COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Honeywell International Inc.
P.O. Box 761
Hopewell, Virginia 23860
Permit No. PRO50232

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Honeywell International Inc. has applied for a Title V Operating Permit for its Hopewell, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date:
Stanley Faggert
(804) 527-5078

Air Permit Manager: _____ Date:
James E. Kyle, P.E.

Deputy Regional Director: _____ Date:
Kyle I. Winter, P.E.

FACILITY INFORMATION

Permittee/Facility
Honeywell International Inc. – Hopewell Plant
Intersection of Routes 10 and 156
Hopewell, Virginia 23860

Responsible Official
Mr. Fred Harry
Plant Manager

Contact Person
Mr. Phillip Lockard
Lead Air Engineer
804-541-5438

County-Plant Identification Number: 670-0026

Facility Description: SIC Code 2869 – The Honeywell International Inc. - Hopewell Plant is located on a 450 acre site between Route 10 and the James River at the east end of Hopewell. The site employs approximately 700 people.

The Hopewell facility includes nine major chemical process areas, a powerhouse, a pilot plant and a marine terminal for transfer of fuel and bulk materials. Caprolactam is the primary product which is sold to internal and external customers.

Co-products include ammonium sulfate, adipic acid, cyclohexanol, cyclohexanone and oxime chemicals. Major raw materials used at the site include phenol, natural gas for the production of ammonia and sulfur for the production of oleum.

The facility is a Title V major source of PM-10, PM-2.5, NOx, SO2, VOC and GHG. This source is located in an attainment area for all pollutants, and is an existing major source for new source review purposes. The facility is currently permitted under minor NSR permits issued on July 16, 1979, July 1, 2013 and January 31, 2014 and its initial Title V permit originally effective January 1, 2007 (last amended on August 12, 2008).

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSIONS INVENTORY:

A summary of Honeywell's most recent annual emissions is shown below.

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]	
CRITERIA POLLUTANTS	**2013 ACTUAL EMISSIONS**
Particulate Matter (PM-10)	**269**
Particulate Matter (PM-2.5)	**173**
Nitrogen Oxides (NOx)	**6913**
Sulfur Dioxide (SO2)	**217**
Carbon Monoxide (CO)	**248**
Volatile Organic Compounds (VOC)	**232**
Hazardous Air Pollutants (HAP)	**28**

The permitted capacity of the Honeywell facility is above the major source levels for all criteria pollutants and is subject to Title V permitting requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Area 6							
Area 6	N/A	Area 6 Cyclohexanone Production	47,371 Area 6 cyclohexanone units/hr; 480 Area 6 cyclohexanol units/her	N/A	N/A	N/A	July 1, 2013
A6-Hydro (APT-2,4, 6,81,82)	FU-1 or FLS-61/62	Area 6 Continuous Cyclohexanone Hydrogenation Reactor System	17,520 Area 6 feed units/hr	Process heater combustion or non-assisted flare	FU-1 or FLS-61/62	VOC	July 1, 2013

F-119, F-120	FLS-61/62	Area 6 Cryogenics Carbon Beds	17,520 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
CL-2	FLS-61/62	Cyclohexanone Distillation Column	2,190 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
CL-9	FLS-61/62	Cyclohexanol (APT-1 System) Distillation Column	365 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
CL-10	VE-27	Cyclohexanol (APT-1 System) Distillation Column	321 Area 6 feed units/hr	Condenser	VE-27	VOC	July 1, 2013
CL-17	FLS-61/62	Cyclohexanol Distillation Column	803 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
CL-18	FLS-61/62	Cyclohexanone Distillation Column	2,920 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
CL-25	C-190	Phenol Distillation Column	6,132 Area 6 feed units/hr	Condenser	C-190	VOC	July 1, 2013
CL-26	FLS-61/62	Cyclohexanone Distillation Column	9,198 Area 6 feed units/hr	Non-assisted flare Condenser	FLS-61/62	VOC	July 1, 2013
CL-36	C-434	Cyclohexanone Distillation Column	5,840 Area 6 feed units/hr	Condenser	C-434	VOC	July 1, 2013
CL-46	C-249	Phenol System Distillation Column	14,600 Area 6 feed units/hr	Condenser	C-249	VOC	July 1, 2013
CL-80	FLS-61/62	Cyclohexanol Distillation Column	3,066 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
CL-64	VE-108	Cyclohexanone Distillation Column	3,504 Area 6 feed units/hr	Condenser	VE-108	VOC	July 1, 2013
CL-65	CL-65RC	Cyclohexanone Distillation Column	6,570 Area 6 feed units/hr	Condenser	CL-65RC	VOC	July 1, 2013
CL-65N	FLS-61/62	Cyclohexanone Distillation Column	6,570 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
APT-66B APT-67B	C-225	Two Phenol Purification Vessels	18,396 Area 6 feed units/hr	Condenser	C-225	VOC	July 1, 2013
CT-48 CT-53 CT-55	FLS-61/62	Three Continuous Cyclohexanone Catalyst Centrifuges	11,096 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
APT-1	FLS-61/62	Cyclohexanol Batch Reactor	3,504 Area 6 feed units/batch	Non-assisted flare	FLS-61/62	VOC	July 1, 2013
VA-15	VE-76ZC	CL-26 Catalyst Concentrator	292 Area 6 feed units/hr	N/A	N/A	N/A	July 1, 2013

VA-17	VE-107ZC	CL-36 Catalyst Concentrator	146 Area 6 feed units/hr	N/A	N/A	N/A	July 1, 2013
VT-003	VT-003	Area 6 Storage Tank	4,638 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-004	VT-004	Area 6 Storage Tank	4,638 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-005	VT-005	Cyclohexanone/ Cyclohexanol Storage Tank	4,638 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	July 1, 2013
VT-007	C-437	CL-80 Feed Tank	10,230 Area 6 storage units	Condenser	C-437	VOC	July 1, 2013
VT-008	VT-008	Area 6 Storage Tank	10,230 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-010	VT-010	Area 6 Storage Tank	1,535 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	July 1, 2013
VT-029	VT-029	Area 6 Storage Tank	16,027 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	July 1, 2013
VT-462	VT-462	Crude Phenol Storage Tank	349,184 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-515	VT-515	Crude Phenol Storage Tank	349,184 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-197	VT-197	Area 6 Storage Tank	358 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-205	VT-205	Nadone Storage Tank	49,104 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-210	C-225	Phenol Distillation Residue Storage Tank	4,007 Area 6 storage units	Submerged Fill Pipe/Level Control and Condenser	C-225	VOC	July 1, 2013
VT-211	C-225	Area 6 Storage Tank	4,007 Area 6 storage units	Submerged Fill Pipe and Condenser	C-225	VOC	July 1, 2013
VT-212	C-225	Area 6 Storage Tank	6,684 Area 6 storage units	Condenser	C-225	N/A	July 1, 2013
APT-17	APT-17	Area 6 Storage Tank	1,535 Area 6 storage units	Level Control	N/A	VOC	July 1, 2013
APT-44	VT-21/250	Area 6 Storage Tank	327 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
APT-46	VT-21/250	Area 6 Storage Tank	57 Area 6 storage units	N/A	N/A	N/A	July 1, 2013

APT-83	VT-21/250	Area 6 Storage Tank	512 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
APT-106	VT-21/250	Area 6 Storage Tank	512 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-183	VT-183	Area 6 Storage Tank	1,637 Area 6 storage units	Condenser	C-548	VOC	July 1, 2013
VT-184	VT-184	CL-64 Feed Tank	1,637 Area 6 storage units	Level Control	N/A	VOC	July 1, 2013
HT-09	HT-09	Area 6 Storage Tank	205 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
HT-26	HT-26	Area 6 Storage Tank	6,360 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	July 1, 2013
HT-38	HT-38	Area 6 Storage Tank	119 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
HT-45	VT-21/250	Area 6 Storage Tank	597 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
HT-62	HT-62	Area 6 Storage Tank	1,705 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
HT-63	HT-63	Area 6 Storage Tank	409 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
HT-85	HT-85	Area 6 Storage Tank	2,728 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
HT-242	HT-242	Area 6 Storage Tank	3,274 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	July 1, 2013
SE-157	SE-157	Jet Condensate Phase Separator	2,046 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
SP-001	SP-001	Area 6 Storage Tank	94 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-108	VT-108	Area 6 Storage Tank	4,638 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-113	VT-113	Area 6 Storage Tank	341 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-119	VT-119	Area 6 Storage Tank	324 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-021	VT-021	Area 6 Storage Tank	648 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							

VT-250	VT-250	Area 6 Storage Tank	1,961 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-390	VT-390	Area 6 Storage Tank	16,027 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-456	VT-456	Area 6 Storage Tank	136.4 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-680	VT-680	Area 6 Storage Tank	17,630 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-681	VT-681	Area 6 Storage Tank	10,230 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-693	VT-693	Area 6 Storage Tank	4,007 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-697	VT-697	Area 6 Storage Tank	9,002 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-752	VT-752	Area 6 Storage Tank	41 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-836	VT-836	Area 6 Storage Tank	102 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-863	VT-863	Area 6 Storage Tank	376,464 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-N2	C-XX2	Cyclohexanone Storage Tank	682,000 Area 6 storage units	Condenser	C-XX2	VOC	July 1, 2013
VT-N3	C-XX3	Cyclohexanone Storage Tank	272,884 Area 6 storage units	Condenser	C-XX3	VOC	July 1, 2013
VT-N4	C-XX4	Phenol Storage Tank	682,000 Area 6 storage units	Condenser (or equivalent)	C-XX4	VOC	July 1, 2013
VT-176	VT-176	Crude Phenol Storage Tank	49,104 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-180	VT-180	Area 6 Storage Tank	23,188 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
VT-188	VT-188	Area 6 Storage Tank	49,104 Area 6 storage units	N/A	N/A	N/A	July 1, 2013
RC-Nadone	VT-205	Nadone Rail Car Loading Rack	2,940 Area 6 loading units/hr	Vapor Recovery System	VT-205	VOC	July 1, 2013
TT-Naxol	TT-Nax	Naxol Tanker Truck Loading Rack	368 Area 6 loading units/hr	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							

Drum Naxol	DR-Nax	Naxol Drum Loading Rack	211 Area 6 loading units/hr	N/A	N/A	N/A	July 1, 2013
Drum Nadone	DR-Nad	Nadone Drum Loading Rack	211 Area 6 loading units/hr	N/A	N/A	N/A	July 1, 2013
TT Catalyst	TT-Cat	Hydrogenation Catalyst Tanker Truck Loading Rack	613 Area 6 loading units/hr	N/A	N/A	N/A	July 1, 2013
RC-A6 Copr	RC-A6	Area 6 Co-product Rail Car Loading Rack	588 Area 6 loading units/hr	Vapor Balance System	N/A	VOC	July 1, 2013
A6 CT	A6 CT	Four Area 6 Modular Cooling Towers	3,120 Area 6 cooling units/min total	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							
Area 9							
Area 9	N/A	Area 9 Hydroxylamine Monoammonium Sulfate Production	46,498 Area 9 production units/hr	N/A	N/A	N/A	July 1, 2013
TW-2	TW-2	A-Train Ammonium Nitrite (Nitrite) Tower	3,623 Area 9 production units/hr[1] 4,297 Area 9 production units/hr[2]	N/A	N/A	N/A	July 1, 2013
TW-8	TW-8	B-Train Nitrite Tower	3,623 Area 9 production units/hr[1] 4,297 Area 9 production units/hr[2]	Venturi Scrubber	SE-179	TSP	July 1, 2013
TW-17	TW-17	C-Train Nitrite Tower	3,623 Area 9 production units/hr[1] 4,297 Area 9 production units/hr[2]	N/A	N/A	N/A	July 1, 2013

TW-22	TW-22	D-Train Nitrite Tower	4,297 Area 9 production units/hr[1] 4,655 Area 9 production units/hr[2]	NOx Oxidizer Tank Venturi Scrubber	VT-883 SE-65	NOx PM	July 1, 2013
TW-32	TW-32	E-Train Nitrite Tower	4,297 Area 9 production units/hr[1] 4,655 Area 9 production units/hr[2]	NOx Oxidizer Tank Venturi Scrubber	VT-847 SE-116	NOx PM	July 1, 2013
TW-62	TW-62	A-Train Hydroxylamine Diammonium Sulfonate (Disulfonate) Tower	17,107 Area 9 production units/hr[1] 18,252 Area 9 production units/hr[2]	Packed Bed Scrubber Mist Eliminator	SE-45 SE-88	SO2 PM	July 1, 2013
TW-9	TW-9	B-Train Disulfonate Tower	17,107 Area 9 production units/hr[1] 18,252 Area 9 production units/hr[2]	Packed Bed Scrubber Mist Eliminator	SE-87 SE-89	SO2 PM	July 1, 2013
TW-18	TW-18	C-Train Disulfonate Tower	17,107 Area 9 production units/hr[1] 18,252 Area 9 production units/hr[2]	Packed Bed Scrubber Mist Eliminator	SE-19 SE-90	SO2 PM	July 1, 2013
This row has been inserted for spacing purposes.							

TW-23	TW-23	D-Train Disulfonate Tower	18,252 Area 9 production units/hr[1] 19,392 Area 9 production units/hr[2]	Packed Bed Scrubber Mist Eliminator	SE-32 SE-91	NOx, SO2 PM	July 1, 2013
TW-33	TW-33	E-Train Disulfonate Tower	18,252 Area 9 production units/hr[1] 19,392 Area 9 production units/hr[2]	Packed Bed Scrubber Mist Eliminator	SE-54 SE-101	NOx, SO2 PM	July 1, 2013
Area 9 CT	Area 9 CT	Area 9 Modular Cooling Towers	5,200 Area 9 cooling units/min total	N/A	N/A	N/A	July 1, 2013
Area 9-New CT	Area 9-New CT	Area 9-New Modular Cooling Towers	2,080 Area 9 cooling units/min total	N/A	N/A	N/A	July 1, 2013
Quench CT	Quench CT	Area 9 Quench Modular Cooling Towers	208 Area 9 cooling units/min total	N/A	N/A	N/A	July 1, 2013
TW-37	TW-37	Area 9 Cooling Tower	6,240 Area 9 cooling units/min	N/A	N/A	N/A	July 1, 2013
[1]Capacity prior to selective catalytic reduction systems installation [2]Capacity after selective catalytic reduction systems installation							
Area 8/16							
Area 8/16	N/A	Area 8/16 Crude Caprolactam Production	48,415 Area 8 production units/hr	N/A	N/A	N/A	July 1, 2013
A8Rea	VT-664	Area 8 Cyclohexanone Oxime Rearrangement Reactor system (APT-8, APT-16, APT-32, SP-681, VT-96, VT-226, VT-404A, VT-664, VT-867)	48,415 Area 8 production units/hr	N/A	N/A	N/A	July 1, 2013

A8Tur	SE-325	A8 Turbogizer System (APT-128, VT-141, VT-243, VT-244, VT-817)	48,415 Area 8 production units/hr	Scrubber	N/A	VOC	July 1, 2013
A8Tur-Sep	SE-325	A8 Turbogizer Separation System (APT-14, APT-26, VT-59, VT-59New, HT-66)	48,415 Area 8 production units/hr	Scrubber	SE-325	VOC	July 1, 2013
APT-30	APT-30	Spare Oxime Hold Tank	25,260 Area 8 production units/hr	N/A	N/A	N/A	July 1, 2013
TW-20	TW-20	Cyclohexanone/sulfate Stripping Column	314,335 Area 8 production units/hr	N/A	N/A	N/A	July 1, 2013
LacSep	FU-16	Lactam/Sulfate/Emulsion Separation (APT-9, APT-10, HT-58, HT-74, HT-99, VT-246)	296,754 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
LacExt	FU-16	Caprolactam Extraction and Separation (CL-14, CL-45, SE-125)	218,095 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
CL-15	FU-16	Toluene/Sulfate Stripping Column	184,903 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
CL-81	FU-16	Toluene/Sulfate Stripping Column (formerly CL-15new)	184,903 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
CL-28, 29	FU-16	Toluizer Head Tanks	296,754 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
CL-29new	FU-16	Toluizer Head Tank	296,754 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
CL-62	FU-16	Toluene/Lactam Distillation Column	111,851 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
CL-62new	FU-16	Toluene/Lactam Distillation Column	111,851 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013

HT-52	SE-325	Cyclohexanone Storage Tank	1,194 Area 8 storage units	Scrubber	SE-325	VOC	July 1, 2013
HT-53	FU-16	Toluene/Water Separator	40,416 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
VT-227	FU-16	Toluene Recovery Flash Tank	10,609 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
VT-245	FU-16	Toluene Storage Tank	1,083 Area 8 storage units	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
VT-291	VT-291	Area 8/16 Storage Tank	8,225 Area 8 storage units	N/A	N/A	N/A	July 1, 2013
VT-343	VT-343	Area 8/16 Storage Tank	8,225 Area 8 storage units	N/A	N/A	N/A	July 1, 2013
VT-344	FU-16	CL-15 O/H Recovery Tank	36 Area 8 storage units	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
VT-359	VT-359	Area 8/16 Storage Tank	24,064 Area 8 storage units	N/A	N/A	N/A	July 1, 2013
VT-365	VT-365	Area 8/16 Storage Tank	24,064 Area 8 storage units	N/A	N/A	N/A	July 1, 2013
VT-402, 668	VT-402	Lamella Separator	85,707 Area 8 production units/hr	N/A	N/A	N/A	July 1, 2013
CCM	FN-174, 175	Cobalt Catalyst Manufacturing (located in and operated by Area 9)	632 Area 8 production units	Baghouse	FN-182	PM	July 6, 1979
VT-403	VT-403	Area 8/16 Storage Tank	36 Area 8 storage units	N/A	N/A	N/A	July 1, 2013
VT-857	VT-857	Area 8/16 Storage Tank	83 Area 8 storage units	N/A	N/A	N/A	July 1, 2013
C-361	FU-16	Toluene Vent Condenser	594 Area 8 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
SolLdg	FU-16	Area 8 Solvent Purge Loadout	192 Area 8 storage units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
Area 8 CT	Area 8 CT	Area 8 Modular Cooling Towers	2,740 Area 8 cooling units/min	N/A	N/A	N/A	July 1, 2013

VT-221	FU-16	Toluene Storage Tank	752 Area 8 storage units	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
This row has been inserted for spacing purposes.							
Area 7							
Area 7	N/A	Area 7 Purified Caprolactam Production	3,035 Area 7 production units/hr	N/A	N/A	N/A	July 1, 2013
A7Pur	C-323	Caprolactam Distillation and Crystallization	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
A7Fil	FS-1 FS-2	Caprolactam Belt Filtration and Crystallization/Storage	3,035 Area 7 production units/hr	Fabric filter (x2)	FS-1; FS-2	Particulate	July 1, 2013
EV-8 EV-12	C-323	Two Caprolactam Strippers	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
EV-14 EV-15 EV-16	C-323	Three Caprolactam Dryers	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
EV-17 EV-18	C-323	Two Caprolactam Strippers	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
CL-70	C-323	Caprolactam Product Distillation Column	1,054 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
CL-39	Area 9	Purge Tower	136 Area 7 production units/hr	Sulfur burner	Variable	VOC/H2S	July 1, 2013
CO-151	SE-149	Depoly Conveyor	850 Area 7 production units/hr	Scrubber	SE-149	PM/H2S/VOC	July 1, 2013
HE-221	HE-221	Natural Gas-Fired Steam Superheater	4.24 MMBtu/hr	N/A	N/A	N/A	July 1, 2013
HE-305	HE-305	Natural Gas-Fired Steam Superheater	4.24 MMBtu/hr	N/A	N/A	N/A	July 1, 2013
HT-43	HT-43	Area 7 Storage Tank	450 Area 7 storage units	N/A	N/A	N/A	July 1, 2013

VT-36	C-323	Bottoms Concentrator	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
VT-40	VT-40	Area 7 Storage Tank	450 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-121	SE-149	Depoly Feed Storage	880 Area 7 storage units	Scrubber	SE-149	VOC/H2S	July 1, 2013
VT-127	SE-149	Depoly Feed Storage	300 Area 7 storage units	Scrubber	SE-149	VOC/H2S	July 1, 2013
VT-220	C-323	Water Stripper	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
VT-297	VT-297	Area 7 Storage Tank	37,500 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-327	C-323	Caprolactam Dryer	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
VT-360	VT-360	Area 7 Storage Tank	37,500 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-903	VT-903	Area 7 Storage Tank	3,250 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-XX1	VT-XX1	Area 7 Storage Tank	50 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-XX2	VT-XX2	Area 7 Storage Tank	2,500 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-394	C-323	Washwater/wastewater concentrator	153 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
VT-395	C-323	Caprolactam Stripper	1,600 Area 7 storage units	Condenser	C-323	VOC	July 1, 2013
VT-799	C-323	Caprolactam Stripper	1,600 Area 7 storage units	Condenser	C-323	VOC	July 1, 2013
APT-22, 23, 24, 25, 39, 40, 41, 42	C-323	A/C/D-Train Crystallization/Purification Systems	3,035 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
This row has been inserted for spacing purposes.							

CL-21	C-323	Caprolactam Purification Column	3,485 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
CL-12	C-323	Washwater/wastewater concentrator	340 Area 7 production units/hr	Condenser	C-323	VOC	July 1, 2013
B7Fug	B7Fug	Building 7 Fugitive Emissions from Area 7 Filtration	3,035 Area 7 production units/hr	N/A	N/A	N/A	July 1, 2013
VP-6-14 VP-17-20	VP-6-14 VP-17-20	Thirteen Belt Filter Vacuum Pumps	3,035 Area 7 production units/hr	N/A	N/A	N/A	July 1, 2013
VA-19	CL-39	Depoly Vaporizer	136 Area 7 production units/hr	N/A	N/A	N/A	July 1, 2013
Area 7 Storage	Misc. Storage Tanks	Fifty-One (51) Miscellaneous Area 7 Organic Liquid Storage Tanks including: HT-03; HT-04; HT-20; HT-28; HT-47; HT-48; HT-61; PFR-01; SP-01; SP-505; SP-734; SP-930; VT-28, VT-37, VT-39; VT-46, VT-47; VT-55; VT-58; VT-62; VT-64; VT-114; VT-129; VT-137; VT-139; VT-140; VT-142; VT-143; VT-152; VT-157; VT-158; VT-159; VT-160; VT-161; VT-162; VT-165; VT-192; VT-193; VT-196; VT-222; VT-224; VT-236; VT-325; VT-332; VT-341; VT-460; VT-490; VT-491; VT-813; VT-838; VT-854; VT-967; VT-968; VT-969	13,000 Area 7 storage units max. capacity	N/A	N/A	N/A	July 1, 2013
A7Ldg	A7Ldg	Area 7 Caprolactam Loading Rack	43 Area 7 loading units/hr	N/A	N/A	N/A	July 1, 2013

A7W/W	A7W/W	Area 7 Washwater/Wastewater Loading Rack	5,406 Area 7 loading units/hr	N/A	N/A	N/A	July 1, 2013
Remelt	SC-61	Caprolactam Remelt facility	442 Area 7 production units/hr	Scrubber	SC-61	PM/VOC	July 1, 2013
Area 7 CRU	Area 7 CRU	Area 7 Caprolactam Recovery Unit	272 Area 7 production units/hr	N/A	N/A	N/A	July 1, 2013
EV-46	FU-16	Area 7 CRU Thin Film Evaporator	272 Area 7 production units/hr	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
VT-966	FU-16	Area 7 CRU Residue Recovery Tank (formerly VT-XXX1)	96 Area 7 storage units	Area 8/16 Thermal Oxidizer	FU-16	VOC	July 1, 2013
FL-6	SE-149	Area 7 CRU Residue Flaker	42.5 Area 7 production units/hr	Scrubber	SE-149	PM/VOC	July 1, 2013
VT-XXX2	VT-XXX2	Caprolactam Recovery Tank	26.5 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-XXX4	VT-XXX4	Caprolactam Recovery Tank	15 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
VT-XXX3	VT-XXX3	Dilute Caprolactam Tank	26.5 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
BT-10	BT-10	Natural Gas-Fired Thermal Oil Heater	4.3 MMBtu/hr	N/A	N/A	N/A	July 1, 2013
HT-XXX1 HT-XXX2	HT-XXX1 HT-XXX2	Two Thermal Oil Storage Tanks	35 Area 7 storage units 10 Area 7 storage units	N/A	N/A	N/A	July 1, 2013
FL-1	SC-61	Area 8 Flaker #1	281 Area 7 production units/hr	Scrubber	SC-61	PM/VOC	July 1, 2013
FL-5	SC-68	Area 8 Flaker #2	281 Area 7 production units/hr	Scrubber	SC-68	PM/VOC	July 1, 2013
This row has been inserted for spacing purposes.							

FL-7	APCD-DS	Area 8 Flaker #3	306 Area 7 production units/hr	Scrubber	APCD-DS	PM/VOC	July 1, 2013
Area 7 CT	Area 7 CT	Area 7 Modular Cooling Towers	1,151 Area 7 cooling units/min total	N/A	N/A	N/A	July 1, 2013
TW-71	TW-71	Area 7 Cooling Tower	7,398 Area 7 cooling units/min	N/A	N/A	N/A	July 1, 2013
TW-85	TW-85	Area 7 Cooling Tower	1,589 Area 7 cooling units/min	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							
Area 11							
Area 11	N/A	Area 11 Ammonium Sulfate Production	10,710 Area 11 production units/hr	N/A	N/A	N/A	July 1, 2013
RD-3	DC-7	Ammonium Sulfate Dryer	2,800 Area 11 production units per hour	Scrubber	DC-7	PM/VOC	July 1, 2013
RD-4	DC-11	Ammonium Sulfate Dryer	3,800 Area 11 production units per hour	Scrubber	DC-11	PM/VOC	July 1, 2013
RD-6	DC-12	Ammonium Sulfate Dryer	2,800 Area 11 production units per hour	Scrubber	DC-12	PM/VOC	July 1, 2013
RD-7	DC-29	Ammonium Sulfate Dryer	2,800 Area 11 production units per hour	Scrubber	DC-29	PM/VOC	July 1, 2013
EV-9 EV-28 EV-29	EV-9 EV-28 EV-29	Three First Effect Ammonium Sulfate Crystallizers	4,200 Area 11 production units/hr total	N/A	N/A	N/A	July 1, 2013
EV-30 EV-35	EV-30 EV-35	Two Second Effect Ammonium Sulfate Crystallizers	3,990 Area 11 production units/hr total	N/A	N/A	N/A	July 1, 2013
EV-19 EV-26 EV-27	C-55 C-270 C-150	Three Third Effect Ammonium Sulfate Crystallizers	3,780 Area 11 production units/hr total	Condenser Condenser Condenser	C-55 C-270 C-150	VOC VOC VOC	July 1, 2013
This row has been inserted for spacing purposes.							

Area 11 CT	Area 11 CT	Area 11 Modular Cooling Towers	20 Area 11 cooling units/min	N/A	N/A	N/A	July 1, 2013
A11CTF	DC-25	Ammonium Sulfate Centrifuges	10,710 Area 11 production units per hour	Scrubber	DC-25	PM/VOC	July 1, 2013
VT-873	VT-873	Ammonium Sulfate Coating	441 Area 11 production units (volume)/hr	N/A	N/A	N/A	July 1, 2013
VT-796	VT-796	Ammonium Sulfate Coating	1,239 Area 11 production units (volume)/hr	N/A	N/A	N/A	July 1, 2013
DC-21	DC-21	Building 12 Ammonium Sulfate Screening and Storage Operation – Dust Collector Point Source	80.3 Area 11 storage units per hour	Scrubber	DC-21	PM/VOC	July 1, 2013
DC-31	DC-31	Building 12 Ammonium Sulfate Screening and Storage Operation – Fabric Filter Point Source	80.3 Area 11 storage units per hour	Fabric Filter	DC-31	PM/PM-10	July 1, 2013
N/A	Fugitive	Building 12 Ammonium Sulfate Screening and Storage Operation – Fugitive Emissions	80.3 Area 11 storage units/hr	N/A	N/A	N/A	July 1, 2013
SC-65, 66, 67	DC-21	Three (3) Triple Deck Screens	6,300 Area 11 production units per hour each	Scrubber	DC-21	PM/PM-10	July 1, 2013
CO-225	DC-21	Ammonium Sulfate Mid-Grade Conveyor	6,300 Area 11 production units per hour	Scrubber	DC-21	PM/PM-10	July 1, 2013
BN-11	DC-31	Ammonium Sulfate Bulk Storage Bin/Loading Station	252 Area 11 storage units per hour	Fabric Filter	DC-31	PM/PM-10	July 1, 2013
CO-226	DC-31	Ammonium Sulfate Bulk Storage Bin Conveyor	47.3 Area 11 storage units per hour	Fabric Filter	DC-31	PM/PM-10	July 1, 2013
This row has been inserted for spacing purposes.							

EL-25	DC-31	Ammonium Sulfate Bulk Storage Bin Elevator	47.3 Area 11 storage units per hour	Fabric Filter	DC-31	PM/PM-10	July 1, 2013
N/A	Fugitive	Ammonium Sulfate Handling and Loading Operation (Railcar/Ship/Barge/Truck)	252 Area 11 storage units per hour	Dustrol anti-caking agent and Enclosed Drop Loading Chute	N/A	PM/PM-10	July 1, 2013
This row has been inserted for spacing purposes.							
Sulfuric Acid Plant (SAP)							
SAP	SK-1	Sulfuric Acid Plant	10,296 sulfuric acid production units/hr	Sulfite Scrubber Mist Eliminator	TW-38 SE-105	SO2 PM	July 1, 2013
VT-436	VT-436	Sulfur Storage Tank	3 SAP tank units	N/A	N/A	N/A	July 1, 2013
VT-437	VT-437	Oleum/Acid Storage Tank	24 SAP tank units	N/A	N/A	N/A	July 1, 2013
VT-439	CL-71	Acid Storage Tank	1.5 SAP tank units	Scrubber	CL-71	SO2	July 1, 2013
VT-441	VT-441	Sulfur Storage Tank	60 SAP tank units	N/A	N/A	N/A	July 1, 2013
VT-442	VT-442	Sulfur Storage Tank	60 SAP tank units	N/A	N/A	N/A	July 1, 2013
VT-443	VT-443	Sulfur Storage Tank	3 SAP tank units	N/A	N/A	N/A	July 1, 2013
VT-746	VT-746	Oleum Storage Tank	24 SAP tank units	N/A	N/A	N/A	July 1, 2013
VT-747	VT-747	Oleum Storage Tank	24 SAP tank units	N/A	N/A	N/A	July 1, 2013
N/A	N/A	Oleum Truck/Rail Loading Operation	46.8 SAP truck loading units/hr	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							
Kellogg/Girdler Ammonia/Synthetic Gas (Syngas) Plants							
FU-1	FU-1	Kellogg Primary Reformer and Auxiliary Boiler	9.1 syngas heat input units/hr	Low Pressure Purge	GC-11	NOx	July 1, 2013
FU-5	FU-5	Ammonia Converter Start-up Heater	0.3 syngas heat input units/hr	N/A	N/A	N/A	July 1, 2013
FU-6	FU-6	Girdler Primary Reformer	0.6 syngas heat input units/hr	N/A	N/A	N/A	July 1, 2013
VT-418	VT-418	CO2 Strippers	139,339 CO2 stripper units/hr	N/A	N/A	N/A	July 1, 2013
CD-1	CD-1	Kellogg Desulfurization Drum	746 Kellogg desulfurization units/hr	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							

CD-3 CD-4	CD-4	Girdler Desulfurization Drums	10,514 Girdler desulfurization units/hr	N/A	N/A	N/A	July 1, 2013
CLT-1	CLT-1	Kellogg Primary Reformer Cooling Tower	9,306 syngas cooling units/min	N/A	N/A	N/A	July 1, 2013
Kel SCT	Kel SCT	Kellogg Supplemental Cooling Tower	2,376 syngas cooling units/min	N/A	N/A	N/A	July 1, 2013
VT-407 VT-426 VT-427	VT-407 VT-426 VT-427	Kellogg Storage Vessels	5,103 syngas storage units	N/A	N/A	N/A	July 1, 2013
VT-882 HT-214	VT-882 HT-214	Two (2) Kellogg Condensate Collection Vents	5,103 syngas storage units	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							
Powerhouse Combustion Equipment							
FU-17	S-102	Powerhouse Boiler (formerly referred to as B-New in 7/1/2013 NSR permit); natural gas, landfill gas, distillate oil and Area 6 Co-Product fired	275.2 MMBtu/hr	Fabric Filter	DC-XX	PM	July 1, 2013
CT-New	S-102	Combustion Turbine #CT-New; natural gas, landfill gas and Area 6 Co-Product fired	275.2 MMBtu/hr	Fabric Filter	DC-XX	PM	July 1, 2013
VT-444	VT-44	Area 6 Co-Product Storage Tank	2,947,943 gallons	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							
SULF-N26 Pilot Plant							
Pilot Plant	N/A	SULF-N26 Pilot Plant	0.6 Fiorelli units/hr	N/A	N/A	N/A	July 1, 2013
AS TU	Fugitive	Ammonium Sulfate Rail Car Unloading	0.4 Fiorelli units/hr	N/A	N/A	N/A	July 1, 2013
U-10	Fugitive	Ammonium Sulfate Receiving Hopper	0.4 Fiorelli units/hr	N/A	N/A	N/A	July 1, 2013
M-10	APCD-DC1	Ammonium Sulfate Grinding and Screening Operation	0.4 Fiorelli units/hr	Fabric Filter	APCD-DC1	PM	July 1, 2013
U-13	APCD-DM	Ammonium Sulfate Slurry Prill Tower	0.6 Fiorelli units/hr	Scrubber	APCD-DM	PM	July 1, 2013

U-13	APCD-DC2	Ammonium Sulfate Slurry Dryer/Cooler	0.6 Fiorelli units/hr	Fabric Filter	APCD-DC2	PM	July 1, 2013
U-13	E-15	FASN (Fusion Ammonium Sulfate Nitrate) Mix Tank	0.6 Fiorelli units/hr	Condenser	E-15	PM	July 1, 2013
SP	Fugitive	SULF-N26 Storage	0.6 Fiorelli units/hr	N/A	N/A	N/A	July 1, 2013
26 TL	Fugitive	SULF-N26 Truck Loading	0.6 Fiorelli units/hr	N/A	N/A	N/A	July 1, 2013
This row has been inserted for spacing purposes.							
Area 14							
VT-853	VT-853	MEKO primary reactor	8,400 Area 14 production units/hr	N/A	N/A	N/A	January 31, 2014
APT-136	VT-853	MEKO secondary reactor	8,400 Area 14 production units/hr	N/A	N/A	N/A	January 31, 2014
VT-215/217	TW-74	Two (2) MEK Storage Tanks	7,262.5 Area 14 storage units each	Koch Packed Tower Absorber	TW-74	VOC	January 31, 2014
CL-16	C-111	Aq. Ammonium Sulfate Stripping Column	8,064 Area 14 production units/hr	N/A	N/A	N/A	January 31, 2014
HT-55	HT-55	Crude MEKO/aq. Ammonium Sulfate Phase Separator	588 Area 14 production units/hr	N/A	N/A	N/A	January 31, 2014
SE-170	SE-170	Crude MEKO/Water Phase Separator	42 Area 14 production units/hr	N/A	N/A	N/A	January 31, 2014
Misc A14 Storage Tanks	Misc	Eight (8) Miscellaneous A14 Storage Tanks	16,021 Area 14 storage units total	N/A	N/A	N/A	January 31, 2014
This row has been inserted for spacing purposes.							
Honeywell Specialty Products Plant							
MEKO-1		Honeywell Specialty Products MEKO Manufacturing Process; including	751.7 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014

	TW-75	MEKO Lites Distillation Column	751.7 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	TW-76	MEKO Product Distillation Column	649.6 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-851; 852	Two (2) MEKO Product Run Tanks	7.5 Honeywell Chemicals storage units each	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HT-258	MEKO Product Tower Reflux Tank	0.6 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HT-259	MEKO Scum Tank	9 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-728	Crude MEKO Storage Tank	30 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HT-200	MEKO Separator Overflow Pot	3 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HT-230	Aq. MEKO Storage Tank	6 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-779	Catch Tank	10.2 Honeywell Chemicals storage unit	N/A	N/A	N/A	January 31, 2014
	VT-787	MEKO Product Storage Tank	180 Honeywell Chemicals storage units	N/A	N/A	N/A	January 31, 2014
	VT-788	Aq. MEKO Storage Tank	18 Honeywell Chemicals storage units	N/A	N/A	N/A	January 31, 2014
This row has been inserted for spacing purposes.							

	VT-856	MEKO Vacuum Seal Pot	0.15 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
OX-1		Honeywell Chemicals Multi-Purpose Oximes Production Unit; including	348 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-614	First Stage Oximator	116 Honeywell Chemicals production units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	APT-117	Second Stage Oximator	127.6 Honeywell Chemicals production units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	CL-54	Aq. Ammonium Sulfate Stripping Column	348 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	CL-55	Lites Distillation Column	229 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	CL-56	Product Distillation Column	229 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	SE-301 SE-302	Two (2) Phase Separators	69.6 Honeywell Chemicals production units/hr each	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	C-516 C-517	Two (2) Vacuum Systems with After-Condensers	69.6 Honeywell Chemicals production units/hr each	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HT-187	Pressurized Acetaldehyde (AA)/Methyl Isobutyl Ketone (MIBK)/Methyl Propyl Ketone (MPK) Storage Tank	102 Honeywell Chemicals storage units	N/A	N/A	N/A	January 31, 2014

	VT-953	Seal Pot	69.6 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	MX-53	Static Mixer	69.6 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HA-103	Reflux Drum	0.05 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HA-104	Reflux Drum	0.2 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HA-112	Aq. Ammonium Sulfate Reflux Drum	0.04 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	HA-113	Aq. Ammonium Sulfate Product Drum	0.04 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-603	Aq. Ammonium Sulfate Storage Tank	38.1 Honeywell Chemicals storage units	N/A	N/A	N/A	January 31, 2014
	VT-615	CL-54 O/H Receiver Tank	1.5 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-616	Recycle Tank	38.1 Honeywell Chemicals storage units	N/A	N/A	N/A	January 31, 2014
	VT-617 VT-618	Two (2) Product Hold Tanks	7.5 Honeywell Chemicals storage units each	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	VT-621	Aq. Sulfate Feed Tank/Recycle Tank	9 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
This row has been inserted for spacing purposes.							

	VT-757	AAO Product Tank	375 Honeywell Chemicals storage units	N/A	N/A	N/A	January 31, 2014
	TT/RR	AAO/MIBKO/2-PO Tanker Truck/Rail Car Loading Operation	10.8 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	N/A	AAO/MEKO Drum Loading Operation	2.7 Honeywell Chemicals storage units/hr	Thermal Oxidizer	FU-14	VOC	January 31, 2014
	N/A	Acetaldehyde (AA) /Methyl Isobutyl Ketone (MIBK) /methyl Propyl Ketone (MPK) Unloading and Storage Facility	163.5 Honeywell Chemicals/hr storage units/hr	N/A	N/A	N/A	January 31, 2014
	TW-77	Cooling Tower	10,400 gallons/min	N/A	N/A	N/A	January 31, 2014
This row has been inserted for spacing purposes.							
Miscellaneous Emission Units							
FP-1	FP-1	Building 35 diesel fire pump #1	288 HP	N/A	N/A	N/A	N/A
FP-2	FP-2	Building 35 diesel fire pump #2	340 HP	N/A	N/A	N/A	N/A
FP-3	FP-3	Area 6 diesel fire pump	170 HP	N/A	N/A	N/A	N/A
FP-4	FP-4	Kellogg diesel fire pump	194 HP	N/A	N/A	N/A	N/A
GEN-2	GEN-2	Kellogg UPS diesel engine (emergency)	160 HP	N/A	N/A	N/A	N/A
GEN-3	GEN-3	South side diesel emergency generator	277 HP	N/A	N/A	N/A	N/A
GEN-4	GEN-4	Diesel generator for emergency wet well pumps	600 HP	N/A	N/A	N/A	N/A
PW-8	PW-8	(2) Safe-T-Kleen parts washers	<5 tons/yr VOC	N/A	N/A	N/A	N/A
PW-9	PW-9	(3) Safe-T-Kleen parts washers	<5 tons/yr VOC	N/A	N/A	N/A	N/A
PW-17	PW-17	(2) Safe-T-Kleen parts washers	<5 tons/yr VOC	N/A	N/A	N/A	N/A
This row has been inserted for spacing purposes.							

PW-26	PW-26	(4) Safe-T-Kleen parts washers	<5 tons/yr VOC	N/A	N/A	N/A	N/A
PW-77	PW-77	(4) Safe-T-Kleen parts washers	<5 tons/yr VOC	N/A	N/A	N/A	N/A

EMISSION UNIT APPLICABLE REQUIREMENTS – Area 6

The source has emission unit specific applicable requirements for Area 6 (cyclohexanone production). The sources of applicable requirements for Area 6 are as follows: the 7/1/2013 NSR (new source review) permit; the 3/26/1997 RACT (Reasonably Available Control Technology) Consent Agreement; the Chapter 40 Existing Source Standard for Storage Tanks (Rule 4-25); NSPS (New Source Performance Standards) Subparts NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) and RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes); 40 CFR 63 Subparts A, F, G and H (National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater; (HON MACT)) and 40 CFR 63 Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (MON MACT)); and the 40 CFR 64 Compliance Assurance Monitoring (CAM) requirements.

Limitations

7/1/2013 NSR permit
Conditions #25-38 of the NSR permit contain criteria pollutant control equipment requirements for Area 6 and have been included as Conditions #1-14 of the proposed TV permit.

Conditions #39-52 of the NSR permit contain operating limitations for Area 6 and have been included as Conditions #18-31 of the proposed TV permit.

Conditions #55-70 of the NSR permit contain hourly and annual criteria pollutant emission limits Area 6 and have been included as Conditions #32-47 of the proposed TV permit.

3/26/1997 RACT Agreement
Conditions #E.4 and #E.7 of the RACT Agreement contain VOC control requirements for Area 6 and have been included as Conditions #3 (both the RACT and the NSR permit require the operation of the flare) and #15 of the proposed TV permit.

Rule 4-25
Rule 4-25 specifies VOC control requirements for certain Area 6 storage tanks, and these requirements have been included as Conditions #16-17 (submerged fill pipe or level control) of the proposed TV permit.

NSPS NNN and RRR
The NSPS NNN and RRR VOC control requirements for Area 6 (flare, TRE, etc.) were incorporated into the NSR permit (as Condition #54) and have also been included in the proposed TV permit as Condition #48.

HON MACT
The process vent (98% control or flare or TRE) and LDAR requirements of the HON for Area 6 have been included in the proposed TV permit as Conditions #54-63 of the proposed TV permit.

MON MACT
Due to overlap with the HON, there are no substantive MON requirements for Area 6. A general MON reference has been included as Condition #64 in the proposed TV permit as a contingency.

Monitoring/Testing/Recordkeeping/Reporting

General Periodic Monitoring Notes:
The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point (at a source subject to Title V of the Act) that is subject to an applicable requirement.

EPA has also stated that MACT (40 CFR 63) and NSPS (40 CFR 60) standards promulgated in the 1990s by default can be considered to include monitoring, recordkeeping, and reporting provisions sufficient to qualify as periodic monitoring without additional requirements. Thus no additional periodic monitoring discussion is included for 40 CFR 63 Subparts A, F, G and H (Area 6) and 40 CFR 63 Subparts A and FFFF (Areas 6, 7, 8/16, 14, and the Honeywell Specialty Products plant). Although not necessarily promulgated prior to 1990, New Source Performance Standards Subparts NNN and RRR (Areas 6, 8/16, 7), PP (Area 11), and H (SAP plant) were all examined for monitoring adequacy. Each of these Part 60 regulations were determined to have sufficient monitoring, recordkeeping and reporting requirements to provide a reasonable assurance of compliance with the applicable emission standards.

In addition, the other main sources of applicable requirements for the facility (the 7/1/2013 NSR permit, the 1/31/2014 NSR permit, the 1997 RACT Agreement) have all been created since the 1990s. Review of these documents revealed that, in most cases, they included monitoring, recordkeeping, and reporting provisions sufficient to qualify as periodic monitoring without additional requirements. For example, the 2013 and 2014 NSR permits include extensive material throughput limitations and associated recordkeeping provisions.

Exceptions to this were the opacity standards from the NSR permits. Also, the new/modified source opacity standard of 9 VAC 5-50-80 does not contain any specific or enforceable monitoring requirements, so periodic monitoring was applied to these standards in the Title V permit. This periodic monitoring was determined to be an opacity observation schedule along with associated recordkeeping and reporting provisions.

7/1/2013 NSR permit
The monitoring, testing, notification and recordkeeping requirements in Conditions #71-85 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #49-53, #61-62, #65, #67 and #70-72 of the proposed TV permit.

3/26/1997 RACT Agreement
In conjunction with the monitoring already required by the NSR permit (discussed above), Conditions #E.18-19 and #E.22 of the RACT Agreement contain VOC control measure monitoring requirements (condenser temperature and flow; LDAR records) for Area 6 and have been determined to meet Part 70 requirements as is. These requirements have been included as Conditions #68, #70, #71.f.v and #71.h of the proposed TV permit.

Rule 4-25
Conditions #66 and #71.i (submerged fill pipe certifications and level control inspections/recordkeeping) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for Rule-425.

NSPS NNN/RRR
As discussed above, the NSPS monitoring requirements have been determined to meet Part 70 requirements and have been included in the proposed TV permit as Conditions #49-53 and #71.e.

HON MACT
By definition, Part 63 MACT standards are presumed to include sufficient monitoring, recordkeeping and reporting (MRR) requirements to satisfy both periodic monitoring and CAM requirements. These HON MRR requirements have been included as Conditions #68-73. It should be noted that due that certain MRR requirements (flare, LDAR, etc.) play a role in demonstrating compliance with multiple source of limitations.

CAM
For Area 6, CAM is applicable for one pollutant, VOC, for both the Kellogg process heater and the Area 6 flares (these are both active control devices that are subject to emission limitations with pre-control emissions greater than 100 tons/yr of VOC). Accordingly, Honeywell submitted a CAM plan for the both the Kellogg process heater and the Area 6 flares. In summary, Honeywell proposes to monitor the temperature of the process heater and the flow, visible emissions and pilot flame status of the flares. DEQ has reviewed, and with the issuance of the TV

permit with the CAM plans included as Attachment A-1, and hereby approve the proposed CAM plans. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Area 9

The source has emission unit specific applicable requirements for Area 9 (hydroxylamine sulfate production). The sources of applicable requirements for Area 9 are as follows: the 7/1/2013 NSR permit.

Limitations

7/1/2013 NSR permit
Conditions #86-104 of the NSR permit contain criteria pollutant control equipment requirements for Area 9 and have been included as Conditions #74-92 of the proposed TV permit.

Conditions #105-107 of the NSR permit contain operating limitations for Area 9 and have been included as Conditions #94-96 of the proposed TV permit.

Conditions #108-114 of the NSR permit contain hourly and annual criteria pollutant emission limits Area 9 and have been included as Conditions #97-103 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
The monitoring, testing, notification and recordkeeping requirements in Conditions #22 and #115-129 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #104-118 of the proposed TV permit.

CAM
For Area 9, CAM is applicable to the PM-10 emissions from the five disulfonate towers; TW-62, TW-9, TW-18, TW-23, and TW-33 (these five emission units have pre-control PM-10 PTE >100 tons/yr, are subject to PM-10 emission limits and employ active control devices (mist eliminators) to comply with these limitations). Accordingly, Honeywell submitted a CAM plan for each emission unit. In summary, Honeywell proposes to continuously monitor the pressure drop of each mist eliminator. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-2.I, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

For Area 9, CAM is also applicable to the NOx emissions from the TW-22, TW-32 TW-23 and TW-33 (these four emission units have pre-control NOx PTE >100 tons/yr, are subject to NOx emission limits and employ active control devices (time tanks for TW-22 and TW-32; packed bed scrubbers for TW-23 and TW-33) to comply with these limitations). Accordingly, Honeywell submitted a CAM plan for each emission unit. In summary, Honeywell proposes to use a continuous emission monitoring system (CEMS) for each emission unit. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-2.II, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Area 8/16

The source has emission unit specific applicable requirements for Area 8/16 (crude caprolactam production). The sources of applicable requirements for Area 8/16 are as follows: the 7/1/2013 NSR permit; the 7/6/1979 NSR permit; the 3/26/1997 RACT Consent Agreement; Rule 4-25; NSPS Subparts NNN/RRR; the MON MACT; the new/modified source opacity standard of 9 VAC 5-50-80 and the 40 CFR 64 Compliance Assurance Monitoring (CAM) requirements.

Limitations

7/1/2013 NSR permit
Conditions #130-131 of the NSR permit contain criteria pollutant control equipment requirements for Area 8/16 and have been included as Conditions #119 and #122 of the proposed TV permit.

Conditions #132-138 of the NSR permit contain operating limitations for Area 8/16 and have been included as Conditions #123-129 of the proposed TV permit.

Conditions #140-144 of the NSR permit contain hourly and annual criteria pollutant emission limits Area 8/16 and have been included as Conditions #131-135 of the proposed TV permit.

7/6/1979 NSR permit
The 7/6/1979 NSR permit conditions 15-16 are included in the TV permit as Conditions #130 and #136. These conditions limit the operation (operating limit and emission limit) of the cobalt catalyst process. The other conditions of the 7/6/1979 NSR permit are obsolete, environmentally insignificant, or inapplicable for the Title V permitting program.

3/26/1997 RACT Agreement
Conditions #E.4 and #E.7 of the RACT Agreement contain VOC control requirements for Area 8/16 and have been included as Conditions #119 (both the RACT and the NSR permit require the operation of the Area 8/16 thermal oxidizer) and #121 of the proposed TV permit.

Rule 4-25
Rule 4-25 specifies VOC control requirements for certain Area 8/16 storage tanks, and these requirements have been included as Condition #120 of the proposed TV permit.

NSPS NNN/RRR
The NSPS NNN and RRR VOC control requirements for Area 8/16 (98% efficient thermal oxidizer, TRE, etc.) have been included in the proposed TV permit as Conditions #138-139.

Chapter 50 New Source Opacity Standard
The Chapter 50 opacity standard (20%) is applicable to the Area 8/16 thermal oxidizer and has been included as Condition #137 of the proposed TV permit.

MON MACT
A general MON reference for Area 8/16 has been included as Condition #140 in the proposed TV permit as a contingency.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
The monitoring, testing, notification and recordkeeping requirements in Conditions #146-157 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #142-152 of the proposed TV permit.

7/6/1979 NSR permit
Since the MRR requirements included in the 7/6/1979 NSR permit (none) were insufficient for Part 70 purposes, throughput and emission recordkeeping requirements for the catalyst process have been included in Condition #150 of the proposed TV permit.

3/26/1997 RACT Agreement
The monitoring already required by the NSR permit (discussed above) contains VOC control measure monitoring requirements (thermal oxidizer temperature and flow; LDAR records) for Area 8/16 and have been determined to

meet Part 70 requirements as is for the RACT Agreement as well. These requirements have been included as Conditions #142-152 of the proposed TV permit.

Rule 4-25
Condition #150.h has been included in the proposed TV permit to satisfy Part 70 monitoring requirements for Rule 4-25.

NSPS NNN/RRR
As discussed above, the NSPS monitoring requirements have been determined to meet Part 70 requirements and have been in the proposed TV permit as Conditions #142-152. Since the NSPS requirements were previously incorporated in the 7/1/2013 NSR permit, the monitoring requirements are the same for both.

Chapter 50 New Source Opacity Standard
Conditions #141, #150 and #153 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for the opacity standard.

CAM
For Area 8/16, CAM is applicable for one pollutant, VOC, for the Area 8/16 thermal oxidizer (this is an active control device that is subject to a VOC emission limitation with pre-control emissions greater than 100 tons/yr of VOC). Accordingly, Honeywell submitted a CAM plan for the Area 8/16 thermal oxidizer. In summary, Honeywell proposes to monitor the temperature and perform visible emission evaluations of the thermal oxidizer. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-3, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Area 7

The source has emission unit specific applicable requirements for Area 7 (caprolactam purification). The sources of applicable requirements for Area 7 are as follows: the 7/1/2013 NSR permit; NSPS Subpart NNN; the MON MACT and the new/modified source opacity standard of 9 VAC 5-50-80.

Limitations

7/1/2013 NSR permit
Conditions #158-163 of the NSR permit contain criteria pollutant control equipment requirements for Area 7 and have been included as Conditions #154-159 of the proposed TV permit.

Conditions #164-172 of the NSR permit contain operating limitations for Area 7 and have been included as Conditions #162-170 of the proposed TV permit.

Conditions #174-183 of the NSR permit contain hourly and annual criteria pollutant emission limits and opacity standards for Area 7 and have been included as Conditions #160 and #171-179 of the proposed TV permit.

NSPS NNN
The NSPS NNN VOC control requirements for Area 8/16 (maintain TRE > 1.0, etc.) have been included in the proposed TV permit as Conditions #160-161.

MON MACT
The process vent (98% control via the Area 8/16 thermal oxidizer) requirements of the MON for Area 7 have been included in the proposed TV permit as Conditions #181-182 of the proposed TV permit.

Chapter 50 New Source Opacity Standard
The Chapter 50 opacity standard (20%) is applicable to the Area 7 remelt facility and the three flakers and has been included as Condition #180 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
Except for the opacity standard of Condition #183 of the NSR permit, the monitoring, testing, notification and recordkeeping requirements in Conditions #187-189, #192-199 and #201-202 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #184-195 of the proposed TV permit.

NSPS NNN
As discussed above, the NSPS monitoring requirements have been determined to meet Part 70 requirements and have been in the proposed TV permit as Conditions #184-186 and #192-194. Since the NSPS requirements were previously incorporated in the 7/1/2013 NSR permit, the monitoring requirements are the same for both.

MON MACT
By definition, Part 63 MACT standards are presumed to include sufficient monitoring, recordkeeping and reporting (MRR) requirements to satisfy both periodic monitoring and CAM requirements. These MON MRR requirements have been included as Conditions #187 and #192 of the proposed TV permit. It should be noted that due that since the Area 8/16 thermal oxidizer is used to achieve 98% control for the Area 7 MON process vent (the CRU), the Area 7 MON MRR requirements (flare, LDAR, etc.) are the same as the MRR requirements for the thermal oxidizer from the Area 8/16 section.

Chapter 50 New Source Opacity Standard and Condition #183 of the 7/1/2013 NSR permit
Conditions #183, #192 and #196 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for the Area 7 opacity standards.

EMISSION UNIT APPLICABLE REQUIREMENTS – Area 11

The source has emission unit specific applicable requirements for Area 11 (ammonium sulfate production). The sources of applicable requirements for Area 11 are as follows: the 7/1/2013 NSR permit; NSPS Subpart PP (Standards of Performance for Ammonia Sulfate Manufacture); the new/modified source opacity standard of 9 VAC 5-50-80 and 40 CFR 64 Compliance Assurance Monitoring (CAM) requirements.

Limitations

7/1/2013 NSR permit
Conditions #203-213 of the NSR permit contain criteria pollutant control equipment requirements for Area 11 and have been included as Conditions #197-206 of the proposed TV permit.

Conditions #214-216 and #218-221 of the NSR permit contain operating limitations for Area 11 and have been included as Conditions #207-213 of the proposed TV permit.

Conditions #222-223, #225-#238 and #240-243 of the NSR permit contain hourly and annual criteria pollutant emission limits and opacity standards for Area 11 and have been included as Conditions #214-233 of the proposed TV permit.

NSPS PP
The NSPS PP requirements for Area 11 (RD-4 and RD-6) have been included in the proposed TV permit as Conditions #214-215 (NSPS emission standard) and #228-229 (NSPS opacity standard).

Chapter 50 New Source Opacity Standard
The Chapter 50 opacity standard (20%) is applicable to the Area 11 PM-emitting emission units not covered by one of the opacity standards of Conditions #237-243 of the NSR permit and has been included as Condition #234 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
Except for the opacity standards of Conditions #237-243 of the NSR permit, the monitoring, testing, notification and recordkeeping requirements in Conditions #203-#210, #247-248 and #250 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #235-245 and #247 of the proposed TV permit.

NSPS PP
As discussed above, the NSPS monitoring requirements have been determined to meet Part 70 requirements and have been in the proposed TV permit as Conditions #236-237, #240 and #247. Since the NSPS requirements were previously incorporated in the 7/1/2013 NSR permit, the monitoring requirements are the same for both.

Chapter 50 New Source Opacity Standard and Conditions #237-243 of the 7/1/2013 NSR permit
Conditions #246-248 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for the Area 11 opacity standards.

CAM
For Area 11, CAM is applicable to the PM-10 emissions from the four rotary dryers (RD-3, RD-4, RD-6, RD-7) and two emission points (one associated with SC-65, SC-66, SC-67 and CO-225 and one associated with EL-25) from the Building 12 ammonium sulfate storage and loading operation (these six emission units have pre-control PM-10 PTE >100 tons/yr, are subject to PM-10 emission limits and employ active control devices (scrubbers of fabric filters) to comply with these limitations). Accordingly, Honeywell submitted a CAM plan for each emission unit. In summary, Honeywell proposes to continuously monitor the pressure drop and scrubbant flow of each scrubber and the pressure drop and visible emission from the fabric filter. DEQ has reviewed, and with the issuance of the TV permit with the CAM plans included as Attachments A-4.I-II, and hereby approve the proposed CAM plans. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Sulfuric Acid Plant (SAP)

The source has emission unit specific applicable requirements for the SAP. The sources of applicable requirements for the SAP are as follows: the 7/1/2013 NSR permit; NSPS Subpart H (Standards of Performance for Sulfuric Acid Plants) and 40 CFR 64 Compliance Assurance Monitoring (CAM) requirements.

Limitations

7/1/2013 NSR permit
Conditions #251-253 of the NSR permit contain criteria pollutant control equipment requirements for the SAP and have been included as Conditions #249-251 of the proposed TV permit.

Conditions #254-255 of the NSR permit contain operating limitations for the SAP and have been included as Conditions #252-253 of the proposed TV permit.

Conditions #256-262 of the NSR permit contain hourly and annual criteria pollutant emission limits and opacity standards for the SAP and have been included as Conditions #254-260 of the proposed TV permit.

NSPS H
The NSPS H requirements for the SAP have been included in the proposed TV permit as Conditions #254 and #256-257.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
The monitoring, testing, notification and recordkeeping requirements in Conditions #265-#269 and #271 of the NSR permit have been examined and determined to meet Part 70 requirements with one addition. A visible emission observation reporting requirement has been added. These requirements have been included as Conditions #261-267 of the proposed TV permit.

NSPS H
As discussed above, the NSPS monitoring requirements have been determined to meet Part 70 requirements and have been in the proposed TV permit as Conditions #262 and #265-266. Since the NSPS requirements were previously incorporated in the 7/1/2013 NSR permit, the monitoring requirements are the same for both.

CAM
For the SAP, CAM is applicable to the SO2 emissions from the SAP (the SAP has pre-control SO2 PTE >100 tons/yr, is subject to a SO2 emission limit and employs an active control device (scrubber) to comply with the limitation. Accordingly, Honeywell submitted a CAM plan for SO2 emissions from the SAP. In summary, Honeywell proposes to use a continuous emission monitoring system (CEMS) for the SAP. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-5.I, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

For the SAP, CAM is also applicable to the PM-10 emissions from the SAP (the SAP has pre-control PM-10 PTE >100 tons/yr, is subject to a PM-10 emission limit and employs an active control device (mist eliminator) to comply with the limitation). Accordingly, Honeywell submitted a CAM plan for PM-10 emission from the SAP. In summary, Honeywell proposes to continuously monitor the pressure drop of the mist eliminator and conduct visible emission observations. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-5.II, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Kellogg Ammonia Plant

The source has emission unit specific applicable requirements for the Kellogg Ammonia Plant (Kellogg). The sources of applicable requirements for the Kellogg are as follows: the 7/1/2013 NSR permit; the new/modified source opacity standard of 9 VAC 5-50-80 and 40 CFR 64 Compliance Assurance Monitoring (CAM) requirements.

Limitations

7/1/2013 NSR permit
Conditions #272-273 of the NSR permit contain criteria pollutant control equipment requirements for the Kellogg and have been included as Conditions #268-269 of the proposed TV permit.

Conditions #274-276 of the NSR permit contain operating limitations for the Kellogg and have been included as Conditions #270-272 of the proposed TV permit.

Conditions #277-280 of the NSR permit contain hourly and annual criteria pollutant emission limits for the Kellogg and have been included as Conditions #273-277 of the proposed TV permit.

Chapter 50 New Source Opacity Standard
The Chapter 50 opacity standard (20%) is applicable to the Kellogg (FU-1) and has been included as Condition #278 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
The monitoring, testing, notification and recordkeeping requirements in Conditions #272 and #282 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #280-281 of the proposed TV permit.

Chapter 50 New Source Opacity Standard
Conditions #279, #281 and #283 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for the Kellogg's opacity standard.

CAM
For the Kellogg, CAM is applicable to the NOx emissions from the primary reformer (FU-1). This emission unit has pre-control NOx PTE >100 tons/yr, is subject to a NOx emission limit and employs an active control mechanism (compressor) to comply with the limitation). Accordingly, Honeywell submitted a CAM plan for NOx emissions from FU-1. In summary, Honeywell proposes to continuously monitor the compressor valve position. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-6, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Girdler Synthesis Gas Production Plant

The source has emission unit specific applicable requirements for the Girdler Synthesis Gas Production Plant (Girdler). The sources of applicable requirements for the Girdler are as follows: the 7/1/2013 NSR permit; the 3/26/1997 RACT Consent Agreement and the new/modified source opacity standard of 9 VAC 5-50-80.

Limitations

7/1/2013 NSR permit
Conditions #283-284 of the NSR permit contain operating limitations for the Girdler and have been included as Conditions #285-286 of the proposed TV permit.

Conditions #285-286 of the NSR permit contain hourly and annual criteria pollutant emission limits for the Girdler and have been included as Conditions #287-288 of the proposed TV permit.

3/26/1997 RACT Agreement
Condition #E.6 of the RACT Agreement contains VOC control requirements for the Girdler (CD-3 and CD-4) and has been included as Condition #284 of the proposed TV permit.

Chapter 50 New Source Opacity Standard
The Chapter 50 opacity standard (20%) is applicable to the Girdler (FU-6) and has been included as Condition #289 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
The recordkeeping requirements in Condition #287 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #291 of the proposed TV permit.

3/26/1997 RACT Agreement
The monitoring already required by the NSR permit (discussed above) contains recordkeeping requirements for the Girdler and have been determined to meet Part 70 requirements as is for the RACT Agreement as well. These requirements have been included as Conditions #291 of the proposed TV permit.

Chapter 50 New Source Opacity Standard
Conditions #290-292 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for the Girdler's opacity standard.

EMISSION UNIT APPLICABLE REQUIREMENTS – Powerhouse Boilers/Turbines

The source has emission unit specific applicable requirements for the Powerhouse Boilers/Turbines. The sources of applicable requirements for the Powerhouse are as follows: the 5/31/2004 NOx Budget permit; the 7/1/2013 NSR permit; the Clean Air Interstate Rule (CAIR); New Source Performance Standards Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units); New Source Performance Standards Subpart CCCC (Standards of Performance for Commercial and Industrial Solid Waste Incineration Units); New Source Performance Standards Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) and 40 CFR 64 Compliance Assurance Monitoring (CAM) requirements.

Note that the 7/1/2013 NSR permit authorizes the construction of a new boiler (FU-17) and a new combustion turbine (CT-New). While FU-17 has been constructed and commenced operation, construction on CT-New has not commenced. Therefore, CAM will only apply to FU-17.

Limitations

5/31/2004 NOx Budget Permit
This permit contained NOx emission trading requirements for powerhouse boilers that have now been shutdown. The permit is essentially the emission trading regulation, so its requirements are all inclusive (allowances, monitoring, etc.) Since the facility is still considered a NOx budget facility, these requirements have been included as Conditions #293-309 of the proposed TV permit.

CAIR
This is another emission trading regulation that was applicable to powerhouse boilers that have now been shutdown. Because of the uncertainty re: these shutdown units and the legal status of the CAIR program itself, the requirement of the facility to comply with any applicable provision of CAIR has been included as Condition #310 of the proposed TV permit.

7/1/2013 NSR permit, NSPS Db and NSPS CCCC (FU-17)
Conditions #288-291, #294 and #296-299 of the NSR permit (and NSPS Db and CCCC since these conditions also encompass these NSPS) contain certain emission control and operating requirements for FU-17 and have been included as Conditions #311-318 of the proposed TV permit.

Conditions #300-301 of the NSR permit contain NSPS, hourly and annual regulated NSR pollutant emission limits and opacity limits for the FU-17 and have been included as Conditions #319-320 of the proposed TV permit.

7/1/2013 NSR permit, NSPS CCCC and NSPS KKKK (CT-New)
Conditions #315-317 and #319-325 of the NSR permit (and NSPS CCCC and KKKK since these conditions also encompass these NSPS) contain certain emission control and operating requirements for CT-New and have been included as Conditions #334-343 of the proposed TV permit.

Conditions #326-328 of the NSR permit contain NSPS, hourly and annual regulated NSR pollutant emission limits and opacity limits for the CT-New and have been included as Conditions #344-346 of the proposed TV permit.

7/1/2013 NSR permit (both FU-17 and CT-New)
Conditions #344-345 of the NSR permit contain certain throughput and emission limits that apply to both FU-17 and CT-New and have been included as Conditions #364-365 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit, NSPS Db and NSPS CCCC (FU-17)
Except for the opacity standard of Condition #301 of the NSR permit, the monitoring, testing, notification and recordkeeping requirements in Conditions #303-314 of the NSR permit (and NSPS Db and CCCC since these conditions also encompass these NSPS) have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #322-327, #329-331 and #333 of the proposed TV permit.

7/1/2013 NSR permit, NSPS CCCC and NSPS KKKK (CT-New)
Except for the opacity standard of Condition #327 of the NSR permit, the monitoring, testing, notification and recordkeeping requirements in Conditions #329-343 of the NSR permit (and NSPS CCCC and KKKK since these conditions also encompass these NSPS) have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #348-357, #359-361 and #363 of the proposed TV permit.

Conditions #301 and #327 of the 7/1/2013 NSR permit (#301 for FU-17; #327 for CT-New)
Conditions #328-329 and #332 (visible emission observations, recordkeeping and reporting) for FU-17 and Conditions #358-359 and #362 (visible emission observations, recordkeeping and reporting) for CT-New have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for Conditions #301 and #327 of the NSR permit (opacity standards).

7/1/2013 NSR permit (both FU-17 and CT-New)
The recordkeeping requirements in Condition #346 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Condition #366 of the proposed TV permit.

CAM
For the powerhouse, CAM is applicable to the PM-10 emissions from FU-17 (FU-17 has pre-control PM-10 PTE >100 tons/yr, is subject to a PM-10 emission limit and employs an active control device (fabric filter) to comply with the limitation). Accordingly, Honeywell submitted a CAM plan for PM-10 emissions from FU-17. In summary, Honeywell proposes to use a baghouse leak detection system. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-7.I, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

For the powerhouse, CAM is applicable to the NOx emissions from the FU-17 (FU-17 has pre-control NOx PTE >100 tons/yr, is subject to a NOx emission limit and employs an active control mechanism (flue gas recirculation) to comply with the limitation). Accordingly, Honeywell submitted a CAM plan for NOx emission from FU-17. In summary, Honeywell proposes to measure NOx emissions with a CEMS. DEQ has reviewed, and with the issuance of the TV permit with the CAM plan included as Attachment A-7.II, and hereby approves the proposed CAM plan. Section XIV of the proposed TV permit references the CAM plan attachment and also includes general CAM requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – SULF-N26 Pilot Plant

The source has emission unit specific applicable requirements for the SULF-N26 Pilot Plant (Pilot Plant). The sources of applicable requirements for the Pilot Plant are as follows: the 7/1/2013 NSR permit.

Limitations

7/1/2013 NSR permit
Conditions #347-350 of the NSR permit contain criteria pollutant control equipment requirements for the Pilot Plant and have been included as Conditions #367-370 of the proposed TV permit.

Conditions #351-352 of the NSR permit contain operating limitations for the Pilot Plant and have been included as Conditions #371-372 of the proposed TV permit.

Conditions #353-359 of the NSR permit contain hourly and annual criteria pollutant emission limits for the Pilot Plant and have been included as Conditions #373-379 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
Except for the opacity standards of Conditions #358-359 of the NSR permit, the recordkeeping requirements in Condition #360-368 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #380-386 and #388-389 of the proposed TV permit.

Conditions #358-359 of the 7/1/2013 NSR permit
Conditions #387-388 and #390 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for Condition #18 of the NSR permit (opacity standard).

EMISSION UNIT APPLICABLE REQUIREMENTS – Area 14 and Honeywell Specialty Products Plant

The source has emission unit specific applicable requirements for Area 14 and Honeywell Specialty Products Plant (Area 14). The sources of applicable requirements for Area 14 are as follows: the 1/31/2014 NSR permit; the 3/26/1997 RACT Consent Agreement and the MON MACT.

Limitations

1/31/2014 NSR permit
Conditions #2-6 of the NSR permit contain criteria pollutant control equipment requirements for Area 14 and have been included as Conditions #391-395 of the proposed TV permit.

Conditions #9-13 of the NSR permit contain operating limitations for Area 14 and have been included as Conditions #397-401 of the proposed TV permit.

Conditions #14-18 of the NSR permit contain hourly and annual criteria pollutant emission limits and opacity standards for Area 14 and have been included as Conditions #402-406 of the proposed TV permit.

3/26/1997 RACT Agreement
Condition #E.7 of the RACT Agreement contains VOC LDAR requirements for Area 14 and has been as Condition #396 of the proposed TV permit.

MON MACT
The process vent (Group 2) requirements of the MON for Area 14 have been included as Conditions #391 and #407 of the proposed TV permit.

Monitoring/Testing/Recordkeeping/Reporting

7/1/2013 NSR permit
Except for the opacity standard of Condition #18 of the NSR permit, the monitoring, testing, notification and recordkeeping requirements in Conditions #2, #5 and #19-21 of the NSR permit have been examined and determined to meet Part 70 requirements as is. These requirements have been included as Conditions #408-410 and #412-413 of the proposed TV permit.

Condition #18 of the 7/1/2013 NSR permit
Conditions #411-412 and #414 (visible emission observations, recordkeeping and reporting) have been included in the proposed TV permit to satisfy Part 70 monitoring requirements for Condition #18 of the NSR permit (opacity standard).

MON MACT
By definition, Part 63 MACT standards are presumed to include sufficient monitoring, recordkeeping and reporting (MRR) requirements to satisfy both periodic monitoring and CAM requirements. These MON MRR requirements (Group 2 process vent recordkeeping) have been included as Condition #412 of the proposed TV permit.

FACILITY-WIDE REQUIREMENTS

Certain air pollution control regulations and requirements from the 7/1/2013 NSR permit that apply on a plant-wide basis were included in a separate "Facility-Wide Requirements" section. These include the following:

7/1/2013 NSR permit
Conditions #5-7, #11, #17-18 and #20-25 of the subject permit do not apply to a specific operational division of the facility, so they have been included in the in the Facility-Wide section of the proposed TV permit as Conditions #427, #429-433, #435-437 and #450-451.

9 VAC 5 Chapter 40 Article 24 (Rule 4-24 Solvent Metal Cleaning)
Since they do not apply to a specific operational division of the facility, the requirements of Rule 4-24 have been included in the Facility-Wide section of the proposed TV permit as Conditions #428 and #450.

40 CFR 61 Subpart FF
Since they do not apply to a specific operational division of the facility, the requirements of 40 CFR 61 Subpart FF (Benzene NESHAP) have been included in the Facility-Wide section of the proposed TV permit as Conditions #438, #450 and #452.

40 CFR 63 Subpart DDDDD
A general condition (Condition #449) requiring the permittee to comply with any applicable requirements of 40 CFR 63 Subpart DDDDD have been included in the proposed TV permit.

Emergency Engines – 40 CFR 63 Subpart ZZZZ
These requirements have been included as Conditions #439-445 of the proposed TV permit,

It should be noted that, for the purposes of 40 CFR 63 Subpart ZZZZ, Honeywell's emergency generators (except for GEN-4) are considered existing emergency compression ignition RICE with capacities of 500 horsepower or less. Because of this classification and because they are located at a major source, many of the other Subpart ZZZZ requirements (emission standards, performance tests, fuel standards, NOCS reports, initial notifications) are not applicable.

By default, the MACT testing, monitoring, recordkeeping and reporting requirements are deemed sufficient for periodic monitoring and CAM purposes (40 CFR 64.1).

Emergency generator GEN-4 (600 hp) does not have any applicable requirements from 40 CFR 63 Subpart ZZZZ in accordance with 63.6590(b). However, in order to demonstrate compliance with the "emergency" designation, GEN-4 has been included in Conditions #441-442 and #444 of the proposed TV permit.

Emergency Engines – 9 VAC 5-50-80 Visible Emission Standard
The visible emission standard and appropriate periodic monitoring (consistent with the monitoring established for other units subject to 9 VAC 5-50-80) requirements have been included as Conditions #446-448 and #450 of the proposed TV permit.

STREAMLINED REQUIREMENTS

No streamlined requirements have been identified.

GREENHOUSE GAS (GHG) REQUIREMENTS

There are no applicable GHG permitting requirements for this source.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

Comments on General Conditions

Proposed Condition #460 - Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §§2.2-604 and §§10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-2003".

Proposed Condition #467 - Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

Proposed Condition #486 - Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in Condition #467 and Condition #486. For further explanation see the comments on Condition #467.

STATE ONLY APPLICABLE REQUIREMENTS

None identified

FUTURE APPLICABLE REQUIREMENTS

None identified.

INAPPLICABLE REQUIREMENTS

No inapplicable requirements identified.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, record keeping or reporting shall be required for these

emission units in accordance with 9 VAC 5-80-110. The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
VT-031 VT-033 VT-099 VT-102 VT-151 VT-230 VT-252 VT-257 VT-333 VT-364 VT-401 VT-522 VT-771 VT-795 VT-796 VT-797	Miscellaneous Area 11 Storage Tanks	9 VAC 5-80-720 B	VOC	N/A
TW-07	Carbonate Tower	9 VAC 5-80-720 B	VOC	N/A
TW-11	Carbonate Tower	9 VAC 5-80-720 B	VOC	N/A
TW-16	Carbonate Tower	9 VAC 5-80-720 B	VOC	N/A
TW-21	Carbonate Tower	9 VAC 5-80-720 B	VOC	N/A
TW-31	Carbonate Tower	9 VAC 5-80-720 B	VOC	N/A
HE-221	North American 6514-8-A natural gas-fired steam superheater	9 VAC 5-80-720 C	N/A	4.24 MMBtu/hr
HE-305	North American 6514-8-A natural gas-fired steam superheater	9 VAC 5-80-720 C	N/A	4.24 MMBtu/hr
MH-1	Marine operations portable diesel-fired heater	9 VAC 5-80-720 C	N/A	0.15 MMBtu/hr
MH-2	Marine operations portable diesel-fired heater	9 VAC 5-80-720 C	N/A	0.15 MMBtu/hr
MH-3	Marine operations portable diesel-fired heater	9 VAC 5-80-720 C	N/A	0.15 MMBtu/hr
PB-1	South Maintenance paint fume hood	9 VAC 5-80-720 B	VOC	N/A
RAC-1	Rental air compressors	9 VAC 5-80-720	PM,SO2,NOx,CO, VOC	N/A

CONFIDENTIAL INFORMATION

The permittee did submit confidential and non-confidential versions of their Title V application. Additionally, in accordance with DEQ's 2003 Confidentiality Policy, Honeywell submitted a detailed showing for their confidential information claims. The DEQ approved the source's confidential showing. This showing included the use of certain surrogate parameters in lieu of confidential information such as maximum rated capacity and throughput

limits. The relationship between the surrogate parameters and the confidential information is detailed in the confidential "key" document provided by Honeywell with their showing. Therefore, there is only one version of the Title V permit (and Statement of Basis), and it does NOT contain any confidential information. Instead of the CBI rated capacities and throughput limits, the Title V permit and Statement of Basis use the surrogate parameters from the CBI "key". This approach matches that of the underlying 7/1/2013 NSR permit. The "key" will be the only permit-related document filed as confidential.

PUBLIC PARTICIPATION

The draft permit went to public notice in the Hopewell News on May 30, 2014. The 30-day comment period specified in the public notice ended on June 30, 2014. During the public comment period, 609 individuals (through a Virginia Sierra Club standardized mass electronic mailing) and one organization (Virginia Sierra Club) participated in the public comment period. As of July 22, 2014, there were also 169 comments submitted after the close of the public comment period. The 778, total of all individual comments (both on-time and late), individual comments received were all submitted in a standardized electronic mail format consisting of some or all of five paragraphs. 37 of these 778 comments also contained personalized information in addition to the standard five paragraphs, but none of the personalized information raised additional air quality related issues with the draft Title V permit. DEQ has reviewed the standardized comment, has evaluated each of the five paragraphs, and developed responses to each paragraph as in the Response to Comment document included as an attachment to this statement of basis. A similar analysis of the Virginia Sierra Club comment is also in the attached Response to Comment document.

The main concerns expressed by commenters are summarized as follows:

- DEQ should hold a public hearing on the draft Title V permit.
- The draft Title V permit is deficient since it does not include specific emission limits for certain industrial chemicals.

All the requests for a public hearing were reviewed in light of the criteria set forth in the Code of Virginia at § 10.1-1322.01 and the Virginia Regulations for the Control and Abatement of Air Pollution at 9 VAC 5-80-35 C. In all cases, the primary action requested was the creation or establishment of emission limits for various individual chemicals in the draft permit. However, a Title V permit is not a tool to create new applicable requirements and DEQ does not have the authority to unilaterally establish new emission caps/limits in the process of issuing this permit; making the primary action requested, on its face, inconsistent with the Title V permitting regulation (9 VAC 5, Chapter 80, Article 1). Therefore, a public hearing was not held. In addition, as outlined in the attached *Response to Comments* document, there were no changes to the draft Title V permit.

The Title V permit, Statement of Basis and Response to comments documents were provided to the Region III office of the Environmental Protection Agency (by email) as proposed for issuance on August 11, 2014. EPA Region III responded (by email) on September 24, 2014 that EPA had no comments on the proposed permit.