SETTLEMENT AGREEMENT

The Commissioner of Labor (hereinafter referred to as "Commissioner") and Indianapolis Power & Light Company, (hereinafter referred to as "Employer") hereby agree as follows:

PARTI

The Commissioner amends the Safety Order(s) and Notification(s) of Penalty, IOSHA Inspection No. 315870717 and issued to the Employer on January 30, 2013 in the following manner:

SAFETY ORDER 01:

Item 1a:

Deleted.

Item 1b:

Citation is revised as stated below with the Penalty of \$20,000

29 CFR 1910.269(v)(11)(xii): Where coal handling operations produced a combustible atmosphere from fuel sources or from flammable gases or dust, sources of ignition were not eliminated or safely controlled to prevent ignition of the combustible atmosphere:

Unit 7 (Harding Street Generating Station) — Due to a mechanical failure that occurred on one of the Induced Draft (ID) fans on or about August 6, 2012, Unit 7 tripped while it was running at full load. When Unit 7 tripped, all five of the Unit 7 Pulverizers (Mills) also tripped and were shut down while they were partially full of coal dust/powder, a Class II group F combustible dust. Prior to and during the cleaning operations, the employer did not adequately verify that any potential sources of ignition were properly isolated from combustible dust that remained in the mills after the mills were shut down as a result of the Unit 7 trip. Conditions could arise inside a mill that was tripped under load that could potentially cause coal dust deflagrations and/or explosions to occur inside of the mills during cleaning operations and/or prior to the mills being brought back online (i.e. start-up operations).

Respondent agrees to performing the following:

- 1. Develop an SOP(s), that manages the means for positive isolation between the furnace and pulverizers in order to avoid the introduction of sources of ignition when the mill is open. Or in the alternative, develop SOPs for the starting and stopping of pulverizers, sweeping/vacuuming loaded pulverizers, and clearing pulverizers.
- Update applicable contractor agreements to include the requirement of contractors to
 include wearing Flame Retardant Clothes (FRCs) when performing tasks that the
 contractor determines potentially expose its workers to risk of combustible dust related
 flash fires and/or deflagrations.
- Revise existing contractor applicable terms and conditions to include the requirement of bonding and grounding of all contractor equipment that can create an energy conduit related to combustible dust.
- 4. Develop contractor safety terms and conditions to remind employees and contractors that the use of compressed air to blow or disturb combustible dust located inside of the mills is prohibited.

5. The above abatements to be completed within ninety (90) days of the date of this Agreement.

Item 2: Deleted.

Item 3: Citation and Penalty Upheld.

Respondent agrees to revise its Program on LO/TO to include: LO/TO training, secondary verification of LO/TO, management oversight of LO/TO, and random audits of LO/TO with this abatement to be completed within ninety (90) days of the date of this Agreement including implementation of the Program.

Item 4: Delete.

Respondent agrees to reevaluate the emergency action plan to include an annual emergency response drill to take place within one hundred and twenty (120) days following the completion of the reevaluation. Respondent agrees to revised Contractor Safety Terms & conditions to require FRCs, when applicable. Respondent agrees to update PPE hazard assessments for IPL employees to include FRC where applicable. The evaluation and FRC abatements are to be completed within ninety (90) days of the date of this Agreement.

SAFETY ORDER 02:

Item 1: Deleted.

Item 2a, 2b, and 2c:

Deleted.

Item 2d:

Reduce to a Serious violation and the penalty remains \$63,000.

Respondent agrees to install new transmitters with new logic and to inspect and maintain those transmitters according to manufacturer recommendations and as documented in an SOP. Installation and SOP to be completed within ninety (90) days of the date of this Agreement.

Item 3: Reduce to a Serious violation and the penalty is reduced to \$13,000.

Respondent agrees to an SOP that includes a vendor/OEM recommended replacement schedule for parts, monthly visual inspections of the system, and, an annual 'live' short duration test of the of valves located prior to the overhead lines with this SOP to be completed within ninety (90) days of the date of this Agreement.

The TOTAL AGREED PENALTY for INSPECTION No. 315870717 is \$102,300.00.

PART II

The Commissioner amends the Safety Order(s) and Notification(s) of Penalty, IOSHA Inspection No. 316972678 and issued to the Employer on August 30, 2013 in the following manner:

SAFETY ORDER 01:

Item 1: Deleted. Respondent agrees to train employees to not open mill doors and

insert water hoses. Abatement date extended to ninety days after the

employer has executed this agreement.

Item 2: Deleted.

Item 3: Upheld under Indiana Code 29 CFR 1910.269(a)(2)(i). "In the alternative"

citation deleted. Abatement date extended to December 1, 2014.

Item 4: Grouped with Item 3 under 29 CFR 1910.269(a)(2)(iii). "In the

alternative" citation deleted. Abatement to be commenced by March 15,

2014 and completed by December 1, 2014.

Item 5: Grouped with Item 3 and 4 under 29 CFR 1910.269(a)2)(iv)(A). "In the

alternative" citation deleted. Abatement to be commenced by March 15,

2014 and completed by December 1, 2014.

Item 6: Grouped with Item 3, 4, and 5 under 29 CFR 1910.269(a)(2). "In the

alternative" citation deleted. Abatement to be commenced by March 15,

2014 and completed by December 1, 2014.

Item 7: Serious violation. IPL does not agree this citation applies and is only

agreeing for purposes of settlement only. The "In the alternative" citation is deleted. Abatement date extended to December 1, 2014. IPL to install

and conduct Millpro pilot project on 7-5 mill. Six months after the

completion of the Millpro pilot system, IPL will conduct a process hazard

evaluation of the effectiveness of the pilot system with that evaluation to be performed by a professional engineer. IPL will provide the evaluation

to the Agency no later than September 1, 2015.

The TOTAL AGREED PENALTY for INSPECTION No. 316972678 is \$18,000.00.

The TOTAL AGREED PENALTY for INSPECTION No. 316972678 and INSPECTION No. 315870717 is \$120,300.00.

THE EMPLOYER IS SATISFIED WITH THE AMENDMENTS STATED ABOVE AND ACCORDINGLY WAIVES ITS RIGHT TO FILE A NOTICE OF CONTEST OF THE SAFETY ORDER(S) AND NOTIFICATION(S) OF PENALTY AS AMENDED AND AGREES TO WITHDRAW ANY PREVIOUSLY FILED NOTICES OF CONTEST IN THIS MATTER.

Upon full execution of this Settlement Agreement ("Agreement") the Employer will post this Agreement for three (3) working days or until abatement is completed, whichever period is longer.

The total AGREED PENALTY is due and payable within fifteen (15) working days from the Employer's execution of this Agreement. The Employer further agrees that if the AGREED PENALTY is not paid within fifteen working days from the Employer's execution of this Agreement, that the full amount of the penalty initially assessed against the Employer in the Safety Order(s) and Notification(s) of Penalty which are the subject of this Agreement is due and payable immediately.

The Safety Order(s) and Notification(s) of Penalty are, and shall be, herein a final and enforceable Order of the Board of Safety Review.

Except for this Agreement, and IOSHA matters arising out of this Agreement, and any other subsequent IOSHA proceedings between the parties, none of the foregoing agreements, statements, findings, and actions taken by Employer shall be deemed an admission by Employer of the allegations contained within the Safety Order(s) and Notification(s) of Penalty. Any and all actions to be taken by Employer under this Agreement (including penalty payments), whether relating to policies, procedures, personnel, plant, design or equipment, all constitute subsequent remedial measures as to the events which occurred at the Harding Street plant on or about August 6, 2012 and which are the subject of this Agreement. This Agreement has been made for the sole purposes of avoiding the ongoing expense of administrative review or litigation and to reduce the likelihood of future similar events. The agreements, statements, findings and actions taken herein are made in order to compromise and settle this IOSHA matter economically and amicably, and they shall not be used for any other purpose, except as herein stated.

INDIANAPOLIS POWER & LIGHT	COMMISSIONER OF LABOR
COMPANY	$\sim \alpha //$
By: Kelly M. Hunti	By flexander of
Printed Name: Kelly M. Huntington	Printed Name: Jule C. Alexander
Printed Name: Kerry W. Turnington	Timed Name
Title: President	Title: Director
Date: 5/15/14	Date: .5/16/14
•	7 /

Indiana Occupational Safety and Health Administration 402 West Washington Street

Room W195

Indianapolis, IN 46204-2751

Phone: 317/232-1979 Fax: 317/233-8509



Ocotificial mail # 2003 1010 0003 5732 6273 1-30-13 AD

Safety Order and Notification of Penalty

To:

Indianapolis Power & Light Company, and its successors 1230 West Morris Street Indianapolis, IN 46221

Inspection Site:

3700 South Harding Street Indianapolis, IN 46217

Inspection Number:

315870717

Inspection Date(s):

08/08/2012 - 01/11/2013

Issuance Date:

01/30/2013

The violation(s) described in this Safety Order and Notification of Penalty is (are) alleged to have occurred on or about the day(s) the inspection was made unless otherwise indicated within the description given below.

An inspection of your place of employment has revealed conditions which we believe do not comply with the provisions of the Indiana Occupational Safety and Health Act (Indiana Code Chapter 22-8-1.1) or the standards or rules adopted thereunder. Accordingly, enclosed please find safety order(s) and notification(s) of penalty describing such violation(s) with references to applicable standards, rules, or provisions of the statute and stating the amount of any penalty(ies).

Informal Conference - Please be advised that it may be possible to informally settle any potential dispute without initiating the more elaborate proceedings brought on by a petition for review. Prior to filing a petition for review, you may request an informal conference concerning any of the results of the inspection (safety orders, penalties, abatement dates, etc.) by contacting the Indiana Department of Labor/IOSHA, preferably by telephone, in a prompt manner. Please be advised that a request for an informal conference cannot extend the fifteen working day period for filing a petition for review. Informal conferences frequently resolve any possible disputes, and therefore you are urged to take advantage of this opportunity. Because of the limited time period and in order to facilitate scheduling, any requests for an informal conference should be made promptly upon your receipt of the safety order(s) and notification(s) of penalty.

Right to Contest - You are hereby also notified that you are entitled to seek administrative review of the safety order(s), penalty(ies), or both by filing a written petition for review at the above address <u>postmarked</u> within fifteen working days of your receipt of the safety order(s) and notification(s) of penalty. ("Working days" means Mondays through Fridays, but does not include Saturdays, Sundays, legal holidays under a state statute or days

on which the Indiana Department of Labor's offices are closed during regular business hours). If you do not file such a petition for review (contest), the safety order(s) and penalty(ies) shall be deemed final orders of the Board of Safety Review and not subject to review by any court or agency. The issuance of a safety order does not constitute a finding that a violation has occurred unless no petition for review is filed, or if a petition for review (contest) is filed, it must contain a statement of its basis and should reference the above inspection number. Upon receipt of your petition for review, we will affirm, amend or dismiss the safety order(s) and notification(s) of penalty. If we affirm, your petition for review will be granted (unless it was not timely) and the dispute will be certified by the Board of Safety Review for further proceedings. The Board of Safety Review is an independent agency appointed by the governor with authority to conduct hearings and to issue decisions concerning disputed safety order(s) and notification(s) of penalty. If we amend the safety order(s) or notification(s) of penalty, your petition for review shall be deemed moot. However, you will then be given an opportunity to file a petition for review concerning the amended safety order(s) and notification(s) of penalty.

Please be advised that an employee or representative of employees may file a petition for review to contest the reasonableness of the time stated in the safety order(s) for the abatement of any violation.

Posting - Upon receipt of any safety order(s) you are required to post such safety order(s), or a copy thereof, unedited, at or near each place an alleged violation referred to in the safety order(s) occurred. However, if your operations are such that it is not practicable to post the safety order(s) at or near each place of alleged violation, such safety order(s) shall be posted, unedited, in a prominent place where it will be readily observable by all affected employees. For example, if you are engaged in activities which are physically dispersed, the safety order(s) may be posted at the location from which the employees operate to carry out their activities. You must take steps to ensure that the safety order is not altered, defaced, or covered by other material. Posting shall be until the violation is abated, or for three working days, whichever is longer.

Penalties - Penalties are due within fifteen (15) working days of receipt of this notification unless contested. Abatement does not constitute payment of penalties.

Abatement - The conditions cited in the safety order(s) must be corrected (abated) on or before the date shown for each item on the safety order(s) and notification(s) of penalty unless:

- (1) You file a petition for review concerning the violation, in which case the full abatement period shall commence from the issuance of a final decision by the Board of Safety Review or the courts which requires compliance with the safety order; or
 - (2) The abatement period is extended by the granting of a petition for modification of abatement date.

PMAs - The petition for modification of abatement date is a manner in which you may seek additional time to correct (abate) a violation without having to file a petition for review concerning the safety order, or after the expiration of the time period to file such a petition for review when it becomes apparent that you need extra time to abate the violation. A petition for modification of abatement date shall be in writing and shall include the following information:

- (1) All steps you have taken, and the dates of such actions, in an effort to achieve compliance during the prescribed abatement period.
 - (2) The specific additional abatement time necessary in order to achieve compliance.
- (3) The reasons such additional time is necessary, including the unavailability of professional or technical personnel or of materials and equipment, or because necessary construction or alteration of facilities cannot be completed by the original abatement date.
- (4) All available interim steps being taken to safeguard employees against the cited hazard during the abatement period.
- (5) A certification that a copy of the petition has been posted, and if appropriate, served on the authorized representative of affected employees, and a certification of the date upon which such posting and service was made.

A petition for modification of abatement date shall be filed with the Indiana Department of Labor/IOSHA no later than the close of the next working day following the date on which abatement was originally required. A later-filed petition shall be accompanied by the employer's statement of exceptional circumstances explaining the delay. A copy of such petition shall be posted in a conspicuous place where all affected employees will have notice thereof or near such location where the violation occurred. The petition shall remain posted until the time period for the filing of a petition for review of the Commissioner's granting or denying the petition expires. Where affected employees are represented by an authorized representative, said representative shall be served a copy of such petition.

Notification of Corrective Action - Correction of the alleged violations which have an abatement period of thirty (30) days or less should be reported in writing to us promptly upon correction. A "Letter of Abatement" form and an "Abatement Photographs" worksheet are enclosed for your assistance in providing adequate documentation of abatement. Reports of corrections should show specific corrective action on each alleged violation and the date of such action. On alleged violations with abatement periods of more than thirty (30) days, a written progress report should be submitted, detailing what has been done, what remains to be done, and the time needed to fully abate each such violation. When the alleged violation is fully abated, we should be so advised. Timely correction of an alleged violation does not affect the initial proposed penalty.

Followup Inspections - Please be advised that a followup inspection may be made for the purpose of ascertaining that you have posted the safety order(s) and corrected the alleged violations. Failure to correct an alleged violation may result in additional penalties for each day that the violation has not been corrected.

Employer Discrimination Unlawful - The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he/she has been discriminated against may file a complaint no later than 30 days after the discrimination occurred with the Indiana Department of Labor/IOSHA at the address shown above.

Notice to Employees - The law gives an employee or his/her representative the opportunity to object to any abatement date set for a violation if he/she believes the date to be unreasonable. The contest must be mailed to the Indiana Department of Labor/IOSHA at the address shown above within fifteen (15) working days (excluding weekends and State holidays) or receipt by the employer of this safety order and penalty.

If you wish additional information, you may direct such requests to us at the address or telephone number stated above.

Indiana Occupational Safety and Health Administration



NOTICE TO EMPLOYEES OF INFORMAL CONFERENCE

An informal conference has been scheduled with IOSHA to discuss the safety order(s) issued	
on 01/30/2013. The conference will be held at the IOSHA office located at 402 West	
Washington Street, Room W195, Indianapolis, IN 46204 on at	
Employees and/or representatives of employees have a right to attend	
an informal conference.	

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name: Inspection Site:

Indianapolis Power & Light Company

3700 South Harding Street, Indianapolis, IN 46217



The alleged violations below have been grouped because they involve similar or related hazards that may increase the potential for illness or injury resulting from an accident.

Safety Order 1 Item 1a Type of Violation:

Serious

IC 22-8-1.1, Section 2: The employer did not establish and maintain conditions of work which were reasonably safe and healthful for employees, and free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to potential deflagration and/or explosion hazards caused by ineffective control of potential sources of ignition that were present inside of components of a pulverized coal fuel system during normal operation and after an unexpected shut down (trip) occurred:

Unit 7 (Harding Street Generating Station) - Due to a mechanical failure that occurred on one of the Induced Draft (ID) Fans on or about August 6, 2012, Unit 7 tripped while it was running at full load. When Unit 7 tripped, all five of the Unit 7 Pulverizers (Mills) also tripped and were shut down while they were partially full of coal dust/powder, a Class II Group F combustible dust. Prior to cleaning operations commencing inside of the mills, none of the mills contained an inert atmosphere and all of the access doors were taken off of each of the mills. Prior to and during these cleaning operations, the employer also did not adequately verify that any potential sources of ignition were present inside the mills. Conditions could arise inside of an mill with an non-inert atmosphere that was tripped under load that could potentially cause coal dust deflagrations and/or explosions to occur inside of the mills during cleaning operations and/or prior to the mills being brought back online (i.e. start-up operations).

Among other methods, one feasible and acceptable method to correct this hazard is to follow the requirements listed in the National Fire Protection Association's (NFPA) Boiler and Combustion Systems Hazards Code (NFPA 85-2011). Section 9.4.6.8 of NFPA 85-2011 states that "pulverizers and pulverized fuel storage systems shall be equipped with an inerting system that is capable of maintaining an inert atmosphere as required to meet the provisions of 9.5.4.2.1. (See also NFPA 69, Standard on Explosion Prevention Systems)." Section 9.5.4.2.1.1 of NFPA 85-2011 states that "a pulverizer that is tripped under load shall be inerted and maintained under an inert atmosphere until confirmation that no burning or smoldering fuel exists in the pulverizer or the fuel is removed." Section 9.5.4.2.2.2(C) of NFPA 85-2011 states that "due to the danger of an explosion when they are being opened and cleaned, pulverizers shall not be cleaned manually until they and their contents have been cooled to ambient temperature."

Date By Which Violation Must be Abated: **Proposed Penalty:**

02/26/2013

\$6,300.00

OR IN THE ALTERNATIVE

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Safety Order 1 Item 1b Type of Violation:

Serious

29 CFR 1910.269(v)(11)(xii): Where coal-handling operations produced a combustible atmosphere from fuel sources or from flammable gases or dust, sources of ignition were not eliminated or safely controlled to prevent ignition of the combustible atmosphere:

Unit 7 (Harding Street Generating Station) - Due to a mechanical failure that occurred on one of the Induced Draft (ID) Fans on or about August 6, 2012, Unit 7 tripped while it was running at full load. When Unit 7 tripped, all five of the Unit 7 Pulverizers (Mills) also tripped and were shut down while they were partially full of coal dust/powder, a Class II Group F combustible dust. Prior to cleaning operations commencing inside of the mills, none of the mills contained an inert atmosphere and all of the access doors were taken off of each of the mills. Prior to and during these cleaning operations, the employer also did not adequately verify that any potential sources of ignition were present inside the mills. Conditions could arise inside of an mill with an non-inert atmosphere that was tripped under load that could potentially cause coal dust deflagrations and/or explosions to occur inside of the mills during cleaning operations and/or prior to the mills being brought back online (i.e. start-up operations).

Date By Which Violation Must be Abated:

02/26/2013

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Safety Order 1 Item 2 Type of Violation:

Serious

IC 22-8-1.1, Section 2: The employer did not establish and maintain conditions of work which were reasonably safe and healthful for employees, and free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to potential fire, deflagration and/or explosion hazards caused by the employer not verifying that outside contractors used and followed recognized safety procedures and practices to control or eliminate dispersion of combustible dust and potential sources of ignition:

Unit 7 (Harding Street Generating Station) - On or about August 6, 2012, an outside contractor, SSI Services, began cleaning and removing coal dust/powder, a Class II Group F combustible dust, from inside of all five of the Unit 7 Pulverizers (Mills). Although the employer brought in SSI to clean the inside of the mills, the employer did not effectively monitor and assure that SSI used and followed recognized safety procedures and practices when disturbing coal dust/powder. Through ineffective monitoring, SSI was allowed to use compressed air rated above approximately 100 psi inside of the mills to blow coal dust/powder towards and into the vacuum hose(s). Through ineffective monitoring, the employer also allowed SSI to potentially introduce sources of ignition such as, but not limited to, static electricity into the cleaning operations due to inadequate bonding and grounding of the vacuum truck and its components (i.e. hoses). The employer also did not verify that the coal dust collected from inside of the mills was conveyed to a dust collection system that was approved and/or designed to collect combustible dust. This lack of effective outside contractor monitoring prior to and during cleaning operations could potentially cause accumulated or settled coal dust/powder concentrations present inside of the mills to be dispersed and ignited, which could potentially cause deflagrations and/or explosions to occur inside of the mills and/or the vacuum system (truck, hoses, etc.).

Among other methods, one feasible and acceptable method to correct this hazard is to follow the requirements for contractors and subcontractors listed in Section 11.5 of the National Fire Protection Association's (NFPA) Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (NFPA 654-2013). The employer should also assure that outside cleaning contractors follow all applicable requirements of NFPA 654-2013 including, but not limited to, Section 8.2.2 (Cleaning Methods). The employer should also assure that all contractors and subcontractors comply with the employer's safety practices, policies and/or procedures, including but not limited to, requiring the use of flame resistant clothing (FRC) when performing cleaning operations inside of the mills.

Date By Which Violation Must be Abated: Proposed Penalty:

02/26/2013 \$6,300.00

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Safety Order 1 Item 3 Type of Violation:

29 CFR 1910.269(d)(6)(vii): Before starting work on machines or equipment that had been locked out or tagged out, the authorized employee did not verify that isolation and deenergizing of the machine or equipment had been accomplished:

Serious

Unit 7 (Harding Street Generating Station) - Due to a mechanical failure that occurred on one of the Induced Draft (ID) Fans on or about August 6, 2012, Unit 7 tripped while it was running at full load. Prior to cleaning operations commencing inside of the five Unit 7 Pulverizers (Mills), Operators locked and/or tagged out various gates and dampers (and their components) located on each of the mills. Although these gates and dampers were locked and/or tagged out, the gates and dampers on each of the mills were not verified to be effectively locked and/or tagged out in the closed position. Prior to cleaning operations commencing inside of the mills, gates and dampers such as, but not limited to the Exhauster Discharge Gates and Exhauster Inlet Dampers on each of the mills were locked and/or tagged out (isolated) in the open to partially open position(s).

Date By Which Violation Must be Abated: Proposed Penalty:

02/26/2013 \$6,300.00

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Safety Order 1 Item 4 Type of Violation:

29 CFR 1910.269(g)(1): Personal protective equipment did not meet the requirements of Subpart I of this Part:

Serious

- (a) Unit 7 (Harding Street Generating Station) On or about August 6, 2012, cleaning operations began inside of the five Unit 7 Pulverizers (Mills). Due to significant amounts of accumulated and/or settled coal dust/powder, a Class II Group F combustible dust, located inside of each of the mills, a potential combustible dust flash fire hazard existed during cleaning operations and/or start-up operations. However, Operators who worked in or near the mills while cleaning and/or start up operations were commencing were not required to wear appropriate flame-resistant clothing (FRC) or flame-resistant garments (FRGs). On or about August 7, 2012, Operators who entered the Unit 7 Area after the first in a series of explosions occurred were also not required to wear appropriate FRC or FRGs that protected their heads and/or faces from the flash fires (fireball(s)) that occurred inside of and/or around one of more of he mills.
- (b) Unit 7 (Harding Street Generating Station) The Personal Protective Equipment (PPE) Hazard Assessment for the various jobs, processes and/or pieces of machinery/equipment located throughout Unit 7 did not specifically address and/or discuss the potential flash fire, deflagration and explosion hazards created by the coal dust/powder, a Class II Group F combustible dust, which was dispersed and suspended during normal operation and cleaning operations in areas such as, but not limited to the five Unit 7 Pulverizers (Mills). The PPE Hazard Assessment also did not specifically describe what PPE, if any, was required to be worn to protect employees from flash fire hazards caused by combustible dust(s).

Date By Which Violation Must be Abated: Proposed Penalty:

02/26/2013 \$6,300.00

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

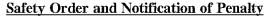
Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

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Safety Order 2 Item 1 Type of Violation:

Knowing

IC 22-8-1.1, Section 2: The employer did not establish and maintain conditions of work which were reasonably safe and healthful for employees, and free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to potential deflagration and/or explosion hazards because the hot air duct systems connected to the coal pulverizers were not designed to prevent the propagation of a coal dust deflagration and/or explosion from one pulverizer to other pulverizers:

Unit 7 (Harding Street Generating Station) - The hot air ducts, which were connected to the lower left side of each of the Unit 7 Pulverizers (Mills), delivered/transported pre-heated air to warm the coal dust/powder, a Class II Group F combustible dust, located inside of the mills. Each of these hot air ducts were connected to a large header that was located behind the mills, and the combination of this common header and the hot air ducts interconnected all five of the Unit 7 Mills together. Although each of the Unit 7 Mills were protected from explosion hazards by deflagration containment, none of the metal hot air ducts were designed to withstand the pressure generated during a coal dust deflagration and/or explosion. Also, none of the hot air ducts connected to each of the mills were equipped with deflagration isolation systems. Thus, if a deflagration and/or explosion occurred inside of any of the Unit 7 Mills, the pressure wave and resulting flame front could potentially propagate through the hot air duct system (including the header) and into one or more of the other mills. Because there was nothing to prevent or relieve the pressure generated during a deflagration and/or explosion that occurred inside of the mills, the propagation of this deflagration and/or explosion through the hot air ducts could also potentially cause the ducts to burst open and violently explode.

Among other methods, one feasible and acceptable method to correct this hazard is to install mechanical deflagration isolation systems and/or devices inside of the hot air ducts which are designed to prevent deflagration propagation between connected pieces of equipment in accordance with the National Fire Protection Association's (NFPA) Standard on Explosion Prevention Systems (NFPA 69-2008). Deflagration isolation propagation methods are also discussed in Annex E of NFPA's Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (NFPA 654-2013).

Date By Which Violation Must be Abated: Proposed Penalty:

02/26/2013 \$63,000.00

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

The alleged violations below have been grouped because they involve similar or related hazards that may increase the potential for illness or injury resulting from an accident.

Safety Order 2 Item 2a Type of Violation:

Knowing

IC 22-8-1.1, Section 2: The employer did not establish and maintain conditions of work which were reasonably safe and healthful for employees, and free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to potential extreme pressure fluctuations of a pulverized coal fuel system caused by starting up the system without properly functioning safety devices:

Unit 7 (Harding Street Generating Station) - On or about August 7, 2012, employees began to bring Unit 7 back online after the unit tripped on or about August 6, 2012, due to a mechanical failure that occurred on one of the Induced Draft (ID) Fans. At approximately 12:43 am on or about August 7, 2012, an oil fire was started inside of the Unit 7 Boiler, which operated under a slight negative pressure during normal operation. Prior to starting a fire in the boiler, no fan tests were performed on the boiler or the system and several of the pressure switches and/or transmitters were broken and/or not functioning. The broken and/or non-functioning pressure switches and/or transmitters could allow the boiler and fans to continue to operate during an excessive pressure event without shutting down (tripping) the system and cause the boiler to operate under positive pressure. If a fire is put into the boiler and the boiler goes positive (i.e. extreme positive pressure), conditions could arise that could potentially cause coal dust explosions to occur inside of the mills while the mills are being cleaned out. Specifically, materials such as, but not limited to hot air, coal dust/powder and fly ash could potentially be sent back into the mills from the boiler through the feed pipes. The hot air and combusting material(s) produced during an over-pressurization of the boiler could potentially disperse and ignite any dispersed or settled coal dust/powder concentrations (clouds) present inside of the mills.

Among other methods, one feasible and acceptable method to correct this hazard is to assure all safety devices such as, but not limited to the pressure switches and transmitters are properly maintained and functioning prior to starting up the pulverized coal fuel system after a expected or unexpected shut down (trip) occurs. Start-up procedures should also include requirements to verify that all safety devices are properly functioning prior to bringing the unit back online. The employer should also follow all applicable requirements for start-up, shut down and trips of pulverized fuel systems listed in the National Fire Protection Association's (NFPA) *Boiler and Combustion Systems Hazards Code* (NFPA 85-2011).

Date By Which Violation Must be Abated: Proposed Penalty:

02/26/2013 \$63,000.00

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Safety Order 2 Item 2b Type of Violation: Knowing

29 CFR 1910.269(v)(11)(xii): Where coal-handling operations produced a combustible atmosphere from fuel sources or from flammable gases or dust, sources of ignition were not eliminated or safely controlled to prevent ignition of the combustible atmosphere:

Unit 7 (Harding Street Generating Station) - On or about August 7, 2012, employees began to bring Unit 7 back online after the unit tripped on or about August 6, 2012, due to a mechanical failure that occurred on one of the Induced Draft (ID) Fans. At approximately 12:43 am on or about August 7, 2012, an oil fire was started inside of the Unit 7 Boiler, which operated under a slight negative pressure during normal operation. Prior to starting a fire in the boiler, no fan tests were performed on the boiler or the system, and several of the pressure switches and/or transmitters were broken and/or not functioning. The broken and/or non-functioning pressure switches and/or transmitters could allow the boiler and fans to continue to operate during an excessive pressure event without shutting down (tripping) the system and cause the boiler to operate under positive pressure. If a fire is put into the boiler and the boiler goes positive (i.e. extreme positive pressure), conditions could arise that could potentially cause coal dust explosions to occur inside of the mills while the mills are being cleaned out. Specifically, materials such as, but not limited to hot air, coal dust/powder and fly ash could potentially be sent back into the mills from the boiler through the feed pipes. The hot air and combusting material(s) produced during an over-pressurization of the boiler could potentially disperse and ignite any dispersed or settled coal dust/powder concentrations (clouds) present inside of the mills.

Date By Which Violation Must be Abated:

02/26/2013

OR IN THE ALTERNATIVE

Indiana Occupational Safety and Health Administration

Inspection 315870717

Number:

Inspection Dates: 08/08/2

08/08/2012 - 01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

The alleged violations below have been grouped because they involve similar or related hazards that may increase the potential for illness or injury resulting from an accident.

Safety Order 2 Item 2c Type of Violation: Knowing

IC 22-8-1.1, Section 2: The employer did not establish and maintain conditions of work which were reasonably safe and healthful for employees, and free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to extreme pressure fluctuations of a pulverized coal fuel system due to inadequate maintenance, inspection and testing of pressure-related safety devices:

Unit 7 (Harding Street Generating Station) - If an extreme pressure fluctuation occurred inside of the boiler (furnace), a system of twelve Dwyer Model 1626-10 Single Electric Pressure Switches and three Rosemount Model 1151 GP 3522 SMART Pressure Transmitters located on the 12th Floor of Unit 7 were designed to trip the boiler and/or Induced Draft (ID) and Forced Draft (FD) Fans. However, neither the pressure switches nor the pressure transmitters were properly inspected and calibrated at regular intervals to assure that they were maintained and functioning correctly. When the pressure switches and/or transmitters were calibrated, calibration records, information and/or documents were also not properly maintained. Several of the twelve pressure switches had previously been found to be damaged and/or broken, including when the pressure switches were calibrated on or about May 10, 2012 (approximately three months prior to a series of explosions that occurred inside of Unit 7 on or about August 7, 2012). Improperly functioning pressure switches and/or transmitters could allow the boiler and fans to continue to operate during an excessive pressure event without shutting down (tripping) the system. This could cause the boiler to operate under positive pressure, which could allow conditions to arise that could potentially cause coal dust explosions to occur inside of the Pulverizers (mills) or other Unit 7 components during normal operation and during start-up of the boiler (i.e. when cleaning operations occurred inside of the mills).

Among other methods, one feasible and acceptable method to correct this hazard is to develop and implement a maintenance, inspection and testing (calibration) schedule for the twelve Dwyer Model 1626-10 Single Electric Pressure Switches and three Rosemount Model 1151 GP 3522 SMART Pressure Transmitters. Dwyer recommends that if the pressure switches are protecting critical pieces of equipment (i.e. a pressure vessel), the switches should be calibrated once every three months, or a minimum of once per year. Rosemount recommends to calibrate the pressure transmitters on an annual basis. All calibration records, information, data and/or documents should be maintained and kept in a consistent manner (i.e. one form or document used during each calibration cycle kept in an accessible, known location).

Date By Which Violation Must be Abated:

02/26/2013

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013



Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Safety Order 2 Item 2d Type of Violation:

Knowing

29 CFR 1910.269(v)(1)(i): Interlocks and other safety devices were not maintained in a safe, operable condition:

Unit 7 (Harding Street Generating Station) - If an extreme pressure fluctuation occurred inside of the boiler (furnace), a system of twelve Dwyer Model 1626-10 Single Electric Pressure Switches and three Rosemount Model 1151 GP 3522 SMART Pressure Transmitters located on the 12th Floor of Unit 7 were designed to trip the boiler and/or Induced Draft (ID) and Forced Draft (FD) Fans. However, neither the pressure switches nor the pressure transmitters were properly inspected and calibrated at regular intervals to assure that they were maintained and functioning correctly. When the pressure switches and/or transmitters were calibrated, calibration records, information and/or documents were also not properly maintained. Several of the twelve pressure switches had previously been found to be damaged and/or broken, including when the pressure switches were calibrated on or about May 10, 2012 (approximately three months prior to a series of explosions that occurred inside of Unit 7 on or about August 7, 2012). Improperly functioning pressure switches and/or transmitters would allow the boiler and fans to continue to operate during an excessive pressure event without shutting down (tripping) the system. This could cause the boiler to operate under positive pressure, which could allow conditions to arise that could potentially cause coal dust explosions to occur inside of the Pulverizers (mills) or other Unit 7 components during normal operation and during start-up of the boiler (i.e. when cleaning operations occurred inside of the mills).

Date By Which Violation Must be Abated:

02/26/2013

Indiana Occupational Safety and Health Administration

Inspection

315870717

Number:

Inspection Dates:

08/08/2012 -

01/11/2013

Issuance Date:

01/30/2013

Safety Order and Notification of Penalty

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217



Safety Order 2 Item 3 Type of Violation:

Knowing

IC 22-8-1.1, Section 2: The employer did not establish and maintain conditions of work which were reasonably safe and healthful for employees, and free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to potential fire hazards due to inadequate maintenance, inspection and testing of the fire detection and suppression systems installed inside of coal pulverizers (mills):

Unit 7 (Harding Street Generating Station) - Each of the five Unit 7 Pulverizers (Mills) were equipped with fixed water-based fire protection (suppression) systems, which were manually activated by a pull station located inside of the Control Room. Each of the Unit 7 Mills were also equipped with fire detection systems (i.e. temperature sensors), but these systems were not connected to and would not automatically activate the fixed water-based fire protection systems. Although the fixed water-based fire protection systems were designed to extinguish fires inside of mills, these systems were not properly maintained, inspected and tested at regular intervals to assure that the systems (and their components) were functioning correctly.

Among other methods, one feasible and acceptable method to correct this hazard is to develop and implement a maintenance, inspection and testing schedule for the fixed water-based fire protection (suppression) systems and fire detection systems located inside of the Unit 7 Mills. Before implementing any maintenance, inspection and/or testing schedule, the employer should consult the manufacturers of the fixed water-based fire protection systems and fire detection systems. The National Fire Protection Association's (NFPA) Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems (NFPA 25-2011) and National Fire Alarm and Signaling Code (NFPA 72-2013) also have inspection and testing requirements for fixed water-based fire protection systems and fire detection systems respectively.

Date By Which Violation Must be Abated:

Proposed Penalty:

02/26/2013

\$63,000.00

Julie C. Alexander J.D.

Director, Industrial Compliance

Indiana Occupational Safety and Health Administration 402 West Washington Street Room W195

Indianapolis, IN 46204-2751

Phone: 317/232-1979 Fax: 317/233-8509



INVOICE/DEBT COLLECTION NOTICE

Company Name:

Indianapolis Power & Light Company

Inspection Site:

3700 South Harding Street, Indianapolis, IN 46217

Issuance Date:

01/30/2013

Summary of Penalties for Inspection Number

315870717

Safety Order 01, Serious

\$25,200.00

Safety Order 02, Knowing

\$189,000.00

Total Proposed Penalties

\$214,200.00

Penalties are due within fifteen (15) working days of receipt of this notification unless contested. Make your check or money order payable to: "Indiana DOL/IOSHA". Please indicate IOSHA's Inspection Number (indicated above) on the remittance.

IOSHA does not agree to any restrictions or conditions or endorsements put on any check or money order for less than full amount due, and will cash the check or money order as if these restrictions, conditions, or endorsements do not exist.

Corrective action, taken by you for each alleged violation should be submitted to this office on or about the abatement dates indicated on the Safety Order and Notification of Penalty.

A work sheet has been provided to assist in providing the required abatement information. A completed copy of this work sheet should be posted at the worksite with the safety order(s).

Julie C Alexander J.D.

Director, Industrial Compliance

Date of