	21.2	21.2
	KNOXVILLE	IA	N	50138	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	PELLA	IA	N	50219	0.1	14.4	14.6	0.1	20.3	20.4	0.1	19.4	19.5
	FORT DODGE	IA	N	50501	NR	NR	NR	0.0	6.5	6.5	0.0	13.7	13.7
	CEDAR FALLS	IA	N	50613	0.0	6.0	6.0	0.0	5.7	5.7	NR	NR	NR
	ORANGE CITY	IA	N	51041	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CARROLL	IA	N	51401	NR	NR	NR	0.0	5.1	5.1	0.0	5.6	5.6
	MISSOURI VALLEY	IA	N	51555	0.0	6.0	6.0	0.0	7.8	7.8	0.0	5.5	5.5
	CEDAR RAPIDS	IA	N	52404	NR	NR	NR	0.6	0.0	0.6	NR	NR	NR
	BURLINGTON	IA	N	52601	0.2	5.5	5.7	0.2	8.0	8.2	0.2	11.0	11.2
	MUSCATINE	IA	N	52761	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	CHILTON	WI	N	53014	NR	NR	NR	NR	NR	NR	6.3	0.0	6.3
	CHILTON	WI	N	53014	0.9	4.3	5.3	0.9	4.9	5.8	0.2	5.0	5.3
	HARTFORD	WI	N	53027	0.1	10.6	10.8	0.1	7.6	7.7	0.1	8.7	8.8
	HARTFORD	WI	N	53027	12.0	0.4	12.4	13.5	0.4	13.9	11.5	0.4	11.9
	HORICON	WI	N	53032	NR	NR	NR	NR	NR	NR	0.0	5.5	5.5
	LOMIRA	WI	N	53048	NR	NR	NR	2.6	0.3	2.8	4.8	0.5	5.4

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[redacted]	MENOMONEE FALLS	WI	N	53051	NR	NR	NR	0.3	0.0	0.3	0.4	0.0	0.4
	OCONOMOWOC	WI	N	53066	1.8	7.1	8.8	1.7	8.3	10.0	1.3	5.2	6.5
	OCONOMOWOC	WI	N	53066	NR	NR	NR	NR	NR	NR	0.0	0.6	0.6
	SHEBOYGAN FALLS	WI	N	53085	0.0	13.1	13.1	0.0	13.9	13.9	0.0	12.7	12.7
	SUSSEX	WI	N	53089	8.3	0.9	9.2	8.6	1.0	9.6	11.6	1.3	12.9
	WATERTOWN	WI	N	53094	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	NEW BERLIN	WI	N	53151	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	OAK CREEK	WI	N	53154	NR	NR	NR	0.0	20.3	20.3	0.0	18.6	18.6
	OAK CREEK	WI	N	53154	15.5	0.4	15.9	25.2	0.4	25.6	35.2	0.4	35.6
	TWIN LAKES	WI	N	53181	NR	NR	NR	0.0	0.8	0.8	0.0	1.4	1.4
	WAUKESHA	WI	N	53186	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	SAINT FRANCIS	WI	N	53235	0.0	6.6	6.6	0.0	7.1	7.1	0.0	9.8	9.8
	MILWAUKEE	WI	N	53207	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	MILWAUKEE	WI	N	53209	NR	NR	NR	0.1	0.0	0.1	0.1	0.0	0.1
	MILWAUKEE	WI	N	53212	0.0	14.9	14.9	0.0	15.5	15.5	NR	NR	NR
	WEST ALLIS	WI	N	53214	NR	NR	NR	3.2	0.1	3.3	3.4	0.1	3.5
	MILWAUKEE	WI	N	53223	0.4	0.0	0.4	0.3	0.0	0.3	NR	NR	NR
	MILWAUKEE	WI	N	53224	9.1	0.0	9.1	9.3	0.0	9.3	9.4	0.0	9.4
	MILWAUKEE	WI	N	53224	35.5	7.0	42.5	29.0	9.0	38.0	27.5	7.5	35.0
	MILWAUKEE	WI	N	53226	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	STURTEVANT	WI	N	53177	NR	NR	NR	NR	NR	NR	0.3	0.0	0.3
	FORT ATKINSON	WI	N	53538	3.6	11.0	14.6	3.9	17.0	20.9	3.5	8.5	12.0
	BARABOO	WI	N	53913	NR	NR	NR	NR	NR	NR	4.2	0.2	4.4
	BARABOO	WI	N	53913	0.0	29.8	29.8	0.0	30.6	30.6	0.0	25.7	25.7
	MARINETTE	WI	N	54143	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	MANITOWOC	WI	N	54220	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	PLOVER	WI	Y	54467	10.8	40.0	50.8	7.6	27.8	35.4	1.3	3.2	4.5
	LA CROSSE	WI	Y	54603	22.8	1.7	24.5	22.1	1.7	23.8	24.0	1.8	25.8
	TOMAH	WI	N	54660	0.0	2.0	2.0	0.0	3.3	3.3	NR	NR	NR
	TOMAH	WI	N	54660	NR	NR	NR	NR	NR	NR	0.0	5.4	5.4
	MENOMONIE	WI	N	54751	1.5	5.8	7.3	1.6	6.3	7.9	1.6	6.2	7.8
	OSHKOSH	WI	N	54903	0.6	0.0	0.6	NR	NR	NR	NR	NR	NR

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	WAUPACA	WI	N	54981	0.4	4.0	4.5	0.9	7.7	8.6	1.0	9.4	10.4
	LAKEVILLE	MN	N	55044	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	OWATONNA	MN	Y	55060	29.3	87.7	117.1	30.7	91.9	122.6	31.9	95.7	127.6
	RED WING	MN	N	55066	0.0	22.8	22.8	0.0	27.6	27.6	0.0	24.4	24.4
	SAINT PAUL	MN	Y	55107	14.0	79.5	93.5	13.4	76.1	89.5	11.8	67.0	78.8
	SAINT PAUL	MN	N	55116	0.4	3.0	3.4	0.4	4.2	4.6	0.1	7.0	7.1
	ROSEMOUNT	MN	N	55068	0.8	0.0	0.8	0.6	0.0	0.6	NR	NR	NR
	HOPKINS	MN	N	55343	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	MAPLE GROVE	MN	N	55369	NR	NR	NR	NR	NR	NR	3.9	0.1	4.0
	WACONIA	MN	N	55387	0.0	5.1	5.1	NR	NR	NR	NR	NR	NR
	MINNEAPOLIS	MN	N	55416	NR	NR	NR	NR	NR	NR	0.0	6.3	6.3
	WASECA	MN	N	56093	4.3	0.1	4.3	4.4	0.1	4.5	6.7	0.1	6.8
	COTTONWOOD	MN	N	56229	0.5	4.8	5.3	NR	NR	NR	NR	NR	NR
	SAINT CLOUD	MN	N	56303	4.6	0.1	4.7	7.1	0.3	7.3	5.7	0.2	5.9
	YANKTON	SD	N	57078	0.0	24.4	24.4	0.0	6.3	6.3	0.0	2.4	2.4
	GWINNER	ND	N	58040	NR	NR	NR	0.0	6.0	6.0	NR	NR	NR
	ELK GROVE VILLAGE	IL	N	60007	1.4	5.4	6.8	2.1	8.4	10.4	1.8	7.0	8.8
	ELK GROVE VILLAGE	IL	N	60007	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	ELK GROVE VILLAGE	IL	N	60007	0.0	0.5	0.5	0.0	0.3	0.3	NR	NR	NR
	DES PLAINES	IL	N	60016	NR	NR	NR	0.0	0.4	0.4	NR	NR	NR
	LAKE BLUFF	IL	N	60044	0.1	5.0	5.1	NR	NR	NR	NR	NR	NR
	WOODSTOCK	IL	N	60098	4.0	0.1	4.1	3.9	0.1	4.0	6.1	0.1	6.3
	ADDISON	IL	N	60101	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	ELGIN	IL	N	60120	1.7	8.5	10.2	0.9	7.5	8.4	0.4	1.4	1.8
	ELGIN	IL	N	60123	NR	NR	NR	0.0	0.2	0.2	NR	NR	NR
	FRANKLIN PARK	IL	N	60131	NR	NR	NR	NR	NR	NR	0.0	1.7	1.7
	HAMPSHIRE	IL	N	60140	NR	NR	NR	NR	NR	NR	0.3	0.0	0.3
	BROADVIEW	IL	N	60153	2.0	0.1	2.1	NR	NR	NR	NR	NR	NR
	NORTHLAKE	IL	N	60164	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	SYCAMORE	IL	N	60178	NR	NR	NR	0.0	10.1	10.1	0.0	6.7	6.7

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					2009			2010			2011		
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[redacted]	SYCAMORE	IL	N	60178	NR	NR	NR	0.4	0.1	0.4	0.6	0.1	0.6
	CAROL STREAM	IL	N	60188	0.5	2.0	2.5	1.1	4.4	5.5	1.8	7.0	8.8
	ALSIP	IL	N	60803	NR	NR	NR	NR	NR	NR	0.2	0.1	0.3
	CHANNAHON	IL	N	60410	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	CHICAGO HEIGHTS	IL	N	60411	6.3	25.1	31.4	7.5	30.0	37.5	7.2	28.7	35.9
	HARVEY	IL	N	60426	10.0	5.9	15.9	16.1	9.5	25.5	4.3	2.5	6.9
	HOMEWOOD	IL	N	60430	0.0	0.1	0.1	0.0	0.0	0.0	NR	NR	NR
	MIDLOTHIAN	IL	N	60445	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	BRIDGEVIEW	IL	N	60455	0.9	7.6	8.4	1.0	8.6	9.5	0.9	7.5	8.4
	BEDFORD PARK	IL	N	60499	0.0	0.0	0.1	NR	NR	NR	0.0	0.0	0.0
	BEDFORD PARK	IL	N	60501	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	AURORA	IL	N	60504	7.9	1.0	8.9	7.0	0.8	7.8	5.1	0.7	5.8
	WOODRIDGE	IL	N	60517	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	CHICAGO	IL	N	60608	1.0	8.8	9.8	1.1	13.2	14.3	2.7	0.6	3.3
	CHICAGO	IL	N	60609	0.0	25.7	25.7	0.0	43.1	43.1	0.0	33.9	33.9
	CHICAGO	IL	Y	60609	13.6	51.7	65.4	14.2	53.8	68.0	6.5	26.6	33.2
	CHICAGO	IL	N	60623	1.3	5.9	7.2	1.5	9.7	11.2	0.9	9.9	10.8
	CHICAGO	IL	N	60623	4.4	2.9	7.3	6.8	18.7	25.5	7.2	15.7	23.0
	CHICAGO	IL	N	60623	1.1	9.1	10.2	1.2	10.1	11.3	1.4	10.9	12.3
	CHICAGO	IL	N	60624	1.4	5.3	6.7	0.8	3.8	4.7	1.1	4.4	5.4
	CHICAGO	IL	N	60632	NR	NR	NR	0.7	5.8	6.5	0.9	7.9	8.8
	ALSIP	IL	N	60803	1.6	3.9	5.5	2.0	21.3	23.3	4.1	14.6	18.7
	BRADLEY	IL	Y	60915	17.1	51.4	68.6	16.0	48.1	64.1	16.2	48.6	64.8
	BELVIDERE	IL	N	61008	0.1	1.1	1.2	0.8	6.5	7.3	1.2	10.0	11.2
	GALENA	IL	N	61036	NR	NR	NR	NR	NR	NR	12.2	0.0	12.2
	ROCHELLE	IL	N	61068	1.8	1.3	3.1	4.4	1.4	5.8	7.3	3.8	11.0
	ROCKFORD	IL	N	61104	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	CORDOVA	IL	N	61242	0.3	0.0	0.3	0.7	0.1	0.8	NR	NR	NR
	CORDOVA	IL	N	61242	NR	NR	NR	NR	NR	NR	0.4	0.2	0.6
	EAST MOLINE	IL	N	61244	0.3	6.0	6.3	NR	NR	NR	NR	NR	NR
	HILLSDALE	IL	N	61257	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	GALESBURG	IL	N	61401	NR	NR	NR	9.2	0.0	9.2	7.4	0.0	7.4
	PEORIA	IL	N	61615	NR	NR	NR	0.8	0.0	0.8	NR	NR	NR
	GOODFIELD	IL	N	61742	NR	NR	NR	0.1	8.3	8.4	NR	NR	NR

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					2009			2010			2011		
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[redacted]	GOODFIELD	IL	N	61742	NR	NR	NR	NR	NR	NR	1.7	15.1	16.7
	ARTHUR	IL	N	61911	0.0	8.3	8.3	NR	NR	NR	NR	NR	NR
	MATTOON	IL	N	61938	NR	NR	NR	3.2	0.2	3.5	2.0	0.1	2.1
	GRANITE CITY	IL	N	62040	NR	NR	NR	0.3	0.1	0.4	0.4	0.1	0.5
	GRANITE CITY	IL	N	62040	4.5	1.1	5.6	4.5	1.1	5.6	4.2	1.0	5.3
	SAUGET	IL	N	62201	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	SAUGET	IL	N	62201	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	QUINCY	IL	N	62305	0.1	13.0	13.1	0.2	13.4	13.6	0.1	15.9	16.1
	EFFINGHAM	IL	N	62401	6.2	0.0	6.2	3.4	0.4	3.8	2.2	0.3	2.4
	ARNOLD	MO	Y	63010	17.1	27.1	44.2	17.9	28.4	46.3	16.4	25.7	42.0
	FENTON	MO	N	63026	NR	NR	NR	1.6	8.2	9.8	1.4	8.3	9.6
	FENTON	MO	N	63026	5.5	32.0	37.5	NR	NR	NR	NR	NR	NR
	MARYLAND HEIGHTS	MO	N	63043	0.1	0.1	0.3	NR	NR	NR	NR	NR	NR
	MARYLAND HEIGHTS	MO	N	63043	0.1	1.8	1.9	NR	NR	NR	0.1	1.6	1.7
	PACIFIC	MO	N	63069	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	SAINT LOUIS	MO	N	63104	4.8	0.0	4.8	5.8	0.0	5.8	6.3	0.0	6.3
	SAINT LOUIS	MO	N	63111	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	BERKELEY	MO	N	63134	0.1	0.1	0.3	0.0	0.0	0.0	NR	NR	NR
	SAINT LOUIS	MO	N	63147	0.0	0.1	0.1	0.0	0.1	0.1	NR	NR	NR
	SAINT LOUIS	MO	N	63147	NR	NR	NR	NR	NR	NR	0.1	0.1	0.2
	WARRENTON	MO	N	63383	NR	NR	NR	NR	NR	NR	18.5	2.9	21.5
	WENTZVILLE	MO	N	63385	0.9	3.7	4.5	1.3	6.0	7.3	1.1	8.0	9.1
	POPLAR BLUFF	MO	N	63901	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	INDEPENDENCE	MO	N	64051	1.4	3.3	4.7	1.3	3.9	5.2	1.6	2.5	4.1
	CLAYCOMO	MO	Y	64119	2.3	39.5	41.8	1.5	50.0	51.5	1.6	55.0	56.6
	KANSAS CITY	MO	N	64120	4.2	0.1	4.2	NR	NR	NR	NR	NR	NR
	SAINT JOSEPH	MO	N	64504	6.3	2.9	9.2	5.4	3.6	9.0	5.2	3.7	9.0
	OWENSVILLE	MO	N	65066	4.1	1.6	5.8	6.6	1.1	7.7	3.7	1.4	5.1
	MANSFIELD	MO	N	65704	NR	NR	NR	0.0	7.5	7.5	NR	NR	NR

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[redacted]	MONETT	MO	Y	65708	1.2	28.1	29.2	1.0	5.2	6.2	1.1	0.6	1.7
	MONETT	MO	N	65708	NR	NR	NR	0.3	4.8	5.0	NR	NR	NR
	MOUNT VERNON	MO	N	65712	2.6	10.1	12.7	2.4	9.3	11.7	NR	NR	NR
	SPRINGFIELD	MO	N	65802	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	SPRINGFIELD	MO	N	65802	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	SHAWNEE	KS	N	66227	1.6	3.8	5.4	1.7	4.0	5.7	1.1	2.6	3.7
	BAXTER SPRINGS	KS	N	66713	0.0	6.2	6.2	5.9	0.0	5.9	NR	NR	NR
	FREDONIA	KS	N	66736	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	IOLA	KS	N	66749	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	WINFIELD	KS	N	67156	0.3	2.3	2.6	0.8	6.8	7.5	2.1	7.0	9.1
	WICHITA	KS	N	67219	NR	NR	NR	0.0	6.1	6.1	0.0	5.9	5.9
	WICHITA	KS	N	67219	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	SALINA	KS	N	67401	0.0	3.5	3.5	NR	NR	NR	NR	NR	NR
	VALLEY	NE	N	68064	NR	NR	NR	NR	NR	NR	5.0	0.0	5.0
	LINCOLN	NE	N	68504	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	LINCOLN	NE	N	68524	0.3	2.9	3.2	0.3	2.7	3.0	NR	NR	NR
	NORFOLK	NE	N	68701	0.8	10.5	11.3	0.3	10.0	10.3	0.3	10.0	10.3
	DAKOTA CITY	NE	N	68731	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	RESERVE	LA	N	70084	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	NEW ORLEANS	LA	N	70123	2.7	4.2	6.9	3.4	5.3	8.7	1.4	8.1	9.6
	BROUSSARD	LA	N	70518	NR	NR	NR	0.1	0.0	0.1	NR	NR	NR
	NEW IBERIA	LA	N	70560	NR	NR	NR	1.4	0.0	1.4	1.5	0.0	1.5
	SCOTT	LA	N	70583	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	SAINT GABRIEL	LA	N	70776	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	ZACHARY	LA	N	70791	4.7	0.4	5.1	5.1	0.5	5.5	4.8	0.6	5.4
	BATON ROUGE	LA	N	70815	0.2	0.0	0.2	0.2	0.0	0.2	NR	NR	NR
	SHREVEPORT	LA	N	71129	0.1	6.0	6.1	0.1	3.7	3.7	0.1	2.5	2.6
	ALEXANDRIA	LA	N	71303	0.0	0.1	0.1	NR	NR	NR	NR	NR	NR

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[redacted]	WHITE HALL	AR	N	71602	0.0	9.9	9.9	0.0	10.1	10.1	0.0	8.5	8.5
	PINE BLUFF	AR	N	71602	NR	NR	NR	6.5	0.0	6.5	6.0	0.0	6.0
	EL DORADO	AR	N	71730	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	MAGNOLIA	AR	N	71753	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	BENTON	AR	N	72015	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	SEARCY	AR	N	72143	NR	NR	NR	0.1	0.1	0.3	NR	NR	NR
	BLYTHEVILLE	AR	N	72315	NR	NR	NR	NR	NR	NR	11.2	0.0	11.2
	HELENA	AR	N	72342	NR	NR	NR	0.0	0.3	0.3	0.0	0.2	0.2
	JONESBORO	AR	N	72401	NR	NR	NR	NR	NR	NR	3.6	2.3	5.9
	PIGGOTT	AR	N	72454	0.2	14.2	14.4	0.2	13.2	13.3	0.1	5.4	5.5
	FAYETTEVILLE	AR	N	72701	NR	NR	NR	0.0	7.3	7.3	0.0	11.0	11.0
	ROGERS	AR	N	72756	NR	NR	NR	0.0	6.7	6.7	0.0	12.9	12.9
	SPRINGDALE	AR	N	72764	4.8	5.3	10.1	3.4	4.8	8.2	4.1	5.9	10.0
	FORT SMITH	AR	N	72916	NR	NR	NR	NR	NR	NR	0.0	13.2	13.2
	EL RENO	OK	N	73036	NR	NR	NR	0.0	7.4	7.4	0.0	7.5	7.5
	EL RENO	OK	N	73036	NR	NR	NR	0.4	0.0	0.4	0.2	0.0	0.2
	TINKER A F B	OK	N	73145	1.6	4.2	5.8	1.3	6.0	7.3	1.9	3.2	5.1
	OKLAHOMA CITY	OK	Y	73179	5.0	28.5	33.5	NR	NR	NR	NR	NR	NR
	WAYNOKA	OK	N	73860	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	SAND SPRINGS	OK	N	74063	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	TULSA	OK	N	74131	0.0	0.0	0.0	NR	NR	NR	0.0	0.0	0.0
	TULSA	OK	N	74147	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	PONCA CITY	OK	N	74601	0.2	23.6	23.9	0.2	20.4	20.6	0.2	19.7	19.9
	SHAWNEE	OK	N	74804	0.4	23.0	23.4	0.4	21.5	21.9	0.4	18.7	19.1
	CARROLLTON	TX	N	75006	NR	NR	NR	0.0	0.1	0.1	NR	NR	NR
	CARROLLTON	TX	N	75006	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	GARLAND	TX	N	75041	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	MESQUITE	TX	N	75149	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	TERRELL	TX	N	75160	2.8	14.9	17.7	3.2	13.4	16.6	0.0	15.3	15.3
	WAXAHACHIE	TX	N	75165	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	WAXAHACHIE	TX	N	75165	0.4	0.0	0.4	NR	NR	NR	NR	NR	NR

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	WAXAHACHIE	TX	N	75165	0.0	0.2	0.2	NR	NR	NR	NR	NR	NR
	DALLAS	TX	N	75244	0.0	0.9	0.9	NR	NR	NR	NR	NR	NR
	PARIS	TX	N	75460	4.9	3.2	8.2	4.0	2.9	7.0	3.4	3.2	6.7
	TEXARKANA	TX	N	75501	0.0	0.6	0.6	NR	NR	NR	NR	NR	NR
	LONGVIEW	TX	N	75604	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	LONGVIEW	TX	Y	75604	17.7	49.3	67.0	14.4	43.0	57.5	4.8	47.7	52.5
	LONGVIEW	TX	N	75602	12.0	1.8	13.8	12.1	2.5	14.6	12.3	3.1	15.3
	GILMER	TX	N	75644	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	KILGORE	TX	N	75662	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	KILGORE	TX	N	75662	0.2	0.0	0.2	NR	NR	NR	NR	NR	NR
	LONGVIEW	TX	N	75662	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	KILGORE	TX	N	75662	NR	NR	NR	0.0	0.1	0.1	0.0	0.1	0.1
	GRAPELAND	TX	N	75844	0.2	16.3	16.4	0.2	13.3	13.5	4.3	7.9	12.2
	LUFKIN	TX	N	75904	7.1	0.0	7.1	8.3	0.0	8.3	NR	NR	NR
	CRESSON	TX	N	76035	0.1	0.0	0.1	NR	NR	NR	NR	NR	NR
	MANSFIELD	TX	N	76063	NR	NR	NR	NR	NR	NR	0.2	0.1	0.3
	FORT WORTH	TX	N	76140	5.5	7.5	13.0	5.5	8.0	13.5	5.5	7.0	12.5
	MEXIA	TX	N	76667	NR	NR	NR	0.0	10.7	10.7	NR	NR	NR
	HOUSTON	TX	N	77007	0.0	0.7	0.7	0.0	0.7	0.7	NR	NR	NR
	HOUSTON	TX	N	77015	4.8	0.3	5.1	4.6	0.3	4.8	4.4	0.2	4.7
	HOUSTON	TX	N	77041	0.1	1.4	1.5	NR	NR	NR	NR	NR	NR
	HOUSTON	TX	N	77041	NR	NR	NR	0.4	0.5	0.9	0.4	0.4	0.8
	HOUSTON	TX	N	77043	NR	NR	NR	4.6	0.0	4.6	4.6	0.1	4.7
	HOUSTON	TX	N	77047	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	HOUSTON	TX	N	77054	2.3	0.0	2.3	1.2	0.0	1.2	NR	NR	NR
	HOUSTON	TX	N	77060	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	HOUSTON	TX	N	77092	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	CONROE	TX	N	77301	NR	NR	NR	0.4	10.1	10.6	1.0	6.0	6.9
	CONROE	TX	N	77303	14.0	4.6	18.6	14.0	4.6	18.6	13.0	4.2	17.2
	CONROE	TX	N	77303	29.3	4.8	34.1	30.8	5.0	35.9	27.6	4.5	32.1
	TOMBALL	TX	N	77375	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	SUGAR LAND	TX	N	77478	28.0	4.2	32.2	28.1	4.2	32.3	27.4	4.1	31.5
	SUGAR LAND	TX	N	77478	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1
	PASADENA	TX	N	77503	12.7	8.0	20.7	12.8	8.8	21.6	15.0	8.8	23.8
	PASADENA	TX	N	77507	6.8	0.0	6.8	6.7	0.7	7.4	5.1	0.2	5.2
	BAYTOWN	TX	N	77520	0.1	0.0	0.1	0.1	0.0	0.1	NR	NR	NR
	CROSBY	TX	N	77532	NR	NR	NR	NR	NR	NR	0.1	0.1	0.3
	DEER PARK	TX	N	77536	0.0	0.0	0.0	0.1	0.0	0.1	NR	NR	NR
	LA PORTE	TX	N	77571	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	FRESNO	TX	N	77545	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	LA PORTE	TX	N	77571	4.1	0.1	4.2	1.7	0.5	2.1	4.5	0.5	5.0
	LA PORTE	TX	N	77571	0.6	0.0	0.6	NR	NR	NR	NR	NR	NR
	TEXAS CITY	TX	N	77590	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	ORANGE	TX	N	77630	NR	NR	NR	0.1	0.0	0.1	0.0	0.1	0.1
	PORT NECHES	TX	N	77651	NR	NR	NR	0.0	0.1	0.1	0.0	0.1	0.1
	BRYAN	TX	N	77807	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	NAVASOTA	TX	N	77868	0.8	0.3	1.1	4.9	0.5	5.4	0.1	0.1	0.2
	SEADRIFT	TX	N	77983	13.9	3.1	17.0	13.9	3.5	17.5	14.2	3.5	17.7
	ELMENDORF	TX	N	78112	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	SAN ANTONIO	TX	N	78264	5.2	3.4	8.6	2.4	0.4	2.8	6.8	3.1	9.9
	ROBSTOWN	TX	N	78380	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	CORPUS CHRISTI	TX	N	78405	0.1	0.0	0.1	0.1	0.0	0.1	NR	NR	NR
	AMARILLO	TX	N	79108	0.1	0.0	0.1	NR	NR	NR	0.0	0.0	0.0
	GARDENDALE	TX	N	79758	NR	NR	NR	NR	NR	NR	1.4	0.0	1.4
	ODESSA	TX	N	79762	NR	NR	NR	0.2	0.0	0.2	0.3	0.0	0.3
	HOUSTON	TX	N	77061	0.0	0.0	0.0	NR	NR	NR	0.1	0.1	0.3
	ODESSA	TX	N	79765	0.0	0.1	0.1	NR	NR	NR	NR	NR	NR
	DENVER	CO	N	80216	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	DENVER	CO	N	80216	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	GOLDEN	CO	N	80401	30.5	6.0	36.5	29.5	6.0	35.5	26.5	7.0	33.5

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	GOLDEN	CO	N	80403	21.0	10.5	31.5	19.5	9.5	29.0	20.0	11.5	31.5
	LONGMONT	CO	N	80501	3.1	1.9	5.0	3.0	1.9	4.9	3.3	1.7	5.0
	WINDSOR	CO	Y	80550	15.1	42.4	57.5	14.9	40.1	55.0	14.5	39.7	54.3
	COLORADO SPRINGS	CO	N	80916	NR	NR	NR	0.3	0.1	0.5	0.5	0.2	0.6
	GRAND JUNCTION	CO	N	81505	NR	NR	NR	NR	NR	NR	0.0	4.8	4.8
	SINCLAIR	WY	N	82334	0.0	0.0	0.0	NR	NR	NR	0.0	0.0	0.0
	WORLAND	WY	N	82401	11.1	33.4	44.5	12.8	38.3	51.1	13.3	40.0	53.3
	CLEARFIELD	UT	N	84016	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	HILL AFB	UT	N	84056	0.9	0.7	1.6	NR	NR	NR	NR	NR	NR
	LOGAN	UT	N	84321	0.1	1.1	1.2	0.4	3.9	4.3	0.6	5.3	5.9
	PHOENIX	AZ	Y	85043	5.2	34.4	39.6	5.2	33.0	38.2	5.7	36.2	41.9
	PHOENIX	AZ	N	85043	0.0	0.1	0.1	NR	NR	NR	NR	NR	NR
	MESA	AZ	N	85210	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	CHANDLER	AZ	N	85226	0.1	0.0	0.2	NR	NR	NR	NR	NR	NR
	GOODYEAR	AZ	N	85338	NR	NR	NR	NR	NR	NR	0.2	0.0	0.2
	YUMA	AZ	N	85369	0.1	0.0	0.1	NR	NR	NR	NR	NR	NR
	FERNLEY	NV	N	89408	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	WINNEMUCCA	NV	N	89445	NR	NR	NR	0.0	7.5	7.5	0.0	5.0	5.0
	RENO	NV	N	89512	1.5	0.2	1.7	1.8	0.0	1.8	NR	NR	NR
	CITY OF COMMERCE	CA	N	90040	0.0	0.0	0.0	NR	NR	NR	0.0	0.0	0.0
	VERNON	CA	N	90058	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	LYNWOOD	CA	N	90262	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	TORRANCE	CA	N	90503	31.0	2.7	33.7	29.0	3.0	32.0	16.0	0.7	16.7
	TORRANCE	CA	N	90509	NR	NR	NR	0.1	0.0	0.1	0.0	0.0	0.0
	LA MIRADA	CA	N	90638	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	LOS ALAMITOS	CA	N	90720	1.8	0.1	1.9	NR	NR	NR	NR	NR	NR
	TERMINAL ISLAND	CA	N	90731	6.2	0.6	6.7	4.1	0.4	4.5	3.8	0.4	4.2

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[redacted]	SAN PEDRO	CA	N	90731	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1
	CARSON	CA	N	90745	0.0	8.5	8.5	0.0	7.2	7.2	NR	NR	NR
	LONG BEACH	CA	N	90810	NR	NR	NR	0.0	0.1	0.1	NR	NR	NR
	CHATSWORTH	CA	Y	91311	14.3	40.3	54.6	8.9	35.5	44.4	6.4	22.6	29.0
	AZUSA	CA	N	91702	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	RANCHO CUCAMONGA	CA	N	91730	NR	NR	NR	0.6	0.4	0.9	0.5	0.4	0.9
	SOUTH EL MONTE	CA	N	91733	0.0	0.0	0.1	0.0	0.0	0.1	NR	NR	NR
	MIRA LOMA	CA	N	91752	29.0	3.8	32.8	28.5	3.7	32.3	27.5	3.7	31.2
	ONTARIO	CA	N	91761	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	SAN MARCOS	CA	N	92078	0.0	2.1	2.1	NR	NR	NR	0.0	0.3	0.3
	IRVINE	CA	N	92618	NR	NR	NR	NR	NR	NR	0.0	0.0	0.0
	SANTA ANA	CA	N	92704	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	SANTA ANA	CA	N	92704	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	SANTA ANA	CA	N	92704	NR	NR	NR	NR	NR	NR	0.1	0.1	0.2
	BAKERSFIELD	CA	N	93308	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	BAKERSFIELD	CA	N	93308	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	SAN CARLOS	CA	N	94070	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	FAIRFIELD	CA	N	94533	12.5	19.0	31.5	7.5	12.0	19.5	9.0	12.5	21.5
	FAIRFIELD	CA	Y	94533	5.5	8.5	14.0	5.4	3.9	9.4	5.3	3.9	9.2
	FREMONT	CA	N	94538	29.7	7.4	37.1	14.6	0.0	14.6	NR	NR	NR
	SAN JOSE	CA	N	95131	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	SAN JOSE	CA	N	95133	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	MERCED	CA	N	95348	6.5	1.1	7.6	4.6	1.3	5.9	0.2	0.7	0.8
	OAKDALE	CA	N	95361	0.8	4.7	5.4	0.1	3.9	4.0	0.2	3.4	3.6
	RIVERBANK	CA	N	95367	0.2	3.9	4.1	0.3	4.4	4.7	0.6	7.2	7.8
	DIXON	CA	N	95620	4.7	0.0	4.7	5.6	0.0	5.6	4.4	0.0	4.4
	ROSEVILLE	CA	N	95678	0.0	0.3	0.3	NR	NR	NR	NR	NR	NR
	SACRAMENTO	CA	N	95824	NR	NR	NR	NR	NR	NR	0.1	0.0	0.1

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					2009			2010			2011		
Facility	City	State	Completed Survey	Zip Code	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)	Fugitive Air Emissions (tpy)	Point Source Air Emissions (tpy)	Total Air Emissions (tpy)
[redacted]	SACRAMENTO	CA	N	95824	4.9	0.4	5.3	5.2	0.9	6.1	4.4	0.6	5.0
	SACRAMENTO	CA	N	95826	0.0	0.0	0.0	NR	NR	NR	NR	NR	NR
	KAPOLEI	HI	N	96707	2.2	10.5	12.7	2.3	10.5	12.8	2.0	9.0	11.0
	PORTLAND	OR	N	97210	NR	NR	NR	0.0	0.1	0.1	0.0	0.1	0.1
	PORTLAND	OR	N	97210	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR
	PORTLAND	OR	N	97227	0.0	0.0	0.0	0.0	0.0	0.0	NR	NR	NR
	AUBURN	WA	N	98002	NR	NR	NR	0.1	0.0	0.1	0.1	0.0	0.1
	KENT	WA	Y	98032	13.2	74.8	88.0	12.5	70.6	83.1	12.4	70.5	82.9
	EVERETT	WA	N	98204	1.6	14.0	15.6	2.0	9.0	11.0	3.5	17.0	20.5
	TACOMA	WA	N	98421	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0
	OLYMPIA	WA	Y	98501	17.1	51.3	68.4	19.4	58.3	77.7	16.0	48.0	64.0
	ELMENDORF AFB	AK	N	99506	NR	NR	NR	0.0	0.0	0.0	NR	NR	NR

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	AGUADILLA	PR	N	00605	Default	Default	Default	0.20	0.05	0.07	Out	Out	Out
	CAROLINA	PR	N	00985	Default	Default	Default	0.75	0.69	0.60	Out	Out	Out
	MANATI	PR	N	00674	Default	Default	Default	NR	0.002	NR	Out	Out	Out
	CHRISTIANSTED	V Isl	N	00820	Default	Default	Default	0.01	0.03	NR	Out	Out	Out
	EAST LONGMEADOW	MA	N	01028	Default	Default	Default	NR	0.08	NR	Out	Out	Out
	DUDLEY	MA	N	01571	Default	Default	Default	0.00	0.0001	NR	Out	Out	Out
	LAWRENCE	MA	N	01841	Default	Default	Default	NR	0.03	0.04	Out	Out	Out
	LAWRENCE	MA	N	01843	Default	Default	Default	0.00	0.0003	NR	Out	Out	Out
	LAWRENCE	MA	Y	01843	8.7	34	0.905	4.31	3.75	4.19	Retain	Retain	Retain
	NEWBURYPORT	MA	N	01950	Default	Default	Default	NR	NR	0.0019	Out	Out	Out
	WARWICK	RI	N	02886	Default	Default	Default	NR	0.00004	0.0000	Out	Out	Out
	CRANSTON	RI	N	02920	Default	Default	Default	NR	0.12	0.12	Out	Out	Out
	MEREDITH	NH	N	03253	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	SEABROOK	NH	N	03874	Default	Default	Default	NR	NR	0.0011	Out	Out	Out
	WESTBROOK	ME	N	04098	Default	Default	Default	0.32	0.50	0.74	Out	Out	Out
	BUCKSPORT	ME	N	4416	Default	Default	Default	NR	0.00001	NR	Out	Out	Out
	HARTLAND	ME	N	04943	Default	Default	Default	0.12	0.10	NR	Out	Out	Out
	NEW BRITAIN	CT	N	06052	Default	Default	Default	0.21	0.23	0.24	Out	Out	Out
	LINDEN	NJ	N	07036	Default	Default	Default	0.0001	0.0001	NR	Out	Out	Out
	LINDEN	NJ	N	07036	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	WOODBRIDGE	NJ	N	07095	Default	Default	Default	0.06	0.15	0.19	Out	Out	Out
	NEWARK	NJ	N	07105	Default	Default	Default	NR	0.00004	0.00005	Out	Out	Out
	NEWARK	NJ	N	07105	Default	Default	Default	0.02	NR	0.01	Out	Out	Out
	WAYNE	NJ	N	07470	Default	Default	Default	0.0001	0.0001	NR	Out	Out	Out
	BELVIDERE	NJ	N	07823	Default	Default	Default	0.0004	0.0004	NR	Out	Out	Out
	DEEPWATER	NJ	N	08023	Default	Default	Default	0.005	NR	0.0048	Out	Out	Out
	PALMYRA	NJ	N	08065	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	EDISON	NJ	N	08817	Default	Default	Default	0.25	0.18	0.17	Out	Out	Out
	PERTH AMBOY	NJ	N	08861	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	SOMERVILLE	NJ	N	08876	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	MIDDLETOWN	NY	Y	10940	15	122	0.98	0.24	0.26	0.32	Out	Out	Out
	EAST SETAUKET	NY	N	11733	Default	Default	Default	NR	0.0003	0.0003	Out	Out	Out
	HAUPPAUGE	NY	N	11788	Default	Default	Default	0.07	NR	NR	Out	Out	Out
	ALBANY	NY	N	12204	Default	Default	Default	NR	0.00002	NR	Out	Out	Out

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Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	NEW WINDSOR	NY	Y	12553	12.192	73.152	0.87	1.01	0.93	0.89	Out	Out	Out
	SARATOGA SPRINGS	NY	Y	12866	20	66	1	0.19	0.20	0.19	Out	Out	Out
	SARATOGA SPRINGS	NY	N	12866	Default	Default	Default	0.21	NR	0.14	Out	Out	Out
	LOWVILLE	NY	N	13367	Default	Default	Default	0.12	0.11	0.10	Out	Out	Out
	VERONA	NY	N	13478	Default	Default	Default	NR	NR	0.0001	Out	Out	Out
	AKRON	NY	N	14001	Default	Default	Default	0.16	0.18	0.25	Out	Out	Out
	TONAWANDA	NY	N	14150	Default	Default	Default	NR	0.0001	NR	Out	Out	Out
	MARION	NY	N	14505	Default	Default	Default	0.13	0.14	0.11	Out	Out	Out
	WEST HENRIETTA	NY	N	14586	Default	Default	Default	0.32	0.14	0.17	Out	Out	Out
	CHEMUNG	NY	N	14825	Default	Default	Default	0.29	0.33	0.28	Out	Out	Out
	BUNOLA	PA	N	15020	Default	Default	Default	NR	0.0002	0.0046	Out	Out	Out
	CLAIRTON	PA	N	15025	Default	Default	Default	0.20	0.52	1.48	Out	Out	Out
	LEETSDALE	PA	N	15056	Default	Default	Default	0.00	NR	0.0002	Out	Out	Out
	MC KEESPORT	PA	N	15132	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	SPRINGDALE	PA	N	15144	Default	Default	Default	0.20	0.19	0.21	Out	Out	Out
	WILMERDING	PA	N	15148	Default	Default	Default	0.003	0.0023	NR	Out	Out	Out
	MANNS CHOICE	PA	N	15550	Default	Default	Default	0.28	0.32	0.32	Out	Out	Out
	ELLWOOD CITY	PA	N	16117	Default	Default	Default	NR	0.0000	0.0000	Out	Out	Out
	JAMESTOWN	PA	N	16134	Default	Default	Default	0.01	NR	0.01	Out	Out	Out
	HERMITAGE	PA	N	16148	Default	Default	Default	NR	0.0003	0.0003	Out	Out	Out
	CLARENDON	PA	N	16313	Default	Default	Default	0.18	0.14	0.10	Out	Out	Out
	FRANKLIN	PA	N	16323	Default	Default	Default	0.39	0.42	0.31	Out	Out	Out
	ERIE	PA	N	16502	Default	Default	Default	0.17	NR	NR	Out	Out	Out
	HARRISBURG	PA	N	17104	Default	Default	Default	NR	0.47	0.60	Out	Out	Out
	HANOVER	PA	N	17331	Default	Default	Default	0.28	0.34	0.13	Out	Out	Out
	HANOVER	PA	N	17331	Default	Default	Default	0.55	0.51	0.59	Out	Out	Out
	YORK	PA	N	17404	Default	Default	Default	0.08	NR	NR	Out	Out	Out
	YORK	PA	N	17402	Default	Default	Default	NR	0.04	0.04	Out	Out	Out
	LANCASTER	PA	N	17601	Default	Default	Default	0.25	0.17	0.32	Out	Out	Out
	LANCASTER	PA	N	17601	Default	Default	Default	0.20	0.23	0.28	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	LANCASTER	PA	N	17603	Default	Default	Default	0.04	NR	NR	Out	Out	Out
	ALLENTOWN	PA	N	18106	Default	Default	Default	0.002	0.0005	NR	Out	Out	Out
	SAYRE	PA	N	18840	Default	Default	Default	NR	0.0055	NR	Out	Out	Out
	TOWANDA	PA	N	18848	Default	Default	Default	NR	NR	0.05	Out	Out	Out
	QUAKERTOWN	PA	N	18951	Default	Default	Default	NR	0.04	0.09	Out	Out	Out
	SOUTHAMPTON	PA	N	18966	Default	Default	Default	NR	NR	0.16	Out	Out	Out
	WARMINSTER	PA	N	18974	Default	Default	Default	0.03	0.11	0.17	Out	Out	Out
	CROYDON	PA	N	19021	Default	Default	Default	0.0046	NR	NR	Out	Out	Out
	MORRISVILLE	PA	N	19067	Default	Default	Default	0.0001	NR	0.0008	Out	Out	Out
	PHILADELPHIA	PA	N	19120	Default	Default	Default	0.24	0.17	0.11	Out	Out	Out
	PHILADELPHIA	PA	N	19132	Default	Default	Default	NR	0.0055	0.0048	Out	Out	Out
	BLANDON	PA	N	19510	Default	Default	Default	0.32	0.25	0.16	Out	Out	Out
	DOVER	DE	N	19904	Default	Default	Default	0.14	0.08	0.06	Out	Out	Out
	BELCAMP	MD	N	21017	Default	Default	Default	NR	NR	0.03	Out	Out	Out
	BALTIMORE	MD	N	21221	Default	Default	Default	0.84	0.85	0.86	Out	Out	Out
	BALTIMORE	MD	N	21222	Default	Default	Default	NR	0.0019	0.0026	Out	Out	Out
	WILLIAMSPORT	MD	N	21795	Default	Default	Default	NR	0.0005	0.01	Out	Out	Out
	HAGERSTOWN	MD	N	21742	Default	Default	Default	NR	0.40	0.31	Out	Out	Out
	MANASSAS	VA	N	20109	Default	Default	Default	NR	0.07	0.08	Out	Out	Out
	MONTROSS	VA	N	22520	Default	Default	Default	NR	0.09	0.08	Out	Out	Out
	WINCHESTER	VA	N	22603	Default	Default	Default	0.12	0.20	0.14	Out	Out	Out
	FRONT ROYAL	VA	N	22630	Default	Default	Default	0.0036	NR	0.00	Out	Out	Out
	MIDDLETOWN	VA	N	22645	Default	Default	Default	0.0004	NR	0.00005	Out	Out	Out
	HARRISONBURG	VA	Y	22802	11.2	45	Default	1.56	1.65	1.90	Out	Retain	Retain
	ELKTON	VI	N	22827	Default	Default	Default	0.04	0.01	NR	Out	Out	Out
	ARVONIA	VI	N	23004	Default	Default	Default	0.00001	NR	NR	Out	Out	Out
	WILLIAMSBURG	VA	Y	23185	13.1318	96	0.9656	3.79	4.05	3.93	Retain	Retain	Retain
	RICHMOND	VI	N	23228	Default	Default	Default	NR	0.08	NR	Out	Out	Out
	PETERSBURG	VA	N	23805	Default	Default	Default	0.002	NR	0.0001	Out	Out	Out
	DUBLIN	VI	N	24084	Default	Default	Default	NR	0.13	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	SALEM	VI	N	24153	Default	Default	Default	0.19	NR	NR	Out	Out	Out
	GALAX	VA	N	24333	Default	Default	Default	NR	NR	0.12	Out	Out	Out
	MARION	VA	N	24354	Default	Default	Default	0.21	0.30	0.20	Out	Out	Out
	GROTTOES	VI	N	24441	Default	Default	Default	0.0016	NR	NR	Out	Out	Out
	LYNCHBURG	VA	N	24506	Default	Default	Default	NR	0.0051	0.01	Out	Out	Out
	WEIRTON	WV	N	26062	Default	Default	Default	1.16	0.69	0.43	Out	Out	Out
	WEIRTON	WV	Y	26062	11	12	1	6.59	6.26	6.01	Retain	Retain	Retain
	WEIRTON	WV	N	26062	Default	Default	Default	0.12	0.15	0.06	Out	Out	Out
	CRAIGSVILLE	WV	N	26205	Default	Default	Default	NR	0.07	NR	Out	Out	Out
	WINSTON-SALEM	NC	Y	27107	14	75	0.95	3.86	4.23	3.10	Retain	Retain	Retain
	BURLINGTON	NC	N	27215	Default	Default	Default	0.0051	0.01	NR	Out	Out	Out
	HIGH POINT	NC	N	27261	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	HIGH POINT	NC	N	27263	Default	Default	Default	NR	0.38	0.34	Out	Out	Out
	JAMESTOWN	NC	N	27282	Default	Default	Default	NR	NR	0.0002	Out	Out	Out
	MEBANE	NC	N	27302	Default	Default	Default	0.41	NR	0.11	Out	Out	Out
	REIDSVILLE	NC	Y	27320	16	137	1	1.18	1.45	1.58	Out	Out	Out
	DURHAM	NC	N	27703	Default	Default	Default	0.14	0.14	0.0026	Out	Out	Out
	TARBORO	NC	N	27886	Default	Default	Default	0.32	0.36	0.35	Out	Out	Out
	WILSON	NC	N	27893	Default	Default	Default	NR	0.0000	0.00	Out	Out	Out
	GASTONIA	NC	N	28052	Default	Default	Default	0.15	0.15	0.13	Out	Out	Out
	HARRISBURG	NC	N	28075	Default	Default	Default	0.14	0.66	0.11	Out	Out	Out
	MOUNT HOLLY	NC	N	28120	Default	Default	Default	0.0011	0.0012	NR	Out	Out	Out
	CHARLOTTE	NC	N	28273	Default	Default	Default	0.01	NR	0.01	Out	Out	Out
	CHARLOTTE	NC	N	28273	Default	Default	Default	NR	NR	0.02	Out	Out	Out
	FAYETTEVILLE	NC	N	28306	Default	Default	Default	NR	0.01	NR	Out	Out	Out
	MAXTON	NC	N	28364	Default	Default	Default	0.24	0.26	0.25	Out	Out	Out
	LENOIR	NC	N	28645	Default	Default	Default	0.17	0.23	0.19	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	STATESVILLE	NC	N	28625	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	BISHOPVILLE	SC	Y	29010	11.5824	11	0.9987	4.11	4.13	3.81	Retain	Retain	Retain
	HOLLY HILL	SC	N	29059	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	LEXINGTON	SC	N	29073	Default	Default	Default	0.05	0.21	0.00	Out	Out	Out
	ORANGEBURG	SC	N	29116	Default	Default	Default	0.12	0.14	0.14	Out	Out	Out
	ENOREE	SC	N	29335	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	FLORENCE	SC	N	29501	Default	Default	Default	0.33	0.34	0.42	Out	Out	Out
	CHERAW	SC	N	29520	Default	Default	Default	0.76	0.83	0.82	Out	Out	Out
	CONWAY	SC	N	29526	Default	Default	Default	0.05	NR	NR	Out	Out	Out
	MYRTLE BEACH	SC	Y	29577	5.5	38.099998	0.75	0.34	0.24	0.11	Out	Out	Out
	GREENVILLE	SC	N	29605	Default	Default	Default	NR	0.0072	0.01	Out	Out	Out
	STARR	SC	N	29684	Default	Default	Default	0.12	0.15	0.11	Out	Out	Out
	GREENWOOD	SC	N	29649	Default	Default	Default	NR	NR	0.03	Out	Out	Out
	GREER	SC	Y	29651	18.3	270	0.88	0.47	0.59	0.98	Out	Out	Out
	MAULDIN	SC	N	29662	Default	Default	Default	0.0019	0.0004	NR	Out	Out	Out
	SENECA	SC	N	29678	Default	Default	Default	NR	NR	0.05	Out	Out	Out
	CHESTER	SC	N	29706	Default	Default	Default	NR	0.00003	0.00004	Out	Out	Out
	AIKEN	SC	N	29801	Default	Default	Default	0.13	0.43	0.49	Out	Out	Out
	CARROLLTON	GA	N	30117	Default	Default	Default	0.03	NR	0.03	Out	Out	Out
	ROME	GA	Y	30161	12.192	54.864	0.86	1.34	1.44	1.21	Out	Out	Out
	COVINGTON	GA	N	30014	Default	Default	Default	0.02	0.03	NR	Out	Out	Out
	MC DONOUGH	GA	N	30253	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	MC DONOUGH	GA	N	30253	Default	Default	Default	0.0015	0.0013	NR	Out	Out	Out
	MC DONOUGH	GA	N	30253	Default	Default	Default	NR	NR	0.0010	Out	Out	Out
	MC DONOUGH	GA	N	30253	Default	Default	Default	NR	0.14	0.19	Out	Out	Out
	MC DONOUGH	GA	N	30253	Default	Default	Default	0.18	0.29	0.24	Out	Out	Out
	THE ROCK	GA	N	30285	Default	Default	Default	NR	NR	0.08	Out	Out	Out
	ATLANTA	GA	N	30339	Default	Default	Default	0.01	0.0060	NR	Out	Out	Out
	DORAVILLE	GA	N	30362	Default	Default	Default	NR	NR	0.0002	Out	Out	Out
	LAVONIA	GA	N	30553	Default	Default	Default	NR	0.24	0.37	Out	Out	Out
	ATHENS	GA	N	30607	Default	Default	Default	0.23	0.05	0.11	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	DALTON	GA	N	30721	Default	Default	Default	0.02	0.02	NR	Out	Out	Out
	DALTON	GA	N	30720	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	DUBLIN	GA	N	31021	Default	Default	Default	0.35	0.34	0.33	Out	Out	Out
	MILLEDGEVILLE	GA	N	31061	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	ROBINS AFB	GA	N	31098	Default	Default	Default	0.08	0.10	NR	Out	Out	Out
	HOMERVILLE	GA	N	31634	Default	Default	Default	0.70	1.53	0.25	Out	Out	Out
	WEST POINT	GA	N	31833	Default	Default	Default	NR	0.06	0.11	Out	Out	Out
	EDGEWATER	FL	N	32132	Default	Default	Default	0.06	NR	NR	Out	Out	Out
	JACKSONVILLE	FL	N	32254	Default	Default	Default	1.40	0.84	0.64	Out	Out	Out
	JACKSONVILLE	FL	N	32208	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	JACKSONVILLE	FL	N	32212	Default	Default	Default	NR	0.00	NR	Out	Out	Out
	JACKSONVILLE	FL	N	32254	Default	Default	Default	NR	0.00	0.00	Out	Out	Out
	WINTER GARDEN	FL	N	34787	Default	Default	Default	0.14	NR	NR	Out	Out	Out
	ORLANDO	FL	N	32837	Default	Default	Default	NR	0.03	0.02	Out	Out	Out
	FT LAUDERDALE	FL	N	33316	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	BUSHNELL	FL	N	33513	Default	Default	Default	0.33	0.31	0.23	Out	Out	Out
	TAMPA	FL	N	33617	Default	Default	Default	0.74	0.64	0.48	Out	Out	Out
	TAMPA	FL	N	33619	Default	Default	Default	NR	0.00	0.00	Out	Out	Out
	TAMPA	FL	N	33611	Default	Default	Default	NR	0.07	0.07	Out	Out	Out
	CLEARWATER	FL	N	33760	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	LAKELAND	FL	N	33801	Default	Default	Default	0.34	0.30	0.30	Out	Out	Out
	LAKELAND	FL	N	33810	Default	Default	Default	0.22	0.27	0.20	Out	Out	Out
	AUBURNDALE	FL	N	33823	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	CLEARWATER	FL	N	33760	Default	Default	Default	NR	0.0027	NR	Out	Out	Out
	CLEARWATER	FL	N	33760	Default	Default	Default	0.003	0.0050	NR	Out	Out	Out
	LEEDS	AL	N	35094	Default	Default	Default	0.29	0.33	0.32	Out	Out	Out
	LINCOLN	AL	N	35096	Default	Default	Default	0.36	0.51	0.54	Out	Out	Out
	BIRMINGHAM	AL	N	35234	Default	Default	Default	0.41	0.36	0.44	Out	Out	Out
	BIRMINGHAM	AL	N	35234	Default	Default	Default	0.01	0.01	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	TUSCALOOSA	AL	N	35401	Default	Default	Default	0.00	0.00	NR	Out	Out	Out
	TUSCALOOSA	AL	N	35401	Default	Default	Default	0.00	0.00	NR	Out	Out	Out
	VANCE	AL	N	35490	Default	Default	Default	0.29	0.55	0.60	Out	Out	Out
	GUIN	AL	N	35563	Default	Default	Default	0.20	0.27	NR	Out	Out	Out
	GUIN	AL	N	35563	Default	Default	Default	NR	NR	0.26	Out	Out	Out
	DECATUR	AL	N	35603	Default	Default	Default	NR	NR	0.42	Out	Out	Out
	HUNTSVILLE	AL	N	35811	Default	Default	Default	0.31	0.30	0.19	Out	Out	Out
	ALBERTVILLE	AL	N	35950	Default	Default	Default	0.39	NR	NR	Out	Out	Out
	FORT PAYNE	AL	N	35967	Default	Default	Default	0.22	0.30	0.19	Out	Out	Out
	ANNISTON	AL	N	36207	Default	Default	Default	0.02	0.01	NR	Out	Out	Out
	DOTHAN	AL	N	36303	Default	Default	Default	NR	NR	0.11	Out	Out	Out
	GENEVA	AL	N	36340	Default	Default	Default	0.10	0.11	0.27	Out	Out	Out
	PINE HILL	AL	N	36769	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	ASHLAND CITY	TN	N	37015	Default	Default	Default	NR	0.22	0.20	Out	Out	Out
	CLARKSVILLE	TN	N	37040	Default	Default	Default	0.09	0.15	NR	Out	Out	Out
	SHELBYVILLE	TN	N	37160	Default	Default	Default	0.05	NR	NR	Out	Out	Out
	SMYRNA	TN	N	37167	Default	Default	Default	0.72	0.77	0.65	Out	Out	Out
	SPRING HILL	TN	N	37174	Default	Default	Default	0.39	0.07	NR	Out	Out	Out
	NASHVILLE	TN	N	37207	Default	Default	Default	NR	0.01	0.25	Out	Out	Out
	NASHVILLE	TN	N	37209	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	NASHVILLE	TN	N	37218	Default	Default	Default	0.16	0.38	0.63	Out	Out	Out
	CLEVELAND	TN	N	37311	Default	Default	Default	0.18	0.13	0.13	Out	Out	Out
	DAYTON	TN	N	37321	Default	Default	Default	0.17	0.18	0.14	Out	Out	Out
	MANCHESTER	TN	N	37355	Default	Default	Default	0.48	0.44	0.75	Out	Out	Out
	MANCHESTER	TN	N	37355	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	CHATTANOOGA	TN	N	37402	Default	Default	Default	0.50	0.60	0.86	Out	Out	Out
	CHATTANOOGA	TN	N	37416	Default	Default	Default	NR	NR	0.23	Out	Out	Out
	ELIZABETHTON	TN	N	37643	Default	Default	Default	0.02	NR	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	ONEIDA	TN	N	37841	Default	Default	Default	0.14	0.11	0.10	Out	Out	Out
	SWEETWATER	TN	N	37874	Default	Default	Default	0.39	0.44	0.47	Out	Out	Out
	KNOXVILLE	TN	N	37921	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	BROWNSVILLE	TN	N	38012	Default	Default	Default	NR	NR	0.14	Out	Out	Out
	DYERSBURG	TN	N	38024	Default	Default	Default	0.0005	0.0003	NR	Out	Out	Out
	DYERSBURG	TN	N	38024	Default	Default	Default	0.23	0.05	NR	Out	Out	Out
	MEMPHIS	TN	N	38109	Default	Default	Default	NR	0.00	NR	Out	Out	Out
	MEMPHIS	TN	N	38109	Default	Default	Default	NR	0.002	0.00	Out	Out	Out
	MEMPHIS	TN	N	38113	Default	Default	Default	0.005	0.005	NR	Out	Out	Out
	MEMPHIS	TN	N	38113	Default	Default	Default	0.14	0.07	0.04	Out	Out	Out
	MEMPHIS	TN	N	38113	Default	Default	Default	0.0026	NR	NR	Out	Out	Out
	MEMPHIS	TN	N	38118	Default	Default	Default	0.00005	0.00	NR	Out	Out	Out
	MEMPHIS	TN	N	38118	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	MEMPHIS	TN	N	38113	Default	Default	Default	NR	0.0026	0.0027	Out	Out	Out
	UNION CITY	TN	N	38261	Default	Default	Default	0.00001	NR	NR	Out	Out	Out
	UNION CITY	TN	N	38261	Default	Default	Default	NR	NR	0.12	Out	Out	Out
	MILAN	TN	N	38358	Default	Default	Default	0.30	0.58	0.48	Out	Out	Out
	TRENTON	TN	N	38382	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	BATESVILLE	MS	N	38606	Default	Default	Default	0.87	0.77	0.76	Out	Out	Out
	HERNANDO	MS	N	38632	Default	Default	Default	0.05	NR	NR	Out	Out	Out
	HERNANDO	MS	N	38632	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	OLIVE BRANCH	MS	Y	38654	12	100	0.95	1.35	1.22	1.27	Out	Out	Out
	OLIVE BRANCH	MS	N	38654	Default	Default	Default	0.09	NR	NR	Out	Out	Out
	OLIVE BRANCH	MS	N	38654	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	SHANNON	MS	N	38868	Default	Default	Default	0.13	0.13	0.13	Out	Out	Out
	CANTON	MS	N	39046	Default	Default	Default	0.59	0.17	0.32	Out	Out	Out
	VICKSBURG	MS	N	39181	Default	Default	Default	NR	0.38	0.51	Out	Out	Out
	JACKSON	MS	N	39272	Default	Default	Default	0.11	0.08	0.09	Out	Out	Out
	JACKSON	MS	N	39272	Default	Default	Default	0.47	0.38	0.38	Out	Out	Out
	NEWTON	MS	N	39345	Default	Default	Default	0.23	0.31	0.35	Out	Out	Out
	PASCAGOULA	MS	N	39581	Default	Default	Default	NR	0.00	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	BARDSTOWN	KY	N	40004	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	LOUISVILLE	KY	N	40210	Default	Default	Default	NR	NR	0.02	Out	Out	Out
	LOUISVILLE	KY	N	40211	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	LOUISVILLE	KY	N	40213	Default	Default	Default	0.26	0.04	NR	Out	Out	Out
	LOUISVILLE	KY	N	40210	Default	Default	Default	NR	NR	0.05	Out	Out	Out
	LOUISVILLE	KY	Y	40241	Default	Default	0.79	0.57	0.62	0.78	Out	Out	Out
	GEORGETOWN	KY	N	40324	Default	Default	Default	0.12	0.27	0.20	Out	Out	Out
	HARRODSBURG	KY	N	40330	Default	Default	Default	0.27	NR	NR	Out	Out	Out
	MOREHEAD	KY	N	40351	Default	Default	Default	0.004	NR	NR	Out	Out	Out
	PARIS	KY	N	40361	Default	Default	Default	0.00	0.003	NR	Out	Out	Out
	BEREA	KY	N	40403	Default	Default	Default	0.24	0.35	0.31	Out	Out	Out
	LEXINGTON	KY	N	40511	Default	Default	Default	0.19	0.20	0.19	Out	Out	Out
	FLORENCE	KY	N	41042	Default	Default	Default	0.60	0.76	0.78	Out	Out	Out
	INDEPENDENCE	KY	N	41051	Default	Default	Default	NR	0.01	NR	Out	Out	Out
	CALVERT CITY	KY	N	42029	Default	Default	Default	NR	0.001	NR	Out	Out	Out
	HOPKINSVILLE	KY	N	42240	Default	Default	Default	0.11	0.01	NR	Out	Out	Out
	RUSSELLVILLE	KY	N	42276	Default	Default	Default	0.12	0.11	0.10	Out	Out	Out
	HAWESVILLE	KY	N	42348	Default	Default	Default	0.02	0.01	0.11	Out	Out	Out
	HEBRON	OH	N	43025	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	MARYSVILLE	OH	N	43040	Default	Default	Default	1.10	0.95	0.89	Out	Out	Out
	URBANA	OH	N	43078	Default	Default	Default	0.30	0.30	NR	Out	Out	Out
	COLUMBUS	OH	Y	43213	13.52	37	0.995	2.02	2.04	2.18	Retain	Retain	Retain
	MARION	OH	Y	43302	12.2	95	1	1.18	1.21	1.09	Out	Out	Out
	EAST LIBERTY	OH	N	43319	Default	Default	Default	0.65	1.03	0.84	Out	Out	Out
	CLYDE	OH	N	43410	Default	Default	Default	0.76	0.50	NR	Out	Out	Out
	FREMONT	OH	Y	43420	20	55	0.97	1.07	0.95	1.14	Out	Out	Out
	ROSSFORD	OH	N	43460	Default	Default	Default	0.13	0.16	0.16	Out	Out	Out
	NAPOLEON	OH	N	43545	Default	Default	Default	0.23	0.21	0.35	Out	Out	Out
	WHITEHOUSE	OH	Y	43571	15	200	0.99	0.45	0.63	0.70	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	TOLEDO	OH	N	43607	Default	Default	Default	0.27	0.48	0.47	Out	Out	Out
	TOLEDO	OH	N	43608	Default	Default	Default	0.55	0.86	NR	Out	Out	Out
	TOLEDO	OH	N	43612	Default	Default	Default	0.03	0.04	0.38	Out	Out	Out
	TOLEDO	OH	N	43612	Default	Default	Default	0.28	0.34	0.32	Out	Out	Out
	ZANESVILLE	OH	N	43701	Default	Default	Default	0.05	0.10	0.13	Out	Out	Out
	BEREA	OH	N	44017	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	BURTON	OH	N	44021	Default	Default	Default	NR	0.0004	0.0004	Out	Out	Out
	CHAGRIN FALLS	OH	N	44023	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	MIDDLEFIELD	OH	N	44062	Default	Default	Default	NR	0.0045	NR	Out	Out	Out
	CLEVELAND	OH	N	44105	Default	Default	Default	0.34	0.45	0.37	Out	Out	Out
	CLEVELAND	OH	N	44102	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	STRONGSVILLE	OH	N	44136	Default	Default	Default	NR	0.0005	0.01	Out	Out	Out
	WALTON HILLS	OH	N	44146	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	CUYAHOGA FALLS	OH	N	44223	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	BRIMFIELD	OH	N	44240	Default	Default	Default	0.33	NR	0.18	Out	Out	Out
	MEDINA	OH	N	44258	Default	Default	Default	NR	0.0003	0.003	Out	Out	Out
	MEDINA	OH	N	44256	Default	Default	Default	NR	NR	0.004	Out	Out	Out
	AKRON	OH	N	44305	Default	Default	Default	NR	0.00002	0.0001	Out	Out	Out
	CANFIELD	OH	N	44406	Default	Default	Default	0.02	NR	0.04	Out	Out	Out
	LORDSTOWN	OH	N	44481	Default	Default	Default	0.44	0.13	0.16	Out	Out	Out
	WARREN	OH	N	44483	Default	Default	Default	0.15	0.18	0.18	Out	Out	Out
	WARREN	OH	N	44483	Default	Default	Default	0.41	0.31	0.38	Out	Out	Out
	YOUNGSTOWN	OH	N	44502	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	BOARDMAN	OH	N	44512	Default	Default	Default	0.21	NR	NR	Out	Out	Out
	YOUNGSTOWN	OH	N	44512	Default	Default	Default	0.39	0.35	0.02	Out	Out	Out
	NEW PHILADELPHIA	OH	N	44663	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	WOOSTER	OH	N	44691	Default	Default	Default	0.23	0.30	0.29	Out	Out	Out
	NORWALK	OH	N	44857	Default	Default	Default	0.21	NR	NR	Out	Out	Out
	SANDUSKY	OH	N	44870	Default	Default	Default	NR	0.0045	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	WILLARD	OH	N	44890	Default	Default	Default	0.27	0.32	0.29	Out	Out	Out
	MANSFIELD	OH	N	44903	Default	Default	Default	NR	0.00005	NR	Out	Out	Out
	LEBANON	OH	N	45036	Default	Default	Default	NR	0.02	0.02	Out	Out	Out
	LEBANON	OH	N	45036	Default	Default	Default	0.12	0.11	NR	Out	Out	Out
	MASON	OH	N	45040	Default	Default	Default	0.17	0.25	0.27	Out	Out	Out
	CINCINNATI	OH	N	45217	Default	Default	Default	NR	NR	0.0002	Out	Out	Out
	BLUE ASH	OH	N	45242	Default	Default	Default	0.02	NR	NR	Out	Out	Out
	CINCINNATI	OH	N	45242	Default	Default	Default	0.26	0.63	0.80	Out	Out	Out
	CINCINNATI	OH	N	45246	Default	Default	Default	0.00006	0.0001	NR	Out	Out	Out
	SIDNEY	OH	N	45365	Default	Default	Default	0.11	0.12	0.27	Out	Out	Out
	SIDNEY	OH	N	45365	Default	Default	Default	0.24	0.27	0.25	Out	Out	Out
	SPRINGFIELD	OH	N	45502	Default	Default	Default	0.13	0.14	0.09	Out	Out	Out
	WAVERLY	OH	N	45690	Default	Default	Default	0.01	0.02	NR	Out	Out	Out
	FINDLAY	OH	Y	45840	14.1732	89	1	3.63	3.65	3.77	Retain	Retain	Retain
	FINDLAY	OH	N	45840	Default	Default	Default	0.52	0.51	0.49	Out	Out	Out
	FORT RECOVERY	OH	N	45846	Default	Default	Default	0.04	NR	NR	Out	Out	Out
	PAULDING	OH	N	45879	Default	Default	Default	NR	0.00002	NR	Out	Out	Out
	SAINT MARYS	OH	N	45885	Default	Default	Default	0.10	0.14	0.16	Out	Out	Out
	FRANKFORT	IN	N	46041	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	GREENCASTLE	IN	N	46135	Default	Default	Default	0.07	NR	0.16	Out	Out	Out
	GREENFIELD	IN	N	46140	Default	Default	Default	0.39	0.51	0.17	Out	Out	Out
	INDIANAPOLIS	IN	N	46203	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	INDIANAPOLIS	IN	N	46218	Default	Default	Default	0.04	0.03	NR	Out	Out	Out
	INDIANAPOLIS	IN	N	46219	Default	Default	Default	0.0008	0.0004	NR	Out	Out	Out
	INDIANAPOLIS	IN	N	46222	Default	Default	Default	NR	0.0003	0.0001	Out	Out	Out
	INDIANAPOLIS	IN	N	46225	Default	Default	Default	0.0001	0.0010	NR	Out	Out	Out
	INDIANAPOLIS	IN	N	46226	Default	Default	Default	0.0002	0.00	NR	Out	Out	Out
	INDIANAPOLIS	IN	N	46268	Default	Default	Default	0.0003	NR	NR	Out	Out	Out
	EAST CHICAGO	IN	N	46312	Default	Default	Default	NR	NR	0.02	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	HAMMOND	IN	N	46320	Default	Default	Default	0.13	0.13	0.12	Out	Out	Out
	LA PORTE	IN	N	46350	Default	Default	Default	0.11	0.16	0.15	Out	Out	Out
	LA PORTE	IN	Y	46350	12.19	32.22	1	1.83	1.87	1.79	Retain	Retain	Retain
	SCHERERVILLE	IN	N	46375	Default	Default	Default	0.002	0.0006	NR	Out	Out	Out
	WHITING	IN	N	46394	Default	Default	Default	NR	0.0002	0.00002	Out	Out	Out
	BREMEN	IN	N	46506	Default	Default	Default	0.006	0.006	NR	Out	Out	Out
	GOSHEN	IN	N	46526	Default	Default	Default	NR	NR	0.09	Out	Out	Out
	MIDDLEBURY	IN	N	46540	Default	Default	Default	NR	0.07	0.11	Out	Out	Out
	MISHAWAKA	IN	N	46545	Default	Default	Default	NR	0.17	NR	Out	Out	Out
	WARSAW	IN	N	46580	Default	Default	Default	0.002	0.002	NR	Out	Out	Out
	ASHLEY	IN	N	46705	Default	Default	Default	NR	0.0001	NR	Out	Out	Out
	BUTLER	IN	N	46721	Default	Default	Default	0.0004	0.0004	NR	Out	Out	Out
	BUTLER	IN	N	46721	Default	Default	Default	0.65	0.63	0.51	Out	Out	Out
	ROANOKE	IN	N	46783	Default	Default	Default	0.16	0.27	0.33	Out	Out	Out
	SAINT JOE	IN	N	46785	Default	Default	Default	0.19	0.19	0.22	Out	Out	Out
	AURORA	IN	N	47001	Default	Default	Default	2.27	1.44	NR	Retain	Out	Out
	BATESVILLE	IN	N	47006	Default	Default	Default	0.08	0.12	0.12	Out	Out	Out
	COLUMBUS	IN	N	47201	Default	Default	Default	0.11	0.15	0.13	Out	Out	Out
	PORTLAND	IN	N	47371	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	BLOOMINGTON	IN	N	47404	Default	Default	Default	0.23	0.23	0.14	Out	Out	Out
	ASHLEY	IN	N	46705	Default	Default	Default	0.11	0.23	0.14	Out	Out	Out
	MOUNT VERNON	IN	N	47620	Default	Default	Default	0.13	0.06	0.16	Out	Out	Out
	NEWBURGH	IN	N	47629	Default	Default	Default	0.31	0.15	0.18	Out	Out	Out
	PRINCETON	IN	N	47670	Default	Default	Default	0.49	0.67	0.57	Out	Out	Out
	EVANSVILLE	IN	N	47710	Default	Default	Default	0.21	0.46	0.50	Out	Out	Out
	BRAZIL	IN	N	47834	Default	Default	Default	NR	0.01	0.07	Out	Out	Out
	LAFAYETTE	IN	N	47905	Default	Default	Default	0.47	0.76	0.63	Out	Out	Out
	CRAWFORDSVILLE	IN	N	47933	Default	Default	Default	0.44	0.61	0.69	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	CRAWFORDSVILLE	IN	N	47933	Default	Default	Default	0.29	0.25	0.23	Out	Out	Out
	KENTLAND	IN	N	47951	Default	Default	Default	0.08	NR	NR	Out	Out	Out
	MONTICELLO	IN	N	47960	Default	Default	Default	1.15	0.79	0.91	Out	Out	Out
	VEEDERSBURG	IN	N	47987	Default	Default	Default	0.05	NR	NR	Out	Out	Out
	LAKE ORION	MI	N	48359	Default	Default	Default	0.25	NR	0.05	Out	Out	Out
	LAKE ORION	MI	N	48359	Default	Default	Default	NR	NR	0.05	Out	Out	Out
	PONTIAC	MI	N	48341	Default	Default	Default	0.08	NR	NR	Out	Out	Out
	MADISON HEIGHTS	MI	N	48071	Default	Default	Default	0.16	0.25	0.26	Out	Out	Out
	STERLING HEIGHTS	MI	N	48313	Default	Default	Default	0.09	0.14	0.20	Out	Out	Out
	STERLING HEIGHTS	MI	N	48314	Default	Default	Default	0.02	NR	NR	Out	Out	Out
	WARREN	MI	N	48091	Default	Default	Default	0.23	0.21	0.31	Out	Out	Out
	BELLEVILLE	MI	N	48111	Default	Default	Default	NR	0.0001	NR	Out	Out	Out
	DEARBORN	MI	Y	48121	21.32926829	Default	0.97	0.51	0.34	0.33	Out	Out	Out
	FLAT ROCK	MI	N	48134	Default	Default	Default	0.27	0.12	0.11	Out	Out	Out
	ROMULUS	MI	N	48174	Default	Default	Default	NR	0.0010	0.0022	Out	Out	Out
	SALINE	MI	N	48176	Default	Default	Default	NR	NR	0.08	Out	Out	Out
	WAYNE	MI	N	48184	Default	Default	Default	0.18	0.24	NR	Out	Out	Out
	WAYNE	MI	N	48184	Default	Default	Default	0.00	0.0064	0.13	Out	Out	Out
	WAYNE	MI	N	48184	Default	Default	Default	NR	0.005	0.005	Out	Out	Out
	DETROIT	MI	N	48207	Default	Default	Default	NR	0.11	0.16	Out	Out	Out
	DETROIT	MI	N	48215	Default	Default	Default	0.66	0.81	1.27	Out	Out	Out
	DETROIT	MI	N	48228	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	REDFORD	MI	N	48239	Default	Default	Default	NR	NR	0.0003	Out	Out	Out
	DETROIT	MI	N	48234	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	FLINT	MI	N	48552	Default	Default	Default	0.76	0.53	0.56	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	LANSING	MI	N	48917	Default	Default	Default	0.19	0.50	0.53	Out	Out	Out
	LANSING	MI	N	48921	Default	Default	Default	0.19	0.21	0.16	Out	Out	Out
	KALAMAZOO	MI	N	49007	Default	Default	Default	NR	NR	0.18	Out	Out	Out
	WHITE PIGEON	MI	N	49099	Default	Default	Default	0.39	0.56	0.34	Out	Out	Out
	JACKSON	MI	N	49203	Default	Default	Default	NR	0.000004	0.000004	Out	Out	Out
	ADRIAN	MI	N	49221	Default	Default	Default	NR	NR	0.00014	Out	Out	Out
	CALEDONIA	MI	N	49316	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	MIDDLEVILLE	MI	N	49333	Default	Default	Default	0.12	0.13	0.15	Out	Out	Out
	NEWAYGO	MI	N	49337	Default	Default	Default	NR	0.10	0.08	Out	Out	Out
	MUSKEGON HEIGHTS	MI	N	49444	Default	Default	Default	NR	0.0029	0.01	Out	Out	Out
	GRAND RAPIDS	MI	N	49503	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	CADILLAC	MI	N	49601	Default	Default	Default	NR	NR	0.0045	Out	Out	Out
	ANKENY	IA	N	50023	Default	Default	Default	NR	0.15	0.45	Out	Out	Out
	KNOXVILLE	IA	N	50138	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	PELLA	IA	N	50219	Default	Default	Default	0.31	0.43	0.41	Out	Out	Out
	FORT DODGE	IA	N	50501	Default	Default	Default	NR	0.14	0.29	Out	Out	Out
	CEDAR FALLS	IA	N	50613	Default	Default	Default	0.13	0.12	NR	Out	Out	Out
	ORANGE CITY	IA	N	51041	Default	Default	Default	NR	0.00	0.00	Out	Out	Out
	CARROLL	IA	N	51401	Default	Default	Default	NR	0.11	0.12	Out	Out	Out
	MISSOURI VALLEY	IA	N	51555	Default	Default	Default	0.13	0.17	0.12	Out	Out	Out
	CEDAR RAPIDS	IA	N	52404	Default	Default	Default	NR	0.02	NR	Out	Out	Out
	BURLINGTON	IA	N	52601	Default	Default	Default	0.12	0.18	0.24	Out	Out	Out
	MUSCATINE	IA	N	52761	Default	Default	Default	0.00	0.00002	NR	Out	Out	Out
	CHILTON	WI	N	53014	Default	Default	Default	NR	NR	0.23	Out	Out	Out
	CHILTON	WI	N	53014	Default	Default	Default	0.13	0.14	0.11	Out	Out	Out
	HARTFORD	WI	N	53027	Default	Default	Default	0.23	0.16	0.19	Out	Out	Out
	HARTFORD	WI	N	53027	Default	Default	Default	0.44	0.50	0.42	Out	Out	Out
	HORICON	WI	N	53032	Default	Default	Default	NR	NR	0.12	Out	Out	Out
	LOMIRA	WI	N	53048	Default	Default	Default	NR	0.10	0.19	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	MENOMONEE FALLS	WI	N	53051	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	OCONOMOWOC	WI	N	53066	Default	Default	Default	0.21	0.23	0.16	Out	Out	Out
	OCONOMOWOC	WI	N	53066	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	SHEBOYGAN FALLS	WI	N	53085	Default	Default	Default	0.28	0.29	0.27	Out	Out	Out
	SUSSEX	WI	N	53089	Default	Default	Default	0.32	0.33	0.44	Out	Out	Out
	WATERTOWN	WI	N	53094	Default	Default	Default	NR	0.000005	0.000004	Out	Out	Out
	NEW BERLIN	WI	N	53151	Default	Default	Default	NR	NR	0.00022	Out	Out	Out
	OAK CREEK	WI	N	53154	Default	Default	Default	NR	0.43	0.39	Out	Out	Out
	OAK CREEK	WI	N	53154	Default	Default	Default	0.57	0.92	1.28	Out	Out	Out
	TWIN LAKES	WI	N	53181	Default	Default	Default	NR	0.02	0.03	Out	Out	Out
	WAUKESHA	WI	N	53186	Default	Default	Default	NR	NR	0.00031	Out	Out	Out
	SAINT FRANCIS	WI	N	53235	Default	Default	Default	0.14	0.15	0.21	Out	Out	Out
	MILWAUKEE	WI	N	53207	Default	Default	Default	0.00	0.00005	NR	Out	Out	Out
	MILWAUKEE	WI	N	53209	Default	Default	Default	NR	0.0036	0.0032	Out	Out	Out
	MILWAUKEE	WI	N	53212	Default	Default	Default	0.31	0.33	NR	Out	Out	Out
	WEST ALLIS	WI	N	53214	Default	Default	Default	NR	0.12	0.13	Out	Out	Out
	MILWAUKEE	WI	N	53223	Default	Default	Default	0.01	0.01	NR	Out	Out	Out
	MILWAUKEE	WI	N	53224	Default	Default	Default	0.33	0.34	0.34	Out	Out	Out
	MILWAUKEE	WI	N	53224	Default	Default	Default	1.43	1.24	1.15	Out	Out	Out
	MILWAUKEE	WI	N	53226	Default	Default	Default	0.00004	0.00004	NR	Out	Out	Out
	STURTEVANT	WI	N	53177	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	FORT ATKINSON	WI	N	53538	Default	Default	Default	0.36	0.50	0.30	Out	Out	Out
	BARABOO	WI	N	53913	Default	Default	Default	NR	NR	0.16	Out	Out	Out
	BARABOO	WI	N	53913	Default	Default	Default	0.63	0.65	0.54	Out	Out	Out
	MARINETTE	WI	N	54143	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	MANITOWOC	WI	N	54220	Default	Default	Default	NR	NR	0.00074	Out	Out	Out
	PLOVER	WI	Y	54467	11.28	36.88	0.99	1.40	0.97	0.13	Out	Out	Out
	LA CROSSE	WI	Y	54603	13.716	12	1	2.96	2.87	3.11	Retain	Retain	Retain
	TOMAH	WI	N	54660	Default	Default	Default	0.04	0.07	NR	Out	Out	Out
	TOMAH	WI	N	54660	Default	Default	Default	NR	NR	0.11	Out	Out	Out
	MENOMONIE	WI	N	54751	Default	Default	Default	0.17	0.19	0.19	Out	Out	Out
	OSHKOSH	WI	N	54903	Default	Default	Default	0.02	NR	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	WAUPACA	WI	N	54981	Default	Default	Default	0.10	0.19	0.24	Out	Out	Out
	LAKEVILLE	MN	N	55044	Default	Default	Default	0.0001	0.0001	NR	Out	Out	Out
	OWATONNA	MN	Y	55060	17.98	70.7	0.99	2.88	3.02	3.14	Retain	Retain	Retain
	RED WING	MN	N	55066	Default	Default	Default	0.48	0.58	0.51	Out	Out	Out
	SAINT PAUL	MN	Y	55107	15	120	0.95	1.36	1.30	1.15	Out	Out	Out
	SAINT PAUL	MN	N	55116	Default	Default	Default	0.08	0.10	0.15	Out	Out	Out
	ROSEMOUNT	MN	N	55068	Default	Default	Default	0.03	0.02	NR	Out	Out	Out
	HOPKINS	MN	N	55343	Default	Default	Default	NR	0.0001	0.00009	Out	Out	Out
	MAPLE GROVE	MN	N	55369	Default	Default	Default	NR	NR	0.14	Out	Out	Out
	WACONIA	MN	N	55387	Default	Default	Default	0.11	NR	NR	Out	Out	Out
	MINNEAPOLIS	MN	N	55416	Default	Default	Default	NR	NR	0.13	Out	Out	Out
	WASECA	MN	N	56093	Default	Default	Default	0.16	0.16	0.24	Out	Out	Out
	COTTONWOOD	MN	N	56229	Default	Default	Default	0.12	NR	NR	Out	Out	Out
	SAINT CLOUD	MN	N	56303	Default	Default	Default	0.17	0.26	0.21	Out	Out	Out
	YANKTON	SD	N	57078	Default	Default	Default	0.52	0.13	0.05	Out	Out	Out
	GWINNER	ND	N	58040	Default	Default	Default	NR	0.13	NR	Out	Out	Out
	ELK GROVE VILLAGE	IL	N	60007	Default	Default	Default	0.16	0.25	0.21	Out	Out	Out
	ELK GROVE VILLAGE	IL	N	60007	Default	Default	Default	NR	NR	0.00003	Out	Out	Out
	ELK GROVE VILLAGE	IL	N	60007	Default	Default	Default	0.01	0.01	NR	Out	Out	Out
	DES PLAINES	IL	N	60016	Default	Default	Default	NR	0.01	NR	Out	Out	Out
	LAKE BLUFF	IL	N	60044	Default	Default	Default	0.11	NR	NR	Out	Out	Out
	WOODSTOCK	IL	N	60098	Default	Default	Default	0.15	0.14	0.22	Out	Out	Out
	ADDISON	IL	N	60101	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	ELGIN	IL	N	60120	Default	Default	Default	0.24	0.19	0.05	Out	Out	Out
	ELGIN	IL	N	60123	Default	Default	Default	NR	0.00	NR	Out	Out	Out
	FRANKLIN PARK	IL	N	60131	Default	Default	Default	NR	NR	0.04	Out	Out	Out
	HAMPSHIRE	IL	N	60140	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	BROADVIEW	IL	N	60153	Default	Default	Default	0.07	NR	NR	Out	Out	Out
	NORTHLAKE	IL	N	60164	Default	Default	Default	NR	0.0006	0.0001	Out	Out	Out
	SYCAMORE	IL	N	60178	Default	Default	Default	NR	0.21	0.14	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	SYCAMORE	IL	N	60178	Default	Default	Default	NR	0.01	0.02	Out	Out	Out
	CAROL STREAM	IL	N	60188	Default	Default	Default	0.06	0.13	0.21	Out	Out	Out
	ALSIP	IL	N	60803	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	CHANNAHON	IL	N	60410	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	CHICAGO HEIGHTS	IL	N	60411	Default	Default	Default	0.76	0.90	0.86	Out	Out	Out
	HARVEY	IL	N	60426	Default	Default	Default	0.49	0.78	0.21	Out	Out	Out
	HOMEWOOD	IL	N	60430	Default	Default	Default	0.003	0.0002	NR	Out	Out	Out
	MIDLOTHIAN	IL	N	60445	Default	Default	Default	0.0001	0.0001	NR	Out	Out	Out
	BRIDGEVIEW	IL	N	60455	Default	Default	Default	0.19	0.21	0.19	Out	Out	Out
	BEDFORD PARK	IL	N	60499	Default	Default	Default	0.002	NR	0.0003	Out	Out	Out
	BEDFORD PARK	IL	N	60501	Default	Default	Default	0.0006	NR	NR	Out	Out	Out
	AURORA	IL	N	60504	Default	Default	Default	0.31	0.27	0.20	Out	Out	Out
	WOODRIDGE	IL	N	60517	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	CHICAGO	IL	N	60608	Default	Default	Default	0.22	0.32	0.11	Out	Out	Out
	CHICAGO	IL	N	60609	Default	Default	Default	0.54	0.91	0.72	Out	Out	Out
	CHICAGO	IL	Y	60609	12.192	19	0.9368	2.97	3.10	1.47	Retain	Retain	Out
	CHICAGO	IL	N	60623	Default	Default	Default	0.17	0.26	0.24	Out	Out	Out
	CHICAGO	IL	N	60623	Default	Default	Default	0.22	0.64	0.59	Out	Out	Out
	CHICAGO	IL	N	60623	Default	Default	Default	0.23	0.26	0.28	Out	Out	Out
	CHICAGO	IL	N	60624	Default	Default	Default	0.16	0.11	0.13	Out	Out	Out
	CHICAGO	IL	N	60632	Default	Default	Default	NR	0.15	0.20	Out	Out	Out
	ALSIP	IL	N	60803	Default	Default	Default	0.14	0.52	0.46	Out	Out	Out
	BRADLEY	IL	Y	60915	15.24	18.71	0.88	3.18	2.97	3.01	Retain	Retain	Retain
	BELVIDERE	IL	N	61008	Default	Default	Default	0.03	0.17	0.25	Out	Out	Out
	GALENA	IL	N	61036	Default	Default	Default	NR	NR	0.44	Out	Out	Out
	ROCHELLE	IL	N	61068	Default	Default	Default	0.09	0.19	0.34	Out	Out	Out
	ROCKFORD	IL	N	61104	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	CORDOVA	IL	N	61242	Default	Default	Default	0.01	0.03	NR	Out	Out	Out
	CORDOVA	IL	N	61242	Default	Default	Default	NR	NR	0.02	Out	Out	Out
	EAST MOLINE	IL	N	61244	Default	Default	Default	0.14	NR	NR	Out	Out	Out
	HILLSDALE	IL	N	61257	Default	Default	Default	0.0005	0.0006	NR	Out	Out	Out
	GALESBURG	IL	N	61401	Default	Default	Default	NR	0.33	0.27	Out	Out	Out
	PEORIA	IL	N	61615	Default	Default	Default	NR	0.03	NR	Out	Out	Out
	GOODFIELD	IL	N	61742	Default	Default	Default	NR	0.18	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	GOODFIELD	IL	N	61742	Default	Default	Default	NR	NR	0.38	Out	Out	Out
	ARTHUR	IL	N	61911	Default	Default	Default	0.17	NR	NR	Out	Out	Out
	MATTOON	IL	N	61938	Default	Default	Default	NR	0.12	0.07	Out	Out	Out
	GRANITE CITY	IL	N	62040	Default	Default	Default	NR	0.01	0.02	Out	Out	Out
	GRANITE CITY	IL	N	62040	Default	Default	Default	0.18	0.19	0.17	Out	Out	Out
	SAUGET	IL	N	62201	Default	Default	Default	NR	0.0005	0.0005	Out	Out	Out
	SAUGET	IL	N	62201	Default	Default	Default	NR	0.0001	0.0001	Out	Out	Out
	QUINCY	IL	N	62305	Default	Default	Default	0.28	0.29	0.34	Out	Out	Out
	EFFINGHAM	IL	N	62401	Default	Default	Default	0.22	0.13	0.08	Out	Out	Out
	ARNOLD	MO	Y	63010	12.192	68.58	0.8	0.95	1.00	0.91	Out	Out	Out
	FENTON	MO	N	63026	Default	Default	Default	NR	0.23	0.22	Out	Out	Out
	FENTON	MO	N	63026	Default	Default	Default	0.87	NR	NR	Out	Out	Out
	MARYLAND HEIGHTS	MO	N	63043	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	MARYLAND HEIGHTS	MO	N	63043	Default	Default	Default	0.04	NR	0.04	Out	Out	Out
	PACIFIC	MO	N	63069	Default	Default	Default	NR	NR	0.0009	Out	Out	Out
	SAINT LOUIS	MO	N	63104	Default	Default	Default	0.18	0.21	0.23	Out	Out	Out
	SAINT LOUIS	MO	N	63111	Default	Default	Default	0.0004	0.0002	NR	Out	Out	Out
	BERKELEY	MO	N	63134	Default	Default	Default	0.01	0.0011	NR	Out	Out	Out
	SAINT LOUIS	MO	N	63147	Default	Default	Default	0.00	0.0027	NR	Out	Out	Out
	SAINT LOUIS	MO	N	63147	Default	Default	Default	NR	NR	0.0046	Out	Out	Out
	WARRENTON	MO	N	63383	Default	Default	Default	NR	NR	0.73	Out	Out	Out
	WENTZVILLE	MO	N	63385	Default	Default	Default	0.11	0.17	0.21	Out	Out	Out
	POPLAR BLUFF	MO	N	63901	Default	Default	Default	NR	0.00001	0.00002	Out	Out	Out
	INDEPENDENCE	MO	N	64051	Default	Default	Default	0.12	0.13	0.11	Out	Out	Out
	CLAYCOMO	MO	Y	64119	Default	Default	0.57	0.52	0.63	0.69	Out	Out	Out
	KANSAS CITY	MO	N	64120	Default	Default	Default	0.15	NR	NR	Out	Out	Out
	SAINT JOSEPH	MO	N	64504	Default	Default	Default	0.29	0.27	0.27	Out	Out	Out
	OWENSVILLE	MO	N	65066	Default	Default	Default	0.18	0.26	0.16	Out	Out	Out
	MANSFIELD	MO	N	65704	Default	Default	Default	NR	0.16	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	MONETT	MO	Y	65708	6.096	3.048	0.11	0.31	0.07	0.02	Out	Out	Out
	MONETT	MO	N	65708	Default	Default	Default	NR	0.11	NR	Out	Out	Out
	MOUNT VERNON	MO	N	65712	Default	Default	Default	0.31	0.28	NR	Out	Out	Out
	SPRINGFIELD	MO	N	65802	Default	Default	Default	0.0004	0.0004	NR	Out	Out	Out
	SPRINGFIELD	MO	N	65802	Default	Default	Default	NR	NR	0.0004	Out	Out	Out
	SHAWNEE	KS	N	66227	Default	Default	Default	0.14	0.15	0.09	Out	Out	Out
	BAXTER SPRINGS	KS	N	66713	Default	Default	Default	0.13	0.21	NR	Out	Out	Out
	FREDONIA	KS	N	66736	Default	Default	Default	NR	0.0002	NR	Out	Out	Out
	IOLA	KS	N	66749	Default	Default	Default	NR	0.00005	0.00006	Out	Out	Out
	WINFIELD	KS	N	67156	Default	Default	Default	0.06	0.17	0.22	Out	Out	Out
	WICHITA	KS	N	67219	Default	Default	Default	NR	0.13	0.12	Out	Out	Out
	WICHITA	KS	N	67219	Default	Default	Default	NR	0.00012	0.00014	Out	Out	Out
	SALINA	KS	N	67401	Default	Default	Default	0.07	NR	NR	Out	Out	Out
	VALLEY	NE	N	68064	Default	Default	Default	NR	NR	0.18	Out	Out	Out
	LINCOLN	NE	N	68504	Default	Default	Default	NR	0.0000000003	0.00000005	Out	Out	Out
	LINCOLN	NE	N	68524	Default	Default	Default	0.07	0.07	NR	Out	Out	Out
	NORFOLK	NE	N	68701	Default	Default	Default	0.25	0.22	0.22	Out	Out	Out
	DAKOTA CITY	NE	N	68731	Default	Default	Default	NR	0.00	NR	Out	Out	Out
	RESERVE	LA	N	70084	Default	Default	Default	NR	0.00000004	0.00000005	Out	Out	Out
	NEW ORLEANS	LA	N	70123	Default	Default	Default	0.18	0.23	0.22	Out	Out	Out
	BROUSSARD	LA	N	70518	Default	Default	Default	NR	0.003	NR	Out	Out	Out
	NEW IBERIA	LA	N	70560	Default	Default	Default	NR	0.05	0.05	Out	Out	Out
	SCOTT	LA	N	70583	Default	Default	Default	NR	0.000007	0.000023	Out	Out	Out
	SAINT GABRIEL	LA	N	70776	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	ZACHARY	LA	N	70791	Default	Default	Default	0.18	0.19	0.18	Out	Out	Out
	BATON ROUGE	LA	N	70815	Default	Default	Default	0.01	0.01	NR	Out	Out	Out
	SHREVEPORT	LA	N	71129	Default	Default	Default	0.13	0.08	0.06	Out	Out	Out
	ALEXANDRIA	LA	N	71303	Default	Default	Default	0.00	NR	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	WHITE HALL	AR	N	71602	Default	Default	Default	0.21	0.21	0.18	Out	Out	Out
	PINE BLUFF	AR	N	71602	Default	Default	Default	NR	0.23	0.22	Out	Out	Out
	EL DORADO	AR	N	71730	Default	Default	Default	0.00	0.00021	NR	Out	Out	Out
	MAGNOLIA	AR	N	71753	Default	Default	Default	NR	NR	0.00152	Out	Out	Out
	BENTON	AR	N	72015	Default	Default	Default	0.00	0.0018	NR	Out	Out	Out
	SEARCY	AR	N	72143	Default	Default	Default	NR	0.01	NR	Out	Out	Out
	BLYTHEVILLE	AR	N	72315	Default	Default	Default	NR	NR	0.40	Out	Out	Out
	HELENA	AR	N	72342	Default	Default	Default	NR	0.0065	0.0032	Out	Out	Out
	JONESBORO	AR	N	72401	Default	Default	Default	NR	NR	0.18	Out	Out	Out
	PIGGOTT	AR	N	72454	Default	Default	Default	0.31	0.28	0.12	Out	Out	Out
	FAYETTEVILLE	AR	N	72701	Default	Default	Default	NR	0.15	0.23	Out	Out	Out
	ROGERS	AR	N	72756	Default	Default	Default	NR	0.14	0.27	Out	Out	Out
	SPRINGDALE	AR	N	72764	Default	Default	Default	0.28	0.22	0.27	Out	Out	Out
	FORT SMITH	AR	N	72916	Default	Default	Default	NR	NR	0.28	Out	Out	Out
	EL RENO	OK	N	73036	Default	Default	Default	NR	0.16	0.16	Out	Out	Out
	EL RENO	OK	N	73036	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	TINKER A F B	OK	N	73145	Default	Default	Default	0.15	0.17	0.14	Out	Out	Out
	OKLAHOMA CITY	OK	Y	73179	13	100	0.85	0.44	NR	NR	Out	Out	Out
	WAYNOKA	OK	N	73860	Default	Default	Default	NR	NR	0.00005	Out	Out	Out
	SAND SPRINGS	OK	N	74063	Default	Default	Default	NR	0.0011	0.0011	Out	Out	Out
	TULSA	OK	N	74131	Default	Default	Default	0.0002	NR	0.00009	Out	Out	Out
	TULSA	OK	N	74147	Default	Default	Default	NR	0.00005	0.00005	Out	Out	Out
	PONCA CITY	OK	N	74601	Default	Default	Default	0.51	0.44	0.42	Out	Out	Out
	SHAWNEE	OK	N	74804	Default	Default	Default	0.50	0.47	0.41	Out	Out	Out
	CARROLLTON	TX	N	75006	Default	Default	Default	NR	0.00273	NR	Out	Out	Out
	CARROLLTON	TX	N	75006	Default	Default	Default	NR	NR	0.000006	Out	Out	Out
	GARLAND	TX	N	75041	Default	Default	Default	NR	NR	0.00009	Out	Out	Out
	MESQUITE	TX	N	75149	Default	Default	Default	NR	NR	0.00005	Out	Out	Out
	TERRELL	TX	N	75160	Default	Default	Default	0.41	0.40	0.32	Out	Out	Out
	WAXAHACHIE	TX	N	75165	Default	Default	Default	0.00009	0.00009	NR	Out	Out	Out
	WAXAHACHIE	TX	N	75165	Default	Default	Default	0.01	NR	NR	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	WAXAHACHIE	TX	N	75165	Default	Default	Default	0.0045	NR	NR	Out	Out	Out
	DALLAS	TX	N	75244	Default	Default	Default	0.02	NR	NR	Out	Out	Out
	PARIS	TX	N	75460	Default	Default	Default	0.25	0.21	0.19	Out	Out	Out
	TEXARKANA	TX	N	75501	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	LONGVIEW	TX	N	75604	Default	Default	Default	NR	NR	0.0008	Out	Out	Out
	LONGVIEW	TX	Y	75604	18	80	0.91	1.53	1.30	1.07	Out	Out	Out
	LONGVIEW	TX	N	75602	Default	Default	Default	0.47	0.49	0.51	Out	Out	Out
	GILMER	TX	N	75644	Default	Default	Default	NR	NR	0.0009	Out	Out	Out
	KILGORE	TX	N	75662	Default	Default	Default	NR	0.0000020	0.000009	Out	Out	Out
	KILGORE	TX	N	75662	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	LONGVIEW	TX	N	75662	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	KILGORE	TX	N	75662	Default	Default	Default	NR	0.0012	0.0012	Out	Out	Out
	GRAPELAND	TX	N	75844	Default	Default	Default	0.35	0.29	0.32	Out	Out	Out
	LUFKIN	TX	N	75904	Default	Default	Default	0.26	0.30	NR	Out	Out	Out
	CRESSON	TX	N	76035	Default	Default	Default	0.0029	NR	NR	Out	Out	Out
	MANSFIELD	TX	N	76063	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	FORT WORTH	TX	N	76140	Default	Default	Default	0.36	0.37	0.35	Out	Out	Out
	MEXIA	TX	N	76667	Default	Default	Default	NR	0.23	NR	Out	Out	Out
	HOUSTON	TX	N	77007	Default	Default	Default	0.02	0.01	NR	Out	Out	Out
	HOUSTON	TX	N	77015	Default	Default	Default	0.18	0.17	0.16	Out	Out	Out
	HOUSTON	TX	N	77041	Default	Default	Default	0.03	NR	NR	Out	Out	Out
	HOUSTON	TX	N	77041	Default	Default	Default	NR	0.02	0.02	Out	Out	Out
	HOUSTON	TX	N	77043	Default	Default	Default	NR	0.17	0.17	Out	Out	Out
	HOUSTON	TX	N	77047	Default	Default	Default	0.0011	0.0007	NR	Out	Out	Out
	HOUSTON	TX	N	77054	Default	Default	Default	0.08	0.04	NR	Out	Out	Out
	HOUSTON	TX	N	77060	Default	Default	Default	NR	NR	0.00	Out	Out	Out
	HOUSTON	TX	N	77092	Default	Default	Default	NR	0.0001	0.0002	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	CONROE	TX	N	77301	Default	Default	Default	NR	0.23	0.16	Out	Out	Out
	CONROE	TX	N	77303	Default	Default	Default	0.60	0.60	0.56	Out	Out	Out
	CONROE	TX	N	77303	Default	Default	Default	1.16	1.22	1.09	Out	Out	Out
	TOMBALL	TX	N	77375	Default	Default	Default	0.0012	0.0008	NR	Out	Out	Out
	SUGAR LAND	TX	N	77478	Default	Default	Default	1.10	1.10	1.08	Out	Out	Out
	SUGAR LAND	TX	N	77478	Default	Default	Default	NR	NR	0.0020	Out	Out	Out
	PASADENA	TX	N	77503	Default	Default	Default	0.63	0.65	0.73	Out	Out	Out
	PASADENA	TX	N	77507	Default	Default	Default	0.24	0.26	0.19	Out	Out	Out
	BAYTOWN	TX	N	77520	Default	Default	Default	0.0046	0.0046	NR	Out	Out	Out
	CROSBY	TX	N	77532	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	DEER PARK	TX	N	77536	Default	Default	Default	0.00005	0.0046	NR	Out	Out	Out
	LA PORTE	TX	N	77571	Default	Default	Default	NR	0.00004	NR	Out	Out	Out
	FRESNO	TX	N	77545	Default	Default	Default	NR	0.0018	0.0016	Out	Out	Out
	LA PORTE	TX	N	77571	Default	Default	Default	0.15	0.07	0.17	Out	Out	Out
	LA PORTE	TX	N	77571	Default	Default	Default	0.02	NR	NR	Out	Out	Out
	TEXAS CITY	TX	N	77590	Default	Default	Default	NR	0.0002	NR	Out	Out	Out
	ORANGE	TX	N	77630	Default	Default	Default	NR	0.0045	0.0026	Out	Out	Out
	PORT NECHES	TX	N	77651	Default	Default	Default	NR	0.0028	0.0028	Out	Out	Out
	BRYAN	TX	N	77807	Default	Default	Default	NR	NR	0.0004	Out	Out	Out
	NAVASOTA	TX	N	77868	Default	Default	Default	0.04	0.19	0.0059	Out	Out	Out
	SEADRIFT	TX	N	77983	Default	Default	Default	0.57	0.58	0.59	Out	Out	Out
	ELMENDORF	TX	N	78112	Default	Default	Default	0.00006	NR	NR	Out	Out	Out
	SAN ANTONIO	TX	N	78264	Default	Default	Default	0.26	0.10	0.31	Out	Out	Out
	ROBSTOWN	TX	N	78380	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	CORPUS CHRISTI	TX	N	78405	Default	Default	Default	0.0029	0.002	NR	Out	Out	Out
	AMARILLO	TX	N	79108	Default	Default	Default	0.0025	NR	0.0007	Out	Out	Out
	GARDENDALE	TX	N	79758	Default	Default	Default	NR	NR	0.05	Out	Out	Out
	ODESSA	TX	N	79762	Default	Default	Default	NR	0.01	0.01	Out	Out	Out
	HOUSTON	TX	N	77061	Default	Default	Default	0.0001	NR	0.01	Out	Out	Out
	ODESSA	TX	N	79765	Default	Default	Default	0.0026	NR	NR	Out	Out	Out
	DENVER	CO	N	80216	Default	Default	Default	0.0009	0.00047	NR	Out	Out	Out
	DENVER	CO	N	80216	Default	Default	Default	0.0001	0.00010	NR	Out	Out	Out
	GOLDEN	CO	N	80401	Default	Default	Default	1.23	1.19	1.10	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	GOLDEN	CO	N	80403	Default	Default	Default	0.98	0.90	0.96	Out	Out	Out
	LONGMONT	CO	N	80501	Default	Default	Default	0.15	0.15	0.16	Out	Out	Out
	WINDSOR	CO	Y	80550	14.224	61.8744	0.85	1.22	1.18	1.16	Out	Out	Out
	COLORADO SPRINGS	CO	N	80916	Default	Default	Default	NR	0.02	0.02	Out	Out	Out
	GRAND JUNCTION	CO	N	81505	Default	Default	Default	NR	NR	0.10	Out	Out	Out
	SINCLAIR	WY	N	82334	Default	Default	Default	0.00005	NR	0.00	Out	Out	Out
	WORLAND	WY	N	82401	Default	Default	Default	1.11	1.27	1.33	Out	Out	Out
	CLEARFIELD	UT	N	84016	Default	Default	Default	0.00012	0.00005	NR	Out	Out	Out
	HILL AFB	UT	N	84056	Default	Default	Default	0.05	NR	NR	Out	Out	Out
	LOGAN	UT	N	84321	Default	Default	Default	0.03	0.10	0.13	Out	Out	Out
	PHOENIX	AZ	Y	85043	14	30	1	1.05	1.01	1.11	Out	Out	Out
	PHOENIX	AZ	N	85043	Default	Default	Default	0.0026	NR	NR	Out	Out	Out
	MESA	AZ	N	85210	Default	Default	Default	NR	0.00002	0.00022	Out	Out	Out
	CHANDLER	AZ	N	85226	Default	Default	Default	0.01	NR	NR	Out	Out	Out
	GOODYEAR	AZ	N	85338	Default	Default	Default	NR	NR	0.0055	Out	Out	Out
	YUMA	AZ	N	85369	Default	Default	Default	0.0039	NR	NR	Out	Out	Out
	FERNLEY	NV	N	89408	Default	Default	Default	0.00006	0.00006	NR	Out	Out	Out
	WINNEMUCCA	NV	N	89445	Default	Default	Default	NR	0.16	0.11	Out	Out	Out
	RENO	NV	N	89512	Default	Default	Default	0.06	0.06	NR	Out	Out	Out
	CITY OF COMMERCE	CA	N	90040	Default	Default	Default	0.00012	NR	0.00003	Out	Out	Out
	VERNON	CA	N	90058	Default	Default	Default	0.0011	NR	NR	Out	Out	Out
	LYNWOOD	CA	N	90262	Default	Default	Default	0.0001	NR	NR	Out	Out	Out
	TORRANCE	CA	N	90503	Default	Default	Default	1.18	1.11	0.59	Out	Out	Out
	TORRANCE	CA	N	90509	Default	Default	Default	NR	0.0045	0.0007	Out	Out	Out
	LA MIRADA	CA	N	90638	Default	Default	Default	NR	NR	0.00014	Out	Out	Out
	LOS ALAMITOS	CA	N	90720	Default	Default	Default	0.07	NR	NR	Out	Out	Out
	TERMINAL ISLAND	CA	N	90731	Default	Default	Default	0.23	0.16	0.15	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	SAN PEDRO	CA	N	90731	Default	Default	Default	NR	NR	0.0046	Out	Out	Out
	CARSON	CA	N	90745	Default	Default	Default	0.18	0.15	NR	Out	Out	Out
	LONG BEACH	CA	N	90810	Default	Default	Default	NR	0.0027	NR	Out	Out	Out
	CHATSWORTH	CA	Y	91311	15	30	0.98	1.53	1.20	0.79	Out	Out	Out
	AZUSA	CA	N	91702	Default	Default	Default	NR	NR	0.0001	Out	Out	Out
	RANCHO CUCAMONGA	CA	N	91730	Default	Default	Default	NR	0.03	0.03	Out	Out	Out
	SOUTH EL MONTE	CA	N	91733	Default	Default	Default	0.0021	0.0021	NR	Out	Out	Out
	MIRA LOMA	CA	N	91752	Default	Default	Default	1.13	1.11	1.07	Out	Out	Out
	ONTARIO	CA	N	91761	Default	Default	Default	0.00021	NR	NR	Out	Out	Out
	SAN MARCOS	CA	N	92078	Default	Default	Default	0.04	NR	0.0055	Out	Out	Out
	IRVINE	CA	N	92618	Default	Default	Default	NR	NR	0.00003	Out	Out	Out
	SANTA ANA	CA	N	92704	Default	Default	Default	0.00	NR	NR	Out	Out	Out
	SANTA ANA	CA	N	92704	Default	Default	Default	0.00035	0.00047	NR	Out	Out	Out
	SANTA ANA	CA	N	92704	Default	Default	Default	NR	NR	0.01	Out	Out	Out
	BAKERSFIELD	CA	N	93308	Default	Default	Default	0.00010	0.00012	NR	Out	Out	Out
	BAKERSFIELD	CA	N	93308	Default	Default	Default	NR	0.00014	NR	Out	Out	Out
	SAN CARLOS	CA	N	94070	Default	Default	Default	0.00003	0.00003	NR	Out	Out	Out
	FAIRFIELD	CA	N	94533	Default	Default	Default	0.85	0.52	0.59	Out	Out	Out
	FAIRFIELD	CA	Y	94533	15	50	0.98	0.37	0.27	0.27	Out	Out	Out
	FREMONT	CA	N	94538	Default	Default	Default	1.23	0.53	NR	Out	Out	Out
	SAN JOSE	CA	N	95131	Default	Default	Default	0.0002	0.0003	NR	Out	Out	Out
	SAN JOSE	CA	N	95133	Default	Default	Default	0.0007	NR	NR	Out	Out	Out
	MERCED	CA	N	95348	Default	Default	Default	0.26	0.19	0.02	Out	Out	Out
	OAKDALE	CA	N	95361	Default	Default	Default	0.13	0.09	0.08	Out	Out	Out
	RIVERBANK	CA	N	95367	Default	Default	Default	0.09	0.10	0.17	Out	Out	Out
	DIXON	CA	N	95620	Default	Default	Default	0.17	0.20	0.16	Out	Out	Out
	ROSEVILLE	CA	N	95678	Default	Default	Default	0.0057	NR	NR	Out	Out	Out
	SACRAMENTO	CA	N	95824	Default	Default	Default	NR	NR	0.0045	Out	Out	Out

Table C-4. Comparisons of 2009, 2010 and 2011 TRI Air Emissions Data for Certain Glycol Ethers to Site Specific Screening Values (Step B)

Facility	City	State	Completed Survey	Zip Code	Minimum Release Height (m)	Minimum Receptor Distance (m)	Proportion of Certain Glycol Ethers Used that are EGBE	2009 Maximum Impact (mg/m^3)	2010 Maximum Impact (mg/m^3)	2011 Maximum Impact (mg/m^3)	2009 Outcome	2010 Outcome	2011 Outcome
[redacted]	SACRAMENTO	CA	N	95824	Default	Default	Default	0.18	0.21	0.17	Out	Out	Out
	SACRAMENTO	CA	N	95826	Default	Default	Default	0.000011	NR	NR	Out	Out	Out
	KAPOLEI	HI	N	96707	Default	Default	Default	0.30	0.30	0.26	Out	Out	Out
	PORTLAND	OR	N	97210	Default	Default	Default	NR	0.00160	0.00134	Out	Out	Out
	PORTLAND	OR	N	97210	Default	Default	Default	NR	0.00009	NR	Out	Out	Out
	PORTLAND	OR	N	97227	Default	Default	Default	0.00029	0.00007	NR	Out	Out	Out
	AUBURN	WA	N	98002	Default	Default	Default	NR	0.0045	0.0045	Out	Out	Out
	KENT	WA	Y	98032	13.19784	29	0.9987	3.75	3.54	3.54	Retain	Retain	Retain
	EVERETT	WA	N	98204	Default	Default	Default	0.35	0.26	0.48	Out	Out	Out
	TACOMA	WA	N	98421	Default	Default	Default	NR	0.0000001	0.0000002	Out	Out	Out
	OLYMPIA	WA	Y	98501	12.8	44.63	0.94	1.83	2.07	1.71	Retain	Retain	Retain
	ELMENDORF AFB	AK	N	99506	Default	Default	Default	NR	0.00023	NR	Out	Out	Out

NR: no emissions reported
Y: survey completed
N: survey not completed
tpy: tons per year
Default: Because site-specific survey not completed, assumed point source type, emissions height of 5 m, distance to fenceline of 20 m and all repor
mg/m^3: concentration of EGBE in air (milligrams per cubic meter) at fenceline
EGBE: ethylene glycol monobutyl ether
m: meter
TRI: Toxics Release Inventory

APPENDIX D

Outcome of Long-Term Tiered Modeling in Support of Uncertainty Analysis

Table D-1. Tier 1 Table of Normalized Annual Concentrations (µg/m^3)/(tpy)

Source Type	Release Height (m)	Side Length (m)	Normalized Maximum Annual Concentrations At or Beyond: Receptor Distance					
			10 m	30 m	50 m	100 m	200 m	500 m
Area (10 m)	0.00	10.00	956	302.00	164.00	64.80	23.20	5.53
Area (10 m)[a]	3.00	10.00	103	32.47	29.94	28.09	17.73	5.18
Area (20 m)	0.00	20.00	515	183.00	107.00	47.80	19.10	5.04
Area (30 m)	0.00	30.00	351	131.00	79.20	37.40	16.10	4.58
Volume	3[a]	10.00	128	40.32	36.10	25.00	13.79	4.46
Point	0	-	5410	792.00	325.00	96.70	29.10	6.08
Point	2	-	187	142.00	135.00	72.80	26.40	5.96
Point	5	-	96.20	74.60	51.80	27.20	14.80	5.18
Point	10	-	27.70	24.40	21.10	13.60	7.17	2.88
Point	20	-	6.91	4.52	4.52	3.80	2.44	1.06
Point	35	-	2.26	2.26	1.13	1.11	0.90	0.44
Point	50	-	1.11	1.10	1.11	0.47	0.42	0.25

a. Not included in EPA's Tier 1 table. Included in the EGBE HAPs Petition Table 4-2. These values are based on ratios of predicted SCREEN3 impacts for each receptor distance. The 10 m2 area source with the 0 m release height was used as the basis for the SCREEN3 predicted ratios. Ratios at the 10 m receptor distance were set equal to the ratios at the 30 m receptor distance.

m: meter

tpy: ton per year

µg/m^3: micrograms per cubic meter

Table D-2. Tier 1 Sensitivity Analysis Long-Term Modeling Parameters and Individual Source Results at Selected Facilities

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	EPA Tier 1 Table: Normalized Maximum Annual Conc. ($\mu g/m^3$)/(tpy)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)
[redacted]	Stack 1	16.6	-	89	Y	21.10	1.00	130.0	2,743	130.0	2,743	135.0	2,848.50
	Stack 2	16.6	-	91	Y	21.10	1.00	130.0	2,743	130.0	2,743	135.0	2,848.50
	Stack 3	19.8	-	89	Y	21.10	1.00	130.0	2,743	130.0	2,743	135.0	2,848.50
	Stack 4	19.8	-	100	Y	13.60	1.00	130.0	1,768	130.0	1,768	135.0	1,836.00
	Stack 5	14.2	-	127	Y	13.60	1.00	130.0	1,768	130.0	1,768	135.0	1,836.00
	Stack 6	21.2	-	108	Y	3.80	1.00	130.0	494	130.0	494	135.0	513.00
	Stack 7	21.6	-	135	Y	3.80	1.00	130.0	494	130.0	494	135.0	513.00
	Stack 8	20.4	-	105	Y	3.80	1.00	130.0	494	130.0	494	135.0	513.00
	Stack 9	20.7	-	100	Y	3.80	1.00	130.0	494	130.0	494	135.0	513.00
	Fugitive	6.9	10	84	Y	36.10	1.00	24.5	884	25.0	903	25.5	920.58
	Stack 1	21.5	-	58	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 2	21.8	-	61	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 3	25.9	-	62	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 4	15.9	-	68	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 5	13.5	-	57	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 6	13.5	-	68	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 7	21.5	-	65	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 8	21.8	-	70	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 9	25.9	-	69	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 10	25.9	-	60	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 11	13.5	-	68	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 12	13.5	-	68	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 13	25.9	-	59	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 14	21.8	-	55	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 15	25.9	-	52	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 16	25.9	-	48	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 17	13.5	-	58	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 18	13.5	-	57	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Stack 19	21.5	-	37	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 20	25.9	-	49	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 21	21.8	-	45	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 22	25.9	-	43	N	4.52	1.00	50.0	225	65.0	292	70.0	314.82
	Stack 23	15.8	-	53	N	21.10	1.00	50.0	1,050	65.0	1,365	70.0	1,469.62
	Fugitive	5.8	10	50	N	36.10	1.00	20.0	718	11.5	413	12.0	431.05
	Stack 1	18.5	-	147	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 2	18.9	-	127	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 3	15.5	-	102	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 4	15.2	-	102	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 5	13.1	-	98	Y	21.10	0.97	140.0	2,852	150.0	3,056	145.0	2,954.25
	Stack 6	13.1	-	96	Y	21.10	0.97	140.0	2,852	150.0	3,056	145.0	2,954.25
	Stack 7	18.5	-	140	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 8	18.4	-	145	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 9	18.3	-	122	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 10	18.6	-	118	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 11	18.3	-	103	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16

Table D-2. Tier 1 Sensitivity Analysis Long-Term Modeling Parameters and Individual Source Results at Selected Facilities

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	EPA Tier 1 Table: Normalized Maximum Annual Conc. ($\mu g/m^3$)/(tpy)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)
[redacted]	Stack 12	18.3	-	111	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 13	18.3	-	121	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 14	18.5	-	142	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 15	15.5	-	106	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 16	15.5	-	110	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 17	17.9	-	136	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 18	17.9	-	116	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Stack 19	17.9	-	114	Y	13.60	0.97	140.0	1,839	150.0	1,970	145.0	1,904.16
	Fugitive	6.8	10	135	Y	25.00	0.97	27.0	652	28.5	688	28.0	675.92
	Stack 1	18.3	-	18.71	N	27.70	0.88	51.4	1,253	48.1	1,171	48.6	1,185.48
	Stack 2	15.2	-	18.71	N	27.70	0.88	51.4	1,253	48.1	1,171	48.6	1,185.48
	Stack 3	15.2	-	24	N	27.70	0.88	51.4	1,253	48.1	1,171	48.6	1,185.48
	Stack 4	18.3	-	24	N	27.70	0.88	51.4	1,253	48.1	1,171	48.6	1,185.48
	Stack 5	15.2	-	37.92	N	24.40	0.88	51.4	1,104	48.1	1,032	48.6	1,044.25
	Stack 6	15.2	-	32.99	N	24.40	0.88	51.4	1,104	48.1	1,032	48.6	1,044.25
	Stack 7	18.3	-	37.92	N	24.40	0.88	51.4	1,104	48.1	1,032	48.6	1,044.25
	Fugitive	3.4	10	43.67	N	40.32	0.88	17.1	608	16.0	568	16.2	575.23
	Stack 1	8.7	-	38	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 2	8.7	-	41	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 3	8.7	-	39	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 4	8.7	-	40	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 5	8.7	-	34	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 6	8.7	-	42	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 7	8.7	-	60	N	51.80	0.91	54.1	2,538	47.0	2,205	52.6	2,467.38
	Stack 8	8.7	-	64	N	51.80	0.91	54.1	2,538	47.0	2,205	52.6	2,467.38
	Stack 9	8.7	-	46	N	74.60	0.91	54.1	3,655	47.0	3,176	52.6	3,553.41
	Stack 10	8.7	-	62	N	51.80	0.91	54.1	2,538	47.0	2,205	52.6	2,467.38
	Stack 11	8.7	-	63	N	51.80	0.91	54.1	2,538	47.0	2,205	52.6	2,467.38
	Stack 12	8.7	-	50	N	51.80	0.91	54.1	2,538	47.0	2,205	52.6	2,467.38
	Fugitive	2.8	10	75	N	36.10	0.91	18.0	590	15.7	512	17.5	573.20
	Stack 1	14.3	-	44.63	N	24.40	0.94	51.3	1,177	58.3	1,336	48.0	1,100.35
	Stack 2	16.8	-	55.57	N	21.10	0.94	51.3	1,018	58.3	1,156	48.0	951.54
	Stack 3	12.8	-	63.77	N	21.10	0.94	51.3	1,018	58.3	1,156	48.0	951.54
	Stack 4	12.8	-	72.24	N	21.10	0.94	51.3	1,018	58.3	1,156	48.0	951.54
	Fugitive	5.0	10	69.36	N	36.10	0.94	17.1	580	19.4	659	16.0	542.67
	Stack 1	18.0	-	70.7	N	21.10	0.99	87.7	1,833	91.9	1,920	95.7	1,998.49
	Stack 2	18.0	-	81.66	N	21.10	0.99	87.7	1,833	91.9	1,920	95.7	1,998.49
	Stack 3	18.0	-	98.33	N	21.10	0.99	87.7	1,833	91.9	1,920	95.7	1,998.49
	Stack 4	18.0	-	104.03	N	13.60	0.99	87.7	1,181	91.9	1,237	95.7	1,288.13
	Stack 5	18.0	-	78.13	N	21.10	0.99	87.7	1,833	91.9	1,920	95.7	1,998.49
	Fugitive	5.0	10	102.8	N	25.00	0.99	29.3	725	30.7	761	31.9	789.29
	Stack 1	11.0	-	12	N	27.70	1.00	63.3	1,753	60.1	1,665	57.7	1,598.80
	Stack 2	17.0	-	15	N	27.70	1.00	63.3	1,753	60.1	1,665	57.7	1,598.80
	Fugitive	4.3	10	31.36	N	40.32	1.00	37.9	1,527	36.0	1,450	34.5	1,392.18
	Stack 1	15.2	-	22	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98

Table D-2. Tier 1 Sensitivity Analysis Long-Term Modeling Parameters and Individual Source Results at Selected Facilities

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	EPA Tier 1 Table: Normalized Maximum Annual Conc. ($\mu g/m^3$)/(tpy)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)
[redacted]	Stack 2	15.5	-	43	Y	24.40	1.00	82.0	1,998	82.2	2,004	75.9	1,848.92
	Stack 3	11.6	-	13	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98
	Stack 4	14.0	-	16	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98
	Stack 5	14.0	-	19	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98
	Stack 6	15.2	-	11	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98
	Stack 7	15.2	-	18	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98
	Stack 8	15.2	-	23	Y	27.70	1.00	82.0	2,268	82.2	2,275	75.9	2,098.98
	Fugitive	5.0	10	63	Y	36.10	1.00	14.5	522	14.5	523	13.4	482.62
	Stack 1	14.6	-	36	Y	24.40	1.00	74.8	1,822	70.6	1,721	70.5	1,718.06
	Stack 2	14.6	-	40	Y	24.40	1.00	74.8	1,822	70.6	1,721	70.5	1,718.06
	Stack 3	16.6	-	42	Y	24.40	1.00	74.8	1,822	70.6	1,721	70.5	1,718.06
	Stack 4	14.6	-	29	Y	27.70	1.00	74.8	2,068	70.6	1,954	70.5	1,950.42
	Stack 5	13.5	-	56	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 6	14.2	-	61	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 7	13.2	-	62	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 8	13.7	-	65	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 9	15.2	-	56	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 10	15.3	-	62	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 11	15.3	-	65	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Stack 12	15.3	-	60	Y	21.10	1.00	74.8	1,576	70.6	1,488	70.5	1,485.70
	Fugitive	3.7	10	64	Y	36.10	1.00	13.2	476	12.5	449	12.4	448.59
	Stack 1	12.2	-	37.8	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 2	12.2	-	32.22	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 3	13.4	-	41.76	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 4	13.4	-	41.76	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 5	13.4	-	45.11	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 7	12.2	-	41.45	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 8	12.2	-	32.61	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 9	12.2	-	49.07	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Stack 10	12.8	-	53.95	N	21.10	1.00	54.5	1,150	55.5	1,171	53.2	1,123.18
	Stack 11	12.2	-	56.39	N	21.10	1.00	54.5	1,150	55.5	1,171	53.2	1,123.18
	Stack 12	12.2	-	44.2	N	24.40	1.00	54.5	1,330	55.5	1,354	53.2	1,298.85
	Fugitive	3.0	10	59	N	36.10	1.00	12.5	451	12.9	464	12.2	440.11
	Stack 1	13.1	-	30	Y	24.40	0.94	51.7	1,183	53.8	1,230	26.6	609.15
	Stack 2	12.6	-	38	Y	24.40	0.94	51.7	1,183	53.8	1,230	26.6	609.15
	Stack 3	13.2	-	44	Y	24.40	0.94	51.7	1,183	53.8	1,230	26.6	609.15
	Stack 4	12.2	-	19	Y	27.70	0.94	51.7	1,342	53.8	1,396	26.6	691.54
	Stack 5	12.8	-	23	Y	27.70	0.94	51.7	1,342	53.8	1,396	26.6	691.54
	Stack 6	13.7	-	31	Y	24.40	0.94	51.7	1,183	53.8	1,230	26.6	609.15
	Stack 7	14.0	-	26	Y	27.70	0.94	51.7	1,342	53.8	1,396	26.6	691.54
	Stack 8	14.0	-	34	Y	24.40	0.94	51.7	1,183	53.8	1,230	26.6	609.15
	Stack 9	15.2	-	41	Y	24.40	0.94	51.7	1,183	53.8	1,230	26.6	609.15
	Fugitive	4.3	10	46	Y	40.32	0.94	13.6	515	14.2	537	6.5	246.36
	Stack 1	13.7	-	12	N	27.70	1.00	1.7	47	1.7	46	1.8	49.82
	Fugitive	3.0	10	70	N	36.10	1.00	22.8	824	22.1	799	24.0	865.65

Table D-2. Tier 1 Sensitivity Analysis Long-Term Modeling Parameters and Individual Source Results at Selected Facilities

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	EPA Tier 1 Table: Normalized Maximum Annual Conc. ($\mu g/m^3$)/(tpy)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (tpy)	Maximum Annual Tier I EGBE Conc. ($\mu g/m^3$)
[redacted]	Point	11.2	-	45	Unknown	24.40	1.00	4.3	104	3.6	87	3.1	74.69
	Fugitive	3.1	10	210	Unknown	13.79	1.00	36.1	498	38.8	535	45.2	623.50
	Stacks 1-10	14.0	-	75	Unknown	21.10	0.95	143.9	2,885	157.6	3,158	110.5	2,214.11
	Fugitive	3.0	10	91.7	Unknown	36.10	0.95	28.3	971	31.2	1,071	25.7	881.96

Table D-3. Tier 1 Sensitivity Analysis Long-Term Modeling Summary for Selected Facilities

Site Name	Source Type	2009 TRI		2010 TRI		2011 TRI	
		Maximum Annual Tier I EGBE Conc. (µg/m^3)	Long-Term HQ (combined)	Maximum Annual Tier I EGBE Conc. (µg/m^3)	Long-Term HQ (combined)	Maximum Annual Tier I EGBE Conc. (µg/m^3)	Long-Term HQ (combined)
[redacted]	Point	3654.7	**3**	3176.1	**2**	3553.4	**3**
	Volume	589.5		512.3		573.2	
	Point	104.4	0.4	87.5	0.4	74.7	0.4
	Volume	498.5		535.1		623.5	
	Point	2852.4	**2**	3056.1	**2**	2954.3	**2**
	Volume	651.8		688.0		675.9	
	Point	1753.1	**2**	1665.4	**2**	1598.8	**2**
	Volume	1526.5		1450.2		1392.2	
	Point	2885.0	**2**	3158.4	**3**	2214.1	**2**
	Volume	971.0		1070.7		882.0	
	Point	2268.3	**2**	2275.3	**2**	2099.0	**2**
	Volume	521.7		523.3		482.6	
	Point	1049.7	1	1364.6	1	1469.6	1
	Volume	718.4		413.1		431.0	
	Point	2743.0	**2**	2743.0	**2**	2848.5	**2**
	Volume	884.5		902.5		920.6	
	Point	1329.8	1	1354.2	1	1298.8	1
	Volume	451.3		463.9		440.1	
	Point	47.4	0.5	46.0	0.5	49.8	0.6
	Volume	823.6		799.2		865.6	
	Point	1833.0	**2**	1919.7	**2**	1998.5	**2**
	Volume	725.5		761.0		789.3	
	Point	1342.4	1	1395.9	1	691.5	0.6
	Volume	515.3		536.8		246.4	
	Point	1253.3	1	1171.5	1	1185.5	1
	Volume	608.1		568.4		575.2	
	Point	2068.4	**2**	1953.6	**2**	1950.4	1
	Volume	475.7		449.3		448.6	
	Point	1177.4	1	1336.4	1	1100.4	1
	Volume	579.7		659.1		542.7	

Hazard quotient (HQ) equals the sum of the maximum annual average concentration for fugitive/volume source emissions and point source emissions, at or beyond the fence line, is compared to an RfC for EGBE of 1,600 µg/m^3.
Bold text indicates an HQ greater than 1
EGBE: ethylene glycol monobutyl ether
HQ: hazard quotient
RfC: reference concentration
TRI: Toxics Release Inventory
µg/m^3: micrograms per cubic meter

Table D-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
Ball Container LLC - Columbus	Stack 1	L1-IBO-Hot		21.49	0.686	9.64	349.8	1.431	1.860	2.004	59.41
Ball Container LLC - Columbus	Stack 2	L1-ISS		21.79	0.405	11.70	298.0	1.431	1.860	2.004	165.81
Ball Container LLC - Columbus	Stack 3	L1-PO1-Hot		25.91	0.381	19.16	374.8	1.431	1.860	2.004	61.09
Ball Container LLC - Columbus	Stack 4	L1-PO2-Hot		15.85	0.405	20.70	374.8	1.431	1.860	2.004	72.90
Ball Container LLC - Columbus	Stack 5	L1-PR-11		13.52	0.399	10.18	298.0	1.431	1.860	2.004	195.17
Ball Container LLC - Columbus	Stack 6	L1-PR-12		13.52	0.399	10.18	298.0	1.431	1.860	2.004	202.66
Ball Container LLC - Columbus	Stack 7	L2-IBO-Hot		21.49	0.686	2.71	349.8	1.431	1.860	2.004	140.47
Ball Container LLC - Columbus	Stack 8	L2-ISS		21.79	0.405	11.70	298.0	1.431	1.860	2.004	156.61
Ball Container LLC - Columbus	Stack 9	L2-PO1-Hot		25.91	0.393	19.19	374.8	1.431	1.860	2.004	59.16
Ball Container LLC - Columbus	Stack 10	L2-PO2-Hot		25.91	0.381	15.63	374.8	1.431	1.860	2.004	83.54
Ball Container LLC - Columbus	Stack 11	L2-PR-21		13.52	0.399	10.18	298.0	1.431	1.860	2.004	204.17
Ball Container LLC - Columbus	Stack 12	L2-PR-22		13.52	0.399	10.18	298.0	1.431	1.860	2.004	211.88
Ball Container LLC - Columbus	Stack 13	L3-IBO-Hot		25.91	0.686	7.59	349.8	1.431	1.860	2.004	88.27
Ball Container LLC - Columbus	Stack 14	L3-ISS		21.79	0.405	11.70	298.0	1.431	1.860	2.004	151.97
Ball Container LLC - Columbus	Stack 15	L3-PO1-Hot		25.91	0.381	17.20	374.8	1.431	1.860	2.004	77.60
Ball Container LLC - Columbus	Stack 16	L3-PO2-Hot		25.91	0.393	14.71	374.8	1.431	1.860	2.004	83.30
Ball Container LLC - Columbus	Stack 17	L3-PR-31		13.52	0.399	10.18	298.0	1.431	1.860	2.004	210.52
Ball Container LLC - Columbus	Stack 18	L3-PR-32		13.52	0.399	10.18	298.0	1.431	1.860	2.004	196.63
Ball Container LLC - Columbus	Stack 19	L4-BCO-Hot		21.49	0.393	17.23	453.2	1.431	1.860	2.004	62.85
Ball Container LLC - Columbus	Stack 20	L4-IBO-Hot		25.91	0.381	32.32	349.8	1.431	1.860	2.004	56.94
Ball Container LLC - Columbus	Stack 21	L4-ISS		21.79	0.405	7.31	298.0	1.431	1.860	2.004	172.87
Ball Container LLC - Columbus	Stack 22	L4-PO-Hot		25.91	0.686	5.00	374.8	1.431	1.860	2.004	85.12
Ball Container LLC - Columbus	Stack 23	L4-PR-41		15.75	1.119	1.30	298.0	1.431	1.860	2.004	**284.49**
Ball Metal Beverage Container Corp- Findlay	Stack 1	B_PO11	PO11	16.61	0.457	7.00	510.9	3.740	3.740	3.883	**49.10**
Ball Metal Beverage Container Corp- Findlay	Stack 2	B_PO12	PO12	16.61	0.305	29.07	510.9	3.740	3.740	3.883	32.25
Ball Metal Beverage Container Corp- Findlay	Stack 3	B_PO21	PO21	19.81	0.457	9.79	499.8	3.740	3.740	3.883	19.29
Ball Metal Beverage Container Corp- Findlay	Stack 4	B_PO22	PO22	19.81	0.457	11.32	488.7	3.740	3.740	3.883	18.31
Ball Metal Beverage Container Corp- Findlay	Stack 5	B_IBO11	IBO11	14.17	0.610	11.62	477.6	3.740	3.740	3.883	27.00
Ball Metal Beverage Container Corp- Findlay	Stack 6	B_IBO21B	IBO21-B	21.18	0.610	3.98	477.6	3.740	3.740	3.883	21.02
Ball Metal Beverage Container Corp- Findlay	Stack 7	B_IBO31	IBO31	21.64	0.864	5.12	494.3	3.740	3.740	3.883	11.49
Ball Metal Beverage Container Corp- Findlay	Stack 8	B_WCO31	WashCoat Ov	20.42	0.813	2.58	510.9	3.740	3.740	3.883	18.91
Ball Metal Beverage Container Corp- Findlay	Stack 9	B_BH	Baghouse	20.73	0.330	37.48	294.3	3.740	3.740	3.883	22.86
Ball Metal Food Container Corp- Williamsburg	Stack 1	PO2	S019	18.47	0.406	13.53	402.0	3.889	4.167	4.028	27.18
Ball Metal Food Container Corp- Williamsburg	Stack 2	PO3	S006	18.87	0.406	12.25	365.9	3.889	4.167	4.028	39.52
Ball Metal Food Container Corp- Williamsburg	Stack 3	PO4Z1	S035	15.54	0.483	6.77	402.6	3.889	4.167	4.028	88.33
Ball Metal Food Container Corp- Williamsburg	Stack 4	PO4Z2	S036	15.16	0.483	9.49	395.9	3.889	4.167	4.028	77.59

Table D-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
Ball Metal Food Container Corp- Williamsburg	Stack 5	PO5Z1	S037	13.13	0.483	9.63	369.8	3.889	4.167	4.028	85.53
Ball Metal Food Container Corp- Williamsburg	Stack 6	PO5Z2	S038	13.13	0.483	8.84	380.9	3.889	4.167	4.028	79.85
Ball Metal Food Container Corp- Williamsburg	Stack 7	IBO2Z1	S021	18.52	0.406	7.60	362.6	3.889	4.167	4.028	46.41
Ball Metal Food Container Corp- Williamsburg	Stack 8	IBO2Z2	S020	18.42	0.508	6.60	382.6	3.889	4.167	4.028	36.78
Ball Metal Food Container Corp- Williamsburg	Stack 9	IBO3Z1	S011	18.34	0.406	6.06	322.6	3.889	4.167	4.028	80.16
Ball Metal Food Container Corp- Williamsburg	Stack 10	IBO3Z2	S010	18.59	0.508	7.29	389.3	3.889	4.167	4.028	37.88
Ball Metal Food Container Corp- Williamsburg	Stack 11	IBO4/5Z1	S027	18.31	0.406	2.85	356.5	3.889	4.167	4.028	**129.63**
Ball Metal Food Container Corp- Williamsburg	Stack 12	IBO4/5Z2	S028	18.29	0.508	5.13	384.8	3.889	4.167	4.028	59.16
Ball Metal Food Container Corp- Williamsburg	Stack 13	IBO4/5Z3	S039	18.34	0.406	13.05	373.7	3.889	4.167	4.028	38.05
Ball Metal Food Container Corp- Williamsburg	Stack 14	BCPOL2	S016	18.47	0.406	13.01	391.5	3.889	4.167	4.028	30.40
Ball Metal Food Container Corp- Williamsburg	Stack 15	BCPOL4Z1	S033	15.54	0.483	9.00	355.9	3.889	4.167	4.028	91.25
Ball Metal Food Container Corp- Williamsburg	Stack 16	BCPOL4Z2	S034	15.54	0.483	10.22	382.0	3.889	4.167	4.028	74.95
Ball Metal Food Container Corp- Williamsburg	Stack 17	ICEXH02	S024	17.86	0.305	11.26	293.2	3.889	4.167	4.028	78.39
Ball Metal Food Container Corp- Williamsburg	Stack 18	ICEXH03	S023	17.86	0.305	11.89	295.9	3.889	4.167	4.028	85.78
Ball Metal Food Container Corp- Williamsburg	Stack 19	ICEXH045	S022	17.86	0.406	8.61	295.9	3.889	4.167	4.028	89.46
Crown Beverage Packaging - Bradley	Stack 1	IBO	IBO (Can Lin	18.29	0.305	10.20	459.8	1.302	1.217	1.231	114.57
Crown Beverage Packaging - Bradley	Stack 2	Ross	Ross (Can Lir	15.24	0.305	16.72	422.6	1.302	1.217	1.231	103.34
Crown Beverage Packaging - Bradley	Stack 3	IBO	IBO (Can Lin	15.24	0.305	9.51	459.8	1.302	1.217	1.231	132.80
Crown Beverage Packaging - Bradley	Stack 4	Ross	Ross (Can Lir	18.29	0.305	16.72	422.6	1.302	1.217	1.231	92.75
Crown Beverage Packaging - Bradley	Stack 5	IBO	IBO (Can Lin	15.24	0.305	10.20	459.8	1.302	1.217	1.231	**155.87**
Crown Beverage Packaging - Bradley	Stack 6	Ross	Ross (Can Lir	15.24	0.305	16.72	422.6	1.302	1.217	1.231	131.89
Crown Beverage Packaging - Bradley	Stack 7	Ross	Ross (Can Lir	18.29	0.305	16.72	422.6	1.302	1.217	1.231	118.04
Crown Beverage Packaging - Olympia	Stack 1	IBO #1A		14.33	0.710	3.97	460.9	1.388	1.576	1.297	62.08
Crown Beverage Packaging - Olympia	Stack 2	IBO #2C		16.76	1.067	7.98	316.5	1.388	1.576	1.297	93.81
Crown Beverage Packaging - Olympia	Stack 3	LSM #1A		12.80	0.280	8.32	294.3	1.388	1.576	1.297	294.50
Crown Beverage Packaging - Olympia	Stack 4	LSM #2A		12.80	0.280	6.91	294.3	1.388	1.576	1.297	**310.14**
Crown Beverage Packaging - Lawrence	Stack 1	LSM2		8.53	0.457	1.42	449.8	1.409	1.225	1.370	281.40
Crown Beverage Packaging - Lawrence	Stack 2	L1PO		8.53	0.457	2.10	291.5	1.409	1.225	1.370	**817.14**
Crown Beverage Packaging - Lawrence	Stack 3	IBO1		8.53	0.457	3.31	533.2	1.409	1.225	1.370	187.50
Crown Beverage Packaging - Lawrence	Stack 4	LSM1		8.53	0.457	1.18	449.8	1.409	1.225	1.370	365.71
Crown Beverage Packaging - Lawrence	Stack 5	L1V1		8.53	0.457	3.42	291.5	1.409	1.225	1.370	764.54
Crown Beverage Packaging - Lawrence	Stack 6	IBO3		8.53	0.457	10.25	291.5	1.409	1.225	1.370	317.95
Crown Beverage Packaging - Lawrence	Stack 7	L3S		8.53	0.457	1.18	449.8	1.409	1.225	1.370	254.13
Crown Beverage Packaging - Lawrence	Stack 8	L3VI		8.53	0.457	3.42	291.5	1.409	1.225	1.370	537.98
Crown Beverage Packaging - Lawrence	Stack 9	IBO4		8.53	0.457	8.52	291.5	1.409	1.225	1.370	437.56
Crown Beverage Packaging - Lawrence	Stack 10	L4S		8.53	0.457	1.42	449.8	1.409	1.225	1.370	250.24

Table D-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
Crown Beverage Packaging - Lawrence	Stack 11	L3PO		8.53	0.457	3.42	291.5	1.409	1.225	1.370	533.91
Crown Beverage Packaging - Lawrence	Stack 12	IBO2		8.53	0.457	3.68	533.2	1.409	1.225	1.370	151.60
Crown Cork & Seal Co (USA) - Weirton	Stack 1	TO-1		11.00	1.219	16.17	659.2	1.821	1.730	1.660	19.68
Crown Cork & Seal Co (USA) - Weirton	Stack 2	TO-2		17.00	0.597	13.49	773.2	1.821	1.730	1.660	**33.64**
Crown Food Packaging - Owatonna	Stack 1	EU-001		17.98	0.311	31.08	310.9	2.499	2.617	2.725	**93.44**
Crown Food Packaging - Owatonna	Stack 2	EU-003		17.98	0.311	18.65	394.3	2.499	2.617	2.725	82.12
Crown Food Packaging - Owatonna	Stack 3	EU-005		17.98	0.311	18.65	394.3	2.499	2.617	2.725	80.28
Crown Food Packaging - Owatonna	Stack 4	EU-007		17.98	0.311	31.08	449.8	2.499	2.617	2.725	55.63
Crown Food Packaging - Owatonna	Stack 5	EU-008		17.98	0.311	31.08	449.8	2.499	2.617	2.725	52.29
Rexam Beverage Can Company- Bishopville	Stack 1	SV4	Printer Oven S	15.24	0.457	6.10	422.0	2.356	2.363	2.180	98.65
Rexam Beverage Can Company- Bishopville	Stack 2	SV5	Printer Oven S	15.54	0.396	6.10	422.0	2.356	2.363	2.180	102.13
Rexam Beverage Can Company- Bishopville	Stack 3	SV 6	Inside Spray M	11.58	0.610	3.96	294.3	2.356	2.363	2.180	**363.01**
Rexam Beverage Can Company- Bishopville	Stack 4	SV 7	Inside Spray M	14.02	0.610	3.96	294.3	2.356	2.363	2.180	295.01
Rexam Beverage Can Company- Bishopville	Stack 5	SV 8	Inside Spray M	14.02	0.610	3.96	294.3	2.356	2.363	2.180	294.17
Rexam Beverage Can Company- Bishopville	Stack 6	SV9	Inside Bake C	15.24	0.762	4.88	422.0	2.356	2.363	2.180	59.82
Rexam Beverage Can Company- Bishopville	Stack 7	SV10	Inside Bake C	15.24	0.762	4.88	422.0	2.356	2.363	2.180	60.45
Rexam Beverage Can Company- Bishopville	Stack 8	SV11	Inside Bake C	15.24	0.762	4.88	422.0	2.356	2.363	2.180	59.70
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV21	Printer Oven S	13.11	0.396	9.58	366.5	1.394	1.450	0.718	165.67
Rexam Beverage Can Company- Chicago	Stack 2	REX_SV22	Printer Oven S	12.65	0.396	9.57	366.5	1.394	1.450	0.718	175.24
Rexam Beverage Can Company- Chicago	Stack 3	REX_SV23	Base Coater F	13.17	0.396	9.57	366.5	1.394	1.450	0.718	190.89
Rexam Beverage Can Company- Chicago	Stack 4	RED_SV31	Inside Spray M	12.19	1.097	2.50	294.3	1.394	1.450	0.718	321.15
Rexam Beverage Can Company- Chicago	Stack 5	REX_SV32	Inside Spray M	12.80	1.189	2.13	294.3	1.394	1.450	0.718	**376.82**
Rexam Beverage Can Company- Chicago	Stack 6	REX_SV33	Inside Spray M	13.72	0.914	3.59	294.3	1.394	1.450	0.718	305.07
Rexam Beverage Can Company- Chicago	Stack 7	REX_SV41	Inside Bake C	14.02	0.762	8.07	449.8	1.394	1.450	0.718	71.92
Rexam Beverage Can Company- Chicago	Stack 8	REX_SV42	Inside Bake C	14.02	0.823	6.92	449.8	1.394	1.450	0.718	69.03
Rexam Beverage Can Company- Chicago	Stack 9	REX_RTO	Regenerative	15.24	1.158	7.61	488.7	1.394	1.450	0.718	42.09
Rexam Beverage Can Company- Kent	Stack 1	SV7A	Printer Pin Ov	14.63	0.558	4.83	422.0	2.148	2.029	2.026	129.19
Rexam Beverage Can Company- Kent	Stack 2	SV7B	Printer Pin Ov	14.63	0.558	4.83	444.3	2.148	2.029	2.026	153.09
Rexam Beverage Can Company- Kent	Stack 3	SV7C	Printer Pin Ov	16.61	0.914	1.80	397.0	2.148	2.029	2.026	152.01
Rexam Beverage Can Company- Kent	Stack 4	SV7D	Printer Pin Ov	14.63	0.610	4.04	399.8	2.148	2.029	2.026	131.78
Rexam Beverage Can Company- Kent	Stack 5	SV8A	Inside Spray M	13.50	0.838	2.14	299.8	2.148	2.029	2.026	472.44
Rexam Beverage Can Company- Kent	Stack 6	SV8B	Inside Spray M	14.17	0.838	2.14	299.8	2.148	2.029	2.026	413.91
Rexam Beverage Can Company- Kent	Stack 7	SV8C	Inside Spray M	13.20	0.850	2.08	299.8	2.148	2.029	2.026	**481.59**
Rexam Beverage Can Company- Kent	Stack 8	SV8D	Inside Spray M	13.72	0.838	2.14	299.8	2.148	2.029	2.026	453.99
Rexam Beverage Can Company- Kent	Stack 9	SV9A	Inside Bake C	15.24	0.762	3.62	358.2	2.148	2.029	2.026	167.40
Rexam Beverage Can Company- Kent	Stack 10	SV9B	Inside Bake C	15.33	0.762	3.62	360.9	2.148	2.029	2.026	152.46

Table D-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
Rexam Beverage Can Company- Kent	Stack 11	SV9C	Inside Bake C	15.33	0.762	3.62	366.5	2.148	2.029	2.026	152.35
Rexam Beverage Can Company- Kent	Stack 12	SV9D	Inside Bake C	15.33	0.762	3.62	360.9	2.148	2.029	2.026	172.04
Rexam Beverage Can Company- Salem	Stack 1	Stack1		14.00	6.096	0.46	394.3	3.933	4.306	3.019	55.33
Rexam Beverage Can Company- Salem	Stack 2	Stack2		14.00	6.096	0.46	394.3	3.933	4.306	3.019	67.54
Rexam Beverage Can Company- Salem	Stack 3	Stack3		14.00	6.096	0.46	394.3	3.933	4.306	3.019	70.24
Rexam Beverage Can Company- Salem	Stack 4	Stack4		14.00	6.096	0.46	394.3	3.933	4.306	3.019	58.47
Rexam Beverage Can Company- Salem	Stack 5	Stack5		14.00	6.096	0.46	394.3	3.933	4.306	3.019	54.25
Silgan Containers Manufacturing Corp- LaPorte	Stack 1	C11	L1Roll1	15.80	0.719	17.42	477.6	1.568	1.597	1.531	27.42
Silgan Containers Manufacturing Corp- LaPorte	Stack 2	C12	L1Roll2	15.80	0.719	7.37	477.6	1.568	1.597	1.531	55.07
Silgan Containers Manufacturing Corp- LaPorte	Stack 3	C13	L1IS1	17.11	0.905	5.13	477.6	1.568	1.597	1.531	44.89
Silgan Containers Manufacturing Corp- LaPorte	Stack 4	C14	L1IS2	17.11	0.905	5.13	477.6	1.568	1.597	1.531	45.44
Silgan Containers Manufacturing Corp- LaPorte	Stack 5	C15	L1IS3	17.11	0.905	12.32	477.6	1.568	1.597	1.531	23.93
Silgan Containers Manufacturing Corp- LaPorte	Stack 6	C16	L1IS4	17.11	0.914	10.78	477.6	1.568	1.597	1.531	26.33
Silgan Containers Manufacturing Corp- LaPorte	Stack 7	C21	L2Roll1	15.80	0.719	17.42	477.6	1.568	1.597	1.531	28.58
Silgan Containers Manufacturing Corp- LaPorte	Stack 8	C22	L2Roll2	15.80	0.719	7.37	477.6	1.568	1.597	1.531	49.54
Silgan Containers Manufacturing Corp- LaPorte	Stack 9	C23	L2IS1	16.46	0.799	9.42	477.6	1.568	1.597	1.531	35.83
Silgan Containers Manufacturing Corp- LaPorte	Stack 10	C24	L2IS2	16.78	0.799	18.85	477.6	1.568	1.597	1.531	25.58
Silgan Containers Manufacturing Corp- LaPorte	Stack 11	S1	IS_1_Over_Fl	16.00	0.695	12.44	294.3	1.568	1.597	1.531	**132.66**
Silgan Containers Manufacturing Corp- LaPorte	Stack 12	S2	IS_2_Over_Fl	16.13	0.362	45.87	294.3	1.568	1.597	1.531	69.78

a. All point EGBE emissions were conservatively assumed to exhaust through each stack for AERSCREEN modeling.
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr)
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.

b. Worst case annual average unit emission rate concentration in (µg/m3) (1g/s) assumes stack emission rate of 1 g/s.
It is obtained by multiplying worst-case 1-hr average unit emission rate concentration by a factor of 0.1, in accordance with EPA's AERSCREEN guidance
Tier 2 annual concentration for a stack is obtained by multiplying the unit emission rate concentration by Tier 2 stack emission rate (in g/s) for a given TRI year
The maximum point source unit emission rate impact (considering all point sources for a facility) is shown in **bolded** text.

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table D-5. Tier 2 Modeling Fugitive Volume Parameters and Results at Individual Facilities

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]	Worst case fugitive annual average unit emission rate concentration[f] (µg/m3) (1g/s)
Ball Container LLC - Columbus	Volume	12.420	22.790	5.777	0.572	0.32916	0.34347	86.09
Ball Metal Beverage Container Corp- Findlay	Volume	12.420	11.230	5.780	0.705	0.71917	0.73355	131.53
Ball Metal Food Container Corp- Williamsburg	Volume	14.630	13.730	6.805	0.750	0.79165	0.77776	52.37
Crown Beverage Packaging - Bradley	Volume	7.315	19.850	3.402	0.434	0.40553	0.41038	184.57
Crown Beverage Packaging - Olympia	Volume	10.670	24.820	4.962	0.462	0.52520	0.43242	93.98
Crown Beverage Packaging - Lawrence	Volume	6.096	27.300	2.835	0.470	0.40825	0.45675	95.61
Crown Cork & Seal Co (USA) - Weirton	Volume	9.144	14.120	4.253	1.089	1.03458	0.99320	198.76
Crown Food Packaging - Owatonna	Volume	10.670	30.710	4.962	0.835	0.87561	0.90821	82.09
Rexam Beverage Can Company- Bishopville	Volume	10.670	28.840	4.962	0.416	0.41699	0.38457	87.58
Rexam Beverage Can Company- Chicago	Volume	9.144	20.930	4.253	0.368	0.38295	0.17576	108.26
Rexam Beverage Can Company- Kent	Volume	7.925	24.550	3.686	0.379	0.35802	0.35745	129.65
Rexam Beverage Can Company- Salem	Volume	7.000	27.240	3.250	0.774	0.85314	0.70277	111.01
Silgan Containers Manufacturing Corp- LaPorte	Volume	12.192	20.698	5.670	0.360	0.36965	0.35069	104.77

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr)
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.

f. Worst case annual average unit emission rate concentration in (µg/m3) (1g/s) assumes fugitive emission rate of 1 g/s. Tier 2 annual concentration for a fugitive volume is obtained by multiplying the unit emission rate concentration by Tier 2 fugitive emission rate (in g/s) for a given TRI year

g/s: grams per second
hrs/yr: hours per year
m: meter
tpy: ton per year
TRI: Toxic Release Inventory

Table D-6. Tier 2 Modeling Stack Parameters and Individual Source Results in Clusters

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV21	Printer Oven Stack # 1 – SV 21	13.11	0.396	9.58	366.5	1.394	1.450	0.718	165.67
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV22	Printer Oven Stack # 2 – SV 22	12.65	0.396	9.57	366.5	1.394	1.450	0.718	175.24
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV23	Base Coater Pin Oven Stack # 3 – SV 23	13.17	0.396	9.57	366.5	1.394	1.450	0.718	190.89
Rexam Beverage Can Company- Chicago	Stack 4	RED_SV31	Inside Spray Machines Bank 1 – SV 31	12.19	1.097	2.50	294.3	1.394	1.450	0.718	321.15
Rexam Beverage Can Company- Chicago	Stack 5	REX_SV32	Inside Spray Machines Bank 2 – SV 32	12.80	1.189	2.13	294.3	1.394	1.450	0.718	**376.82**
Rexam Beverage Can Company- Chicago	Stack 6	REX_SV33	Inside Spray Machines Bank 2 – SV 33	13.72	0.914	3.59	294.3	1.394	1.450	0.718	305.07
Rexam Beverage Can Company- Chicago	Stack 7	REX_SV41	Inside Bake Oven Stack # 1 – SV 41	14.02	0.762	8.07	449.8	1.394	1.450	0.718	71.92
Rexam Beverage Can Company- Chicago	Stack 8	REX_SV42	Inside Bake Oven Stack # 2 – SV 42	14.02	0.823	6.92	449.8	1.394	1.450	0.718	69.03
Rexam Beverage Can Company- Chicago	Stack 9	REX_RTO	Regenerative Thermal Oxidizer Stack	15.24	1.158	7.61	488.7	1.394	1.450	0.718	42.09
Edsal Manufacturing Co Inc- Chicago	Stack1	N/A	3960***	9.75	0.396	2.74	294.3	0.740	1.241	0.976	460.83
Ball Metal Beverage Container Corp- Findlay	Stack 1	B_PO11	PO11	16.61	0.457	7.00	510.9	3.740	3.740	3.883	**49.10**
Ball Metal Beverage Container Corp- Findlay	Stack 2	B_PO12	PO12	16.61	0.305	29.07	510.9	3.740	3.740	3.883	32.25
Ball Metal Beverage Container Corp- Findlay	Stack 3	B_PO21	PO21	19.81	0.457	9.79	499.8	3.740	3.740	3.883	19.29
Ball Metal Beverage Container Corp- Findlay	Stack 4	B_PO22	PO22	19.81	0.457	11.32	488.7	3.740	3.740	3.883	18.31
Ball Metal Beverage Container Corp- Findlay	Stack 5	B_IBO11	IBO11	14.17	0.610	11.62	477.6	3.740	3.740	3.883	27.00
Ball Metal Beverage Container Corp- Findlay	Stack 6	B_IBO21B	IBO21-B	21.18	0.610	3.98	477.6	3.740	3.740	3.883	21.02
Ball Metal Beverage Container Corp- Findlay	Stack 7	B_IBO31	IBO31	21.64	0.864	5.12	494.3	3.740	3.740	3.883	11.49
Ball Metal Beverage Container Corp- Findlay	Stack 8	B_WCO31	WashCoat Oven31	20.42	0.813	2.58	510.9	3.740	3.740	3.883	18.91
Ball Metal Beverage Container Corp- Findlay	Stack 9	B_BH	Baghouse	20.73	0.330	37.48	294.3	3.740	3.740	3.883	22.86
Whirlpool Corp Findlay Div- Findlay	Stack 1	Stk_2	8194****	12.19	0.305	0.39	327.6	0.591	0.579	0.557	287.86
Silgan Containers Manufacturing Corp- LaPorte	Stack 1	C11	L1Roll1	15.80	0.719	17.42	477.6	1.568	1.597	1.531	27.42
Silgan Containers Manufacturing Corp- LaPorte	Stack 2	C12	L1Roll2	15.80	0.719	7.37	477.6	1.568	1.597	1.531	55.07
Silgan Containers Manufacturing Corp- LaPorte	Stack 3	C13	L1IS1	17.11	0.905	5.13	477.6	1.568	1.597	1.531	44.89
Silgan Containers Manufacturing Corp- LaPorte	Stack 4	C14	L1IS2	17.11	0.905	5.13	477.6	1.568	1.597	1.531	45.44
Silgan Containers Manufacturing Corp- LaPorte	Stack 5	C15	L1IS3	17.11	0.905	12.32	477.6	1.568	1.597	1.531	23.93
Silgan Containers Manufacturing Corp- LaPorte	Stack 6	C16	L1IS4	17.11	0.914	10.78	477.6	1.568	1.597	1.531	26.33
Silgan Containers Manufacturing Corp- LaPorte	Stack 7	C21	L2Roll1	15.80	0.719	17.42	477.6	1.568	1.597	1.531	28.58
Silgan Containers Manufacturing Corp- LaPorte	Stack 8	C22	L2Roll2	15.80	0.719	7.37	477.6	1.568	1.597	1.531	49.54
Silgan Containers Manufacturing Corp- LaPorte	Stack 9	C23	L2IS1	16.46	0.799	9.42	477.6	1.568	1.597	1.531	35.83
Silgan Containers Manufacturing Corp- LaPorte	Stack 10	C24	L2IS2	16.78	0.799	18.85	477.6	1.568	1.597	1.531	25.58
Silgan Containers Manufacturing Corp- LaPorte	Stack 11	S1	IS_1_Over_Fug	16.00	0.695	12.44	294.3	1.568	1.597	1.531	**132.66**
Silgan Containers Manufacturing Corp- LaPorte	Stack 12	S2	IS_2_Over_Fug	16.13	0.362	45.87	294.3	1.568	1.597	1.531	69.78
Roll Coater- La Porte	Stack 1	Stk_2	not used	9.14	0.914	3.23	505.4	0.145	0.222	0.199	101.81
Ball Metal Food Container Corp- Weirton	Stack 1	0001	0001 (Bldg 5G)	12.80	2.070	8.41	405.9	0.231	0.161	0.066	15.46
Ball Metal Food Container Corp- Weirton	Stack 2	TO-1	TO-1 (Bldg 5D)	11.58	1.220	7.80	488.2	0.231	0.161	0.066	31.62
Ball Metal Food Container Corp- Weirton	Stack 3	TO-2	TO-2 (Bldg 5D)	10.67	0.670	6.86	704.3	0.231	0.161	0.066	46.93
Ball Metal Food Container Corp- Weirton	Stack 4	0003	0003 (Bldg 5D)	10.05	0.640	1.66	649.8	0.231	0.161	0.066	**92.82**
Crown Cork & Seal Co (USA) - Weirton	Stack 1	TO-1		11.00	1.219	16.17	659.2	1.821	1.730	1.660	19.68
Crown Cork & Seal Co (USA) - Weirton	Stack 2	TO-2		17.00	0.597	13.49	773.2	1.821	1.730	1.660	**33.64**
Ardagh Metal Packaging USA Inc- Weirton	Stack 1	Coater #1		12.50	0.610	31.01	824.8	0.031	0.032	0.006	17.65
Ardagh Metal Packaging USA Inc- Weirton	Stack 2	Coater #2		14.33	0.610	9.15	783.2	0.031	0.032	0.006	**31.19**
Ardagh Metal Packaging USA Inc- Weirton	Stack 3	Coater #3		12.50	0.457	22.27	760.9	0.031	0.032	0.006	23.90
Ardagh Metal Packaging USA Inc- Weirton	Stack 4	Coater #4		12.19	0.457	15.45	745.4	0.031	0.032	0.006	26.08
Roll Coater- Weirton	Stack 1		No stack parameters available. All emissions (stack + fugitives) modeled as a volume								

Table D-6. Tier 2 Modeling Stack Parameters and Individual Source Results in Clusters

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
Ball Metal Beverage Container Corp- Reidsville	Stack 1	PO1		15.95	0.508	4.32	479.0	1.812	2.230	2.369	76.93
Ball Metal Beverage Container Corp- Reidsville	Stack 2	PO2		16.31	0.508	4.28	465.0	1.812	2.230	2.369	89.85
Ball Metal Beverage Container Corp- Reidsville	Stack 3	PO3		16.08	0.508	6.14	458.0	1.812	2.230	2.369	82.55
Ball Metal Beverage Container Corp- Reidsville	Stack 4	IBO1		16.00	0.457	12.15	473.0	1.812	2.230	2.369	53.74
Ball Metal Beverage Container Corp- Reidsville	Stack 5	IBO2		16.00	0.457	7.11	475.0	1.812	2.230	2.369	69.59
Ball Metal Beverage Container Corp- Reidsville	Stack 6	IBO3		16.00	0.457	13.17	474.0	1.812	2.230	2.369	60.47
Ball Metal Beverage Container Corp- Reidsville	Stack 7	Printer 1		15.95	0.508	0.50	298.0	1.812	2.230	2.369	**303.39**
Ball Metal Beverage Container Corp- Reidsville	Stack 8	Printer 2		15.90	0.508	0.50	298.0	1.812	2.230	2.369	258.17
Ball Metal Beverage Container Corp- Reidsville	Stack 9	Printer 3		16.08	0.508	0.50	298.0	1.812	2.230	2.369	278.44
Ball Metal Beverage Container Corp- Reidsville	Stack 10	Spray line 1		14.94	0.381	6.39	298.0	1.812	2.230	2.369	193.05
Ball Metal Beverage Container Corp- Reidsville	Stack 11	Spray line 2		14.99	0.381	7.28	298.0	1.812	2.230	2.369	194.68
Ball Metal Beverage Container Corp- Reidsville	Stack 12	Spray line 3		14.99	0.381	8.74	298.0	1.812	2.230	2.369	210.93
Dystar LP- Reidsville	Stack 1	Stk_2		11.64	0.432	5.44	370.9	0.0004	0.0004	0.0004	178.83

a. All point EGBE emissions were conservatively assumed to exhaust through each stack for AERSCREEN modeling.
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr)
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.

b. Worst case annual average unit emission rate concentration in (µg/m3) (1g/s) assumes stack emission rate of 1 g/s.
It is obtained by multiplying worst-case 1-hr average unit emission rate concentration by a factor of 0.1, in accordance with EPA's AERSCREEN guidance
Tier 2 annual concentration for a stack is obtained by multiplying the unit emission rate concentration by Tier 2 stack emission rate (in g/s) for a given TRI year
The maximum point source unit emission rate impact (considering all point sources for a facility) is shown in **bolded** text.

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Regulatory Index

Table D-7. Tier 2 Modeling Fugitive Volume Parameters and Results in Clusters

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]	Worst case fugitive annual average unit emission rate concentration[f] (µg/m3) (1g/s)
Rexam Beverage Can Company- Chicago	Volume	9.144	20.930	4.253	0.368	0.38295	0.17576	108.26
Edsal Manufacturing Co Inc- Chicago	Volume	No fugitive emissions reported to TRI. All reported emissions modeled as a stack release						
Ball Metal Beverage Container Corp- Findlay	Volume	12.420	11.230	5.780	0.705	0.71917	0.73355	131.53
Whirlpool Corp Findlay Div- Findlay	Volume	8.800	47.280	4.093	0.066	0.06437	0.06187	49.60
Silgan Containers Manufacturing Corp- LaPorte	Volume	12.192	20.698	5.670	0.360	0.36965	0.35069	104.77
Roll Coater- La Porte	Volume	9.144	39.535	4.251	0.000	0.00000	0.00058	73.37
Ball Metal Food Container Corp, Bldg_5D- Weirton[g]	Volume	7.315	19.900	3.402	0.338	0.19243	0.13205	185.81
Ball Metal Food Container Corp, Bldg_5G- Weirton[g]	Volume	12.192	16.247	5.670	0.174	0.09913	0.06802	106.82
Crown Cork & Seal Co (USA) - Weirton	Volume	9.144	14.120	4.253	1.089	1.03458	0.99320	198.76
Ardagh Metal Packaging USA Inc- Weirton	Volume	9.750	11.881	4.540	0.000	0.00011	0.00118	191.64
Roll Coater- Weirton	Volume	9.144	16.000	4.250	0.164	0.20797	0.07570	147.46
Ball Metal Beverage Container Corp- Reidsville	Volume	13.106	30.930	6.096	0.334	0.40419	0.47387	54.07
Dystar LP- Reidsville	Volume	10.000	9.698	4.651	0.001	0.00101	0.00101	186.65

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr)
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.

f. Worst case annual average unit emission rate concentration in (µg/m3) (1g/s) assumes fugitive emission rate of 1 g/s. Tier 2 annual concentration for a fugitive volume is obtained by multiplying the unit emission rate concentration by Tier 2 fugitive emission rate (in g/s) for a given TRI year

g. Ball Facility in Weirton has two distinct (physically separate) buildings associtaed with fugitive emissions which were modeled separately. Their emissions were estimated based on the breakdown of the total fugitive emissions provided by the faciltiy in Tier 2 Survey a signle volume (building) with worse dispersion characteristics

g/s: grams per second
hrs/yr: hours per year
m: meter
tpy: ton per year
TRI: Toxic Release Inventory

Table D-8. Tier 3 Modeling Stack Parameters at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]
Crown Beverage Packaging - Lawrence	Stack 1	LSM2		8.530	0.457	2.103	291.483	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 2	L1PO		8.530	0.457	3.312	533.150	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 3	IBO1		8.530	0.457	1.183	449.817	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 4	LSM1		8.530	0.457	3.417	291.483	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 5	L1V1		8.530	0.457	10.252	291.483	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 6	IBO3		8.530	0.457	1.183	449.817	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 7	L3S		8.530	0.457	3.417	291.483	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 8	L3VI		8.530	0.457	8.517	291.483	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 9	IBO4		8.530	0.457	1.419	449.817	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 10	L4S		8.530	0.457	3.417	291.483	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 11	L3PO		8.530	0.457	3.680	533.150	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lawrence	Stack 12	IBO2		8.530	0.457	1.183	449.817	0.1174	0.1021	0.1142
Crown Beverage Packaging - Lacrosse	Stack 1	S30		13.720	0.966	9.546	422.000	0.049	0.0454	0.0491
Crown Cork & Seal Co (USA) - Weirton	Stack 1	TO-1		11.000	1.219	16.149	659.150	0.7724	0.7337	0.7044
Crown Cork & Seal Co (USA) - Weirton	Stack 2	TO-2		17.000	0.597	13.492	773.150	1.0482	0.9958	0.9560
Rexam Beverage Can Company- Bishopville	Stack 1	SV4	Printer Oven Stack # 1 – SV4	15.200	0.460	6.100	422.000	0.2197	0.2204	0.2033
Rexam Beverage Can Company- Bishopville	Stack 2	SV5	Printer Oven Stack # 2 – SV5	15.500	0.400	6.100	422.000	0.2197	0.2204	0.2033
Rexam Beverage Can Company- Bishopville	Stack 3	SV 6	Inside Spray Machines Bank 1 – SV 6	11.600	0.610	3.960	294.000	0.0958	0.0961	0.0886
Rexam Beverage Can Company- Bishopville	Stack 4	SV 7	Inside Spray Machines Bank 2 – SV 7	14.000	0.610	3.960	294.000	0.0958	0.0961	0.0886
Rexam Beverage Can Company- Bishopville	Stack 5	SV 8	Inside Spray Machines Bank 3 – SV 8	14.000	0.610	3.960	294.000	0.0958	0.0961	0.0886
Rexam Beverage Can Company- Bishopville	Stack 6	SV9	Inside Bake Oven Stack # 1 – SV9	15.200	0.760	4.880	422.000	0.5430	0.5447	0.5025
Rexam Beverage Can Company- Bishopville	Stack 7	SV10	Inside Bake Oven Stack # 2 – SV10	15.200	0.760	4.880	422.000	0.5430	0.5447	0.5025
Rexam Beverage Can Company- Bishopville	Stack 8	SV11	Inside Bake Oven Stack # 3 – SV11	15.200	0.760	4.880	422.000	0.5430	0.5447	0.5025
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV21	Printer Oven Stack # 1 – SV 21	13.106	0.396	9.580	366.500	0.1446	0.1504	0.0745
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV22	Printer Oven Stack # 2 – SV 22	12.649	0.396	9.568	366.500	0.1446	0.1504	0.0745
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV23	Base Coater Pin Oven Stack # 3 – SV 23	13.167	0.396	9.568	366.500	0.0014	0.0015	0.0007
Rexam Beverage Can Company- Chicago	Stack 4	RED_SV31	Inside Spray Machines Bank 1 – SV 31	12.192	1.097	2.495	294.261	0.0708	0.0736	0.0365
Rexam Beverage Can Company- Chicago	Stack 5	REX_SV32	Inside Spray Machines Bank 2 – SV 32	12.802	1.189	2.126	294.261	0.0708	0.0736	0.0365
Rexam Beverage Can Company- Chicago	Stack 6	REX_SV33	Inside Spray Machines Bank 2 – SV 33	13.716	0.914	3.593	294.261	0.0185	0.0192	0.0095
Rexam Beverage Can Company- Chicago	Stack 7	REX_SV41	Inside Bake Oven Stack # 1 – SV 41	14.021	0.762	8.072	449.817	0.4020	0.4180	0.2071
Rexam Beverage Can Company- Chicago	Stack 8	REX_SV42	Inside Bake Oven Stack # 2 – SV 42	14.021	0.823	6.921	449.817	0.4020	0.4180	0.2071
Rexam Beverage Can Company- Chicago	Stack 9	REX_RTO	Regenerative Thermal Oxidizer Stack	15.240	1.158	7.615	488.706	0.1395	0.1450	0.0718
Rexam Beverage Can Company- Kent	Stack 1	SV7A	Printer Pin Oven Stack 1 – SV 7A	14.630	0.558	4.828	422.039	0.1459	0.1378	0.1376
Rexam Beverage Can Company- Kent	Stack 2	SV7B	Printer Pin Oven Stack 2 – SV 7B	14.630	0.558	4.828	444.261	0.1459	0.1378	0.1376
Rexam Beverage Can Company- Kent	Stack 3	SV7C	Printer Pin Oven Stack 3 – SV 7C	16.612	0.914	1.797	397.039	0.1459	0.1378	0.1376
Rexam Beverage Can Company- Kent	Stack 4	SV7D	Printer Pin Oven Stack 4 – SV 7D	14.630	0.610	4.043	399.817	0.1459	0.1378	0.1376
Rexam Beverage Can Company- Kent	Stack 5	SV8A	Inside Spray Machines Bank 1 – SV 8A	13.503	0.838	2.138	299.817	0.0587	0.0554	0.0553
Rexam Beverage Can Company- Kent	Stack 6	SV8B	Inside Spray Machines Bank 2 – SV 8B	14.173	0.838	2.138	299.817	0.0587	0.0554	0.0553
Rexam Beverage Can Company- Kent	Stack 7	SV8C	Inside Spray Machines Bank 3 – SV 8C	13.198	0.850	2.079	299.817	0.0587	0.0554	0.0553
Rexam Beverage Can Company- Kent	Stack 8	SV8D	Inside Spray Machines Bank 4 – SV 8D	13.716	0.838	2.138	299.817	0.0587	0.0554	0.0553
Rexam Beverage Can Company- Kent	Stack 9	SV9A	Inside Bake Oven Stack # 1 – SV 9A	15.240	0.762	3.622	358.150	0.3325	0.3140	0.3135

Table D-8. Tier 3 Modeling Stack Parameters at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]
Rexam Beverage Can Company- Kent	Stack 10	SV9B	Inside Bake Oven Stack # 2 – SV 9B	15.331	0.762	3.622	360.928	0.3325	0.3140	0.3135
Rexam Beverage Can Company- Kent	Stack 11	SV9C	Inside Bake Oven Stack # 3 – SV 9C	15.331	0.762	3.622	366.483	0.3325	0.3140	0.3135
Rexam Beverage Can Company- Kent	Stack 12	SV9D	Inside Bake Oven Stack # 4 – SV 9D	15.331	0.762	3.622	360.928	0.3325	0.3140	0.3135
Rexam Beverage Can Company - Winston Salem	Stack 1	WS1		14.000	0.457	6.096	394.261	3.9333	4.3060	3.0186
Rexam Beverage Can Company - Winston Salem	Stack 2	WS2		14.000	0.457	6.096	394.261	3.9333	4.3060	3.0186
Rexam Beverage Can Company - Winston Salem	Stack 3	WS3		14.000	0.457	6.096	394.261	3.9333	4.3060	3.0186
Rexam Beverage Can Company - Winston Salem	Stack 4	WS4		14.000	0.457	6.096	394.261	3.9333	4.3060	3.0186
Rexam Beverage Can Company - Winston Salem	Stack 5	WS5		14.000	0.457	6.096	394.261	3.9333	4.3060	3.0186

a. Individual stack emissions were based on total TRI Stack emissions and actual breakdown of EGBE emissions among individual stacks
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr) x Stack_fraction
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.
Stack_fraction represents the percent of the total TRI stack emissions emitted through the individual stack

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table D-9. Tier 3 Modeling Fugitive Volume Parameters and Results at Individual Facilities

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]
Crown Beverage Packaging - Lawrence	Volume	6.096	27.310	2.840	0.470	0.40825	0.45675
Crown Cork & Seal Co (USA) - Weirton	Volume	9.144	14.120	4.253	1.089	1.03458	0.99320
Rexam Beverage Can Company- Bishopville	Volume	10.668	28.840	4.960	0.416	0.41699	0.38457
Rexam Beverage Can Company- Chicago	Volume	9.144	20.900	4.253	0.368	0.38295	0.17576
Rexam Beverage Can Company- Kent	Volume	7.920	24.558	3.686	0.379	0.35802	0.35745
Rexam Beverage Can Company - Winston Salem	Volume	7.000	27.242	3.250	0.774	0.85314	0.70277

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr)
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.

g/s: grams per second
hrs/yr: hours per year
m: meter
tpy: ton per year
TRI: Toxic Release Inventory

Table D-10. Tier 3 Modeling Stack Parameters and Individual Source Results in Clusters

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV21	Printer Oven Stack # 1 – SV 21	13.100	0.396	9.580	366.500	0.1446	0.1504	0.0745
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV22	Printer Oven Stack # 2 – SV 22	12.649	0.396	9.568	366.500	0.1446	0.1504	0.0745
Rexam Beverage Can Company- Chicago	Stack 1	REX_SV23	Base Coater Pin Oven Stack # 3 – SV 23	13.167	0.396	9.568	366.500	0.0014	0.0015	0.0007
Rexam Beverage Can Company- Chicago	Stack 4	RED_SV31	Inside Spray Machines Bank 1 – SV 31	12.192	1.097	2.495	294.261	0.0708	0.0736	0.0365
Rexam Beverage Can Company- Chicago	Stack 5	REX_SV32	Inside Spray Machines Bank 2 – SV 32	12.802	1.189	2.126	294.261	0.0708	0.0736	0.0365
Rexam Beverage Can Company- Chicago	Stack 6	REX_SV33	Inside Spray Machines Bank 2 – SV 33	13.716	0.914	3.593	294.261	0.0185	0.0192	0.0095
Rexam Beverage Can Company- Chicago	Stack 7	REX_SV41	Inside Bake Oven Stack # 1 – SV 41	14.021	0.762	8.072	449.817	0.4020	0.4180	0.2071
Rexam Beverage Can Company- Chicago	Stack 8	REX_SV42	Inside Bake Oven Stack # 2 – SV 42	14.021	0.823	6.921	449.817	0.4020	0.4180	0.2071
Rexam Beverage Can Company- Chicago	Stack 9	REX_RTO	Regenerative Thermal Oxidizer Stack	15.240	1.158	7.615	488.706	0.1395	0.1450	0.0718
Edsal Manufacturing Co Inc- Chicago	Stack1	N/A	3960***	9.144	0.396	2.743	294.260	0.7404	1.2411	0.9764
Ball Metal Food Container Corp- Weirton	Stack 1	BA5G_P1	0001 (Bldg 5G)	12.802	2.070	8.414	405.930	0.1278	0.0889	0.0367
Ball Metal Food Container Corp- Weirton	Stack 1	BA5D_PT1	TO-1 (Bldg 5D)	11.580	1.220	7.796	488.150	0.0406	0.0282	0.0116
Ball Metal Food Container Corp- Weirton	Stack 1	BA5D_PT2	TO-2 (Bldg 5D)	10.670	0.670	6.860	704.300	0.0203	0.0141	0.0058
Ball Metal Food Container Corp- Weirton	Stack 4	BA5D_P3	0003 (Bldg 5D)	10.050	0.640	1.659	649.800	0.0426	0.0296	0.0122
Crown Cork & Seal Co (USA) - Weirton	Stack 1	CR_PTO1	TO-1	11.000	1.219	16.149	659.150	0.7724	0.7337	0.7044
Crown Cork & Seal Co (USA) - Weirton	Stack 2	CR_PTO2	TO-2	17.000	0.597	13.492	773.150	1.0482	0.9958	0.9560
Ardagh Metal Packaging USA Inc- Weirton	Stack 1	AR_PC1	Coater #1	12.497	0.610	31.008	824.820	0.0084	0.0086	0.0017
Ardagh Metal Packaging USA Inc- Weirton	Stack 2	AR_PC2	Coater #2	14.330	0.610	9.147	783.150	0.0072	0.0074	0.0015
Ardagh Metal Packaging USA Inc- Weirton	Stack 3	AR_PC3	Coater #3	12.497	0.457	22.269	760.930	0.0066	0.0068	0.0014
Ardagh Metal Packaging USA Inc- Weirton	Stack 4	AR_PC4	Coater #4	12.190	0.457	15.447	745.370	0.0087	0.0089	0.0018
Roll Coater- Weirton	Stack 1		No stack parameters available. All emissions (stack + fugitives) modeled as a volume							

a. Individual stack emissions were based on total TRI Stack emissions and actual breakdown of EGBE emissions among individual stacks
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr) x Stack_fraction
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.
Stack_fraction represents the percent of the total TRI stack emissions emitted through the individual stack

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table D-11. Tier 3 Modeling Fugitive Volume Parameters and Results in Clusters

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]
Rexam Beverage Can Company- Chicago	Volume	9.144	20.900	4.253	0.368	0.38295	0.17576
Edsal Manufacturing Co Inc- Chicago	Volume	No fugitive emissions reported to TRI. All reported emissions modeled as a stack release					
Ball Metal Food Container Corp, Bldg. 5D- Weirton[g]	Volume	7.315	19.900	3.402	0.338	0.19246	0.13205
Ball Metal Food Container Corp, Bldg. 5G- Weirton[g]	Volume	12.192	16.247	5.670	0.174	0.09914	0.06802
Crown Cork & Seal Co (USA) - Weirton	Volume	9.144	14.120	4.253	1.089	1.03458	0.99320
Ardagh Metal Packaging USA Inc- Weirton	Volume	9.750	11.881	4.540	0.000	0.00011	0.00118
Roll Coater- Weirton	Volume	9.144	26.700	4.250	0.164	0.20800	0.07570

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 8,760 (hrs/yr)
The calculated emission rate assumes EGBE emissions occur continuously 8,760 hours per year.

g. Ball Facility in Weirton has two distinct (physically separate) buildings associtaed with fugitive emissions which were modeled separately. Their emissions were estimated based on the breakdown of the total fugitive emissions provided by the faciltiy in Tier 2 Survey

g/s: grams per second
hrs/yr: hours per year
m: meter
tpy: ton per year
TRI: Toxic Release Inventory

APPENDIX E

Outcome of Short-Term Tiered Modeling

Table E-1. Tier 1 Table of Maximum Normalized 1-Hour Concentrations (µg/m^3)/(gps)

Source Type	Release Height (m)	Side Length (m)	Normalized Maximum 1-Hour Average Concentrations At or Beyond: Receptor Distance					
			10 m	30 m	50 m	100 m	200 m	500 m
Area (10 m)	0.00	10.00	332,000	105,000	57,000	22,500	8,070	1,920
Area (10 m)[a]	3.00	10.00	35,825	11,294	10,415	9,771	6,168	1,802
Area (20 m)	0.00	20.00	179,000	63,600	37,200	16,600	6,620	1,750
Area (30 m)	0.00	30.00	122,000	45,400	27,500	13,000	5,590	1,590
Volume	3[a]	10.00	44,427	14,027	12,558	8,697	4,798	1,553
Point	0	-	1,880,000	275,000	113,000	33,600	10,100	2,110
Point	2	-	65,100	49,200	46,900	25,300	9,180	2,070
Point	5	-	33,400	25,900	18,000	9,440	5,130	1,800
Point	10	-	9,610	8,490	7,360	4,710	2,490	1,000
Point	20	-	2,450	1,570	1,570	1,320	846	367
Point	35	-	784	784	394	385	312	153
Point	50	-	384	384	384	163	147	88

a. Not included in EPA's Tier 1 table. Included in the EGBE HAPs Petition Table 4-2. These values are based on ratios of predicted SCREEN3 impacts for each receptor distance. The 10 m2 area source with the 0 m release height was used as the basis for the SCREEN3 predicted ratios. Ratios at the 10 m receptor distance were set equal to the ratios at the 30 m receptor distance.

m: meter

gps: grams per second

µg/m^3: micrograms per cubic meter

Table E-2. Tier 1 Short-Term Modeling Parameters and Individual Source Results at Selected Facilities for Short-Term Exposures

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	Tier 1 Table: Normalized Maximum 1-Hour Average Conc. (µg/m^3)/(gps)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)
[redacted]	Stack 1	16.6116	-	89	Y	7360.00	1.00	16.4	120,555	16.4	120,555	17.0	125,191.49
	Stack 2	16.6116	-	91	Y	7360.00	1.00	16.4	120,555	16.4	120,555	17.0	125,191.49
	Stack 3	19.812	-	89	Y	7360.00	1.00	16.4	120,555	16.4	120,555	17.0	125,191.49
	Stack 4	19.812	-	100	Y	4710.00	1.00	16.4	77,148	16.4	77,148	17.0	80,115.75
	Stack 5	14.1732	-	127	Y	4710.00	1.00	16.4	77,148	16.4	77,148	17.0	80,115.75
	Stack 6	21.1836	-	108	Y	1320.00	1.00	16.4	21,621	16.4	21,621	17.0	22,452.82
	Stack 7	21.6408	-	135	Y	1320.00	1.00	16.4	21,621	16.4	21,621	17.0	22,452.82
	Stack 8	20.4216	-	105	Y	1320.00	1.00	16.4	21,621	16.4	21,621	17.0	22,452.82
	Stack 9	20.7264	-	100	Y	1320.00	1.00	16.4	21,621	16.4	21,621	17.0	22,452.82
	Fugitive	6.911162791	10	84	Y	12558.23	1.00	3.1	38,767	3.1	39,558	3.2	40,348.92
	Stack 1	21.49	-	58	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 2	21.79	-	61	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 3	25.91	-	62	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 4	15.85	-	68	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 5	13.52	-	57	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 6	13.52	-	68	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 7	21.49	-	65	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 8	21.79	-	70	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 9	25.91	-	69	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 10	25.91	-	60	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 11	13.52	-	68	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 12	13.52	-	68	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 13	25.91	-	59	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 14	21.79	-	55	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 15	25.91	-	52	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 16	25.91	-	48	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 17	13.52	-	58	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 18	13.52	-	57	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Stack 19	21.49	-	37	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 20	25.91	-	49	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 21	21.79	-	45	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 22	25.91	-	43	N	1570.00	1.00	6.3	9,841	8.2	12,794	8.8	13,777.93
	Stack 23	15.75	-	53	N	7360.00	1.00	6.3	46,135	8.2	59,976	8.8	64,589.53
	Fugitive	5.777023256	10	50	N	12558.23	1.00	2.5	31,488	1.4	18,106	1.5	18,892.79
	Stack 1	18.4658	-	147	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 2	18.8722	-	127	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 3	15.5448	-	102	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 4	15.1638	-	102	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 5	13.1318	-	98	Y	7360.00	0.97	17.6	125,362	18.9	134,317	18.3	129,839.34
	Stack 6	13.1318	-	96	Y	7360.00	0.97	17.6	125,362	18.9	134,317	18.3	129,839.34
	Stack 7	18.5166	-	140	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 8	18.415	-	145	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 9	18.3388	-	122	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 10	18.5928	-	118	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 11	18.3134	-	103	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 12	18.288	-	111	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12

Table E-2. Tier 1 Short-Term Modeling Parameters and Individual Source Results at Selected Facilities for Short-Term Exposures

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	Tier 1 Table: Normalized Maximum 1-Hour Average Conc. (µg/m^3)/(gps)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)
[redacted]	Stack 13	18.3388	-	121	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 14	18.4658	-	142	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 15	15.5448	-	106	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 16	15.5448	-	110	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 17	17.8562	-	136	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 18	17.8562	-	116	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Stack 19	17.8562	-	114	Y	4710.00	0.97	17.6	80,225	18.9	85,955	18.3	83,090.12
	Fugitive	6.804837209	10	135	Y	8696.57	0.97	3.4	28,568	3.6	30,155	3.5	29,625.57
	Stack 1	18.29	-	18.71	N	9610.00	0.88	6.5	54,786	6.1	51,208	6.1	51,820.35
	Stack 2	15.24	-	18.71	N	9610.00	0.88	6.5	54,786	6.1	51,208	6.1	51,820.35
	Stack 3	15.24	-	24	N	9610.00	0.88	6.5	54,786	6.1	51,208	6.1	51,820.35
	Stack 4	18.29	-	24	N	9610.00	0.88	6.5	54,786	6.1	51,208	6.1	51,820.35
	Stack 5	15.24	-	37.92	N	8490.00	0.88	6.5	48,401	6.1	45,240	6.1	45,780.93
	Stack 6	15.24	-	32.99	N	8490.00	0.88	6.5	48,401	6.1	45,240	6.1	45,780.93
	Stack 7	18.29	-	37.92	N	8490.00	0.88	6.5	48,401	6.1	45,240	6.1	45,780.93
	Fugitive	3.402418605	10	43.67	N	14026.73	0.88	2.2	26,655	2.0	24,914	2.0	25,212.29
	Stack 1	8.7	-	38	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 2	8.7	-	41	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 3	8.7	-	39	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 4	8.7	-	40	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 5	8.7	-	34	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 6	8.7	-	42	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 7	8.7	-	60	N	18000.00	0.91	6.8	111,108	5.9	96,559	6.6	108,029.52
	Stack 8	8.7	-	64	N	18000.00	0.91	6.8	111,108	5.9	96,559	6.6	108,029.52
	Stack 9	8.7	-	46	N	25900.00	0.91	6.8	159,872	5.9	138,938	6.6	155,442.47
	Stack 10	8.7	-	62	N	18000.00	0.91	6.8	111,108	5.9	96,559	6.6	108,029.52
	Stack 11	8.7	-	63	N	18000.00	0.91	6.8	111,108	5.9	96,559	6.6	108,029.52
	Stack 12	8.7	-	50	N	18000.00	0.91	6.8	111,108	5.9	96,559	6.6	108,029.52
	Fugitive	2.835348837	10	75	N	12558.23	0.91	2.3	25,840	2.0	22,456	2.2	25,123.56
	Stack 1	14.33	-	44.63	N	8490.00	0.94	6.5	51,617	7.3	58,590	6.0	48,240.72
	Stack 2	16.76	-	55.57	N	7360.00	0.94	6.5	44,747	7.3	50,792	6.0	41,819.98
	Stack 3	12.8	-	63.77	N	7360.00	0.94	6.5	44,747	7.3	50,792	6.0	41,819.98
	Stack 4	12.8	-	72.24	N	7360.00	0.94	6.5	44,747	7.3	50,792	6.0	41,819.98
	Fugitive	4.961860465	10	69.36	N	12558.23	0.94	2.2	25,409	2.4	28,888	2.0	23,785.31
	Stack 1	17.98	-	70.7	N	7360.00	0.99	11.1	80,560	11.6	84,371	12.1	87,833.68
	Stack 2	17.98	-	81.66	N	7360.00	0.99	11.1	80,560	11.6	84,371	12.1	87,833.68
	Stack 3	17.98	-	98.33	N	7360.00	0.99	11.1	80,560	11.6	84,371	12.1	87,833.68
	Stack 4	17.98	-	104.03	N	4710.00	0.99	11.1	51,554	11.6	53,993	12.1	56,208.78
	Stack 5	17.98	-	78.13	N	7360.00	0.99	11.1	80,560	11.6	84,371	12.1	87,833.68
	Fugitive	4.961860465	10	102.8	N	8696.57	0.99	3.7	31,797	3.9	33,353	4.0	34,594.57
	Stack 1	11	-	12	N	9610.00	1.00	8.0	76,632	7.6	72,800	7.3	69,887.84
	Stack 2	17	-	15	N	9610.00	1.00	8.0	76,632	7.6	72,800	7.3	69,887.84
	Fugitive	4.253023256	10	31.36	N	14026.73	1.00	4.8	66,907	4.5	63,561	4.4	61,019.13
	Stack 1	15.24	-	22	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81
	Stack 2	15.5448	-	43	Y	8490.00	1.00	10.3	87,597	10.4	87,868	9.6	81,058.57
	Stack 3	11.5824	-	13	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81

Table E-2. Tier 1 Short-Term Modeling Parameters and Individual Source Results at Selected Facilities for Short-Term Exposures

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	Tier 1 Table: Normalized Maximum 1-Hour Average Conc. ($\mu g/m^3$)/(gps)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. ($\mu g/m^3$)
[redacted]	Stack 4	14.0208	-	16	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81
	Stack 5	14.0208	-	19	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81
	Stack 6	15.24	-	11	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81
	Stack 7	15.24	-	18	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81
	Stack 8	15.24	-	23	Y	9610.00	1.00	10.3	99,153	10.4	99,459	9.6	91,751.81
	Fugitive	4.961860465	10	63	Y	12558.23	1.00	1.8	22,865	1.8	22,937	1.7	21,153.27
	Stack 1	14.6304	-	36	Y	8490.00	1.00	9.4	79,876	8.9	75,444	8.9	75,321.63
	Stack 2	14.6304	-	40	Y	8490.00	1.00	9.4	79,876	8.9	75,444	8.9	75,321.63
	Stack 3	16.6116	-	42	Y	8490.00	1.00	9.4	79,876	8.9	75,444	8.9	75,321.63
	Stack 4	14.6304	-	29	Y	9610.00	1.00	9.4	90,414	8.9	85,397	8.9	85,258.05
	Stack 5	13.50264	-	56	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 6	14.1732	-	61	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 7	13.19784	-	62	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 8	13.716	-	65	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 9	15.24	-	56	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 10	15.33144	-	62	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 11	15.33144	-	65	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Stack 12	15.33144	-	60	Y	7360.00	1.00	9.4	69,245	8.9	65,403	8.9	65,296.49
	Fugitive	3.685953488	10	64	Y	12558.23	1.00	1.7	20,851	1.6	19,693	1.6	19,661.51
	Stack 1	12.19	-	37.8	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 2	12.19	-	32.22	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 3	13.41	-	41.76	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 4	13.41	-	41.76	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 5	13.41	-	45.11	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 7	12.19	-	41.45	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 8	12.19	-	32.61	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 9	12.19	-	49.07	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Stack 10	12.8	-	53.95	N	7360.00	1.00	6.9	50,540	7.0	51,468	6.7	49,363.93
	Stack 11	12.19	-	56.39	N	7360.00	1.00	6.9	50,540	7.0	51,468	6.7	49,363.93
	Stack 12	12.19	-	44.2	N	8490.00	1.00	6.9	58,300	7.0	59,370	6.7	56,942.90
	Fugitive	3	10	59	N	12558.23	1.00	1.6	19,779	1.6	20,333	1.5	19,289.95
	Stack 1	13.1064	-	30	Y	8490.00	0.94	6.5	51,842	6.8	53,908	3.4	26,705.88
	Stack 2	12.6492	-	38	Y	8490.00	0.94	6.5	51,842	6.8	53,908	3.4	26,705.88
	Stack 3	13.16736	-	44	Y	8490.00	0.94	6.5	51,842	6.8	53,908	3.4	26,705.88
	Stack 4	12.192	-	19	Y	9610.00	0.94	6.5	58,681	6.8	61,020	3.4	30,228.91
	Stack 5	12.8016	-	23	Y	9610.00	0.94	6.5	58,681	6.8	61,020	3.4	30,228.91
	Stack 6	13.716	-	31	Y	8490.00	0.94	6.5	51,842	6.8	53,908	3.4	26,705.88
	Stack 7	14.0208	-	26	Y	9610.00	0.94	6.5	58,681	6.8	61,020	3.4	30,228.91
	Stack 8	14.0208	-	34	Y	8490.00	0.94	6.5	51,842	6.8	53,908	3.4	26,705.88
	Stack 9	15.24	-	41	Y	8490.00	0.94	6.5	51,842	6.8	53,908	3.4	26,705.88
	Fugitive	4.253023256	10	46	Y	14026.73	0.94	1.7	22,587	1.8	23,528	0.8	10,798.10
	Stack 1	13.716	-	12	N	9610.00	1.00	0.2	2,072	0.2	2,011	0.2	2,177.69
	Fugitive	3	10	70	N	12558.23	1.00	2.9	36,100	2.8	35,030	3.0	37,941.43
	Point	11.17	-	45	Unknown	8490.00	1.00	0.5	4,575	0.5	3,835	0.4	3,274.42
	Fugitive	3.05	10	210	Unknown	4798.11	1.00	4.6	21,848	4.9	23,455	5.7	27,327.85
	Stacks 1-10	14	-	75	Unknown	7360.00	0.95	18.1	126,798	19.9	138,812	13.9	97,310.09

Table E-2. Tier 1 Short-Term Modeling Parameters and Individual Source Results at Selected Facilities for Short-Term Exposures

Facility Name	Source ID	Release Height (m)	Volume Source Length of Side (m)	Distance to Nearest Receptor (m)	Physical Fence (Y/N)	Tier 1 Table: Normalized Maximum 1-Hour Average Conc. ($\mu g/m^3$)/(gps)	Proportion EGBE of Certain Glycol Ethers	2009		2010		2011	
								TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. ($\mu g/m^3$)	TRI Emissions (gps)	Maximum 1-Hour Average Tier I EGBE Conc. ($\mu g/m^3$)
[redacted]	Fugitive	3	10	91.7	Unknown	12558.23	0.95	3.6	42,558	3.9	46,927	3.2	38,656.16

Table E-3. Tier 1 Short-Term Modeling Summary for Selected Facilities

Site Name	Source Type	2009 TRI		2010 TRI		2011 TRI	
		Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	Short-Term HQ (combined)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	Short-Term HQ (combined)	Maximum 1-Hour Average Tier I EGBE Conc. (µg/m^3)	Short-Term HQ (combined)
[redacted]	Point	1674648.6	**18**	1455360.1	**15**	1628244.9	**17**
	Volume	25839.6		22455.8		25123.6	
	Point	4575.2	0.3	3835.5	0.3	3274.4	0.3
	Volume	21848.5		23455.4		27327.9	
	Point	1614548.3	**17**	1729873.2	**18**	1672210.7	**18**
	Volume	28567.5		30154.6		29625.6	
	Point	153263.2	**2**	145599.8	**2**	139775.7	**2**
	Volume	66907.0		63561.5		61019.1	
	Point	126797.7	**2**	138811.6	**2**	97310.1	1
	Volume	42558.5		46926.7		38656.2	
	Point	781664.4	**8**	784081.0	**8**	723321.2	**8**
	Volume	22865.5		22936.6		21153.3	
	Point	516703.7	**6**	671714.9	**7**	723385.2	**8**
	Volume	31488.0		18105.6		18892.8	
	Point	602446.2	**7**	602446.2	**7**	625617.2	**7**
	Volume	38766.6		39557.8		40348.9	
	Point	625779.2	**7**	637261.3	**7**	611214.0	**7**
	Volume	19778.9		20332.7		19289.9	
	Point	2071.7	0.4	2010.6	0.4	2177.7	0.4
	Volume	36099.6		35030.0		37941.4	
	Point	373793.1	**4**	391475.5	**4**	407543.5	**5**
	Volume	31796.9		33353.0		34594.6	
	Point	487099.1	**5**	506509.5	**5**	250922.0	**3**
	Volume	22587.1		23527.5		10798.1	
	Point	364345.2	**4**	340549.6	**4**	344624.2	**4**
	Volume	26654.8		24914.5		25212.3	
	Point	884003.8	**9**	834954.6	**9**	833594.9	**9**
	Volume	20850.7		19693.1		19661.5	
	Point	185857.0	**2**	210964.4	**2**	173700.7	**2**
	Volume	25408.8		28888.5		23785.3	

Hazard quotient (HQ) equals the sum of the maximum annual average concentration for fugitive/volume source emissions and point source emissions, at or beyond the fence line, is compared to a NOAEL for EGBE of 97,000 µg/m^3.
EGBE: ethylene glycol monobutyl ether
HQ: hazard quotient
RfC: reference concentration
TRI: Toxics Release Inventory
µg/m^3: micrograms per cubic meter
Bold font indicates an HQ greather than 1.

Table E-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
[redacted]	Stack 1	L1-IBO-Hot		21.49	0.686	9.64	349.8	6.268	8.149	8.776	594.06
	Stack 2	L1-ISS		21.79	0.405	11.70	298.0	6.268	8.149	8.776	1658.08
	Stack 3	L1-PO1-Hot		25.91	0.381	19.16	374.8	6.268	8.149	8.776	610.95
	Stack 4	L1-PO2-Hot		15.85	0.405	20.70	374.8	6.268	8.149	8.776	728.96
	Stack 5	L1-PR-11		13.52	0.399	10.18	298.0	6.268	8.149	8.776	1951.66
	Stack 6	L1-PR-12		13.52	0.399	10.18	298.0	6.268	8.149	8.776	2026.61
	Stack 7	L2-IBO-Hot		21.49	0.686	2.71	349.8	6.268	8.149	8.776	1404.66
	Stack 8	L2-ISS		21.79	0.405	11.70	298.0	6.268	8.149	8.776	1566.07
	Stack 9	L2-PO1-Hot		25.91	0.393	19.19	374.8	6.268	8.149	8.776	591.61
	Stack 10	L2-PO2-Hot		25.91	0.381	15.63	374.8	6.268	8.149	8.776	835.39
	Stack 11	L2-PR-21		13.52	0.399	10.18	298.0	6.268	8.149	8.776	2041.74
	Stack 12	L2-PR-22		13.52	0.399	10.18	298.0	6.268	8.149	8.776	2118.85
	Stack 13	L3-IBO-Hot		25.91	0.686	7.59	349.8	6.268	8.149	8.776	882.72
	Stack 14	L3-ISS		21.79	0.405	11.70	298.0	6.268	8.149	8.776	1519.69
	Stack 15	L3-PO1-Hot		25.91	0.381	17.20	374.8	6.268	8.149	8.776	776.04
	Stack 16	L3-PO2-Hot		25.91	0.393	14.71	374.8	6.268	8.149	8.776	832.98
	Stack 17	L3-PR-31		13.52	0.399	10.18	298.0	6.268	8.149	8.776	2105.18
	Stack 18	L3-PR-32		13.52	0.399	10.18	298.0	6.268	8.149	8.776	1966.29
	Stack 19	L4-BCO-Hot		21.49	0.393	17.23	453.2	6.268	8.149	8.776	628.53
	Stack 20	L4-IBO-Hot		25.91	0.381	32.32	349.8	6.268	8.149	8.776	569.39
	Stack 21	L4-ISS		21.79	0.405	7.31	298.0	6.268	8.149	8.776	1728.75
	Stack 22	L4-PO-Hot		25.91	0.686	5.00	374.8	6.268	8.149	8.776	851.15
	Stack 23	L4-PR-41		15.75	1.119	1.30	298.0	6.268	8.149	8.776	**2844.86**
	Stack 1	B_PO11	PO11	16.61	0.457	7.00	510.9	16.380	16.380	17.010	**490.97**
	Stack 2	B_PO12	PO12	16.61	0.305	29.07	510.9	16.380	16.380	17.010	322.51
	Stack 3	B_PO21	PO21	19.81	0.457	9.79	499.8	16.380	16.380	17.010	192.92
	Stack 4	B_PO22	PO22	19.81	0.457	11.32	488.7	16.380	16.380	17.010	183.11
	Stack 5	B_IBO11	IBO11	14.17	0.610	11.62	477.6	16.380	16.380	17.010	269.99
	Stack 6	B_IBO21B	IBO21-B	21.18	0.610	3.98	477.6	16.380	16.380	17.010	210.23
	Stack 7	B_IBO31	IBO31	21.64	0.864	5.12	494.3	16.380	16.380	17.010	114.93
	Stack 8	B_WCO31	WashCoat Ov	20.42	0.813	2.58	510.9	16.380	16.380	17.010	189.14
	Stack 9	B_BH	Baghouse	20.73	0.330	37.48	294.3	16.380	16.380	17.010	228.58
	Stack 1	PO2	S019	18.47	0.406	13.53	402.0	17.033	18.250	17.641	271.76
	Stack 2	PO3	S006	18.87	0.406	12.25	365.9	17.033	18.250	17.641	395.24
	Stack 3	PO4Z1	S035	15.54	0.483	6.77	402.6	17.033	18.250	17.641	883.30
	Stack 4	PO4Z2	S036	15.16	0.483	9.49	395.9	17.033	18.250	17.641	775.94

Table E-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
[redacted]	Stack 5	PO5Z1	S037	13.13	0.483	9.63	369.8	17.033	18.250	17.641	855.28
	Stack 6	PO5Z2	S038	13.13	0.483	8.84	380.9	17.033	18.250	17.641	798.49
	Stack 7	IBO2Z1	S021	18.52	0.406	7.60	362.6	17.033	18.250	17.641	464.09
	Stack 8	IBO2Z2	S020	18.42	0.508	6.60	382.6	17.033	18.250	17.641	367.79
	Stack 9	IBO3Z1	S011	18.34	0.406	6.06	322.6	17.033	18.250	17.641	801.58
	Stack 10	IBO3Z2	S010	18.59	0.508	7.29	389.3	17.033	18.250	17.641	378.79
	Stack 11	IBO4/5Z1	S027	18.31	0.406	2.85	356.5	17.033	18.250	17.641	**1296.25**
	Stack 12	IBO4/5Z2	S028	18.29	0.508	5.13	384.8	17.033	18.250	17.641	591.59
	Stack 13	IBO4/5Z3	S039	18.34	0.406	13.05	373.7	17.033	18.250	17.641	380.54
	Stack 14	BCPOL2	S016	18.47	0.406	13.01	391.5	17.033	18.250	17.641	304.05
	Stack 15	BCPOL4Z1	S033	15.54	0.483	9.00	355.9	17.033	18.250	17.641	912.54
	Stack 16	BCPOL4Z2	S034	15.54	0.483	10.22	382.0	17.033	18.250	17.641	749.49
	Stack 17	ICEXH02	S024	17.86	0.305	11.26	293.2	17.033	18.250	17.641	783.91
	Stack 18	ICEXH03	S023	17.86	0.305	11.89	295.9	17.033	18.250	17.641	857.76
	Stack 19	ICEXH045	S022	17.86	0.406	8.61	295.9	17.033	18.250	17.641	894.58
	Stack 1	IBO	IBO (Can Lin	18.29	0.305	10.20	459.8	5.701	5.329	5.392	1145.73
	Stack 2	Ross	Ross (Can Lir	15.24	0.305	16.72	422.6	5.701	5.329	5.392	1033.43
	Stack 3	IBO	IBO (Can Lin	15.24	0.305	9.51	459.8	5.701	5.329	5.392	1328.00
	Stack 4	Ross	Ross (Can Lir	18.29	0.305	16.72	422.6	5.701	5.329	5.392	927.51
	Stack 5	IBO	IBO (Can Lin	15.24	0.305	10.20	459.8	5.701	5.329	5.392	**1558.72**
	Stack 6	Ross	Ross (Can Lir	15.24	0.305	16.72	422.6	5.701	5.329	5.392	1318.91
	Stack 7	Ross	Ross (Can Lir	18.29	0.305	16.72	422.6	5.701	5.329	5.392	1180.43
	Stack 1	IBO #1A		14.33	0.710	3.97	460.9	6.080	6.901	5.682	620.78
	Stack 2	IBO #2C		16.76	1.067	7.98	316.5	6.080	6.901	5.682	938.12
	Stack 3	LSM #1A		12.80	0.280	8.32	294.3	6.080	6.901	5.682	2944.95
	Stack 4	LSM #2A		12.80	0.280	6.91	294.3	6.080	6.901	5.682	**3101.38**
	Stack 1	LSM2		8.53	0.457	1.42	449.8	6.173	5.364	6.002	2814.02
	Stack 2	L1PO		8.53	0.457	2.10	291.5	6.173	5.364	6.002	**8171.36**
	Stack 3	IBO1		8.53	0.457	3.31	533.2	6.173	5.364	6.002	1874.95
	Stack 4	LSM1		8.53	0.457	1.18	449.8	6.173	5.364	6.002	3657.09
	Stack 5	L1V1		8.53	0.457	3.42	291.5	6.173	5.364	6.002	7645.40
	Stack 6	IBO3		8.53	0.457	10.25	291.5	6.173	5.364	6.002	3179.53
	Stack 7	L3S		8.53	0.457	1.18	449.8	6.173	5.364	6.002	2541.28
	Stack 8	L3VI		8.53	0.457	3.42	291.5	6.173	5.364	6.002	5379.82
	Stack 9	IBO4		8.53	0.457	8.52	291.5	6.173	5.364	6.002	4375.61
	Stack 10	L4S		8.53	0.457	1.42	449.8	6.173	5.364	6.002	2502.39

Table E-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
[redacted]	Stack 11	L3PO		8.53	0.457	3.42	291.5	6.173	5.364	6.002	5339.13
	Stack 12	IBO2		8.53	0.457	3.68	533.2	6.173	5.364	6.002	1515.96
	Stack 1	TO-1		11.00	1.219	16.17	659.2	7.974	7.575	7.272	196.82
	Stack 2	TO-2		17.00	0.597	13.49	773.2	7.974	7.575	7.272	**336.36**
	Stack 1	EU-001		17.98	0.311	31.08	310.9	10.946	11.463	11.934	**934.36**
	Stack 2	EU-003		17.98	0.311	18.65	394.3	10.946	11.463	11.934	821.21
	Stack 3	EU-005		17.98	0.311	18.65	394.3	10.946	11.463	11.934	802.77
	Stack 4	EU-007		17.98	0.311	31.08	449.8	10.946	11.463	11.934	556.34
	Stack 5	EU-008		17.98	0.311	31.08	449.8	10.946	11.463	11.934	522.95
	Stack 1	SV4	Printer Oven S	15.24	0.457	6.10	422.0	10.318	10.350	9.548	986.47
	Stack 2	SV5	Printer Oven S	15.54	0.396	6.10	422.0	10.318	10.350	9.548	1021.25
	Stack 3	SV 6	Inside Spray M	11.58	0.610	3.96	294.3	10.318	10.350	9.548	**3630.15**
	Stack 4	SV 7	Inside Spray M	14.02	0.610	3.96	294.3	10.318	10.350	9.548	2950.11
	Stack 5	SV 8	Inside Spray M	14.02	0.610	3.96	294.3	10.318	10.350	9.548	2941.73
	Stack 6	SV9	Inside Bake O	15.24	0.762	4.88	422.0	10.318	10.350	9.548	598.16
	Stack 7	SV10	Inside Bake O	15.24	0.762	4.88	422.0	10.318	10.350	9.548	604.47
	Stack 8	SV11	Inside Bake O	15.24	0.762	4.88	422.0	10.318	10.350	9.548	597.03
	Stack 1	REX_SV21	Printer Oven S	13.11	0.396	9.58	366.5	6.106	6.350	3.146	1656.67
	Stack 2	REX_SV22	Printer Oven S	12.65	0.396	9.57	366.5	6.106	6.350	3.146	1752.38
	Stack 3	REX_SV23	Base Coater E	13.17	0.396	9.57	366.5	6.106	6.350	3.146	1908.85
	Stack 4	RED_SV31	Inside Spray M	12.19	1.097	2.50	294.3	6.106	6.350	3.146	3211.46
	Stack 5	REX_SV32	Inside Spray M	12.80	1.189	2.13	294.3	6.106	6.350	3.146	**3768.25**
	Stack 6	REX_SV33	Inside Spray M	13.72	0.914	3.59	294.3	6.106	6.350	3.146	3050.71
	Stack 7	REX_SV41	Inside Bake O	14.02	0.762	8.07	449.8	6.106	6.350	3.146	719.15
	Stack 8	REX_SV42	Inside Bake O	14.02	0.823	6.92	449.8	6.106	6.350	3.146	690.34
	Stack 9	REX_RTO	Regenerative	15.24	1.158	7.61	488.7	6.106	6.350	3.146	420.86
	Stack 1	SV7A	Printer Pin Ov	14.63	0.558	4.83	422.0	9.408	8.886	8.872	1291.94
	Stack 2	SV7B	Printer Pin Ov	14.63	0.558	4.83	444.3	9.408	8.886	8.872	1530.94
	Stack 3	SV7C	Printer Pin Ov	16.61	0.914	1.80	397.0	9.408	8.886	8.872	1520.13
	Stack 4	SV7D	Printer Pin Ov	14.63	0.610	4.04	399.8	9.408	8.886	8.872	1317.77
	Stack 5	SV8A	Inside Spray M	13.50	0.838	2.14	299.8	9.408	8.886	8.872	4724.42
	Stack 6	SV8B	Inside Spray M	14.17	0.838	2.14	299.8	9.408	8.886	8.872	4139.12
	Stack 7	SV8C	Inside Spray M	13.20	0.850	2.08	299.8	9.408	8.886	8.872	**4815.86**
	Stack 8	SV8D	Inside Spray M	13.72	0.838	2.14	299.8	9.408	8.886	8.872	4539.85
	Stack 9	SV9A	Inside Bake O	15.24	0.762	3.62	358.2	9.408	8.886	8.872	1674.02
	Stack 10	SV9B	Inside Bake O	15.33	0.762	3.62	360.9	9.408	8.886	8.872	1524.62

Table E-4. Tier 2 Modeling Stack Parameters and Individual Source Results at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
[redacted]	Stack 11	SV9C	Inside Bake C	15.33	0.762	3.62	366.5	9.408	8.886	8.872	1523.51
	Stack 12	SV9D	Inside Bake C	15.33	0.762	3.62	360.9	9.408	8.886	8.872	1720.38
	Stack 1	Stack1		14.00	6.096	0.46	394.3	17.228	18.860	13.221	553.27
	Stack 2	Stack2		14.00	6.096	0.46	394.3	17.228	18.860	13.221	675.40
	Stack 3	Stack3		14.00	6.096	0.46	394.3	17.228	18.860	13.221	702.45
	Stack 4	Stack4		14.00	6.096	0.46	394.3	17.228	18.860	13.221	584.73
	Stack 5	Stack5		14.00	6.096	0.46	394.3	17.228	18.860	13.221	542.50
	Stack 1	C11	L1Roll1	15.80	0.719	17.42	477.6	6.867	6.993	6.707	274.20
	Stack 2	C12	L1Roll2	15.80	0.719	7.37	477.6	6.867	6.993	6.707	550.70
	Stack 3	C13	L1IS1	17.11	0.905	5.13	477.6	6.867	6.993	6.707	448.93
	Stack 4	C14	L1IS2	17.11	0.905	5.13	477.6	6.867	6.993	6.707	454.40
	Stack 5	C15	L1IS3	17.11	0.905	12.32	477.6	6.867	6.993	6.707	239.27
	Stack 6	C16	L1IS4	17.11	0.914	10.78	477.6	6.867	6.993	6.707	263.33
	Stack 7	C21	L2Roll1	15.80	0.719	17.42	477.6	6.867	6.993	6.707	285.75
	Stack 8	C22	L2Roll2	15.80	0.719	7.37	477.6	6.867	6.993	6.707	495.43
	Stack 9	C23	L2IS1	16.46	0.799	9.42	477.6	6.867	6.993	6.707	358.27
	Stack 10	C24	L2IS2	16.78	0.799	18.85	477.6	6.867	6.993	6.707	255.84
	Stack 11	S1	IS_1_Over_F	16.00	0.695	12.44	294.3	6.867	6.993	6.707	**1326.56**
	Stack 12	S2	IS_2_Over_F	16.13	0.362	45.87	294.3	6.867	6.993	6.707	697.82

a. All point EGBE emissions were conservatively assumed to exhaust through each stack for AERSCREEN modeling.
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr)
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.

b. Worst case 1-hr average unit emission rate concentration in (µg/m3) (1g/s) assumes stack emission rate of 1 g/s.
It is used to calculate Tier 2 1-hr concentration for a stack by multiplying the unit emission rate concentration by Tier 2 stack emission rate (in g/s) for a given TRI year
The maximum point source unit emission rate impact (considering all point sources for a facility) is shown in **bolded** text.

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table E-5. Tier 2 Modeling Fugitive Volume Parameters and Results at Individual Facilities

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]	Worst case fugitive annual average unit emission rate concentration[f] (µg/m3) (1g/s)
[redacted]	Volume	12.420	22.790	5.777	2.507	1.44173	1.50441	860.89
	Volume	12.420	11.230	5.780	3.087	3.14995	3.21295	1315.32
	Volume	14.630	13.730	6.805	3.285	3.46741	3.40658	523.70
	Volume	7.315	19.850	3.402	1.900	1.77621	1.79745	1845.69
	Volume	10.670	24.820	4.962	2.023	2.30036	1.89400	939.75
	Volume	6.096	27.300	2.835	2.058	1.78813	2.00057	956.11
	Volume	9.144	14.120	4.253	4.770	4.53145	4.35020	1987.61
	Volume	10.670	30.710	4.962	3.656	3.83519	3.97795	820.91
	Volume	10.670	28.840	4.962	1.821	1.82642	1.68442	875.76
	Volume	9.144	20.930	4.253	1.610	1.67733	0.76982	1082.62
	Volume	7.925	24.550	3.686	1.660	1.56814	1.56563	1296.45
	Volume	7.000	27.240	3.250	3.389	3.73673	3.07815	1110.14
	Volume	12.192	20.698	5.670	1.575	1.61907	1.53604	1047.65

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr)
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.

f. Worst case 1-hr average unit emission rate concentration in (µg/m3) (1g/s) assumes fugitive emission rate of 1 g/s. It is used to calculate Tier 2 1-hr concentration for a fugitive volume by multiplying the unit emission rate concentration by Tier 2 fugitive emission rate (in g/s) for a given TRI year

g/s: grams per second
hrs/yr: hours per year
m: meter
$\mu g/m^3$: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table E-6. Tier 2 Modeling Stack Parameters and Individual Source Results in Clusters

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
[redacted]	Stack 1	REX_SV21	Printer Oven Stack # 1 – SV 21	13.11	0.396	9.58	366.5	6.106	6.350	3.146	1656.67
	Stack 1	REX_SV22	Printer Oven Stack # 2 – SV 22	12.65	0.396	9.57	366.5	6.106	6.350	3.146	1752.38
	Stack 1	REX_SV23	Base Coater Pin Oven Stack # 3 – SV 23	13.17	0.396	9.57	366.5	6.106	6.350	3.146	1908.85
	Stack 4	RED_SV31	Inside Spray Machines Bank 1 – SV 31	12.19	1.097	2.50	294.3	6.106	6.350	3.146	3211.46
	Stack 5	REX_SV32	Inside Spray Machines Bank 2 – SV 32	12.80	1.189	2.13	294.3	6.106	6.350	3.146	**3768.25**
	Stack 6	REX_SV33	Inside Spray Machines Bank 2 – SV 33	13.72	0.914	3.59	294.3	6.106	6.350	3.146	3050.71
	Stack 7	REX_SV41	Inside Bake Oven Stack # 1 – SV 41	14.02	0.762	8.07	449.8	6.106	6.350	3.146	719.15
	Stack 8	REX_SV42	Inside Bake Oven Stack # 2 – SV 42	14.02	0.823	6.92	449.8	6.106	6.350	3.146	690.34
	Stack 9	REX_RTO	Regenerative Thermal Oxidizer Stack	15.24	1.158	7.61	488.7	6.106	6.350	3.146	420.86
	Stack1	N/A	3960***	9.75	0.396	2.74	294.3	3.243	5.436	4.277	4608.31
	Stack 1	B_PO11	PO11	16.61	0.457	7.00	510.9	16.380	16.380	17.010	**490.97**
	Stack 2	B_PO12	PO12	16.61	0.305	29.07	510.9	16.380	16.380	17.010	322.51
	Stack 3	B_PO21	PO21	19.81	0.457	9.79	499.8	16.380	16.380	17.010	192.92
	Stack 4	B_PO22	PO22	19.81	0.457	11.32	488.7	16.380	16.380	17.010	183.11
	Stack 5	B_IBO11	IBO11	14.17	0.610	11.62	477.6	16.380	16.380	17.010	269.99
	Stack 6	B_IBO21B	IBO21-B	21.18	0.610	3.98	477.6	16.380	16.380	17.010	210.23
	Stack 7	B_IBO31	IBO31	21.64	0.864	5.12	494.3	16.380	16.380	17.010	114.93
	Stack 8	B_WCO31	WashCoat Oven31	20.42	0.813	2.58	510.9	16.380	16.380	17.010	189.14
	Stack 9	B_BH	Baghouse	20.73	0.330	37.48	294.3	16.380	16.380	17.010	228.58
	Stack 1	Stk_2	8194****	12.19	0.305	0.39	327.6	2.591	2.537	2.439	2878.62
	Stack 1	C11	L1Roll1	15.80	0.719	17.42	477.6	6.867	6.993	6.707	274.20
	Stack 2	C12	L1Roll2	15.80	0.719	7.37	477.6	6.867	6.993	6.707	550.70
	Stack 3	C13	L1IS1	17.11	0.905	5.13	477.6	6.867	6.993	6.707	448.93
	Stack 4	C14	L1IS2	17.11	0.905	5.13	477.6	6.867	6.993	6.707	454.40
	Stack 5	C15	L1IS3	17.11	0.905	12.32	477.6	6.867	6.993	6.707	239.27
	Stack 6	C16	L1IS4	17.11	0.914	10.78	477.6	6.867	6.993	6.707	263.33
	Stack 7	C21	L2Roll1	15.80	0.719	17.42	477.6	6.867	6.993	6.707	285.75
	Stack 8	C22	L2Roll2	15.80	0.719	7.37	477.6	6.867	6.993	6.707	495.43
	Stack 9	C23	L2IS1	16.46	0.799	9.42	477.6	6.867	6.993	6.707	358.27
	Stack 10	C24	L2IS2	16.78	0.799	18.85	477.6	6.867	6.993	6.707	255.84
	Stack 11	S1	IS_1_Over_Fug	16.00	0.695	12.44	294.3	6.867	6.993	6.707	**1326.56**
	Stack 12	S2	IS_2_Over_Fug	16.13	0.362	45.87	294.3	6.867	6.993	6.707	697.82
	Stack 1	Stk_2	not used	9.14	0.914	3.23	505.4	0.633	0.974	0.871	1018.09
	Stack 1	0001	0001 (Bldg 5G)	12.80	2.070	8.41	405.9	1.013	0.705	0.291	154.56
	Stack 2	TO-1	TO-1 (Bldg 5D)	11.58	1.220	7.80	488.2	1.013	0.705	0.291	316.24
	Stack 3	TO-2	TO-2 (Bldg 5D)	10.67	0.670	6.86	704.3	1.013	0.705	0.291	469.30
	Stack 4	0003	0003 (Bldg 5D)	10.05	0.640	1.66	649.8	1.013	0.705	0.291	**928.20**
	Stack 1	TO-1		11.00	1.219	16.17	659.2	7.974	7.575	7.272	196.82
	Stack 2	TO-2		17.00	0.597	13.49	773.2	7.974	7.575	7.272	**336.36**
	Stack 1	Coater #1		12.50	0.610	31.01	824.8	0.135	0.139	0.028	176.53
	Stack 2	Coater #2		14.33	0.610	9.15	783.2	0.135	0.139	0.028	**311.95**
	Stack 3	Coater #3		12.50	0.457	22.27	760.9	0.135	0.139	0.028	239.00
	Stack 4	Coater #4		12.19	0.457	15.45	745.4	0.135	0.139	0.028	260.81
	Stack 1		No stack parameters available. All emissions (stack + fugitives) modeled as a volume								

Table E-6. Tier 2 Modeling Stack Parameters and Individual Source Results in Clusters

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]	Worst case annual average unit emission rate concentration[b] (µg/m3) (1g/s)
[redacted]	Stack 1	PO1		15.95	0.508	4.32	479.0	7.936	9.767	10.378	769.29
	Stack 2	PO2		16.31	0.508	4.28	465.0	7.936	9.767	10.378	898.51
	Stack 3	PO3		16.08	0.508	6.14	458.0	7.936	9.767	10.378	825.45
	Stack 4	IBO1		16.00	0.457	12.15	473.0	7.936	9.767	10.378	537.42
	Stack 5	IBO2		16.00	0.457	7.11	475.0	7.936	9.767	10.378	695.90
	Stack 6	IBO3		16.00	0.457	13.17	474.0	7.936	9.767	10.378	604.66
	Stack 7	Printer 1		15.95	0.508	0.50	298.0	7.936	9.767	10.378	**3033.94**
	Stack 8	Printer 2		15.90	0.508	0.50	298.0	7.936	9.767	10.378	2581.65
	Stack 9	Printer 3		16.08	0.508	0.50	298.0	7.936	9.767	10.378	2784.36
	Stack 10	Spray line 1		14.94	0.381	6.39	298.0	7.936	9.767	10.378	1930.54
	Stack 11	Spray line 2		14.99	0.381	7.28	298.0	7.936	9.767	10.378	1946.81
	Stack 12	Spray line 3		14.99	0.381	8.74	298.0	7.936	9.767	10.378	2109.27
	Stack 1	Stk_2		11.64	0.432	5.44	370.9	0.0019	0.0019	0.0019	1788.26

a. All point EGBE emissions were conservatively assumed to exhaust through each stack for AERSCREEN modeling.
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr)
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.

b. Worst case 1-hr average unit emission rate concentration in (µg/m3) (1g/s) assumes stack emission rate of 1 g/s.
It is used to calculate Tier 2 1-hr concentration for a stack by multiplying the unit emission rate concentration by Tier 2 stack emission rate (in g/s) for a given TRI year
The maximum point source unit emission rate impact (considering all point sources for a facility) is shown in **bolded** text.

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table E-7. Tier 2 Modeling Fugitive Volume Parameters and Results in Clusters

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]	Worst case fugitive annual average unit emission rate concentration[f] (µg/m3) (1g/s)
[redacted]	Volume	9.144	20.930	4.253	1.610	1.67733	0.76982	1082.62
	Volume	No fugitive emissions reported to TRI. All reported emissions modeled as a stack release						
	Volume	12.420	11.230	5.780	3.087	3.14995	3.21295	1315.32
	Volume	8.800	47.280	4.093	0.288	0.28192	0.27101	495.99
	Volume	12.192	20.698	5.670	1.575	1.61907	1.53604	1047.65
	Volume	9.144	39.535	4.251	0.000	0.00000	0.00252	733.69
	Volume	7.315	19.900	3.402	1.482	0.84285	0.57837	1858.10
	Volume	12.192	16.247	5.670	0.764	0.43420	0.29795	1068.24
	Volume	9.144	14.120	4.253	4.770	4.53145	4.35020	1987.61
	Volume	9.750	11.881	4.540	0.000	0.00048	0.00517	1916.41
	Volume	9.144	16.000	4.250	0.716	0.91090	0.33156	1474.64
	Volume	13.106	30.930	6.096	1.465	1.77033	2.07556	540.72
	Volume	10.000	9.698	4.651	0.004	0.00441	0.00441	1866.55

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr)
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.

f. Worst case 1-hr average unit emission rate concentration in (µg/m3) (1g/s) assumes fugitive emission rate of 1 g/s.
It is used to calculate Tier 2 1-hr concentration for a fugitive volume by multiplying the unit emission rate concentration by Tier 2 fugitive emission rate (in g/s) for a given TRI year

g. Ball Facility in Weirton has two distinct (physically separate) buildings associtaed with fugitive emissions which were modeled separately. Their emissions were estimated based on the breakdown of the total fugitive emissions provided by the faciltiy in Tier 2 Survey
The maximum impact from fugitive sources for that facility is obtained by summing maximum impacts of the two volume sources.

g/s: grams per second
hrs/yr: hours per year
m: meter
tpy: ton per year
TRI: Toxic Release Inventory

Table E-8. Tier 3 Modeling Stack Parameters at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]
[redacted]	Stack 1	LSM2		8.530	0.457	2.103	291.483	0.5144	0.4470	0.5001
	Stack 2	L1PO		8.530	0.457	3.312	533.150	0.5144	0.4470	0.5001
	Stack 3	IBO1		8.530	0.457	1.183	449.817	0.5144	0.4470	0.5001
	Stack 4	LSM1		8.530	0.457	3.417	291.483	0.5144	0.4470	0.5001
	Stack 5	L1V1		8.530	0.457	10.252	291.483	0.5144	0.4470	0.5001
	Stack 6	IBO3		8.530	0.457	1.183	449.817	0.5144	0.4470	0.5001
	Stack 7	L3S		8.530	0.457	3.417	291.483	0.5144	0.4470	0.5001
	Stack 8	L3VI		8.530	0.457	8.517	291.483	0.5144	0.4470	0.5001
	Stack 9	IBO4		8.530	0.457	1.419	449.817	0.5144	0.4470	0.5001
	Stack 10	L4S		8.530	0.457	3.417	291.483	0.5144	0.4470	0.5001
	Stack 11	L3PO		8.530	0.457	3.680	533.150	0.5144	0.4470	0.5001
	Stack 12	IBO2		8.530	0.457	1.183	449.817	0.5144	0.4470	0.5001
	Stack 1	S30		13.720	0.966	9.546	422.000	0.216	0.1988	0.2153
	Stack 1	TO-1		11.000	1.219	16.149	659.150	3.3830	3.2138	3.0853
	Stack 2	TO-2		17.000	0.597	13.492	773.150	4.5912	4.3616	4.1871
	Stack 1	SV4	Printer Oven Stack # 1 – SV4	15.200	0.460	6.100	422.000	0.9622	0.9652	0.8904
	Stack 2	SV5	Printer Oven Stack # 2 – SV5	15.500	0.400	6.100	422.000	0.9622	0.9652	0.8904
	Stack 3	SV 6	Inside Spray Machines Bank 1 – SV 6	11.600	0.610	3.960	294.000	0.4194	0.4207	0.3881
	Stack 4	SV 7	Inside Spray Machines Bank 2 – SV 7	14.000	0.610	3.960	294.000	0.4194	0.4207	0.3881
	Stack 5	SV 8	Inside Spray Machines Bank 3 – SV 8	14.000	0.610	3.960	294.000	0.4194	0.4207	0.3881
	Stack 6	SV9	Inside Bake Oven Stack # 1 – SV9	15.200	0.760	4.880	422.000	2.3783	2.3857	2.2008
	Stack 7	SV10	Inside Bake Oven Stack # 2 – SV10	15.200	0.760	4.880	422.000	2.3783	2.3857	2.2008
	Stack 8	SV11	Inside Bake Oven Stack # 3 – SV11	15.200	0.760	4.880	422.000	2.3783	2.3857	2.2008
	Stack 1	REX_SV21	Printer Oven Stack # 1 – SV 21	13.106	0.396	9.580	366.500	0.6334	0.6586	0.3263
	Stack 1	REX_SV22	Printer Oven Stack # 2 – SV 22	12.649	0.396	9.568	366.500	0.6334	0.6586	0.3263
	Stack 1	REX_SV23	Base Coater Pin Oven Stack # 3 – SV 23	13.167	0.396	9.568	366.500	0.0063	0.0065	0.0032
	Stack 4	RED_SV31	Inside Spray Machines Bank 1 – SV 31	12.192	1.097	2.495	294.261	0.3099	0.3223	0.1597
	Stack 5	REX_SV32	Inside Spray Machines Bank 2 – SV 32	12.802	1.189	2.126	294.261	0.3099	0.3223	0.1597
	Stack 6	REX_SV33	Inside Spray Machines Bank 2 – SV 33	13.716	0.914	3.593	294.261	0.0809	0.0841	0.0417
	Stack 7	REX_SV41	Inside Bake Oven Stack # 1 – SV 41	14.021	0.762	8.072	449.817	1.7608	1.8310	0.9071
	Stack 8	REX_SV42	Inside Bake Oven Stack # 2 – SV 42	14.021	0.823	6.921	449.817	1.7608	1.8310	0.9071
	Stack 9	REX_RTO	Regenerative Thermal Oxidizer Stack	15.240	1.158	7.615	488.706	0.6109	0.6352	0.3147
	Stack 1	SV7A	Printer Pin Oven Stack 1 – SV 7A	14.630	0.558	4.828	422.039	0.6390	0.6035	0.6025
	Stack 2	SV7B	Printer Pin Oven Stack 2 – SV 7B	14.630	0.558	4.828	444.261	0.6390	0.6035	0.6025
	Stack 3	SV7C	Printer Pin Oven Stack 3 – SV 7C	16.612	0.914	1.797	397.039	0.6390	0.6035	0.6025
	Stack 4	SV7D	Printer Pin Oven Stack 4 – SV 7D	14.630	0.610	4.043	399.817	0.6390	0.6035	0.6025
	Stack 5	SV8A	Inside Spray Machines Bank 1 – SV 8A	13.503	0.838	2.138	299.817	0.2569	0.2427	0.2423
	Stack 6	SV8B	Inside Spray Machines Bank 2 – SV 8B	14.173	0.838	2.138	299.817	0.2569	0.2427	0.2423
	Stack 7	SV8C	Inside Spray Machines Bank 3 – SV 8C	13.198	0.850	2.079	299.817	0.2569	0.2427	0.2423
	Stack 8	SV8D	Inside Spray Machines Bank 4 – SV 8D	13.716	0.838	2.138	299.817	0.2569	0.2427	0.2423
	Stack 9	SV9A	Inside Bake Oven Stack # 1 – SV 9A	15.240	0.762	3.622	358.150	1.4562	1.3754	1.3732

Table E-8. Tier 3 Modeling Stack Parameters at Individual Facilities

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]
[redacted]	Stack 10	SV9B	Inside Bake Oven Stack # 2 – SV 9B	15.331	0.762	3.622	360.928	1.4562	1.3754	1.3732
	Stack 11	SV9C	Inside Bake Oven Stack # 3 – SV 9C	15.331	0.762	3.622	366.483	1.4562	1.3754	1.3732
	Stack 12	SV9D	Inside Bake Oven Stack # 4 – SV 9D	15.331	0.762	3.622	360.928	1.4562	1.3754	1.3732
	Stack 1	WS1		14.000	0.457	6.096	394.261	17.2280	18.8603	13.2215
	Stack 2	WS2		14.000	0.457	6.096	394.261	17.2280	18.8603	13.2215
	Stack 3	WS3		14.000	0.457	6.096	394.261	17.2280	18.8603	13.2215
	Stack 4	WS4		14.000	0.457	6.096	394.261	17.2280	18.8603	13.2215
	Stack 5	WS5		14.000	0.457	6.096	394.261	17.2280	18.8603	13.2215

a. Individual stack emissions were based on total TRI Stack emissions and actual breakdown of EGBE emissions among individual stacks
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr) x Stack_fraction
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.
Stack_fraction represents the percent of the total TRI stack emissions emitted through the individual stack

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
$\mu g/m^3$: micrograms per cubic meter
tpy: ton per year
TRI: Toxic Release Inventory

Table E-9. Tier 3 Modeling Fugitive Volume Parameters and Results at Individual Facilities

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]
[redacted]	Volume	6.096	27.310	2.840	2.058	1.78813	2.00057
	Volume	9.144	14.120	4.253	4.770	4.53145	4.35020
	Volume	10.668	28.840	4.960	1.821	1.82642	1.68442
	Volume	9.144	20.900	4.253	1.610	1.67733	0.76982
	Volume	7.920	24.558	3.686	1.660	1.56814	1.56563
	Volume	7.000	27.242	3.250	3.389	3.73675	3.07813

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr)
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.

g/s: grams per second
hrs/yr: hours per year
m: meter
tpy: ton per year
TRI: Toxic Release Inventory

Table E-10. Tier 3 Modeling Stack Parameters and Individual Source Results in Clusters

Facility Name	Stack	Stack ID	Alternative Stack ID	Release Height (m)	Stack Inside Diameter (m)	Stack Exit Gas Velocity (m/s)	Stack Temperature (K)	2009 TRI Emission Rate (g/s)[a]	2010 TRI Emission Rate (g/s)[a]	2011 TRI Emission Rate (g/s)[a]
[redacted]	Stack 1	REX_SV21	Printer Oven Stack # 1 – SV 21	13.100	0.396	9.580	366.500	0.6334	0.6586	0.3263
	Stack 1	REX_SV22	Printer Oven Stack # 2 – SV 22	12.649	0.396	9.568	366.500	0.6334	0.6586	0.3263
	Stack 1	REX_SV23	Base Coater Pin Oven Stack # 3 – SV 23	13.167	0.396	9.568	366.500	0.0063	0.0065	0.0032
	Stack 4	RED_SV31	Inside Spray Machines Bank 1 – SV 31	12.192	1.097	2.495	294.261	0.3099	0.3223	0.1597
	Stack 5	REX_SV32	Inside Spray Machines Bank 2 – SV 32	12.802	1.189	2.126	294.261	0.3099	0.3223	0.1597
	Stack 6	REX_SV33	Inside Spray Machines Bank 2 – SV 33	13.716	0.914	3.593	294.261	0.0809	0.0841	0.0417
	Stack 7	REX_SV41	Inside Bake Oven Stack # 1 – SV 41	14.021	0.762	8.072	449.817	1.7608	1.8310	0.9071
	Stack 8	REX_SV42	Inside Bake Oven Stack # 2 – SV 42	14.021	0.823	6.921	449.817	1.7608	1.8310	0.9071
	Stack 9	REX_RTO	Regenerative Thermal Oxidizer Stack	15.240	1.158	7.615	488.706	0.6109	0.6352	0.3147
	Stack1	N/A	3960***	9.144	0.396	2.743	294.260	3.2430	5.4361	4.2767
	Stack 1	BA5G_P1	0001 (Bldg 5G)	12.802	2.070	8.414	405.930	0.5597	0.3894	0.1606
	Stack 1	BA5D_PT1	TO-1 (Bldg 5D)	11.580	1.220	7.796	488.150	0.1777	0.1236	0.0510
	Stack 1	BA5D_PT2	TO-2 (Bldg 5D)	10.670	0.670	6.860	704.300	0.0888	0.0618	0.0255
	Stack 4	BA5D_P3	0003 (Bldg 5D)	10.050	0.640	1.659	649.800	0.1866	0.1298	0.0535
	Stack 1	CR_PTO1	TO-1	11.000	1.219	16.149	659.150	3.3830	3.2138	3.0853
	Stack 2	CR_PTO2	TO-2	17.000	0.597	13.492	773.150	4.5912	4.3616	4.1871
	Stack 1	AR_PC1	Coater #1	12.497	0.610	31.008	824.820	0.0366	0.0377	0.0076
	Stack 2	AR_PC2	Coater #2	14.330	0.610	9.147	783.150	0.0314	0.0323	0.0065
	Stack 3	AR_PC3	Coater #3	12.497	0.457	22.269	760.930	0.0288	0.0297	0.0060
	Stack 4	AR_PC4	Coater #4	12.190	0.457	15.447	745.370	0.0379	0.0391	0.0078
	Stack 1		No stack parameters available. All emissions (stack + fugitives) modeled as a volume							

a. Individual stack emissions were based on total TRI Stack emissions and actual breakdown of EGBE emissions among individual stacks
The emission rate for each source is calculated from the TRI reported stack emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Stack TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr) x Stack_fraction
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.
Stack_fraction represents the percent of the total TRI stack emissions emitted through the individual stack

g/s: grams per second
K: degrees Kelvin
m: meter
m/s: meters per second
µg/m^3: micrograms per cubic meter
TRI: Toxic Release Inventory

Table E-11. Tier 3 Modeling Fugitive Volume Parameters and Results in Clusters

Site Name	Source Type	Volume Release Height (m) [b]	Volume Intial Lateral Dimension (m) [c]	Volume Intial Vertical Dimension (m) [d]	2009 TRI Emission Rate (g/s)[e]	2010 TRI Emission Rate (g/s)[e]	2011 TRI Emission Rate (g/s)[e]
[redacted]	Volume	9.144	20.900	4.253	1.610	1.67733	0.76982
	Volume	No fugitive emissions reported to TRI. All reported emissions modeled as a stack release					
	Volume	7.315	19.900	3.402	1.482	0.84296	0.57838
	Volume	12.192	16.247	5.670	0.764	0.43425	0.29793
	Volume	9.144	14.120	4.253	4.770	4.53145	4.35020
	Volume	9.750	11.881	4.540	0.000	0.00048	0.00517
	Volume	9.144	26.700	4.250	0.716	0.91104	0.33156

a. Fugitive releases of EGBE are reported to occur through the building's roof vents in the production area of the facility building where stacks emitting EGBE are located. Fugitive emissions from the roof vents are modeled as a single volume source.

b. The volume source release height is taken to be at the release height of fugitive emissions; it is set to be equal to the roof height of the process building

c. Per EPA's AERMOD guidance, the volume source initial lateral dimension is taken to be the length of the side of the volume divided by 4.3.

d. Per EPA's AERMOD guidance, the volume source initial vertical dimension is taken to be the height of the volume source (roof height) divided by 2.15.

e. The emission rate for each source is calculated from the TRI reported fugitive emissions of Certain Glycol Ethers as follows:
EGBE Emission Rate (g/s) = Fugitive TRI Emissions of Certain Glycol Ethers (tpy) x % EGBE x 254 (conversion factor) ÷ 2,000 (hrs/yr)
The calculated emission rate assumes the total annual EGBE emissions are relased over a period of 2,000 hours a year, which would correspond to a facility steadily emitting EGBE 40 hours a week, 50 weeks per year.

g. Ball Facility in Weirton has two distinct (physically separate) buildings associtaed with fugitive emissions which were modeled separately. Their emissions were estimated based on the breakdown of the total fugitive emissions provided by the faciltiy in Tier 2 Survey

hrs/yr: hours per year

m: meter

tpy: ton per year

TRI: Toxic Release Inventory

APPENDIX F

Tier 2 and Tier 3 Modeling Output Files (CDROM)