

STAFF REPORT

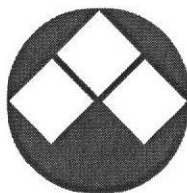
Workers at the Electric Services coal yard operate heavy machinery to transport coal from the coal pile to the conveyors feeding the Power Plant boilers. Operating this machinery on the coal pile can be very hazardous during the winter months when it gets dark during normal shift hours. Standard lighting methods are inadequate for illuminating the top of the coal pile, and workers run the risk of driving off the edge of the pile in the bulldozer in the darkness. The City's workplace safety advisor, the Iowa Association of Municipal Utilities, has recommended that additional lighting be added. A copy of the letter is attached, which cites the relevant OSHA regulation requiring employers to provide a worksite free of hazards.

Installation of floodlights mounted on 60 foot tall power poles placed around the perimeter of the coal yard will improve the lighting levels on the coal pile and provide a safer environment for the heavy machinery operators. The City Council should be advised that the flood lights needed for this installation will exceed the 1800 lumens limitation specified in the City's Outdoor Lighting Code ordinance. There may be some light reaching residences to the south of the coal yard, near the Resource Recovery Plant, in particular. However, the ordinance provides for an exception for hazard warning luminaires required by Federal regulatory agencies, in this case the OSHA requirements.

It is important to note that the lights will be illuminated only when work is being done in the coal yard, and this will be normally only in the early evening hours. The floodlights will be controlled by switches and only turned on when necessary. The lights will be aimed toward the coal pile with shields installed on the top of the light fixtures to ensure downlighting and reduce light pollution. Every effort is being made to follow the guidelines set out in the City's Outdoor Lighting Code to control the glare from the lights, while still providing safe working conditions for the equipment operators. Staff has modeled the expected lighting to approximate its effect on adjacent areas (see attached).

Estimated cost for this project is \$7,000 for labor and the purchase of the light fixtures. Funds for the work are available in the power plant's fuel handling equipment budget.

The Council is being informed in advance of this project being completed, should there be questions from the neighbors in the area. Electric Utility staff will be pleased to answer any questions you may have about this work.



IOWA
ASSOCIATION OF MUNICIPAL
UTILITIES

October 21, 2009

RE: Power Plant Coal Yard Safety Lighting Recommendation - Ames, Iowa

During the Fall and Winter months the Coal Yard may have 40,000 tons of coal rising to at least forty feet high. The wheel dozer and loader operated by Ames Power Plant employees move on top of the forty-foot mountain of coal as early as 5 a.m. and as late as 6 p.m. During seasonal daylight hours it is still very dark outside while loading operations are in progress. There have been several close calls in the Coal Yard in the last year. There is an area of safety concern with regards to semis, heavy equipment, vehicle traffic and pedestrians in the low-light situation. The very real hazards are possible equipment damage, injury or even death while not being able to see equipment or people in the dark. The best way to eliminate these hazards is to install more lighting. My best recommendation is to install two or three sixty-foot poles with each pole accommodating 1,000 or more watts of light. These lights should be illuminated for a two-hour period in the morning and evening. Extremity lighting can be a very effective guard against accidents and collisions in general. To reduce light pollution, cutoffs can be installed on the top of the lights to eliminate lighting the night sky.

The lighting requirements ASAE S279.12 chart recommendations should be followed whenever possible and include important safety components. These additional recommendations are standardized through national consensus and have been adopted by new equipment manufacturers.

CFR (Code of Federal Regulations) General Duty Clause 5(a)(1).

OSHA SEC.5.Duties

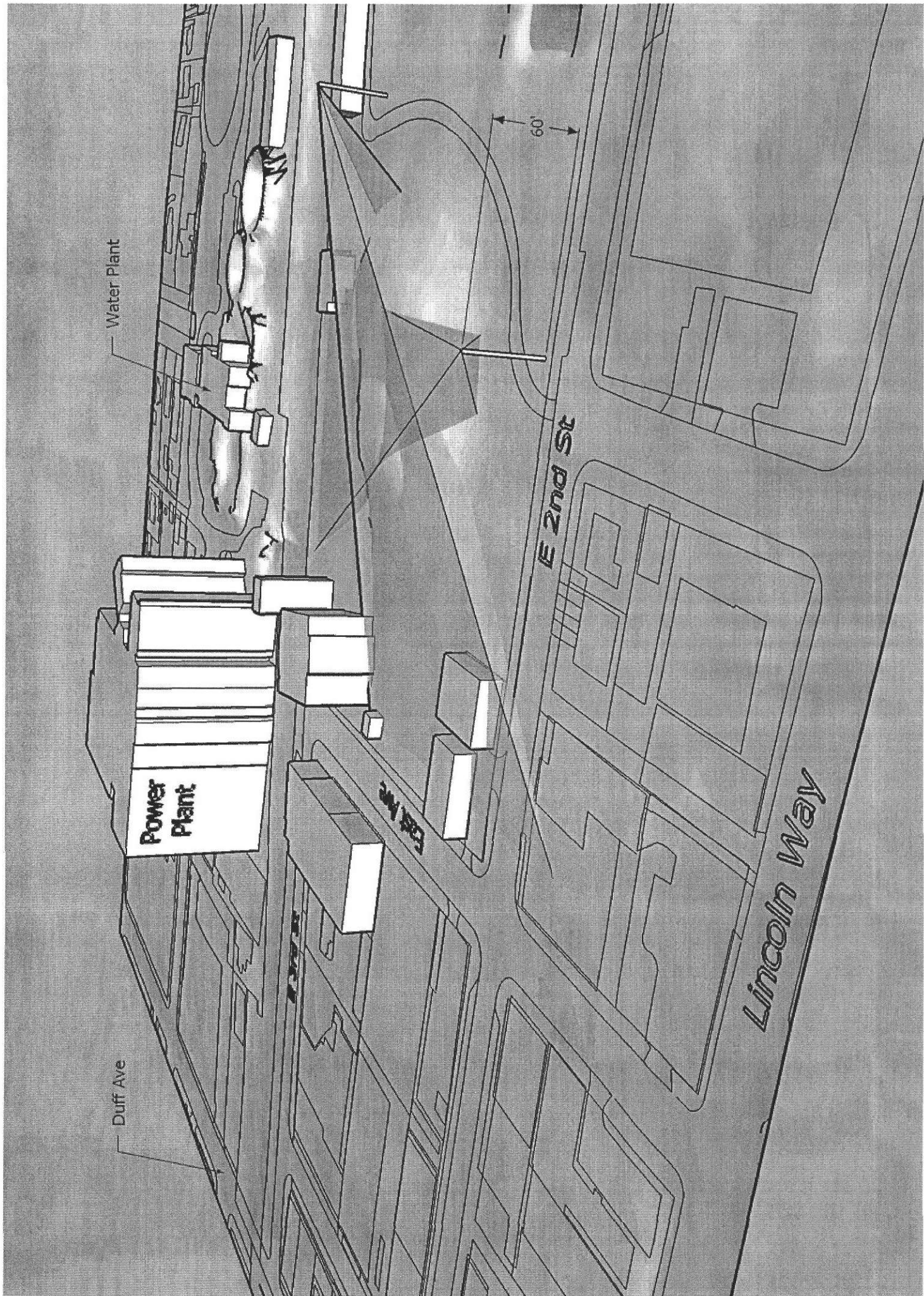
(a) Each employer –

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

Mary Ann Kinkade
Job Training & Safety Coordinator



Water Plant

Power Plant

Duff Ave

E 2nd St

Lincoln Way

60'