AP32 Section:	12.5.1
Background Chapter	3
Reference:	16
Title:	Source Sampling for Particulate, HCl, CO and Visible Emissions, Pickle Line and EAF Baghouse Inlet. Nucor Steel, Crawfordsville, IN. May 14-16, 1996.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Indianapolis

OFFICE MEMORANDUM

To: Herm Carney Date: July 26, 1996

From: Jarrod C. Fisher JCF Thru: Ed Surla

Subject: Nucor Steel
Crawfordsville, Indiana
Pickle Line and EAF Baghouse Inlet
Source ID No. 107 00038

The subject company has submitted a report concerning particulate and carbon monoxide emissions of the pickle line and EAF baghouse inlet, respectively. Sampling was conducted on May 14 through May 16, 1996 by Ramcon Environmental Corporation. The purpose of the sampling was to determine the compliance status of the facility with regards to the permit conditions. The test protocol was approved by Steve Friend, and the test was observed by Steve Friend. 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:

Pickle Line - Scrubber outlet	
Maximum Production Rate:	150 tons/hr
Average Production Rate:	129 tons/hr
Allowable Particulate Emissions Rate:	0.8 lb/hr
Average Particulate Emissions Rate:	0.07 lb/hr
Highest 6-min Opacity:	0 %
Average Opacity:	0 %

EAF Baghouse - Inlet	
Maximum Production Rate:	260 tons/hr
Average Production Rate:	216 tons/hr
Allowable CO Emission:	260 lb/hr
Average CO Emission:	177 lb/hr

STATUS: **In Compliance** (Pickle line at 86%, and EAF Baghouse at 83%)

Note: The third run of the particulate emissions test was voided due to below required production rate.

cc: W. Stanfield
J. Fisher
General Files, Montgomery Co.

RAMCON

Environmental Corporation

Regional Offices:
Philadelphia, Pennsylvania
Houston, Texas

Source Sampling for Particulate, HCl,
CO and Visible Emissions

Pickle Line and EAF Baghouse Inlet

NUCOR STEEL
CRAWFORDSVILLE, INDIANA
May 14-16, 1996

Dave Sulc, Engineer
Nucor Steel

Raymond R. Jenkins
Vice President/Division Manager-Memphis
RAMCON Environmental Corporation

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II. TEST RESULTS

A. Discussion of Results:

Tables A and B report the results of the particulate and HCl testing and the CO testing done on the Pickle Line and the Baghouse Inlet, respectively.

The particulate and HCl emissions results are reported in Table A below in terms of concentration, grains per dry standard cubic foot (gr/dscf), and emissions, pounds per hour (lb/hr), values.

Particulate and HCl Emissions Test Results
May 15-16, 1996

Test Run	Time	Particulate			HCl	
		gr/dscf	lb/hr	Isokinetics, %	gr/dscf	lb/hr
1	13:30 - 14:35	0.0002	0.01	104.5	0.0015	0.11
2	18:02 - 19:10	0.0016	0.12	99.2	0.0020	0.15
3	14:10 - 15:15	0.0027	0.20	98.0	0.0018	0.14
	Average:	0.0015	0.11		0.0018	0.13

Table B tabulates the CO emissions results which are reported in concentration, parts per million (ppm), dry basis, in emission, pounds per hour (lb/hr) and pounds per ton (lb/ton), values.

Table B
CO Concentration Summary
May 14, 1996

Run	Time	O2, %	CO2, %	CO, ppm	CO, lb/hr	CO, lb/ton
1	11:58 - 12:58	20.2	1.2	50.30	197.80	0.92
2	13:14 - 14:14	20.4	0.9	47.80	173.72	0.80
3	14:47 - 15:47	20.5	0.7	49.13	179.57	0.83
	Average:	20.4	0.9	49.08	183.70	0.85

B. Problems Encountered:

During the third run of testing the Pickle Line for HCl and particulate, the process was not in production as noted in the plant data log forms.