

ILLINOIS POLLUTION CONTROL BOARD
April 8, 1993

SUSAN A. CURTIS AND
MARCY DIESING,

Complainants,

and

CITY OF CRYSTAL LAKE,

Intervening-Complainant,

v.

VILLAGE OF LAKE IN THE HILLS

Intervening-Respondent,

and

MATERIAL SERVICE CORPORATION

Respondent.

MATERIAL SERVICE CORPORATION,

Cross-Complainant,

v.

CITY OF CRYSTAL LAKE,

Cross-Respondent.

PCB 91-30
(Enforcement)

SUSAN A. CURTIS AND MARCY DIESING APPEARED PRO SE;

MR. MICHAEL E. COPPEDGE OF COWLIN, UNGVARSKY, AND CURRAN APPEARED
ON BEHALF OF THE CITY OF CRYSTAL LAKE;

MR. RICHARD FLOOD OF ZUKOWSKI, ROGERS, FLOOD, AND MCARDLE
APPEARED ON BEHALF OF THE VILLAGE OF LAKE IN THE HILLS; AND

MR. RICHARD R. ELLEDGE AND MR. JEFFREY M. FRIEDMAN OF GOULD AND
RATNER APPEARED ON BEHALF OF MATERIAL SERVICE CORPORATION.

Opinion and Order of the Board (by J. C. Marlin):

This matter is before the Board on a formal complaint filed
February 20, 1991, by Susan Curtis and Marcy Diesing

0141-0003

(complainants) against Material Service Corporation (MSC). The complainants filed an amended complaint on December 27, 1991. The amended complaint alleges that MSC's mining operations in McHenry County interfere with the complainants' use of their property. The amended complaint alleges that the noise and dust emissions violate 35 Ill. Adm. Code 900.102 and 901.102 and Sections 9(a), 23 and 24 of the Environmental Protection Act (Act). (415 ILCS 5/9(a), 5/23, and 5/24 (1992).) (Comp. at 2.)

On July 26, 1991, the City of Crystal Lake (City) petitioned to intervene as a complainant, and the request was granted by the Hearing Officer on July 29, 1991. On October 30, 1991, the Village of Lake in the Hills (Village) filed a petition to intervene as a respondent. On November 1, 1991, MSC filed a cross complaint against the City. The petition was granted and the cross complaint was accepted for hearing by Board Order on November 7, 1991. Public hearings in this case were held on December 17 and 18, 1991, January 15, 1992, and February 3, 1992, which members of the public attended.¹ The complainants filed a post-hearing brief on March 10, 1992, and a reply brief in response to the Village's brief on March 23, 1992. MSC filed a post-hearing brief on March 12, 1992, and a reply brief on March 18, 1992. The Village filed a brief on March 10, 1992, and the City filed a response to the post-hearing brief of MSC and the Village on March 18, 1992.

On November 20, 1992, MSC filed a motion to dismiss this case. On November 30, 1992, the Village filed a response to MSC's motion to dismiss stating that it had no objection to dismissal. On December 1, 1992, the complainants filed a response in opposition to MSC's motion to dismiss. The Board denied MSC's motion in a December 17, 1992, order. (Curtis and Diesing v. Material Service Corporation et. al. (December 17, 1992) ___ PCB ___, PCB 91-30.)

PRELIMINARY MATTERS

The complainants filed an amended complaint on December 27, 1991. At hearing, the complainants moved to amend their complaint in order to allege further violations of the Act and the Code. (Tr. at 9.) There were no objections to the motion. (Tr. at 275.) Therefore, the Board, pursuant to 35 Ill. Adm. Code 103.210(a), grants the complainants motion to file an amended complaint.

¹The transcript pages in this case are numbered sequentially beginning with the hearing on December 17, 1991, and continuing through the hearing on February 3, 1992. The transcript citation in this opinion will be (Tr. at .).

On February 10, 1992, MSC filed an appeal of the Hearing Officer's ruling to bar the testimony of George W. Kamperman and made an offer of proof. The Board has reviewed the arguments made at hearing and the motion and sees no reason to overrule the Hearing Officer on this matter. Therefore, the ruling of the Hearing Officer to bar the testimony of George W. Kamperman is upheld.

THE COMPLAINT

The amended complaint alleges that MSC's mining activity is causing both noise and air pollution. The amended complaint charges that the mining interferes with the complainants' use of their property in several ways. The amended complaint charges that the noise and dust emissions violate 35 Ill. Adm. Code 900.101 and 900.102 and Sections 9(a), 23 and 24 of the Act. (Comp. at 2.) Complainants maintain that the equipment used by MSC to mine disturbs their sleep even when their windows are closed. (Comp. at 3.) They also assert that the mining keeps them and their families from enjoying outdoor activities around their homes, and disrupts normal family activities such as reading or studying. (Comp. at 3.)

The complainants allege that the noise causes stress and that neighborhood parents are concerned for the emotional well-being of their children. (Comp. at 3.) The complainants also assert that the dust and dirt created by the mining operation causes air pollution which pollutes their homes even when the doors and windows are kept closed. (Comp. at 3.)

THE CROSS-COMPLAINT

MSC's cross-complaint against the City alleges that the City has failed to honor a settlement agreement between itself, the Village, and MSC. The complaint alleges that the City has failed to plant grass and trees or shrubs on the berm constructed by MSC. (Cross-Comp. at 5.) MSC alleges that any dust resulting in air pollution is a result of the berm not being planted and that noise from the mining would be deflected if the berm were properly planted. (Cross-Comp. at 5.) MSC argues that if the Board finds that noise or air pollution is occurring from any source, that the Board should direct the City to immediately plant the berm. (Cross-Comp. at 6.)

BACKGROUND

The complainants are home owners in the Coventry Subdivision (Subdivision) of the City of Crystal Lake in McHenry County, Illinois. The MSC mining operation in question is located in the Village of Lake in the Hills on land known as the Cohn parcel. The Cohn parcel is directly south of the Subdivision. The Cohn parcel, beginning at its Western most border, runs east from near

the City sewage treatment plant around four thousand feet to Pyot Road. The subdivision is the Cohn parcel's northern boundary; from there, the parcel runs south approximately thirteen hundred feet. (Tr. at 408.) The Cohn parcel and the Subdivision are separated by a berm which runs along most of the border between the two properties. Located south of the Cohn parcel is the Crystal Lake airport (Tr. at 408) and located southeast of the subdivision is a mining operation owned by Vulcan Mining Company. (Tr. at 696 and Resp. Exh. 2.)

MSC is a mining company. MSC owns a large mining yard which includes the Cohn parcel. MSC acquired the Cohn parcel in 1956, and has mined it since July, 1990. (Tr. at 409.) At the time of the hearing, four major activities took place in the yard owned by MSC: extraction, maintenance, processing, and shipping. (Tr. at 416.) It is the noise and dust created by the extraction which is the subject of this complaint. The equipment used in extraction includes scrapers, dozers, front-end loaders, field conveyor systems, feeders, and drag lines. (Tr. at 420.)

In addition to the machinery, eight lights are used on the Cohn parcel to illuminate the work area after dark. The closest light to the Subdivision is estimated to be not less than five hundred feet from the subdivision. (Tr. at 431.) However, the lights are not a subject of this complaint and the Board will not consider the lights any further.

MSC testified that its normal mining operations take place on the Cohn parcel from 6:00 A.M.- 12:00 midnight (Tr. at 451.) Before the summer of 1991, late night maintenance or mining took place after midnight. MSC testified that since August of 1991, no such work has taken place on the property after midnight. (Tr. at 513.)

The complainants ask the Board to order the respondents to stop polluting the air with dirt and dust and confine the noise of their mining operation completely within their boundaries. The complainants ask that this be done by installation of heavy duty mufflers, elimination of back-up beepers, enclosing conveyors, and watering of the work area. The complainants also ask the Board to restrict MSC's mining hours and to order MSC to cease and desist mining at any time on Sunday. (Comp. at 4.)

WITNESSES

In attempting to prove that the noise from MSC interferes unreasonably with their enjoyment of life and lawful activity, complainants Diesing and Curtis gave examples and called witnesses to testify about how the noise was affecting their lives. With the exception of Gregory Zak, the Illinois Environmental Protection Agency's (Agency) noise technical advisor, all witnesses called by the complainants reside in the

Subdivision. The following is a list of complainants' witnesses in order of appearance and the witnesses occupations (if identified at hearing):

Susan Curtis,	Complainant;
Diane Jones,	
Jeff Swanson,	Airline Pilot;
Diane Bender,	Teacher;
Gregory T. Zak,	Agency Noise Technical Advisor;
Anne B. Bessler,	High School French Teacher;
Jean Olsen,	
Susan Sanders,	Homemaker and Former Teacher;
Gail Anne Tracy,	
Joseph Misurelli,	City Manager for City of Crystal Lake;
Thomas Courtre,	Police Officer for City of Crystal Lake; and
Marcy Diesing,	Complainant and Homemaker.

The respondents called several people at hearing to testify that the noise and dust from MSC's operation does not violate the Act or the Board's rules. Additionally, the respondents called witnesses to testify about what impact planting the berm between the Subdivision and MSC's property would have on the noise and dust. The following is a list of respondents' witnesses in order of appearance:

David Olson,	Area Manager of Aggregate Operations at MSC;
Jeff Brasuell,	MSC Plant Superintendent of Yard 46 in Algonquin, IL;
William Riley,	Lift Operator at MSC; and
Dale Garman,	Senior Environmental Engineer at MSC.

The following is a list of witnesses called to testify for Intervening-Respondent, Village:

James Wales, Chief of Police Village of Lake in the Hills;

Robert Hughes, Police Sergeant Village of Lake in the Hills;

John Gadrim, Police Officer Village of Lake in the Hills;

Douglas Schenk, Police Officer Village of Lake in the Hills; and

Terri Vollmer, Police Sergeant Village of Lake in the Hills.

TESTIMONY

Complainants' witnesses testified extensively regarding the impact of the noise on their lives. At hearing, complainant Diesing testified that the noise from MSC interferes with the use of her property both inside the home and outside in the yard. (Tr. at 616-30.) Complainants' witness Mrs. Bender testified that the noise from the mining is audible even with all of the doors and windows of her home closed. (Tr. at 126.) Mrs. Tracy stated that the mining noise sounds like rocks hitting other rocks. (Tr. at 527.) Additionally, Mrs. Bender described the mining noise as "constant and irritating". (Tr. at 127.)

Mr. Swanson testified that he occasionally wears hearing protection in his home. (Tr. at 110.) Mrs. Curtis testified that she is tense, tired and edgy from the noise. (Tr. at 41-48.) Mrs. Bessler testified that people with whom she was on the phone could overhear the noise from MSC while she was on the phone with them. (Tr. at 256-258.) Mrs. Sanders compared the sound to constant construction noise and said that her family sometimes used "white noise" from the television to cover the mining noise (Tr. at 382-388.)

Mrs. Olsen described the noise as follows:

We hear a constant clinking, like gravel and scraping, and that terrible beeping sound. There is a beeping sound I think from the time I wake up in the morning until I go to bed. I feel like the garbage truck is in my backyard.

(Tr. at 278.)

Complainants and their witnesses also testified that the noise has an adverse effect upon the children who live in the subdivision. One witness, Mrs. Jones, explained that the windows in her son's room rattle and that she has problems getting him to

sleep at night. (Tr. at 99-101.) Mrs. Bessler testified that her daughter would not play on the swings and is afraid of the noises. (Tr. at 259.) Further, Mrs. Tracy testified that she kept her children up late at night so they could sleep from being overtired. Mrs. Tracy also stated that her daughter fell asleep in class twice from lack of sleep due to the noise the night before. (Tr. at 528.) Mrs. Olsen described how vibrations disturbed her child. (Tr. at 282.)

Mr. Zak testified that he measured noise levels in the subdivision twice. The measurements were taken on September 26, 1991, from 12:38 p.m. to 1:21 p.m. and on October 8, 1991, from 3:43 p.m. to 5:41 p.m. (Comp. Exh. 11 at 1-2.) On September 26, 1991, noise emissions from MSC were measured at the Diesing Home at 129 Dartmoor Drive, Crystal Lake, Illinois 60014. (Tr. at 165 and Comp. Exh. 11 at 1.) On October 8, 1991, noise levels were measured at the Curtis residence at 132 Dartmoor Drive, Crystal Lake, Illinois 60014. (Tr. at 169 and 209 and Comp. Exh. 11 at 2.)

Mr. Zak's noise survey report for the two sites include general information, octave band survey data, site location, inspection photos, and printout of the noise measurement data from the two sites stored in the memory of the sound level meter. (Comp. Exh. 11.) The general information includes details about the instrumentation, atmospheric conditions and field calibration. (Tr. at 167-170 and Comp. Exh. 11 at 1-2.) Mr. Zak used a Larson-Davis 3100 Real Time Analyzer (RTA) to monitor the sound levels. (Tr. at 167.) The microphone used was a model LDL 2541 No. 1296. (Tr. at 167.) The atmospheric conditions data include: temperature; wind speed and direction; relative humidity; and barometric pressure measured before and after the survey. (Tr. at 168-169.) The field calibration involved the calibration of the RTA at 114 dB and 250 hertz using a Larson Davis calibrator. (Tr. at 171.) Mr. Zak testified that the equipment used to obtain the preliminary information complies with the state guidelines. (Tr. at 167-170.)

The site at which measurements were taken on September 26, 1991, was located at approximately 45 degree angle to Diesing residence at a distance of 25 feet from the corner of the house. (Tr. at 176 and Comp. Exh. at 5.) Mr. Zak testified that the microphone was angled zero degrees and placed at a height four feet above the ground. (Tr. at 176-177 and Comp. Exh. 11 at 1.) The microphone was located approximately 65 feet from the berm separating the noise source and the Diesing residence. (Tr. at 177.) Mr. Zak noted that this site was chosen to represent the nearest receiving property to MSC. (Tr. at 178.)

The second monitoring site (October 8, 1991) was located at a distance of 25 feet from the Curtis residence and in excess of

four hundred feet from the MSC noise source.² Mr. Zak testified that he moved to the Curtis home because of wind problems at the Diesing residence. (Tr. at 202.) Mr. Zak also testified that he felt that there was no "significant acoustic difference" between the two sites so he moved to the Curtis site where the wind levels were in the acceptable range of zero to twelve miles per hour. (Tr. at 202.) The instrumentation was set up in the same manner as it was done at the Diesing residence. (Tr. at 204.)

Mr. Zak's report includes an octave band survey of the noise measurement data of the sound emissions from the mining operation at MSC. (Tr. at 235 and Comp. Exh. 11 at 3.) The octave band survey data include decibels levels at various frequencies transcribed from the RTA printout for both sites. (Tr. at 237.) Mr. Zak testified that the noise data measured on September 26, 1991, at the Diesing residence, was adequate to represent the ambient sound level, which is used to correct the raw sound levels to adjust for the impact of ambient conditions. (Tr. at 187-188, 322, and Comp. Exh. 11 at 18-28.) The data measured on October 8, 1991, represents the raw sound levels emanating from MSC in terms of 1-hour L_{eq} . (Tr. 233-234 and Comp. Exh. 11 at 31-96.)

Mr. Zak compared the raw octave band sound levels measured on October 8, 1991, to the daytime numerical limits in Section 901.102 (a) to arrive at the reduction needed for compliance. (Tr. at 238-239.) Mr. Zak noted that no ambient corrections are necessary since the difference between the ambient levels and the noise levels from the source is equal to or greater than 11. (Tr. at 239-240 and Comp. Exh. 11 at 3.) Mr. Zak also estimated the projected reduction of sound levels required to comply with the nighttime limits in Section 901.102(b). (Tr. at 241-242 and Comp. Exh. at 3.) However, Mr. Zak noted that he was not claiming nighttime violation since the noise measurements were taken in daytime. (Tr. at 241-242.) The report also includes graphic representation of the octave band survey data that shows the actual and projected violations of the Board's noise regulations in Section 901.102. (Tr. at 243-244 and Comp. Exh. at 4.)

Mr. Zak's report includes a printout of the noise data stored in the memory of the RTA. (Comp. Exh. 11 at 17-97.) The printout indicate proper calibration of the instrument, and the type of sound being recorded, i.e. octave band or discrete tone. (Comp. Exh. 11 at 17, 29, 30 and 97.) The printout also

²A chart comparing the sound levels measured in dB allowed by Section 901.102(a) and those emitted from MSC as measured by Mr. Zak on October 8, 1992, can be found on page 18 of this opinion.

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establishes that the analyzer took an L_{eq} measurement as required by Board regulations. (Tr. at 185 and Comp. Exh. 11 at 17-97.) Mr. Zak testified that the information in the printouts formed the basis of his conclusion that the MSC mining operations were in violation of Section 901.102(a) of the Board's noise regulations. (Tr. at 237-241.) Mr. Zak did not take any night noise measurements, although he opined that MSC would have to reduce their noise in order to comply with the nighttime limitations. (Tr. at 241-243 and Comp. Exh. 11 at 3.)

Mr. Zak's testimony was contested by the testimony of Respondent's witness, Mr. Garman, a member of MSC's environmental services department. Mr. Garman testified that he believed the frequency readings taken by Mr. Zak on October 8, 1991, reflected the noise of the winds, of anywhere from twelve to twenty miles per hour, blowing through the trees, and not the noise from MSC. (Tr. at 1035 and 1036.) Mr. Garman also testified that it was his experience that it was "virtually impossible" to determine a predominant noise source without taking measurements at more than one location. (Tr. at 1036.)

On March 15, 1991, Mr. Garman used a Larson Davis Lab Model 800-B with a Hewlett Packard Model 70-B computer to sample the noise at MSC Yard 46. (Tr. at 999.) March 15, 1991, was the first time he had ever used this equipment. (Tr. at 99.) Garman also testified that some of the samples taken on March 15, 1991, were distorted and that there is a possibility that all of the samples were distorted. (Tr. at 1001-1002 and 1044.) Mr. Garman also testified that he obtained data for October 9, 1991. However, he testified that the data would be of no help in ascertaining if there was a noise violation at the Diesing or Curtis properties. (Tr. at 1058.)

Although the noise in the Coventry subdivision is not limited to the mining by MSC, complainant Curtis and witnesses Bender, Bessler, and Tracy testified that they are not bothered by the other noises. Subdivision residents consistently stated that their concern with noise began when mining started. They did not consider the sounds associated with the local roads, airport or other industries to be consistently bothersome. (Tr. at 70-72, 154, 253-255, 398, 531.) Mrs. Bender testified that she can hear MSC over the other neighborhood noise such as the airport and the nearby roads. (Tr. at 139.) Additionally, Mr. Zak testified that MSC was the predominant noise source in the Coventry subdivision when he was taking readings on October 8, 1991. (Tr. at 211, 213-216.)

Complainants and their witnesses also testified about the dust pollution from the mining. Complainant Curtis testified that the dust has ruined the fabric on her sofa and has "exasperated" her son's allergies. (Tr. at 72-3.) Complainant

Diesing described cleaning her house thoroughly and leaving it closed while she was on vacation only to return to a dust covered home. Other witnesses from the subdivision, Mrs. Bender, Mrs. Olsen, and Mrs. Sanders, also testified that they have problems with the mining dust both inside and outside of their homes. (Tr. at 126, 277-285, 382-395.) One witness, Mr. Swanson, testified that he has had to hire professional cleaners to clean the dust from his home. (Tr. at 111.) Mrs. Tracy testified that when she painted her kitchen, "The next day there were brown streaks all the way through which we had to redo." (Tr. at 529.)

The extent of the dust problems was illustrated by Mrs. Bender who said:

I have a screen house on my patio, and I have to take a hose with a cleaner on it at least every other day, because you can't even see through the screen. The dirt just clogs right in there, plus the dirt in my home.

(Tr. at 141.)

Mr. Brasuell, MSC's plant superintendent of yard 46 in Algonquin, Illinois, testified that MSC has attempted to mitigate the noise arising from its mining operations. They have done this through self-imposed noise abatement techniques. Some of the techniques which have been employed are: 6:00 A.M.- 12:00 midnight working hours Monday-Saturday, not mining on Sunday, adding new mufflers to some equipment, and installing smart alarms on some trucks. (Tr. at 825.) Mr. Brasuell testified that MSC is looking into ways to solve the problems created by the lights which are used after dark on the Cohn parcel. (Tr. at 824.) The record does not, however, reflect any attempt by the respondent to mitigate the air pollution caused by the mining other than trying to get the City to plant the berm.

Mr. Brasuell indicated that it was his belief that the corrective action undertaken by MSC has reduced the noise emissions by confining them to the hours of 6:00 A.M. until midnight. Mr. Brasuell also testified that the new heavier mufflers reduced the noise produced by the machines on which they have been installed. (Tr. at 800, 810, 835.)

Complainants Diesing and Curtis and witnesses Swanson, Zak, Olsen, and Sanders all were of the opinion that a higher or more planted berm would not solve the problems associated with the mining operation. (Tr. at 82, 123, 289-90, 397, 645.) Mr. Zak said that planted berms will screen an area and make it pleasing to the eye, "but instrumentation would indicate there was virtually no change in noise coming from the berm area if it was planted with trees." (Tr. at 246.) He also indicated it would take a significant depth of vegetation in order to provide a

significant noise reduction. (Tr. at 246.)

APPLICABLE REGULATIONS FOR NUISANCE NOISE

Title VI of the Act establishes procedures and standards for noise control. Section 23 of Title VI sets forth the legislature's purpose of preventing noise that causes a public nuisance. Section 24 of Title VI prohibits the emission beyond one's property of noise that unreasonably interferes with another person's enjoyment of life or lawful activities. The Board's authority to adopt noise regulations is found in Section 25.

Section 23 and 24 of Title VI provide as follows:

Section 23

The General Assembly finds that excessive noise endangers physical and emotional health and well-being, interferes with legitimate business and recreational activities, increases construction costs, depresses property values, offends the senses, creates public nuisances, and in other respects reduces the quality of our environment.

It is the purpose of this Title to prevent noise which creates a public nuisance.

Section 24

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.

The Board has implemented these sections of the Act in two ways. First, the Board has adopted specific numerical limitations on the characteristics of sound that may be transmitted from source to receiver. The second method of implementing the noise provisions of the Act are found in 35 Ill. Adm. Code 900.101 and 900.102.

Section 900.101 Definitions

Noise pollution: the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity.

Section 900.102 Prohibition of Noise
Pollution

No person shall cause or allow the emission of sound beyond the boundaries of his property, as property is defined in Section 25 of the Illinois Environmental Protection Act, so as to cause noise pollution in Illinois, or so as to violate any provision of this Chapter.

In effect, these two sections adopt a regulatory public nuisance provision for noise control using the statutory phrase "unreasonable interference with the enjoyment of life or with any lawful business or activity" as the standard.³

The Board finds that the testimony is sufficient to establish that the noise and dust from MSC caused interference with life in the Subdivision. The Board now moves to an analysis of whether the interference was unreasonable under Section 33(c).

UNREASONABLE INTERFERENCE

The Illinois Supreme Court has directed that the Board must consider the facts of the case in light of the factors outlined by 33(c) of the Act in determining whether unreasonable interference has occurred under the Act and Board rules. Wells Manufacturing Co. v. PCB, 73 Ill. 2d 226, 232-33, 383 N.E.2d 148, 150-51 (1978) ("nuisance" air pollution; first four factors only); see Ferndale Heights Utilities v. PCB and IEPA, 44 Ill. App. 3d at 967-68, 358 N.E.2d at 1228. Those factors are as follows:

³ Noise enforcement cases previously decided by the Board include: Kaji v. R. Olson Mfg. Co., Inc. (1981) PCB 80-46, aff'd, (1982), 109 Ill. App. 3d 1168, 441 N.E.2d 188; Citizens of Burbank v. Clairmont Transfer Co. (1986), PCB 84-125; John W. Eirlich v. John Smith (1987), PCB 85-4; Thomas & Lisa Annino v. Browning-Ferris Industries (1988) PCB 97-139; Anthony Kochanski v. Hinsdale Golf Club (1989), PCB 88-16, rev'd, (1990), 197 Ill. App. 3d 634, 555 N.E.2d 31; William Brainerd v. Donna Hagen et al. (1989), PCB 88-171; Brian J. Peter v. Geneva Meat and Fish Market (1990), PCB 89-151; Will County Environmental Network v. Gallagher Asphalt (1990), PCB 89-64; Kvatsak v. St. Michael's Lutheran Church (1990), PCB 89-182; Zivoli v. Prospect Dive and Sport Shop (1991), PCB 89-205; Village of Matteson v. World Music Theatre (1991 and 1993), PCB 90-146; Christianson v. American Milling (1991), PCB 90-59; Zarlenga v Bloomingdale Partners (1991 and 1992), PCB 89-169.

- (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 . . . resulting from such pollution source; and
- (v) any subsequent compliance.

415 ILCS 5/33(c) (1992).

These factors guide the Board in reaching a decision on whether or not noise emissions rise to the level of noise pollution, which, by definition, unreasonably interfere with the enjoyment of life, and which is proscribed by the Act and regulations. The Illinois courts have held that the reasonableness of the interference with life and property must be determined by the Board by reference to these statutory criteria. Wells Manufacturing Company v. Pollution Control Board (1978), 73 Ill.2d 225, 383 N.E. 2d 148; Mystic Tape, Div. of Borden, Inc. v. Pollution Control Board (1975), 60 Ill.2d 330, 328 N.E.2d 5; Incinerator, Inc. v. Pollution Control Board (1974), 59 Ill.2d 290, 319 N.E. 2d 794; City of Monmouth v. Pollution Control Board (1974), 57 Ill.2d 482, 313 N.E.2d 161. However, complainants are not required to introduce evidence on each of these points. Processing & Books v. Pollution Control Board (1976), 64 Ill.2d 68, 351 N.E.2d 865.

The Board now turns to consideration of each of these mandatory factors in determining whether the interference suffered is unreasonable.

CHARACTER AND DEGREE OF INJURY

In assessing the character and degree of the injury or interference caused by the noise emissions from MSC the Board looks to whether the noise substantially and frequently interferes with the use and enjoyment of life and property, beyond minor trifling annoyance or discomfort. (Kvatsak, PCB 89-182 at 9.)

The testimony demonstrates that people in the subdivision were severely impacted by the noise for an extended period of time. Their sleep, conversations, study habits, and daily routines were disrupted. Their children were similarly disturbed by the noise. The record clearly establishes that the complainants enjoyment of their homes and yards was affected by the noise.

SOCIAL OR ECONOMIC VALUE OF THE SOURCE

The record establishes that MSC is a viable business concern. In fact, one of the largest industries in McHenry County is the sand and gravel industry. (Tr. at 726.) MSC employs thirty-three people as a result of mining the Cohn parcel. (MSC Brief at 15.) Additionally, MSC hires as many as 120 different truck drivers on any one day. (MSC Brief at 15.)

SUITABILITY OR UNSUITABILITY OF THE SOURCE

The subdivision is in a residential area of Crystal Lake. Nearby is another gravel pit also in Crystal Lake. MSC is in Lake in the Hills next to an airport in an area zoned M-1 (Manufacturing) with a special use permit for the excavation of sand and gravel. The Cohn property was purchased in 1956 for the explicit purpose of mining. MSC has a mining permit from the Illinois Department of Mines and Minerals. (Tr. at 708-709.) Until 1990 the property was generally in farm use. Mrs. Bender testified that she has lived in the Subdivision for 22 years. (Tr. at 137.) Several complainants' witnesses testified they were unaware that MSC owned the Cohen parcel. One was lead to believe the land would be a park, another was told by a real estate agent the land would remain a farm. (Tr. at 86, 393 and 633.)

TECHNICAL PRACTICABILITY AND ECONOMIC REASONABLENESS OF CONTROL

The record shows that the cost of installation of noise reduction equipment, and the feasibility of installation varies depending upon the type of machinery it is being added to. (Tr. at 796-811, and 823.) Therefore, the Board finds that although the exact costs are uncertain, it is technically practical to reduce noise.

SUBSEQUENT COMPLIANCE

The record contains disputed evidence regarding this factor. The first issue of subsequent compliance in dispute is whether MSC mines outside of the hours of 6:00 A.M. and midnight. Complainants and their witnesses testified that at times since August 1991, that they have heard mining after midnight. MSC testified that they no longer mined after midnight and in support of this testimony, several Lake in the Hills police officers were

called to testify.

The next issue is the actual affect of the new equipment installed by MSC on the noise. Mr. Brausuell, a Plant Supervisor for MSC, testified that MSC has installed new mufflers on some equipment, smart alarms to control backup beeping, and is looking into ways to alleviate the problems caused by their lights. (Tr. at 798, 800, 802.) In addition, Brausuell testified that MSC installed rock shelves in the transfer points at the Cohn property so that the sand and gravel falling from one conveyor to the next will hit more sand and gravel instead of metal. (Tr. at 810.) He also testified that MSC hung rubber belting material on the west side of the property to isolate the sound of the transfer points to that area. (Tr. at 810.) The effectiveness and safety of various options for reducing noise from operating equipment was discussed but no clearly workable plan emerged.

However, when Mr. Garman testified about the noise measurements he had taken, he stated that in light of the measurements, he had reached the conclusion that the high performance muffler MSC had installed was "not having the affect" that he had expected. (Tr. at 1028.)

Finally, in its motion to dismiss, MSC stated that it has completed all mining in the area north of the Lake in the Hills Airport including the Cohen property and that it does not plan any further mining in the area. (Mot. at 2.) MSC also states that it plans to conduct reclamation activities in the area in the spring of 1993. (Mot. at 2.)

The complainants in their response to MSC's motion argued that their complaint is not limited in scope to the area to the north of the airport. (Resp. at 1.) The complainants state that their complaint includes Tracts "A", "B", and "C". (Resp. at 1.) Complainants argued in their response that the continued mining in tract "B" which is south of the airport, continues to "compromise the lifestyles and quiet" of the Subdivision residents. (Resp. at 2.) In addition, in their response, complainants expressed concern over what will constitute reclamation activity and what noise will be associated with that activity. (Resp. at 2.)

CONCLUSION AS TO UNREASONABLE INTERFERENCE

After consideration of the facts and circumstances of record, and in light of the Section 33(c) factors, the Board finds that the noise emissions from MSC's mining activity did constitute an unreasonable interference with complainants' enjoyment of life, property, and pursuit of lawful business or activity. The Board finds that MSC violated Section 24 of the Act and 35 Ill. Adm. Code 900.102.

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SECTION 901.102 NUMERICAL NOISE VIOLATION DISCUSSION

Section 901.102(a) provides that no person shall cause or allow the emission of sound during daytime hours from property located on any Class A, B or C land to receiving Class A land in excess of certain enumerated allowable octave band sound pressure levels. The regulations adopt a standard land use coding manual (SLUCM). (35 Ill. Adm. Code Subtitle H Appendix B.) It is the use class of the property, not the zoning class, which is controlling under Section 901.102(a). Mr. Zak testified that the mining operations of MSC constituted Class C land and that the Subdivision constituted Class A land. (Tr. at 244.)

In order to show compliance with, or establish a violation of the Board's sound emission standards for property-line-noise-sources at 35 Ill. Adm. Code 901.102, the sound emissions from the source must be measured in accordance with the Board regulations at 35 Ill. Adm. Code 900 and 901. These regulations prescribe procedures for the measurement of sound pressure levels, and specifications for the instrumentation used to measure sound levels. If the sound measurement data presented to the Board are obtained by methods which do not meet the applicable standards, then the validity of such data becomes questionable.

In the present case, the Board finds that the noise measurement data presented by Mr. Zak is valid sound data. The instrumentation and the procedures used to measure the sound levels are in accordance with the Board regulations at 35 Ill. Adm. Code 900 and 901. First, the sound level meter used in the study, Larson-Davis 3100 real time analyzer (RTA), complies with the standards prescribed at 35 Ill. Adm. Code 900.103(b). (Tr. at 167.) The Board notes that the RTA is a Type I precision device capable of measuring the full spectrum of sound frequencies specified in the Board regulations simultaneously and present the data in terms of L_{eq} averaging as defined at 35 Ill. Adm. Code 900.101.

Second, the sound measurement data included in Mr. Zak's report indicate that the sound levels have been recorded in accordance with the 1-hour L_{eq} requirement of 35 Ill. Adm. Code 900, i.e., the sound levels have been measured at different octave band center frequencies on the basis of L_{eq} averaging over a period of one hour. (Tr. at 233-234.)

Regarding the ambient level, the Board notes that Mr. Zak used the data measured on September 26, 1991, during mining operations for comparing with the raw noise data measured on October 8, 1991, to determine if ambient correction was necessary. (Tr. at 187-188.) In this regard, the Board believes that ideally ambient should be measured within an hour before or

after the measurement of the property-line-noise source emissions. However, if such measurement is not possible, representative ambient data measured on a different date may be used to correct the raw sound levels⁴. The noise survey data indicate that ambient correction is not necessary due to the high levels of the source sound compared to the ambient levels⁵. (Tr. at 239-240.)

Finally, the Board notes that Mr. Zak's report appears to meet all the requirements of 35 Ill. Adm. Code 9512, and includes all the necessary information that is needed to evaluate the sound level data to make a determination of compliance or non-compliance. The information in the report includes the atmospheric conditions, octave band survey of the sound data in written and graphical forms, a map and pictures showing the location of the sound source and the measurement point, and a printout of the raw sound level data including calibration data from the memory register of the RTA.

Regarding the sound measurement data presented by Mr. Garman on behalf of MSC, the Board notes that information presented in the noise report, and the hearing testimony indicate that the procedures used to measure the sound levels are not in accordance with the Board regulations at 35 Ill. Adm. Code 900.103(b). Therefore, the Board cannot consider the sound level data presented by Garman to make a determination of compliance or non-compliance.

The following compares the sound levels, measured in dB, allowed by Section 901.102(a) and those emitted from MSC as measured by Mr. Zak on October 8, 1992.
Regulatory Limits

Octave Band Center Frequency (Hertz)	Class C Land to Class A	Sound Emitted by Mining Operations
31.5	75	75
63	74	70
125	69	64
250	64	60
500	58	61
1000	52	60
2000	47	55
4000	43	51
8000	40	45

⁴See Village of Matteson v. World Music theater (February 25, 1993), __PCB__, PCB 90-146.

⁵Ambient correction is not necessary when the difference between the raw sound levels and the ambient sound levels is equal to or greater than 11.

Based upon the sound emissions data presented by Mr. Zak, the Board finds that complainants have established that emissions from MSC violated Section 901.102(a).

The Board notes that although complainants allege violations of the nighttime limits at Section 901.102(b), no nighttime noise measurements were entered into evidence. The Board notes, that Mr. Zak did project nighttime noise violations based upon his daytime readings. However, these projections are not proof of any such violation by the respondent. Thus, the Board finds that there is insufficient proof in the record to find a nighttime noise violation under 901.102(b).

AIR POLLUTION DISCUSSION

Complainants have also brought an air pollution action under Section 9 of the Act. Section 8 of the Act sets forth the legislature's purpose of preventing air pollution that causes a public nuisance the relevant part states:

... It is the purpose of this Title to restore, maintain, and enhance the purity of the air of this State in order to protect health, welfare, property, and the quality of life and to assure that no air contaminants are discharged into the atmosphere without being given the degree of treatment or control necessary to prevent pollution.

(415 ILCS 5/8 (1992).)

Accordingly, Section 9 defines acts prohibited under the air pollution title. The relevant portion states,

[n]o person shall; 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..."

(415 ILCS 5/8 (1992).)

The Act's definition of air pollution is found in Section 3.02, which states:

'AIR POLLUTION' is 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.

(415 ILCS 5/8 (1992).)

The Board is also required in air enforcement actions to consider the factors set out in 33(c) of the Act in order to determine whether or not MSC's air emissions are reasonable. Wells Manufacturing Co. v. PCB, 73 Ill. 2d 226, 232-33, 383 N.E.2d 148, 150-51 (1978) ("nuisance" air pollution; first four factors only).

CHARACTER AND DEGREE OF INJURY

The record is replete with uncontroverted testimony concerning the dust pollution caused by MSC's mining activity. Complainants testified as to ruined paint, excessive dust on furniture, inability to leave windows open, dust on homes and yards, and added expense to clean their homes.

SOCIAL OR ECONOMIC VALUE OF THE SOURCE AND SUITABILITY OR UNSUITABILITY OF THE SOURCE

The Board notes that the analysis of the social or economic value of the source and the suitability or unsuitability of the source is the same as was discussed in the nuisance noise section of this opinion.

TECHNICAL PRACTICABILITY AND ECONOMIC REASONABLENESS OF CONTROL

Respondents' testimony about reducing the dust from MSC's operations centered on planting the berm and additional trees or vegetation. The agreement between the City and the Village specifically addresses the berm planting requirements. There was no testimony regarding what action MSC could take to lower the dust levels.

SUBSEQUENT COMPLIANCE

There is no evidence in the record regarding MSC's subsequent compliance with Section 9. The only evidence regarding possible compliance came from the City. City Manager Misurelli testified that the City let out bids and that the contract to landscape the berm was awarded on September 17, 1991. (Tr. at 562.) As of January 28, 1992, work on the berm had not been completed. However, planting and seeding of the berm was expected to be done in the spring of 1992. (Tr. at 578.) It is quite clear from the record that the berm contributed to the dust problem. It was planted far too late for vegetation to have a positive impact on dust control. Mrs. Curtis' preferring that the plantings had been done ten years prior to mining (Tr. at 83) is on point.

CONCLUSION AS TO UNREASONABLE INTERFERENCE

The Board finds that the evidence is sufficient to show that the mining activity of MSC causes dust to be discharged into the

air in such a manner as to cause or tend to cause air pollution in Illinois. Therefore, the Board finds that MSC caused dust to be discharged into the air in violation of section 9(a) of the Act.

CROSS-COMPLAINT DISCUSSION

MSC in its cross-complaint alleges that the City has failed to honor a settlement agreement between itself the City and the Village by failing to plant the berm located between the Subdivision and MSC's property. In addition, MSC alleges that a planted berm would deflect noise and dust from the Subdivision. In addition, MSC asks the Board to direct the City to immediately plant the berm if it is found that MSC violated the Act or the Code.

The record reflects that the City has contracted for the seeding of the Berm and that should be completed sometime in the near future. (Tr. at 594.)

The issues presented in the cross-complaint are not properly before the Board. The Board finds inadequate basis to compel further conduct by the parties or to adjudicate contractual obligations, via an order of this Board. In so saying, the Board is not suggesting that the agreement is not binding or that the parties are not free to pursue other devices or forums outside of the Board order. However, because the Board finds that cross-complaint is improperly before it and that the Board lacks jurisdiction to compel the City to plant the berm.

REMEDY

Having found MSC in violation, the Board notes that on November 20, 1992, MSC filed a motion to dismiss which was denied by Board order on December 17, 1992. MSC in its motion stated that the Board should grant its motion to dismiss because this proceeding had been rendered moot. In support of its assertion, MSC alleged that it had completed all of its mining operations on the land north of the Lake in the Hills airport including the Cohen property which is at issue in this case. (See, Curtis and Diesing v. Material Service Corporation et. al. (December 17, 1992) ___ PCB ___, PCB 91-30 at 1.) Further, MSC stated that it did not plan any additional extraction in the area. (Id.) However, MSC did state that it would be performing reclamation activities in the area. (Id.)

Because of MSC's past violations, and in light of the fact that the reclamation activity will be occurring in the area immediately south of the Subdivision, the Board will order MSC to cease and desist from causing any violations of the Act or the Board's regulations.

The record does not contain a unified plan for controlling dust and noise that is workable as well as economically viable. The Board notes that it cannot determine on the basis of the facts before it which of the noise and dust reduction strategies would produce the most effective compliance alternative for MSC. Accordingly, the Board will direct MSC to take what it views as the most effective steps, consistent with any safety considerations, during future operations with the only provision that the choice effectuate compliance.

The Board notes that the complainants do not ask for a monetary penalty. The Board will not today, on its own motion, levy a monetary penalty against MSC, but notes that pursuant to Section 42 of the Act, the Board is empowered to levy a civil penalty. Should future violations be found concerning the site, penalties may be imposed.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

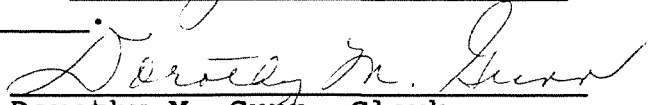
ORDER

1. The Board finds that Material Service Corporation has violated Sections 9(a) and 24 of the Illinois Environmental Protection Act, 415 ILCS 5/9(a)m 5.24 (1992), and 35 Ill. Adm. Code 900.102 and 901.102(a).
2. Material Service Corporation is hereby ordered to take necessary steps to comply with Sections 9(a) and 24 of the Act and 35 Ill Adm. Code 900.102 and 901.102(a) at all times, and to cease and desist from further violations of the Act and Board regulations.

IT IS SO ORDERED

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1992).) provides for appeal of final orders of the Board within 35 days. The rules of the Supreme Court of Illinois establish filing requirements. (But see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration; Castenada v. Illinois Human Rights Commission (1989), 132 Ill. 2d 304, 547 N.E.2d 437, and Strube v. Illinois Pollution Control Board, No. 3-92-0468, slip op. at 4-5 (3d Dist. March 15, 1993).)

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 8th day of April, 1993, by a vote of 6-0


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board