TABLE 1
Risk Summary

	Naperville [40 miles southwest of airport] Background Average	Bensenville [in field west of airport] UPW Average	Runway 27R [fenceline east of airport] DWN Average	Runway 27L [fenceline east of airport] DWS Average
Carcinogenic Risk Summary				
Adult Resident	**2.E-05**	**5.E-05**	**8.E-05**	**1.E-04**
Risk Drivers	Benzene Carbon Tetrachloride 1,4-Dichlorobenzene Formaldehyde	Benzene Carbon Tetrachloride 1,4-Dichlorobenzene Crotonaldehyde Formaldehyde	Benzene Carbon Tetrachloride 1,4-Dichlorobenzene Crotonaldehyde Formaldehyde	Benzene Carbon Tetrachloride 1,4-Dichlorobenzene Crotonaldehyde Formaldehyde
Child Resident	**6.E-06**	**1.E-05**	**2.E-05**	**3.E-05**
Risk Drivers	Benzene 1,4-Dichlorobenzene Formaldehyde	Benzene Carbon Tetrachloride Crotonaldehyde Formaldehyde	Benzene Carbon Tetrachloride Crotonaldehyde Formaldehyde	Benzene 1,4-Dichlorobenzene Crotonaldehyde Formaldehyde
Noncarcinogenic Risk Summary				
Adult Resident	**1**	**1**	**1**	**23**
Risk Drivers				Benzene Naphthalene
Child Resident	**1**	**1**	**1**	**23**
Risk Drivers				Benzene Naphthalene

TABLE 2 Exposure Parameters			
Parameter	**Units**	**Adult Resident**	**Child Resident (age 1 to 7)**
Exposure Frequency	days/year	350	350
Exposure Duration	years	70	6
Averaging Time, Carcinogenic	days	25550	25550
Averaging Time, Noncarcinogenic	days	25550	2190
Inhalation Rate	m^3/day	*20*	*20*
Body Weight	*kg*	*70*	*15*

TABLE 3a Toxicity Values - Cancer									
Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Wt	Ref	Inhalation URF $(ug/m3)^{-1}$	Ref	Note	Inhalation SF $(mg/kg/d)^{-1}$	Ref
Acetone+IsoPentane	67-64-1 + 109-66-0	Acetone	D	1					
Acetonitrile	75-05-8		D	1					
Acetophenone+$C_{11}H_{24}$ Alkane	98-86-2 + Indeterminate	Acetophenone	D	1					
Benzaldehyde+2-Ethylhexanal	100-52-7 + 104-76-7	2-Ethylhexanal							
Benzene	71-43-2		A	1	7.80E-06	1	60		
Butanol, 1-	71-36-3		D	1					
Butanone, 2-	78-93-3		D	1					
Butoxyethanol, 2- +Hexylene glycol	111-76-2 + 107-41-5	2-n-butoxyethanol	C	1					
Carbon disulfide	75-15-0								
Carbon tetrachloride	56-23-5		B2	1	1.50E-05	1		5.30E-02	2
Chloromethane	74-87-3		C	2	1.80E-06	2		6.30E-03	2
Dichlorobenzene, 1,4-	106-46-7		C	2	6.29E-06		based on inhalation SF	2.20E-02	3
Dichlorodifluoromethane	75-71-8								
Ethylbenzene	100-41-4		D	1					
Hexane, n-	110-54-3								
Hexanone, 2-	591-78-6								
Isobutane+Acetaldehyde	106-97-8 + 75-07-0	Isobutane							

TABLE 3a
Toxicity Values - Cancer

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Wt	Ref	Inhalation URF $(ug/m3)^{-1}$	Ref	Note	Inhalation SF $(mg/kg/d)^{-1}$	Ref
Methyl-1-propanol, 2-	78-83-1								
Methyl-2-pentanone, 4-	108-10-1								
Methylene chloride	75-09-2		B2	1	4.70E-07	1			
Methylstyrene, alph-	98-83-9								
Naphthalene	91-20-3		C	1					
Tetrachloroethene	127-18-4		C-B2	51	5.80E-07	51		2.00E-03	51
Toluene	108-88-3		D	1					
Trichloroethene	79-01-6		C-B2	49	1.70E-06	49		6.00E-03	49
Trichlorofluoromethane	75-69-4								
Trimethylbenzene, 1,2,4-	95-63-6								
Xylene, o-	95-47-6		D	1					
Xylenes, m- & p-	1330-20-7		D	1					
Butanal	123-72-8								
Butane, n-	106-97-8								
Butene or Iso-Butane	106-98-9 (1-Butene), 107-01-7 (2-Butene) or 106-97-8 (Butane)								
$C_{10}H_{14}$ Aromatic	Indeterminate								
$C_{11}H_{24}$ Alkane	Indeterminate								

TABLE 3a Toxicity Values - Cancer										
Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Wt	Ref	Inhalation URF $(ug/m3)^{-1}$	Ref	Note	Inhalation SF $(mg/kg/d)^{-1}$	Ref
C_5H_{10} Alkene	Indeterminate								
$C_8H_{14}O$ Aldehyde	Indeterminate								
$C_9H_{16}O$ Aldehyde	Indeterminate								
Decane, n-	124-18-5								
Dimethyl disulfide	624-92-0								
Dimethyl-3-pentanone, 2,4-	565-80-0								
Dimethylbutane, 2,3-	79-29-8								
Dodecane, n-	112-40-3								
Ethanol	64-17-5								
Ethyl-1-hexenol, 2-	104-76-7								
Heptanal	111-71-7								
Heptane, n-	142-82-5		D	1					
Hexamethylcyclotrialloxane	Indeterminate								
Hexanal	66-25-1								
Isooctane	540-84-1								
Isopropanol	67-63-0								
Methacrolain	78-85-3								
Methylcyclopentane	96-37-7								
Methylpentane, 2-	107-83-5								
Methylpentane, 3-	96-14-0								
Methylpropanal, 2-	78-84-2								
Nonanal	124-19-6								
Nonane, p-	111-84-2								
Octamethylcyclotetrasiloxane	556-67-2								
Octanol	111-87-5								
Pentane, n-	109-66-0								

TABLE 3a Toxicity Values - Cancer									
Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Wt	Ref	Inhalation URF $(ug/m3)^{-1}$	Ref	Note	Inhalation SF $(mg/kg/d)^{-1}$	Ref
Pentanol+3-Methylhexane	71-41-0 (1-Pentanol), 6032-29-7 (2-Pentanol) or 584-02-1 (3-Pentanol) + 589-34-4 (3-Methylhexane)								
Propene+Propane	115-07-1 + 74-98-6								
Tetradecane, n-	629-59-4								
Trichlorofluoroethane	75-79-4								
Tridecane, n-	629-50-5								
Trimethylallanol	Indeterminate								
Undecane, n-	1120-21-4								
Acetaldehyde	75-07-0				2.20E-06	1			
Benzaldehyde	100-52-7								
Crotonaldehyde	123-73-9				5.40E-04	2	Based on Oral SF		
Formaldehyde	50-00-0				1.30E-05	1			
Unidentified Siloxane	Indeterminate								

TABLE 3b
Toxicity Values - Noncancer

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation RFC (mg/m3)	Ref	Note	Inhalation RFD (mg/kg/d)	Ref	Note	Oral RFD (mg/kg/d)	Ref	Note
Acetone+IsoPentane	67-64-1 + 109-66-0	Acetone	3.50E-01		based on oral RfD				1.00E-01	1	
Acetonitrile	75-05-8		6.00E-02	1							
Acetophenone+C11H24 Alkane	98-86-2 + Indeterminate	Acetophenone	3.50E-01		based on oral RfD				1.00E-01	1	
Benzaldehyde+2-Ethylhexanal	100-52-7 + 104-76-7	2-Ethylhexanal									
Benzene	71-43-2		6.00E-03	32	50,69	1.70E-03	3	50,69	3.00E-03	3	50,69
Butanol, 1-	71-36-3		3.50E-01		based on oral RfD				1.00E-01	1	
Butanone, 2-	78-93-3		1.00E+00	1					6.00E-01	1	
Butoxyethanol, 2- +Hexylene glycol	111-76-2 + 107-41-5	2-n-butoxyethanol	1.30E+01	1					5.00E-01	1	
Carbon disulfide	75-15-0		7.00E-01	1					1.00E-01	1	
Carbon tetrachloride	56-23-5		2.00E-03	33		5.71E-04	3		7.00E-04	1	
Chloromethane	74-87-3		3.01E-01		based on inhalation RfD	8.60E-02	3		4.00E-03	34	
Dichlorobenzene, 1,4-	106-46-7		8.00E-01	1					3.00E-02	3	
Dichlorodifluoromethane	75-71-8		2.00E-01	2					2.00E-01	1	
Ethylbenzene	100-41-4		1.00E+00	1					1.00E-01	1	
Hexane, n-	110-54-3		2.00E-01	1					6.00E-02	2	
Hexanone, 2-	591-78-6		4.90E-03		based on inhalation RfD	1.40E-03	3		4.00E-02	40	
Isobutane+Acetaldehyde	106-97-8 + 75-07-0	Isobutane									

TABLE 3b
Toxicity Values - Noncancer

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation RFC (mg/m3)	Ref	Note	Inhalation RFD (mg/kg/d)	Ref	Note	Oral RFD (mg/kg/d)	Ref	Note
Methyl-1-propanol, 2-	78-83-1		1.05E+00		based on oral RfD				3.00E-01	1	
Methyl-2-pentanone, 4-	108-10-1		8.00E-02	2		2.00E-02	2		8.00E-02	2	
Methylene chloride	75-09-2		3.00E+00	2		8.60E-01	2		6.00E-02	1	
Methylstyrene, alph-	98-83-9		2.45E-01		based on oral RfD				7.00E-02	2	
Naphthalene	91-20-3		3.00E-03	1					2.00E-02	1	
Tetrachloroethene	127-18-4		3.50E-02		based on oral RfD				1.00E-02	1	
Toluene	108-88-3		4.00E-01	1					2.00E-01	1	
Trichloroethene	79-01-6		2.10E-02		based on oral RfD				6.00E-03	46	
Trichlorofluoromethane	75-69-4		7.00E-01	2		2.00E-01	2		3.00E-01	1	
Trimethylbenzene, 1,2,4-	95-63-6		5.95E-03		based on inhalation RfD	1.70E-03	3		5.00E-02	3	
Xylene, o-	95-47-6		7.00E+00		based on oral RfD				2.00E+00	2	
Xylenes, m- & p-	1330-20-7		7.00E+00		based on oral RfD				2.00E+00	1	
Butanal	123-72-8										
Butane, n-	106-97-8										
Butene or Iso-Butane	106-98-9 (1-Butene), 107-01-7 (2-Butene) or 106-97-8 (Butane)										
C10H14 Aromatic	Indeterminate										
C11H24 Alkane	Indeterminate										

TABLE 3b
Toxicity Values - Noncancer

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation RFC (mg/m3)	Ref	Note	Inhalation RFD (mg/kg/d)	Ref	Note	Oral RFD (mg/kg/d)	Ref	Note
C5H10 Alkene	Indeterminate										
C8H14O Aldehyde	Indeterminate										
C9H16O Aldehyde	Indeterminate										
Decane, n-	124-18-5										
Dimethyl disulfide	624-92-0										
Dimethyl-3-pentanone, 2,4-	565-80-0										
Dimethylbutane, 2,3-	79-29-8										
Dodecane, n-	112-40-3										
Ethanol	64-17-5										
Ethyl-1-hexenol, 2-	104-76-7										
Heptanal	111-71-7										
Heptane, n-	142-82-5										
Hexamethylcyclotrialloxane	Indeterminate										
Hexanal	66-25-1										
Isooctane	540-84-1										
Isopropanol	67-63-0										
Methacrolain	78-85-3										
Methylcyclopentane	96-37-7										
Methylpentane, 2-	107-83-5										
Methylpentane, 3-	96-14-0										
Methylpropanal, 2-	78-84-2										
Nonanal	124-19-6										
Nonane, p-	111-84-2										
Octamethylcyclotetrasiloxane	556-67-2										
Octanol	111-87-5										
Pentane, n-	109-66-0										

TABLE 3b
Toxicity Values - Noncancer

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation RFC (mg/m3)	Ref	Note	Inhalation RFD (mg/kg/d)	Ref	Note	Oral RFD (mg/kg/d)	Ref	Note
Pentanol+3-Methylhexane	71-41-0 (1-Pentanol), 6032-29-7 (2-Pentanol) or 584-02-1 (3-Pentanol) + 589-34-4 (3-Methylhexane)										
Propene+Propane	115-07-1 + 74-98-6										
Tetradecane, n-	629-59-4										
Trichlorofluoroethane	75-79-4										
Tridecane, n-	629-50-5										
Trimethylallanol	Indeterminate										
Undecane, n-	1120-21-4										
Acetaldehyde	75-07-0		9.00E-03	1							
Benzaldehyde	100-52-7		3.50E-01	1	Based on Oral RfD				1.00E-01	1	
Crotonaldehyde	123-73-9										
Formaldehyde	50-00-0		7.00E-01	1	Based on Oral RfD				2.00E-01	1	
Unidentified Siloxane	Indeterminate										

TABLES 3a and 3b

References and Notes for Toxicity Values

Ref	Source
1	USEPA. 2000. Integrated Risk Information System (IRIS). On-line database.
2	USEPA. 1997. Health Effects Assessment Summary Tables (HEAST). FY-1997 Update. EPA 540/R-97-036. July.
3	USEPA. Region III. 1999. Risk-Based Concentration Table. October.
32	USEPA. NCEA. 1994. Risk Assessment Issue paper for: Derivation of a Provisional Chronic Inhalation RfC for Benzene [CASRN 71-43-2]. March 23.
33	USEPA. NCEA. 1994. Risk Assessment Issue paper for: Derivation of a Provisional Inhalation RfC for Carbon Tetrachloride [CASRN 56-23-5]. April 11.
34	USEPA. NCEA. 1994. Risk Assessment Issue paper for: Derivation of a Provisional RfD for Chloromethane [CASRN 74-87-3]. March 21.
40	USEPA. NCEA. 1993. Risk Assessment Issue paper for: Derivation of a Provisional RfD for 2-Hexanone (Methyl-n-butyl ketone) [CASRN 591-78-6]. June 24.
46	USEPA. NCEA. 1995. Risk Assessment Issue paper for: Provisional oral RfD for Trichloroethylene [CASRN 79-01-6].
49	USEPA. NCEA. 1995. Risk Assessment Issue paper for: Carcinogenicity Information for Trichloroethylene (TCE) [CASRN 79-01-6]. September 6.
51	USEPA. NCEA. 1995. Risk Assessment Issue paper for: Carcinogenicity Information for Tetrachloroethylene (perchloroethylene, PERC) [CASRN 127-18-4]. September 11.
Note	**Comment**
50	Personal communication with NCEA; indicated the supporting paper had been withdrawn.
60	IRIS provides a range of 2.2E-6 to 7.8E-6 (ug/m3)-1as the Inhalation Unit Risk Factor (URFI) for Benzene.
69	Personal communication with NCEA; indicated the withdrawn paper should be used until a new value is published in IRIS.

TABLE 4
Toxicity Values Used in Risk Assessment

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation URF $(ug/m^3)^{-1}$	Inhalation URF Adjusted for Child's Exposure $(ug/m^3)^{-1}$	Inhalation RfC (ug/m^3)
Acetone+IsoPentane	67-64-1 + 109-66-0	Acetone			3.50E+02
Acetonitrile	75-05-8				6.00E+01
Acetophenone+C11H24 Alkane	98-86-2 + Indeterminate	Acetophenone			3.50E+02
Benzaldehyde+2-Ethylhexanal	100-52-7 + 104-76-7	2-Ethylhexanal			
Benzene	71-43-2		7.80E-06	2.18E-05	6.00E+00
Butanol, 1-	71-36-3				3.50E+02
Butanone, 2-	78-93-3				1.00E+03
Butoxyethanol, 2- +Hexylene glycol	111-76-2 + 107-41-5	2-n-butoxyethanol			1.30E+04
Carbon disulfide	75-15-0				7.00E+02
Carbon tetrachloride	56-23-5		1.50E-05	4.19E-05	2.00E+00
Chloromethane	74-87-3		1.80E-06	5.03E-06	3.01E+02
Dichlorobenzene, 1,4-	106-46-7		6.29E-06	1.76E-05	8.00E+02
Dichlorodifluoromethane	75-71-8				2.00E+02
Ethylbenzene	100-41-4				1.00E+03
Hexane, n-	110-54-3				2.00E+02
Hexanone, 2-	591-78-6				4.90E+00
Isobutane+Acetaldehyde	106-97-8 + 75-07-0	Isobutane			
Methyl-1-propanol, 2-	78-83-1				1.05E+03
Methyl-2-pentanone, 4-	108-10-1				8.00E+01
Methylene chloride	75-09-2		4.70E-07	1.31E-06	3.00E+03
Methylstyrene, alph-	98-83-9				2.45E+02
Naphthalene	91-20-3				3.00E+00
Tetrachloroethene	127-18-4		5.80E-07	1.62E-06	3.50E+01
Toluene	108-88-3				4.00E+02
Trichloroethene	79-01-6		1.70E-06	4.75E-06	2.10E+01
Trichlorofluoromethane	75-69-4				7.00E+02
Trimethylbenzene, 1,2,4-	95-63-6				5.95E+00

TABLE 4
Toxicity Values Used in Risk Assessment

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation URF $(ug/m^3)^{-1}$	Inhalation URF Adjusted for Child's Exposure $(ug/m^3)^{-1}$	Inhalation RfC (ug/m^3)
Xylene, o-	95-47-6				7.00E+03
Xylenes, m- & p-	1330-20-7				7.00E+03
Butanal	123-72-8				
Butane, n-	106-97-8				
Butene or Iso-Butane	106-98-9 (1-Butene), 107-01-7 (2-Butene) or 106-97-8 (Butane)				
C10H14 Aromatic	Indeterminate				
C11H24 Alkane	Indeterminate				
C5H10 Alkene	Indeterminate				
C8H14O Aldehyde	Indeterminate				
C9H16O Aldehyde	Indeterminate				
Decane, n-	124-18-5				
Dimethyl disulfide	624-92-0				
Dimethyl-3-pentanone, 2,4-	565-80-0				
Dimethylbutane, 2,3-	79-29-8				
Dodecane, n-	112-40-3				
Ethanol	64-17-5				
Ethyl-1-hexenol, 2-	104-76-7				
Heptanal	111-71-7				
Heptane, n-	142-82-5				
Hexamethylcyclotrialloxane	Indeterminate				
Hexanal	66-25-1				
Isooctane	540-84-1				
Isopropanol	67-63-0				
Methacrolain	78-85-3				
Methylcyclopentane	96-37-7				
Methylpentane, 2-	107-83-5				
Methylpentane, 3-	96-14-0				

TABLE 4
Toxicity Values Used in Risk Assessment

Chemical Name	CASRN	Chemical representing coeluted compound in quantitative risk assessment	Inhalation URF $(ug/m^3)^{-1}$	Inhalation URF Adjusted for Child's Exposure $(ug/m^3)^{-1}$	Inhalation RfC (ug/m^3)
Methylpropanal, 2-	78-84-2				
Nonanal	124-19-6				
Nonane, p-	111-84-2				
Octamethylcyclotetrasiloxane	556-67-2				
Octanol	111-87-5				
Pentane, n-	109-66-0				
Pentanol+3-Methylhexane	71-41-0 (1-Pentanol), 6032-29-7 (2-Pentanol) or 584-02-1 (3-Pentanol) + 589-34-4 (3-Methylhexane)				
Propene+Propane	115-07-1 + 74-98-6				
Tetradecane, n-	629-59-4				
Trichlorofluoroethane	75-79-4				
Tridecane, n-	629-50-5				
Trimethylallanol	Indeterminate				
Undecane, n-	1120-21-4				
Acetaldehyde	75-07-0		2.20E-06	6.14E-06	9.00E+00
Benzaldehyde	100-52-7				3.50E+02
Crotonaldehyde	123-73-9		5.40E-04	1.51E-03	
Formaldehyde	50-00-0		1.30E-05	3.63E-05	7.00E+02
Unidentified Siloxane	Indeterminate				