

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE

Nalco Chemical Company
Attn: Paul D. Pederson, EH&S Superintendent
6216 West 66th Place
Chicago, IL 60638

Application No.: 96030187 I.D. No.: 031012AAO
Applicant's Designation: Date Received: March 11, 1996
Operation of: Specialty Chemicals Manufacturing
Date Issued: November 15, 2000 Expiration Date²: November 15, 2005
Source Location: 6216 West 66th Place, Chicago, Cook County
Responsible Official: Dan Harker, Vice President of Manufacturing and
Logistics

This permit is hereby granted to the above-designated Permittee to OPERATE a specialty chemicals manufacturing source, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this permit, please contact Jonathan Sperry at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JS:psj

cc: Illinois EPA, FOS, Region 1
USEPA

¹ This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

² Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Nalco Chemical Company
6216 West 66th Place
Chicago, IL 60638
708/496-5210

I.D. No.: 031012AAO
Standard Industrial Classification: 2899, Chemicals and Chemical
Preparations

1.2 Owner/Parent Company

Nalco Chemical Company
One Nalco Center
Naperville, IL 60123

1.3 Operator

Nalco Chemical Company
6216 West 66th Place
Chicago, IL 60638

Paul D. Pederson, EH&S Superintendent
708/496-5210

1.4 General Source Description

The Nalco Chemical Company is located at 6216 West 66th Place Chicago, Illinois. The source operates a specialty chemicals manufacturing plant. The source manufactures water treatment chemicals, silica products, and polymers for use by a variety of industries. In addition, the source operates a pilot plant for research and development of products and processes.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

ACMA	Alternative Compliance Market Account
Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment Trading Unit
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emissions Reduction Market System
ft ³	cubic foot
gal	gallon
HAP	Hazardous Air Pollutant
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
ILCS	Illinois Compiled Statutes
Illinois EPA	Illinois Environmental Protection Agency
kg	kilogram
kPa	kilopascal
kW	kilowatts
lb	pound
lb-mole	pound mole
m ³	cubic meter
Mg	megagram
mmBtu	Million British thermal units
mmHg	millimeters of mercury
mo	month
MW	megawatt
Mol. Wt.	molecular weight
NESHAP	National Emission Standards for Hazardous Air Pollutants
No.	number
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration
psia	pounds per square inch, absolute
RMP	Risk Management Plan

SIC	Standard Industrial Classification, as defined in the 1987 edition of the Federal Standard Industrial Classification Manual
SO ₂	Sulfur Dioxide
T	ton
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material
VP	vapor pressure (at 68 °F)
yr	year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

- 3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Container Cleaning Station
Wastewater Treatment Plant
Emissions from Equipment Leaks
Drum Ovens

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

Cooling Towers

- 3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

Coating operations (excluding powder, architectural and industrial maintenance coating) with aggregate VOM usage that never exceeds 15 lbs/day from all coating lines at the source, including VOM from coating, dilutents, and cleaning materials [35 IAC 201.210(a)(13)].

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

Gas turbines and stationary reciprocating internal combustion engines of between 112 kW and 1,118 kW (150

and 1,500 horsepower) power output that are emergency or standby units [35 IAC 201.210(a)(16)].

Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials, provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 121	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 122	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 123	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 124	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 124A	1 Process Blender	11/1995	None
Unit 124B	1 Process Blender	11/1995	None
Unit 125	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 130	1 Process Blender	Pre-1972	None
Unit 140	1 Process Blender	Pre-1972	2046-SCB-3*
Unit 142	1 Process Blender	10/1973	2046-SCB-3*
Unit 155	1 Process Reactor	Pre-1972	None
Unit 156	1 Process Blender	Pre-1972	None
Unit 156A	1 Process Blender	11/1995	None
Unit 156B	1 Process Blender	11/1995	None
Unit 157	1 Process Blender	Pre-1972	None
Unit 157B	1 Process Blender	11/1995	None
Unit 157C	1 Process Blender	11/1995	None
Unit 159	1 Process Blender	12/1991	2046-SCB-3*
Unit 193	1 Process Blender	Pre-1972	2046-SCB-1*
Unit 195	1 Process Reactor	Pre-1972	None
Unit 200	1 Process Blender	Pre-1972	2046-SCB-1*
Unit 314	1 Process Blender	Pre-1972	None
Unit 457	1 Process Blender	8/1998	None
Latex Polymer Train (10 Units)			
Unit 164	Reactor	Pre-1972	None
Unit 166	Blender	1/1995	2544-SCB-1*
Unit 168	Blender	Pre-1972	2544-SCB-1*
Unit 205	Reactor	Pre-1972	None
Unit 230	Blender	Pre-1972	None
Unit 284	Blender	8/1983	2544-SCB-1*
Unit 440	Blender	2/1991	None
Unit 441	Blender	11/1989	2451-SCB-1*
Unit 443	Blender	11/1989	None
Unit 444	Blender	11/1989	None
Nalcoag Train (56 Units)			
Unit 042	Blender	Pre-1972	None
Unit 044	Blender	Pre-1972	None
Unit 060	Flash Tank	9/1975	None
Unit 061	Blender	Pre-1972	1048-SCB-1*
Unit 062	Blender	Pre-1972	None
Unit 063	Ion Exchanger	Pre-1972	None
Unit 066	Evaporator	Pre-1972	None
Unit 069	Blender	Pre-1972	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 074	Evaporator	Pre-1972	None
Unit 080	Evaporator	Pre-1972	None
Unit 081	Ion Exchanger	Pre-1972	None
Unit 082	Blender	Pre-1972	None
Unit 087	Evaporator	Pre-1972	None
Unit 089	Blender	Pre-1972	None
Unit 090	Blender	Pre-1972	None
Unit 091	Blender	Pre-1972	None
Unit 092	Blender	Pre-1972	None
Unit 093	Blender	Pre-1972	None
Unit 351	Blender	9/1975	None
Unit 352	Ion Exchanger	9/1975	None
Unit 353	Ion Exchanger	Pre-1972	None
Unit 355	Blender	9/1975	None
Unit 356	Evaporator	9/1975	None
Unit 357	Evaporator	9/1975	None
Unit 358	Reactor	1987	1048-SCB-1*
Unit 359	Reactor	1987	1048-SCB-1*
Unit 360	Blender	1987	None
Unit 361	Blender	1987	None
Unit 362	Blender	1987	None
Unit 363	Blender	1976	None
Unit 364	Blender	4/1980	None
Unit 365	Blender	4/1980	None
Unit 366	Blender	4/1980	None
Unit 367	Blender	4/1980	None
Unit 368	Reactor	4/1980	None
Unit 370	Blender	4/1980	None
Unit 377	Blender	1989	None
Unit 378	Blender	1989	None
Unit 379	Blender	1989	None
Unit 380	Blender	11/1997	None
Unit 381	Blender	11/1997	None
Unit 383	Blender	12/1992	None
Unit 428	Blender	1995	None
Unit 429	Blender	1995	None
Unit 445	Ion Exchanger	1995-1996	None
Unit 446	Ion Exchanger	1995-1996	None
Unit 447	Ion Exchanger	1995-1996	None
Unit 448	Ion Exchanger	1995-1996	None
Unit 453	Blender	1995-1996	None
Unit 463	Blender	6/1996	None
Unit 464	Blender	6/1996	None
Unit 465	Blender	6/1996	None
Unit 466	Ion Exchanger	1997	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 467	Ion Exchanger	1997	None
Unit 475	Blender	2/1999	None
Unit 498	Blender	4/2000	None
Solution Polymer Train (5 Units)			
Unit 300	Reactor	Pre-1972	None
Unit 302	Blender	Pre-1972	3257-SCB-1*
Unit 322	Blender	1980	3258-SCB-2*
Unit 325	Reactor	1980	None
Unit 328	Blender	1990	None
Pilot Plant (20 Units)			
Unit 022	Reactor	Pre-1972	None
Unit 025	Blender	Pre-1972	None
Unit 029	Reactor	Pre-1972	None
Unit 035	Reactor	Pre-1972	None
Unit 127	Reactor	10/1974	Scrubber*
Unit 189	Reactor	Pre-1972	None
Unit 237	Blender	Pre-1972	None
Unit 239	Reactor	10/1974	None
Unit 242	Blender	Pre-1972	None
Unit 243	Blender	Pre-1972	None
Unit 288	Blender	Pre-1972	None
Unit 292	Reactor	6/1980	None
Unit 382	Blender	12/1994	None
Unit 393	Reactor	12/1994	None
Unit 394	Blender	12/1994	None
Unit 395	Reactor	12/1994	None
Unit 396	Blender	12/1994	None
Unit 397	Blender	12/1994	None
Unit 399	Blender	12/1994	None
Unit 474	Reactor	1/1999	None
Applied Services (AS)	175 Units (maximum): Blending / storage units not greater than 550 gallons.	-	None
Storage Tank (152 Units)			
Unit 001	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 002	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 010	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 014	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 041	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 046	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 055	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 064	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 071	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 072	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 077	1 Fixed Roof Storage Tank	5/1976	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 101	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 102	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 103	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 104	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 105	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 106	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 107	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 108	1 Fixed Roof Storage Tank	1/1991	None
Unit 109	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 126	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 139	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 143	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 145	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 147	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 150	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 151	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 160	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 161	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 162	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 201	1 Fixed Roof Storage Tank	9/1980	None
Unit 206	1 Fixed Roof Storage Tank	Pre-1972	2751-SCB-1*
Unit 208	1 Fixed Roof Storage Tank	Pre-1972	2751-SCB-1*
Unit 210	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 211	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 212	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 213	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 218	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 219	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 220	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 221	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 222	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 223	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 224	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 225	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 226	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 227	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 228	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 229	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 231	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 232	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 233	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 245	1 Fixed Roof Storage Tank	4/1973	None
Unit 246	1 Fixed Roof Storage Tank	4/1973	None
Unit 247	1 Fixed Roof Storage Tank	4/1973	None
Unit 248	1 Fixed Roof Storage Tank	4/1973	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 249	1 Fixed Roof Storage Tank	4/1973	None
Unit 250	1 Fixed Roof Storage Tank	4/1973	None
Unit 251	1 Fixed Roof Storage Tank	4/1973	None
Unit 252	1 Fixed Roof Storage Tank	4/1973	None
Unit 253	1 Fixed Roof Storage Tank	4/1973	None
Unit 254	1 Fixed Roof Storage Tank	4/1973	None
Unit 245	1 Fixed Roof Storage Tank	4/1988	None
Unit 264	1 Fixed Roof Storage Tank	10/1972	None
Unit 278	1 Fixed Roof Storage Tank	9/1977	None
Unit 279	1 Fixed Roof Storage Tank	9/1977	None
Unit 282	1 Fixed Roof Storage Tank	10/1978	2544-SCB-1*
Unit 283	1 Fixed Roof Storage Tank	10/1978	2544-SCB-1*
Unit 285	1 Fixed Roof Storage Tank	5/1980	None
Unit 286	1 Fixed Roof Storage Tank	5/1980	None
Unit 290	1 Fixed Roof Storage Tank	6/1981	None
Unit 305	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 306	1 Fixed Roof Storage Tank	2/1988	None
Unit 307	1 Fixed Roof Storage Tank	2/1988	None
Unit 308	1 Fixed Roof Storage Tank	2/1988	None
Unit 310	1 Fixed Roof Storage Tank	2/1988	None
Unit 311	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 315	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 318	1 Fixed Roof Storage Tank	2/1974	None
Unit 319	1 Fixed Roof Storage Tank	2/1974	None
Unit 320	1 Fixed Roof Storage Tank	2/1974	None
Unit 326	1 Fixed Roof Storage Tank	11/1984	None
Unit 327	1 Fixed Roof Storage Tank	1/1990	None
Unit 329	1 Fixed Roof Storage Tank	11/1992	None
Unit 331	1 Fixed Roof Storage Tank	6/1988	None
Unit 332	1 Fixed Roof Storage Tank	6/1988	None
Unit 333	1 Fixed Roof Storage Tank	6/1988	None
Unit 334	1 Fixed Roof Storage Tank	6/1988	None
Unit 335	1 Fixed Roof Storage Tank	6/1988	None
Unit 336	1 Fixed Roof Storage Tank	6/1988	None
Unit 337	1 Pressure Storage Tank	10/1990	Vapor Return
Unit 345	1 Fixed Roof Storage Tank	3/1994	None
Unit 347	1 Fixed Roof Storage Tank	3/1994	None
Unit 348	1 Fixed Roof Storage Tank	4/1980	None
Unit 349	1 Fixed Roof Storage Tank	4/1980	None
Unit 350	1 Fixed Roof Storage Tank	11/1976	None
Unit 354	1 Fixed Roof Storage Tank	11/1976	None
Unit 388	1 Fixed Roof Storage Tank	1/1991	None
Unit 389	1 Fixed Roof Storage Tank	1/1991	None
Unit 390	1 Fixed Roof Storage Tank	1993	3256-SCB-2*
Unit 391	1 Fixed Roof Storage Tank	1993	3256-SCB-3*

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 401	1 Fixed Roof Storage Tank	5/1982	None
Unit 402	1 Fixed Roof Storage Tank	5/1982	None
Unit 403	1 Fixed Roof Storage Tank	5/1982	None
Unit 404	1 Fixed Roof Storage Tank	5/1982	None
Unit 405	1 Fixed Roof Storage Tank	5/1982	None
Unit 406	1 Fixed Roof Storage Tank	5/1982	None
Unit 407	1 Fixed Roof Storage Tank	5/1982	None
Unit 408	1 Fixed Roof Storage Tank	5/1982	None
Unit 409	1 Fixed Roof Storage Tank	5/1982	None
Unit 410	1 Fixed Roof Storage Tank	5/1982	None
Unit 411	1 Fixed Roof Storage Tank	5/1982	None
Unit 412	1 Fixed Roof Storage Tank	5/1982	None
Unit 413	1 Fixed Roof Storage Tank	5/1982	None
Unit 414	1 Fixed Roof Storage Tank	5/1982	None
Unit 415	1 Fixed Roof Storage Tank	5/1982	None
Unit 416	1 Fixed Roof Storage Tank	5/1982	None
Unit 417	1 Fixed Roof Storage Tank	5/1982	None
Unit 418	1 Fixed Roof Storage Tank	5/1982	None
Unit 419	1 Fixed Roof Storage Tank	5/1982	None
Unit 420	1 Fixed Roof Storage Tank	5/1982	None
Unit 421	1 Fixed Roof Storage Tank	5/1982	None
Unit 422	1 Fixed Roof Storage Tank	5/1982	None
Unit 423	1 Fixed Roof Storage Tank	5/1982	None
Unit 424	1 Fixed Roof Storage Tank	5/1982	None
Unit 430	1 Fixed Roof Storage Tank	1/1994	None
Unit 431	1 Fixed Roof Storage Tank	1/1994	None
Unit 432	1 Fixed Roof Storage Tank	1/1994	None
Unit 433	1 Fixed Roof Storage Tank	1/1994	None
Unit 434	1 Fixed Roof Storage Tank	1/1994	None
Unit 435	1 Fixed Roof Storage Tank	1/1994	None
Unit 436	1 Fixed Roof Storage Tank	1/1994	None
Unit 437	1 Fixed Roof Storage Tank	1/1994	None
Unit 438	1 Fixed Roof Storage Tank	1/1994	None
Unit 439	1 Fixed Roof Storage Tank	1/1994	None
Unit 442	1 Fixed Roof Storage Tank	11/1989	None
Unit 443	1 Fixed Roof Storage Tank	11/1989	None
Unit 444	1 Fixed Roof Storage Tank	11/1989	None
Unit 449	1 Fixed Roof Storage Tank	1994-1995	None
Unit 450	1 Fixed Roof Storage Tank	1994-1995	None
Unit 451	1 Fixed Roof Storage Tank	1994-1995	None
Unit 452	1 Fixed Roof Storage Tank	7/1995	None
Unit 453	1 Fixed Roof Storage Tank	1995-1996	None
Unit 454	1 Fixed Roof Storage Tank	1995-1996	None
Unit 458	1 Fixed Roof Storage Tank	6/1996	None
Unit 463	1 Fixed Roof Storage Tank	6/1996	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 467	1 Fixed Roof Storage Tank	1/1997	None
Unit 478	1 Fixed Roof Storage Tank	6/1996	None
Unit 496	1 Fixed Roof Storage Tank	1999	None
Unit 497	1 Fixed Roof Storage Tank	1999	None
Unit 498	1 Fixed Roof Storage Tank	1999-2000	None
Unit 515	1 Fixed Roof Storage Tank	9/1990	2545-SCB-5*
Boiler 1	114.6 mmBtu/hr Natural Gas-Fired Boiler	12/1965	None
Boiler 2	124.0 mmBtu/hr Natural Gas-Fired Boiler	03/1973	None
Boiler 3	42.6 mmBtu/hr Natural Gas-Fired Boiler	Prior to 1973	None
Boiler 4	71.0 mmBtu/hr Natural Gas-Fired Boiler	04/1959	None
Loading Operations	Various Units: 10 loading racks, 6 fixed roof storage tanks, loading directly from process vessels	-	None

* The control equipment is permitted for use, but is not required to meet air emission standards.

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

- 5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of NO_x and VOM emissions.
- 5.1.2 This permit is issued based on the source not being a major source of HAPs.

5.2 Applicable Regulations

- 5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.
- 5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:
 - a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

- b.
 - i. This source shall be operated under the provisions of an operating program prepared by the Permittee and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)].
 - ii. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].
 - iii. All normal traffic pattern roads and parking facilities located at this source shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas shall be

cleaned on a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program [35 IAC 212.306].

- c. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

5.2.3 The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 Risk Management Plan

- a. This stationary source, as defined in 40 CFR Section 68.3, is subject to 40 CFR Part 68, the Accidental Release Prevention regulations [40 CFR 68.215(a)(1)].
- b. The owner or operator of a stationary source shall revise and update the RMP submitted, as specified in 40 CFR 68.190.

5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s)

as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
 - i. Illinois EPA, Compliance Section; and
 - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
 - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

- 5.2.7 This source is subject to 40 CFR 61, Subpart FF: National Emission Standard for Benzene Waste Operations, because this source is a chemical manufacturing plant with benzene-containing hazardous waste. If the total annual

benzene quantity from facility waste, based on the determination methods in 40 CFR 61.355, is less than 1 Mg/yr, then the Permittee shall comply with the recordkeeping requirements in Condition 5.6.2 and the reporting requirements in Condition 5.7.3 [40 CFR 61.355(a)(5)].

5.3 Non-Applicability of Regulations of Concern

5.3.1 This permit is issued based on the source not being subject to 35 IAC Part 218, Subparts RR and TT, because the potential to emit from all emission units included in the applicability of these regulations is less than 25 tons per year (see Conditions 5.5.3 and 7.1.6) [35 IAC 218.960(b) and 218.980(b)].

5.3.2 This permit is issued based on the source not being subject to 40 CFR Part 61, Subpart J: National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene, because the source does not have equipment that contains or contacts a fluid that is at least 10 percent benzene by weight.

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	39.20
Sulfur Dioxide (SO ₂)	0.30

Particulate Matter (PM)	43.80
Nitrogen Oxides (NO _x)	140.00
HAP, not included in VOM or PM	1.00
TOTAL	224.30

5.5.2 Emissions of Hazardous Air Pollutants

This permit is issued based on the emissions of HAPs as listed in Section 112(b) of the CAA not being equal to or exceeding 10 tons per year of a single HAP or 25 tons per year of any combination of such HAPs, so that this source is considered a minor source for HAPs.

5.5.3 Other Source-Wide Emission Limitations

The annual emissions from the following sources shall not exceed the following limitations:

<u>Emission Unit/Process</u>	<u>VOM Emissions (Lb/Year)</u>	<u>Underlying Rules</u>
General Manufacturing Area and Pilot Plant	29,000	
Insignificant Activities:		35 IAC 218, Subparts RR and TT
Cooling Towers	274	
Equipment Leaks	203	
Drum Ovens	<u>23</u>	
Total	29,500 (14.75 T/Yr)	

The above limitations contain revisions to previously issued Permit 72100431. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. These limits ensure that the emission units are not subject to the control requirements of 35 IAC Part 218, Subparts RR and TT, because the potential to emit from these emission units, as indicated by these limits, is less than 25 tons per year.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Records for VOM and HAP Emissions

The Permittee shall maintain records of the following items for the source quantify annual VOM and HAP emissions, so as to demonstrate compliance with the annual emission limits in Condition 5.5 and the regulatory exemptions in Condition 5.3:

- a. Aggregate VOM emissions from emission units included in Section 7 of this permit;
- b. Aggregate VOM emissions from insignificant activities included in Section 3 of this permit, if those activities are included in the applicability determination of 35 IAC Part 218, Subparts RR or TT (see Condition 5.5.3).
- c. Aggregate HAP emissions from emission units included in Section 7 of this permit, calculated as a fraction of VOM emissions according to vapor weight percent.
- d. An analysis demonstrating the design capacity of the source and that equipment is not in benzene service, as defined by 40 CFR 61.111 [40 CFR 61.110(c)(1) and 61.246(i)].
- e. Records in accordance with 40 CFR 61.356(b)(1) and (2) showing that each waste stream is exempt from the standards of 40 CFR Part 61, Subpart FF.

5.6.3 Records for Operating Scenarios

N/A

5.6.4 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is

readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.7.3 Annual Reporting of HAP Emissions

None

5.7.4 Other Source Wide Reporting Requirements

The Permittee shall submit to the Illinois EPA a report that updates the information listed in 40 CFR 61.357(a)(1) through (a)(3) whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility wastes to increase to 1 Mg/yr or more [40 CFR 61.357(b)].

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and

compliance procedures in Section 7 (Unit Specific Conditions) of this permit.

- a. For the purpose of estimating emissions from the storage tanks, the most recent version of TANKS or the method outlined in AP-42, 5th Edition, Volume I, Supplement D, September 1997, is acceptable.
- b. For the purpose of estimating HAP emissions from equipment at the source, the vapor weight percent of each HAP for each organic liquid times the VOM emissions contributed by that organic liquid is acceptable.

6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182(c) of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set in the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source should have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources' transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the "Alternative Compliance Market Account" (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

6.2 Applicability

Emissions of VOM from the source during the seasonal allotment period from May 1 through September 30 of each year shall not exceed 15 tons, not including VOM emissions from insignificant

emission units and activities as identified in Section 3 of this permit. This limitation is established at the request of the source to exempt it from the requirements of 35 IAC Part 205, Emissions Reduction Market System (ERMS), pursuant to 35 IAC 205.205.

6.3 Recordkeeping and Reporting

- a. The Permittee shall maintain the following records to determine compliance with the above limitation:
 - i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in Sections 5 and 7 of this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period;
 - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in Sections 5 and 7 of this permit; and
 - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period.
- b. The Permittee shall submit the seasonal emissions component of the Annual Emissions Report by November 30 of each year, reporting actual emissions of VOM during the seasonal allotment period, in accordance with 35 IAC 205.205(b) and 35 IAC 205.300.
- c. In the event that the source's VOM emissions during the seasonal allotment period exceed 15 tons, the source shall no longer be exempt from the ERMS and beginning with the following seasonal allotment period, shall comply with 35 IAC Part 205, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period.

6.4 Federal Enforceability

Section 6.0 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

7.0 UNIT SPECIFIC CONDITIONS

7.1 Chemical Manufacturing Process Units

7.1.1 Description

The Chemical Process Units include the Blender Groups, the Nalcoag train, the Latex Polymers train, the Solution Polymers train, Applied Services, and the Pilot Plant.

The Blender Groups manufacture a variety of water treatment products, such as oxygen scavengers used in boilers, corrosion inhibitors used in boilers and cooling towers, biocides that control biological growth, dispersants that keep dissolved solids from plating, antifoams to prevent foaming, and emulsifiers that allow water and oil to mix. In addition, some blenders mix additives to products made in other process areas. In general, the blenders operate independently from each other in a batch process. VOM emissions occur during the filling, heating, nitrogen purging, and vacuuming operations.

The Nalcoag train manufactures colloidal silica used by a variety of industries to polish silicon wafers for computers, for metal casting and mold release applications, and as retention aids and clarifiers. The products are mostly inorganic and are made in a variety of sizes. VOM emissions occur during drum preparation and filling operations.

The Latex Polymers train manufactures flocculants which are often used as retention aids, dust control additives and wastewater treatment additives. The process includes a material preparation area, reactor vessels, and final blend tanks. VOM emissions occur during the filling, heating, nitrogen purging, and vacuuming operations.

The Solution Polymer train manufactures polymers used primarily for cooling water and boiler water treatment. The process includes a material preparation area and reactors vessels. VOM emissions occur during the filling, heating, nitrogen purging, and vacuuming operations.

The Pilot Plant includes research activities, product and process development, and some production for sale of all product lines.

The Applied Services area provides a variety of functions. The analytical services for our customers and field representatives are considered insignificant under

201.210(b)(xi). In addition, applied services prepares tank labels, test kits, reagents, and items used in the field by our sales representatives and customers. The only significant source of emissions is the preparation of reagents for the test kits. The reagents are made in small batch quantities and are considered part of manufacturing.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit Group	Description	Emission Control Equipment
Unit 121	1 Process Blender	2046-SCB-2*
Unit 122	1 Process Blender	2046-SCB-2*
Unit 123	1 Process Blender	2046-SCB-2*
Unit 124	1 Process Blender	2046-SCB-2*
Unit 124A	1 Process Blender	None
Unit 124B	1 Process Blender	None
Unit 125	1 Process Blender	2046-SCB-2*
Unit 130	1 Process Blender	None
Unit 140	1 Process Blender	2046-SCB-3*
Unit 142	1 Process Blender	2046-SCB-3*
Unit 155	1 Process Reactor	None
Unit 156	1 Process Blender	None
Unit 156A	1 Process Blender	None
Unit 156B	1 Process Blender	None
Unit 157	1 Process Blender	None
Unit 157B	1 Process Blender	None
Unit 157C	1 Process Blender	None
Unit 159	1 Process Blender	2046-SCB-3*
Unit 193	1 Process Blender	2046-SCB-1*
Unit 195	1 Process Reactor	None
Unit 200	1 Process Blender	2046-SCB-1*
Unit 314	1 Process Blender	None
Unit 457	1 Process Blender	None
Latex Polymer Train (10 Units)		
Unit 164	Reactor	None
Unit 166	Blender	2544-SCB-1*
Unit 168	Blender	2544-SCB-1*
Unit 205	Reactor	None
Unit 230	Blender	None
Unit 284	Blender	2544-SCB-1*
Unit 440	Blender	None
Unit 441	Blender	2451-SCB-1*
Unit 443	Blender	None
Unit 444	Blender	None
Nalcoag Train (56 Units)		
Unit 042	Blender	None

Emission Unit Group	Description	Emission Control Equipment
Unit 044	Blender	None
Unit 060	Flash Tank	None
Unit 061	Blender	1048-SCB-1*
Unit 062	Blender	None
Unit 063	Ion Exchanger	None
Unit 066	Evaporator	None
Unit 069	Blender	None
Unit 074	Evaporator	None
Unit 080	Evaporator	None
Unit 081	Ion Exchanger	None
Unit 082	Blender	None
Unit 087	Evaporator	None
Unit 089	Blender	None
Unit 090	Blender	None
Unit 091	Blender	None
Unit 092	Blender	None
Unit 093	Blender	None
Unit 351	Blender	None
Unit 352	Ion Exchanger	None
Unit 353	Ion Exchanger	None
Unit 355	Blender	None
Unit 356	Evaporator	None
Unit 357	Evaporator	None
Unit 358	Reactor	1048-SCB-1*
Unit 359	Reactor	1048-SCB-1*
Unit 360	Blender	None
Unit 361	Blender	None
Unit 362	Blender	None
Unit 363	Blender	None
Unit 364	Blender	None
Unit 365	Blender	None
Unit 366	Blender	None
Unit 367	Blender	None
Unit 368	Reactor	None
Unit 370	Blender	None
Unit 377	Blender	None
Unit 378	Blender	None
Unit 379	Blender	None
Unit 380	Blender	None
Unit 381	Blender	None
Unit 383	Blender	None
Unit 428	Blender	None
Unit 429	Blender	None
Unit 445	Ion Exchanger	None
Unit 446	Ion Exchanger	None

Emission Unit Group	Description	Emission Control Equipment
Unit 447	Ion Exchanger	None
Unit 448	Ion Exchanger	None
Unit 453	Blender	None
Unit 463	Blender	None
Unit 464	Blender	None
Unit 465	Blender	None
Unit 466	Ion Exchanger	None
Unit 467	Ion Exchanger	None
Unit 475	Blender	None
Unit 498	Blender	None
Solution Polymer Train (5 Units)		
Unit 300	Reactor	None
Unit 302	Blender	3257-SCB-1*
Unit 322	Blender	3258-SCB-2*
Unit 325	Reactor	None
Unit 328	Blender	None
Pilot Plant (20 Units)		
Unit 022	Reactor	None
Unit 025	Blender	None
Unit 029	Reactor	None
Unit 035	Reactor	None
Unit 127	Reactor	Scrubber*
Unit 189	Reactor	None
Unit 237	Blender	None
Unit 239	Reactor	None
Unit 242	Blender	None
Unit 243	Blender	None
Unit 288	Blender	None
Unit 292	Reactor	None
Unit 382	Blender	None
Unit 393	Reactor	None
Unit 394	Blender	None
Unit 395	Reactor	None
Unit 396	Blender	None
Unit 397	Blender	None
Unit 399	Blender	None
Unit 474	Reactor	None
Applied Services (AS)	175 Units (maximum): Blending / storage units not greater than 550 gallons.	None

* The control equipment is permitted for use, but is not required to meet air emission standards.

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected chemical manufacturing process units" for the purpose of these unit-specific conditions, are the emission units used to manufacture specialty chemicals, including those units listed in Condition 7.1.2.
- b. The affected chemical manufacturing process units are subject to 35 IAC 212, Subpart L: Particulate Matter from Process Emission Sources, which provides that:

- i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)]; and

- ii. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (See also Attachment 2) [35 IAC 212.322(a)]; and

- c. The affected chemical manufacturing process units are subject to 35 IAC 218.301, which provides that:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302 and the following exception: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall apply only to photochemically reactive material [35 IAC 218.301].

7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected chemical manufacturing process units not being subject to the

control requirements of 35 IAC 218.501, Control Requirements for Batch Operations, pursuant to 35 IAC 218.500(c), which excludes single unit operations and batch process trains that have VOM emissions below the de minimis level. However, there are certain recordkeeping and reporting requirements for the affected chemical manufacturing process units pursuant to 35 IAC Part 218, Subpart V, included in Conditions 7.1.9 and 7.1.10.

- b. This permit is issued based on the affected chemical manufacturing process units not being subject to 35 IAC Part 218, Subparts RR and TT, because the potential to emit from all emission units included in the applicability of these regulations is less than 25 tons per year (see also Condition 5.3) [35 IAC 218.960(b) and 218.980(b)].
- c. This permit is issued based on the affected chemical manufacturing process units not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemical Manufacturing Industry, 40 CFR Part 60, Subparts V V and RRR (equipment leaks and reactors), because the affected chemical manufacturing process units do not produce any of the affected chemicals listed in these regulations.
- d. This permit is issued based on the affected chemical manufacturing process units not being subject to the New Source Performance Standards (NSPS) for the Polymer Manufacturing Industry, 40 CFR Part 60, Subpart DDD, because the affected chemical manufacturing process units do not produce any of the affected polymers listed in this regulation.
- e. This permit is issued based on the affected chemical manufacturing process units not being subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for the Synthetic Organic Chemical Manufacturing Industry, 40 CFR Part 63, Subparts F through H, because the affected chemical manufacturing process units do not produce any of the affected chemicals listed in these regulations.
- f. This permit is issued based on the affected chemical manufacturing process units not being subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Polymers and Resins, 40 CFR Part 63, Subparts U and JJJ, because the affected chemical manufacturing process units do not produce

any of the affected polymers listed in these regulations.

7.1.5 Operational And Production Limits And Work Practices

None

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected chemical manufacturing process units are subject to the following:

- a. Emissions from the affected chemical manufacturing process units shall not exceed the following limits:

<u>Emission Source</u>	<u>VOM Emissions</u>	
	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
Pilot Plant and General Manufacturing	1.82	14.50

These limits are based on the maximum operating rates, vapor displacement calculations, and material balance calculations.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations contain revisions to previously issued Permit 72100431. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. These limits

also ensure that the affected chemical manufacturing process units are not subject to the control requirements of 35 IAC Part 218, Subparts RR and TT (see also Conditions 5.3 and 7.1.4(b)). Specifically, the numerous emission limits on individual emission units were combined into a single emission limit for the pilot plant and general manufacturing. Together with Condition 7.2.6, the overall emission limits represent an increase in allowable VOM emissions of 6,892 pounds per year [T1R].

7.1.7 Testing Requirements

The Permittee shall complete the following testing requirements for the affected chemical manufacturing process units to demonstrate compliance with Conditions 5.5.3, 6.2, and 7.1.6, pursuant to Section 39.5(7)(c) of the Act:

- a. Upon request by the Illinois EPA or USEPA where it is necessary to demonstrate compliance, the Permittee shall, at his own expense, conduct tests in accordance with the applicable test methods and procedures specified in 35 IAC 218.105 [35 IAC 218.105(i)]. These tests shall be designed to quantify VOM emissions from the affected chemical manufacturing process units and associated activities under process conditions representative of maximum emissions.
- b. Use of an adaptation of the test methods specified in 35 IAC 218.105(f) may not be used unless approved by the Illinois EPA and the USEPA on a case by case basis. The Permittee must submit sufficient documentation for the Illinois EPA and the USEPA to find that the test methods specified above will yield inaccurate results or are otherwise inappropriate and that the proposed adaptation is appropriate [35 IAC 218.105(f)(7)].
- c. The Permittee shall notify the Illinois EPA, Compliance Section and Regional Field Office, at least 30 days before the planned performance of the test to allow the Illinois EPA to have an observer present during the test.

7.1.8 Monitoring Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected chemical manufacturing process units to demonstrate compliance with Conditions 5.5.1, 7.1.5, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall keep records of the uncontrolled total annual mass emissions for any de minimis single unit operation or batch process train, as applicable, and documentation verifying these values or measurements. The documentation shall include the engineering calculations, any measurements made in accordance with 35 IAC 218.503, and the potential or permitted number of batch cycles per year, or, in the alternative, total production as represented in the source's operating permit [35 IAC 218.505(a)].
- b. Records of operation and emissions of each affected chemical manufacturing process unit, including the following:
 - i. Number of batches of each material produced in each vessel (batch/month);
 - ii. Date each batch was produced;
 - iii. The amount produced in each vessel (pound/month);
 - iv. VOM emissions with supporting calculations, e.g., the procedures in Condition 7.1.12 (ton/month and ton/year).

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of an affected chemical manufacturing process unit with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The owner or operator of a de minimis single unit operation or batch process train exempt from the control requirements due to 35 IAC 218.500(c) shall notify the Illinois EPA in writing if the uncontrolled total annual mass emissions from such de minimis single unit operation or batch process train exceed the threshold in 35 IAC 218.500(c)(1) or (2), respectively, within 60 days after the event occurs.

Such notification shall include a copy of all records of such event [35 IAC 218.505(g)].

- b. Upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 IAC 218 Subpart TT shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements [35 IAC 218.990].
- c. Emissions of VOM in excess of the limits in Conditions 7.1.3(c) and/or 7.1.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected chemical manufacturing process units without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Usage of any combination of batches or raw materials without exceeding the emission limits of this permit and without violating any other requirements of this permit.

7.1.12 Compliance Procedures

- a. Compliance with the PM emission limitations in Condition 7.1.3(b) is assured and achieved by the proper operation, maintenance, and work-practices inherent in operation of the affected chemical manufacturing process units. PM emissions shall be determined by the recordkeeping requirements in Condition 7.1.9 and an emission factor of 0.1% of all dry materials used.
- b. Compliance with the VOM emission limitations shall be determined by the recordkeeping requirements in Condition 7.1.9 and the following emission factors:

<u>Product Made</u>	<u>Vessel</u>	<u>VOM Emission Factor (lb/batch)</u>
Latex Polymer	164/205	1.15

Solution Polymer	300/322/325	3.80
Pilot Plant	ANY	1.60
PR-475	155	0.21
7607	195	0.10
Amine	140	2.00
Amine	142	1.32
Amine	159	0.40
AS (alcohol)	AS	1.00
Non-VOM	ANY	0.00
Other	ANY	0.10

7.2 Storage Tanks

7.2.1 Description

The Permittee operates fixed roof storage tanks to store materials used or produced in the chemical manufacturing processes at this source.

7.2.2 List of Emission Equipment and Pollution Control Equipment

Storage Tank	Description	Emission Control Equipment
Unit 001	1 Fixed Roof Storage Tank	None
Unit 002	1 Fixed Roof Storage Tank	None
Unit 010	1 Fixed Roof Storage Tank	None
Unit 014	1 Fixed Roof Storage Tank	None
Unit 041	1 Fixed Roof Storage Tank	None
Unit 046	1 Fixed Roof Storage Tank	None
Unit 055	1 Fixed Roof Storage Tank	None
Unit 064	1 Fixed Roof Storage Tank	None
Unit 071	1 Fixed Roof Storage Tank	None
Unit 072	1 Fixed Roof Storage Tank	None
Unit 077	1 Fixed Roof Storage Tank	None
Unit 101	1 Fixed Roof Storage Tank	None
Unit 102	1 Fixed Roof Storage Tank	None
Unit 103	1 Fixed Roof Storage Tank	None
Unit 104	1 Fixed Roof Storage Tank	None
Unit 105	1 Fixed Roof Storage Tank	None
Unit 106	1 Fixed Roof Storage Tank	None
Unit 107	1 Fixed Roof Storage Tank	None
Unit 108	1 Fixed Roof Storage Tank	None
Unit 109	1 Fixed Roof Storage Tank	None
Unit 126	1 Fixed Roof Storage Tank	None
Unit 139	1 Fixed Roof Storage Tank	None
Unit 143	1 Fixed Roof Storage Tank	None
Unit 145	1 Fixed Roof Storage Tank	None
Unit 147	1 Fixed Roof Storage Tank	None
Unit 150	1 Fixed Roof Storage Tank	None
Unit 151	1 Fixed Roof Storage Tank	None
Unit 160	1 Fixed Roof Storage Tank	None
Unit 161	1 Fixed Roof Storage Tank	None
Unit 162	1 Fixed Roof Storage Tank	None
Unit 201	1 Fixed Roof Storage Tank	None
Unit 206	1 Fixed Roof Storage Tank	2751-SCB-1*
Unit 208	1 Fixed Roof Storage Tank	2751-SCB-1*
Unit 210	1 Fixed Roof Storage Tank	None
Unit 211	1 Fixed Roof Storage Tank	None
Unit 212	1 Fixed Roof Storage Tank	None

Storage Tank	Description	Emission Control Equipment
Unit 213	1 Fixed Roof Storage Tank	None
Unit 218	1 Fixed Roof Storage Tank	None
Unit 219	1 Fixed Roof Storage Tank	None
Unit 220	1 Fixed Roof Storage Tank	None
Unit 221	1 Fixed Roof Storage Tank	None
Unit 222	1 Fixed Roof Storage Tank	None
Unit 223	1 Fixed Roof Storage Tank	None
Unit 224	1 Fixed Roof Storage Tank	None
Unit 225	1 Fixed Roof Storage Tank	None
Unit 226	1 Fixed Roof Storage Tank	None
Unit 227	1 Fixed Roof Storage Tank	None
Unit 228	1 Fixed Roof Storage Tank	None
Unit 229	1 Fixed Roof Storage Tank	None
Unit 231	1 Fixed Roof Storage Tank	None
Unit 232	1 Fixed Roof Storage Tank	None
Unit 233	1 Fixed Roof Storage Tank	None
Unit 245	1 Fixed Roof Storage Tank	None
Unit 246	1 Fixed Roof Storage Tank	None
Unit 247	1 Fixed Roof Storage Tank	None
Unit 248	1 Fixed Roof Storage Tank	None
Unit 249	1 Fixed Roof Storage Tank	None
Unit 250	1 Fixed Roof Storage Tank	None
Unit 251	1 Fixed Roof Storage Tank	None
Unit 252	1 Fixed Roof Storage Tank	None
Unit 253	1 Fixed Roof Storage Tank	None
Unit 254	1 Fixed Roof Storage Tank	None
Unit 245	1 Fixed Roof Storage Tank	None
Unit 264	1 Fixed Roof Storage Tank	None
Unit 278	1 Fixed Roof Storage Tank	None
Unit 279	1 Fixed Roof Storage Tank	None
Unit 282	1 Fixed Roof Storage Tank	2544-SCB-1*
Unit 283	1 Fixed Roof Storage Tank	2544-SCB-1*
Unit 285	1 Fixed Roof Storage Tank	None
Unit 286	1 Fixed Roof Storage Tank	None
Unit 290	1 Fixed Roof Storage Tank	None
Unit 305	1 Fixed Roof Storage Tank	None
Unit 306	1 Fixed Roof Storage Tank	None
Unit 307	1 Fixed Roof Storage Tank	None
Unit 308	1 Fixed Roof Storage Tank	None
Unit 310	1 Fixed Roof Storage Tank	None
Unit 311	1 Fixed Roof Storage Tank	None
Unit 315	1 Fixed Roof Storage Tank	None
Unit 318	1 Fixed Roof Storage Tank	None
Unit 319	1 Fixed Roof Storage Tank	None
Unit 320	1 Fixed Roof Storage Tank	None

Storage Tank	Description	Emission Control Equipment
Unit 326	1 Fixed Roof Storage Tank	None
Unit 327	1 Fixed Roof Storage Tank	None
Unit 329	1 Fixed Roof Storage Tank	None
Unit 331	1 Fixed Roof Storage Tank	None
Unit 332	1 Fixed Roof Storage Tank	None
Unit 333	1 Fixed Roof Storage Tank	None
Unit 334	1 Fixed Roof Storage Tank	None
Unit 335	1 Fixed Roof Storage Tank	None
Unit 336	1 Fixed Roof Storage Tank	None
Unit 337	1 Pressure Storage Tank	Vapor Return
Unit 345	1 Fixed Roof Storage Tank	None
Unit 347	1 Fixed Roof Storage Tank	None
Unit 348	1 Fixed Roof Storage Tank	None
Unit 349	1 Fixed Roof Storage Tank	None
Unit 350	1 Fixed Roof Storage Tank	None
Unit 354	1 Fixed Roof Storage Tank	None
Unit 388	1 Fixed Roof Storage Tank	None
Unit 389	1 Fixed Roof Storage Tank	None
Unit 390	1 Fixed Roof Storage Tank	3256-SCB-2*
Unit 391	1 Fixed Roof Storage Tank	3256-SCB-3*
Unit 401	1 Fixed Roof Storage Tank	None
Unit 402	1 Fixed Roof Storage Tank	None
Unit 403	1 Fixed Roof Storage Tank	None
Unit 404	1 Fixed Roof Storage Tank	None
Unit 405	1 Fixed Roof Storage Tank	None
Unit 406	1 Fixed Roof Storage Tank	None
Unit 407	1 Fixed Roof Storage Tank	None
Unit 408	1 Fixed Roof Storage Tank	None
Unit 409	1 Fixed Roof Storage Tank	None
Unit 410	1 Fixed Roof Storage Tank	None
Unit 411	1 Fixed Roof Storage Tank	None
Unit 412	1 Fixed Roof Storage Tank	None
Unit 413	1 Fixed Roof Storage Tank	None
Unit 414	1 Fixed Roof Storage Tank	None
Unit 415	1 Fixed Roof Storage Tank	None
Unit 416	1 Fixed Roof Storage Tank	None
Unit 417	1 Fixed Roof Storage Tank	None
Unit 418	1 Fixed Roof Storage Tank	None
Unit 419	1 Fixed Roof Storage Tank	None
Unit 420	1 Fixed Roof Storage Tank	None
Unit 421	1 Fixed Roof Storage Tank	None
Unit 422	1 Fixed Roof Storage Tank	None
Unit 423	1 Fixed Roof Storage Tank	None
Unit 424	1 Fixed Roof Storage Tank	None

Storage Tank	Description	Emission Control Equipment
Unit 430	1 Fixed Roof Storage Tank	None
Unit 431	1 Fixed Roof Storage Tank	None
Unit 432	1 Fixed Roof Storage Tank	None
Unit 433	1 Fixed Roof Storage Tank	None
Unit 434	1 Fixed Roof Storage Tank	None
Unit 435	1 Fixed Roof Storage Tank	None
Unit 436	1 Fixed Roof Storage Tank	None
Unit 437	1 Fixed Roof Storage Tank	None
Unit 438	1 Fixed Roof Storage Tank	None
Unit 439	1 Fixed Roof Storage Tank	None
Unit 442	1 Fixed Roof Storage Tank	None
Unit 443	1 Fixed Roof Storage Tank	None
Unit 444	1 Fixed Roof Storage Tank	None
Unit 449	1 Fixed Roof Storage Tank	None
Unit 450	1 Fixed Roof Storage Tank	None
Unit 451	1 Fixed Roof Storage Tank	None
Unit 452	1 Fixed Roof Storage Tank	None
Unit 453	1 Fixed Roof Storage Tank	None
Unit 454	1 Fixed Roof Storage Tank	None
Unit 458	1 Fixed Roof Storage Tank	None
Unit 463	1 Fixed Roof Storage Tank	None
Unit 467	1 Fixed Roof Storage Tank	None
Unit 478	1 Fixed Roof Storage Tank	None
Unit 496	1 Fixed Roof Storage Tank	None
Unit 497	1 Fixed Roof Storage Tank	None
Unit 498	1 Fixed Roof Storage Tank	None
Unit 515	1 Fixed Roof Storage Tank	2545-SCB-5*

* The control equipment is permitted for use, but is not required to meet air emission standards.

7.2.3 Applicability Provisions

- a. An "affected storage tank," for the purpose of these unit-specific conditions, is a storage tank that has a capacity of less than or equal to 40,000 gallons, as identified in Condition 7.2.2.
- b. Each affected storage tank is subject to 35 IAC 218.301, which specifies that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302 and the following exception: if no odor nuisance exists this limitation shall apply only to photochemically reactive material [35 IAC 218.301].

- c. Each affected storage tank is subject to the requirements of 35 IAC 218.122(b) because each affected storage tank has a storage capacity greater than 946 liters (250 gallons). If no odor nuisance exists this regulation shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 °K (70 °F).
- d. Each affected storage tank with storage capacity greater than or equal to 40 m³ (10,567 gallons) that is constructed, reconstructed, or modified after July 23, 1984 is subject to the requirements of 40 CFR 60, Subpart Kb.

7.2.4 Non-Applicable Regulations

Each affected storage tank is not subject to 35 IAC 218 Subpart B: Organic Emissions from Storage and Loading Operations (except 35 IAC 218.122(b) and 35 IAC 218.129(f)), because each tank has a capacity of less than 40,000 gallons.

7.2.5 Operational And Production Limits And Work Practices

- a. Pursuant to 40 CFR 60, Subpart Kb the Permittee shall not store any organic material with a maximum true vapor pressure of 27.6 kPa (4.0 psia) or greater in each affected storage tank with storage capacity greater than or equal to 75 m³ (19,813 gallons) that is constructed, reconstructed, or modified after July 23, 1984. Storage of such material in these affected storage tanks requires the use of additional emissions control.
- b. Each affected tank shall be equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108, or unless such tank is fitted with a recovery system as described in 35 IAC 218.121. If no odor nuisance exists the limitations of this condition shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 °K (70 °F) [35 IAC 218.122(b) and (c)].

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected storage tanks are subject to the following:

- a. Emissions from the affected storage tanks shall not exceed the following limits:

<u>Emission Source</u>	<u>VOM Emissions</u>	
	<u>(Lb/Month)</u>	<u>(Ton/Year)</u>
Tanks and Tank Loading	2,500	14.5

These limits are based on the maximum total throughput for each tank group, molecular weight and vapor pressures of materials stored, and standard emission factors for storage tanks.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations contain revisions to previously issued Permit 72100431. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the numerous emission limits on groups of tanks were combined into a single emission limit for all storage tanks. Together with Condition 7.1.6, the overall emission limits represent an increase in allowable VOM emissions of 6,892 pounds per year [T1R].

7.2.7 Testing Requirements

None

7.2.8 Inspection Requirements

None

7.2.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for each affected storage tank to demonstrate compliance with Conditions 5.5.1, 7.2.3, and 7.2.7 pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the following items for each affected storage tank. These records shall be kept up to date for each tank at the source and be retained until the tank is removed from the source.

- i. The date* on which construction of the tank was commenced, with a copy of supporting documentation;
- ii. The date(s)* on which modification or reconstruction, as defined in 40 CFR 60.14 and 60.15 respectively, were commenced on the tank, if applicable;
- iii. Records indicating compliance with 35 IAC 218.122 (e.g., the presence of a submerged loading pipe); and
- iv. The dimensions of the tank and an analysis of capacity [35 IAC 218.129(f) and 40 CFR 60.116b(b)].

* If a date is prior to June 11, 1973, a specific date is not needed and documentation need only show commencement of construction prior to this date.

b. The Permittee shall maintain the following general records:

- i. The identification and properties of each organic liquid stored at the source, as related to emissions, i.e., vapor pressure and molecular weight;
- ii. The vapor weight percent of each HAP in the organic material emissions for each liquid determined as the average over the annual range of storage temperature and

representative data on the composition of the liquid, with identification of supporting documentation, e.g., USEPA 1992 survey; and

- iii. A copy of the supporting documentation for HAP vapor weight percent.
- c. The Permittee shall maintain records of the following items on a monthly basis for the previous month:
- i. The throughput of each organic liquid through each tank or group of tanks;
 - ii. The VOM emissions attributable to each organic liquid stored at the source, tons/month, with supporting calculations, calculated utilizing an approved USEPA methodology, such as the current version of the TANKS program or the method outlined in AP-42, 5th Edition, Volume I, Supplement D, September 1997;
 - iii. For each HAP identified as present, the total emissions of the individual HAP for all emission units at the source, in tons/month, with supporting calculations; and
 - iv. Total emissions of each individual HAP, and combined HAPs from the source, in tons/month, with supporting calculations.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations with the operating requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

- a. Any storage of organic liquid with a true vapor pressure greater than 27.6 kPa (4.0 psia) in an affected storage tank with storage capacity greater than or equal to 75 m³ (19,813 gallons), within five days of becoming aware of the non-compliance status. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps taken to avoid future non-compliance.
- b. Any loading of organic liquid with a true vapor pressure greater than or equal to 17.24 kPa (2.5 psia) in an affected storage tank without usage of a permanent submerged loading pipe or an equivalent

device approved by the Illinois EPA. This notification shall include a description of the event, the cause for the non-compliance, actions taken to correct the non-compliance, and the steps taken to avoid future non-compliance.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to an affected storage tank without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material stored in a tank, provided the tank continues to comply with the Conditions in Section 7.2 of this permit.

7.2.12 Compliance Procedures

- a. Compliance with the requirements in Condition 7.2.5 shall be determined by the recordkeeping and reporting requirements in Condition 7.2.9 and Condition 7.2.10.
- b. Emissions from each affected storage tank shall be determined through the use of the current version of the USEPA TANKS program or the method outlined in AP-42, 5th Edition, Volume I, Supplement D, September 1997.

7.3 Fuel Combustion Equipment

7.3.1 Description

The boilers produce steam and heat for the various processes at this source. All boilers combust only natural gas and were constructed prior to 1984.

7.3.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Rated Capacity (mmBtu/hr)
Boiler 1	114.6 mmBtu/hr Natural Gas-Fired Boiler	114.6
Boiler 2	124.0 mmBtu/hr Natural Gas-Fired Boiler	124.0
Boiler 3	42.6 mmBtu/hr Natural Gas-Fired Boiler	42.6
Boiler 4	71.0 mmBtu/hr Natural Gas-Fired Boiler	71.0

7.3.3 Applicability Provisions and Applicable Regulations

- a. An "affected boiler" for the purpose of these unit specific conditions is a steam generating unit that is listed in Condition 7.3.2.
- b. The emission of carbon monoxide (CO) into the atmosphere from each affected boiler with actual heat input greater than 2.9 MW (10 mmBtu/hr) shall not exceed 200 ppm, corrected to 50 percent excess air. [35 IAC 216.121]
- c. Each affected boiler is also subject to the opacity limits identified in Condition 5.2.2(c).

7.3.4 Non-Applicability of Regulations of Concern

- a. Each affected boiler is not subject to 35 IAC 217.141, because the actual heat input of each affected boiler is less than 73.2 MW (250 mmBtu/hr).
- b. Pursuant to 35 IAC 218.303, each affected boiler, i.e., fuel combustion emission unit, is not subject to 35 IAC 218.301, Use of Organic Material.
- c. Each affected boiler is not subject to the New Source Performance Standard 40 CFR 60 Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units, since each affected boiler with a heat input capacity between 10 mmBtu/hr and 100 mmBtu/hr,

inclusive, was constructed, modified, or reconstructed prior to June 9, 1989 which is the applicability date.

- d. Each affected boiler is not subject to the New Source Performance Standard 40 CFR 60 Subpart Db, Industrial-Commercial-Institutional Steam Generating Units, since each affected boiler with a heat input capacity greater than 100 mmBtu/hr was constructed, modified, or reconstructed prior to June 19, 1984 which is the applicability date.
- e. There are no applicable requirements for particulate matter or sulfur dioxide for affected boilers firing natural gas.

7.3.5 Operational And Production Limits And Work Practices

- a. Natural gas shall be the only fuel fired in the affected boilers. Natural gas usage shall not exceed 125 million ft³ per month and 1,000 million ft³ per year.
- b. At all times, the Permittee shall, to the extent practicable, maintain and operate each affected boiler in a manner consistent with good air pollution control practice for minimizing emissions.

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected boilers are subject to the following:

- a. Emissions from the affected boilers shall not exceed the following limits:

Pollutant	Pollutant Emissions	
	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
VOM	0.35	2.80
NO _x	17.50	140.00
CO	5.25	42.00
PM	0.48	3.80
SO ₂	0.04	0.30

These limits are based on the maximum natural gas usage and standard AP-42 emission factors for small and large industrial boilers.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current

month plus the preceding 11 months (running 12 month total) [T1].

The above limitations contain revisions to previously issued Permit 72100431. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the annual and monthly emission limits have been revised to reflect more current emissions factors [T1R].

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected boiler to demonstrate compliance with Conditions 5.5.1 and 7.3.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Total natural gas usage in the affected boilers (ft³/month and ft³/year); and
- b. Annual aggregate NO_x, CO, PM, SO₂, and VOM emissions from each affected boiler, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected boilers with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Notification within 60 days of operation of an affected boiler that may not have been in compliance with the opacity limitations in Condition 5.5.2(c), with a copy of such record for each incident.
- b. Emissions of NO_x, CO, PM, SO₂, or VOM from the affected boilers in excess of the limits specified in Condition 5.5.1 or Condition 7.3.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

- a. Compliance with Condition 7.3.3(b) and (c) is demonstrated under inherent operating conditions of an affected boiler, so that no compliance procedures are set in this permit addressing this requirement.
- b. Compliance with the emission limits in Condition 5.5.1 shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

<u>Pollutant</u>	<u>Emission Factor (lb/10⁶ ft³)</u>
PM	7.6
SO ₂	0.6
VOM	5.5
NO _x (Small Boilers)	100.0
NO _x (Large Boilers)	280.0
CO	84.0

These are the emission factors for uncontrolled natural gas combustion in small boilers (<100 mmBtu/hr) and large boilers (>100 mmBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, Volume I, Supplement D, March, 1998.

Boiler Emissions (lb) = natural gas consumed (ft³)
multiplied by the appropriate emission factor.

7.4 Loading Operations

7.4.1 Description

Loading of products into shipping containers is conducted in various locations throughout the plant. Material can be loaded directly from process units or from bulk storage. Several loading racks are located throughout the plant to fill trucks.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Loading Operations	Various Units: 10 loading racks, 6 fixed roof storage tanks, loading directly from process vessels	None

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected loading operations" for the purpose of these unit-specific conditions, are all product loading operations as described in Condition 7.4.2
- b. The affected loading operations are subject to 35 IAC 218 Subpart B, Organic Emissions from Storage and Loading Operations, which provides that:

The Permittee shall not cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Illinois EPA according to 35 IAC 201, and further processed consistent with 35 IAC 218.108 [35 IAC 218.122(a)].

- c. Each affected loading operation is subject to 35 IAC 218.301, which specifies that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302 and the following exception: if no odor nuisance exists this limitation shall apply only to photochemically reactive material [35 IAC 218.301].

7.4.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected loading operations not being subject to 35 IAC Part 218, Subparts RR and TT, because the requirements of these subparts do not apply to emission units subject to 35 IAC 218, Subpart B [35 IAC 218.960(b)(2) and 218.980(b)(2)].
- b. This permit is issued based on the affected loading operations not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemical Manufacturing Industry, 40 CFR Part 60, Subparts V V (equipment leaks), because the affected loading operations are not associated with equipment that produces any of the affected chemicals listed in this regulation.
- c. This permit is issued based on the affected loading operations not being subject to the New Source Performance Standards (NSPS) for the Polymer Manufacturing Industry, 40 CFR Part 60, Subpart DDD, because the affected loading operations are not associated with equipment that produces any of the affected polymers listed in this regulation.
- d. This permit is issued based on the affected loading operations not being subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for the Synthetic Organic Chemical Manufacturing Industry, 40 CFR Part 63, Subparts F through H, because the affected loading operations are not associated with equipment which produces any of the affected chemicals listed in these regulations.
- e. This permit is issued based on the affected loading operations not being subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Polymers and Resins, 40 CFR Part 63, Subparts U and JJJ, because the affected loading operations are not associated with equipment which produces any of the affected polymers listed in these regulations.

7.4.5 Operational And Production Limits And Work Practices

Each affected loading operation shall be equipped with a submerged loading pipe, unless the organic material emissions from such loading operation are less than 3.6 kilograms per hour (8 pounds per hour) or the loading area

has a throughput of less than 151 cubic meters per day (40,000 gallons per day).

7.4.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.4.7 Testing Requirements

None

7.4.8 Inspection Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected loading operations to demonstrate compliance with Condition 5.5.1 and 7.4.5, pursuant to Section 39.5(7)(b) of the Act:

- a. A list of the types of organic material processed through the affected loading operations in aggregate, with date of each change in the list;
- b. Number of batches of each organic material loaded through the affected loading operations in aggregate (batch/month);
- c. Records of the daily throughput of each organic material through the affected loading operations in aggregate (gallons);
- d. Records indicating the maximum VOM emissions per hour using maximum operating rates for each affected loading operation, with supporting calculations; and
- e. The actual VOM emissions from the affected loading operations (tons/year), with supporting calculations.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of an affected loading operation with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports

shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Operation without a submerged loading pipe as required by Condition 7.4.5, unless one of the exceptions in Condition 7.4.5 applies, within 30 days of such an occurrence.
- b. Emissions of VOM in excess of the limits specified in Condition 5.5.1 based on the current annual records within 30 days of such an occurrence.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

- a. Compliance with the operating requirements in Condition 7.4.5 shall be determined by the recordkeeping and reporting requirements in Conditions 7.4.9 and 7.4.10.
- b. Compliance with the VOM emission limitations in Conditions 5.5.1 and 7.4.3 shall be determined by the recordkeeping requirements in Condition 7.4.9 and the following emission factors:

<u>Product Made</u>	<u>Vessel</u>	<u>VOM Emission Factor (lb/batch)</u>
Latex Polymer	164/205	0.17
Solution Polymer	300/322/325	0.65
Pilot Plant	ANY	1.60
PR-475	155	0.21
7607	195	0.10
Amine	140	2.00
Amine	142	1.32
Amine	159	0.40
AS (alcohol)	AS	1.00
Non-VOM	ANY	0.00
Other	ANY	0.10

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after September 24, 2000 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this

permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
 - i. Describe the physical or operational change;
 - ii. Identify the schedule for implementing the physical or operational change;
 - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
 - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
 - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result

of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;

- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
 - i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)

P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

iii. Illinois EPA - Air Permit Section

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AR - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner

unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance; or
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment that is required by this permit. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].
- b. Other records required by this permit shall be retained for a period of at least 5 years from the

date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain

compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
 - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is

removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing

to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(l), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

10.2 Attachment 2 Particulate Matter Emissions from Process Emission Units

10.2.1 Section 212.321 - Process Emission Units For Which Construction or Modification Commenced On or After April 14, 1972.

- a. Except as further provided in 35 IAC Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.
- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = A(P)^B$$

Where:

P = Process weight rate; and
 E = Allowable emission rate; and,

- i. Up to process weight rates of 408 Mg/hr (450 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

- ii. For process weight rate greater than or equal to 408 Mg/hr (450 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

c. Limits for Process Emission Units For Which Construction of Modification Commenced On or After April 14,1972

Metric		English	
P <u>Mg/hr</u>	E <u>kg/hr</u>	P <u>Ton/hr</u>	E <u>lbs/hr</u>
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.20	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.	3.9	10.00	8.70
13.	4.8	15.00	10.80
18.	5.7	20.00	12.50
23.	6.5	25.00	14.00
27.	7.1	30.00	15.60
32.	7.7	35.00	17.00
36.	8.2	40.00	18.20
41.	8.8	45.00	19.20
45.	9.3	50.00	20.50
90.	13.4	100.00	29.50
140.	17.0	150.00	37.00
180.	19.4	200.00	43.00
230.	22.	250.00	48.50
270.	24.	300.00	53.00
320.	26.	350.00	58.00
360.	28.	400.00	62.00
408.	30.1	450.00	66.00
454.	30.4	500.00	67.00

Where:

P = Process weight rate in Mg/hr or Ton/hr, and
E = Allowable emission rate in kg/hr or lbs/hr.

10.2.2 Section 212.322 - Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972

- a. Except as further provided in 35 IAC Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour

period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = C + A(P)^B$$

Where:

P = Process weight rate; and,
E = Allowable emission rate; and,

- i. For process weight rates up to 27.2 Mg/hr (30 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

- ii. For process weight rates in excess or 27.2 Mg/hr (30 Ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	Ton/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	-18.4	-40.0

- c. Limits for Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972

<u>Metric</u>		<u>English</u>	
P	E	P	E
<u>Mg/hr</u>	<u>kg/hr</u>	<u>Ton/hr</u>	<u>lbs/hr</u>
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87

0.2	0.68	0.20	1.40
0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.	8.7	10.00	19.20
13.	11.1	15.00	25.20
18.	13.8	20.00	30.50
23.	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60

Metric		English	
P	E	P	E
<u>Mg/hr</u>	<u>kg/hr</u>	<u>Ton/hr</u>	<u>lbs/hr</u>
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

Where:

P = Process weight rate in Mg/hr or Ton/hr, and
E = Allowable emission rate in kg/hr or lbs/hr.

JS:jar

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

The Nalco Chemical Company is located at 6216 West 66th Place Chicago, Illinois. The source operates a specialty chemicals manufacturing plant. The source manufactures water treatment chemicals, silica products, and polymers for use by a variety of industries. In addition, the source operates a pilot plant for research and development of products and processes.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 121	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 122	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 123	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 124	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 124A	1 Process Blender	11/1995	None
Unit 124B	1 Process Blender	11/1995	None
Unit 125	1 Process Blender	Pre-1972	2046-SCB-2*
Unit 130	1 Process Blender	Pre-1972	None
Unit 140	1 Process Blender	Pre-1972	2046-SCB-3*
Unit 142	1 Process Blender	10/1973	2046-SCB-3*
Unit 155	1 Process Reactor	Pre-1972	None
Unit 156	1 Process Blender	Pre-1972	None
Unit 156A	1 Process Blender	11/1995	None
Unit 156B	1 Process Blender	11/1995	None
Unit 157	1 Process Blender	Pre-1972	None
Unit 157B	1 Process Blender	11/1995	None
Unit 157C	1 Process Blender	11/1995	None
Unit 159	1 Process Blender	12/1991	2046-SCB-3*
Unit 193	1 Process Blender	Pre-1972	2046-SCB-1*
Unit 195	1 Process Reactor	Pre-1972	None
Unit 200	1 Process Blender	Pre-1972	2046-SCB-1*
Unit 314	1 Process Blender	Pre-1972	None
Unit 457	1 Process Blender	8/1998	None
Latex Polymer Train (10 Units)			
Unit 164	Reactor	Pre-1972	None
Unit 166	Blender	1/1995	2544-SCB-1*

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 168	Blender	Pre-1972	2544-SCB-1*
Unit 205	Reactor	Pre-1972	None
Unit 230	Blender	Pre-1972	None
Unit 284	Blender	8/1983	2544-SCB-1*
Unit 440	Blender	2/1991	None
Unit 441	Blender	11/1989	2451-SCB-1*

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 443	Blender	11/1989	None
Unit 444	Blender	11/1989	None
Nalcoag Train (56 Units)			
Unit 042	Blender	Pre-1972	None
Unit 044	Blender	Pre-1972	None
Unit 060	Flash Tank	9/1975	None
Unit 061	Blender	Pre-1972	1048-SCB-1*
Unit 062	Blender	Pre-1972	None
Unit 063	Ion Exchanger	Pre-1972	None
Unit 066	Evaporator	Pre-1972	None
Unit 069	Blender	Pre-1972	None
Unit 074	Evaporator	Pre-1972	None
Unit 080	Evaporator	Pre-1972	None
Unit 081	Ion Exchanger	Pre-1972	None
Unit 082	Blender	Pre-1972	None
Unit 087	Evaporator	Pre-1972	None
Unit 089	Blender	Pre-1972	None
Unit 090	Blender	Pre-1972	None
Unit 091	Blender	Pre-1972	None
Unit 092	Blender	Pre-1972	None
Unit 093	Blender	Pre-1972	None
Unit 351	Blender	9/1975	None
Unit 352	Ion Exchanger	9/1975	None
Unit 353	Ion Exchanger	Pre-1972	None
Unit 355	Blender	9/1975	None
Unit 356	Evaporator	9/1975	None
Unit 357	Evaporator	9/1975	None
Unit 358	Reactor	1987	1048-SCB-1*
Unit 359	Reactor	1987	1048-SCB-1*
Unit 360	Blender	1987	None
Unit 361	Blender	1987	None
Unit 362	Blender	1987	None
Unit 363	Blender	1976	None
Unit 364	Blender	4/1980	None
Unit 365	Blender	4/1980	None
Unit 366	Blender	4/1980	None
Unit 367	Blender	4/1980	None
Unit 368	Reactor	4/1980	None
Unit 370	Blender	4/1980	None
Unit 377	Blender	1989	None
Unit 378	Blender	1989	None
Unit 379	Blender	1989	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 380	Blender	11/1997	None
Unit 381	Blender	11/1997	None
Unit 383	Blender	12/1992	None
Unit 428	Blender	1995	None
Unit 429	Blender	1995	None
Unit 445	Ion Exchanger	1995-1996	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 446	Ion Exchanger	1995-1996	None
Unit 447	Ion Exchanger	1995-1996	None
Unit 448	Ion Exchanger	1995-1996	None
Unit 453	Blender	1995-1996	None
Unit 463	Blender	6/1996	None
Unit 464	Blender	6/1996	None
Unit 465	Blender	6/1996	None
Unit 466	Ion Exchanger	1997	None
Unit 467	Ion Exchanger	1997	None
Unit 475	Blender	2/1999	None
Unit 498	Blender	4/2000	None
Solution Polymer Train (5 Units)			
Unit 300	Reactor	Pre-1972	None
Unit 302	Blender	Pre-1972	3257-SCB-1*
Unit 322	Blender	1980	3258-SCB-2*
Unit 325	Reactor	1980	None
Unit 328	Blender	1990	None
Pilot Plant (20 Units)			
Unit 022	Reactor	Pre-1972	None
Unit 025	Blender	Pre-1972	None
Unit 029	Reactor	Pre-1972	None
Unit 035	Reactor	Pre-1972	None
Unit 127	Reactor	10/1974	Scrubber*
Unit 189	Reactor	Pre-1972	None
Unit 237	Blender	Pre-1972	None
Unit 239	Reactor	10/1974	None
Unit 242	Blender	Pre-1972	None
Unit 243	Blender	Pre-1972	None
Unit 288	Blender	Pre-1972	None
Unit 292	Reactor	6/1980	None
Unit 382	Blender	12/1994	None
Unit 393	Reactor	12/1994	None
Unit 394	Blender	12/1994	None
Unit 395	Reactor	12/1994	None
Unit 396	Blender	12/1994	None
Unit 397	Blender	12/1994	None
Unit 399	Blender	12/1994	None
Unit 474	Reactor	1/1999	None
Applied Services (AS)	175 Units (maximum): Blending / storage units not greater than 550 gallons.	-	None
Storage Tank (152 Units)			

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 001	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 002	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 010	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 014	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 041	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 046	1 Fixed Roof Storage Tank	Pre-1972	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 055	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 064	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 071	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 072	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 077	1 Fixed Roof Storage Tank	5/1976	None
Unit 101	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 102	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 103	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 104	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 105	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 106	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 107	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 108	1 Fixed Roof Storage Tank	1/1991	None
Unit 109	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 126	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 139	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 143	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 145	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 147	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 150	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 151	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 160	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 161	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 162	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 201	1 Fixed Roof Storage Tank	9/1980	None
Unit 206	1 Fixed Roof Storage Tank	Pre-1972	2751-SCB-1*
Unit 208	1 Fixed Roof Storage Tank	Pre-1972	2751-SCB-1*
Unit 210	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 211	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 212	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 213	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 218	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 219	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 220	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 221	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 222	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 223	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 224	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 225	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 226	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 227	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 228	1 Fixed Roof Storage Tank	Pre-1972	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 229	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 231	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 232	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 233	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 245	1 Fixed Roof Storage Tank	4/1973	None
Unit 246	1 Fixed Roof Storage Tank	4/1973	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 247	1 Fixed Roof Storage Tank	4/1973	None
Unit 248	1 Fixed Roof Storage Tank	4/1973	None
Unit 249	1 Fixed Roof Storage Tank	4/1973	None
Unit 250	1 Fixed Roof Storage Tank	4/1973	None
Unit 251	1 Fixed Roof Storage Tank	4/1973	None
Unit 252	1 Fixed Roof Storage Tank	4/1973	None
Unit 253	1 Fixed Roof Storage Tank	4/1973	None
Unit 254	1 Fixed Roof Storage Tank	4/1973	None
Unit 245	1 Fixed Roof Storage Tank	4/1988	None
Unit 264	1 Fixed Roof Storage Tank	10/1972	None
Unit 278	1 Fixed Roof Storage Tank	9/1977	None
Unit 279	1 Fixed Roof Storage Tank	9/1977	None
Unit 282	1 Fixed Roof Storage Tank	10/1978	2544-SCB-1*
Unit 283	1 Fixed Roof Storage Tank	10/1978	2544-SCB-1*
Unit 285	1 Fixed Roof Storage Tank	5/1980	None
Unit 286	1 Fixed Roof Storage Tank	5/1980	None
Unit 290	1 Fixed Roof Storage Tank	6/1981	None
Unit 305	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 306	1 Fixed Roof Storage Tank	2/1988	None
Unit 307	1 Fixed Roof Storage Tank	2/1988	None
Unit 308	1 Fixed Roof Storage Tank	2/1988	None
Unit 310	1 Fixed Roof Storage Tank	2/1988	None
Unit 311	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 315	1 Fixed Roof Storage Tank	Pre-1972	None
Unit 318	1 Fixed Roof Storage Tank	2/1974	None
Unit 319	1 Fixed Roof Storage Tank	2/1974	None
Unit 320	1 Fixed Roof Storage Tank	2/1974	None
Unit 326	1 Fixed Roof Storage Tank	11/1984	None
Unit 327	1 Fixed Roof Storage Tank	1/1990	None
Unit 329	1 Fixed Roof Storage Tank	11/1992	None
Unit 331	1 Fixed Roof Storage Tank	6/1988	None
Unit 332	1 Fixed Roof Storage Tank	6/1988	None
Unit 333	1 Fixed Roof Storage Tank	6/1988	None
Unit 334	1 Fixed Roof Storage Tank	6/1988	None
Unit 335	1 Fixed Roof Storage Tank	6/1988	None
Unit 336	1 Fixed Roof Storage Tank	6/1988	None
Unit 337	1 Pressure Storage Tank	10/1990	Vapor Return
Unit 345	1 Fixed Roof Storage Tank	3/1994	None
Unit 347	1 Fixed Roof Storage Tank	3/1994	None
Unit 348	1 Fixed Roof Storage Tank	4/1980	None
Unit 349	1 Fixed Roof Storage Tank	4/1980	None
Unit 350	1 Fixed Roof Storage Tank	11/1976	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 354	1 Fixed Roof Storage Tank	11/1976	None
Unit 388	1 Fixed Roof Storage Tank	1/1991	None
Unit 389	1 Fixed Roof Storage Tank	1/1991	None
Unit 390	1 Fixed Roof Storage Tank	1993	3256-SCB-2*
Unit 391	1 Fixed Roof Storage Tank	1993	3256-SCB-3*
Unit 401	1 Fixed Roof Storage Tank	5/1982	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 402	1 Fixed Roof Storage Tank	5/1982	None
Unit 403	1 Fixed Roof Storage Tank	5/1982	None
Unit 404	1 Fixed Roof Storage Tank	5/1982	None
Unit 405	1 Fixed Roof Storage Tank	5/1982	None
Unit 406	1 Fixed Roof Storage Tank	5/1982	None
Unit 407	1 Fixed Roof Storage Tank	5/1982	None
Unit 408	1 Fixed Roof Storage Tank	5/1982	None
Unit 409	1 Fixed Roof Storage Tank	5/1982	None
Unit 410	1 Fixed Roof Storage Tank	5/1982	None
Unit 411	1 Fixed Roof Storage Tank	5/1982	None
Unit 412	1 Fixed Roof Storage Tank	5/1982	None
Unit 413	1 Fixed Roof Storage Tank	5/1982	None
Unit 414	1 Fixed Roof Storage Tank	5/1982	None
Unit 415	1 Fixed Roof Storage Tank	5/1982	None
Unit 416	1 Fixed Roof Storage Tank	5/1982	None
Unit 417	1 Fixed Roof Storage Tank	5/1982	None
Unit 418	1 Fixed Roof Storage Tank	5/1982	None
Unit 419	1 Fixed Roof Storage Tank	5/1982	None
Unit 420	1 Fixed Roof Storage Tank	5/1982	None
Unit 421	1 Fixed Roof Storage Tank	5/1982	None
Unit 422	1 Fixed Roof Storage Tank	5/1982	None
Unit 423	1 Fixed Roof Storage Tank	5/1982	None
Unit 424	1 Fixed Roof Storage Tank	5/1982	None
Unit 430	1 Fixed Roof Storage Tank	1/1994	None
Unit 431	1 Fixed Roof Storage Tank	1/1994	None
Unit 432	1 Fixed Roof Storage Tank	1/1994	None
Unit 433	1 Fixed Roof Storage Tank	1/1994	None
Unit 434	1 Fixed Roof Storage Tank	1/1994	None
Unit 435	1 Fixed Roof Storage Tank	1/1994	None
Unit 436	1 Fixed Roof Storage Tank	1/1994	None
Unit 437	1 Fixed Roof Storage Tank	1/1994	None
Unit 438	1 Fixed Roof Storage Tank	1/1994	None
Unit 439	1 Fixed Roof Storage Tank	1/1994	None
Unit 442	1 Fixed Roof Storage Tank	11/1989	None
Unit 443	1 Fixed Roof Storage Tank	11/1989	None
Unit 444	1 Fixed Roof Storage Tank	11/1989	None
Unit 449	1 Fixed Roof Storage Tank	1994-1995	None
Unit 450	1 Fixed Roof Storage Tank	1994-1995	None
Unit 451	1 Fixed Roof Storage Tank	1994-1995	None
Unit 452	1 Fixed Roof Storage Tank	7/1995	None
Unit 453	1 Fixed Roof Storage Tank	1995-1996	None
Unit 454	1 Fixed Roof Storage Tank	1995-1996	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 458	1 Fixed Roof Storage Tank	6/1996	None
Unit 463	1 Fixed Roof Storage Tank	6/1996	None
Unit 467	1 Fixed Roof Storage Tank	1/1997	None
Unit 478	1 Fixed Roof Storage Tank	6/1996	None
Unit 496	1 Fixed Roof Storage Tank	1999	None
Unit 497	1 Fixed Roof Storage Tank	1999	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 498	1 Fixed Roof Storage Tank	1999-2000	None
Unit 515	1 Fixed Roof Storage Tank	9/1990	2545-SCB-5*
Boiler 1	114.6 mmBtu/hr Natural Gas-Fired Boiler	12/1965	None
Boiler 2	124.0 mmBtu/hr Natural Gas-Fired Boiler	03/1973	None
Boiler 3	42.6 mmBtu/hr Natural Gas-Fired Boiler	Prior to 1973	None
Boiler 4	71.0 mmBtu/hr Natural Gas-Fired Boiler	04/1959	None
Loading Operations	Various Units: 10 loading racks, 6 fixed roof storage tanks, loading directly from process vessels	-	None

* The control equipment is permitted for use, but is not required to meet air emission standards.

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	39.20
Sulfur Dioxide (SO ₂)	0.30
Particulate Matter (PM)	43.80
Nitrogen Oxides (NO _x)	140.00
HAP, not included in VOM or PM	1.00
TOTAL	224.30

This permit is a combined Title I/CAAPP permit that may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the Clean Air Act and regulations promulgated thereunder, including 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the permit by T1, T1R, or T1N. The source has requested that the Illinois EPA establish or revise such conditions in a Title I permit, consistent with the information provided in the CAAPP

application. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 164.

JS:jar