

Statement of Basis of the Federal Operating Permit

Chevron Phillips Chemical Company, LP

Site/Area Name: PPS Plant

Physical location: Approx 2 miles northeast of the City of Borger on State Hwy Spur 119

Nearest City: Borger

County: Hutchinson

Permit Number: O2165

Project Type: Renewal

Standard Industrial Classification (SIC) Code: 2869

SIC Name: Industrial Organic Chemicals,

This Statement of Basis sets forth the legal and factual basis for the draft permit conditions in accordance with 30 TAC §122.201(a)(4). Per 30 TAC §§ 122.241 and 243, the permit holder has submitted an application under § 122.134 for permit renewal. This document may include the following information:

- A description of the facility/area process description;
- A basis for applying permit shields;
- A list of the federal regulatory applicability determinations;
- A table listing the determination of applicable requirements;
- A list of the New Source Review Requirements;
- The rationale for periodic monitoring methods selected;
- The rationale for compliance assurance methods selected;
- A compliance status; and
- A list of available unit attribute forms.

Prepared on: November 14, 2008

OPERATING PERMIT BASIS OF DETERMINATION

PERMIT AREA PROCESS DESCRIPTION

The process at the Philtex-Ryton plant is as follows:

Polyphenylene sulfide (proprietary trade name "Ryton") is produced by combining p-dichlorobenzene (p-DCB, DCB) with sodium hydrosulfide (NaSH) in a series of reactions also involving caustic (NaOH) and N-methyl pyrrolidone (NMP). Salt (NaCl) is a byproduct of the reaction. This is washed from the polymer and disposed via deepwell injection with "Rytbrine" equipment (tanks, filters, pumps). The washed polymer is dried and sent to further processing and/or boxing. Collectively, the synthesis equipment is lumped under the Title V process name "PRORYTSYN". After the final polymerization step (but before washing and drying), unreacted feedstocks are flashed to recovery equipment, collectively referred to as "PRORYTREC". Here, NMP and DCB are recovered and returned to storage for reuse.

Heat for the synthesis and recovery processes is provided by two small natural gas-fired furnaces using heat transfer oil. Ryton also has a dedicated cooling tower.

The Ryton product can be further processed by curing and/or pelletizing. Final product, in the form of powder or pellets, is placed in boxes or similar packaging for shipment to customers.

MAJOR SOURCE POLLUTANTS

The table below specifies the pollutants for which the site is a major source:

Major Pollutants	VOC, SO2, HAPS, CO, H2S
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The permit contains terms and conditions that specify the area-wide applicable requirements and a table of applicable requirements for specific emission units in the application area. The Special Terms and Conditions contain both generic and site-wide requirements. The generic requirements are general monitoring, recordkeeping, reporting requirements that do not apply to specific sources. Site-wide requirements apply uniformly to a group of emission sources such as source-wide opacity limits. These requirements are streamlined into the Special Terms and Condition for brevity. The streamlining of broadly applicable requirements was developed in accordance with EPA's White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995. Applicable requirements that do not apply uniformly (i.e. are specific to each emission source) appear in the FOP's Applicable Requirement Summary table.

The "application area" consists of the emission units and that portion of the site included in the application and this permit. When there is only one area for the site, then the application information and permit will include the site.

Additional FOP: O2164

FEDERAL REGULATORY APPLICABILITY DETERMINATIONS

The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

Regulatory Program	Applicability (Yes/No)
Prevention of Significant Deterioration (PSD)	No
Nonattainment New Source Review (NNSR)	No
State NSR	Yes
40 CFR Part 60 - New Source Performance Standards	Yes
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)	Yes
40 CFR Part 63 - NESHAPs for Source Categories	Yes
Title IV (Acid Rain) of the Clean Air Act (CAA)	No
Title V (Federal Operating Permits) of the CAA	Yes
Title VI (Stratospheric Ozone Protection) of the CAA	Yes
CAIR (Clean Air Interstate Rule)	No

BASIS FOR APPLYING PERMIT SHIELDS

An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the "Permit Shield" attachment of the permit.

INSIGNIFICANT ACTIVITIES

In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OPREQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

1. Office activities such as photocopying, blueprint copying, and photographic processes.
2. Sanitary sewage collection and treatment facilities other than those used to incinerate wastewater treatment plant sludge. Stacks or vents for sanitary sewer plumbing traps are also included.
3. Food preparation facilities including, but not limited to, restaurants and cafeterias used for preparing food or beverages primarily for consumption on the premises.
4. Outdoor barbecue pits, campfires, and fireplaces.
5. Laundry dryers, extractors, and tumblers processing bedding, clothing, or other fabric items generated primarily at the premises. This does not include emissions from drycleaning systems using perchloroethylene or petroleum solvents.
6. Facilities storing only dry, sweet natural gas, including natural gas pressure regulator vents.
7. Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.
8. Storage and handling of sealed portable containers, cylinders, or sealed drums.
9. Vehicle exhaust from maintenance or repair shops.
10. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
11. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
12. Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
13. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
14. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
15. Well cellars.
16. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
17. Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal.
18. Equipment used exclusively for the melting or application of wax.
19. All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
20. Shell core and shell mold manufacturing machines.
21. Sand or investment molds with a capacity of 100 lbs. or less used for the casting of metals;
22. Equipment used for inspection of metal products.
23. Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.
24. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.

25. Battery recharging areas.
26. Brazing, soldering, or welding equipment.

DETERMINATION OF APPLICABLE REQUIREMENTS

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at http://www.tceq.state.tx.us/permitting/air/nav/air_all_ua_forms.html.

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled "Basis of Determination." Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at http://www.tceq.state.tx.us/permitting/air/nav/air_supportsys.html. The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column "Changes and Exceptions to RRT." If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word "None" will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled "Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected."

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled “Basis for Applying Permit Shields” specifies which units, if any, have a permit shield.

Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.

DETERMINATION OF APPLICABLE REQUIREMENTS

Unit ID	Regulation	Index Number	Basis of Determination*
36-80010	40 CFR Part 60, Subpart Dc	60Dc_GAS	CONSTRUCTION/MODIFICATION DATE = AFTER JUNE 9, 1989 PM MONITORING TYPE = NO PARTICULATE MONITORING MAXIMUM DESIGN HEAT INPUT CAPACITY = MAXIMUM DESIGN HEAT INPUT CAPACITY GREATER THAN OR EQUAL TO 10 MMBTU/HOUR (2.9 MW) AND LESS THAN 100 MMBTU/HOUR (29 MW) SO2 INLET MONITORING TYPE = NO SO2 MONITORING HEAT INPUT CAPACITY = HEAT INPUT CAPACITY GREATER THAN OR EQUAL TO 30 MMBTU/HOUR (8.7 MW) AND LESS THAN OR EQUAL TO 75 MMBTU/HOUR (22 MW) SO2 OUTLET MONITORING TYPE = NO SO2 MONITORING D-SERIES FUEL TYPE = NATURAL GAS TECHNOLOGY TYPE = NONE FUEL HEAT INPUT = HEAT INPUT IS NOT LESS THAN OR EQUAL TO 30% FROM COMBUSTION OF COAL AND OIL IN A DUCT BURNER OR HEAT INPUT IS NOT GREATER THAN OR EQUAL TO 70% TO THE STEAM GENERATING UNIT IS FROM THE EXHAUST GASES ENTERING THE DUCT BURNER
36-Y001	40 CFR Part 60, Subpart Dc	60Dc_GAS	CONSTRUCTION/MODIFICATION DATE = AFTER JUNE 9, 1989 PM MONITORING TYPE = NO PARTICULATE MONITORING MAXIMUM DESIGN HEAT INPUT CAPACITY = MAXIMUM DESIGN HEAT INPUT CAPACITY GREATER THAN OR EQUAL TO 10 MMBTU/HOUR (2.9 MW) AND LESS THAN 100 MMBTU/HOUR (29 MW) SO2 INLET MONITORING TYPE = NO SO2 MONITORING HEAT INPUT CAPACITY = HEAT INPUT CAPACITY GREATER THAN 10 MMBTU/HOUR (2.9 MW) AND LESS THAN 30 MMBTU/HOUR (8.7 MW) SO2 OUTLET MONITORING TYPE = NO SO2 MONITORING D-SERIES FUEL TYPE = NATURAL GAS TECHNOLOGY TYPE = NONE FUEL HEAT INPUT = HEAT INPUT IS NOT LESS THAN OR EQUAL TO 30% FROM COMBUSTION OF COAL AND OIL IN A DUCT BURNER OR HEAT INPUT IS NOT GREATER THAN OR EQUAL TO 70% TO THE STEAM GENERATING UNIT IS FROM THE EXHAUST GASES ENTERING THE DUCT BURNER
95-Y006	40 CFR Part 60, Subpart Kb	60Kb_LOW	40 CFR 60 (NSPS) SUBPART KB PRODUCT STORED = VOLATILE ORGANIC LIQUID 40 CFR 60 (NSPS) SUBPART KB STORAGE CAPACITY = CAPACITY GREATER THAN OR EQUAL TO 19,800 GALLONS (74,951 LITERS) AND LESS THAN 39,900 GALLONS (151,037 LITERS) ('PRODUCT STORED' OTHER THAN "PTCD-BF3") 40 CFR 60 (NSPS) SUBPART KB MAXIMUM TRUE VAPOR PRESSURE (TVP) = TRUE VAPOR PRESSURE GREATER THAN OR EQUAL TO 2.2 PSIA AND LESS THAN 4.0 PSIA 40 CFR 60 (NSPS) SUBPART KB STORAGE VESSEL DESCRIPTION = EMISSION CONTROLS NOT REQUIRED
95-Y028	40 CFR Part 63, Subpart FFFF	63FFFF	STREAM GROUP CONTINUOUS PROCESS VENT = CONTINUOUS PROCESS VENT STREAM IS A GROUP 2 STREAM

95-10030	40 CFR Part 63, Subpart FFFF	63FFFF	CONSTRUCTION/MODIFICATION DATE = CONSTRUCTION OR RECONSTRUCTION COMMENCED AFTER APRIL 4, 2002 STORAGE CAPACITY = STORAGE CAPACITY OF THE TANK IS 10,000 GALLONS OR GREATER MAXIMUM TRUE VAPOR PRESSURE = MAXIMUM TRUE VAPOR PRESSURE OF THE STORED MATERIAL IS 0.69 KPA OR GREATER
95-50022	40 CFR Part 63, Subpart FFFF	63FFFF	PROCESS WASTEWATER= YES MEETS 40 CFR § 63.149(D)= YES
95-50033	40 CFR Part 63, Subpart FFFF	63FFFF	PROCESS WASTEWATER= YES MEETS 40 CFR § 63.149(D)= YES
GRP_MCPU	40 CFR Part 63, Subpart FFFF	63FFFF	UNIT TYPE = PROCESS DATE CONSTRUCTED/PLACED IN SERVICE = ON/BEFORE NOVEMBER 15 1992 FUNCTIONALLY IDENTICAL REPLACEMENT [REG VII] = UNIT IS NOT FUNCTIONALLY IDENTICAL REPLACEMENT (DATE CONSTRUCTED/PLACED IN SERVICE = '92+') MAXIMUM RATED CAPACITY [REG VII] = MAXIMUM RATED CAPACITY LESS THAN OR EQUAL TO 5 MMBTU/HR
F-R1	40 CFR Part 63, Subpart FFFF	63FFFF	EXISTING SOURCE = FUGITIVE UNIT CONTAINS EQUIPMENT IN AN EXISTING MISCELLANEOUS CHEMICAL PROCESSING UNIT
PRORYT	40 CFR Part 63, Subpart FFFF	63FFFF	HEAT EXCHANGE SYSTEM = PROCESS UNIT HAS HEAT EXCHANGE SYSTEMS SUBJECT TO § 63.2490
R-V23	40 CFR Part 63, Subpart FFFF	63FFFF	STREAM GROUP CONTINUOUS PROCESS VENT = CONTINUOUS VENT STREAM IS A GROUP 1 STREAM OR IS A COMBINED VENT STREAM CONTAINING A GROUP 1 CONTINUOUS PROCESS VENT STREAM AND NOT CONTAINING A GROUP 1 BATCH PROCESS VENT STREAM

* - The "unit attributes" or operating conditions that determine what requirements apply

NEW SOURCE REVIEW REQUIREMENTS

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room, located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. The Office of Public Assistance (OPA) may be contacted at 1-800-687-4040 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. The following table specifies the permits by rule that apply to the site. All current permits by rule are contained in Chapter 106. Outdated 30 TAC Chapter 106 permits by rule may be viewed at the following website:

www.tceq.state.tx.us/permitting/air/permitbyrule/historical_rules/old106list/index106.html. Outdated Standard Exemption lists may be viewed at the following website:

www.tceq.state.tx.us/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

PSD Permits	NA Permits
PSD Permit No.:	NA Permit No.:
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 7719A	Authorization No.:
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.393	Version No./Date: 09/04/2000
Number: 106.418	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Municipal Solid Waste and Industrial Hazardous Waste Permits With an Air Addendum	
Permit No.:	Permit No.:

EMISSION UNITS AND EMISSION POINTS

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sand-blasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the "Maximum Allowable Emission Rate Table", or "MAERT" for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

COMPLIANCE REVIEW

In accordance with 30 TAC Chapter 60, the compliance history was reviewed on November 14, 2008.

The compliance history review evaluated the period from January 1, 2002 to November 14, 2008.

Site rating: 8.07; Average Company rating: 3.24; Average
(High < 0.10; Average > 0.10 and < 45; Poor > 45)

Permit reviewer notes:

Site/Permit Area Compliance Status Review

1. Were there any out-of-compliance units listed on Form OP-ACPS?..... No
2. Is a compliance plan and schedule included in the permit?..... No

Permit reviewer notes:

AVAILABLE UNIT ATTRIBUTE FORMS

OP-UA1 - Miscellaneous and Generic Unit Attributes
OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes
OP-UA3 - Storage Tank/Vessel Attributes
OP-UA4 - Loading/Unloading Operations Attributes
OP-UA5 - Process Heater/Furnace Attributes
OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes
OP-UA7 - Flare Attributes
OP-UA8 - Coal Preparation Plant Attributes
OP-UA9 - Nonmetallic Mineral Process Plant Attributes
OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes
OP-UA11 - Stationary Turbine Attributes
OP-UA12 - Fugitive Emission Unit Attributes
OP-UA13 - Industrial Process Cooling Tower Attributes
OP-UA14 - Water Separator Attributes
OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes
OP-UA16 - Solvent Degreasing Machine Attributes
OP-UA17 - Distillation Unit Attributes

OP-UA18 - Surface Coating Operations attributes
OP-UA19 - Wastewater Unit Attributes
OP-UA20 - Asphalt Operations Attributes
OP-UA21 - Grain Elevator Attributes
OP-UA22 - Printing Attributes
OP-UA24 - Wool Fiberglass Insulation Manufacturing Plant Attributes
OP-UA25 - Synthetic Fiber Production Attributes
OP-UA26 - Electroplating and Anodizing Unit Attributes
OP-UA27 - Nitric Acid Manufacturing Attributes
OP-UA28 - Polymer Manufacturing Attributes
OP-UA29 - Glass Manufacturing Unit Attributes
OP-UA30 - Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill Attributes
OP-UA31 - Lead Smelting Attributes
OP-UA32 - Copper and Zinc Smelting/Brass and Bronze Production Attributes
OP-UA33 - Metallic Mineral Processing Plant Attributes
OP-UA34 - Pharmaceutical Manufacturing
OP-UA35 - Incinerator Attributes
OP-UA36 - Steel Plant Unit Attributes
OP-UA37 - Basic Oxygen Process Furnace Unit Attributes
OP-UA38 - Lead-Acid Battery Manufacturing Plant Attributes
OP-UA39 - Sterilization Source Attributes
OP-UA40 - Ferroalloy Production Facility Attributes
OP-UA41 - Dry Cleaning Facility Attributes
OP-UA42 - Phosphate Fertilizer Manufacturing Attributes
OP-UA43 - Sulfuric Acid Production Attributes
OP-UA44 - Municipal Solid Waste Landfill/Waste Disposal Site Attributes
OP-UA45 - Surface Impoundment Attributes
OP-UA46 - Epoxy Resins and Non-Nylon Polyamides Production Attributes
OP-UA47 - Ship Building and Ship Repair Unit Attributes
OP-UA48 - Air Oxidation Unit Process Attributes
OP-UA49 - Vacuum-Producing System Attributes
OP-UA50 - Fluid Catalytic Cracking Unit Catalyst Regenerator/Fuel Gas Combustion Device/Claus Sulfur Recovery Plant Attributes
OP-UA51 - Dryer/Kiln/Oven Attributes
OP-UA52 - Closed Vent Systems and Control Devices
OP-UA53 - Beryllium Processing Attributes
OP-UA54 - Mercury Chlor-Alkali Cell Attributes
OP-UA55 - Transfer System Attributes
OP-UA56 - Vinyl Chloride Process Attributes
OP-UA57 - Cleaning/Depainting Operation Attributes
OP-UA58 - Treatment Process Attributes
OP-UA59 - Coke By-Product Recovery Plant Attributes
OP-UA60 - Chemical Manufacturing Process Unit Attributes
OP-UA61 - Pulp, Paper, or Paperboard Producing Process Attributes
OP-UA62 - Glycol Dehydration Unit Attributes
OP-UA63 - Vegetable Oil Production Attributes