

ILLINOIS POLLUTION CONTROL BOARD  
March 7, 2002

JAMES GLASGOW, VICKIE GLASGOW, )  
BILL HOPPE, and PAT HOPPE, )  
 )  
Complainants, )  
 )  
v. ) PCB 00-221  
 ) (Citizens Enforcement - Noise, Air)  
GRANITE CITY STEEL, )  
 )  
Respondent. )

W. JEFFREY MUSKOPF OF FREEARK, HARVEY, MENDILLO, DENNIS, WULLER & CAIN, P.C., APPEARED ON BEHALF OF COMPLAINANTS; and

CHESTER R. BABST AND STACIA CHRISTMAN OF BABST, CALLAND, CLEMENTS & ZOMNIR, P.C., APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by N.J. Melas):

This citizens' enforcement action concern a coal storage operation in Granite City, Madison County. Complainants, James Glasgow, Vickie Glasgow, Bill Hoppe, and Pat Hoppe, allege that Respondent Granite City Steel's (GCS) coal storage operation and coke batteries exceed Illinois' air pollution laws and nuisance noise standards. Complainants contend that GCS has therefore violated Sections 9(a) and 24 of the Environmental Protection Act (Act) (415 ILCS 5/9(a) and 24 (2000)) and the Board's regulations at 35 Ill. Adm. Code 900.102.

GCS states that complainants have not met their burden to prove their accusations and that the case should be dismissed with prejudice. GCS Br. at 2.

The Board finds that GCS has not violated the air pollution provision at Section 9(a) of the Act. The Board finds that GCS has not violated the nuisance noise provisions at Section 24 of the Act and 35 Ill. Adm. Code 900.102. Accordingly, this matter is dismissed and the docket is closed.

**PROCEDURAL MATTERS**

Complainants filed a complaint on June 19, 2000. In the complaint, complainants alleged that GCS caused air and noise pollution in violation of Sections 23 and 24 of the Act and Sections 900.102, 901.102(a), and 901.102(b) of the Board's regulations. On August 24, 2000, the Board issued an order in which it accepted for hearing the noise pollution allegations at Section 24 of the Act and Sections 900.102, 901.102(a), and 901.102(b) of the Board's regulations. In that order, the Board found that the noise pollution allegations pertaining to Section 23 of the Act was frivolous because Section 23 is merely the General Assembly's statement of purpose for Title VI of the Act. The Board found the air pollution allegation

frivolous because complainants did not allege any provisions in either the Act or the Board's regulations that address air pollution. Complainants filed the amended complaint alleging violations of Section 9(a) and 24 of the Act and Section 900.102 of the Board's regulations on November 13, 2000 (Am. Comp. at \_\_\_).

Board Hearing Officer Steven C. Langhoff held a hearing in this matter on July 10 and 11, 2001. Complainants presented nine witnesses. Complainants also offered 44 exhibits, 42 of which were admitted. Respondents presented four witnesses. Respondents offered 36 exhibits, all of which were admitted.<sup>1</sup>

Complainants filed their objections to rulings at hearing on August 6, 2001 (Obj. at \_\_\_) and then filed a supplemental memorandum in support of their objections on August 17, 2001 (Supp. at \_\_\_). Complainants filed their post-hearing brief on August 10, 2001 (Comp. Br. at \_\_\_), and GCS filed its post-hearing brief on September 10, 2001 (GCS Br. at \_\_\_). GCS filed its responses to complainants' objections to rulings at hearing and motion to overrule on September 24, 2001 (Resp. at \_\_\_), and complainants filed a motion to strike that pleading on October 15, 2001. On October 18, 2001, respondent filed a motion to deny complainants' motion to strike and complainants' motion to overrule.

The Board will now address complainants' objections to rulings at hearing and GCS's response. The Board will then summarize the findings of fact. The Board will discuss the alleged air pollution violation and the alleged noise pollution violation. The Board will then determine if the alleged air and noise pollution interfered with complainants' lives. Lastly, the Board will apply the factors at Section 33(c) of the Act (415 ILCS 5/33(c) (2000)) to determine if the interference in complainants' lives was unreasonable.

### **OBJECTIONS TO RULINGS AT HEARING**

Complainants requested that the Board overrule several hearing officer rulings during hearing. The Board first addresses the motion to strike and motion to deny. Complainants' arguments, GCS's responses, the Board decision on each point are then outlined below.

#### **Motion to Strike and Motion to Deny**

In the motion to strike, complainants claimed that GCS's September 24 responses were untimely because the responses were not filed until well after complainants' August 6 objections. Complainants' cited Section 101.500(d) of the Board's procedural regulations which provide, in pertinent part, "Within 14 days after service of a motion, a party may file a response to the motion. If no response is filed, the party will be deemed to have waived objection to the granting of the motion, but the waiver of objection does not bind the Board . . . in its disposition of the motion."

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<sup>1</sup> The transcript of the hearing is cited as "Tr. at \_\_\_." Complainants' hearing exhibits are cited as "Exh. C\_\_\_." GCS's hearing exhibits are cited as "GCS Exh. \_\_\_."

In the motion to deny, GCS stated that complainants' August 6 filing was objections, not a motion. GCS claimed that the Board's procedural regulations have no time limit on responding to objections, and that its responses were timely filed. GCS claimed that even if complainants' pleading is construed as a motion, and if GCS is deemed to have waived its objection to the granting of complainants' motion, such a waiver does not bind the Board to automatically uphold complainants' pleading.

The Board finds that GCS properly filed its responses, even though those responses were filed more than 14 days after the filing of complainants' objections. The Board finds in favor of GCS on this point and denies complainants' motion to strike.

### **Coal Dust and Health Concerns**

Complainants objected to the hearing officer rulings excluding testimony about health effects from exposure to coal dust, including Black Lung Disease. Specifically, complainants objected to rulings excluding testimony from complainants' neighbor Carolyn Carpenter and from Bill Hoppe. Complainants requested that the excluded testimony on coal dust and health concerns be admitted into the record and be considered by the Board. Complainants also objected to the hearing officer ruling excluding exhibits C40 and C41. Obj. at 1-2, 6; Tr. at 24-25, 114-16, 616.

In an offer of proof, Ms. Carpenter testified that she was concerned about the effects of coal dust on her health. Tr. at 25. In another offer of proof, Mr. Hoppe testified that he had read exhibits C40 and C41 and that they formed the basis of his concerns. Tr. at 116.

Complainants argued that the excluded testimony is admissible to prove the character and interference with their lives, health, and general welfare. They claimed that expert testimony is not necessary for this purpose. Obj. at 2.

Complainants cited to Section 101.626(b) of the Board's procedural regulations which provides "When the admissibility of evidence depends on a good faith argument as to the interpretation of substantive law, the hearing officer will admit the evidence." Complainants claimed that this provision supports its claim that the coal dust/health effects evidence should be allowed. Supp. at 1.

Complainants contended that exhibits C40 and C41 should be admitted pursuant to the Illinois rules of evidence for administrative hearings. *See* 5 ILCS 100/10-40 (2000). Complainants claimed that C40 and C41 are examples of evidence "commonly relied upon by reasonably prudent men in the conduct of their affairs." Obj. at 2; *see also* 101.626(a). Complainants also cited Section 101.626(c) of the Board's procedural regulations to support the admission of exhibits C40 and C41. It provides that "Relevant scientific or technical articles, treatises, or materials may be introduced into evidence by a party. The materials are subject to refutation or disputation through introduction of documentary evidence or expert testimony." Supp. at 1-2.

GCS claimed that the hearing officer properly barred Ms. Carpenter's and Mr. Hoppe's testimony on the link between coal dust and health. Resp. at 3.

GCS claimed that it is standard practice at the Board and in Illinois courts to prohibit lay witness testimony on medical conclusions and cited Bridgeman v. Terminal Railroad Ass'n of St. Louis, 195 Ill. App. 3d 966, 973-974, 552 N.E.2d 1146, 1150 (5th Dist. 1990), app. den. 132 Ill.2d 543, 555 N.E.2d 374; Young v. Gilster-Mary Lee Corp., PCB 00-90, slip op. at 12, 16 (Sept. 6, 2001) citing Johnson v. ADM-Demeter, Hoopston Division, PCB 98-31, slip. op. at 7 (Jan. 7, 1999). Resp. at 2-3. In Johnson, the Board disregarded complainant's testimony that dust from respondent's facility aggravated his upper respiratory congestion, headaches, and sleeplessness because complainant did not show that was qualified to offer a medical opinion regarding the cause of his illness.

GCS also claimed that Black Lung Disease was never mentioned prior to the hearing nor during discovery, thus preventing GCS from properly being able to defend against these claims. GCS further claimed that Black Lung Disease triggers a prejudicial mental image. Resp. at 3-4.

The Board finds that its holdings in Young and Johnson in addition to the appellate court holding in Bridgeman are persuasive here. The Board finds nothing in the record which states that either Ms. Carpenter or Mr. Hoppe are medical experts. Furthermore, there is no question about the interpretation of the substantive law regarding medical testimony by non-experts. The Board will disregard complainants' opinions on the causes of the illnesses that they describe.

The Board notes that exhibits C40 and C41 are scientific articles that describe the effect on coal dust on human health. The Board recognizes that its procedural regulations allow exhibits that are "relied upon by prudent persons in the conduct of serious affairs" and allow relevant scientific articles. However, the Board will not allow complainants to rely on exhibits C40 and C41 because neither Ms. Carpenter nor Mr. Hoppe are medical experts.

The Board upholds the hearing officer's ruling on this point.

### **Greg Zak's Testimony**

At the time of the hearing, Greg Zak had been a noise advisor for the Agency for 29 years.<sup>2</sup> He had spent about 50 hours on this matter; was familiar with much of the record including the videotapes, photographs, deposition transcripts; and had visited the area at issue for about 30 minutes. Tr. at 283, 290-91, 356-57.

GCS made a motion *in limine* to exclude Mr. Zak's testimony at the beginning of the hearing on July 10, 2001. Tr. at 18-19, 288. The hearing officer granted the motion *in limine* and excluded Mr. Zak's opinion testimony that noise emissions from GCS are an unreasonable interference with complainants' lives. Obj. at 3; Tr. at 19.

Complainants claimed that the hearing officer ruling regarding Mr. Zak's opinion testimony was in error. Mr. Zak testified that the noise emissions from GCS constitute an

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<sup>2</sup> The Board takes judicial notice of the fact that, at the time of hearing, Mr. Zak was employed by the Agency, but he has since left the Agency and is now a noise consultant in private practice.

unreasonable interference with complainants' lives and enjoyment of property. Tr. at 288. Citing relevance, the hearing officer would not allow Mr. Zak's testimony regarding the length of time that complainants had endured the noise problem. The hearing officer also would not allow testimony on whether or not GCS was taking complainants' concerns seriously. Complainants claimed that these hearing officer rulings were also in error. Obj. at 3-4; Tr. at 354-56.

Complainants cited Wiegman v. Hitch Post-Inn, 308 Ill. App. 3d 789, 721 N.E.2d 614 (2nd Dist. 1999), which states that expert testimony is allowed regarding the ultimate issue in the case because the jury does not have to accept the testimony and the testimony will not usurp the jury's opinion. Obj. at 3.

GCS argued that the hearing officer's order on Mr. Zak's unreasonable interference testimony was proper. GCS cited cases that state that no witness (expert or non-expert) can provide an opinion on the ultimate issue in a case. See Kirkpatrick v. United Federation of Postal Clerk's Benefits Assn., 52 Ill. App. 2d 457, 202 N.E.2d 136 (5th Dist 1964); Wawryszyn v. Illinois Central Railroad Co., 10 Ill. App. 2d 394, 135 N.E. 2d 154 (1st Dist. 1956). GCS claimed that Mr. Zak could not testify on unreasonable interference since it is the ultimate issue in the case. GCS also claimed that the reasonableness of any alleged interference in complainants' lives is not a proper issue for expert testimony. Resp. at 5.

As part of its nuisance analysis, the Board determines if the noise at issue caused an unreasonable interference with the enjoyment of life. The Board determines if the noise nuisance was unreasonable by examining the factors at Section 33(c) of the Act. 415 ILCS 5/33(c) (2000). The Board often examines expert testimony in determining the 33(c) factors such as the social and economic value of the alleged pollution source. For example, the Board recently quoted Mr. Zak's testimony on the practicality of reducing emissions, which is a Section 33(c) factor. Roti et al. v. LTD Commodities, PCB 99-19, slip op. at 28-29 (Feb. 15, 2001).

Although the Board makes the ultimate determination on whether or not nuisance noise is unreasonable, the Board will admit Mr. Zak's testimony on unreasonable interference. Section 101.626(b) of its procedural regulations provides "When the admissibility of evidence depends on a good faith argument as to the interpretation of substantive law, the hearing officer will admit the evidence". Since there is a good faith argument here, the Board overrules the hearing officer's ruling granting the motion *in limine* excluding Mr. Zak's testimony on unreasonableness. For the same reason, the Board also overrules the hearing officer's objections to Mr. Zak's testimony on the length of time that complainants endured the noise problem and Mr. Zak's testimony on whether or not GCS was taking complainants' complaints seriously. The Board therefore accepts Mr. Zak's testimony on unreasonableness, the length of time that complainants endured the noise problem, and GCS taking the complaints seriously.

### **Motion to Exclude Witnesses**

Complainants objected and requested that GCS's fact witnesses be excluded from hearing, but the hearing officer overruled the objection. Complainants cited to Smith v. City of Chicago, 299 Ill. App. 3d 1048, 1053, 702 N.E.2d, 274, 278 (1st Dist. 1998) in which the court

held that “trial judges have the discretion to exclude witnesses in a civil trial . . . . The purpose of an order excluding non-party witnesses from the courtroom “is to prevent the shaping of testimony by one witness to match that of another and discourage fabrication.” Obj. at 4; Tr. at 308-09.

GCS supported the hearing officer overruling complainants’ objection. GCS argued that its fact witnesses testified on distinct issues. GCS also argued that its fact witnesses could attend the entirety of the hearing as members of the public. GCS pointed out that Board hearings are open to the public. *See* 35 Ill. Adm. Code 101.600. GCS stated that complainants were present during each other’s depositions and that complainants’ fact witnesses were present during each other’s testimony. Resp. at 6.

The Board finds that GCS is correct. Even the case that complainants cited to in order to support their position states that trial judges have the “discretion” to exclude a witness at trial. In fact, the appellate court in that case stated, “There is no statute or rule of the supreme court which mandates that witnesses be excluded from the courtroom during the course of a trial . . . .” Smith, 299 Ill. App. 3d at 1053, 702 N.E.2d at 278. In the instant case, the hearing officer properly exercised his discretion in allowing GCS’s witnesses to remain in the hearing room during each other’s testimonies. Fairness dictates that if complainants’ witnesses were allowed to be present during each other’s testimonies, then GCS’s witnesses should have been allowed to do the same. The Board upholds the hearing officer overruling complainants’ objection on this point.

### **Fact Witnesses Offering Opinion Testimony**

Complainants objected and moved to exclude opinion testimony from GCS’s witnesses who were disclosed during discovery as fact witnesses, not as opinion witnesses. The hearing officer overruled this objection. Complainant cited one of GCS’s fact witnesses who provided opinion testimony on GCS’s profitability and the economic outlook for the steel industry. Complainants claimed that they were prejudiced in that GCS was allowed to offer “unlimited” expert testimony on several matters without disclosing the information to complainants. Obj. at 4; Tr. at 309-14, 559, 595-96;

GCS supported the hearing officer overruling the objection. GCS responded that its fact witnesses provided testimony solely on factual matters, namely “general plant operations, plant history and environmental department operations; coal handling operations and safety issues; and Respondent’s financial condition . . . .” Resp. at 6-7; Tr. at 496-551, 552-89, 590-613. GCS also claimed that complainants’ counsel agreed not to object to GCS’s fact witnesses during a pre-hearing conference call. Resp. at 7.

Nothing in the Board’s procedural regulations prohibits fact witnesses from offering opinions. Section 101.626 of the Board’s procedural regulations states that the hearing officer will admit evidence that is admissible under the rules of evidence as applied in the civil courts of Illinois, except as otherwise permitted by the Board’s procedural regulations. Nothing in the Illinois Code of Civil Procedure or the Illinois Supreme Court regulations prohibits fact

witnesses from providing opinions. The Board accepts the testimony of the GCS witnesses and upholds the hearing officer's ruling on this point.

### **Undisclosed Evidence**

Complainants objected to GCS exhibits 32 and 36 because GCS did not disclose these documents during discovery despite a proper request for the information. The hearing officer overruled the objections and admitted these exhibits. Obj. at 4-5; Tr. at 399, 401, 617-18. GCS supports the hearing officer overruling the objections and breaks down its argument exhibit by exhibit. Resp. at 8.

GCS exhibit 32 is a graph entitled "Frequency Responses for Sound Level Weighting Characteristics" which GCS claims is a publicly available federal guidance document. GCS argued that public documents are generally admissible because it is inconvenient for public officials to testify, public officials are trustworthy, and there is no motive for falsifying the document. See Steward v. Crissell, 289 Ill. App. 3d 66, 73, 681 N.E.2d 1040, 1045 (1st Dist. 1997); Resp. at 7; Tr. at 371.

GCS states that exhibit R36 is a graph of the volume of the three coal piles located nearest complainants' property at different times from 1997 to 2001. GCS claims that complainants already had access to this information in tabular as opposed to graph format. Resp. at 8; Tr. at 567, 617.

The Board finds that the holding in Steward with respect to the admissibility of publicly available documents applies to GCS exhibit 32. The Board thus upholds the hearing officer ruling and accepts GCS exhibit 32.

The Board will also uphold the hearing officer ruling and accept GCS exhibit 36. The Board finds nothing objectionable about GCS exhibit 36 since complainants already had access to the information, albeit in a different format.

The Board notes that complainants objected to the admission of GCS exhibit 33 in their post-hearing objections but explicitly did not object to GCS exhibit 33 at hearing. Obj. at 5-6; Tr. at 618. The Board will not exclude exhibit GCS exhibit 33 because it is a copy of the Board regulation at Section 901.102. This information is publicly available.

### **Social and Economic Burden of Granite City**

GCS provided testimony during hearing that it had a positive effect on the local community by performing such activities as donating to charitable organizations and paying property taxes. Complainants countered with testimony that workers have lost their limbs or lives at the GCS facility. The hearing officer sustained GCS's objection to a question that complainants posited to GCS's comptroller regarding the economic impact of catastrophic injuries at GCS's facility. Complainants requested that the Board overrule the hearing officer's order and requested that the questions and response regarding the economic burden of GCS should be allowed in the record for consideration by the Board. Obj. at 6; Tr. at 582-84, 612-13.

Complainants also state that Section 101.626(b) of the Board's procedural regulations allows the admission of this evidence. Supp. at 1.

GCS claims that the questions and responses are "completely irrelevant" to the case and support the hearing officer's ruling. Resp. at 8-9.

The social and economic value of an alleged pollution source is one of the Section 33(c) factors that the Board examines in determining the unreasonableness of the interference caused by a source of air or noise pollution. The Board also notes that Section 101.626(a) allows the admission of testimony that is relevant. The Board has some concerns about the manner in which complainants' attorney asked the questions regarding the economic impact of catastrophic injuries at GCS. Nevertheless, the Board finds that this line of questioning is relevant to the Board's Section 33(c) analysis, although the answers to these questions will not be the Board's primary consideration in discussing this factor. The Board overrules the hearing officer's objection on this point and will consider the testimony.

### **FINDINGS OF FACT**

The Board will begin by describing the parties and the vicinity in which the alleged violations occurred. The Board will then summarize the history of property uses. The Board will describe the controversy about dust, including a general discussion, trends in the amount of dust in the vicinity, interference in complainants' lives from dust, efforts to achieve dust reduction, and suggested dust reduction measures. The Board then turns its attention to noise, including a summary of nonspecific noise from GCS, specific noise from GCS, and ambient noise. The Board will then describe the interference in complainants' lives from noise, efforts to achieve noise reduction, and suggested noise reduction measures.

#### **Description of Parties and Vicinity**

##### **Complainants**

William (Bill) and Pat Hoppe have lived at 2815 Edwardsville Road in Granite City since November 11, 1961. Their house is very close to the intersection of Edwardsville Road and Alexander Street and is about 75 feet away from Edwardsville Road. Mr. Hoppe was raised in this home, moved a half block away for awhile, and then moved back into the home in 1961. The Hoppes paid under \$10,000 for the house. Tr. at 77-80; Exh. C34.

The Hoppes live across Alexander Street from James and Vickie Glasgow who live at 2901 Edwardsville Road. Tr. at 59, 81, 86; Exh. C25, C34. The Glasgows moved in to their current home on Memorial Day weekend 1997. James Glasgow's aunt had lived in the house but then moved out and abandoned it. The Glasgows then bought the house for \$15,000. Tr. at 165, 196, 229.

Jack and Carolyn Carpenter testified for complainants. They lived at 2105 Alexander Street for 29 years before moving in 1996. Although they no longer live there, the Carpenters still own the home, and Ms. Carpenter visits her mother there two or three times a week. The



house is half a block from the corner of Alexander Street and Edwardsville Road. There were two houses between the Carpenter and the Hoppe houses. Tr. at 21-22, 26, 33, 87; Exh. C25.

Norman and Norma Martinez also testified on behalf of complainants. They lived in an apartment at 2228 Alexander Street for 13 years and then moved across the street to 2227 Alexander Street in November 1970. They are one block from the intersection of Alexander Street and Edwardsville Road. Ms. Martinez testified that they have remained in the area for so long because it is affordable. Tr. at 44-46, 47, 68, 69.

### **GCS**

GCS is a division of the National Steel Corporation. Tr. at 431

The GCS facility is separated from complainants' homes by Edwardsville Road. (Edwardsville Road changes from a two-lane to a four-lane road directly in front of complainants' homes.) The coal piles at the GCS facility are approximately 100 feet away from Edwardsville Road and are plainly visible from the Hoppes' back yard. Tr. at 84, 89-90, 160, 268-69; Exh. C12, C25, C34.

GCS employees testified during the hearings. Larry Siebenberger is the Manager of Environmental Safety at GCS and has worked for GCS in various capacities since 1971. Tr. at 497. Bob Holloran is the process manager for the coke plant at GCS and has worked with coke plants both at GCS and other facilities for 17 years. Tr. at 552-53. Joe Ribbing is the controller for GCS and has worked for GCS since 1969. Tr. at 590.

By contract, the trucks carrying the coal to GCS are completely covered (or "tarpred") and GCS has a security guard at its east gate that ensures that all coal trucks are covered. Trucks dump the coal in piles and then bulldozers push the coal up one of several coal piles. Typically, one truck at a time is dumping coal, but it can be as many as three at a time. One or two bulldozers push coal up the piles. GCS uses three different types of coal, and there are three piles of each coal type for a total of nine coal piles. The "Elk Run" coal piles are located closest to complainants' properties. Tr. at 554-59, 565, 569-71; GCS Exh. 2A, 3HH, 3II.

In recent years, GCS has been trying to both maximize coal pile storage and minimize the height of the piles by "plateauing" the coal. Tr. at 568.

Once a coal pile is finished, a front-end loader extracts coal from the piles and deposits the coal into railroad hopper cars or, at times, into trucks. Typically one or two front-end loaders are operating at the same time. Tr. at 561-63, 572.

GCS receives coal from about 6:30 a.m. until 2:30 p.m. Monday through Fridays and every other Saturday. Typically, the bulldozers operate until 2:30 p.m., but sometimes they operate until 5:00 p.m. and on very rare occasions they operate until midnight such as during the flood of 1993. Typically, front-end loaders take the coal from the piles to the railcars or trucks during two shifts – between 8:00 a.m. and noon, and 8:00 p.m. and midnight, seven days a week.

Railcars then deliver the coal to the coke batteries after each of the front-end loader shifts. Tr. at 569-74, 587.

For safety reasons, all of the vehicles have back-up alarms. Tr. at 576-78.

Coal is the raw material needed to operate coke batteries. A device called a mobile hopper car or Larry's car discharges the coal into the individual ovens in the batteries. There are 45 individual ovens in each coke battery. Coke is baked for about 16 hours. The coke is about 2,200 degrees F when it comes out of the oven. Tr. at 499, 501-03; GCS Exh. 3A, 3B.

Complainants allege that the coke batteries are a source of noise. The coke batteries at the GCS facility are close to the Hoppe and Glasgow residences, but not as close as the coal piles. Tr. at 84-85, 238; Exh. C15, C34; GCS Exh. 2A; Comp. Br. at 8.

The coke is then taken by car to the quench tower to be cooled with water and then is carried to a blast furnaces or into storage. A mixture of iron pellets, coke, and flux are charged into the top of the blast furnace and mixed with hot blast air. The iron pellets melt. Iron oxide is reduced to elemental iron, which pools at the base of the furnace. The flux removes impurities from the iron. Excess blast furnace air is scrubbed and then used to power the facility. Tr. at 505-07. Molten iron (at 2,600 degrees F) is cast into refractory line torpedo cars. Two bag houses capture any potential emissions. 506-507, GCS Exh. 3F and 3G.

The molten iron is transferred to a refractory ladle, desulfurized, skimmed, and sent to a basic oxygen furnace with other raw material. This is where the steel is made at temperatures of about 3,200 degrees F. Tr. at 508-09; GCS Exh. 3I- 3K. Mr. Siebenberger testified that there are extensive environmental controls at this step as well such as bag houses and electrostatic precipitators. Tr. at 509; GCS Exh. 3H at right.

Once the steel is produced it is again transferred in a refractory ladle to continuous casters. The resulting slabs are stored in a slab yard. A kress hauler transports the slabs to a hot strip mill. The slabs are reheated at the hot strip mill in reheat furnaces. The slab is reduced in size and thickness but is lengthened. The strip then goes to a coiler where it turned into a hot steel coil, which GCS sells. Tr. at 509-12, GCS Exh. 3M, 3N-3V.

The hot rolled steel is dipped in a pickling bath to remove oxides. The pickled strip is then taken to a cold mill where it is reduced to produce a cold-rolled product which is sold. The galvanized version of the cold-rolled steel is also sold. Tr. at 511-12; GCS Exh. 3W, 3X, 3Z, 3AA.

Originally, GCS operated two coke batteries using 725,000 tons of coal annually. GCS still operates two coke batteries but now consumes 860,000 tons of coal annually. GCS produces about 500,000 tons of coke annually. It produces about 2.1 million tons of molten iron annually and its permitted capacity is 3.1 million tons. GCS produces 2.6 million tons of steel a year and has a permitted capacity of about 3.5 million tons. Tr. at 499, 502-03, 507, 508, 566.

GCS claims that amount of coal in the Elk Run coal piles closest to complainants' properties has been decreasing over the years, although from a graph presented at hearing it

appears that the amount of coal in the Elk Run piles fluctuated between February 1997 and June 2001. Tr. at 566-67; GCS Exh. 36. The total quantity of the coal in all of the coal piles varies between 75,000 and 100,000 tons. GCS Br. at 3. Mr. Holloran said that GCS maintains coal piles in order to have a 30-day supply. The supply route from the coal source in West Virginia involves both rail and river transport, and it can be unpredictable. Tr. at 584-85.

GCS has costly emission control systems. GCS also hires an independent contractor who monitors the particulate emissions from the coke oven doors daily in accordance with the federal National Emissions Standards for Hazardous Air Pollutants (NESHAP). Mr. Siebenberger said that the emissions from the coke ovens are below the legal limits. He also testified that the Agency has several monitoring stations in Granite City, and one is near complainants' homes. There have been no violations of the federal particulate matter (PM10) NESHAP standards from 1993 to 1998 at any of the local monitoring stations. Tr. at 504, 529-33, 548-49; GCS Exh. 2, 3F, 3G 13, 13A; GCS Br. at 5.

**Economic Affect of GCS.** GCS employs about 2,900 people with a payroll of about \$20 million per month. 30% of the employees live in Granite City or in the immediate vicinity and 90% live in Illinois. Approximately 3,000 GCS retirees are drawing a GCS pension. Several local industries also do in excess of \$100,000 worth of business a year with GCS. Tr. at 590-92.

GCS paid over \$4 million in property taxes in 2000, 53% of which went to the local school district. GCS claims that its tax dollars also help provide law enforcement, fire protection, and health care services. Tr. at 593-94; GCS Exh. 16; GCS Br. at 1.

In 2000, GCS and its employees contributed \$422,000 to the local United Way and also donated to other charitable organizations throughout the area. Tr. at 592-93. Mr. Hoppe and Ms. Glasgow admitted that GCS has baseball fields for Granite City residents on its property. Tr. at 128-29; Exh. C34.

Mr. Holloran admitted under cross-examination that there had been six to ten serious injuries at GCS in the twelve years that he had worked there and that there had been four fatalities in the iron manufacturing area in the past five years. Mr. Ribbing testified that there had been over 10 fatalities at GCS in the 31 years that he had worked there. Tr. at 582-84.

Both Mr. Hoppe and Ms. Glasgow admitted that GCS provides substantial social and economic value to the area. Tr. at 127, 201.

**GCS Financial Problems.** According to National Steel's 2000 annual report, its net income in 1996 was \$54 million, in 1997 it was \$214 million, and in 1998 it was \$89 million. National Steel then lost \$29 million in 1999 and \$130 million in 2000. Mr. Ribbing testified that National Steel lost \$109 million in the first quarter of 2001 and that National Steel does not predict a quick return to profitability. On cross-examination, Mr. Ribbing was asked where the profits from the earlier years had gone and he answered that most had probably gone back into capital expenditures. National Steel's stock price has fallen, from \$11.94 on July 6, 1998, to \$1.85 per share on July 2, 2001. Mr. Ribbing said that the stock fall represents a book value loss of \$412 million. He also said that National Steel cannot survive if the losses continue at a similar rate. Mr. Ribbing testified that National Steel has engaged in extreme cost cutting

measures at GCS such as laying-off over 100 employees and shutting down a galvanizing line and two roll formers. National Steel is also trying to sell off its “noncore assets”. Tr. at 595-99, 608-09; GCS Exh. 18 at 22; GCS Exh. 23. Mr. Ribbing testified that “[a]ny type of cash outlay right now would severely hurt us”. Tr. at 433,598, 609-10; GCS Br. at 10.

National Steel’s 2000 Annual Report indicates that its woes are due to low-priced imported steel, high end-user inventories, and a slowing U.S. economy. National Steel’s overall shipments have declined since the fourth quarter of 1999 and the price that it charges per ton of steel has also declined resulting in a large loss in revenue. GCS claims that steel prices are at their lowest point in the past 30 years. Tr. at 600-02; GCS Exh 18, 21, and 22; GCS Br. at 10.

National Steel’s have been reflected across the steel industry. About 18 U.S. steelmakers declared bankruptcy between late 1997 and mid 2001. Tr. at 602-03; GCS Exh. 20.

Mr. Ribbing testified that if GCS closed its doors, its workers would have difficulty finding new jobs since their work force is older and many have specialized skills that are not required by other employers in the area. Tr. at 605-06.

### **Surrounding Area**

There is a slag plant about a quarter of a mile west of complainants’ homes. Otherwise the neighborhood is residential with some small businesses such as a beauty shop and an automobile repair shop. There is little noise or dust from these neighborhood businesses. Tr. at 82-84, 160; Comp. Br. at 10.

### **History of Property Uses**

There has been a steel manufacturing operation at the present site since 1892, and the coke batteries and blast furnace operation have been at their current locations for about 80 years. Tr. at 431, 499; GCS Br. at 3. GCS claims that Granite City grew up around its operations and that complainants’ homes were built over 80 years ago. GCS Br. at 1.

Mr. Hoppe admitted that the GCS facility was an industrial property when he moved in to his home, and Ms. Hoppe said that they have been living with the dust and noise from the GCS facility for 40 years. Tr. at 125-26, 137-38, 272-73.

### **Dust**

Complainants’ exhibit C25 is a videotape that Mr. Hoppe made of his yard, his neighborhood, and the GCS facility across Edwardsville Road from his home. Complainants’ exhibit C24 is a videotape that Ms. Glasgow made. Tr. at 164-65. Ms. Glasgow and Ms. Hoppe said that both tapes are representative of the noise and dust problems at their homes. Tr. at 219, 262. Mr. Glasgow has seen some of his wife’s videotape and said that the actual conditions are much worse than depicted. Tr. at 235. Complainants’ exhibit 26 is a log kept by Ms. Glasgow. She described the interference in her life from the noise and dust from February to December 1, 2000.

The Hoppes, the Glasgows, Mr. Carpenter, and Mr. Martinez testified that smoke and dust blows from the GCS coke plant or blast furnace to their properties. Tr. at 34, 46-47, 81, 85, 99-102, 142, 161, 231, 227, 258-59; Exh. C25 at 42:34-44:30, Oct. 14, 2000; Comp. Br. at 8. Mr. Hoppe said that it happens frequently. Tr. at 142. Mr. Hoppe's videotape showed coal dust blowing off the coal piles on several dates during May and June of 2000. Exh. C25 at 16:25, 17:20.

Complainants and their neighbors also testified that coal dust blows off the GCS coal piles. Tr. at 34, 81, 46-47, 87-89, 173-74, 91, 227; Exh. C24, C25. The Hoppes and Ms. Glasgow testified that dust blows off the coal piles and into their yards when the wind comes from the south at 20 to 30 miles an hour. Tr. at 89, 218, 252. Specifically, Ms. Hoppe said that the loading and unloading of coal at the coal piles creates dust. Tr. at 268; Exh. C18. Mr. Glasgow testified that dust is created when the front-end loaders dump coal into trucks, when trucks and other heavy equipment travel across the coal, and when the bulldozers push the coal around. Tr. at 258-59. Mr. Hoppe claimed that dust is created when the trucks drive around on the GCS property. Tr. at 99-100; Exh. C25. In her log, Ms. Glasgow reported that March 26, 2000 was a particularly bad air pollution day in that the coal dust was so thick that cars were forced to slow down or stop. Exh. C26.

The dust collected on items (such as garages, sidewalks, automobiles, sheds, and lawn mowers) and on the grass in the yards of complainants and their neighbors. Tr. at 23, 40, 46-48, 92, 100-02, 163-64, 166, 172-73, 238-39, 244; Exh. C10, C11, C24, C25. For example, the dust settled on Mr. Hoppe's freezer on his back porch. He testified that he cleaned the freezer on September 29, 2000, and that by October 1, 2000, he was clearly able to write "9-29-00 to 10-1-00" in the dust that had accumulated on the freezer. Tr. at 98; Exh. C25. The dust also gathered on the siding of the Hoppe and Glasgow homes and was visible after three days to one week. Ms. Glasgow videotaped several instances of washing the siding on her house to remove the coal dust. Tr. at 170, 172, 237, 244, 265-66; Exh. C7, C8, C9, C24. Mr. Hoppe claimed sometimes coal dust that was already deposited north of his home would come back to his home if there was a wind shift. Tr. at 147.

The dust from the GCS facility also eventually ended up in complainants' homes, settling on their furniture. Tr. at 162-63, 184, 267; Exh. C24. The dust also landed inside the Glasgows', Carpenters', and Martinezes' cars. Tr. at 24, 36, 48, 184-185.

Ms. Glasgow and Mr. Hoppe noticed that the coal dust is both fine and coarse. They and Mr. Martinez also testified that the dust has become oily in the past few years. Tr. at 69-70, 108, 183. Mr. Glasgow recalled driving on Edwardsville Road near his home during heavy wind conditions when the traffic on Edwardsville Road came to a complete stop as a result of a black cloud of coal dust. He estimated the wind speed to have been 30 to 35 miles per hour. Tr. at 233, 251.

Ms. Glasgow kept a log from February to December of 2000 describing the sources of noise and dust from the GCS facility. Exh. C26. Complainants' exhibit 21 is a jar of coal dust that Mr. Hoppe retrieved by scraping near the curb on Alexander Street near his house. Tr. at 109, 138-139; Exh. C21.

Mr. Hoppe's videotape shows trucks at GCS raising dust while moving around GCS property on October 1, 2000. Exh. C25 at 35:00 and 37:15.

According to Ms. Glasgow's log, there was a reduction in the frequency of air pollution events after November 1, 2000. Exh. C26.

### **Dust Trends**

Mr. Hoppe said that GCS began storing coal in the early 1970s. Mr. Hoppe said the dust problem has gotten worse since 1986, when he first started complaining to GCS. He also said that the dust problem has gotten worse since the coal piles became larger in the past three to five years. Tr. at 111-12, 122, 124-25.

Ms. Glasgow had lived elsewhere in Granite City before moving to Edwardsville Road and was aware of the GCS facility and the coal piles across Edwardsville Road from her current home before she moved in. Ms. Glasgow testified that there were two coal piles in front of their home when they moved in 1997. She said that the piles have grown both in number and in size since that time. Mr. Glasgow estimates that the three coal piles have grown 10 to 20 feet taller since 1997. He said that coal piles would shrink from time to time but generally they remained quite tall and were not low for any long period of time. The Glasgows testified that the dust problem has gotten worse since they moved in which they attributed to the increased amount of coal in the piles near their house and an increase in the size of the GCS operation. Tr. at 165, 186-87, 196-97, 199, 214-15, 237, 243-44, 252-53; Exh. C1 - C4.

The Carpenters remembered that the GCS coke plant was in existence when they moved into their home in approximately 1967. Mr. Carpenter did not recall the coal piles when they moved in. Tr. at 25, 26, 30, 39. During their visits back to their previous home, Ms. Carpenter has noticed that the level of dust has not decreased while Mr. Carpenter claims that it has increased. Tr. at 23, 26, 40.

The Martinezes did not remember the coal piles when they moved to their apartment, but Ms. Martinez remembered the coke plant. Ms. Martinez said that the coal piles are bigger now than they were 10 years ago, and she attributed this to the worsening dust problem. Tr. at 64-65, 70, 71, 76. Mr. Martinez testified that the trucks coming into the plant are causing the coal dust. He said that there have been more trucks recently, and, as a result, they are now a bigger part of the dust problem. Tr. at 63.

Mr. Siebenberger testified that the coal piles have been in their current position at the east end of the GCS facility since he began working for GCS in 1971. Tr. at 499-500.

### **Interference in Complainants' Lives From Dust**

Due to the dust, the Hoppes (Tr. at 108, 134, 266, 277-78), the Glasgows (Tr. at 163, 190, 232, 250), and the Carpenters (Tr. at 23-24, 36) have sealed some of their windows shut and do not open other windows, even when the weather is nice. Mr. Martinez did not open his windows in nice weather either. Tr. at 47.

The Hoppes and the Glasgows testified that they do not sit outside their homes to enjoy the weather. Tr. at 122-23, 188-90, 227, 235, 273, 276. Ms. Hoppe and Mr. Carpenter said that they do not barbecue. Tr. at 36-37, 273, 276. Ms. Carpenter said that she does not use her porch swing because it is constantly dirty from the dust. Tr. at 24. Ms. Glasgow testified that she enjoys gardening, but she must do it quickly and then go inside. Tr. at 188-90.

Mr. Hoppe (Tr. at 24), the Glasgows (Tr. at 187, 189, 232), and Ms. Carpenter (Tr. at 112) have breathed in the dust. Mr. Martinez claimed he breathes more of the dust now since he is retired and spends more time at home. Tr. at 49, 55. Ms. Martinez said that the smell of the coal dust bothers her. Tr. at 68. Mr. Hoppe's (Tr. at 113) and Ms. Glasgow (Tr. at 187, 205; Exh. C26) testified that dust gets in their eyes, causing them discomfort or forcing them to go inside.

Ms. Hoppe and Mr. Glasgow testified that they would like to invite friends to visit their respective homes but that the noise and dust is so unpleasant that they do not. Tr. at 276, 230; Comp. Br. at 20.

Ms. Hoppe said that spending all of her time cleaning the dust is irritating. She said that she must clean her windows often, and she sometimes sweeps her floor two or three times a day. Tr. at 274-75. Ms. Glasgow said that she also must clean the inside of her home more often as a result of the coal dust. Tr. at 189. Ms. Glasgow and Mr. Carpenter testified that they hose their houses down as often as once every two weeks to remove the dust. Tr. at 36-37, 189; Exh. C24, C26.

### **Efforts to Achieve Dust Reduction**

**Complainants.** Complainants submitted a copy of an article entitled "Dust Unsettles Residents" from the *Granite City Press-Record* dated June 4, 1987 describing Mr. Hoppe's complaints about the coal dust problem from the GCS facility. Mr. Hoppe testified that he had been complaining to GCS for about 18 months prior to the publication of the article. Tr. at 121-22; Exh. C23.

Mr. Hoppe claimed that sometimes he does not complain during the winter when the wind shifts. However, his complaints to GCS have been more or less constant over the years, and, as an example, Mr. Hoppe cited the January 31, 2000 letter that he sent to GCS about the dust problem. Mr. Hoppe claimed that by the date of the hearing, he had already called GCS six or seven times during 2001. Tr. at 121,135-36; Exh C29. Mr. Hoppe has called GCS engineer Connie Hickman both at work and at home (Ms. Hickman provided complainants with her home phone number), although he had "kind of quit calling" Ms. Hickman as of late because he claimed that she stopped returning his phone calls. Tr. at 136, 528. Mr. Hoppe said that if complains a lot, GCS will make an effort (such as spraying) for a day or two but then return to "the same old routine". Tr. at 121.

Ms. Glasgow started complaining to a Mr. Maxwell and Ms. Hickman of GCS in January 1998. Complainants submitted their exhibit 26 which detailed the efforts that Ms. Glasgow had made from February to December of 2000 to address the noise problem. Tr. at 185, 190; Exh.

C26. Ms. Glasgow had been unsatisfied with GCS's efforts to address the noise and the dust problems. Tr. at 219-20.

Up until a year and a half before the hearing, Mr. Hoppe complained to the Agency's Collinsville Office about the dust from the coke plant while Ms. Glasgow made several calls to the Collinsville Office during the spring of 2000. Tr. at 142-43; Exh C26.

**GCS.** Mr. Siebenberger testified that Ms. Hickman investigated complainants' complaints about fugitive dust and then dispatched a spray truck out to the coal piles to address the problems. Tr. at 528. GCS sprayed roads inside its facility with water on occasion which they claimed is effective in controlling dust until the roads dry out again. Tr. at 98, 121, 241; Exh. C25.

GCS sent Mr. Hoppe a letter on April 22, 1988 outlining their coal dust reduction activities. GCS stated that it increased road and street sweeping from once a week to three times per week. However, Mr. Hoppe said that the sweeping made the dust problem worse by raising ground level dust into the air. He also claimed that GCS has rarely swept the streets for the past four or five years. In the April 22, 1988 letter, GCS said that it would pave the entrance road to the coal fields to allow for sweeping. Tr. at 118-20; Exh. C31.

In the April 22, 1988 letter, GCS stated that it would spray coal piles with water and dust suppressant during high wind conditions. GCS also wrote that the coal piles close to Edwardsville Road would be "low profile". Mr. Hoppe said that the spraying helped but that in the year before the hearing GCS only sprayed the portion of the piles up to six feet high. Tr. at 119-21, 134; Exh. C31. Ms. Glasgow agreed that GCS did not spray the piles high enough to control the dust. Tr. at 194, 217-18. Mr. Hoppe also testified that the coal piles were taller than nearby telephone wires. Tr. at 120. In the April 22, 1988 letter, GCS also wrote that it would consider or study planting trees to reduce the amount of dust, but Mr. Hoppe said that GCS never planted the trees. Tr. at 120.

Mr. Siebenberger testified that GCS has had a fugitive dust control program (program) since he began working there in 1971. GCS submitted the program to the Agency in 1981. GCS has improved the program by paving some of the roads at its facility in 1984, and GCS began sweeping and spraying the roads as well. Specifically, GCS paved the first 175 feet of unpaved road inside one of its gates. GCS also applied sealant to the unpaved roads. In 1993, GCS paved the road in front of the coal storage area. In 1995 or 1996, GCS paved roads around the coke ovens. Tr. at 513-15, 517, 546-47; GCS Exh. 3BB, 3CC.

In an effort to reduce the release of dust from trucks exiting the GCS facility, GCS made its east gate one-way in 1991 by only allowing traffic in. The east gate is directly across the street from complainants' homes. Trucks now exit the plant about 1/2 mile farther away from complainants' homes, although some do manage to exit out the one-way gate at times. Tr. at 515-16, 537-38, 555; Exh. C24; GCS Br. at 8. Mr. Hoppe testified that since most of trucks at GCS were now exiting from another gate, the amount of dust had decreased. Tr. at 139, 238-39, 244, 254; Exh. C17.



GCS received a June 26, 2000 Notice of Violation (NOV) from the Agency regarding its coal dust emissions that was based on complainants' complaints. GCS officials met with Agency officials including Sarah Phelps, the Agency's fugitive dust specialist, and agreed to modify the program. The Agency asked if GCS could move the coal piles, but GCS claimed that such a move was not reasonable given its current financial status. GCS did agree to sweep and flush its paved roads more often, sometimes more than once a day. GCS also agreed to water or treat the access areas to the coal piles every day. GCS agreed to use a new type of dust suppressant called "Soil Sement" which it claimed would control dust even under high wind conditions. GCS purchased a sprayer truck solely for use on the coal piles which can spray the tops of the coal piles. GCS claimed that it now checks the weather conditions every day in order to predict wind events and act accordingly. GCS also claimed that it has shortened or "plateaued" the coal piles to allow the Soil Sement to be spread more easily. GCS memorialized these changes in a Compliance Commitment Agreement (CCA) that modified its program. The Agency issued a letter on November 6, 2000 stating that it had accepted the CCA. Tr. at 431, 518-24, 540-44, 547, 568; GCS Exh. 3EE, 3FF, 3GG, 5-12; GCS Br. at 5, 15.

GCS stressed that since it signed the CCA, there have been no new NOV's from the Agency. GCS contended that complainants had not registered any GCS-related complaints with GCS or the Agency during the first nine months of 2001. GCS Br. at 2. Mr. Siebenberger described the dust shown on complainants' videotapes as an infrequent occurrence, and he said that the new procedures and Soil Sement should prevent such occurrences in the future. He testified that complainants' videotapes were taken before the modifications to the fugitive dust program. Tr. at 526-27, 544-46; GCS Br. at 10.

### **Suggested Dust Reduction Measures**

Complainants requested that the Board order GCS to relocate the existing coal piles as specified in GCS exhibit 24. Comp. Br. at 25. GCS exhibit 24 is a brief two-page January 16, 2001 engineering study to "evaluate the economic feasibility of relocating the existing coal storage area". According to the study, GCS considered relocating the coal storage area to south of its ore yard. The relocation would entail building new access roads, conveyor systems, electrical power and control systems, and sanitary facilities for employees. GCS estimated the cost for such relocation at \$4.834 million. GCS Exh 24.

In a response to a suggestion that the separate coal piles could be combined to reduce dust levels, Mr. Holloran testified that such a move would be detrimental to GCS's inventory tracking system. Coal loses its quality over time, and GCS must track how long each shipment of coal has been at its facility. Mr. Holloran also said that combining all the different coal types into one pile could be "disastrous" as GCS would not be able to control the mixture of coal that is fed into the coke ovens. Feeding an unknown mix into the coke ovens could damage them. It also might cause the coke to not push properly from the ovens. Tr. at 559-61.

### **Noise**

#### **Nonspecific Noise from GCS**

Mr. Hoppe said that noise from GCS can occur at any time of the day or night. Tr. at 104-05, 133. Mr. Glasgow said that she could hear the noise from the GCS facility upon arriving home from his second shift job at 12:30 am. Tr. at 221-22. Ms. Carpenter recalled an occasion when a loud noise came from the GCS facility at 1:00 a.m. when she lived nearby. The noise continued “on and on for a long time”, and she complained to the police about it. Tr. at 26.

The Glasgows stated that their house and bed vibrate due to activity at the GCS facility, and Mr. Glasgow testified that the noise problems have gotten worse. Tr. at 169, 242-43; Exh. C26. Ms. Glasgow said that she can hear the noise from the GCS facility in her back yard. Tr. at 174; Exh. C24. Ms. Glasgow also took several nighttime noise meter readings from the GCS facility. The Board notes that, in viewing the tape, it is often difficult to tell what is making the noise, and sometimes the noise is very faint. On occasion, such as on the evening of September 20, 2000, the noise meter readings on the videotape show levels fluctuating between 60 and 70 decibels (dB) due to the nonspecific noise from the GCS facility. Engine noises from GCS are also evident on Ms. Glasgow’s videotapes during May and June of 2000, generally during early morning hours. Exh. C24.

Ms. Hoppe and the Martinezes could hear booming coming from the GCS facility. Mr. Martinez also heard booming and other noises from the coke plant. Ms. Martinez heard the booming from inside the plant as well. Tr. at 56, 57, 71, 264. Ms. Hoppe could also hear a roar “like a big wind tunnel” coming from the GCS facility. Tr. at 264.

Complainants claimed that the coke batteries generate noise, but do not give specifics on what type of noise or what activities at the coke batteries made the noise. Tr. at 26, 56, 81, 161; Comp. Br. at 8.

Mr. Martinez heard noise coming from the GCS facility, but he said that he does not hear the noise as much as the Hoppes do because the Hoppes are much closer (55).

### **Specific Noise From GCS**

Ms. Glasgow said that the noise problem has gotten worse since she moved in which she attributed to an increasing number of trucks entering the plant. Tr. at 185-86, 214.

The Hoppes (Tr. at 81, 103-04, 97, 104, 264; Exh. C25) and the Carpenters (Tr. at 27-29) claimed that the trucks that deliver the coal to the GCS facility make noise and that they vibrate while they dump the coal. Mr. Hoppe said that he can hear the sound in his yard and in his home. Ms. Glasgow (Tr. at 173; Exh. C24) and Ms. Carpenter (Tr. at 43) said that they could tell which trucks were going to the GCS facility because they could hear the squeal of the trucks’ breaks as they slowed down to enter the gate. Ms. Glasgow attributed some of the shaking of her bed to trucks entering the GCS facility. Exh. C26 at Sept. 7, 2000.

Mr. Hoppe (Tr. at 102, 104; Exh. C25) and Ms. Glasgow (Tr. at 176-77, 209, 215; Exh. C24, C26, C42) testified that they can hear the tailgates of trucks banging as they dump their coal at GCS. Ms. Glasgow said that the tailgate noise had been less severe lately. In his house, Mr. Hoppe said that he can hear the front-loading tractor loading the dump truck. Tr. at 99, 104; Exh. C25.

Mr. Hoppe claimed that the bulldozer pushing coal up the coal pile and moving down the pile can vibrate his house to the point where his glasses will fall off of his VCR. The bulldozers made other noises that he and Ms. Glasgow could hear in their houses, even late at night. She attributed some of the vibrations in her home to the bulldozers on the coal piles (the morning of June 29, 2000 is an example). There were other loud truck vibrations as well. Tr. at 95-96, 103-04, 106, 133-34, 68, 170-71; Exh. C24, C25, C26.

Ms. Glasgow (Tr. at 167-68, 171, 175; Exh. C24, C26) and Ms. Martinez (Tr. at 70) said that they can hear the beeping of the bulldozers, sometimes early in the morning (for example, on May 25, 2000 at 6:30 a.m.) and sometimes in the middle of the night. Ms. Hoppe testified that she can hear the beeping and clacking of the bulldozer as it moves up and down the coal piles as early as 4:30 a.m. when she wakes up for work. Tr. at 263-64; Exh. C19.

The sounds of backup beepers are evident on Mr. Hoppe's videotape on September 12, 2000. Mr. Hoppe said that the backup beepers had gotten noticeably louder in the year before the hearing. Tr. at 146-47; Exh. C25 at 27:02. The backup beepers are evident on several places on Ms. Glasgow's videotape at various times between May 23, 2000 through November 11, 2000. Most of the beeping occurred during the morning, although on June 5, 2000 the beeping occurred at 1:00 a.m. The beeping could even be heard inside the Glasgow's house. On the morning of September 20, 2000, and the evening of October 3, 2000, the beeping caused the readings on Ms. Glasgow's Radio Shack noise meter to fluctuate between 60 and 70 dB. Exh. C24.

Ms. Glasgow recorded noise made by the sprayer trucks that were keeping the dust at GCS under control on September 28, 2000. The noise on her Radio Shack noise meter ranged from 60 to 70 dB. Exh. C24. Mr. Hoppe's videotape showed GCS spraying on September 12, 2000. Exh C25 at 29:55.

Ms. Hoppe testified that she can hear trains at the plant hitting each other. Tr. at 264. Mr. Martinez said that he constantly hears beeping, but not the trucks as much. Tr. at 55, 57, 60.

Mr. Hoppe testified that a steam leak or air leak occurred at the GCS facility occasionally, most recently on Father's Day 2001. Tr. at 129-30. GCS claimed that the Father's Day problem was the result of mechanical malfunction and had nothing to do with operations in the coal storage area. Tr. at 536; GCS Br. at 9.

### **Ambient Noise**

Generally, there was little or no ambient traffic noise on Ms. Glasgow's videotape. Comp. Exh 24. With the exception of the GCS facility, Mr. Hoppe considers his neighborhood fairly quiet. Tr. at 148. However, the sound of bulldozers, vibrations from trucks, and traffic noise were evident on Mr. Hoppe's videotape on September 12, 2000. Exh. C25 at 25:16. Traffic noise was louder than the noise from the GCS facility on Mr. Hoppe's videotape on May 18, 2000. Exh. C25 at 15:00 – 17:00.

The Hoppes testified that they can feel vibrations from some of the trucks that pass over a bump on Edwardsville Road. Mr. Hoppe described the road as "moderately" traveled and

testified that trucks pass by day and night. Tr. at 143-44, 280-81. Occasionally, Ms. Glasgow can feel vibrations from trucks. She could always hear big trucks, motorcycles, and cars pass by her house. Tr. at 206-08. Mr. Glasgow said that the only nuisance noises from Edwardsville Road are trucks and motorcycles or vehicles with loud mufflers. He could hear the trucks about 20 to 25 times per day. Other vehicles did not disturb him. He could hear trucks going over the bump on Edwardsville Road about three to six times a day, but not other vehicles. Tr. at 246-47, 257.

Ms. Carpenter did not remember hearing other trucks on Edwardsville Road. Tr. at 29. The Martinezes could hear airplanes flying overhead a couple of times a day, but they did not awaken Mr. Martinez. Tr. at 61, 66, 76.

After his site visit and reviewing the videotapes, Mr. Zak testified that the ambient noise in the area is minimal, and he admitted that traffic noise should be considered ambient noise. Tr. at 384, 389. Mr. Zak said that he had been in the area many times over the past 29 years. He felt that the traffic noise on complainants' videotape segments recorded in the midnight to 1:00 a.m. timeframe were accurate. Tr. at 405.

GCS officials claimed that the dominant noise source near complainants' residences is the heavy traffic on Edwardsville Road. They claimed that the single event noise levels of traffic exceed the single event levels from the coal pile activities. Tr. at 432.

### **Interference in Complainants' Lives From Noise**

Complainants and the Martinezes testified that noise from the GCS facility either wakes them up or prevents them falling asleep. Mr. Glasgow attributed it generally to noises coming from the coal piles (Tr. at 246), but the others were more specific. Mr. Hoppe claimed that, on average, he has trouble falling asleep a couple times a week (including weekend naps) and has been awakened as many as four or five times in one night. Tr. at 105-07, 145. Ms. Hoppe said that vibrations from the GCS facility cause her to awaken at night, while Ms. Glasgow said that vibrations from GCS shake her bed on many mornings. Tr. at 169, 274, 280; Exh. C26. At night Ms. Glasgow is awakened by a rattling noise from the bulldozers, the slamming noise from the trucks' tailgates, general "plant noise", a "shackle noise" from the GCS facility "like rocks", "a real loud pressure noise", and noise from intercoms at the GCS facility. Tr. at 182-83; Exh. C26. Ms. Glasgow said that there was no intercom noise when she first moved in. Tr. at 217. Mr. Martinez testified that the booms from the GCS facility (he once said the boom came from the coke plant) would knock him out of bed often, and Ms. Martinez said that the booming would shake her house. In particular, the booming and backup beepers from the plant would wake up he and Ms. Martinez two or three times a week at various times during the night. Tr. at 56-57, 61-62, 71-72, 73, 75.

Ms. Glasgow explained that being woken up in the middle of the night by the noises from the plant was very stressful. Tr. at 189. At times, she would sleep in the basement of her house because it was quieter there even though her bedroom is on the ground floor. She sometimes used earplugs to block out the noise. Tr. at 190.

Mr. Hoppe (Tr. at 108) and Mr. Martinez (Tr. at 57) testified that it is difficult to have peace and quiet in their homes due to the noise from GCS. Mr. Hoppe and Mr. Glasgow said that they turn on fans and turn up the volume on their televisions to block out the noise from the GCS facility. Tr. at 107, 222. Mr. Hoppe testified that, in warm weather, he becomes irritable when he cannot go outside because it is too noisy. Tr. at 107-08. Ms. Hoppe said that the noise bothers her when she tries to read, but the noise from the traffic on Edwardsville Road does not bother her. Tr. at 274, 282.

### **Efforts to Achieve Noise Reduction**

**Complainants.** Mr. Hoppe began complaining to GCS about the noise starting in 1986 or 1987. Tr. at 121. Ms. Glasgow estimated that she has verbally complained to GCS officials about 30 times. Tr. at 194-95.

The Glasgows sent two registered letters to a Mr. Squires at GCS on January 25, 2000 and January 31, 2000. In each letter, the Glasgows asked Mr. Squires to address the noise and vibrations problems from GCS. Ms. Glasgow said that no one at GCS ever opened up the January 31, 2000 letter. The Glasgows also sent a letter (signed by the Hoppes as well) to Michael Gibbons, Vice President and General Manager of GCS, complaining about both dust and noise. The letter also threatened legal action if the parties could not resolve the matter amicably. Tr. at 191-92; Exh. C28, C30 C32. Complainants submitted exhibit 33, a list of phone calls that Ms. Glasgow made to both Mr. Maxwell and Ms. Hickman of GCS about the noise problem. Tr. at 193; Exh. C33. Mr. Glasgow has also talked to Mr. Maxwell about the noise problem and said that Mr. Maxwell was responsible for a “vibration test” in front of the Glasgow’s house. Mr. Glasgow said that the vibration test occurred on a day when the noise from the GCS facility was quieter than normal. Tr. at 241-42.

Mr. Carpenter recalled calling GCS to complain about both the dust and noise from the trucks while he lived on Alexander Street but claimed that they never addressed the problems. Tr. at 41-42. Mr. Martinez called his alderman about the noise. Tr. at 56.

Ms. Glasgow contacted Mr. Zak in order to address the noise problem. Tr. at 210-11. Mr. Zak helped her with the legal references on the letter that she sent to Mr. Gibbons. Tr. at 210-11; Exh. C32.

**GCS.** GCS stopped most of the trucks from exiting a gate near Mr. Hoppe’s home, but Mr. Hoppe testified that the trucks still exit at the gate occasionally. Mr. Hoppe testified that this action reduced the noise level somewhat. Tr. at 131-32.

Mr. Siebenberger said that he was not aware of noise complaints from complainants prior to January 2000. He said that GCS has taken some steps to reduce vibrations from the GCS facility such as minimizing tailgate slamming and putting quieter back up beepers on vehicles in the coal storage area. Tr. at 534-36. GCS also claimed that there has been only one complaint about noise since the signing of the CCA. GCS Br. at 2.

Other than a reduction in the noise from the banging of tailgates, Mr. Zak testified that it did not appear that GCS had done anything else to reduce the noise problem at its facility. Tr. at

354. Mr. Zak's opinion was based on his observations and listening to complainants' testimonies. Tr. at 427.

GCS retained Vibra-Tech Engineers, a noise/vibration consultant, to study the vibration issue. The study was conducted on February 17, 2000. Vibra-Tech concluded that the vibration levels from GCS were less than the vibration levels from the truck and automobile traffic on Edwardsville Road. Exh. C36; GCS Br. at 8.

### **Suggested Noise Reduction Measures**

Mr. Zak provided many of the suggested noise reduction measures. He put in about 50 hours of work on this matter, including reviewing the record and visiting the site for about 30 minutes. However, he took no noise measurements and did not visit the GCS facility. Tr. at 290-91, 357; GCS Br. at 24. Complainants requested that the Board order GCS to perform all of the items that Mr. Zak suggested as the alternative to moving the coal piles. Cite to Comp. Br. at 25-26.

**Coke Plant Noise.** In order to address the noise from the coke plant, Mr. Zak suggested that GCS retain a qualified noise consultant and take noise measurements. GCS should then concentrate on lowering its nighttime noise emissions from approximately 70 dB (A) to 51 dB (A). Mr. Zak suggested that GCS then submit the recommendations to the Board and allow the Board to choose the ultimate solution. Tr. at 299.

**Backup Beepers.** In the Hoffman case (Hoffman v. City of Columbia, Illinois, PCB 94-146, slip op. at 9 (Oct. 17, 1996)), Mr. Zak recommended that the respondent use an observer instead of a backup beeper since either option would be acceptable under OSHA regulations. He recommended a similar approach for GCS. Tr. at 299-300. Mr. Zak said that in the other cases where he had recommended the observer, the respondent always had employees on hand to perform the job. Tr. at 406. He testified that such a change would cost very little to implement. Tr. at 316-17. Mr. Zak said that if a vehicle is used both on highways and at the GCS facility, it should be equipped with a switch than can turn the beeper off. If there is no switch, he estimated that installation of the switch would cost about \$100 per vehicle. Tr. at 331.

Mr. Holloran stated that there would be a serious safety risk in using observers instead of backup beepers at GCS. He said that there is too much equipment moving around for an observer to see everything. He also said that GCS would need at least two full-time observers if the backup beepers were disconnected, and, taking current staff reductions into consideration, GCS does not have the extra manpower. Tr. at 578-82. GCS warned of property damage, worker injuries, or even fatalities if the beepers are disconnected. GCS Br. at 13.

**Tailgate Banging.** Mr. Zak said that the best suggestion for reducing or eliminating noise from banging tailgates is to install rubber devices so that, as the tailgate swings, it strikes rubber instead of the metal of the truck. GCS could install rubber on its own trucks, and it could require by contract that its vendors install rubber on their trucks. Mr. Zak admitted that such a contract would probably require GCS to pay for the installation. He estimated that installation of the rubber would cost between \$100 and \$500 per truck. Tr. at 332-34.

**Noise Barrier.** For sounds from the bulldozers and front-loading trucks, Mr. Zak suggested that GCS erect a noise barrier wall between its facility and complainants properties. Tr. at 317, 329. For maximum effectiveness, he recommended that GCS place the barrier as close to the coal piles as possible and just to the north of the haulage road. Tr. at 318, 412-413. He said that the barrier should be as high as the second story windows on complainants' houses (about 22 feet) and several hundred feet long in order to block the three coal piles from complainants' homes. Mr. Zak drew the location of such a barrier on an aerial map of the area. Tr. at 318, 320, 410, 412, 413; Exh. C34. He admitted that the location of the barrier might require a minor route change to bring the coal into the facility. Tr. at 412. Mr. Zak said that the height of the coal piles would have to be less than 22 feet so that the barrier would hide a bulldozer on top of a coal pile. Tr. at 319, 328, 329.

Mr. Zak testified that the most cost-effective material for building the barrier is wood, specifically outdoor-grade coated or painted plywood about one inch thick. Such a barrier would last about 10 years. Barriers built of masonry or steel would last longer. Tr. at 320-21, 414-16. The barrier would have to be airtight. Tr. at 321. Mr. Zak testified that such a barrier would probably cost about \$100,000 to \$300,000. Tr. at 328. This sum includes the cost to support the barrier by sinking it into the ground – probably the biggest single expense in constructing a barrier. Tr. at 416-17.

Mr. Zak testified that a similar barrier has been built pursuant to a Board order in the Thomas case (Thomas v. Carry Companies of Illinois, PCB 91-195 (May 19, 1994)) for about \$12,000, well under Mr. Zak's initial estimate of \$50,000. Tr. at 321, 327. Construction costs there were low because the barrier was built in an industrial area and aesthetics were not important. Tr. at 418. Mr. Zak said that he had proposed another noise barrier in the Charter Hall case (Charter Hall Homeowner's Assn. v. Overland Transportation System, Inc., PCB 98-81, slip op. at 5 (May 6, 1999)) which was not built because the company moved its operations instead. Tr. at 322, 417. Mr. Zak proposed a 15-foot noise barrier 300 to 500 feet in length for the settlement in Mellon v. IDOT, PCB 01-21. The barrier there cost between \$100,000 and \$130,000. Tr. at 420-21.

Mr. Zak estimates that a noise barrier with the same dimensions and materials that he has proposed for GCD would reduce noise levels by about 15 A-weighted decibels (dB(A))<sup>3</sup>. Tr. at 326, 396, 418-19. He said that the Radio Shack noise meter readings that Ms. Glasgow took ranged from 60 to 77 dB(A), a "substantial exceedence" of about 20 decibels above the numeric standards. A 15 db(A) drop would be significant, although noise levels would still be slightly above Board numerical standards. Tr. at 326, 349-50; Exh. C43. Mr. Zak said that he will only recommend a noise reduction project if it reduces noise by at least 10 decibels. Tr. at 422-24.

Ned Studholme, GCS's noise expert, said that a noise barrier, such as the one proposed by Mr. Zak, is a technically practical way to reduce noise levels from the coal piles, but it will not stop low-frequency sounds such a vibrations. Mr. Studholme also claimed that such a barrier

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<sup>3</sup> The weighting is determined by different sound frequencies.

would reflect traffic noise on Edwardsville Road and make the traffic noise worse on complainants' properties. Tr. at 459. Mr. Studholme also testified that Mr. Zak's suggested 22-foot barrier may not lead to a 15 dB(A) reduction in noise as Mr. Zak suggested because the noise from the GCS plant might remain unchanged and because noises from high up on the coal piles might not be blocked. Mr. Studholme admitted that he had never analyzed a wood barrier before. Tr. at 492-94.

GCS also pointed out that Mr. Zak was not familiar with the type of soil or the hydrology in the area. GCS Br. at 12; Tr. at 416. In its post-hearing brief, GCS also claimed that a plywood noise barrier at GCS such as the one that Mr. Zak advocated would be "technically ineffective and very impractical." GCS Br. at 13.

**Vibration.** Mr. Zak testified that the vibrations that complainants feel are not travelling through the ground but are instead infrasonic sound of one to twenty hertz which is too low to register with the human ear. He said that the 22-foot noise barrier would not solve the vibration problem since barriers are only effective against noises with higher frequencies. Mr. Zak said that additional study on vibrations is needed. He suggested hiring a consultant who would set up a real time analyzer to determine which equipment at GCS is causing the low frequency noise. Such an analysis would cost \$2,000. Tr. at 342-45.

Mr. Zak suggested that GCS construct a building or enclosure where GCS can shake trucks or railcars to remove the coal such as the one in Christianson v. The American Milling Co., PCB 90-59 (Mar. 11, 1992). He said that the building in Christianson probably cost \$100,000 back in 1990, and he guessed that a similar type of building would cost \$150,000 today. Tr. at 338-40, 425-26.

**Muffler.** Mr. Zak said that engine noise from the bulldozers and front-loaders could be alleviated by installing Nelson Model 400 mufflers. Mr. Zak said that the Board required Nelson mufflers on trucks in the Hoffman case (PCB 94-146, slip op. at 9 (Oct. 17, 1996)). case. The cost to install is about \$500 per vehicle. As with the rubber, Mr. Zak said that GCS could require by contract that its vendors install mufflers on their trucks. Mr. Zak pointed out that in the last ten years mufflers for semi trucks are well-designed. Tr. at 328-30, 334.

**Railcars.** Mr. Zak surmised that the screeching that complainants heard came from brakes on railcars at the GCS facility. He suggested the noise barrier again and refiguring the coal piles. Tr. at 334-37, 425. However, the only similar type of noise that complainants mentioned was squealing from the brakes of trucks.

### **Sound Measurements and Analysis**

**Complainants.** Ms. Glasgow used a Radio Shack Sound Level Meter to get weighted decibel readings on the general noise coming from the plant. Ms. Glasgow testified that she used it according to Mr. Zak's instructions. The Board notes that during some of the noise events that Ms. Glasgow videotaped, the noise meter display was too blurry to see. However, some of the noise meter readings were legible. Tr. at 177-82, 180, 375-76; Exh. C24.



Mr. Zak said that Radio Shack noise meters, like the one that Ms. Glasgow used, are accurate. He calibrated her noise meter and found it to be only a decibel off. Tr. at 297-98.

Mr. Zak testified that the noise measurements taken by Ms. Glasgow can be used “as guidelines to design noise solutions that would bring the levels down to approximate the daytime and nighttime limits for noise”, although Mr. Zak admitted that the sound measurements taken by Ms. Glasgow were not done according to the Board’s numerical noise standards. Tr. at 293, 390. Mr. Zak testified that a significant exceedence of numerical standards might indicate that the noise is unreasonable. Tr. at 295.

Mr. Zak has reviewed the record and found that the numeric noise readings that Ms. Glasgow recorded are significantly higher than the levels in the Board regulations. Tr. at 297, 298, 365. He testified that, for purposes of numeric noise limits, the GCS property is a Class C industrial noise source while complainants’ homes are Class A residential sources. Tr. at 346. Based on his calculations of the dB(A) equivalent of the nine octave bands in the Board’s numeric regulations, he testified that the limits for noise from Class C to Class A properties are 61 dB (A) during the day and 51 dB (A) at night while the impulsive limits are 56 dB (A) daytime and 46 dB (A) at night. Tr. at 348, 361, 366-74, 376-82.

**GCS.** GCS’s noise expert Ned Studholme of Science Applications International Corporation developed a noise model for the area by complainants’ homes based on measurements that he took there on June 19 and 20, 2001. The model allows experts to determine strategies for reducing noise at properties where noise is a problem. Mr. Studholme said that the model he created is based on a generally accepted methodology for evaluating land use compatibility. He also said that he watched complainants’ videotapes and made notes on them. Mr. Studholme testified that the measurements he took corresponded to Ms. Glasgow’s measurements. Tr. at 433-37, 443, 445, 448, 451-53.

At Mr. Studholme’s request, GCS operated its bulldozers on the coal piles, and a GCS contractor drove empty and full trucks down Edwardsville Road so that he could measure each noise source independently. He testified that he was not trying to replicate actual working conditions but was instead trying to get representative samples and then mathematically determine actual conditions. Mr. Studholme measured noise from a bulldozer and from a hydraulic vibrator but did not measure noise from the trucks squealing on the GCS property. Tr. at 483-85, 488-89.

Mr. Studholme said that his model indicated that the noise level at complainants’ properties is 72.8 dB using a day-night average sound level (Ldn). Ldn is a logarithmic average of sound exposure levels (SEL) that are based on decibel readings. Mr. Studholme claimed that, based on Ldn, eliminating the noise from the coal piles or building a noise wall between the piles and complainants’ properties would reduce the noise at complainants’ properties to 71.4 dB – a 1.4 dB difference. Mr. Studholme claimed that in an outdoor setting the human ear can only discern a two dB difference. He claimed that noise from traffic dominates complainants’ properties, especially trucks hitting “irregularities” on Edwardsville Road. He noticed vibrations from the trucks on Edwardsville Road but did not observe vibrations from anywhere else. Tr. at 432, 441-43, 454-56, 459-61; GCS Br. at 2.

Mr. Studholme also said that the federal government has established a relationship between events measured in SEL and the percentage of the population that are awakened. He claimed that SEL is an excellent metric to use in determining sleep interference. Mr. Studholme testified that, based on SEL levels, the truck noise is most likely to awaken complainants followed by the backup beepers at the coal piles, and below that an “upset” event at the GCS facility (such as venting or steam pipe ignition). He claimed that 16% of the population would be awakened by trucks such as those on Edwardsville Road, assuming that complainants’ windows are closed. Only 12% would be awakened by the backup beepers from the coal piles. Tr. at 456-58, 473.

Mr. Studholme admitted that he is not an expert on Illinois’ noise regulations, but was familiar with the ANSI standards on which Illinois’ numeric regulations are based. He also admitted that his measurements did not follow ANSI standards but pointed out that the Board’s numeric noise standards were not at issue. Tr. at 461-64.

### **DISCUSSION**

The Board will first discuss the alleged air pollution violations at Section 9(a) of the Act. The Board will then discuss the alleged violations of the nuisance noise standards at Section 24 of the Act and 35 Ill. Adm. Code. 900.102. Finally, the Board will apply the factors at Section 33(c) of the Act to the alleged air and noise pollution allegations.

### **Burden of Proof**

Complainants’ burden of proof in this matter is set forth in Section 31(e) of the Act (415 ILCS 5/31(e)) which provides:

- e. In hearings before the Board under this Title the burden shall be on the Agency or other complainant to show either that the respondent has caused or threatened to cause air or water pollution or that the respondent has violated or threatens to violate any provision of this Act or any rule or regulation of the Board or permit or term or condition thereof.

### **Alleged Air Pollution Violation - Interference**

Complainants allege that GCS has violated Section 9(a) of the Act by releasing coal dust into the air. Section 9(a) of the Act (415 ILCS 5/9(a) (2000)) provides:

No person shall:

- a. Cause or threaten or allow the discharge or emission of any contaminant into the environment in any State so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, or so as to violate regulations or standards adopted by the Board under this Act;

Contaminant is defined as “any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source.” 415 ILCS 5/3.06 (2000).

Air Pollution is defined at Section 3.02 of the Act (415 ILCS 5/3.02 (2000)) as:

The presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property.

In order to successfully allege a violation of Section 9(a) of the Act, the following must be satisfied:

- 1) There was an emission of dust.
- 2) The dust was caused by GCS.
- 3) The dust resulted in either (a) injury to health or (b) interference with the enjoyment of life or property.
- 4) The injury or the interference was unreasonable according to the criteria at Section 33(c) of the Act (415 ILCS 5/33(c) (2000)). See Gott et al. v. M’Orr Pork, PCB 96-68, slip op. at 12 (Feb. 20, 1997).

The Board finds that there was an emission of dust and that GCS caused the dust. The testimony of complainants and their neighbors point to dozens of instances over the years in which dust has blown off the coal piles at the GCS facility. Furthermore, Mr. Hoppe’s and Ms. Glasgow’s videotapes show dust blowing off the GCS coal piles. GCS provided no evidence to refute that its coal piles are a source of dust.

The Board notes that complainants have not met the burden of proof to show that there was an emission of dust from the GCS coke batteries. Although complainants assert repeatedly that some of the dust came from the coke batteries, they have shown no proof that the GCS coke batteries were the source. Although complainants assert that the coke batteries are a source of air pollution, complainants appear to confuse the coke batteries with the blast furnace. Ms. Hoppe’s videotape shows a substance being released from an area of emission pipes at GCS, but it is not apparent if the pipes are part of the coke batteries. Furthermore, the shots in the videotape showing the release are at night, and it is unclear if the substance being released is dust or a benign substance such as water vapor.

The third part of the test involves injury to health or interference with the enjoyment of life or property. The Board did not allow lay witness testimony regarding the health effects of coal dust, and complainants did not present any physicians or other health professionals to show a link between the presence of coal dust and complainants’ health problems. The Board finds that there was no injury to health from the coal dust.

However, complainants did present evidence on the interference with their lives and property. Complainants have sealed their windows shut to keep the coal dust out. They testified that they do not sit outside to enjoy nice weather nor do they have friends over to visit. They said that dust gets in their eyes and they must clean both their homes (inside and outside) and their yards in order to wash the coal dust away – sometimes several times a week.

GCS argues that the coal dust emissions were only intermittent. Where dust conditions have occurred only intermittently, the Board has not found a violation of Section 9(a) of the Act based on interference. GCS Br. at 29-30, citing Trepanier et al. v. Speedway Wrecking Co. PCB 97-50, (Jan. 6, 2000). The Board notes that the facts in Trepanier and the facts in this matter are extremely different. Complainants in Trepanier alleged air pollution resulting from a five-week demolition of one building. Complainants there cited two instances of air pollution from the demolition, and one of those complainants chose to walk directly into the dust created from demolition activity. On the other hand, complainants in this matter are not choosing to walk into the dust from the GCS coal piles; the only way to avoid the dust is to leave their homes. Furthermore, complainants' videotapes show recurring episodes of dust blowing off the GCS coal piles during 2000 and complainants testified that the dust from the GCS coal piles has been a problem for years. Mr. Hoppe testified that the problem goes back to 1986. The Board finds that the dust has caused an interference with complainants' enjoyment of both their lives and their properties.

The Board will analyze the interference from dust to determine if it is unreasonable (and thus a violation of Section 9(a) of the Act) below.

### **Alleged Nuisance Noise Pollution Violation - Interference**

Complainants allege that respondents have violated Section 24 of the Act and 35 Ill. Adm. Code 900.102. Section 24 provides:

No person shall emit beyond the boundaries of his property any noise that unreasonably interferes with the enjoyment of life or with any lawful business or activity, so as to violate any regulation or standard adopted by the Board under this Act. 415 ILCS 5/24 (1998).

Section 900.102 of the Board's regulations provides, in relevant part, that no person shall cause or allow the emission of sound beyond the boundaries of his property "so as to cause noise pollution in Illinois . . ." 35 Ill. Adm. Code 900.102. Noise pollution is defined as "the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity." 35 Ill. Adm. Code 900.101.

Section 24 of the Act and Section 900.102 of the Board's regulations constitute a prohibition against nuisance noise. Zivoli v. Prospect Dive and Sport Shop, Ltd., PCB 89-205, slip op. at 8 (Mar. 14, 1991). The Board considers Section 33(c) of the Act to determine if noise rises to the level of a nuisance or an unreasonable interference with the enjoyment of life. *See Hoffman*, PCB 94-146, slip op. at 2 (Oct. 17, 1996).

In any nuisance noise enforcement proceeding, the Board must address the threshold issue of whether or not the noise from respondent's property has interfered with complainants' enjoyment of life. *See Furlan v. University of Illinois School of Medicine*, PCB 93-15, slip op. at 4 (Oct. 3, 1996). The noise must objectively affect enjoyment of life if the noise is to be considered interference. *See Hoffman*, PCB 94-146, slip op. at 15-16 (Oct. 17, 1996); *Zivoli*, PCB 89-205, slip op. at 9.

The Board again states that complainants have not met their burden of proof in alleging that noise comes from the coke batteries at GCS. Complainants were not able to cite specific examples of activity at the coke batteries that cause noise. The closest that complainants came to alleging noise from the coke batteries is the steam or air leak that occurred on Father's Day 2001. However, even in this instance complainants did not connect the steam or air leak with specific activity at the coke batteries. The specific complaints about noise from GCS refer to activity near the coal piles such as trucks delivering coal, bulldozers pushing coal up and down the piles, and the backup beepers on those vehicles.

GCS claims that complainants did not provide enough evidence for a finding of interference and that complainants did not provide enough evidence of the vibrations coming from GCS's operations. GCS Br. at 18. The Board disagrees. Although many of the complaints about the source vibrations are not specific, complainants tied some of the vibrations to the bulldozer moving up and down the coal piles and to trucks that vibrate when they dump coal. Complainants' videotapes showed several instances of noise from the coal pile areas that occurred both early in the morning and late at night. Complainants testified that the noise from the GCS coal piles prevents them from falling asleep and wakens them from sleep, in some cases several times in one night. Complainants contended that they have no peace and quiet at home, and Ms. Hoppe claimed that she has difficulty reading due to the noise. Mr. Hoppe said that the noise prevents him from enjoying his yard. The Board has held that such disruptions from noise are an interference with the enjoyment of life in other cases. *See, e.g., Charter Hall*, PCB 98-81, slip op. at 20 (Oct. 1, 1998) (trucking operations interfered with sleep); *Thomas*, PCB 91-195, slip op. at 13, 15 (Aug. 5, 1993) (trucking operations interfered with sleep); *Hoffman*, PCB 94-146, slip op. at 5-6, 17 (Oct. 17, 1996) (noise interfered with sleep and use of yard); *Curtis v. Material Service Corporation*, PCB 91-30, slip op. at 13-14 (Apr. 18, 1993) (noise interfered with sleeping and studying). The Board finds that, in this matter, these disruptions are also an interference with the enjoyment of life.

### **Unreasonable Interference – Section 33(c) Factors**

The Act states that the Board must consider all facts and circumstances involved in an enforcement order including, but not limited to, the factors in Section 33(c). 415 ILCS 5/33(c) (2000). Now that the Board has found that there was interference from both noise and dust, the Board engages in the second part of its analysis: The Board must address whether the coal dust and noise from GCS has unreasonably interfered with complainants' enjoyment of life. The Board examines the criteria at Section 33(c) of the Act to determine if the interference is unreasonable. In proving the unreasonableness of the interference, complainants are not required to introduce evidence on each of the Section 33(c) factors and the Board may still find the interference unreasonable even if it does not find against respondents on every factor. *See Wells*

Manufacturing Co. v. PCB, 73 Ill. 2d 226, 233, 383 N.E.2d 148, 151 (1978); Processing and Books, Inc. v. PCB, 64 Ill. 2d 68, 75-77, 351 N.E.2d 865, 869 (1976).

Section 33(c) of the Act provides:

In making its orders and determinations, the Board shall take into consideration all the facts and circumstances bearing upon the reasonableness of the emissions, discharges or deposits involved including, but not limited to:

- (i) the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;
- (ii) the social and economic value of the pollution source;
- (iii) the suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved;
- (iv) the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source; and
- (v) any subsequent compliance.

The Board will now analyze the Section 33(c) factors.

**The Character and Degree of Injury to, or Interference with the Protection of the Health, General Welfare and Physical Property of the People**

To assess the character and degree of interference that GCS has caused, the Board must determine if the noise and dust “substantially and frequently” interfere with the enjoyment of life “beyond minor or trifling annoyance or discomfort.” Charter Hall, PCB 98-81, slip op. at 21 (Oct. 1, 1998) quoting Kvatsak v. St. Michael’s Lutheran Church, PCB 89-182, slip op. at 9 (Aug. 30, 1990).

GCS claimed that complainants have not proven that the coal dust was toxic or that it made complainants ill. GCS also claimed that complainants showed no evidence that their health was harmed and no evidence of damage to physical property from the noise at GCS. GCS claimed that without medicinal or physical evidence, the degree of interference was minimal at most – and does not rise above the level of temporary discomfort and irritation. GCS Br. at 21, 30-31.

The Board has found substantial interference from noise in dozens of cases without medicinal evidence, physical evidence, or injury to property. The Board has found that complaints about dust are substantial even if no adverse health affects have been alleged. *See* Thomas, PCB 91-195, slip op. at 15 (Aug. 5, 1993). The complaints about dust in this matter are even more substantial than in Thomas.

**Dust.** The Board notes the pattern of dust exposure described in the fact section of this order and summarized in the interference discussion. Complainants' neighbors were able to corroborate the testimony. The Board finds that the dust from GCS's coal piles was a substantial and frequent interference in complainants' lives. The Board weighs this factor against GCS.

**Noise.** GCS claimed that complainants' complaints of noise and vibrations at all hours were inconsistent with the operations at the coal piles and therefore are exaggerated. They claimed that this undercuts complainants' credibility. GCS Br. at 21. The Board finds that complainants' complaints could also undercut the credibility of GCS on this point if those complaints were completely accurate. The Board also notes that GCS described typical hours of operation at the coal piles and mentioned that there were exceptions to the hours that they provided.

GCS claimed that complainants' allegations of interference from vibrations did not specify a specific source at the GCS facility. GCS claimed that the vibrations were more likely the result of cars hitting an irregularity on Edwardsville Road. GCS Br. at 18-19. GCS also pointed to Mr. Studholme's claim that the majority of the noise interference came from the traffic on Edwardsville Road. GCS Br. at 22-23.

The Board notes that complainants could not always pinpoint the exact source of the vibrations that they alleged were coming from GCS. However, complainants were able to identify the noise and vibrations coming from trucks on Edwardsville Road, including those trucks hitting the bump on Edwardsville Road. The Glasgows admitted that they could feel the vibrations and hear the trucks pass on Edwardsville Road. However, complainants did not testify about any interference that the traffic noise and vibrations may have caused them. The ambient noise and vibrations from the traffic does not diminish the fact that the noise from GCS interfered with complainants' lives. See Roti et al. v. LTD Commodities, PCB 99-19, slip op. at 24 (Feb. 15, 2001). The Board finds that the interference from GCS was more substantial than the interference from ambient sources.

Complainants could identify the specific sources of vibrations, including those from bulldozers and trucks. The vibrations caused their homes to vibrate and caused their beds to shake. The Board has recognized that noise which causes residential vibrations is a relevant factor in determining substantial interference with a complainant's life. Roti, PCB 99-19, slip op. at 25-26 (Feb. 15, 2001); Pawlowski v. Johansen, PCB 99-82, slip op. at 4, 8 (Apr. 6, 2000); Tex v. Coggeshall, PCB 90-182, slip op. at 13, 15 (Oct. 23, 1992).

It is necessary to strictly follow the measurement procedures at 35 Ill. Adm. Code 900.103 only when proving an allegation of a numeric noise violation. Discovery South Group, Ltd. v. PCB, 275 Ill. App. 3d 547, 559, 656 N.E.2d 51, 59 (1st Dist. 1995). Where the numeric noise standards are not at issue, the Board may take note of noise measurements, even if they are not performed in accord with Section 900.103, in order to substantiate the alleged violations of the Board's nuisance noise standards or to determine the character and degree of the alleged violations. Roti, PCB 99-19, slip op. at 26 (Feb. 15, 2001), citing Dettlaff v. Boado, PCB 92-26, slip op. at 7, 9 (July 1, 1993); D'Souza v. Marraccini, PCB 96-22, slip op. at 9 (May 2, 1996). In order for the Board to take the noise measurements into account, the noise measurement

procedures must be “technically justified”. Charter Hall, PCB 98-81, slip op. at 21 (Oct. 1, 1998).

The Board finds that there were two sets of noise measurements in this matter and that neither set complied with the measurement procedures at Section 900.103 of the Board’s noise regulations. However, the Board finds that both sets of noise measurement procedures are technically justified. Mr. Zak testified that he calibrated Ms. Glasgow’s Radio Shack noise meter and found it to be only a decibel off. Ms. Glasgow also properly documented the noise measurements that are plainly visible on her videotape. The Board recognizes Mr. Studholme’s qualifications in the field of noise measurement and that he employs a generally accepted methodology for determining land use compatibility based on noise. Furthermore, the Board notes that Mr. Studholme’s noise measurements corresponded to Ms. Glasgow’s noise measurements.

Since the Board’s numeric noise limits are not at issue here, the Board will use the noise measurements taken in this matter to determine the character degree of the noise violation. On those occasions when Ms. Glasgow’s noise meter readings are legible on the videotape, the Board found that the readings usually fell between 60 dB and 70 dB. Although Mr. Studholme used a different method to measure noise from the GCS facility, he admitted that his readings generally matched Ms. Glasgow’s readings.

Mr. Zak compared Ms. Glasgow’s readings to his db(A) equivalent of the Board’s numeric noise limits at Section 901.102 of the Board’s regulations and the impulsive limits at Section 901.103 of the Board’s regulations. In examining Mr. Zak’s numbers and comparing them to Ms. Glasgow’s readings, the Board finds that the noise from GCS to complainants’ properties exceeds the numeric limits by a maximum of over 20 dB. However, this type of exceedence occurred only when Ms. Glasgow’s nighttime readings were in the 70 dB range.

The Board notes that Mr. Studholme’s testimony on the federal government’s correlation between noise and being awakened is intriguing. However, the Board has never followed any type of objective standard in determining noise levels that awaken complainants. The Board finds that the most accurate measure of determining if noises awoke complainants is complainants’ sworn testimonies.

GCS claimed that complainants’ complaints about noise from the coal storage area only stretch back to 2000. Since the length of time is not long, GCS claims that the interference cannot be unreasonable. GCS Br. at 21-22. A search of the record reveals that GCS is basically correct – there is little mention of complainants discussing the noise from GCS before 2000. However, the record reveals that the complaints about noise during 2000 are substantial.

GCS also claimed that complainants’ testimony that they increase the volume on their television sets to drown out noise from GCS does not mean that the interference is unreasonable. GCS cites Schrantz et al. v. Village of Villa Park et al., PCB 93-161, slip op. at 15-16 (Dec. 14, 1994). GCS’s use of Schrantz is misplaced. In Schrantz, the Board found no unreasonable interference because the source of the noise was a four day community festival in which the extent of complainant’s interference consisted of turning up the television, talking louder in



order to have a conversation, and going to bed slightly later than normal. Although complainants in this matter have testified that they turn up their televisions to block out the noise, the other hardships that complainants endure (*see* the interference discussion) mean that the degree of interference here is far more severe than it was in Schrantz. Furthermore, the pattern of noise from GCS lasted during 2000, not just for four days.

The Board finds that the character and degree of interference from the noise at GCS's coal piles has been substantial and frequent. With respect to noise from the coal piles, the Board weighs this factor against GCS.

### **The Social and Economic Value of the Pollution Source**

The Illinois Supreme Court has determined that the number of persons that respondent employs and respondent's prominence in a particular market are relevant to the analysis of this factor. Wells Manufacturing Co., 73 Ill. 2d at 235-36, 383 N.E.2d at 152. The Board has determined that the number of employees and the total wages and taxes paid are relevant. Roti, PCB 99-19, slip op. at 26 (Feb. 15, 2001) quoting Arendovich v. Koppers Co., Inc., PCB 88-127, slip op. at 6 (Feb. 8, 1990). The Board also finds that respondent's charitable activity in the community is relevant. *See, e.g., Young*, PCB 00-90, slip op. at 17 (Sept. 6, 2001); Madoux et al. v. B & M Steel Service Center, Inc., PCB 90-148 (May 3, 1992).

The record reveals that GCS employs about 2,900 people and has a payroll of \$20 million per month. 30% of the employees live in the immediate vicinity of Granite City and 90% live in Illinois. There are 3,000 GCS retirees drawing a pension. Several local businesses do in excess of \$100,000 a year worth of business with GCS. GCS paid over \$4 million in property taxes in 2000, over half of which went to the local school district. The taxes also paid for local fire protection, police protection, and health care. GCS and its employees contributed over \$400,000 to the local United Way, and GCS has provided baseball fields for local residents to use. Even Mr. Hoppe and Ms. Glasgow admitted that GCS provides substantial social and economic value to the Granite City area.

Complainants argued that there would be a positive economic impact to the surrounding area if GCS halted its noise and dust emissions. Comp. Br. at 20. Complainants also argued that GCS's social and economic value is diminished by the employee injuries and deaths that have occurred at the GCS facility.

The Board finds that the overwhelming economic effect that GCS has on the Granite City area is the paramount consideration in addressing this factor. The Board finds that the GCS facility has a great deal of social and economic value and weighs this factor strongly in favor of GCS.

### **The Suitability or Unsuitability of the Pollution Source to the Area in which it is Located, Including the Question of Priority of Location in the Area Involved**

Priority of location is one aspect of suitability, but it is not the sole factor that the Board examines in making a finding for this factor. Roti, PCB 99-19, slip op. at 27 (Feb. 15, 2001) citing Oltman v. Cowan, PCB 96-185, slip op. at 3, 5 (Nov. 21, 1996).

There has been steel manufacturing at the GCS site since 1892 and the coke batteries and blast furnace have been in their current location for 80 years. Complainants and their neighbors all admitted that the GCS facility was in existence when they moved into their homes (the Hoppes in 1961, the Glasgows in 1997, the Carpenters in 1967, and the Martinezes in 1957). Ms. Hoppe said that they have been living with dust and noise from the GCS facility since then.

GCS has consistently maintained two coke batteries although the amount of coal that it uses in the batteries has increased from 725,000 tons annually to 860,000 tons annually.

With respect to the coal piles, Ms. Glasgow said that she was aware of the coal piles when she first moved in to her home in 1997. Mr. Hoppe said that he remembers that GCS began storing coal at its site in the early 1970s. As for the neighbors, Ms. Carpenter does not remember the coal piles at GCS when she and Mr. Carpenter moved in to their home 1967 and the Martinezes do not remember the coal piles at GCS when they moved in during 1957. Mr. Siebenberger said that the coal piles have been in their current positions since he started working for GCS in 1971. GCS claimed that the coal piles have been in their current position for about 80 years, but this fact is not clear from the hearing transcript or the exhibits. GCS Br. at 23.

In addressing this factor, the Illinois Supreme Court has found that

industry cannot, of course, substantially increase its . . . emissions and simultaneously rely on its priority of location in the area as a mitigating factor. This sort of changed circumstance would . . . undermine the industry's priority-of-location argument. Wells Manufacturing Co., 73 Ill. 2d at 237, 383 N.E.2d at 152.

The Glasgows testified that that the coal piles had grown in number and size since they had moved in, although they admitted that the piles shrunk from time to time. The Glasgows attributed the worsening dust problem to the increase in size of the GCS coal piles and GCS operations in general. GCS also claimed that the amount of coal stored in the Elk Run coal piles closest to complainants' properties has been decreasing, although a graph of the capacity of the Elk Run coal piles showed fluctuations in the volume of coal between February 1997 and June 2001.

Mr. Hoppe said that the dust problem had become worse since 1986 when he first started complaining to GCS. He also said that the dust problem had become worse in the past three to five years. The Glasgows said that the dust problem had become worse. Mr. Carpenter said that the dust levels had not increased since they moved away in 1996, but Ms. Carpenter said that the dust levels had increased.

Ms. Hoppe remembered that she had lived with the noise since she moved in, Mr. Hoppe testified that he began complaining to GCS about noise in the late 1980s, and Ms. Glasgow said that she had complained to GCS about 30 times regarding noise. Other than this, there was no testimony on trends in noise disturbance. Most of the testimony on noise centered on activity at the coal piles during 2000.

It is clear that the GCS facility has priority of location in this matter. There has been a steelmaker at the GCS site for over 100 years, and complainants and their neighbors were aware of the facility when they moved into their respective homes. Although GCS uses more coal now than it used to, this fact alone does not mean that emissions from GCS have increased. As the Board has stated, complainants have not been able to successfully link dust or noise emissions to the operation of the coke batteries or other functions at the GCS facility.

It is less clear if the coal piles, particularly the Elk Run coal piles closest to complainants' homes, were present when complainants moved in. The best evidence that the Board has is that the Elk Run coal piles appeared in the early 1970s based on the testimony of Mr. Hoppe and Mr. Siebenberger. There is also no clear evidence on whether the Elk Run coal piles have gotten bigger or smaller over the years since complainants generally state that the coal piles are getting larger while GCS generally states that coal piles fluctuate in size. Complainants contend that the amount of dust generated from the coal piles has gotten worse.

There was no testimony on zoning and little testimony on the character of the surrounding area.

The Board finds that GCS is suitable to the area in which it is located. The Board also finds that the GCS facility had priority of location in the area and that there has been no substantial increase in emissions from the GCS facility, including the coal piles. Complainants contend that the Elk Run coal piles have been the primary cause of the increase in the amount of dust. Complainants should have been on notice that annoyances typical of those found in and near heavy manufacturing areas (such as dust and noise) could affect them. Wells Manufacturing, 73 Ill. 2d at 237, 383 N.E.2d at 152. The Board weighs this factor in favor of GCS.

**The Technical Practicability and Economic Reasonableness of Reducing or Eliminating the Emissions, Discharges or Deposits Resulting from Such Pollution Source**

The Board must examine the record to determine if GCS could have employed readily available, practical, and reasonable means to reduce or eliminate noise emissions. Incinerator, Inc. v. PCB, 59 Ill. 2d 290, 298-299, 319 N.E.2d 794, 798 (1974); Scarpino v. Henry Pratt Co., PCB 96-110, slip op. at 20 (Apr. 3, 1997).

**Generally.** Before looking at the proposed options for reducing dust and noise levels, the Board will examine the financial status of GCS.

Based on the exhibits and testimony presented, the record reflects that GCS's parent company National Steel has gone from several years of profitability in the late 1990s to recent large losses. Complainants attempted to add up all of National's Steel profits from 1996 to 1998 and then subtract its recent losses. They claimed that National Steel had \$241 million available to spend on compliance measures. Tr. at 609; Comp. Br. at 7, 24, 28. Mr. Ribbing testified that the profits which National Steel made in the late 1990s had already been spent on capital expenditures. Tr. at 609.

The Board finds fault with both complainants' arithmetic and logic. The record reflects that, as of the date of the hearing, National Steel was in financial trouble as it was losing money, had declining stock prices, was laying off employees, and was selling off noncore assets. In addition, market conditions in the steel industry did not seem to favor a quick return to profitability for National Steel.

**Dust.** GCS pointed out that the only dust reduction suggestion that complainants put forth was to relocate the coal storage area away from complainants' properties without paying attention to the reasonableness or feasibility of such an operation. GCS argues that complainants' demand to relocate the coal piles is economically unreasonable and that the benefits from such a move are "uncertain at best". GCS Br. at 25, 31.

The Board finds that complainants have submitted almost no information on the technical feasibility or economic reasonableness of relocating the coal piles. The Board finds that GCS has at least engaged in a preliminary study of relocating the coal piles in which it determined that the relocation would cost \$4.8 million. *See* GCS Exhibit 24.

Complainants also suggested combining the coal piles in order to reduce dust levels, but again submitted no information on the economic reasonableness or technical feasibility of such a plan. The Board therefore relies on Mr. Holloran's testimony in which he claims that combining the coal piles would be technically unfeasible.

The Board finds that relocating the coal piles would be economically unreasonable and that the benefits of such a move are uncertain. The benefits of combining the coal piles are also uncertain. The Board rejects combining the coal piles as such an operation would be technically impracticable.

**Noise.** Mr. Zak put forth several proposals on complainants' behalf for reducing noise levels from GCS and most of the proposals focused on noise from the coal piles.

The Board is somewhat concerned about Mr. Zak's proposals. Mr. Zak testified that he had been in the area at issue many times going back to 1972. GCS argues that Mr. Zak's ideas are suspect since he never visited the GCS facility nor is he familiar with any other steel making operations. GCS Br. at 24-25. The Board notes that Mr. Zak only visited the area at issue for about 30 minutes. In Thomas, Mr. Zak proposed several methods to reduce the impact of noise on complainants, but Mr. Zak never set foot on respondent's site nor did he have first hand knowledge of the respondent's operations. The Board issued an interim order there finding a nuisance noise violation and directing respondents to issue a study on reducing noise including Mr. Zak's suggestions. Thomas, PCB 91-195, slip op. at 17, 19 (Aug. 5, 1993). In the instant matter, if the Board ultimately finds Mr. Zak's suggestions to be economically reasonable and technically feasible and finds in favor of complainants, it will follow Thomas and order GCS to study noise reduction measures, including Mr. Zak's suggestions.

The most elaborate and expensive of Mr. Zak's proposals was the construction of a noise barrier near then coal piles in to block noise from bulldozers and front-loading trucks.

In the past, the Board has ordered that noise walls and acoustical barriers be built on a case-by-case basis. The Board looks to the facts in each case to determine if a noise wall is a necessary remedy. For example, the Board considered an option to require a respondent to construct a ten to twenty-foot tall by 200-foot long barrier wall with a cost of \$20,000. The Board noted that the respondent would incur considerable costs for this option and instead required that the respondent undertake other noise reduction measures. Madoux v. Straders Logging and Lumber Mill, PCB 90-149, slip op. at 2, 6 (Nov. 19, 1992). In another case, the Board found that the construction of two barrier walls at a cost of \$20,000 was the most economically reasonable and technically feasible of several proposed noise reduction remedies. Tex, PCB 90-182, slip op. at 4, 6-7 (June 17, 1993). In Hoffman, the Board held that the \$150,000 cost of relocating the respondent's municipal maintenance facility was not "economically reasonable considering the type of interference and the alternative control options." Hoffman, PCB 94-146, slip op. at 19. More recently, the Board ordered a respondent trucking terminal to construct an airtight, one-inch thick, 22-foot tall wooden or brick barrier around the entire northern, western, and southern perimeter of its facility. Charter Hall, PCB 98-81, slip op. at 5-6, 9 (May 6, 1999). At the hearing in Charter Hall, Mr. Zak estimated that a noise barrier would cost the respondent anywhere from \$50 to \$100 per linear foot. The Board found that construction of the barrier was technically feasible and economically reasonable. Charter Hall, PCB 98-81, slip op. at 14, 24-25 (Oct. 1, 1998). Furthermore, the Board ordered the barrier built even though it found no violation of the numeric noise limits.

If the Board were to order GCS to build a noise barrier, the Board would have to be confident that the noise barrier would provide the proposed benefits. The Board finds that Mr. Zak's \$100,000 to \$300,000 estimate for the noise barrier herein is significant. Mr. Zak said that his proposed 22-foot tall noise barrier would reduce noise levels by about 15 dB(A). However, Mr. Studholme testified that the proposed noise barrier could reflect ambient noise on Edwardsville Road back to complainants' properties thus making the ambient noise seem louder. Mr. Studholme also said that Mr. Zak's claim of a 15 dB(A) reduction might be too optimistic since the barrier might not block noise from the upper parts of the coal piles. Mr. Studholme claimed that building a noise wall would only lead to a 1.4 dB reduction in noise levels on complainants' properties and that such a reduction is undetectable. Mr. Studholme admitted that he has never analyzed a wood barrier such as the one that Mr. Zak proposed.

Given Mr. Studholme's testimony regarding the lack of certainty about the effectiveness of the barrier and Mr. Zak's unfamiliarity with the GCS facility, the Board finds that the proposed noise barrier would be economically reasonable or technically feasible.

Both Mr. Zak and Mr. Studholme testified that the barrier would not stop vibrations from GCS. In order to reduce vibrations, Mr. Zak proposed that that GCS construct a \$150,000 building or enclosure in which GCS can shake trucks or railcars to remove coal. The Board finds that when complainants could pinpoint the cause, they blamed the vibrations on the bulldozers moving up and down the coal piles and on trucks dumping coal. An enclosure will address the vibrations from trucks, but will not address vibrations from the bulldozers. The Board finds that spending \$150,000 on the construction of such an enclosure would not be economically reasonable.

Mr. Zak suggested that complainants hire a qualified noise consultant to study noise emissions from the coke plant. However, since the Board has found that the complaints about the noise from the coke plant are too vague and do not constitute an interference, the Board does not find this to be a viable means of reducing noise levels.

Mr. Zak also proposed replacing backup beepers with observers who work at the plant. However, Mr. Holloran stated that replacing the backup beepers with current employees would entail having to hire at least two more employees to be full-time observers since GCS's current employees already have tasks and could not handle additional observing duties. Mr. Holloran claimed that hiring two more employees to be full-time observers would be difficult given GCS's current financial status and the fact that GCS is laying off employees instead of hiring new employees. Mr. Holloran also said that two full-time observers could not see everything, thus creating a risk to safety. The Board finds that hiring two additional full-time observers may or may not be economically reasonable depending on the observers' salaries and benefits. However, the Board is concerned about safety and takes Mr. Holloran's comments very seriously since he is very familiar with the operation of the coal piles. *See* Tr. at 556-62. If safety is compromised by disconnecting backup beepers and hiring observers instead, the Board cannot find that such a move would be technically feasible.

Mr. Zak also suggested that GCS install rubber and mufflers on its trucks and have its contractors do likewise in order to reduce noise from tailgate banging and engines respectively. GCS did not offer testimony in opposition to these measures. The Board finds that the low cost of the rubber and the mufflers makes these remedies economically reasonable (\$100 - \$500 per remedy per vehicle). The Board also finds that these remedies are technically feasible. The Board does have some concern about ordering semi-trucks at the GCS facility to have Nelson Model 400 mufflers if, as Mr. Zak testified, mufflers on semi-trucks less than 10 years old are well-designed.

**Conclusion.** With the exception of rubber and mufflers for vehicles, the Board finds that complainants' suggested noise and dust reduction measures are not technically feasible nor economically reasonable. If the Board ultimately finds in favor of complainants, it will want GCS to submit a study regarding rubber and mufflers for vehicles on the GCS facility. The Board weighs this factor in favor of GCS.

### **Any Subsequent Compliance**

Under this factor, the Board determines whether or not GCS has subsequently come into compliance with any provisions of the Act or the Board's regulations that it allegedly violated. Roti, PCB 99-19, slip op. at 31 (Feb. 15, 2001) citing Manarchy v. JJJ Associates, Inc. d/b/a The Gotham Nightclub, PCB 95-73, slip op. at 13 (July 18, 1996).

The Board finds that GCS had engaged in some dust reduction activities prior to complainants filing the complaint. GCS pointed to the signing of the CCA in November 2000 and its fugitive dust control plan as evidence of subsequent compliance. Specifically GCS cited the purchase of spray equipment and dust suppression products, its road sweeping and flushing

programs, and monitoring weather conditions. GCS Br. at 32. The Board finds that the dust suppression activities listed in the CCA are significant.

With respect to noise control activities, the Board finds that GCS has not engaged in nearly the same level of subsequent compliance. GCS prevented trucks at its facility from exiting the gate closest to complainants' homes, and Mr. Hoppe admitted that this action reduced noise levels somewhat. Mr. Siebenberger testified that GCS has tried to minimize tailgate slamming and put quieter backup beepers on its vehicles in the coal pile area.

The Board finds that there have been few specific complaints about dust since the signing of the CCA in November 2000. Ms. Glasgow's log reveals a reduction in the number and frequency of air pollution complaints after the signing of the CCA. Although there was little testimony about noise pollution complaints after the end of 2000, the Board notes that Ms. Glasgow's log lists almost daily noise complaints from mid-October through December 1, 2000. *See* Exh. C26.

With respect to dust, the Board weighs this factor in favor of GCS. With respect to noise, the Board weighs this factor against GCS since GCS appears to have taken little if any subsequent action to address noise complaints even though there were few specific noise complaints on the record during 2001. On the whole, the Board weighs this factor neither for nor against GCS.

### **CONCLUSION**

The Board finds that complainants have not met the burden of proving that air and noise emissions from the GCS coke batteries interfered with their lives. However, complainants did meet the burden of proving that both the air emissions and noise emissions from the GCS coal piles interfered with their lives. The Board finds the following with respect to the Section 33(c) factors: the character and degree of the dust and noise emissions from GCS was substantial and frequent, and the Board finds that this factor weighs against GCS; GCS has a great deal of social and economic value, and the Board weighs this factor in favor of GCS; GCS is well-suited to the area in which it is located, and the Board weighs this factor in favor of GCS; the majority of the dust and noise control measures suggested are either technically unfeasible or economically unreasonable or both, and the Board weighs this factor in favor of GCS; GCS has attempted subsequent compliance with respect to dust but its efforts with respect to noise have been lacking; the Board weighs this last factor neither for nor against GCS. After examining all of the Section 33(c) factors, the Board finds that the interference in complainants' lives from the dust and noise at the GCS coal piles is not unreasonable. Thus, although the Board finds that the air and noise emissions interfered with complainants' lives, the Board finds that the interference was not unreasonable. Therefore, the Board finds that GCS did not violate Sections 9(a) and 24 of the Act, nor did GCS violate Section 900.102 of the Board's noise regulations.

This opinion and order constitutes the Board's findings of fact and conclusions of law.

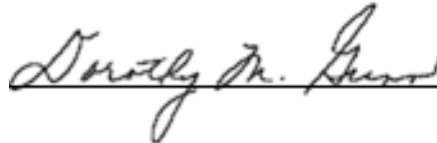
### **ORDER**

For the aforementioned reasons, the Board finds that complainants have failed to prove that GCS violated Sections 9(a) and 24 of the Act, and complainants failed to prove that GCS violated Section 900.102 of the Board's regulations. This matter is dismissed and the docket is closed.

IT IS SO ORDERED.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2000); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on March 7, 2002 by a vote of 7-0.

A handwritten signature in cursive script that reads "Dorothy M. Gunn". The signature is written in black ink and is positioned above a horizontal line.

Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board