AP32 Section:	12.5.1
Background Chapter	3
Reference:	21
Title:	Report on Particulate/PM10 Compliance Testing. Performed for: Nucor Steel, Crawfordsville, IN, RT Mill Baghouse Stack. By: RCP Environmental on March 31, 1998. RCP Project No.: 033198.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Indianapolis

OFFICE MEMORANDUM

To: Phil Perry Date: July 24, 1998

From: Jarrod C. Fisher JCF Thru: Ed Surla

Subject: Nucor Steel
Crawfordsville, Indiana
Source ID No. 107 00038
Permit No. 107 3702

The subject company has submitted a report concerning particulate and PM-10 testing of the Cold Reversing Mill #2 controlled by mist elimination. EPA Methods 1-5, 9, and 202 were used. The test was conducted on March 31, 1998 by RCP, Inc. The purpose of the testing was to determine compliance status of the facility with regards to an emission limitation under an operating permit condition. I have reviewed this report and found the sampling procedures used and results to be acceptable to this Office. A copy of the test report is filed in the Compliance Data Section. The following is a summary of the test results:

Maximum Permitted Rate:	102.74 tons per hour
Average Rate During Test:	88.30 tons per hour
Filterable PM Testing (Method 5)	
Average Measured Emissions:	0.218 lb/hr
Allowable Emissions (326 IAC 6-3-2):	7.2 lb/hr
PM-10 Testing (Method 5 + Method 202)	
Average Measured Emissions:	0.218 lb/hr
Allowable Emissions :	7.2 lb/hr
Highest 6-min Opacity:	0%
Average Opacity:	0%
Pressure Drops of Mist Eliminator:	East In: 4.0 in. H_2O
	East Out: 6.4 in. H_2O
	West In: 2.8 in. H_2O
	West Out: 5.0 in. H_2O

STATUS: In Compliance (at 85.9% of max. permitted rate)

cc: J. Fisher
WPS/General Files, Montgomery Co.

ESS
INC
VCF-10V.

RCP
Environmental
Regulatory Compliance Professionals
5455 West 86th Street Suite 113*Indianapolis, Indiana 46268
(317)872-1306

REPORT ON PARTICULATE/PM10 COMPLIANCE TESTING

Performed for:
Nucor Steel
Crawfordsville, Indiana
RT Mill Baghouse Stack
by: RCP Environmental
on March 31, 1998
RCP Project No.: 033198

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STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT

To the best of our knowledge, the data presented in this report is accurate and complete.

Respectfully Submitted by:

Michael Dicen, Vice-President

RCP Environmental

Nucor Steel
Crawfordsville, Indiana

RCP Project No. 033198

1-1 PROJECT OVERVIEW

RCP Environmental was contracted by Nucor Steel to perform particulate emissions sampling of the RT Mill Baghouse Stack in Crawfordsville, Indiana on March 31, 1998. The objective of the testing was to determine compliance to air operation permit requirements. The following personnel were involved with the testing program:

RCP, Inc.	Michael Dicen
RCP, Inc.	Paul Fabian
Nucor Steel	Rick Lyons
IDEM	Steve Friend

The testing program included particulate (Methods 1-5,202) and visible emissions determination (Method 9). Below is a summary of the results:

Table 1-1
Summary of Test Results

Date	Runs	Time	Location	Emissions (lbs/hr)	Permitted Emissions (lbs/hr)
3/31/98	1-3	7:30- 12:33	Baghouse Stack	0.218	5.62

Nucor Steel
Crawfordsville, Indiana

RCP Project No. 033198

2-1 Results

FILTERABLE PARTICULATE
BAGHOUSE STACK

Run No.		1	2	3	Avg.
Gas Conditions					
Ts	Stack Temperature (°F)	89	87	88.8	88.5
Bwo	Moisture (volume %)	1.16	1.01	0.52	0.90
O2	Oxygen (dry volume %)	20.9	20.9	20.9	20.9
CO2	Carbon Dioxide (dry volume %)	0.0	0.0	0.0	0.0
Volumetric Flow Rate					
Qa	Actual Conditions (acfm)	74,104	76,203	75,194	75,167
Qstd	Standard Conditions (dscfm)	72,307	72,652	71,870	71,610
Particulate Results					
C_f	concentration, filterable (gr/dscf) condensable (gr,dscf)	0.002	0.0004	0.0004	0.00035
E_f	Emission Rate, filterable (lb/hr) filterable and condensable (lb/hr)	0.13	0.26	0.26	0.2180

OFFICE OF AIR MANAGEMENT
TEST OBSERVATION REPORT

Agency: IDEM/OAM/CDS

Date(s) of Test: 3-31-98

Company Name: Nucor Plant ID: 107-00038

Plant Location: Title V: (Y) No

City: Crawfordsv. IN County: Montgomery Reported by: SLF

Pollutants: PM/PM10 Reason(s) for Test: Operating Permit

Facility(s) Tested: Temper/Reverse Mill

Person(s) Interviewed: Rick Lien

Test Observer(s): SLF

Test Methods: 1-4, 5, 202

Process Description: Sheet steel goes thru a gage reduction by compression between two rolls. An oil spray is used to lubricate the surface and a mist eliminator is used to control the emissions.

Company Name: Nucor Date(s) of Test: 3-31-98

Test Summary/Comments: Run 1 did not start until 7:30 AM due to process problems. Run 1 7:30 to 8:35 AM. There were no process or testing problems during this run. Each coil went thru 5 passes to get to the reduced gauge. All leak checks were good. A DGM audit was good. M202 was being done w/ M5 to determine PM/PM10 emissions. Run 2 started at 9:40 and finished at 10:55 AM. The process went down at 10:00 AM and did not start back up until 10:15 due to a broken air line. Two coils were 5 pass and one coil was 3 pass during this run. Run 3 started at 11:25 AM. I left the site after run 3 started. AP's for the mist eliminators were recorded during the coils.

Run 1

Roll wt (lbs)	Passes
46160	5
44610	5
44950	5

Run 2

44750	5
46210	5
44210	3

cc: IDEM-OAM, Compliance Data Section

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