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February 9, 2017

Julie Morita, M.D Commissioner, Department of Public Health & Environment 333 South State St., 2nd Floor Chicago, IL 60604

Re: Second Amendment to Request for Variance from the Rules and Regulations for Control of Emissions from the Handling and Storage of Bulk Solid Materials-American Zinc Recycling (f/k/a Horsehead Corporation)

Dear Commissioner Morita:

Pursuant to Section 8.0 of Article II, Part E of the City of Chicago Department of Public Health's (the "Department") Rules and Regulations for Control of Emissions from the Handling and Storage of Bulk Solid Materials (the "Bulk Solid Materials Rules" or "Rules"), American Zinc Recycling ("AZR") submits this Second Amendment to its pending request for variance dated June 13, 2014, as amended by the Horsehead Corporation submission to the Department dated September 25, 2017, for its facility located in Chicago, Illinois (the "Chicago Plant"). This Second Amendment further amends the original June 2014 variance request to inform the Department of the following changes and developments relating to the variance relief requested:

- 1. Because of the corporate name change from "Horsehead Corporation" to "American Zinc Recycling Corp.," it is AZR who is now seeking a variance;
- 2. The coke materials enclosure structure required by Section 6.0(6) of the Bulk Solid Materials Rules has been completed but a separate plumbing issue relating to the water supply line to the fire hydrants has been identified by the City of Chicago and is being addressed by AZR; and
- 3. The completion of the coke material enclosure structure, and other operational changes at the Chicago Plant, provide additional factual support for the Department's decision to grant AZR's pending request for a variance from the fugitive dust monitors requirement in Section 3.0(4)(a)-(e).

¹ The June 16, 2014 variance request addressed Sections 3.0(2)(c), 3.0(4)(a)-(e), 3.0(8)(d), 5.0(2), 5.0(5), and 5.0(6)(d). As stated in Horsehead's February 19, 2015 Response to the Department's January 26, 2015 Request for Additional Information, Horsehead has completed the activities for which its 2014 variance request sought an extension of time.

Each of the above developments and accomplishments are described in further detail below.

I. Corporate Name Change from Horsehead to AZR

On May 1, 2017, the corporate name "Horsehead Corporation" was changed to "American Zinc Recycling Corp." The change was limited to a change in the name of the corporation. There were no changes to the corporate structure. Therefore, AZR, formerly known as Horsehead, amends its pending variance request to submit that the Department grant AZR, rather than Horsehead, a variance from the following requirements of the Bulk Solid Materials Rules:

- (1) the fugitive dust monitors requirement in Section 3.0(4)(a)-(e) of the Bulk Solid Materials Rules;
- (2) an extension of the coke materials enclosure deadline to within fourteen (14) days of the issuance of the certificate of occupancy for the enclosure structure by the City of Chicago;
- (3) the requirement in Section 5.0(6)(d) to prevent "any" pooling of water at the facility to allow the temporary occurrence of pooling water in areas in the southern portion of the facility following rainfall events; and
- (4) the requirement in Section 5.0(5)(b) to use Chemical Stabilizers and/or water heating systems when temperatures fall below 32° F for its IRM storage piles.

II. Request for Variance to Extend the Enclosure Deadline in Rules Section 6.0(6)

Horsehead, now AZR, has a pending request for relief from the enclosure deadline established in Section 6.0(6) of the Rules. Section 6.0(6) requires AZR to remove or fully enclose all coke and coal bulk materials within two years following the submission of its Enclosure Plan. That deadline was June 11, 2016. AZR diligently pursued the completion of the design, permitting and construction of its coke materials enclosure building. cooperatively with representatives of the Department, the City Fire Department and the City Building Department to complete the enclosed coke materials building. AZR has regularly provided monthly progress reports to the Department concerning the status and progress in completing the structure. Construction of the enclosure structure was completed before the end of 2017. However, in the course of the City's inspection of the completed enclosure structure for purposes of issuing a certificate of occupancy, the City identified a separate issue relating to the existing water supply line to the fire hydrants at the facility which has delayed issuance of the occupancy certificate. AZR is working cooperatively with the City to address this water supply line issue and upon its completion, it reasonably expects the certificate to be issued. Therefore, AZR is requesting that the Department grant a variance extending the deadline in Section 6.0(6) of the Rules for the completion of the coke materials enclosure to within fourteen days of the issuance of the certificate of occupancy by the City in order to allow a reasonable amount of time to transfer the existing coke materials, and any new coke material deliveries, into the new enclosure structure once that certificate is issued.

A. Description of the Coke Materials Enclosure Construction Completion

AZR completed the coke materials enclosure structure at a substantial cost, estimated at approximately \$2 million. The enclosure structure is approximately 5,725 square feet. It is equipped with an overhead door which allows trucks bringing in the coke to the Chicago Plant to enter the building and unload the coke within the enclosure structure. The design and construction of the enclosure were closely reviewed by the City Building Department. In addition, the fire protection system, including the existing water supply line and fire hydrants locations, also was reviewed by the City's Fire Department.

The enclosure building was completed in May 2017. However, in April 2017, an unexpected issue arose regarding the process water lines at the plant and the potential need for a new water supply line for the building fire pump. After it was determined that a new water supply line was needed, the construction of this line was delayed due to another unforeseen development. The City required a change in the location of the firewater access, which in turn required a new permit for the water supply line. After obtaining the new permit, construction of the plumbing commenced this past summer but a City plumbing inspector halted construction of the water supply line and requested a copy of the enclosure plumbing drawings prior to allowing construction of the line to commence. Preliminary plumbing design drawings were submitted to the City and a meeting with the City Fire Department's engineering personnel was held to review the design. The Fire Department agreed the preliminary plumbing design drawings were accepted but also requested that the fire hydrant location plan for the Chicago Plant be submitted for review. A fire hydrant location plan has been submitted to the Fire Department.

The solution to the fire water supply line issue necessitates performing a significant plumbing project to install new fire hydrants and lines to those hydrants. Due to the onset of winter and ground freezing conditions, the field work to complete this plumbing project could not be completed before the end of 2017. It will be completed once all City approvals and permits are obtained and the ground conditions are suitable for performing the work. It is reasonably expected that this can be accomplished prior to June 2018. Upon the City's issuance of a certificate of occupancy for the enclosure structure, AZR will transfer the coke materials used in its on-site operations into the enclosure.

An updated Chicago Plant diagram showing the location of the new enclosure building is attached as Exhibit A. Because the enclosure building cannot yet be used, the updated Chicago Plant diagram continues to show the coke storage area.

Once the certificate of occupancy for the enclosure structure is issued, all new coke materials received at the Chicago Plant will be conveyed by truck into the enclosure building for storage. All coke materials used in the Chicago Plant operations will be moved by front end loader from the enclosure building directly to the coke hopper. None of the relatively small quantities of coke materials,² which currently consist solely of petcoke,³ used in the Chicago Plant operations will be stored outside. As previously explained in the original and amended variance request, all coke materials are consumed in the AZR production process. The full enclosure of all coke materials will further reduced the Chicago Plant's potential for fugitive dust emissions.

B. The Extension of the Enclosure Deadline in Section 6.0(6) has not Caused a Nuisance or Adversely Affect the Surrounding Community (§ 8.0(2)(d)).

Section I.C. (at pp. 3-4) of the September 2015 Amended Variance Request described in detail why the granting of the requested extension of the enclosure deadline in Section 6.0(6) of the Rules would not cause a nuisance or adversely affect the surrounding community. All of the information previously provided to show that no nuisance or adverse effect on the surrounding community would occur has proven to be true. There were no, and have not subsequently been, complaints of any kind received from residents in the surrounding community. The interim precautionary measures that were taken which significantly reduced the surface area of the stored coke (using two piles instead of three) and the added concrete barriers around the remaining coke storage areas maximized the containment of coke material and reduction of fugitive emissions from that material during their limited outdoor storage period. The limited quantity of coke material on site, the protected location of the coke storage piles, their high moisture content, and their large particle size all contributed to preventing or minimizing any fugitive emissions from the coke materials. As represented in the 2015 Amended Variance Request, the Chicago Plant has remained in compliance with all applicable fugitive particulate matter emissions requirements in its Illinois Title V Air Permit issued in May 2002. Finally, continued quarterly opacity testing at the Chicago Plant from 2015 to the present did not identify any exceedances of the applicable opacity limits within the facility and repeated testing pursuant to Method 22 detected no visible emissions at the property line of the Plant. The changes to the Chicago Plant's operating procedures to comply with the City's Rules have further reduced fugitive

² Under the terms of the July 2, 2015 Provisional Administrative Order Pertaining to Coke & Coal Bulk Material Uses issued to Horsehead by the City's Commissioner of Planning and Development, the total daily amount of coke or coal materials present at the Chicago Plant "shall not exceed 4,516 tons at any one time" and the annual receipt of coke materials is limited to 52,808 tons.

³ As explained in Horsehead's September 25, 2015Amended Variance Request (at p. 2), Horsehead agreed to a request by the United States Environmental Protection Agency to limit its petcoke use to 10% by weight. Notwithstanding the ability to use 10% petcoke, Horsehead has not been using any petcoke in its manufacturing process since agreeing to the U.S. EPA's request in 2015.

⁴ The relevant requirements of the Illinois Title V Air permit were described in the September 2015 Amended Variance Request at pp. 4-5.

emissions such that the typical opacity results for on-site handling activities is zero emissions. Copies of the opacity test results for the last two quarters of 2017 are included as Exhibit B.⁵

C. The Proposed Methods to Achieve Compliance with the Regulations will be Successfully Completed. (§ 8.0(2)(f))

As required by Section 8.0(2)(f) of the Rules, Horsehead proposed to complete the enclosure building in cooperation with the City Building and Fire Departments in a diligent manner. It has done so. Although unexpected and unforeseen developments have occurred during the process, AZR continually kept the Department informed of these developments and its progress in resolving all issues that arose through monthly progress reports. The Chicago Plant also complied with all other provisions of the Bulk Solids Rules, save those identified in its pending variance request.

D. Alternative Methods and Factors Influencing the Choice of Applying for a Variance (§ 8.0(2)(g))

The information presented in the September 2015 Amended Variance Request is unchanged and is hereby incorporated by reference.

E. Statement Regarding the Person's Current Status as Related to the Subject Matter of the Variance Request (§ 8.0(2)(h))

AZR has complied with the enclosure requirement of the City's Rules. However, it requests that the Department grant it the requested variance to extend the deadline in Section 6.0(6) of the Rules to within fourteen (14) days of the City's issuance of the certificate of occupancy, which is expected to occur by June 2018.

III. Second Amendment to Variance Request from the Fugitive Dust Monitors Requirements of Section 3.0(4)(a)-(e) of the Bulk Solid Materials Rules.

AZR requests that the Department consider the new information presented in this Second Amendment in its consideration of Horsehead's prior request for a variance from the fugitive dust monitors requirement of Section 3.0(4)(a)-(e) of the Bulk Solid Materials Rules. The enclosure structure is completed and the outside storage of coke material used in the Chicago Plant's production process will cease upon issuance of a certificate of occupancy for the enclosure structure. As stated above, continued quarterly opacity testing shows consistent compliance with fugitive emissions limits. Further, the quantity of coke materials received at the Chicago Plant also has remained in consistent compliance with the limits imposed under the City's Provisional Throughput Order.

⁵ Due to their voluminous nature, the opacity test results for all quarters of testing are not included here. However, Horsehead will provide any or all of the additional opacity testing reports upon the Department's request.

The only outside storage activity involving bulk solid materials that will remain at the Chicago Plant are the Iron Rich Material ("IRM") product storage piles. As explained in detail in the 2014 original Variance Request, the IRM material stored outside forms a crust which minimizes the potential for airborne release from these piles. AZR's dust suppression system has proven successful at protecting against off-site emissions during the handling of IRM on-site. As previously stated, the Chicago Plant continues to perform all of the other requirements of the City's Rules for preventing or minimizing airborne emissions of IRM. The limited handling activities associated with the IRM product do not warrant or justify the imposition of the fugitive air monitors requirement under the Rules.

IV. Limited Updates to the Chicago Plant Information Previously Provided in Support of the Variance Request.

With limited exception, the information required by Section 8 of the Bulk Solid Materials Rules which was included in the Original and Amended variance requests is still accurate today. With regard to the Original Variance Request's description of the quantities and types of materials, processes and activities for which the variance is requested (see Original Variance Request at Section II & Exhibits A + B and Section III), as required by Rules Sections 8.0(2)(b) and § 8.0(2)(c)), the types of materials and the production processes at the Chicago Plant have not changed. The Chicago Plant still uses Electric Arc Furnace dust (EAF dust) and coke materials to produce Waelz Oxide (WOX) and IRM product. EAF dust is received by railcars and trucks directly into the Conditioning & Blending ("C&B") Building, which provides full enclosure for the receipt and handling of this material. EAF dust is offloaded and processed in the recycling operation within fully enclosed facilities and equipment to produce the WOX and IRM. As stated in the Original Variance Request, all EAF dust is contained indoors.

Various areas of the recycling operation conducted in the C&B Building are vented through baghouses with permitted stack emissions. WOX product is captured in fabric filter product collectors (baghouses). Emissions from these product collectors are regulated under the terms of the facility's existing Clean Air Act Title V Permit. The facility has 24-hour opacity monitors to measure if particulate matter is emitted from the product collector stacks at above permitted levels. Alarms alert plant personnel if limits are exceeded, and the affected part of the product collector is shut down for repairs. Hence, the previous description of the production processes provided is hereby incorporated by reference.

There have been limited changes in the handling of bulk solids materials at the Chicago Plant which are relevant to the pending request for variance. These changes relate only to the handling of IRM. No changes have been made to the handling of WOX, which is still conveyed from the product collectors via an enclosed conveyor to a loading chute that extends into closed,

⁶ As stated above, the Chicago Plant presently uses 100% metallurgical coke, and has voluntarily limited future coke use to a ratio of 90% metallurgical coke to 10% petroleum coke.

pressure differential rail cars for off-site shipment. These railcars also are in an enclosed building. The WOX is never exposed to the outdoors.

The changes to the IRM handling operations involve minor changes in how the IRM is temporarily stored for testing of product quality (i.e., whether product specifications are met) prior to being loaded for off-site transfer or moved to the IRM storage piles on the southern portion of the Plant property to await future off-site transfer. IRM product is removed from the kilns, transferred by pay loader and placed into either a silo or a storage pile in a designated area near the kilns. After testing, the IRM is moved by a pay loader to one of three areas. Two of those areas are temporary storage areas located close to the barge loading area from which the IRM is then loaded directly onto barges via an enclosed conveyor system. The third area is the IRM storage piles area on the southern portion of the property. Each of these three storage area are shown on the updated Chicago Plant diagram attached as Exhibit A. As before, fugitive emissions, if any, are controlled with water suppression when moving and loading IRM at the facility. When the IRM is removed from the silos for transfer to one of the three storage areas, water suppression is used as a precautionary measure on IRM piles to further reduce the potential for emissions from movement of IRM on site, as described in AZR's written fugitive dust control plan previously submitted to the Department. The application of water to the IRM accelerates the formation of the crust on the surface of the IRM, which is typically about 4-5 inches thick.

V. Conclusion

AZR is working cooperatively with the City of Chicago's Fire and Building Departments to address the water supply line and hydrants issue so that it can obtain the certificate of occupancy for the enclosure structure as soon as possible. Because the completion of the enclosure project depends on certain factors beyond AZR's control, such as the issuance of permits and weather conditions, AZR is requesting that the requested variance for the extension of the enclosure structure's completion deadline be tied to the issuance of the certificate of occupancy. It is not possible to predict with certain a specific date by which that certificate will be issued, but it is reasonably expected to be accomplished by June 2018. There have not been any other significant changes to the Chicago Plant's operations, and any changes relevant to the variance relief requested by AZR have been identified in this submission.

AZR respectfully submits that it has satisfied the requirements for a variance in Section 8.0 of the Rules and requests that the Commissioner grant the requested variance relief for the reasons described above.

Respectfully submitted,

Brad Sutek Plant Manager

EXHIBIT A To Second Amendment to AZR's Request for Variance

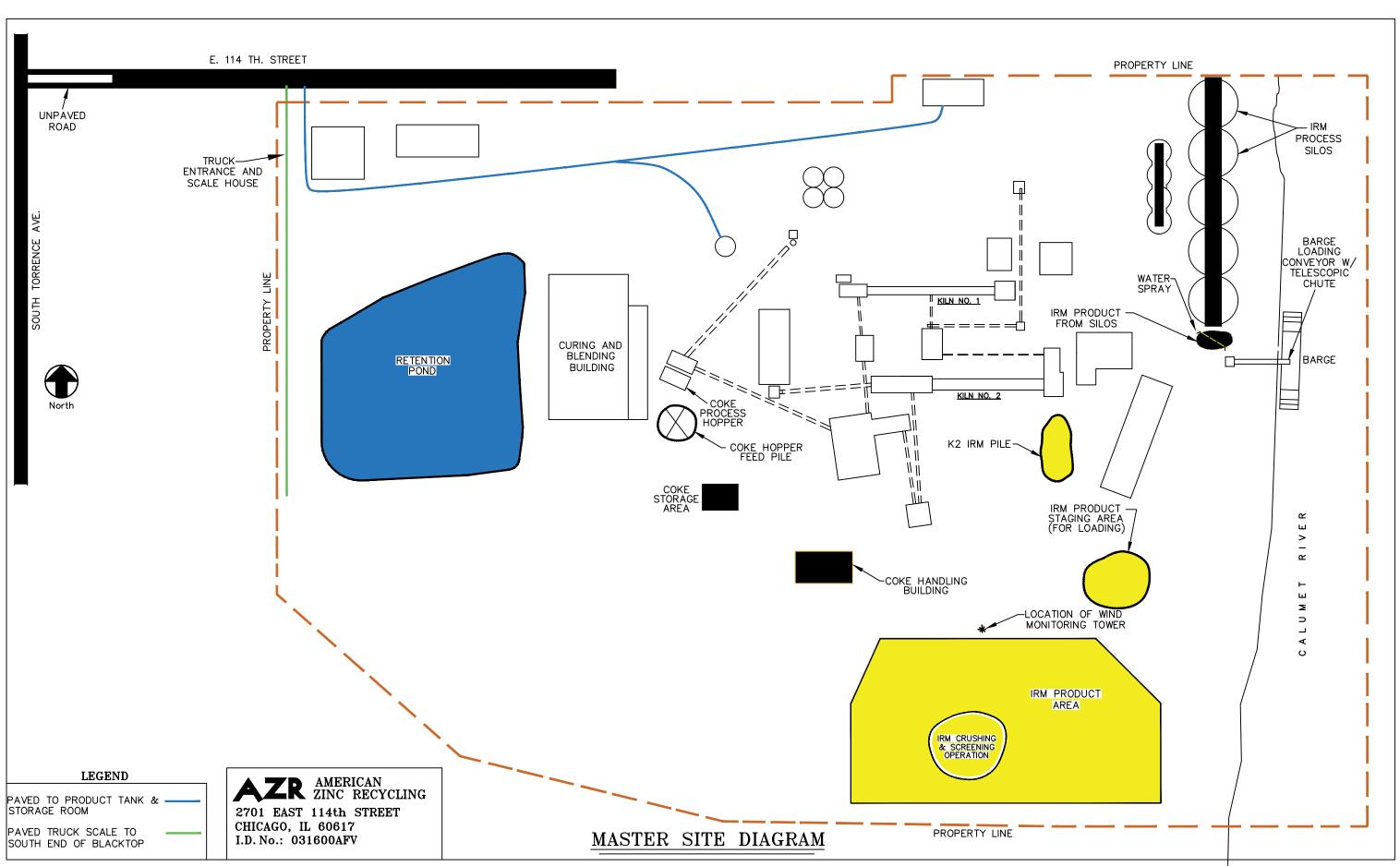


EXHIBIT B To Second Amendment to AZR's Request for Variance



American Zinc Recycling – MTL-XXXX Quarterly Visible Emissions and Opacity Summary

DATE:	9/5/17	BAGHOUSE ID#: Quarter & Merty	
TIME:	AU DAY	INSPECTED BY: Shannon Ansvews	

Instructions: This checklist is to be used by site personnel as a guide to perform visible emissions and opacity observations. Walk-around inspections should not be limited to only items included on this form. Any corrective actions required are to be reported on this form. Comments / concerns on this form should be kept brief and concise.

Quarterly Visible Emissions and Opacity Summary

Location	Type of Fugitive Emissions Source	Duration of Observation (Minutes)	Average Opacity (%)
Coke Hopper	Pugitive	30 min	0
Off Spec Coke Pile	Rightive	30 min	0
Temp. IRM Storage Pile (F) St Of Coke (P) (P)	NA	,	
Temporary IRM Storage Pile	Positive	7 min	0
Main IRM Storage Pile	Figitive	30 min	0
Coke Loading Pile	Rostive	14 min	D
West Coke Pile	N/A		
East Coke Pile	N/A		
Main IRM Storage Bunkers	Fuz, tive	7 min	0

Location	Type of Fugitive Emissions Source	Duration of Observation (Minutes)	Average Opacity (%)
IRM Truck Loading	NIA		
Paved Road - Main Truck Road	TRAFFIL EMUSION	60 min	0
Parking Lot	Traffic Emission	60 min	0
Paved Road - To IRM Truck Loading	TRAGAC EMISSION	60 min	0
Unpaved Road - Section of 114 th Street	TMAGGL EMISSION	60 min	0
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DESCRIBE EMISSIONS START NOVO	0700	Mano	13	0	X	Image: Control of the con	2	43				<u> </u>
START NONE	STOP	PE: CONTINUOUS		2	HQ	T <u>V</u>	10	 				
START MA STOP MA		☐ INTERMITTENT ☐	14	Q		LT)	H(U)	44				
WATER DROPLETS PRESENT:		DROPLET PLUME:	15	U	LÔ.	()	0	45				
NO□ YES□		ED DETACHED	16			0	0	46				
POINT IN THE PLUME AT WHICH OP, START 36 AND	ACITY WAS STOP		17	10	lŏ	15	LĎ	47				
DESCRIBE BACKGROUND	3108	3PT MOUP	18	0	M	R	त्र	48				
START CEB Building	STOP	CAB	19	Ö	X	X	X	49				
BACKGROUND COLOR (/)	SKY CON	DITIONS	20	ă	K	X		50				
START JUN STOP TAM	START	Cleane	21	18	8	 \(\) \	1	-				ļ
START 9 STOP Q	WIND DIR	ECTION ALAJIA /	***************************************	K	14	9	Q	51				
AMBIENT TEMP	WET BULE	B TEMP RH.percent	22	Ų		0	Ø	52		<u> </u>		
START 70 STOP 70		'	23		0	0	0	53				
	_		24	L'O		M	0	54				
Source Layout Sketch	Dra	w North Arrow	25	0	()	O	0	55				
			26	0	A	6	(n)	56	-			
			27	ñ	0	ŏ	X	57				
,		n Point	28	8	X		12	58				
				8	\	10	R	 				
			29	ΙÄ	$\frac{1}{2}$	B	1	59				
Sun - Wind -			30 AVERA			\mathbb{C}_{Ω}	\cup	60	D OF I	I A DIN	GS ABC	<u></u>
Plume and	Observers	s Position	HIGHES)n :	& WERE	OS ABO)VE
Stack	<u></u>	_	RANGE			EADIN	3S	<u> </u>	<u> </u>		$\frac{}{}$	
	0°			<u> </u>	MININ				MAXIM	IUM ()	
Sun Loca	ation Line		OBSER	VER'S N	IAME (F	RINT)	51	nove	1.16			
COMMENTS			OBSER'	VER'S	ICNA	4	J(1	IINE	レ DAT	E ^ '		
COMMENTO			COSER	v L.I (O C	70	7			I DAI	-91	<1r	1
			ORGAN	IZATIØ	\ \	-1				-//	4	/
I HAVE RECEIVED A COPY OF THESE SIGNATURE	OPACITY	OBSERVATIONS	CERTIF	IED BY:					DAT	E		
TITLE		DATE	VERIFIE	D BY:		·			DAT	E		

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: AZR-C	hicago		Provide sketch of o	oserver's position r	elative to the source:
Address: 2701 E.	114th st				
Facility ID:					
Date: 9/5/17					1
Location Description: /	nain truck	Caron			15 ft
1	er truck				15 16
Hours of Observation:	l hn				
Observer's Name:		Indvews	Wind North	Observer	Note: Not to Scale.
Certification Date of Obs	• •	<u> </u>	Observer's A	Affiliation:	AZR
Point of Emissions: F	Roadway/Tire In	nterface	Height of D	scharge Poi	
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge			15 ft		l5 ft
Direction from dischar	:ge	90	degrees	90	degrees
Height of observation	point		4 ft		4 ft
BACKGROUND DESCRIPTION		Thee	s Iska	Treos	Ska
WEATHER CONDITIONS			3 3) 	1 3/	<i>"0</i>
Wind Direction		F:	com the	Fr	om the
Wind Speed			mph		mph
Ambient Temperature			F		F
SKY CONDITIONS (e.g., cle	ar,	Cla	10.0	Clas	10: A
overcast, % clouds, etc.) PLUME DESCRIPTION		<u>u</u>	100	Clou	D G
Color		BEAUTING SERVICE	n 1 / 0	1000-0	
Distance Visible			ove	none.	
OTHER INFORMATION		71	miles	/ r	niles
OTHER INFORMATION	SUMMARY	OF AVERAGI	C OPACTTY		
		Time	1400	Opad	city (%)
Set Number		Start - En		Sum	Average
1	14	(00 - 1	406	0	8
2	141	1960 - 19	112	0	0
3	14	12 - 1	418	0	Ò
4	14	18 - 1	124	0	0
Readings ranged from	O to	0	% opacity.		
Average of 12 readings:	0				

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

ompany _	AZR			Observer	S. Andrews Japustrial
cation _	Chicago	o FL	- Fac	ility Type _	Japustrial
int of e	emissions Roadwa	y/Tire In	terface		
	Vehicle Pass #	0	Seconds 5	10	Vehicle Type
	1	0	Ò	0	Truck
	2	0	0	0	
	3	Õ	0	0	PAY lossee Truck Truck
	4	0	0	0	Truck
scriptic	on of Road (Paved/U	Jnpavez, 1	Dry/Wat):_		alclin

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: AZR	Company: AZR		Provide sketch of observer's position relative to the source:		
Address: 2701 E. 114 12 St					
Facility ID:					
Date: 9/5/17					1
Location Description: UN	Location Description: WMP AND - 114 57				15 ft
Control Device:	truck				15 10
Hours of Observation:	60mm			1	
Observer's Name:	Amorews		Wind North	Observer	Note: Not to Scale.
Certification Date of Obs	erver:		Observer's At	filiation:	
Point of Emissions: R	oadway/Tire I	nterface	Height of Dis	scharge Poir	nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	ft	1	.5 ft
Direction from dischar	ge	90 de	egrees	90	degrees
Height of observation	point	4	ft		4 ft
BACKGROUND DESCRIPTION		O Cu	nts/sku	plant	5/5/4
WEATHER CONDITIONS			"1" B	- 	-1×.0
Wind Direction		From	m the WWW	WNWE	om the
Wind Speed		9 m	ıph	Ω	mph
Ambient Temperature		70	F	30) F
SKY CONDITIONS (e.g., cle	ar,	clas	10 N	cl.	10.4
overcast, % clouds, etc.) PLUME DESCRIPTION				<u></u>	Joy
Color		460			
Distance Visible		MON		Non	
OTHER INFORMATION		/ mi	les	$\frac{7}{1}$	niles
	SUMMARY	OF AVERAGE (OPACITY		
_		Time		Opac	:ity (%)
Set Number		Start - End	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Sum	Average
1.	3	30 - 33	6	0	0
2	3:	36 - 34	17	0	Ö
3	31	12 - 39	54	0	O
4	3	54 - 4	a	D	0
Readings ranged from	O to	0	% opacity.		
Average of 12 readings:	0				

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

					Page 2	of <u>2</u>
Company _	AZR			Observer _	S. Andrews	
Location _	Chicago,	71		ility Type	Inpustrial	
Point of ϵ	emissions Roadwa	ay/Tire In	terface		,	
	Vehicle Pass #	0	Seconds 5	10	Vehicle Type	
	1	0	0	0	Trvek	
	2	0	0	0	TRVK	
	3	0	6	0	CAR	
	4	G	0	0	SUV	
Descriptio	on of Road (Paved/	Unpaved, I	Ory/Wet):_	mol	st 915/17	
_	Obser	ver Signa	ture		Date	

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: AZR		Provide sketch of observer's position relative to the source:			
Address: 2701 E, 11412 St					
Facility ID:					
Date: 9/5/17					<u> </u>
Location Description:	aved Roso J	o Irm los	bing		15 ft
Control Device:	,0 huck				
Hours of Observation:				ф	↓
Observer's Name: Sc	Andvens		Wind North	Observer	Note: Not to Scale.
Certification Date of Obs	erver:		Observer's Af	filiation:	
Point of Emissions: R	oadway/Tire In	nterface	Height of Dis	scharge Poir	nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	ft	1	.5 ft
Direction from dischar	ge	90 de	egrees	90 (degrees
Height of observation	point	4	ft		4 ft
BACKGROUND DESCRIPTION		SICY,	trees	Skar	nees
WEATHER CONDITIONS				U,	
Wind Direction		Froi	n the ${\cal W}$	Fre	om the w
Wind Speed		m	ph 16		mph 16
Ambient Temperature			F 70		F 2
SKY CONDITIONS (e.g., cle	ar,	Clau	<i>(</i> 1).	clyada	
overcast, % clouds, etc.) PLUME DESCRIPTION			wy .	<u>awa</u>	
Color		Mor	JO	A LO	. <i>20</i>
Distance Visible		, , , ,	les		niles
OTHER INFORMATION	· · · · · · · · · · · · · · · · · · ·		100		11100
	SUMMARY	OF AVERAGE (OPACITY		
O-t- Name		Time		Opac	city (%)
Set Number		Start - End		Sum	Average
1	251	0 - 1	546	0	Ø
2	151	(o -) !	522	0	0
3	150	8 - 15	34	O	Q
4	153	4 - 15	40	Õ	Ò
Readings ranged from	to		% opacity.		
Average of 12 readings:					

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

of emissions Roadway		Fac:		S. Anorews Inpustrial
	//Tire In	terface		
Vehicle Pass #	0	Seconds 5	10	Vehicle Type
1	0	0	0	TRUC
2	0	9	0	TRUCK
3	0	0	0	PAYLODER
4	\mathcal{O}	0	0	TRUK TRUK PAYLODER PAIC ING
ription of Road (Paved/U	npaved, l	Dry/Wet):	mo	
iption of Road (Faved/o	npaved, i	pry/wec)	, , , , , , , , , , , , , , , , , , ,	

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: HZR			Provide sketch of obs	server's position re	elative to the source:
Address: 270 E.	114th St	- Chicago			
Facility ID:		V			
Date: 9/5/17					1
Location Description:	Parking Lo	T			15 ft
Control Device: 150	Trivek				
Hours of Observation:	00 min			4	
Observer's Name:	S. Paprews		Wind North	Observer	Note: Not to Scale.
Certification Date of Obs	erver:		Observer's A	ffiliation:	
Point of Emissions: R	oadway/Tire In	ıterface	Height of Di	scharge Poin	nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	ft	1	5 ft
Direction from dischar	ge	90 d	egrees	90	degrees
Height of observation	point	4	ft		4 ft
BACKGROUND DESCRIPTION		SKU	Bllage	SK,	Folia V
WEATHER CONDITIONS		", ")	· · · · · · · · · · · · · · · · · · ·	7	
Wind Direction		Fro	m the	Fr	om the
Wind Speed		n	ıph		mph
Ambient Temperature			F' 1		F'
SKY CONDITIONS (e.g., cle	ar,	0 1010	100 706	Church	22/4
overcast, % clouds, etc.) PLUME DESCRIPTION			705	Cloud)) <i>10 3</i>
Color		NOVE	i (filian en gravidara parte viste) D	1 104	40,500
Distance Visible		- ·			
OTHER INFORMATION		/ mi	les	7 n	niles
	SUMMARY	OF AVERAGE (OPACITY		
		Time		Opac	city (%)
Set Number		Start - End	***************************************	Sum	Average
1	14	140 - 14	યુદ્	0	0
2	14	46 - 10	152	0	Õ
3	1452 - 14		58	Ŏ	Ŏ
4	ί̈́Ч	158 - 15	03	0	0
Readings ranged from) to	0	% opacity.		
Average of 12 readings:					

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

Page 2 of 2 Company AFR Observer S. AMDEWS

Location PARKING LOT Facility Type INDUSTRIAL Point of emissions Roadway/Tire Interface Vehicle Pass # Seconds Vehicle Type 0 10 Description of Road (Paved/Unpaved, Dry/Wet): Observer Signature

FUGI		E EMISSION INSPE-			
Chicago Plant, 27	oration (Chicago Plant) '01 E. 114th St, Chicago, IL	Observer Six	420		
Company Rep. SHANNO	<u></u>		117		
Sky Conditions	loudy	Wind Direction $-l$	Wind Direction West		
Precipitation /	UDNE	Wind Speed 16	Wind Speed 16 mph		
Industry Secondary Refining	g of Non Ferrous Metals	Process Unit PROPER	TY LINE (1/8)		
Sketch Process Unit: In points and/or actual em		on relative to source; in	dicate potential emission		
CONVEYOR SILOS SILOS DE OBSERVEOR RIVER SUN					
OBSERVATIONS					
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)		
Begin Observation	1120	2 min	0.0		
,	1122)	1.		
	1124				
	1126				
	1128				
	1130				
	110				
		<u> </u>			
End Observation		V,			
		Total Sample Tim			
Total Emission Time: Emission Frequency: (Total Emission Time/Total Sample Time) x 100%					

FUG		E EMISSION INSPE TION – METHOD 2.	
Chicago Plant, 2	poration (Chicago Plant) 701 E. 114th St, Chicago, IL	Observer Sif	Imprews
Location 60617 Company Rep. SMANN	on Andrews	Affiliation A	ZR
1	lady		
	none	Wind Speed	west
Industry Secondary Refinit	ng of Non Ferrous Metals	Į.	RTY LINE (2/8)
Sketch Process Unit: I points and/or actual en	ndicate observer positi 1ission points.	on relative to source; in	dicate potential emission
	D'= SUN BINEY	DOBSEEVER	\$
	OBSER	VATIONS	
7	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	1100	2 min	0.0
	1104 1106 1106		
End Observation		Total Sample Tim	e: lomin
		Total Emission Ti Emission Frequen (Total Emission Time/Tota	me: O

FUG		E EMISSION INSPE TION – METHOD 2.			
Company Horsehead Corp Chicago Plant, 27 Location 60617	poration (Chicago Plant) 701 E. 114th St, Chicago, IL	Observer S. Apprews			
Company Rep. SMANN	ON ANDREWS	Affiliation HC Date 9/	5/17		
	oudy :	Wind Direction	West.		
Precipitation WW		Wind Speed / 16	· / / /		
Industry Secondary Refinin	g of Non Ferrous Metals	Process Unit PROPERT	TY LINE (3/8)		
Sketch Process Unit: In points and/or actual em	idicate observer posit ission points.	ion relative to source; in	dicate potential emission		
7 emis		STORAGE	Sw Sw		
		VATIONS			
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)		
Begin Observation	10.30	2 min	. 0		
	1032				
	1034				
	1036				
	1040	V	V		
	- 				
End Observation					
		Total Sample Tim Total Emission Tin Emission Frequen (Total Emission Time/Total	me: O		

FUG	ITIVE OR SMOKI	E EMISSION INSPE	CTION	
<u></u>		TION - METHOD 2		
Company Horsehead Corp	Coration (Chicago Plant)	Observer S. Andrews		
Chicago Plant, 2701 E. 114th St, Chicago, IL Location 60617		Affiliation HE		
Company Rep. SHAWNON	ANDREWS	Date 9/5	17	
	oudy	Wind Direction V	ves+	
Precipitation	IONE	Wind Speed , 16	mob	
Industry Secondary Refinir	g of Non Ferrous Metals	Process Unit PROPE	RTY LINE (9/8)	
Sketch Process Unit: In points and/or actual em	ndicate observer positi iission points.	on relative to source; in	dicate potential emission	
To the state of th	5 ro ends	SUN TRA	IN CICS	
		VATIONS '		
,	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)	
Begin Observation	1010	2 min	0.0	
	1012			
	1014			
	10/6			
	10(8			
	1030	V	V	
			_	
End Observation		_		
	· · · · · · · · · · · · · · · · · · ·	Total Sample Tim Total Emission Ti		
		Emission Frequen	cy:	

Total Control	THE PROPERTY AND ADDRESS OF THE PARTY OF THE		
J. C. J. C.	TOVE OR SMOK	E EMISSION INSPE	CCTION
The second secon	OUISIDE LOC	ATION - METHOD 2	2
Company Horsehead Cor	poration (Chicago Plant)	Observer S. A	iprew's
Location 60617	701 E. 114th St, Chicago,	IL.	ZR .
Company Rep. SHANNO	IN ANDREWS	Date 9	115/17
Sky Conditions (lady	Wind Direction -	vest
Precipitation	Mong	1	16 mgh
Industry Secondary Refinir	ng of Non Ferrous Metals	Process Unit PROPE	RTY LINE (5/8)
Sketch Process Unit: I points and/or actual en	ndicate observer posi nission points.	tion relative to source; in	dicate potential emission
E WELLINGTON	TRYING TRYCICS TRYCICS	PLANT ROAD NIND OF CITA	The dr
	OBSER	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	920) have	n
***************************************	937.	-d-min	- V
	121		
	- 956		
	438		
	940		1
	14.17.11		
End Observation			6
		Total Sample Time Total Emission Time Emission Frequen (Total Emission Time/Total	me: CO

FUG		E EMISSION INSPE 1710N – METHOD 2.		
Company Horsehead Cor Chicago Plant, 2 Location 60617	poration (Chicago Plant) 2701 E. 114th St, Chicago, I	Observer Sc A	nprews ZR	
Company Rep. SHANN	ON AMBREWS		5/17	
Sky Conditions Co	vdz	Wind Direction . W	ies+	
Precipitation	10NG	Wind Speed l	6 mph	
Industry Secondary Refining of Non Ferrous Metals Process Unit PROPERTY LINE (6/8)				
Sketch Process Unit: I points and/or actual en	dission points.	ion relative to source; in	dicate potential emission	
	MATIN PLANT RORD OUR CHEEN	CONTAINMENT POND	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)	
Begin Observation	910a	2 min	00 -	
	912 914, 916 918			
End Observation	!0mm	Total Sample Tim	(0)	
		Total Emission Tin Emission Frequen (Total Emission Time/Total	me:	

FUG		EMISSION INSPE	
12	OUTSIDE LOCAT	TION - METHOD 22	2
Company Horsehead Corp	Parison (Chicago Plant)	Observer S. A	norews
Location 60617	701 E. 114th St, Chicago, IL	Affiliation A	R.
Company Rep. 5,	Anorews Cloudly	Date 9/5	17
Sky Conditions	Cloudy	Wind Direction	vest
Precipitation	MONE	Wind Speed 16	Mph
Industry Secondary Refining of Non Ferrous Metals Process Unit Monary (Int (8/8)			2 (ine (8/8)
Sketch Process Unit: In points and/or actual em	idicate observer position ission points.	on relative to source; in	dicate potential emission
en se	O JERGROWTH TREES OBSERVER	SILDS WIND	
		'ATIONS	
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	8:30 an	2 min	00:00
	832 am		
	8:34		
	8:36 8:38		
	8:38		
End Observation			
/		Total Sample Tim Total Emission Tin Emission Frequen (Total Emission Time/Total	me: One:

FUGITIVE OR SMOKE EMISSION INSPECTION OUTSIDE LOCATION - METHOD 22 S. Anovews Company Horsehead Corporation (Chicago Plant) Observer Chicago Plant, 2701 E. 114th St. Chicago, IL Location 60617 Affiliation SMANNON ANDREWS Company Rep. Date Cloudy Sky Conditions Wind Direction MONE Precipitation Wind Speed Industry Secondary Refining of Non Ferrous Metals PROPERTY Process Unit 7/8 Sketch Process Unit: Indicate observer position relative to source; indicate potential emission points and/or actual emission points. PARKLING FENCE Bropp. , sopl **OBSERVATIONS** Clock Time **Observation Period** Actual Emission Time Duration (min:sec) (min:sec) **Begin Observation** 8:50 2 min **End Observation** 10 min **Total Sample Time: Total Emission Time:** Emission Frequency: (Total Emission Time/Total Sample Time) x 100%



American Zinc Recycling – MTL-XXXX Quarterly Visible Emissions and Opacity Summary

DATE:	11/15/17	BAGHOUSE ID#: QUARTERY GRACET	1
			,
TIME:	AU DAY	INSPECTED BY: S. Andrews	

Instructions: This checklist is to be used by site personnel as a guide to perform visible emissions and opacity observations. Walk-around inspections should not be limited to only items included on this form. Any corrective actions required are to be reported on this form. Comments / concerns on this form should be kept brief and concise.

Quarterly Visible Emissions and Opacity Summary

Location	Type of Fugitive Emissions Source	Duration of Observation (Minutes)	Average Opacity (%)
Coke Hopper	Rugitive	7 min	0
Off Spec Coke Pile	Pugitive	7 min	0
Temp. IRM Storage Pile (East of Coke Pile)	N/A		
Temporary IRM Storage Pile	Rigitive	14 min	0
Main IRM Storage Pile	Fugitive	7 min	0
Coke Loading Pile	Rugitive	14 min	0
West Coke Pile	N/A		
East Coke Pile	N/A		
Main IRM Storage Bunkers	rightive	14 min	0

N/17 ehicle TARFIC Vehicle TARFIC Vehicle TARFIC Vehicle TARFIC Vehicle TARFIC Vehicle TARFIC	30 min 30 min 45 min 45 min 60 min	0 0 0
Vehicle MAGGIC Vehicle MAGGIC Vehicle MAGGIC	30 min 45 min 45 min	0
Jehicle Marric	45 min 45 min	0
rehicle massic	45 min	
		0
Fugitive	60 min	\cap
natoual Transfer	60 min	0
Katerial resources	60 min	D
atedal Turnspec	60 min	0
Yes 🗆	No X	
Yes 🔲	No D	
OTES BELOW		
wind 6 lx.	mph; west	
<u> </u>	atoual vamous atoual vamous Yes TES BELOW	atoual vamore (1) min atoual vamore (0) min Yes No No No No No TES BELOW

SOURCE NAME. American Zinc	^{E NAME} American Zinc Recycling (Chicago Plan		ago Plant)	OBSERVATION DATE					START TIME STOP TIME				*************************************
ADDRESS		<u> </u>		050	71/1	711_			N asa				
2701 East 114th Street				SEC	0	1,5	30	15	SEC	0	15	30	45
2701 Bast 114th Street				1	n	B	7	15	MIN 31	U	13	30	40
CITY	LOTATE	131	ъ	2	X	9	Ŏ	O	32				
Спту Chicago	STATE	ZII	50617	3		7)		 	33				
PHONE	SOURCE	D NUMBER		1	N.	7	$\frac{4}{3}$	$\vdash \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$					
	03160			4	\mathcal{Q}	 	Y		34				
PROCESS EQUIPMENT TOWNSON TON	oile	OPERATION	NG MODE	5	\mathcal{A}	<u>u</u>	Q	(0)	35				
Temporary Jav	price	OPERATII	NG MODE	6	X	W	(\mathcal{V})	Q	36				
tho truck		OPERATIN	V O	7	2	K.	0	Q	37				
DESCRIBE EMISSION POINT START TOMO TO	LM SI	10000	- ala	8	0	ľ <u>V</u>	<u>Q</u>	V.	38				
HEIGHT ABOVE GROUND LEVEL		ELATIMETO	O OBSERVER	9		W	0	Q	39				
7 A	START	7 st	OP)	10	Ω	0	0	0	40	!			
DISTANCE FROM OBSÉRVER		N FROM OF		11	Δ	0	0	3	41				
START 25 STOP 25 DESCRIBE EMISSIONS	START	NW ST	OP MU	12	Z	<u> </u>	10	8	42				
START LANG	STOP	L	200	13	(7)	(0)	0	7	43				
EMISSION COLOR			TINUOUS 🗖	14	า	n	W	7	44				
START VATOR WATER DROPLETS PRESENT:	1	DROPLET I	MITTENT DILIME	15			~		45				
NON YES		ED DETA		16					46				
POINT IN THE PLUME AT WHICH OP		DETERMIN	rep	17					47				
START 3 FO	STOP			18					48				
START COPE BUILD	STOP	Cofe	Buld	19					49				
BACKGROUND COLOR A	SKY CON	Ri I A	1001	20					50				
START STOP	START	CIVS(T)	beast	21					51				
START IZ STOP	START WIND DIR START	Wish	бР	22					52				
AMBIENT TEMP	WET BULE	TEMP	RH.percent	23					53				
START N STOP 3			L	24					54				
Source Layout Sketch	Dra	w North Arr	row	25					55				
				26					56				
		(•)	27									
,	X Emission	Point							57				
•				28					58				-
				29					59				
Sun - Wind -				30 AVERAG	GE OPA	CITY FO	OR 4		60 NUMBE	R OF F	READING	GS ABO	WE
Plume and	Observers	3 Position		HIGHES			•	\cdot	11011.02	(D) %	6 WERE	7	'
Stack 14	10°	_		RANGE	OF OR			SS			$\overline{\Omega}$		
Sun Loca	ation Line	_ >		OBSERV	/FR'S N	MININ IAME (P		0	۸	MAXIM	UM		
Our Look	MON EMO			OBOLIN	/LICON	/	<i>A</i>	Siff	move	W)			
COMMENTS				OBSERV	/ER'S S	IGN/TI	IÓI -			DAT	11/16	71.	າ
		······		ORGAN	IZATION	10					$\overline{\mathrm{M}_{\mathrm{C}}}$	ᅫ,	
				ONGAN	ZATIO	•					•		
I HAVE RECEIVED A COPY OF THESI SIGNATURE	OPACITY	OBSERVAT	TIONS	CERTIF	ED BY:					DATE	=		
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SOURCE NAME, TO SHE THE T	Describes (Chieses Disur)	OBSER	VĄTION	DATE		STAR	TIME		STOP	TIME	
SOURCE NAME American Zinc 1	Recycling (Chicago Plant)	1		1°</td <td>7</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	7						
ADDRESS		SEC	111	<i> </i>	ľ		SEC				
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Chicago	IL 60617	3		<u>U</u>	10	0	33				
PHONE	SOURCE ID NUMBER 031600AFV	4		<i>[[]</i>	()	0	34				
PROCESS EQUIPMENT,	OPERATING MODE	5	Λ	7	1	n	35				
COKE Hopper	longing	-	K	X	l X	1			 	-	
CONTROL EQUIPMENT	OPERATING MODE	6	L	0	LY	177	36				
) SAN AS Needed	7	L(t)	LO	10	U	37				
DESCRIBÉ EMISSION POINT		8					38				
START FRO	nt eno losoer	9					39				
HEIGHT ABOVE GROUND LEVEL	HEIGHT RELATIVE TO OBSERVER			 					ļ	-	
13 kg	START () STOP ()	10					40				
DISTANCE FROM OBSERVER	DIRECTION FROM OBSERVER	11					41				
START 304STOP 30F4	START NW STOP NW	12					42				
DESCRIBE EMISSIONS START NOW	STOP NOME	13					43				
START NOWE	STOP NOME						-				ļ
START NASTOP	FUGITIVE INTERMITTENT	14					44				
WATER DROPLETS PRESENT:	IF WATER DROPLET PLUME:	15					45				
NO YES	ATTACHED DETACHED	16					46				
POINT IN THE PLUME AT WHICH OP		17									
START 314	STOP 3 P4						47				ļ
DESCRIBE BACKGROUND		18				L	48				
START CAB BUILDIN	→ STOP	19					49				
BACKGROUND COLOR START STOP	KY CONDITIONS	20					50				
	START STOP	 			 						<u> </u>
WIND SPEED	WIND DIRECTION START SUSTED	21					51				<u> </u>
START A STOP AMBIENT TEMP		22					52				
START SO STOP SO	WET BULB TEMP RH.percent	23					53				
START OF STOP OF	<u> </u>	24					54				
Source Layout Sketch	Draw North Arrow								ļ	ļ	
•	_	25					55		ļ		
	(\cdot)	26					56				
	\bigcirc	27					57				
	X Emission Point	28					58				
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Sun - Wind -	Observers Position	AVERA			OR	`				GS ABC	VE
Plume and	Capacitors / Contion	HIGHES			EADING	<u>/</u>		<u> </u>	% WERE	<u>. U</u>	
Stack 14	40°	RANGE	OF OF	MININ		38		MAXIN	шм Г	\	
Sun Loca	ation Line	OBSER	VER'S N								
Suit Edda	and, millo	CECEN	- LI (U I)	., (I	' <u>^</u>	C	Anp	PA	1		
COMMENTS		OBSER'	VER'S S	IGNATI	JRE		1 11 (P	DAT	E I	10 -	
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	***************************************	ORGAN	IZATIO	1 ×	<u>~</u>		****		442	+-	
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I HAVE RECEIVED A COPY OF THES	E OPACITY OBSERVATIONS	CERTIF	IED BY:					DAT	E		
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SOURCE NAME,	D 1 !	- (01:	D1 4	OBSER	VATION	DATE	***************************************	STAR	TIME		STOP	TIME	
SOURCE NAME American Zinc	Recyciin	g (Unica	igo Plant)		111	15/1	7						
ADDRESS		-		SEC	, 	'' / '	/ 		SEC				Γ
2701 East 114th Street				MIN	0	15	30	45	MIN	0	15	30	45
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Chicago	IL	6	50617	3	0	l ă			33				
PHONE		D NUMBER		4		X		7	34				
	03160				<u>//</u>	ΙŽ	$ \mathcal{Y} $	X	 				
PROCESS EQUIPMENT	o i a	OPERATIN		5	()	\Box		V	35				
colle conoiny	pie.	1074	DING	6	10	À	$\overline{0}$	(1)	36				
CONTROL EQUIPMENT	244	OPERATIN		7	n	M	A	0	37				
DESCRIBE EMISSION POINT	CAY)	143	Needel	8		 M	\	 					
(20)	DINS	20.10			0	<u> </u>	\cup	LU	38				
HEIGHT ABOVE GROUND LEVEL	<u> </u>	FI ATIVE TO	OBSERVER	9	0	C	0	(1)	39				
2 March	START	ST		10	Ŏ	0	0	$\overline{\Omega}$	40				
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DESCRIBE EMISSIONS	1			12	0	0	\Box		42				
DESCRIBE EMISSIONS START	STOP	MONE	2	13	2	0	กั	N.	43				
EMISSION COLOR	PLUME TY	PE: CONT		14	Ŏ		in	Ö	44				
START MPSTOP	FUGITIVE	□ INTERN	MITTENT 🗖		\Box	\cup	\cup						
WATER DROPLETS PRESENT:		DROPLET		15					45				
NOM YES□		ED 🗖 DET/		16					46				
POINT IN THE PLUME AT WHICH OP.		DETERMIN	EP	17					47				
START 3A	STOP	<u> 3r</u>	7	18									
DESCRIBE BACKGROUND		Clo	_						48				<u> </u>
START SP	STOP	312)	7	19					49				
BACKGROUND COLOR START BUSTOFFEE	SKY CON	ITIONS V	A A DA	20					50				
START /3/OSTPEYES	START WIND DIR	Bluest	OF A MARIE	21					51				
START STOP	START	South	PPD						_				ļ
AMBIENT TEMP	WET BULE		RH.percent	22					52				
START SD STOP 50	WE' BOL) LIVII	Tti i.percent	23					53				
50 3.3.	1			24					54				
Source Layout Sketch	Dra	w North Arr	ow				-						<u> </u>
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Sun - Wind -	0.	- D10		AVERA			OR _		NUMBE	ROFF	READIN	3S ABO	VE
Plume and	Observer	s Position		HIGHES	T PERK	OD	0)		100°	6 WERE	· 'U	1
Stack	10°			RANGE	OF OR			SS		•		7	
					<u> </u>	MININ				MAXIM	UM (<u>/</u>	
Sun Loca	ation Line			OBSERV	VER'S N	AME (P	RINT)	c /)	a. d			
COMMENTO				CDOED!	(EDIA A		$\mathcal{L}A$	216	more	$\langle w \rangle$			
COMMENTS				OBSER\	v⊨R'S S	IGNAT	71			DAT	الأأ	Cli-	1
				ORGAN	ZATION	<u> </u>	/ 」				11/1	<u> </u>	
				ORGAN	IZATION	٧		AZI	2				
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SIGNATURE	_ 0. 7.0111	SESERVAI		O1 (1111111	DI,								
TITLE		DATE		VERIFIE	D BY:					DATI	E		
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SOURCE NAME American Zinc Recycling (Chicago Plant		ago Plant)	OBSERVATION DATE START TIM						STOP TIME				
ADDRESS		8 (3		SEC	Π	11/	<u>'</u>		N OF C				
2701 East 114th Street				MIN	0	15	30	45	SEC	0	15	30	45
				1	n	0	0	Ñ	31		10	- 55	, · · ·
CITY	STATE	ZI		2	$\frac{1}{2}$	R	0	X	32				
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PHONE		D NUMBER		4	$-\times$			X	34				-
DD00500 FOURNEY	03160			5	X	H	17	K	 				<u> </u>
PROCESS EQUIPMENT MAIN FRM PILE		OPERATI	D MODE		\mathcal{X}	 V	X	12	35				
CONTROL EQUIPMENT		OPERATI	NG MODE,	6	LŸ.	W	X	Y	36				
DESCRIBE EMISSION POINT		WA	fered,	7	0	0	U		37				
1	nn	alo		8			ļ		38				
HEIGHT ABOVE GROUND LEVEL	HEIGHT R		OBSERVER	9			ļ		39				
18 PA		ST ST		10				ļ	40				<u></u>
START W STOP		N FROM OF	OPSIVER	11					41				
DESCRIBE EMISSIONS				12					42				
START NONE	STOP	No.		13					43				
EMISSION COLOR START WAS STOP			TINUOUS MITTENT	14					44				
WATER DROPLETS PRESENT:	I	DROPLET		15					45				
NO YES		ED DET		16					46				
POINT IN THE PLUME AT WHICH OP, START 3 P	ACITY WAS STOP	DETERMIN	ED CL	17					47				
DESCRIBE BACKGROUND	010,	<u> </u>	<i>I</i>	18					48				Í
START SKY	STOP	SK	3	19					49				
BACKGROUND COLOR USTART GREAT PROBLEM	SKY CONI	J SNOITIC STO	OP.	20					50				
WIND SPEED	WIND DIR		OF	21					51				
START 2 STOP 12	START	SOUTH		22					52				
START 50 STOP 50	WET BULE	3 TEMP	RH.percent	23					53				
30 0101 30				24					54				
Source Layout Sketch	Dra	w North Arr	row	25					55				
				26					56	***************************************			
		\cdot)	27					57				
,	K Emission	Point		28					58				
				29					59				
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Sun - Wind				AVERAC	SE OPA	CITY FO	DR 🔨	I		R OF F	READING	GS ABO	VE
Plume and	Observer	s Position		HIGHES			<u> </u>			<u> </u>	6 WERE	<u>()</u>	
Stack 14	10°			RANGE	OF OP	MININ		38	·	MAXIM	IIM A)	
Sun Loca	ation Line			OBSERV	/ER'S N				•			<u></u>	***************************************
COMPENSO					/#####	\mathcal{A}	<u> </u>	<u> ა</u>	· AM	210	<u> </u>		
COMMENTS				OBSER\	/⊨R'S S	I SWATT	JHE			DATI	TI li	7/17)
				ORGANI	ZATION		.]	470)		`)) 	!
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III berba		DVIE		VERTIE	. זם ע					DAT	-		

SOURCE NAME American Zinc	Dogwalin	~ (Chia	o a Dlant)	OBSER	VATION	DATE		STAR	TIME		STOP	TIME	
American Zinc	Recyclin	ig (Cinca	igo riant)		111	157	17						
ADDRESS				SEC		1	<u> </u>		SEC				
2701 East 114th Street				MIN	0	15	30	45	MIN	0	15	30	45
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CITY	LOTATE	1 - 1	<u> </u>	2	Ã			0	32				
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PHONE	1	ID NUMBER		3	0	9	0	0	33				
l lieu	03160		`	4	0	[]	0	Q	34				
PROCESS EQUIPMENT	1 00100		NG MODE	5		Ω	()	0	35				
1 off spec colu	06	l W	10	6		7	0	1	36				
CONTROL EQUIPMENT	 \ 	OPERATI	NG MODE	7	4	0	ñ	0	37				<u> </u>
COVERED		UND)		LV	0	$\mu \nu$						
DESCRIBE EMISSION POINT START (ALC OL)	0			8					38				
START (OLE PI) HEIGHT ABOVE GROUND LEVEL		ELATIVE TO	O OBSERVER	9					39				
12	START	12 ST		10					40				
DISTANCE FROM OBSERVER		N FROM OI		11					41				
START 45 STOP 45	START	SW ST	OP SW	12					42				
DESCRIBE EMISSIONS		AIDA	10										
START WHO	STOP	/VV/		13					43				
EMISSION COLOR START AFOP			TINUOUS MITTENT	14					44				
WATER DROPLETS PRESENT:		DROPLET		15					45				
NO□ YES□		ED DET		16					46				
POINT IN THE PLUME AT WHICH OP	ACITY WAS	DETERMIN	VED.	17					47				
START 3 F4	STOP	3	H										
DESCRIBE BACKGROUND		-110	a C	18					48				
START TOUS BACKGROUND COLOR,	STOP SKY CONI	The	دیا	19					49				
START COLOR	START	Cliver	on s	20					50				ĺ
WIND SPEED	WIND DIR		20	21					51				
START 2 STOP 12	START	50/s)	OP	22					52				
AMBIENT IEMP	WET BULE	3 TEMP	RH.percent	23					53				
START SO STOP 50													<u> </u>
Source Layout Sketch	Dra	w North An	row	24					54				
Codice Layout Oketen	Dia	W NOIBI AII		25					55				
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	X Emission	Point		28					58				
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o 👃 148				30	لـــــا	0.1777.7.77		L	60				L
Sun Wind Plume and	Observer	s Position		AVERAC HIGHES					NUMBE		READIN 6 WERE		ΝE
Stack /	\			RANGE			FADING	38	40	\mathcal{U}	0 VVIIIL	\cup	
1	40°					MININ		-		MAXIM	IUM /)	
Sun Loc	ation Line			OBSER\	/ER'S N	AME (P	RINT)						
							Δ	5	An				
COMMENTS				OBSER	/ER'S S	IG XA/FL	₩ <u></u>			DAT	E / (1,-1	-
				ODGA	7,716	<u> </u>					U	177	<u> </u>
				ORGAN	IZA (160N	ı	A	72			•		
I HAVE RECEIVED A COPY OF THES	E OPACITY	OBSERVAT	TIONS	CERTIFI	ED BY:			└	•	DAT	E		
SIGNATURE													
TITLE		DATE		VERIFIE	D BY:					DAT	E		

OURCE NAME American Zinc Recycling (Chicago Plar		ago Plant)	OBSERVATION DATE STA			STAR	RT TIME STOP TIME						
		5 (Ome			1/13	11/							
ADDRESS				SEC	l	ľ `'			SEC				
2701 East 114th Street				MIN	0	15	30	45	MIN	0	15	30	45
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City Chicago	STATE	ZI		2	V	ry.	0	0	32				
PHONE	I	D NUMBER	60617 R	3	Q	LO	0		33				
	03160		•	4	4	Q	(0)	<u>U</u>	34				
PROCESS EQUIPMENT	ا مما	OPERATI		5	10	(1)	0		35				
CONTROL EQUIPMENT	ikens	OBERATI	NG MODE	6	0	(6)	0	0	36				
HO TRUC	K	OF ENAU	NO	7	0	0	1)	2	37				
DESCRIBE EMISSION POINT		·· k oa	<u>^</u>	8	0	()	0	0	38				
START HEIGHT ABOVE GROUND LEVEL	M BV		O OBSERVER	9	Ď	À	0	0	39				
9 64	START	\hat{q} st	OP 9	10	\mathcal{K}	Ø	U	0	40				
DISTANCE FROM OBSERVER	DIRECTIO	N FROM O	BSERVER	11	7	0	0	\bigcirc	41				
START 35 STOP 35 DESCRIBE EMISSIONS	START /	V/VWsT	OP NNW	12	X	\cap	8	$\overline{\Omega}$	42				
START WOO	STOP	NON	R.	13	X	K	7	O	43				
EMISSION COLOR	PLUME TY		TINUOUS 🗖	14	X	0	Ö	ð	44				
START STOP WATER DROPLETS PRESENT:	FUGITIVE IF WATER	_	MITTENT DILLING	15	U				45				
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POINT IN THE PLUME AT WHICH OP.	ACITY WAS			17					47				
START 3 F	STOP	3	M	18					48				
DESCRIBE BACKGROUND START S 3	STOP	Cd	<u>A</u>	19					49				
BACKGROUND COLOR	SKY CONE			20					50				
START TN STOP TAN	START	Clost	OP/	21			<u> </u>		-				
WIND SPEED START \ \ \ \ STOP \ \ \ \ \ \	WIND DIRI	ECTION SUST	MA	<u> </u>					51				
AMBIENT TEMP	WET BULE		RH.percent	22			<u> </u>		52				
START 50 STOP 50				23					53				
Source Layout Sketch	Dra	w North Ar	row	24					54				
out of Edyout Ontion	D,u		_	25					55				
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Sun - ♦ Wind> Plume and <	Observers	S Position		AVERAC HIGHES			ORY		NUMBE		READING WERE		VE \
Stack				RANGE			EADING	38	L	<i>\(\)</i>	o vvere		
	10°,				1)	MININ				MAXIM	UM \overline{C})	
Sun Loca	ation Line			OBSER	/ER'S N	IAME (F	RINT)	ζ,	ANDI	m. 1	(
COMMENTS				OBSERV	/ER'S S	IGNATI	RE		71/1	DATI	<u> </u>	1	
						/ l	1			<u> </u>	11/1	5/1	7
				ORGAN	IZATIO	1	1/	120			7-	-/1	,
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TITLE		DATE		VERIFIE	D BY:					DAT			

SOURCE NAME American Zinc Recyclin	ng (Chicago Plant)	OBSER	AOTAY	DATE		STAR	FYYE	-	STOP	TIME	
ADDRESS		SEC	$m_{\rm c}$	111			SEC		5	/\	1
2701 East 114th Street		MIN	0	15	30	45	MIN	0	15	30	45
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CITY STATE	ZIP	2	0	7		1	32	0	8	0	0
Chicago	60617	3	Õ	ก	X	7)	33	P	0	0	$\tilde{\Omega}$
	ID NUMBER 00AFV	4	ก	ň	0	n	34		0	ð	Ŏ
PROCESS EQUIRMENT	OPERATING MODE	5	0	0	2	1	35	10	0	7	10
CONTROL EQUIPMENT (WYE)	MAPPEL — ISDING OPERATING MODE ()	- 6	10	Q	D	a	36	0	Q	Õ	Ö
1420 Truck / Hose	USING MODE ()	7	0	0	Q	0	37	(1)		0	Q
DESCRIBE EMISSION POINT	CACIBA	8	0		Ũ		38	0	0	0	Q
START (/)///U/CY/N HEIGHT ABOVE GROUND LEVEL HEIGHT F	RELATIVE TO OBSERVER	9		Ö	\bigcirc	\Box	39	0	U	0	0
15 VFF START	5 STOP 15	10	()		0		40		Q	0	0
DISTANCE FROM OBSERVER DIRECTION START (1) STOP (1) START	NESTSTOP	11	0	D	0	Q	41	Q	0	0	Q
DESCRIBE EMISSIONS		12	Q	1	0	0	42	()	4	0	0
START NONC STOP	MNE	13	0	n	Q	Q	43	0	0	0	0
1 11110 1	YPE: CONTINUOUS INTERMITTENT	14	Q	0	0	\mathcal{Q}	44	0	0	Q	0
WATER DROPLETS PRESENT: IF WATER	R DROPLET PLUME:	15	0	Q	3	\mathcal{O}	45	Q		12	0
NO☐ YES ATTACH POINT IN THE PLUME AT WHICH OPACITY WAS	ED DETACHED	16	Q	\mathcal{O}	0	D	46	Q	Q_	2	12
START 3 FT STOP	3 84	17	(Q)	Q	$\widetilde{\mathbb{Q}}$	Q	47	Q	Q	0	Q.
DESCRIBE BACKGROUND START STOP	SIV	18	0	∇	\mathcal{C}	0	48	Q	\mathbb{Q}	0	(2)
BACKGROUND COLOR (), SKY CON	DITIONS	19	8	0	2	2	49	$\frac{1}{2}$	8	R	(()
START GUSTOPISME START	Clugrapy	20	4	X	\mathcal{L}	$\frac{9}{8}$	50	Q	(2)	\bigcirc	Õ-
START 12 STOP 17 START	SOUTUP	21	\mathcal{L}	2	\mathcal{L}	\mathcal{C}	51	X	7		<u>Q</u>
AMBIENT TEMP WET BUL		22	6	\mathcal{L}	U.	8	52	X	K	2	\otimes
START N STOP 50		23 24	X	(i)	(1)	0	53	$\frac{0}{2}$	V	2	0
Source Layout Sketch Dra	aw North Arrow	25	X	2	X	X	54 55	X	2	2	8
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	(\cdot)	27	X	X	\mathcal{L}	8	57		\mathcal{L}	2	2
X Emissio	n Point	28	0	X	\mathcal{A}	7	58	8	12	9	4
		29	K	\times	\mathcal{A}	X	59	8	X	2	X
		30	X	1	5	A	60		X	07	
Sun - Wind -	D 14	AVERA			DR C	LV.			READIN		V OVE
Plume and Observer	s Position	HIGHES RANGE				30		\mathcal{W}°	6 WERE	\mathcal{U}	
140°		RANGE		MININ		30		MAXIM	IUM /	\bigcirc	
Sun Location Line		OBSER	VER'S	IAME (P	RINT	1	10/6)	<u> </u>		
COMMENTS		OBSER	VER'S	GNAT		(171	we	DAT			
			/7						111	15/1	7
		ORGAN	IZATIO	N	A	2/2	- <u></u>			7	
I HAVE RECEIVED A COPY OF THESE OPACITY SIGNATURE	OBSERVATIONS	CERTIF	IED BY:			-	<u> </u>	DAT	E		
TITLE	DATE	VERIFIE	5 507					DAT			

FUG:		E EMISSION INSPE TION – METHOD 2.	
Company Horsehead Corp Chicago Plant, 2	oration (Chicago Plant) 701 E. 114th St, Chicago, IL	Observer / SA	norewi
Location 60617		Affiliation A	32
	in Ambrews	Date !!	115/17
Sky Conditions	lway	Wind Direction	West
Precipitation	NOME	Wind Speed	12 MpH
Industry Secondary Refinir	g of Non Ferrous Metals	Process Unit PROPE	RTV LINE (6/8)
Sketch Process Unit: In points and/or actual em	ission points.	on relative to source; in	dicate potential emission
	OURCROUTH BLDG MATH PLANT RORD	CONTAINMENT	44
		VATIONS	
j	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	1422	2min	AVANT O
	145.7		
	1500		
	.1503		
		-V	
	-		
	•	***************************************	
End Observation	10min		
	•	Total Sample Tim Total Emission Ti	
		Emission Frequen (Total Emission Time/Total	cv:

7777	WITTER Zim O M. OH C. O.		
)		E EMISSION INSPE ATION – METHOD 2	
	poration (Chicago Plant) 701 E. 114th St, Chicago, I	Observer S. A	norews
Location 60617		Affiliation A?	ER.
Company Rep. SHANNO		Date Uil	5/17
Sky Conditions C	lavoro	Wind Direction -	West
Precipitation S	ollyht Misting	1	12 uprt
Industry Secondary Refinir	ng of Non Ferrous Metals	Process Unit PROPE	RTY LINE (5/8)
Sketch Process Unit: In points and/or actual em	ndicate observer posit	tion relative to source; in	dicate potential emission
E WELLINGTON	TRYIN TRKUCS TRKUCS	PLANT ROAD O'C SUN	Ar dr
		EVATIONS	
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	1440	2 min	_ 0
	_1442		1
	1946		
	<u> </u>		
	1450		V
End Observation			6
	The state of the s	Total Sample Tim	e: lomin _
		Total Emission Ti	
		Emission Frequen (Total Emission Time/Total	cy:
		L / Cour Timeston Times 10(8)	Sample 1100 x 100%

ייען קידו	מינורא הוא הוא הוו פערות	T WO W AW OLD TO THE TOTAL TO T	
FUC		E EMISSION INSPE TION – METHOD 2.	
Company Horsehead Corp	ooration (Chicago Plant) 701 E. 114th St, Chicago, IL	Observer SiA	novews)
Location 60617	701 E. TI4til St, Unicago, IL	Affiliation A7	LR.
Company Rep. SHAWNON	*	Date 11/15	5/17
Sky Conditions C	twoy	Wind Direction	West
Precipitation	None	Wind Speed	2 mpril
Industry Secondary Refining	g of Non Ferrous Metals	Process Unit PROPE	RTY LINE (G/8)
Sketch Process Unit: In points and/or actual em	ndicate observer positi ission points.	on relative to source; in	dicate potential emission
The state of the s	Storete Sol	TRA TRAN	IN CIKS
	OBSER Clock Time	VATIONS Observation Period	Actual Emission Time
,		Duration (min:sec)	(min:sec)
Begin Observation	1420	2 min	0 ^
	1477	<u> </u>	
	1120		
	19 29		
	1926		
	1928		
	<u> 1430 .</u>	V	
End Observation			
	,	Total Sample Tim Total Emission Ti Emission Frequen (Total Emission Time/Total	me: O

IEI IC	THE THE CINKERS OF THE STREET		Continues of the A
II. () (I.		E EMISSION INSPE TION – METHOD 2.	
	oration (Chicago Plant) 701 E. 114th St, Chicago, II	Observer 5,	Anprews
Location 60617	701 E. TIAM St, Gricago, ii	Affiliation A	ZR
Company Rep. SMANN	ON ANDREWS	Date	15/17
Sky Conditions C	lovery	Wind Direction U	West'
Precipitation	<u>Voné</u>	Wind Speed	12 mpH
Industry Secondary Refinin	g of Non Ferrous Metals	Process Unit Profess	TY LINE (3/8)
Sketch Process Unit: In points and/or actual em	ndicate observer posit ission points.	ion relative to source; in	dicate potential emission
RAULS LEWIN	1997 1848 -0>1	1 STURALE PILES	J. J. W.
	OBSER	VATIONS Observation Period	Actual Emission Time
	******	Duration (min:sec)	(min:sec)
Begin Observation	1400.	1802 min	. 0
	1402		
	1404		
	140h		
	1408		
	1410		
	-		
	•		
,	•		
End Observation	10 min		
			1
		Total Sample Tim	
		Total Sample Tim Total Emission Ti Emission Frequen	me:

FUG	TIVE OR SMOKI	E EMISSION INSPE	CTION
		TION - METHOD 2.	
	poration (Chicago Plant) 2701 E. 114th St, Chicago, IL	Observer S. An	orews
Location 60617		Affiliation AZI	٧
1	on Andrews	Date 11/15	117
Sky Conditions C	lousy	Wind Direction 2	lest
Precipitation P	uzzle	Wind Speed 1	L MPH
Industry Secondary Refini	ng of Non Ferrous Metals	Process Unit PROPE	RTY LINE (2/8)
Sketch Process Unit: I points and/or actual en	ndicate observer positi aission points.	ion relative to source; in	dicate potential emission
	J'= 20 M BING	DO OBSERVER	\$
		VATIONS	
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	1340	2 min	0
	1342		
	1344		ſ
	1346		-
	1348		
	1350		
The state of the s			L vuf v
End Observation			
		Total Sample Tim	
		Total Emission Ti Emission Frequen	
		(Total Emission Time/Tota	l Sample Time) x 100%

FUGITIVE OR SMOKE EMISSION INSPECTION OUTSIDE LOCATION - METHOD 22 S. Anovews Horsehead Corporation (Chicago Plant) Observer ' Chicago Plant, 2701 E. 114th St, Chicago, IL Location 60617 Affiliation 1 SHANNON ANDREWS Company Rep. Date Clouds. Sky Conditions Wind Direction Precipitation Wind Speed PROPERT LINE Process Unit Industry Secondary Refining of Non Ferrous Metals Sketch Process Unit: Indicate observer position relative to source; indicate potential emission points and/or actual emission points. SILOS DOBSER VER **OBSERVATIONS** Clock Time **Observation Period** Actual Emission Time Duration (min:sec) (min:sec) **Begin Observation** 320 min **End Observation** 10mmOmin **Total Sample Time: Total Emission Time:** Emission Frequency: (Total Emission Time/Total Sample Time) x 100%

FUG		E EMISSION INSPE TION – METHOD 22	
Company Horsehead Corp Chicago Plant, 2 Location 60617	ooration (Chicago Plant) 701 E. 114th St, Chicago, IL	Observer S. A	9mprews
Company Rep 5	Anprews	Date 11/15/	
Sky Conditions _ C	loung :	Wind Direction	West
Precipitation	Slight	Wind Speed 3	2mpH
Industry Secondary Refinir	g of Non Ferrous Metals		2 to line (8/8)
Sketch Process Unit: In points and/or actual em	ndicate observer positi ission points.	on relative to source; in	dicate potential emission
	ONERGROWTH TREES	WIND SILDS	2
,	OBSER	VATIONS	
	Clock Time	Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	13:00 1	2 min	00:00
	1302		
	1304		
	1306		
	1308		
2	1310		\(\)
. '/			
		-	
End Observation	.10. min		
/		Total Sample Time Total Emission Time Emission Frequent (Total Emission Time/Total	me:

Total Sal N. Co.			
F. O.C.		E EMISSION INSPE TION – METHOD 2.	
Company Horsehead Cor	poration (Chicago Plant) 701 E. 114th St, Chicago, IL	Observer Si	Anarews
Location 60617	701 E. 114th St, Chicago, IL	Affiliation	2R
Company Rep. SHAND	ION ANDREWS	Date 1)]]5	り
Sky Conditions	Clarks)	Wind Direction	nest
Precipitation	noting	Wind Speed 10	Ryphii
Industry Secondary Refinit	ng of Non Ferrous Metals	Process Unit PROPE	
Sketch Process Unit: I points and/or actual en	ndicate observer positi iission points.	on relative to source; in	dicate potential emission
80063/5	PATI DE SON WI	RICING LOT FENCE	
	OBSER Clock Time	VATIONS Observation Period Duration (min:sec)	Actual Emission Time (min:sec)
Begin Observation	1510	2 min	(mm.sec)
	1517	(~ -	
	1574		
	1516		
	1518		
	1240_		1 Kn
		V	
			J.C
End Observation		^ ^	
	<u> </u>	Total Sample Tim Total Emission Tin Emission Frequen (Total Emission Time/Total	me: (O

Method 9 Visual Emissions Observation Record Form $\hbox{Paved and Unpaved Roadways}$

Company: AZY			Provide sketch of obs	erver's position r	elative to the source:
Address: 2901	E. 114h	St Chicajo)		
Facility ID:					
Date:	7				1
Location Description: V	NPAVED 11	4h st			15 ft
Control Device:	HO Truc	K			10 10
Hours of Observation:	(00 min			4	
Observer's Name:	ScAmpren	15	Wind North	Observer	Note: Not to Scale.
Certification Date of Obs			Observer's Af	filiation:	
Point of Emissions: R	loadway/Tire Ir	nterface	Height of Dis	scharge Poi	nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	ft		L5 ft
Direction from dischar	ge	90 de	grees	90	degrees
Height of observation	point	4	ft		4 ft
BACKGROUND DESCRIPTION		Dav	15/5/5	plant	SKG
WEATHER CONDITIONS			75.0		73.0
Wind Direction		Fron	the S	Fr	om the S
Wind Speed		19 m	ph	12	mph
Ambient Temperature		50	F	50) F
SKY CONDITIONS (e.g., cle	ar,	Clark	100000	cloudy	Ingrasi.
overcast, % clouds, etc.) PLUME DESCRIPTION		Clwb) 10012210	Civoc)	MUTTLE.
Color		A lo		4 10 1/0	
Distance Visible			ve	None	
OTHER INFORMATION		/ mı	les		niles
OTHER TRICITIATION	SUMMARY	OF AVERAGE (PACITY		
		Time		Opac	city (%)
Set Number		Start - End		Sum	Average
1	C	700 - 900	0	0	0
2	Œ	100 - 91	2	Ó	0
3		912 - 918	}	Q	Ŏ
4	(718 - 920	5	0	Ò
Readings ranged from	O to	0	% opacity.		
Average of 12 readings:	0				

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

					Page _2	of <u>2</u>
Company _	AZR			Observer	S. Andrews	
Location _	Chicago,	U	Fa	cility Type	S.Andrews Inpustriae	
Point of ϵ	emissions Roadw	ay/Tire I	nterface	_		
	Vehicle Pass #	0	Seconds 5	10	Vehicle Type	
	1	0	0	0	Truck	
	2	0	0	0	Truck	
	3	0	0	0	CAN	
	4	0	G	0	CAR	
escriptic	on of Road (Paved/	Unpaved,	Dry/Wet):	we	+ , moist	
	_	1	4		•	
					11/15/17	
	Obser	wex Signa	ture		Date	

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: A7	R		Provide sketch of obs	erver's position r	elative to the source:
Address: 201 E	114h St	Chicago			
Facility ID:		<i>J</i>			
Date: 11/15/17					1
Location Description:	PARKING L	ot			15 ft
Control Device: H2		ts Neoded			15 10
Hours of Observation:	The	()			
Observer's Name:	S. Andrews		Wind North	Observer	Note: Not to Scale.
Certification Date of Obs			Observer's At	filiation:	note. Not to bear.
Point of Emissions: F	Roadway/Tire In	nterface	Height of Dis		nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	ft		15 ft
Direction from dischar	rge	90 de	egrees	90	degrees
Height of observation	point		ft		4 ft
BACKGROUND DESCRIPTION		Sku. G	NASI	Ck A	GARS
WEATHER CONDITIONS				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Wind Direction		From	n the S	Fr	om the S
Wind Speed		m	ph 12	17_	mph
Ambient Temperature			F 50	30	F
SKY CONDITIONS (e.g., cle	ar,	puzzle,	Clark	20.201.	Clarks
overcast, % clouds, etc.) PLUME DESCRIPTION	· · · · · · · · · · · · · · · · · · ·	7/10/ C (&)	Juin)	moste,	<u>, (100°)</u>
Color		1/04			<u> </u>
Distance Visible		NON		<u> </u>	<u>ve</u>
OTHER INFORMATION		mı	les	I	miles
OTHER INFORMATION	SUMMARY	OF AVERAGE (PACITY		
		Time		Opad	city (%)
Set Number		Start - End	THE TRANSPORT OF THE PROPERTY	Sum	Average
1	(735 - 9:	41	0	0
2	1	9:41 - 9:4	7	0	Õ
3		9:47- 9:	53	Ŏ	Ŏ
4		9:3 - 9:	59	0	\sim
Readings ranged from	O to	0	% opacity.		
Average of 12 readings:	_0				

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

tion _	Chica 50,	Jレ	Fac	ility Type	woustrial
t of er	missions Roadw	ay/Tire In	nterface		
r,	Vehicle Pass #	0	Seconds 5	10	Vehicle Type
	1	8)	G	0	CAV
	2	0	9	0	CAR
	3	0	6	0	CAR
	4	0	0	0	Trvck
ription	n of Road (Paved)	4		<u> </u>	CAR CAR TRUCK CH, DRIZZEP 11/15/17

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: AZR			Provide sketch of obse	erver's position re	elative to the source:
Address: 270	- 114th s				
Facility ID:					
Date: 1115	17				<u> </u>
Location Description:	MAIN fru	UK ROSO			15 ft
Control Device: H_7O					
Hours of Observation:	}			ф	1
Observer's Name: \int_{ζ}	Anarews		Wind North	Observer	Note: Not to Scale.
Certification Date of Obs	erver:		Observer's Af	filiation:	
Point of Emissions: R	oadway/Tire In	nterface	Height of Dis	charge Poir	nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	5 ft	.1	.5 ft
Direction from dischar	ge	90 d	egrees	90	degrees
Height of observation	point	4	ft		4 ft
BACKGROUND DESCRIPTION		Thee	5/5/4	Thees	Isra
WEATHER CONDITIONS			770		170
Wind Direction		Fro	m the S	Fr	om the S
Wind Speed		n	nph [2		mph 12
Ambient Temperature			F 50		F 50
SKY CONDITIONS (e.g., cle	ar,	Cloudy	. 0017010	Clarella	001770
overcast, % clouds, etc.) PLUME DESCRIPTION		Cicour) autell	Churly) MUERO
Color		No	NO	NO	Ale
Distance Visible			les		niles
OTHER INFORMATION		.111	.Tes		ittes
	SUMMARY	OF AVERAGE	OPACITY		
_		Time		Opac	city (%)
Set Number		Start - End		Sum	Average
1	100	00 - 10	06	(<u>)</u>	0
2	10	06 - 10	12	()	Ó
3	10	18 - 101	18	()	l ()
4	10	18 - 10:	24	0	Ũ
Readings ranged from	O to	0	% opacity.		
Average of 12 readings:	<u></u>				

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

					Page <u>2</u>	of <u>2</u>
Company _	AZR			Observer	S. Awrews Inputacy	-
Cocation _	Chicago	, 7c	Fac	ility Type _	inovitación	-
oint of e	emissions Roadwa	ay/Tire In	terface			
	Vehicle Pass #	0	Seconds 5	10	Vehicle Type	
	1	0	0	0	TRUCK	
	2	0	5	0	TRUCK FORK IPT TRUCK TRUCK	
	3	0	Ö	0	Truck	
	4	0	7	0	TRUCK	
escriptio	on of Road (Paved/	Unpaved,	Dry/Wet):	W.	iet –	
		11			,	
	f	H			11/15/17	
	øbser	ver Signa	ture		Date	

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways

Company: A 7	R		Provide sketch of obs	erver's position re	elative to the source:
Address: 2701 E. 11	th St Cu	neago, Fr			
Facility ID:	_	0 ,			
Date: 1115)				T
Location Description: $ ho$	Aved Russ	to IRM			15 ft
Control Device:) truck				
Hours of Observation:				4	
Observer's Name:	S. ANDrews		Wind North	Observer	Note: Not to Scale.
Certification Date of Obs			Observer's A	ffiliation:	
Point of Emissions: R	oadway/Tire In	nterface	Height of Di	scharge Poir	nt: 0 ft
CLOCK TIME		Initial		Final	
OBSERVER LOCATION					
Distance to discharge		15	ft	1	.5 ft
Direction from dischar	ge	90 de	egrees	90 (degrees
Height of observation	point	4	ft		4 ft
BACKGROUND DESCRIPTION		Thees	(5/4	THEOS	1 S/Cs
WEATHER CONDITIONS			T'0		t * 0
Wind Direction		From	n the S	Fr	om the ${\cal S}$
Wind Speed		m	ph (2		mph (2
Ambient Temperature			f 50		F 50
SKY CONDITIONS (e.g., cle	ar,	c(v 0.	000	Charl	201
overcast, % clouds, etc.) PLUME DESCRIPTION		l was,	14in	- Covas	70410
Color		A A ALLEY TO A MANAGEMENT		A COA	10
Distance Visible		No	les	1001	
OTHER INFORMATION		шт	res	I	niles
	SUMMARY	OF AVERAGE (OPACITY		Z-114-10-10-10-10-10-10-10-10-10-10-10-10-10-
		Time		Opac	eity (%)
Set Number	1 144400 - 21-2 (2004) - 21-2 (2004)	Start - End		Sum	Average
1	lo s	30 - 103	b	0	0
2		36 - 104		Õ	0
3	•	42 - 104	8	Ó	0
4	18	148 - 10s	54	0	Õ
Readings ranged from	to	0	% opacity.		
Average of 12 readings:	0				

Method 9 Visual Emissions Observation Record Form Paved and Unpaved Roadways (Cont.)

ion	paved	Rosp to	JAN Fac	cility Type	S. Andrews INDISTRIAL
of emis	sions Roadw	ay/Tire I	nterface		
Ve	ehicle Pass #	0	Seconds 5	10	Vehicle Type
	1	h	()	10	Ruck Ruck Vontclief Much
	2	0	7	0	rvck
	3	0	0	0	Portaliff
	4	0	0	0	Truck
rintion o	f Road (Paved,	/IInnawed	Dry/Wet).	U	vet

Expires: 04/24/2018

Issued: 10/24/2017



AEROMET ENGINEERING INC. CERTIFIES THAT
Shannon Andrews

has qualified as a CERTIFIED VISIBLE
EMISSIONS READER
per Tile 40 Part 60 Appendix A USEPA Method 9

Certification of Visible Opacity Reading

Shannon Andrews

qualified to conduct EPA Method 9 Tests for visible opacity in accordance with the methods established for such qualification in 40 CFR Part 60 Appendix A.

Certification Date: October 24, 2017

Expiration Date: April 24, 2018

AeroMet Instructor: Trey Beauchamp

Trey Beaudrinp