



**Company Name:** Tube City IMS (Darlington Site)  
**Permit Number:** TV-0820-0047

**Permit Writer:** Kirk Schneider  
**Date:** 3-9-09

**DATE APPLICATION RECEIVED:** October 15, 2008  
**DATE OF LAST INSPECTION:** October 22, 2007  
**SIC CODE(s):** 7389  
**NAICS CODE(s):** 327999

**FACILITY DESCRIPTION**

Steel slag/separator plant located on the property of the Nucor Steel (Darlington Plant). This facility is co-located with Nucor Steel because Nucor is a Title V source.

**PUBLIC NOTICE INFORMATION**

This draft permit is being public noticed because this facility is a Title V source.

**PROJECT DESCRIPTION**

Title V Operating Permit Renewal. Facility changes since the issue of the previous Title V permit on February 2, 2004 are listed in Table 1. This facility is required to have a Title V operating permit because it is co-located with the Nucor Steel (Darlington Plant) which is required to have a Title V operating permit.

TABLE 1. FACILITY CHANGES SINCE THE PREVIOUS TITLE V PERMIT WAS ISSUED		
Date	Change Type	Description
3-19-04	Construction Permit 0820-0047-CB	Issued to allow the facility to increase the annual plant slag production throughput rate from 175,000 tpy to 225,000 tpy.

**EMISSION UNITS**

Table 2 lists a description of the emission units that are located at this facility.

TABLE 1. EMISSION UNITS			
Unit ID	Unit Description	Control Device	Permit Change
01	Main Separator Plant	Wet Suppression	No Change

**AIR POLLUTION CONTROL EQUIPMENT**

Table 3 lists a description of the air pollution control devices located at this facility.

TABLE 3. AIR POLLUTION CONTROL DEVICES				
Control Device ID	Control Device Description	Install Date	Pollutant(s) Controlled	Permit Change
WS	Wet Suppression	Pre-1994	PM	No Change



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**EQUIPMENT DESCRIPTIONS**

Tables 4 lists a description of the equipment in the emission unit and changes.

<b>TABLE 4. EQUIPMENT DESCRIPTIONS UNIT ID 01 (MAIN SEPARATOR PLANT)</b>						
<b>Equip ID</b>	<b>Equipment Description</b>	<b>Capacity</b>	<b>Install Date</b>	<b>Control Device ID</b>	<b>Stack ID</b>	<b>Permit Change</b>
CR-1	18" x 36" Jaw Crusher	62.0 tph	Pre-1994	WS	CR-1	No Change
H-1	12' x 12' Grizzly Hopper with VGF	300 tph	Pre-1994	WS	H-1	No Change
H-2	10' x 10' Hopper with Syntron Feeder	279 tph	Pre-1994	WS	H-2	No Change
H-201	8'5" x 8'5" Hopper with Syntron Feeder	108 tph	1998	WS	H-201	No Change
S-1	5' x 10' 2 Deck Screen S-1	28.0 tph	Pre-1994	WS	S-1	No Change
S-2	5' x 10' 2 Deck Screen S-2	251 tph	Pre-1994	WS	S-2	No Change
S-201	5' x 12' 2 Deck Screen S-201	108 tph	1998	WS	S-201	No Change
C-1	36" x 65' Conveyor C-1	300 tph	Pre-1994	WS	C-1	No Change
C-1B	42" x 60' Conveyor C-1B	279 tph	Pre-1994	WS	C-1B	No Change
C-2	24" x 33' Conveyor C-2	17.0 tph	Pre-1994	WS	C-2	No Change
C-3	24" x 33' Conveyor C-3	108 tph	Pre-1994	WS	C-3	No Change
C-4	36" x 33' Conveyor C-4	63.0 tph	Pre-1994	WS	C-4	No Change
C-5	24" x 33' Conveyor C-5	81.0 tph	Pre-1994	WS	C-5	No Change
C-6	24" x 33' Conveyor C-6	11.0 tph	Pre-1994	WS	C-6	No Change
C-7	30" x 70' Conveyor C-7	63.0 tph	Pre-1994	WS	C-7	No Change
C-8	30" x 70' Conveyor C-8	108 tph	Pre-1994	WS	C-8	No Change
C-9	30" x 70' Conveyor C-9	108 tph	Pre-1994	WS	C-9	No Change
C-10	30" x 80' Conveyor C-10	108 tph	1998	WS	C-10	No Change
C-11	30" x 100' Conveyor C-11	30.0 tph	1998	WS	C-11	No Change
C-12	30" x 80' Conveyor C-12	45.0 tph	1998	WS	C-12	No Change
SP	Storage Piles	N/A	N/A	N/A	N/A	Added as the storage piles are assigned emission limits



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**INSIGNIFICANT ACTIVITIES**

Table 5 lists a description of the activities that have been determined to be insignificant. These were taken from Form G of the permit application.

<b>TABLE 5. INSIGNIFICANT ACTIVITIES</b>		
<b>Equip ID</b>	<b>Equipment Description</b>	<b>Basis</b>
01	Crane	Insignificant Activities List (A)(24)
02	Forklift	Insignificant Activities List (A)(24)
03 04	2 Scrap Handlers	Insignificant Activities List (A)(24)
05	Backhoe	Insignificant Activities List (A)(24)
06 07	2 Loaders	Insignificant Activities List (A)(24)
08	Bobcat	Insignificant Activities List (A)(24)
09	Excavator	Insignificant Activities List (A)(24)
10 11	2 Pot Carriers	Insignificant Activities List (A)(24)
12 13	2 Welders	Insignificant Activities List (A)(6)
14	Pickup Truck	Insignificant Activities List (A)(24)
15	Fuel Truck	Insignificant Activities List (A)(24)
16	Boom Truck	Insignificant Activities List (A)(24)
17	Water Truck	Insignificant Activities List (A)(24)
18 19	2 Off Road Trucks	Insignificant Activities List (A)(24)
20	Revert Scrap Cutting	Insignificant Emissions



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**FACILITY WIDE CRITERIA POLLUTANT EMISSIONS**

Table 6 lists the facility-wide criteria pollutant emissions. This facility does not have any CO, NO<sub>x</sub> or VOC emissions and so they were not included in Table 6.

TABLE 6. FACILITY-WIDE CRITERIA POLLUTANT EMISSIONS													
Pollutant	PM				PM <sub>2.5</sub>				PM <sub>10</sub>				Method for Estimating Emissions
	Potential Uncontrolled		Potential Controlled		Potential Uncontrolled		Potential Controlled		Potential Uncontrolled		Potential Controlled		
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
Separator Plant	16.34	10.50	0.80	0.53	1.28	0.82	0.06	0.03	7.80	5.01	0.38	0.25	AP-42
Storage Piles Wind Erosion	0.24	1.07	0.24	1.07	0.02	0.08	0.02	0.08	0.12	0.51	0.12	0.51	AP-42
Storage Piles Material Transfer	0.45	1.96	0.45	1.96	0.03	0.14	0.03	0.14	0.21	0.93	0.21	0.93	AP-42
Unpaved Roads	N/A	62.44	N/A	4.19	N/A	7.41	N/A	0.50	N/A	28.10	N/A	1.88	AP-42
<b>TOTAL</b>		<b>75.97</b>		<b>7.75</b>		<b>8.45</b>		<b>0.75</b>		<b>34.55</b>		<b>3.57</b>	

**FACILITY-WIDE HAP EMISSIONS**

This facility does not emit any HAP's.



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**REGULATORY APPLICABILITY REVIEW**

Tables 7 through 12 list the applicable and non-applicable regulations as they apply to this facility.

<b>TABLE 7. REGULATORY APPLICABILITY REVIEW</b>			
Regulation	Applicable		Comments
	Yes	No	
<b>SOUTH CAROLINA AIR POLLUTION REGULATIONS REGULATION 61-62.1 THROUGH 62.99</b>			
<b>REGULATION 61-62.1 SECTION II(E) (SYNTHETIC MINOR)</b>		X	This section applies to sources that wish to limit emissions to avoid PSD. This facility is not subject to PSD because it does not violate the PM and PM <sub>10</sub> PSD significant emission rates.
<b>REGULATION 61-62.1SECTION II(G) (CONDITIONAL MAJOR)</b>		X	This section applies to sources that wish to limit emissions to avoid Title V. This facility is required to have a Title V operating permit because it is co-located with the Nucor Steel (Darlington Plant) which is required to have a Title V operating permit.
<b>STANDARD 1 (FUEL BURNING OPERATIONS)</b>		X	There are no fuel burning sources at this facility.
<b>STANDARD 2 AMBIENT AIR QUALITY STANDARDS</b>	X		Air dispersion modeling to demonstrate compliance with this standard has been exempted by the Modeling section. See modeling summary dated October 7, 2003.  No changes have been made to this facility since the issue of the last operating permit that would require this facility to submit air dispersion modeling to demonstrate compliance with the standard.
<b>STANDARD 3 WASTE COMBUSTION/REDUCTION (STATE ONLY)</b>		X	This regulation applies to sources that burn anything other than virgin fuels for any purpose. There are no fuel burning sources at this facility.
<b>STANDARD 3.1 MEDICAL WASTE INCINERATORS</b>		X	This facility does not incinerate medical waste.
<b>STANDARD 4 (EMISSIONS FROM PROCESS INDUSTRIES)</b>			
<b>SECTION I (GENERAL)</b>	X		This section specifies that EPA Method 9 be used to conduct all opacity observations unless otherwise approved by the Department.
<b>SECTION II THROUGH SECTION VII</b>		X	These sections are for the processes of sulfuric acid manufacturing, kraft pulp and paper manufacturing, cotton gins, hot mix asphalt manufacturing and metal refining. This facility does not have any of the processes specified in these sections.



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**TABLE 8. REGULATORY APPLICABILITY REVIEW**

Regulation	Applicable		Comments
	Yes	No	
<b>SOUTH CAROLINA AIR POLLUTION REGULATIONS REGULATION 61-62.1 THROUGH 62.99</b>			
<b>STANDARD 4 (EMISSIONS FROM PROCESS INDUSTRIES)</b>			
<b>SECTION VIII OTHER MANUFACTURING</b>	X		<p>This section specifies process PM limits where not specified in SC Standard 1, SC Standard 3 or elsewhere in SC Standard 4. There are no PM limits specified in those for this type of facility and so this section applies.</p> <p>Based on June 1999 Department guidance, it was determined that this facility would have one process consisting of Slag Processing with a process rate of 175 tph. This section specifies that the following equation be used to determine the process PM limit (E (lb/hr)) for process rates greater than 30 tph: <math>E \text{ (lb/hr)} = ((55.0) (P^{0.11}) - 40)</math>.</p> <p>For Slag Processing: <math>E \text{ (lb/hr)} = ((55)(175^{0.11})) - 40 = (97.0726 - 40) = 57.07</math></p>
<b>SECTION IX VISIBLE EMISSIONS WHERE NOT SPECIFIED ELSEWHERE</b>	X		<p>This section sets 2 visible emission limits for visible emissions not specified elsewhere in the state regulations. If a process was installed or constructed before August 31, 1985 then its visible emission limit is 40% opacity as specified by Section IX(A). If it was installed or constructed after August 31, 1985 then its visible emission limit is 20% opacity as specified by Section IX(B).</p> <p>This applies to all of the equipment listed in Table 4 except for the storage piles. For all of the equipment listed in Table 4, it was assumed where an installation date of pre-1994 is indicated that the equipment was installed after 1985. A 20% opacity limit was assigned to each piece of equipment listed in Table 4 based on its installation date.</p>
<b>SECTION X (NON-ENCLOSED OPERATIONS)</b>			
<b>SECTION X(A)</b>	X		<p>This facility is a non-enclosed operation. This section requires all non-enclosed operations to be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line. This requirement is specified in this facility's operating permit.</p>
<b>SECTION X(B)</b>	X		<p>This section requires this facility to maintain dust control of the premises and any roadway it owns or controls by paving, or other suitable measures. Oil treatment is prohibited.</p>
<b>SECTION X(C)</b>	X		<p>This facility has crushing operations. This section requires that all crushing, drying, classification and like operations to employ a suitable control device acceptable to the Department and discharge no more particulate matter than that specified in Section VIII.</p> <p>This facility's crushing operations employ wet suppression which is a suitable control device to the Department and a process PM limit has been assigned as specified in Section VIII.</p>



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**TABLE 9. REGULATORY APPLICABILITY REVIEW**

Regulation	Applicable		Comments
	Yes	No	
<b>SOUTH CAROLINA AIR POLLUTION REGULATIONS REGULATION 61-62.1 THROUGH 62.99</b>			
<b>STANDARD 4 (EMISSIONS FROM PROCESS INDUSTRIES)</b>			
<b>SECTION XI TOTAL REDUCED SULFUR EMISSIONS OF KRAFT PULP MILLS</b>		X	This facility does not manufacture Kraft pulp.
<b>SECTION XII PERIODIC TESTING</b>		X	This section requires that recovery furnaces and lime kilns of pulp and paper mills; Rotary kilns, clinker coolers, and rotary dryers of Portland Cement plants; Sulfuric acid plants, Metallurgical furnaces greater than 10 tons/hr normal output, asphalt plants, fertilizer plants and any other sources which are deemed necessary be tested. No periodic testing is required by this section for any of this facility's equipment.
<b>STANDARD 5 VOLATILE ORGANIC COMPOUNDS</b>		X	This standard is specific to certain processes. This facility does not have any process operations that are specified by this regulation and therefore this standard does not apply.
<b>STANDARD 5.1 BACT/LAER FOR VOC (STATE ONLY)</b>		X	This regulation applies to sources that have VOC emissions. This facility does not emit any VOC.
<b>STANDARD 5.2 CONTROL OF OXIDES OF NITROGEN</b>		X	This regulation applies to sources that combust a fuel and are capable of emitting NO <sub>x</sub> . This facility does not have any fuel combustion sources.



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**TABLE 10. REGULATORY APPLICABILITY REVIEW**

Regulation	Applicable		Comments
	Yes	No	
<b>SOUTH CAROLINA AIR POLLUTION REGULATIONS REGULATION 61-62.1 THROUGH 62.99</b>			
<b>STANDARD 7 PREVENTION OF SIGNIFICANT DETERIORATION</b>		X	<p>This regulation defines two(2) categories of major stationary sources for PSD applicability. These categories are potential emissions of 100 tpy of PSD pollutants for 28 specific industry types and potential emissions of 250 tpy of PSD pollutants for all other industry types. This facility is not specified as one of the 28 specific industry types and is in the other industry type category. PSD applicability is pollutant specific and is based on the potential to emit considering federally enforceable air pollution controls and/or federally enforceable operating conditions (i.e. emission limits, production limits etc.) This facility emits only PM and PM<sub>10</sub> which are PSD pollutants but emissions of each are less than 250 tpy.</p> <p>This facility on January 28, 2004, submitted a construction permit application to increase its production capacity from 175,000 tpy to 225,000 tpy. This facility is co-located with the Nucor Steel (Darlington Plant) which is a PSD source. Since this facility is co-located with a PSD source it was required to show that the PM emissions from the proposed production throughput increase would not violate the PM and PM<sub>10</sub> PSD significant emission rates. This facility showed that the production throughput increase would not exceed the PSD significant emission rates of 25 tpy for PM and 15 tpy for PM<sub>10</sub>. On March 19, 2004, this facility was issued non-PSD Construction Permit 0820-0001-CB authorizing the increase.</p>
<b>STANDARD 7(C) AMBIENT AIR INCREMENTS</b>		X	<p>This facility is located in Darlington County which had PSD minor source baselines established for SO<sub>2</sub>, NO<sub>x</sub> and PM<sub>10</sub> in 1988 and 1993. Air dispersion modeling to demonstrate compliance with this standard has been exempted by the Modeling section. See modeling summary dated October 7, 2003.</p> <p>No changes have been made to this facility since the issue of the last operating permit that would require this facility to submit air dispersion modeling to demonstrate compliance with the standard.</p>
<b>STANDARD 7.1 STANDARDS FOR NON ATTAINMENT AREAS</b>		X	This facility is not located in a non-attainment area as specified by this regulation.
<b>STANDARD 8 TOXIC AIR POLLUTANTS (STATE ONLY)</b>		X	This facility does not emit toxic air pollutants as defined in this regulation.
<b>REGULATION 61-62.6 CONTROL OF FUGITIVE PARTICULATE MATTER</b>			
<b>SECTION I CONTROL OF FUGITIVE PARTICULATE MATTER IN NON-ATTAINMENT AREAS</b>		X	For the purpose of this regulation, this facility is not located in a non-attainment area.
<b>SECTION II CONTROL OF FUGITIVE PARTICULATE MATTER IN PROBLEM AREAS</b>		X	This facility is not located in a problem area as determined by the Department.



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**TABLE 11. REGULATORY APPLICABILITY REVIEW**

Regulation	Applicable		Comments
	Yes	No	
<b>SOUTH CAROLINA AIR POLLUTION REGULATIONS REGULATION 61-62.1 THROUGH 62.99</b>			
<b>REGULATION 61-62.6 CONTROL OF FUGITIVE PARTICULATE MATTER</b>			
<b>SECTION III (CONTROL OF FUGITIVE PARTICULATE MATTER STATEWIDE)</b>			
<b>SECTION III(a)</b>	X		This facility is a non-enclosed operation capable of generating fugitive PM emissions. This section requires that fugitive PM emissions be controlled in such a manner and to the degree that it does not create an undesirable level of air pollution.
<b>SECTION III(b)</b>	X		<p>This section specifies that restrictions and requirements may be contained in operating permits on a case-by-case basis that are deemed appropriate and necessary to control fugitive particulate matter in accordance with reasonably available control technology.</p> <p>An additional visible emission limit of 10% opacity each for the slag storage piles, raw material storage piles, product storage piles, the loading, transportation, and unloading or dumping of vehicles and vehicular traffic was deemed appropriate and necessary to ensure that these do not cause excessive fugitive emissions.</p> <p>It was also deemed appropriate and necessary that this facility shall not process slag with a moisture content of less than 1.5% to ensure that the slag storage piles do not cause excessive fugitive emissions. The EPA through guidance as outlined in their April 11, 1995 letter to the Bureau of Air Quality entitled "Use of Controlled Emission Factors in Non-Metallic Mining Industries" has defined saturated material as material with a moisture content (%) verified to be above 1.5%.</p>
<b>SECTION III(c)</b>	X		This facility shall not use any method of materials handling which will generate fugitive particulate matter that is not fully described in the permit application.
<b>SECTION III(d)</b>	X		Volatile organic compounds shall not be used for dust control purposes. Oil treatment is also prohibited.
<b>SECTION IV EFFECTIVE DATE</b>	X		The effective date of this regulation is July 1, 1979.
<b>REGULATION 61-62.63 NESHAP FOR SOURCE CATEGORIES</b>		X	This regulation is an interim standard that applies to any owner or operator who constructs or reconstructs a major or area source of hazardous air pollutants (HAP) where the EPA has not promulgated a MACT standard. This facility does not emit any HAP's.
<b>REGULATION 61-62.68 CHEMICAL ACCIDENT PREVENTION</b>		X	This facility does not store or use chemicals subject to this regulation above the threshold quantities required to trigger applicability.



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**TABLE 12. REGULATORY APPLICABILITY REVIEW**

Regulation	Applicable		Comments
	Yes	No	
<b>SOUTH CAROLINA AIR POLLUTION REGULATIONS REGULATION 61-62.1 THROUGH 62.99</b>			
<b>REGULATION 61-62.70 TITLE V</b>	X		Any source that has the potential to emit greater than 100 tpy of criteria pollutants, single HAP emissions greater than 10 tpy or total HAP emissions greater than 25 tpy (major source of HAP emissions) is required to have a Title V permit.  The only criteria pollutant this facility emits is PM and it does not emit any HAP's. This facility does not have the potential to emit greater than 100 tpy of PM but is required to have a Title V operating permit because it is co-located with another source that is required to have a Title V operating permit.
<b>REGULATION 61-62.72 ACID RAIN</b>		X	This facility does not have any affected sources subject to this regulation as specified in Section 72.6 (Applicability).
<b>REGULATION 61-62.96 NITROGEN OXIDES (NO<sub>x</sub>) BUDGET TRADING PROGRAM</b>		X	This facility does not have any affected sources subject to this regulation as specified in Section 96.4 (Applicability).
<b>REGULATION 61-62.99 NITROGEN OXIDES (NO<sub>x</sub>) BUDGET PROGRAM REQUIREMENTS FOR STATIONARY SOURCES NOT IN THE TRADING PROGRAM</b>		X	Section 99.41(Applicability) states that this regulation only applies to kilns. This facility does not have any kilns.
<b>FEDERAL REGULATIONS</b>			
<b>40CFR60 NEW SOURCE PERFORMANCE STANDARDS (NSPS)</b>		X	This facility does not have sources that meet the applicability requirements of any of the subparts contained in this standard.
<b>40CFR61 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)</b>		X	This facility does not have sources that meet the applicability requirements of any of the subparts contained in this standard.
<b>40CFR63 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (MACT)</b>		X	This facility does not have sources that meet the applicability requirements of any of the subparts contained in this standard.
<b>40CFR64 COMPLIANCE ASSURANCE MONITORING (CAM)</b>		X	This regulation applies to sources required to have a Title V operating permit and this facility is required to have a Title V permit. CAM applies to PSEU's that are located at a major source, subject to an emission limitation from a non-exempt regulation and uses a control device to meet the limitation and has pre-controlled emissions greater than the major source threshold. This facility does not have any PSEU's that meet these requirements.

**SUMMARY AND CONCLUSIONS**

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.