

Fact Sheet



For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-10700001-2011**
Application Received: **July 30, 2009**
Plant Identification Number: **107-00001**
Permittee: **E. I. du Pont de Nemours and Company**
Facility Name: **Washington Works**
Manufacturing Unit: **Nylon Resins Production (Part 5 of 14)**
Mailing Address: : **P. O. Box 1217, Washington, WV 26181-1217**

Physical Location:	Washington, Wood County, West Virginia
UTM Coordinates:	422.27 km Easting • 4,346.57 km Northing • Zone 17
Directions:	Route 68 west from Parkersburg to intersection of Route 892. Continue west on Route 892 with the plant being on the north side about one mile from the intersection of Routes 68 and 892.

Facility Description

Raw materials (organic acids and base) are transported to the site by railcars or trucks. The organic acids are powders that are pneumatically conveyed into storage hoppers or handled in bags. A liquid organic base is mixed with water in the railcar or truck, and then pumped into a storage tank. The organic acids and base are mixed with water in an atmospheric vessel to create the raw material (salt) for the polymer. The salt is held in tanks until pumped to the polymerization process.

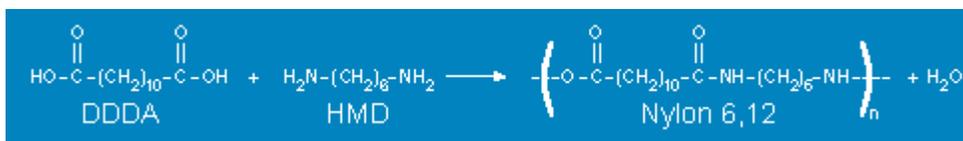
The salt can be pumped to an evaporator vessel for concentration using indirect steam heating, directly to an autoclave polymerization vessel, or it can be pumped to a continuous process system. A physical process of concentration of the water-based salt solution is what occurs in the evaporator before being sent to the autoclave. Nylon polymer is produced in the autoclave or in the continuous MPW1 process through application of heat and pressure. Water of dilution is driven off, as is water of reaction, creating nylon from a condensation reaction. The vapor emissions are directed to a scrubber. When enough water has been driven off, the desired viscosity has been reached.

Nitrogen is used to pressure up the autoclave to allow the polymer to exit the bottom of the vessel through a valve and die assembly. The desired viscosity resin is pumped directly from the continuous system to a die assembly. Strands or ribbons of molten polymer are water quenched and cut by a pelletizer or dicer into small pellets, which are then screened and conveyed into a blender/dryer vessel. Residual moisture is removed in the dryer, and the pellets are pneumatically conveyed to a screener to remove longs and fines and then to a bin. The pellets are then packaged into bags or boxes and shipped to the warehouse or directly to customers.

Typically the batch autoclaves produce 6-12 nylon in accordance with the following polyamide chemistry:

Nylon 6,12

Nylons are the polyamide products from the polycondensation of diamines with dicarboxylic acids. Dodecanedioic Acid (DDDA) is used as the diacid monomer in Nylon 6,12 adhesives, resins and filaments.



The continuous process employed by the MPW1 process area utilizes a plug flow reactor, which produces nylon 6-6 as its primarily product. The

DuPont Washington Works has divided the Title V Permit Application into the fourteen separate business units. This permit covers Business Unit 5 of 14: Nylon Resins Production.

SIC Codes: 2819, 2821, 2824.

Equipment Changes

DuPont listed multiple pieces of equipment, which have been removed from service since the original permit issuance. The following equipment was permitted, but never installed and therefore is being removed from the Emission Unit Table within Section 1.1 of the proposed permit:

Emission Unit ID	Description
151Z-1S	Bulk Storage Tank
151Z-10S-DL	Drum Loading Unit
ZADP	Additive Pots
ZADC	“C” additive system
257-02S	MPW2 Transfer System
Z408S	Glass Feed System

This renewal also included two new pieces of equipment, which were originally approved via permit determination PD10-011. DuPont also submitted a minor modification application under R30-10700001-2003(MM05) to reflect the operation of this equipment, which consists of a feed tank (152Z-6T1S) and reactor (152Z-6T2S). The new requirements pertaining to this equipment can be found within Section 4.0, for the Salt Plant of the proposed permit, under condition 4.1.2 and 4.1.3 for opacity and PM (lb/hr) limits, respectively. It is also necessary to note that the minor permit modification (MM05) as referenced above was incorporated and proposed for the first time by the renewal.

Emissions Summary

Nylon Area Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	(2009) Actual Emissions
Carbon Monoxide (CO)	6.0	2.68
Nitrogen Oxides (NO _x)	79.42	32.7
Particulate Matter (PM ₁₀)	105.05	26.08 filterable + condensable
Total Particulate Matter (TSP)	142.15	27.0
Sulfur Dioxide (SO ₂)	0.23	0.09
Volatile Organic Compounds (VOC)	1.53	1.14

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	(2009) Actual Emissions
Biphenyl	1.0	2.21
Ethylene Glycol	0.8	0.025
Glycol Ethers	25.1	0.35

Some of the above HAPs may be counted as PM or VOCs.

The following table listed the changes in potential as compared to the previous Title V permit:

Nylon Emissions Summary [Tons per Year]		
Regulated Pollutants	Previous Permit	Renewal Permit
Carbon Monoxide (CO)	5.5	6.0
Nitrogen Oxides (NO _x)	18.53	79.42
Particulate Matter (PM ₁₀)	214.8	105.05
Total Particulate Matter (TSP)	262.6	142.15
Sulfur Dioxide (SO ₂)	0.08	0.23
Volatile Organic Compounds (VOC)	1.72	1.53

The largest difference to emissions can be found within the PM category. This change was not a reflection of operational changes, but only a change in the method of determining the potential to emit within the nylon manufacturing process. Much of the operations occur in an aqueous medium thus PM emissions are very low, with the potential coming solely from the initial charging of dry raw material. Historically the unit viewed their 45CSR7 allowable PM limits as being equivalent to their potential to emit for these aqueous mixing/reaction processes. When these operations were evaluated for CAM applicability their calculated potential to emit was found to be much less than allowed by 45CSR7. These large allowable limits defined by 45CSR7 are a function of each unit's process weight rate. Therefore, since the

manufacturing process includes large amounts of water, these rates were inflated when compared to that defined by traditional process calculations. DuPont's application has been updated to reflect this change in PM potential determination methodology.

The other changes stem from DuPont revising emission factors used for natural gas combustion on several process heaters. These changes were justified to be more representative of actual operating conditions for each burner based on taking into account "as run" conditions reflected by each source. These burner emission factor changes are detailed within minor New Source Review permit # R13-1686G.

Title V Program Applicability Basis

With the proposed changes associated with this Renewal of the Nylon Area Permit, this facility as a whole maintains the potential to emit over 100 tons per year of regulated pollutants, over 10 tons per year of individual HAP, and over 25 tons per year of aggregated HAPs. DuPont Washington Works is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate matter and opacity limits for indirect heat exchangers
	45CSR6	Open burning prohibited.
	45CSR7	Particulate matter and opacity limits for manufacturing sources.
	45CSR10	Sulfur dioxide limits.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for Hazardous Air Pollutants Pursuant to 40 C.F.R. Part 63.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63 Subpart DDDDD	Process Heaters and Boilers MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-0278	01-14-77	
R13-0985	01-28-88	
R13-1686G	12-22-10	
R13-1145D	06-14-07	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B, which may be downloaded from DAQ's website.

Determinations and Justifications

45CSR7 TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MANUFACTURING PROCESSES AND ASSOCIATED OPERATIONS

In accordance with 45CSR7, the salt reactors were evaluated for their potential to generate particulate emissions as a result of the chemical reaction itself. During this evaluation it was discovered that the chemical reaction takes place within the aqueous phase. Therefore, it was determined the manufacturing process did not satisfy the criteria of a "type d" source. As a result, these reactors would remain subject to "type a" allowable emission limits consistent with that of a physical change. This physical change results in PM emissions from pneumatic charging of solid raw material. For convenience the definitions of each source type discussed above are listed as follows:

45CSR§7-2.39.a. Type 'a' means any manufacturing process source operation involving glass melting, calcination or physical change except as noted in Type 'c' below.

45CSR§7-2.39.d. Type 'd' means any manufacturing process source operation in which materials of any origin undergo a chemical change, and this chemical change results in the emission of particulate matter to the atmosphere, unless otherwise classified.

As a result of these findings, the emission limits for 45CSR7 remain unchanged within this renewal permit.

With respect to 45CSR7 opacity standards, a facility wide requirement was added as 3.4.7 in order to coordinate multiple recordkeeping requirements, which are common to each section of the proposed permit. Each section has a monitoring requirement, which specifies a visible emission (VE) monitoring frequency and testing criteria. However the recordkeeping requirement associated with this monitoring is specified within 4.4.1, 5.4.1, 6.4.1, and 7.4.1 and points back to the new facility wide requirement in 3.4.7.

Additionally, with respect to the 45CSR7 fugitive emission requirements, the facility wide requirement of 3.1.9 was updated to also include section 3.7 since it's interrelated to the existing condition, which originally incorporated only section 5.1 of 45CSR7.

40 C.F.R. 64 COMPLIANCE ASSURANCE MONITORING (CAM)

Each pollutant specific emission unit was evaluated for CAM applicability. It was determined that no unit exhibits equal to or greater than 100 tons per year of uncontrolled pollutant specific emissions. Therefore, the Nylon facility does not operate any pollutant specific emission units that meet the applicability criteria of 40 C.F.R. §64.2(a)(3). A list of the units evaluated and their uncontrolled potentials are included within this Fact Sheet as Attachment A. As a result of this review, changes were made to the Nylon Area's potential to emit determination methodology. Additional details pertaining to these findings can be found within the emission summary section of this evaluation.

45CSR13 – MINOR NEW SOURCE REVIEW (NSR) Construction and Modification Permit Changes

The permittee was granted a permit to modify specific plant operations on 12-22-10 under permit number R13-1686G. The changes are a result of DuPont revising emission factors used for natural gas combustion on several indirect process heaters having the following equipment IDs (254-01S, 254-02S, 254-05S, 254-06S). These changes were justified to be more representative of actual operating conditions for each burner based on taking into account "as run" conditions reflected by each source, changes to AP-42 emission factors as well as vendor supported emission data. It was noted that equipment ID (254-02S) was previously considered a grandfathered emission unit. These emission factor changes are detailed within the Engineering Evaluation for minor New Source Review permit # R13-1686G. However, it should also be noted here, there have been no process change(s) or changes to actual operations associated with these potential emission estimate revisions.

40 C.F.R 63, Subpart DDDDD (Boiler MACT)

During this review, the permittee identified process heaters, equipment IDs (254-01S, 254-02S, 254-05S, 254-06S, 152Z-V3, and 152Z-V4), as subject to the Boiler MACT. This MACT standard was signed final on February 21, 2011. Since this Regulation was published in the Federal Register on March 21, 2011 the existing source compliance date was established as March 21, 2014. For these existing natural gas fired process heaters, greater than 10 MMBtu/hr, the regulation defines work practice standards in the form of annual tune-ups as well as conducting a onetime energy balance. Even though the compliance date has not yet been reached the proposed permit establishes a placeholder link to these up and coming requirements within section 5 and 6 of the Title V permit.

MISCELLANEOUS CHANGES FROM LAST PERMIT TERM

Within this renewal permit, previous conditions 6.1.6 and 6.1.7 were removed. These requirements pertained to dowerm vaporizer (254-02S) and incorporated applicable 45CSR2 and 45CSR10 requirements for PM and SO₂ as follows:

- 6.1.6. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the following for Type 'b' fuel burning units:

$$14 \text{ MMBtu/hr} * 0.09 = 1.26 \text{ lb/hr PM}$$

(254-02) [45CSR§2-4.1.b]

- 6.1.7. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour in excess of the following for Type 'b' fuel burning units:

$$14 \text{ MMBtu/hr} * 3.1 = 43.4 \text{ lb/hr SO}_2$$

(254-02) [45CSR§10-3.1.e]

These requirements still apply, but are now incorporated by the NSR permit conditions of R13-1686G, which permits the equipment for the first time within the minor source NSR permit. As a result, the dowtherm vaporizer (254-02S) is now being included within the emission limit table of condition 6.1.1. The streamlining language pertaining to state Rules 45CSR2 and 45CSR10 was updated within 6.1.1 to include this particular vaporizer (254-02S).

In addition to the items mentioned above, the following monitoring conditions were also removed from the renewal permit based on exemptions provided within 45CSR2 as well as documented history of compliance.

5.2.2. For the purpose of determining compliance with the opacity limits of 45CSR§2-3.1, the permittee shall conduct opacity monitoring and record keeping for the Dowtherm Vaporizers (152Z-33E and 152Z-44E). Monitoring shall be conducted at least once per month with a maximum of forty-five (45) days between consecutive readings. These checks shall be conducted by personnel trained in the practices and limitations of 40 C.F.R. 60, Appendix A, Method 22 during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of Method 9 within twenty-four (24) hours of the first signs of visible emissions. A Method 9 evaluation shall not be required if the visible emission condition is corrected within twenty-four (24) hours after the visible emission and the sources are operating at normal conditions.

[45CSR§30-5.1.c.]

6.2.2. For the purpose of determining compliance with the opacity limits of 45CSR§2-3.1, the permittee shall conduct opacity monitoring and record keeping for the vaporizers (254-01, 254-02, 254-05, and 254-06). Monitoring shall be conducted at least once per month with a maximum of forty-five (45) days between consecutive readings. These checks shall be conducted by personnel trained in the practices and limitations of 40 C.F.R. 60, Appendix A, Method 22 during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of Method 9 within twenty-four (24) hours of the first signs of visible emissions. A Method 9 evaluation shall not be required if the visible emission condition is corrected within twenty-four (24) hours after the visible emission and the sources are operating at normal conditions. [45CSR§30-5.1.c.]

Since the subject vaporizers (152Z-33E and 152Z-44E) and (254-01, 254-02, 254-05, and 254-06) are all natural gas fired and rated at less than 100 MMBtu/hr these periodic monitoring and VE testing requirements were in accordance with the Director's discretion and necessary for determining initial compliance. Therefore, in accordance with the following 45CSR2 exemption language and a history of compliance, the VE monitoring was no longer determined to be necessary:

8.4.b. The owner or operator of a fuel burning unit(s) which combusts only natural gas shall be exempt from the requirements of subdivision 8.1.a* and subsection 8.2.

8.4.c. The owner or operator of a fuel burning unit(s) with a Design Heat Input of less than 100 mmBtu/hr shall be exempt from the periodic testing requirements of subdivision 8.1.a and the monitoring requirements of subsection 8.2. The Director reserves the right to require testing pursuant to subdivisions 8.1.b and 8.1.c.

*note: 45CSR§2-8.1.a. is the testing section related to visible emissions.

Lastly, within permit condition 6.4.2, an additional recordkeeping provision was added, in accordance with Title V authority. This condition was added to also track compliance with production limits along with the emission limits established by the minor source NSR permit. The writer believes these two requirements belong together since, since they are closely related and interdependent on one another.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

DuPont's Washington Works facility is a major source of carbon dioxide emissions however, the Nylons Production Unit is not subject to PSD permitting requirements at this time due to there being no permitted increases of CO₂ or other regulated pollutants, which would trigger significant increase levels and a PSD permit review at this time.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: April 25, 2011

Ending Date: May 25, 2011

All written comments should be addressed to the following individual and office:

Jesse Hanshaw, P.E.
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Jesse Hanshaw, P.E.
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1216 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Pending

Attachment A

CAM Evaluation Data

Emission Unit	Emission Point	Pollutant	Precontrol, tn/yr	Post Control, tn/yr
152Z-10S	152Z-10E	Total Particulate Matter (TSP)	0.051246	0.051246
152Z-1S	152Z-1E	Total Particulate Matter (TSP)	42	0.42
152Z-AC1	152Z-1E	Total Particulate Matter (TSP)	69	0.69
152Z-AC2	152Z-1E	Total Particulate Matter (TSP)	69	0.69
152Z-AC3	152Z-1E	Total Particulate Matter (TSP)	19.7	0.2
152Z-2S	152Z-2E	Particulate Matter (PM10)	38.1	0.39
152Z-2S	152Z-2E	Particulate Matter (PM2.5)	38.1	0.39
152Z-2S	152Z-2E	Total Particulate Matter (TSP)	38.1	0.39
152Z-AC4	152Z-2E	Total Particulate Matter (TSP)	19.7	0.2
152Z-AC5	152Z-2E	Total Particulate Matter (TSP)	19.7	0.2
152Z-AC6	152Z-2E	Total Particulate Matter (TSP)	33.1	0.34
152Z-V3	152Z-33E	Carbon Monoxide (CO)	0.466032	0.466032
152Z-V3	152Z-33E	Nitrogen Oxides (NOX)	11.6508	11.6508
152Z-V3	152Z-33E	Particulate Matter (PM10)	0.73584	0.73584
152Z-V3	152Z-33E	Particulate Matter (PM2.5)	0.73584	0.73584
152Z-V3	152Z-33E	Sulfur Dioxide (SO2)	0.035916	0.035916
152Z-V3	152Z-33E	Total Particulate Matter (TSP)	0.73584	0.73584
152Z-V3	152Z-33E	Volatile Organic Compounds (VOC)	0.128772	0.128772
152Z-3S	152Z-3E	Total Particulate Matter (TSP)	38.1	0.39
152Z-AC7	152Z-3E	Total Particulate Matter (TSP)	19.7	0.2
152Z-AC8	152Z-3E	Total Particulate Matter (TSP)	19.7	0.2
152Z-AC9	152Z-3E	Total Particulate Matter (TSP)	69.472275	0.69472275
152Z-42S	152Z-42E	Total Particulate Matter (TSP)	42	2.1
152Z-V4	152Z-44E	Carbon Monoxide (CO)	0.466032	0.466032
152Z-V4	152Z-44E	Nitrogen Oxides (NOX)	11.6508	11.6508
152Z-V4	152Z-44E	Particulate Matter (PM10)	0.73584	0.73584
152Z-V4	152Z-44E	Particulate Matter (PM2.5)	0.73584	0.73584
152Z-V4	152Z-44E	Sulfur Dioxide (SO2)	0.035916	0.035916
152Z-V4	152Z-44E	Total Particulate Matter (TSP)	0.73584	0.73584
152Z-V4	152Z-44E	Volatile Organic Compounds (VOC)	0.128772	0.128772
152Z-45S	152Z-45E	Carbon Monoxide (CO)	0.22	0.22
152Z-45S	152Z-45E	Total Particulate Matter (TSP)	25	7.5
152Z-45S	152Z-45E	Volatile Organic Compounds (VOC)	0.05	0.05
152Z-46S	152Z-46E	Total Particulate Matter (TSP)	1.07	1.07
152Z-47S	152Z-47E	Total Particulate Matter (TSP)	2.24	2.24
152Z-4S	152Z-4E	Total Particulate Matter (TSP)	42	2.1
152Z-AC10	152Z-4E	Total Particulate Matter (TSP)	69.472275	0.69472275
152Z-AC11	152Z-4E	Total Particulate Matter (TSP)	19.7	0.2
152Z-AC12	152Z-4E	Total Particulate Matter (TSP)	19.7	0.2
152Z-5S	152Z-5E	Total Particulate Matter (TSP)	42	2.1
152Z-AC13	152Z-5E	Total Particulate Matter (TSP)	69.472275	0.69472275
152Z-AC14	152Z-5E	Total Particulate Matter (TSP)	69.472275	0.69472275
152Z-AC15	152Z-5E	Total Particulate Matter (TSP)	69.472275	0.69472275
152Z-AC16	152Z-5E	Total Particulate Matter (TSP)	69.472275	0.69472275

152Z-6T1S	152Z-6T1E	Particulate Matter (PM10)	0.7722816	0.7722816
152Z-6T1S	152Z-6T1E	Total Particulate Matter (TSP)	3.861408	3.861408
152Z-6T2S	152Z-6T2E	Particulate Matter (PM10)	0.017045304	0.017045304
152Z-6T2S	152Z-6T2E	Total Particulate Matter (TSP)	0.085226522	0.085226522
153Z-B2S	153Z-2-E	Total Particulate Matter (TSP)	0.08	0.08
153Z-B3S	153Z-3-E	Total Particulate Matter (TSP)	0.18	0.18
155-T14S	155-T14E	Particulate Matter (PM10)	0.1335	0.14
155-T14S	155-T14E	Particulate Matter (PM2.5)	0.1335	0.14
155-T14S	155-T14E	Total Particulate Matter (TSP)	0.1335	0.14
157-1S	157-1E	Total Particulate Matter (TSP)	16.4	16.4
157-2S	157-2E	Particulate Matter (PM10)	16.4	16.4
157-3S	157-3E	Total Particulate Matter (TSP)	13	1.3
157-4S	157-4E	Total Particulate Matter (TSP)	1.29	0.03
157-6S	157-6E	Particulate Matter (PM10)	1.05	0.03
157-6S	157-6E	Particulate Matter (PM2.5)	1.05	0.03
157-6S	157-6E	Total Particulate Matter (TSP)	1.05	0.03
252-60S	252-60	Total Particulate Matter (TSP)	0.07	0.07
252-61S	252-61	Total Particulate Matter (TSP)	0.003504	0.003504
252-63S	252-63	Total Particulate Matter (TSP)	0.01	0.01
252-64S	252-64	Total Particulate Matter (TSP)	0.01	0.01
252-73S	252-73	Total Particulate Matter (TSP)	1.54	1.54
252-80S	252-80	Particulate Matter (PM10)	0.7884	0.01
252-80S	252-80	Particulate Matter (PM2.5)	0.0438	0.01
252-80S	252-80	Total Particulate Matter (TSP)	3.942	0.04
252-81S	252-81	Particulate Matter (PM10)	0.08	0.0007884
252-81S	252-81	Particulate Matter (PM2.5)	0.0088	0.00007884
252-81S	252-81	Total Particulate Matter (TSP)	0.4	0.003942
254-01S	254-01	Carbon Monoxide (CO)	0.466032	0.466032
254-01S	254-01	Nitrogen Oxides (NOX)	11.6508	11.6508
254-01S	254-01	Particulate Matter (PM10)	0.73584	0.73584
254-01S	254-01	Particulate Matter (PM2.5)	0.73584	0.73584
254-01S	254-01	Sulfur Dioxide (SO2)	0.036056	0.036056
254-01S	254-01	Total Particulate Matter (TSP)	0.73584	0.73584
254-01S	254-01	Volatile Organic Compounds (VOC)	0.128772	0.128772
254-02S	254-02	Carbon Monoxide (CO)	0.466032	0.466032
254-02S	254-02	Nitrogen Oxides (NOX)	11.6508	11.6508
254-02S	254-02	Particulate Matter (PM10)	0.73584	0.73584
254-02S	254-02	Particulate Matter (PM2.5)	0.73584	0.73584
254-02S	254-02	Sulfur Dioxide (SO2)	0.036056	0.036056
254-02S	254-02	Total Particulate Matter (TSP)	0.73584	0.73584
254-02S	254-02	Volatile Organic Compounds (VOC)	0.128772	0.128772
254-05S	254-05	Carbon Monoxide (CO)	0.549252	0.549252
254-05S	254-05	Nitrogen Oxides (NOX)	13.7313	13.7313
254-05S	254-05	Particulate Matter (PM10)	0.86724	0.86724
254-05S	254-05	Particulate Matter (PM2.5)	0.86724	0.86724
254-05S	254-05	Sulfur Dioxide (SO2)	0.0424976	0.0424976
254-05S	254-05	Total Particulate Matter (TSP)	0.86724	0.86724
254-05S	254-05	Volatile Organic Compounds (VOC)	0.151767	0.151767
254-06S	254-06	Carbon Monoxide (CO)	2.705294118	2.705294118
254-06S	254-06	Nitrogen Oxides (NOX)	22.41529412	22.41529412
254-06S	254-06	Particulate Matter (PM10)	0.587435294	0.587435294

254-06S	254-06	Particulate Matter (PM2.5)	0.587435294	0.587435294
254-06S	254-06	Sulfur Dioxide (SO ₂)	0.046376471	0.046376471
254-06S	254-06	Total Particulate Matter (TSP)	0.587435294	0.587435294
254-06S	254-06	Volatile Organic Compounds (VOC)	0.425117647	0.425117647
254-07S	254-07	Total Particulate Matter (TSP)	1.58	1.58
254-08S	254-08	Total Particulate Matter (TSP)	1.58	1.58
255-06S	255-06	Total Particulate Matter (TSP)	0.02	0.02
255-07S	255-07	Total Particulate Matter (TSP)	0.02	0.02
255-08S	255-08	Total Particulate Matter (TSP)	0.02	0.02
255-55S	255-55	Total Particulate Matter (TSP)	35	0.35
255-56S	255-56	Total Particulate Matter (TSP)	0.08	0.08
255-57S	255-57	Total Particulate Matter (TSP)	0.09	0.09
255-58S	255-58	Total Particulate Matter (TSP)	0.08	0.08
255-59S	255-59	Particulate Matter (PM10)	0.09198	0.09198
255-59S	255-59	Particulate Matter (PM2.5)	0.009198	0.009198
255-59S	255-59	Total Particulate Matter (TSP)	0.4599	0.4599
256-03S	256-03	Total Particulate Matter (TSP)	1.3578	0.02
256-04S	256-04	Particulate Matter (PM10)	0.08	0.0008
256-04S	256-04	Particulate Matter (PM2.5)	0.8	0.008
256-04S	256-04	Total Particulate Matter (TSP)	4	0.04
256-05S	256-05	Carbon Monoxide (CO)	0.01	0.01
256-05S	256-05	Total Particulate Matter (TSP)	0.04	0.04
256-05S	256-05	Volatile Organic Compounds (VOC)	0.01	0.01
256-06S	256-06	Total Particulate Matter (TSP)	0.01	0.01
256-110S	256-110	Total Particulate Matter (TSP)	0.05	0.05
256-111S	256-111	Total Particulate Matter (TSP)	0.03	0.03
256-112S	256-112	Total Particulate Matter (TSP)	0.06	0.06
256-113S	256-113	Total Particulate Matter (TSP)	0.03	0.03
256-114S	256-114	Carbon Monoxide (CO)	0.11	0.11
256-114S	256-114	Total Particulate Matter (TSP)	3.79	0.04
256-114S	256-114	Volatile Organic Compounds (VOC)	0.11	0.11
256-115S	256-115	Carbon Monoxide (CO)	0.11	0.11
256-115S	256-115	Total Particulate Matter (TSP)	0.35	0.35
256-115S	256-115	Volatile Organic Compounds (VOC)	0.01	0.01
256-116S	256-116	Total Particulate Matter (TSP)	6.1	0.07
256-117S	256-117	Total Particulate Matter (TSP)	1.752	0.11
256-119S	256-119	Total Particulate Matter (TSP)	7.1	0.71
256-120S	256-120	Total Particulate Matter (TSP)	10.5	0.11
256-60S	256-60	Total Particulate Matter (TSP)	1.51	1.51
256-62S	256-62	Total Particulate Matter (TSP)	73.5402	4.18
256-59S	256-70	Total Particulate Matter (TSP)	1.93	1.93
256-71S	256-71	Carbon Monoxide (CO)	0.22	0.22
256-71S	256-71	Total Particulate Matter (TSP)	1.81	1.81
256-71S	256-71	Volatile Organic Compounds (VOC)	0.11	0.11
256-72S	256-72	Carbon Monoxide (CO)	0.23	0.23
256-72S	256-72	Total Particulate Matter (TSP)	1.88	1.88
256-72S	256-72	Volatile Organic Compounds (VOC)	0.12	0.12
Z329	Z329E	Total Particulate Matter (TSP)	0.01	0.01
Z107	Z107E	Total Particulate Matter (TSP)	1.27	1.27

Z108	Z108E	Total Particulate Matter (TSP)	0	0
Z109	Z109E	Total Particulate Matter (TSP)	0	0
Z110	Z110E	Total Particulate Matter (TSP)	0	0
Z111	Z111E	Total Particulate Matter (TSP)	0	0
Z112	Z112E	Total Particulate Matter (TSP)	0	0
Z113	Z113E	Total Particulate Matter (TSP)	0	0
Z114	Z114E	Total Particulate Matter (TSP)	0	0
Z115	Z115E	Total Particulate Matter (TSP)	0	0
Z116	Z116E	Total Particulate Matter (TSP)	0	0
Z118	Z118E	Total Particulate Matter (TSP)	0.05	0.05
Z125	Z125E	Total Particulate Matter (TSP)	2.24	2.24
Z128	Z128E	Total Particulate Matter (TSP)	13	1.3
Z131S	Z131	Total Particulate Matter (TSP)	0	0
Z132S	Z132	Total Particulate Matter (TSP)	0	0
Z403S	Z403	Total Particulate Matter (TSP)	0.031	0.031
Z404S	Z404	Total Particulate Matter (TSP)	0.04	0.04
Z405S	Z405	Total Particulate Matter (TSP)	0.04	0.04
Z406S	Z406	Total Particulate Matter (TSP)	0.03	0.03
Z410S	Z410	Total Particulate Matter (TSP)	9.7	0.97
Z411S	Z411	Total Particulate Matter (TSP)	20.148	1.01
Z412S	Z412	Total Particulate Matter (TSP)	0.2	0.2
Z506	Z506E	Total Particulate Matter (TSP)	0.05	0.05
Z610S	Z610	Total Particulate Matter (TSP)	0.14	0.14
Z612S	Z612	Total Particulate Matter (TSP)	0.14	0.14
Z614S	Z614	Total Particulate Matter (TSP)	0.05	0.05
Z623S	Z623	Total Particulate Matter (TSP)	0.05	0.05
Z643S	Z643	Total Particulate Matter (TSP)	0.05	0.05
Z644S	Z644	Total Particulate Matter (TSP)	0.05	0.05
Z701S	Z701	Total Particulate Matter (TSP)	8.45	8.45
Z702S	Z702	Total Particulate Matter (TSP)	1.63	1.63
Z703S	Z703	Total Particulate Matter (TSP)	65.3	6.53
Z704S	Z704	Total Particulate Matter (TSP)	47.4	4.74
Z705S	Z705	Total Particulate Matter (TSP)	1.32	1.32
Z710S	Z710	Total Particulate Matter (TSP)	1.32	1.32
Z725S	Z725	Carbon Monoxide (CO)	0.114	0.114
Z725S	Z725	Particulate Matter (PM10)	0.82344	0.82344
Z725S	Z725	Particulate Matter (PM2.5)	0.0905784	0.0905784
Z725S	Z725	Total Particulate Matter (TSP)	4.1172	4.1172
Z725S	Z725	Volatile Organic Compounds (VOC)	0.05694	0.05694
Z731	Z731E	Total Particulate Matter (TSP)	0.88	0.88
Z732	Z732E	Total Particulate Matter (TSP)	0.88	0.88
Z733	Z733E	Total Particulate Matter (TSP)	1.137	1.137
Z702S	Z737	Particulate Matter (PM10)	10.1178	10.1178
Z702S	Z737	Particulate Matter (PM2.5)	10.1178	10.1178
Z702S	Z737	Total Particulate Matter (TSP)	10.1178	10.1178
Z703S	Z742	Total Particulate Matter (TSP)	5.1	5.1
Z703S	Z743	Total Particulate Matter (TSP)	5.1	5.1
Z744	Z744E	Total Particulate Matter (TSP)	0.028	0.028
Z745	Z745E	Total Particulate Matter (TSP)	0.028	0.028
Z704S	Z746	Total Particulate Matter (TSP)	0.66	0.66
Z801	Z801E	Total Particulate Matter (TSP)	35	0.71
Z803	Z803E	Total Particulate Matter (TSP)	7.884	0.79

Z804	Z804E	Total Particulate Matter (TSP)	0.71	0.71
Z901	Z901E	Total Particulate Matter (TSP)	0.44	0.44
Z904	Z904E	Total Particulate Matter (TSP)	0.44	0.44
Z905	Z905E	Total Particulate Matter (TSP)	0.44	0.44
Z907	Z907E	Total Particulate Matter (TSP)	0.44	0.44
Z908	Z908E	Total Particulate Matter (TSP)	0.44	0.44
Z909	Z909E	Total Particulate Matter (TSP)	0.44	0.44
Z915	Z915E	Total Particulate Matter (TSP)	0.44	0.44
Z916	Z916E	Total Particulate Matter (TSP)	0.44	0.44
Z918	Z918E	Total Particulate Matter (TSP)	0.44	0.44
Z920	Z920E	Total Particulate Matter (TSP)	0.44	0.44
Z921	Z921E	Total Particulate Matter (TSP)	0.44	0.44
Z923	Z923E	Total Particulate Matter (TSP)	0.44	0.44
Z925	Z925E	Total Particulate Matter (TSP)	0.44	0.44
Z926	Z926E	Total Particulate Matter (TSP)	0.44	0.44
Z928	Z928E	Total Particulate Matter (TSP)	0.44	0.44
Z929	Z929E	Total Particulate Matter (TSP)	0.44	0.44
Z931	Z931E	Total Particulate Matter (TSP)	0.44	0.44
Z932	Z932E	Total Particulate Matter (TSP)	0.44	0.44
Z940	Z940E	Total Particulate Matter (TSP)	1.1	1.1
Z941	Z941E	Total Particulate Matter (TSP)	0.44	0.44