

ILLINOIS POLLUTION CONTROL BOARD  
December 20, 1990

THE CECO CORPORATION, )  
 )  
 ) Petitioner, )  
 )  
 ) v. ) PCB 86-180  
 ) (Permit Appeal)  
 )  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 ) Respondent. )

CLIFTON LAKE AND NANETTE EVERSON APPEARED ON BEHALF OF THE PETITIONER.

PAUL JAGIELLO APPEARED ON BEHALF OF THE RESPONDENT.

OPINION AND ORDER OF THE BOARD (J. Theodore Meyer):

This matter is before the Board on a petition filed October 15, 1986, by Ceco Corporation (Ceco) for review of a Modified Closure Plan promulgated by the Illinois Environmental Protection Agency (Agency) on September 11, 1986. Ceco specifically requests review of conditions 1, 2 (d-e), 3, 11, 13, 15, 16, 18, and 20, which were set forth in the modified closure plan. These conditions require Ceco to close the entire 25 acre site pursuant to 35 Ill. Adm. Code 725.358 (b) or to demonstrate to the Agency that all electric arc furnace dust (K061) has been removed from the portions of the site which are not closed. Specifically, the conditions require additional testing and additional sampling of the site to locate electric arc furnace dust and for groundwater monitoring. A public hearing was held on May 25, 1989, in Bolingbrook, Illinois. Both parties have submitted briefs.

BACKGROUND

Ceco owned and operated a steel production facility in Lemont, Illinois, prior to February 3, 1983. On that date, Ceco sold the steel mill facility to Thomas Steel Company; however, the sales agreement provided that Ceco would retain title to the parcel of real estate on which electric arc furnace dust was stored. (Stip. p. 2)<sup>1</sup>. Production operations at the facility involved the melting of scrap steel in electric arc furnaces and

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<sup>1</sup>. The Stipulation of Facts is cited as (Stip. p. \_\_\_\_\_); the transcript is cited as (Tr. p. \_\_\_\_\_). Ceco's brief is cited as (Pet. Br. p. \_\_\_\_\_) and the Agency's brief is cited as (Ag. Br. p. \_\_\_\_\_). The Petition is cited as (Pet. p. \_\_\_\_\_).

the fabrication of billet and other steel forms and shapes including concrete reinforcing bar. (Stip. p. 1). As a consequence of its operation of electric arc furnaces, Ceco was required to install and operate air pollution control equipment. The air pollution control equipment consisted of a baghouse collector system which removed entrained dust from the furnace exhaust. The collected dust was wetted to facilitate handling and deposited in waste piles on a 25 acre parcel of real estate owned by Ceco adjacent to the steel mill. (Stip. p. 2). The greatest portion of the wetted dust was deposited for storage in a single bermed pit; however, some was deposited on other areas of the site and was subsequently covered by other materials, principally slag. (Pet. Br. p. 3).

Electric arc furnace dust is a listed hazardous waste pursuant to 40 CFR 261.32. In 1980, Ceco applied for and received interim status for a hazardous waste storage site under the Resource Conservation and Recovery Act (RCRA) (40 U.S.C. 3001 et seq.) and the rules implementing RCRA. Ceco did not dispose of KO61 at the site after November 19, 1980. (Stip. p. 2).

Because Ceco did not wish to maintain a RCRA regulated hazardous waste storage facility it began removing KO61 from the site for disposal at a licensed hazardous waste disposal site. During 1981 and 1982, Ceco removed 10,000 cubic yards of electric arc furnace dust. (Stip. p. 3). Ceco also retained NUS Corporation (NUS) as an environmental consultant to develop a closure plan for the site. Based on records and information available, NUS estimated that fifteen percent of the dust stored at the site remained in 1983. (Pet. Br. p. 4)

On January 31, 1985, Ceco submitted to the Agency its closure plan for the site. The closure plan described the methodology by which the remaining deposits of electric arc furnace dust would be identified, excavated and disposed of at a licensed hazardous waste facility. (Stip. p. 3). The plan included sub-surface investigation to determine location or existence of dust as well as a plan for removal. Because of the manner in which the dust was deposited, excavation with earth moving machinery caused a significant volume of non-hazardous waste to be admixed with the dust. (Pet. p. 3). Ceco set forth in its plan a system to separate non-hazardous waste from the hazardous waste. On March 29, 1985, the Agency sent a letter to Ceco disapproving the closure plan for certain deficiencies and listing several questions concerning those deficiencies. Ceco responded to those comments on April 30, 1985.

On June 13, 1985, the Agency approved the closure plan submitted by Ceco on January 31, 1985, as clarified by the responses to the March 29, 1985, Agency letter. On September 18, 1985, Agency representatives visited the site and observed the excavation and separation processes being carried out. Following the visit on September 27, 1985, the Agency sent Ceco a Compliance Inquiry Letter. (Pet. p. 4). The Compliance Inquiry

Letter expressed concerns over the color of the electric arc furnace dust at the site, the actual excavation procedures and the separation process. (Pet. Ex. 5)<sup>2</sup>. A meeting between Ceco and the Agency followed in November; the principal subject discussed was the application of the hazardous waste mixture rule (35 Ill. Adm. Code 721.103) to the material excavated. The Agency stated that its interpretation of the hazardous waste mixture rule requires the inclusion of all material from the separation process unless Ceco could demonstrate that "absolutely no trace" of dust would be contained in admixed material. (Pet. p. 4).

Due to the increased cost of disposal of all the 32,000 cubic yards of admixed material and the physical impossibility of obtaining the degree of separation which the Agency required, Ceco notified the Agency that it would amend its closure plan. On March 19, 1986, Ceco submitted an amendment to its closure plan to provide for site disposal of the admixed material.

The March 19, 1986, amendment to the closure plan provided for a consolidation of the then excavated admixed waste within a two acre portion of the former regulated unit which would then be closed pursuant to 35 Ill. Adm. Code 725.358(b). On June 12, 1986, the Agency disapproved the amended closure plan of March 19, 1986. The Agency's disapproval stated that the amended closure plan contained over 18 deficiencies including: 1) "it has not yet been demonstrated to this Agency that all of the waste residues and contaminated soils have been removed"; 2) drawings fail to indicate the outline of the quarry; 3) a description of how the stockpile areas will be cleaned up must be included and 4) a method to identify areas contaminated by wind blown and drifting dust must be included. (Pet. Ex 8)

On July 15, 1986, Ceco submitted a modified closure plan. On September 11, 1986, the Agency notified Ceco that the modified closure plan would not be approved without conditions imposed by the Agency. The letter set forth conditions numbered 1 - 20.

It is from the September 11, 1986, modified closure plan that Ceco appeals. Ceco specifically accepted the conditions in the September 11, 1986, letter which are numbered 2 (a)-(c), 2 (f)-(j), 4, 5, 6, 7, 8, 9, 10, 12, 14, 17, and 19. Ceco also accepted condition number 11 as it relates to the requirement of a final cover of four feet over the closed regulated unit. The specific conditions in the September 11, 1986, closure plan which Ceco objects to are: 1, 2 (d-e), 3, 11, 13, 15 (i-iii), 16, 18, and 20. Ceco did not specifically argue in its briefs the reasons for not accepting conditions 13, 18 and 20, or the

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2. Ceco's Exhibits are cited as (Pet. Ex. \_\_\_\_ p. \_\_\_\_). Agency Exhibits are cited as (Ag. Ex. \_\_\_\_ p. \_\_\_\_).

remaining conditions in 11 in its briefs or its testimony. In fact, Ceco's post-hearing brief states that "Ceco contests only six of the twenty-two conditions imposed by the Agency: conditions 1, 2 (d-e), 3, 13, 15 (i-iii) and 16." (Pet. Br. p. 1). Certain of these conditions are, however, intertwined with other disputed conditions and will be more fully discussed as they relate to those conditions.

### ISSUES

Ceco and the Agency in their briefs set forth six issues for the Board to decide. These issues will be discussed fully below along with the corresponding conditions from the September 11, 1986, closure plan which relate to those issues.

As a preliminary matter, it should be noted that the Board has long held that, in permit appeals the burden of proof rests with the petitioner. The petitioner bears the burden of proving that the closure plan, absent the contested conditions imposed by the Agency, would not violate the Environmental Protection Act (Act) (Ill. Rev. Stat. 1989, Ch. 111 $\frac{1}{2}$ , par. 1001 et.seq.) or the Board's regulations.

This standard of review was enunciated in Browning-Ferris Industries of Illinois, Inc. v. Pollution Control Board, 179 Ill. App. 3d 598, 534 N.E.2d 616, (Second District 1989) and reiterated in John Sexton Contractors Company v. Illinois Environmental Protection Agency, PCB 88-139, February 23, 1989 (Sexton). (Ag. Br. p. 5). In Sexton the Board held:

that the sole question before the Board is whether the applicant proves that the application, as submitted to the Agency, demonstrated that no violations of the Environmental Protection Act would have occurred if the requested permit had been issued. (Ag. Br. p. 5).

Therefore, Ceco must establish to the Board that the closure plan Ceco submitted to the Agency would not violate the Act or the Board's rules if issued without the contested conditions.

### ISSUE 1

The first issue to be decided is a procedural objection by the Agency. The Agency claims that the hearing officer erroneously allowed testimony and admitted evidence that was developed subsequent to the date of the closure permit which was appealed by Ceco. The Agency requests that the testimony and/or evidence be stricken. This testimony appears on pages 170-173 of the hearing transcript. The testimony began with a question by

Ceco's counsel regarding a pre-enforcement conference in which condition 15 was discussed. Specifically, Ceco asked if the Agency's witness, Mr. Charles Zeal, recalled if Ceco was present at the meeting which dealt with the disposition of non-hazardous waste at the site. Mr. Zeal testified that he remembered the conference and that Ceco was present. The Agency objected to this testimony as being beyond the scope of the hearing. The hearing officer allowed the question to be answered after Ceco's counsel indicated that he would tie the question in. Ceco did not however further tie in the information. The Agency then stated for the record a standing objection to questions concerning anything that happened subsequent to the Agency's issuing the permit.

In its brief the Agency asks the Board to strike the testimony on pages 170-173 of the transcript. The Agency points to prior Board decisions such as Sexton Filling and Grading v. Illinois Environmental Protection Agency, (PCB 88-116, June 22, 1989) (Sexton) in which the Board held that it "must restrict its review to information in the Agency's possession on that [the date of the Agency's permit decision] date" (Ag. Br. p. 4). In addition the Agency cites case law in which the court has held that "the decision of the Board shall be based exclusively on the record before the Agency including the record of the hearing, if any...". Illinois Environmental Protection Agency v. Pollution Control Board, 118 Ill. App. 3d 772, 455 N.E.2d 188 (1st Dist. 1983). Ceco does not address this issue either at hearing or in its briefs. The Board finds that the Agency is correct in its interpretation of the existing case law and the testimony and evidence is stricken.

## ISSUE 2

The first substantive issue to be considered is whether or not Ceco's closure and post-closure submittals demonstrated that Ceco's proposed methodology for locating and excavating dust was sufficient to remove all dust and therefore demonstrates that Ceco need not close the entire 25 acre site. The specific conditions from the September 11, 1986 closure plan that this issue relates to are 1, 15, 11 and 16.

Condition 1 of the September 11, 1986 letter states that:

It has still not yet been demonstrated to this Agency that all of the waste residues and contaminated subsoils have been removed from the portion of the hazardous waste management unit which Ceco Corporation wishes to include in the area that will receive RCRA closure and post-closure care. This being the case, RCRA closure and post-closure care in accordance with 35 Ill. Adm. Code 725.358(b) must be

provided for the entire twenty-five (25) acre waste pile (SO3) unit. (Pet. Ex. p. 1.)

Condition 11 requires that Ceco submit revised drawings depicting the closure of the entire 25 acre site and Condition 15 states the "the closure plan as described and modified above shall apply for the subject waste pile (SO3) unit unless Ceco Corporation can demonstrate and document to this Agency's satisfaction within 90 days from the date of this letter that all deposits of KO61 electric arc furnace dust and contaminated material have been removed." (Pet. Ex. 11 p. 5.) Conditions 15 (b) (i-iii) specifically require 24 additional boring and sampling points throughout the 25 acre site to be analyzed by the Agency to determine if any portions of the 25 acre site can be eliminated from RCRA closure. (Id.) Thus, the Agency is requiring RCRA closure of the entire site or demonstration that all KO61 has been removed.

According to the January 31, 1985 closure plan, Ceco's methodology for the removal of KO61 included a drilling and sampling program. This program consisted of placing a series of "17 borings in the fill" to the top of the bedrock and excavating an exploratory trench west of the former storage area. Additionally, nine test pits surrounding the trench were dug. (Pet. Ex. 1 p. 2-2). Ceco described furnace dust in its closure plan stating that: "[p]hysically, the dust exists as a fine particulate." (Id.) Ceco described its excavation process, which would include identification of furnace dust and separation, stating that:

Fill material that is obviously not furnace dust will be removed from the immediate area and stored for eventual replacement after excavation operations are completed. Fill material which is believed to be other than furnace dust, but nonetheless closely exhibits the physical characteristics of furnace dust will be taken to the separation process area for further mechanical separation. (Pet. Ex. 1 p. 4-3).

Other fill materials at the site included large boulder-size slag, wood and finer grained slag; these materials are not as fine as the dust and have a different color. (Pet. Ex. 3 p. 11). Ceco also indicated that at the very early stages of development of the closure plan NUS "gathered information from former employees concerning the probable locations of the smaller furnace dust deposits". (Pet. Br. p.5).

Ceco in its brief indicated that the next step in the methodology was to determine if the electric arc furnace dust had

a chemical "fingerprint". (Pet. Br. p. 6). After conducting EP toxicity analyses on thirty-six samples of material NUS determined that a chemical test could not be developed and determined that it would have to rely on visual identification. (Pet. Br. p. 6). (See Issue 3). In fact, NUS's project manager for Superfund contracts, George Gardner, testified that "as a general matter, the visual classification method is the most widely used method in subsurface investigations for classifying materials present in the subsurface." (Tr. p. 28).

The Agency maintains that Ceco has not demonstrated that all electric arc furnace dust has been removed from the site and that therefore, the site does pose a threat to human health and the environment. (R. Br. p 9). The Agency is primarily concerned with Ceco's visual identification of electric arc furnace dust and the apparent discrepancy in the color of substances identified as electric arc furnace dust. By Ceco's own admission it was not until excavation began that NUS and Ceco discovered that KO61 could be a color other than black. In response to direct examination, Mr. Gardner explained that when excavation began it was noted that there was also a fine-grained brown material which looked like furnace dust coming out of the baghouse. "And at that point in time, it was decided that the color was not the proper criteria to base the excavation on." (emphasis added) (Tr. p. 70). Excavation of furnace dust did not begin until September 7, 1985, three months after the Agency had approved the initial closure plan.

The Agency's concern over identification of KO61 was clear as early as the March 29, 1985 letter from the Agency disapproving the closure plan. That letter included several questions which directly questioned the visual identification of electric arc furnace dust. That letter specifically questioned "what is the criteria for 'obviously not furnace dust'" and "what is the criteria for 'closely exhibits the physical characteristics of furnace dust.'" (Pet. Ex. 2 p. 3). Ceco responded that the criteria was based on the distinctive physical appearance of dust versus the other waste at the fill. Ceco stated that "the dust is black and has a distinctive fine-grained texture" and that other materials which closely exhibit physical characteristics of furnace dust are "very fine grained (silt-sized) material that is black or dark gray in color". (Pet. Ex. 3 p. 11). In addition, Ceco described the physical characteristics and chemical composition of the slag and mill scale at the site.

The fact that the differing color was not discovered until excavation began led the Agency to be concerned that material which exhibited similar characteristics to furnace dust but was not black, was ignored. Charles Zeal, a professional engineer with the Agency, expressed his understanding of Ceco's methodology for locating KO61 as "if there was brown material there, [in the borings] that according to my understanding, would have been ignored and that area would not have been included in the next step of investigation." (Tr. p. 126-127). If such

material were ignored and was in fact KO61, Ceco would not have removed all the electric arc furnace dust from the site.

The methodology for locating the dust was developed precisely because of the fact that neither Ceco nor NUS could be certain of the amount of or location of KO61 remaining on the site. Thus, the Agency's concern over the apparent color discrepancy is especially significant. Ceco calculated the approximate amount of dust left on the site at 12,500 cubic yards, after the removal of 10,000 cubic yards in 1981-1982. Thus, Ceco and NUS were working from approximations in amount and location of dust left at the site. The Agency stated that these facts led to the question "how much non-black KO61 dust was missed, ignored and not excavated by NUS before they realized that the material that was grey or brown may also be KO61 dust." (R. Br. p 16 and 17).

Ceco's response to the Agency's concern focuses on two main factors. The first factor is that the Agency has "improperly focused on the adjective 'black' to describe the furnace dust deposits." (Pet. Br. p. 16.) A subfactor of significance to both the Agency and Ceco is whether or not Ceco informed the Agency of the color discrepancy. The second factor is that color was not the sole or even the determinative criterion in Ceco's methodology for locating and excavating KO61 at the site. In response to these factors, Ceco maintains that "almost a year before the Agency made the determination from which Ceco appeals, Ceco emphatically and unambiguously advised the Agency that color was not a relevant factor in identifying subsurface dust deposits." (Id). In fact, Ceco's January 1985 closure plan described the physical characteristics of KO61, but did not include color in that description.

In response to the second factor, Ceco maintains that "[t]he record shows that color, even at the outset of this six-year-old investigation, was never, by itself, a determinative factor." (Pet. Br. p. 15). Ceco stated in its brief that: "Gardner testified that in making the initial borings to locate the furnace dust boundaries in 1983 and 1984, 'it wasn't strictly the black appearance that we based those boundaries on' (Tr. 215). Rather, texture and the presence of any layered material deposited in lenses, like those created by deposition in a water slurry, controlled . . .". (Pet. Br. p. 15). Mr. Gardner further testified that: "it is my professional opinion that NUS located and removed all subsurface electric arc furnace dust deposits, and also obviously a great deal of non-hazardous material as well." (Tr. p. 31-32).

Ceco's responses are inadequate. Although Ceco did inform the Agency by letter of the color discrepancy, that letter was not sent or received by the Agency until November of 1985. That letter was a response to concerns that the Agency developed after the site visit in September of 1985. Thus, even though Ceco had known of the differing color, Ceco did not inform the Agency



until after the site visit. Further, Ceco did describe KO61 using the adjective "black" in response to direct questions by the Agency concerning identification of KO61 in the March 29, 1985 letter.

The record does indicate that color was not the sole criterion used by Ceco in identifying KO61. Conditions 3 and 16 also speak to the Agency's concern over the methodology used by Ceco and NUS in locating and extracting the electric arc furnace dust. However, Ceco's methodology for locating electric arc furnace dust did rely extensively on visual identification. By Ceco's own admission, "once full-scale excavation revealed that subsurface furnace dust deposits ranged from black to brown and intermediate shades, NUS refined the color criterion to remove all fine-grained densely-packed deposits in the subsurface as if they were furnace dust deposits". (Pet. Br. p. 13) (emphasis added). Clearly, Ceco and NUS did not discover the color discrepancy during the actual site investigation and therefore the Agency's concern seems valid. The Board finds that Ceco has not established that its closure plan, absent these conditions imposed by the Agency, would not violate the Act or the Board's rules.

### ISSUE 3

The third issue to be considered, which relates directly to the issue discussed above, is stated by Ceco as "whether the Agency's requirement that Ceco perform EP toxicity analyses on samples from subsurface borings--and to supply these analyses to the Agency for its evaluation [is] arbitrary and capricious". (Pet. Br. p. 2). This issue relates to conditions 15 and 16. Conditions 15 and 16 would require Ceco to lay out a new 24 point grid across the site and to bore and continuously sample the fill material to the depth of the bedrock at the sampling points. Ceco estimates that the cost of this additional testing would be one hundred thousand dollars (\$100,000). (Pet. Br. p. 17-18).

As previously stated, the identification of dust deposits was done using both borings and trenchings as well as other analyses of the subsurface based on historical information. Ceco in its brief indicated that the next step in the methodology was to determine if the electric arc furnace dust had a chemical "fingerprint". (Pet. Br. p. 6). After conducting EP toxicity analyses on thirty-six samples of material NUS determined that a chemical test could not be developed and recognized that it would have to rely on visual identification. (Pet. Br. p. 6). However in the January 31, 1985 closure plan, Ceco stated that "[f]urnace dust was then visually identified from the samples and confirmed using EPA [sic] Toxicity analyses." (Pet. Ex.3 p.10). It is important to note that the chemical constituents for which electric arc furnace dust is a listed hazardous waste are lead, cadmium, and hexavalent chromium. According to the Agency these constituents are not major constituents of either mill scale or

slag, the remaining materials which were primarily disposed of at the site. (Ag. Br. p.10).

Ceco believes that the data produced under condition 15 would be uninterpretable. Both the Agency expert, Charles Zeal, and the NUS expert, Mr. Gardner, agree that there is no chemical analysis, which taken alone, would identify KO61. (Tr. p. 27 and 163). Therefore, Ceco is concerned that it "could perform all of condition 15, an indeterminate number of samples and analyses, and find that no samples exhibited EP toxicity for any of the three constituents for which KO61 is listed, and still be no closer to demonstrating to the Agency that all furnace dust has been removed." (Pet. Br. p. 19). Ceco further stated that the testimony of Charles Zeal "stands as an Agency admission that conditions 15 and 16 are arbitrary and technically infeasible in their entirety."

Ceco also maintains that the EP toxicity analyses were used "as a tool, no less and no more, to suggest the sub-surface presence of furnace dust." (Pet Reply Br. p. 7). Thus, performance of the EP toxicity analyses would not demonstrate that all electric arc furnace dust has been removed. Therefore, Ceco submits that "the Agency's brief should stand as an admission that EP toxicity analyses would not assist Ceco in meeting its regulatory burden." (Pet. Reply Br. p. 8).

The Agency states in its brief that "[t]o date, Ceco has not produced any documentation that demonstrates that all KO61 dust has been removed from the areas of the site which were to be cleaned closed." (Ag. Br. p. 34). The Agency believes that, until Ceco can demonstrate that all KO61 dust is removed, Ceco cannot demonstrate that its closure plan will not violate the Act and the Board's rules. To that end the Agency points out that:

Electric arc furnace dust is a listed hazardous waste because of three hazardous constituents: Hexavalent chromium, lead and cadmium (Tr. p. 24). This was the testimony of Mr. Gardner, Ceco's witness. Lead, cadmium or hexavalent chromium were not major constituents of the slag (Tr. p. 59). The April 30, 1985 document also stated that mill scale was a common waste at the site and that it was primarily iron oxide, black in color and powdery. (Ag. Br. p. 10-11).

Thus, it is the Agency's position that the EP toxicity analyses of the samples in conjunction with physical examination "would be indicative that the material was KO61 dust." (Ag. Br. p.18).

The Agency also points out that on both the color issue and the issue of EP toxicity analyses, Ceco's testimony at hearing contradicted the information originally provided to the Agency in

Ceco's submittals. The Agency maintains that Ceco had identified KO61 dust as being black but at hearing stated that it could be "from black to gray to dark brown (Tr. p. 29)." (Ag. Br. p. 16). Next the Agency stated that Ceco indicated in its submittals that EP toxicity analyses were used to confirm KO61 dust, but at hearing indicated that there was no chemical analyses which would identify KO61 dust. (Ag. Br. p. 17).

These apparent contradictions lend credence to the Agency's concern as to whether all KO61 dust has been removed. A review of the record clearly indicates that NUS and Ceco relied on both physical characteristics and EP toxicity analyses in determining locations of electric arc furnace dust at the site. The fact that Ceco was not aware of the color differential until after excavation began is a grave concern. In addition, the Agency appears to be asking Ceco to perform additional analyses in the same manner as Ceco maintains it had done initially. These additional analyses, although costly to Ceco, do not appear to be unreasonable given the facts disclosed by the record. Therefore, the Board finds that Ceco has not met its burden of proof on this issue and conditions 15 and 16 must stand.

#### ISSUE 4

The fourth issue in this case is whether or not Ceco has properly accounted for potential windblown and waterborne dispersal of excavated dust. This issue relates to condition 3. Condition 3 would require Ceco to take "surface soil/fill samples" around the perimeter of the entire 25 acre site at 300 feet intervals. Those samples would then be analyzed using EP toxicity analyses. (Pet. Ex. 11 p. 3).

As previously discussed, Ceco's 1985 closure plan called for the excavation of areas which were identified as containing KO61 dust and separation of the dust from other admixed materials. The separation process was to be undertaken by first placing the excavated materials on the surface to dry and then, after the material had dried sufficiently, placing it through a mechanical separation device which would run the materials through a one quarter inch screen. Any materials that ran through the screen would be considered KO61 dust. Over 32,000 cubic yards of material was excavated in an attempt to account for approximately 2,500 cubic yards of KO61 dust.

Due to the application of the hazardous waste mixture rule (35 Ill. Adm. Code 721.103), the Agency required Ceco to demonstrate that "absolutely no trace of electric arc furnace dust remained on the larger-than-one-quarter inch portion of the admixed material." (Pet. Br. p. 21). Because of the expense of disposing of the admixed material off-site, Ceco proposed modifying its closure plan to provide for on-site disposal of the admixed waste.

It is the actual separation process which lead to the Agency's inclusion of condition 3 in the September 11, 1986 closure plan approval. The Agency's concern was that the separation process and the stockpiling would result in contamination of the site because of the potential for the material being separated to be windblown. To alleviate this concern Ceko proposed to remove the top six inches of material from those portions of the site surface that had come into contact with the admixed waste. (Pet. Br. p. 22). Ceko further proposed to remove the top three inches of surface material from a circular area within a 100 feet radius of the separation area. (Pet. Br. p. 25).

The Agency's concern over potential windblown material is a direct result of the site visit made by the Agency on September 18, 1985. Mr. Zeal and Lawrence Eastep visited the site for the Agency and observed the excavation and separation process being carried out. (Stip. p. 5). Material which resembled KO61 dust was also observed on the surface around the separation area. Mr. Zeal testified that the admixed stockpile was not covered and that the piles were exposed to the atmosphere and environment. (Tr. p. 124 and 131). The Agency's brief summarizes Mr. Zeal's testimony stating that:

the separator process was started up while they [Mr. Zeal and Mr. Eastep] were at the site on September 18, 1985 (Tr. p.124). At that time, Mr. Zeal noted a visible amount of KO61 dust being blown off by the wind that day (Tr. p. 125). He observed the blowing or drifting of what was to be KO61 material coming off the conveyor, in other words, a large part would fall to the pile and another portion of it would be drifting away (Tr. p. 125). The area around the separator process was covered with a brownish dust which appeared to be very similar in both color and texture to the sample of KO61 dust that they [Mr. Zeal and Mr. Eastep] were shown by the NUS people that same day (Tr. pp 125-126). (Ag. Br. p.27).

Ceko maintains that its proposal for removal of surface material more than accounts for all windblown material. Ceko points out that the separation only operated for 64 hours. (Pet. Br. p. 20). Ceko further points out that the site is located in a steel mill "backyard" in a heavily industrialized area, and has been used as a repository of by-products of steel production for years. Further, Ceko maintains that a separation process that operated for 64 hours over "four years ago should be a non-issue." (Pet. Reply Br. p. 11).

Ceko's expert also testified that the admixed material was

"primarily large cobbled size and boulder size slag, mixed in with sand size material, all the way down to the very fine portion." (Tr. p. 76). Mr. Gardner further testified that the material was very wet and "and it could not blow off the pile because of those factors." (Tr. p. 77). Mr. Gardner also offered his judgment that Ceco's proposal would be more than sufficient to remove any dust which may have been windblown during separation. (Tr. p. 54).

Ceco argues that the Agency's proposed perimeter sampling program is similar to the proposed sampling program described under issues 1 and 2 above. Therefore, Ceco argues that "even if Ceco were to yield to the Agency's demand and conduct the additional surface sampling, Ceco would be no closer to establishing, definitively, that surface contamination is not an issue at the site." (Pet. Br. p. 24).

The Agency argues that Ceco has not established that the material on the surface was not KO61 dust. The Agency emphasizes that Ceco's expert, Mr. Gardner, testified that the material on the surface "resembled a sample of fresh electric arc furnace dust which NUS's on-site engineer had acquired and produced for the Agency representatives." (Tr. p. 35). Mr. Gardner further testified on cross examination that anything below the surface which had a fine grained texture was assumed to be KO61 dust and yet the brownish fine grained material on the surface of the site was assumed not to be KO61 dust. (Tr. p. 91). The Agency maintains that the testimony of Mr. Gardner is not reasonable. (Ag. Br. p. 28).

Ceco's proposal for the removal of surface material which may have been contaminated "was based on a practical judgment call." (Tr. p. 99). Ceco did not base its proposal on sampling or analyses. Therefore, the Agency believes the proposal was inadequate. (Ag. Br. p. 9).

The position Ceco has taken in identifying KO61 dust below the surface is that if a material exhibited the physical properties of KO61, then it was considered KO61 dust. Ceco can not now claim that mere resemblance to KO61 is not sufficient to identify material as potential KO61 dust. The Agency's inspectors viewed material which exhibited the properties of KO61 dust on the surface. Ceco did not demonstrate that the material was not KO61 dust. Therefore, the Board finds that condition 3 is necessary to insure that the Act and the Board's regulations will not be violated and the condition must stand.

#### ISSUE 5

The fifth issue to be decided in this case is whether or not Ceco's post-closure groundwater monitoring plan is sufficient to meet the requirements of the Board's rules and the Act. This issue relates to conditions 2 (d) and (e). Ceco specifically

objects to conditions 2 (d) and (e) relating to the Agency's choice of groundwater monitoring parameters and analytical methodology included in the proposed post-closure groundwater monitoring plan for the regulated unit and because of the requirement to analyze samples for unfiltered metals.

The interpretation of the Board's rules at 35 Ill. Adm. Code 725:Subpart F is a key factor in examining the arguments concerning conditions 2(d) and 2(e). Condition 2(d) requires Ceco to monitor groundwater for certain parameters listed in Section 725.192(b) of the Board's rules. Ceco and the Agency disagree on the application of that rule. The two primary areas relating to this issue which must be addressed are: 1) whether the Agency has the authority to waive the monitoring of groundwater parameters; and 2) if the Agency does have such authority, whether Ceco demonstrated that it should be granted such a waiver.

In support of Ceco's position, Ceco cites Section 725.190(a) and (c). Ceco maintains that when Sections 725.190(a) and (c) are read in conjunction with the other provisions of Subpart F, it is clear that those two Sections allow for the waiver of parameters from the groundwater monitoring requirements. (Pet. Br. p. 28).

Section 725.190 (a) states:

The owner or operator of a surface impoundment, landfill or land treatment facility which is used to manage hazardous waste must implement a groundwater monitoring program capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility, except as Section 725.101 and paragraph (c) provide otherwise.

Section 725.190 (c) states, in part:

All or part of the groundwater monitoring requirements of this subpart may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste or hazardous waste constituents from the facility via the uppermost aquifer to water supply wells (domestic, industrial or agricultural) or to surface water....(emphasis added.)

The Agency maintains in its brief and testimony that all the parameters set forth in Section 725.192(b) must be included in

the groundwater monitoring. Section 725.192(b) provides that "[t]he owner or operator must determine the concentration or value of the following parameters in groundwater samples in accordance with paragraphs (c) and (d) of this section." (emphasis added). Subsections (1)-(3) of Section 725.192(b) set forth specific parameters including those in Appendix III. The Agency has altered its interpretation of Section 725.192(b) during the course of this case. In fact, the interpretation delineated in the Agency's brief is not the interpretation enumerated in the September 11, 1986 closure plan. The Agency, in condition 2(d) of the September 11, 1986 closure plan required monitoring for the following parameters: Arsenic, Barium, Cadmium, Chromium, Hexavalent Chromium, Lead, Mercury, Selenium, Silver, Chloride, Iron, Manganese, Phenols, Sodium, Sulfate, pH, Specific Conductance, TOC, TOX. (Pet. Ex. 11 p. 2). The parameters set forth by the Agency do not include several parameters included in Section 725. Appendix III. The Agency's expert, Cindy Davis, testified that these parameters were not included because her boss felt that Ceco had made a good case for not monitoring for pesticides. (Tr. p. 189).

The Agency's basis for this change of policy according to testimony by Ms. Davis, is that "[i]t's [Section 725.192(b)] a Board regulation and the Agency doesn't have the authority to change a regulation" (Tr. p. 195). It would appear that the Agency is arguing that all parameters listed in Section 725.192(b) should be included even though the Agency only included particular parameters in the September 11, 1986 closure plan.

Section 725.192(b) clearly states that the "owner or operator must determine the concentration or value" (emphasis added) of the parameters listed in subsections (1) through (3). Therefore, the plain language of the rule clearly indicates that the owner or operator is required to monitor for the parameters set forth in subsection (1) through (3). However, Section 725.192(b) cannot be read without examining the other provisions of Subpart F.

Sections 725.190(a) and (c) must also be examined. The plain language of Sections 725.190(a) and (c) allows for waiver of groundwater monitoring requirements of Subpart F if certain conditions are met. These conditions allow for a waiver if there is a demonstration in writing that there is a low potential for migration of hazardous waste and that such demonstration be kept at the site.

Based on the plain language of 35 Ill. Adm. Code 725:Subpart F, the Board finds that the Agency does have the authority to waive the groundwater monitoring requirement of 35 Ill. Adm. Code: Subpart F. The Board notes that the Agency is correct in that the Agency does not have the authority to change a Board rule. However, in this instance the rule allows the Agency to waive the provisions of another rule.

Having determined that the Agency does have the authority to waive the monitoring requirements, it must next be determined whether Ceko should be granted such a waiver. Section 725.190(c) provides that the owner or operator must demonstrate that there is "low potential for migration of hazardous waste in hazardous waste constituents from the facility". Ms. Davis testified that her boss "thought that Ceko made a good case for not having to analyze for the pesticides". (Tr. p. 189). Therefore, the Agency's September 11, 1986 closure plan specifically excluded certain parameters. Thus, it would appear that the Agency believed that Ceko had demonstrated that there is a "low potential for migration of" hazardous waste constituents and implicitly waived the monitoring requirements for the remaining parameters.

Ceko's proposal, as submitted to the Agency, proposed to monitor for lead, cadmium, hexavalent chromium and turbidity as "drinking water quality standards", as well as chloride, iron and sulfate as "groundwater quality parameters" and for "groundwater contamination indicators", pH, specific conductance and total dissolved solids. (Pet. Br. p. 28). As previously stated the Agency's September 11, 1986 letter required monitoring for Arsenic, Barium, Cadmium, Chromium, Hexavalent Chromium, Lead, Mercury, Selenium, Silver, Chloride, Iron, Manganese, Phenols, Sodium, Sulfate, pH, Specific Conductance, TOC, TOX. (Pet. Ex. 11 p. 2).

Ceko stated in its brief that after considerable study, NUS determined that:

the natural dolomitic limestone bedrock lying beneath the site, ensures that the groundwater will perpetually exhibit a naturally high pH. This fact assures that heavy metals could not be present in solution and so could not move appreciably. (Pet. Br. p. 29).

This conclusion was supported by the testimony of Ceko's expert Mr. Gardner. Mr. Gardner's qualifications include a Master's Degree in Geology from Kent State and engaging in seventeen years of geo-technical and hydrogeological work.

Mr. Gardner testified that:

Based on our groundwater monitoring work, NUS found that the presence of the massive natural deposit of dolomitic limestone beneath the site effectively controls the groundwater pH to the slightly alkaline side and contributes to relatively high biocarbonate ion concentrations. As a consequence, even if the heavy metals contained in the furnace dust were to become soluble by the downward



movement of precipitation through the fill, any heavy metals present in solution would immediately precipitate, forming solid complexes which would not move further with the groundwater. (Tr. p. 25).

Therefore Ceco maintains that its groundwater monitoring proposal is "capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility." (Section 725.190(a)).

The Agency maintains that Ceco's groundwater monitoring proposal is not sufficient to demonstrate that the Act and the Board's regulations would not be violated. The Agency supports its position with testimony from Cindy Davis. Ms. Davis, who has a Bachelor's Degree in geology from Eastern Illinois University, has been with the Agency for four and a half years and she reviews records in groundwater monitoring programs. Ms. Davis had previously reviewed 10 permits for hazardous waste facilities.

Ms. Davis testified that she did not agree with the conclusion reached by NUS and Mr. Gardner because:

KO61 is a fine material that can be transported in the groundwater and that based upon her experience, especially with groundwater results in the dolomite and at the Joliet area, she has seen migration of total metals, suspended farther than a few feet. (Ag. Br. p. 25).

The issue that must be considered is whether or not the Agency's condition is technically justified. The Board notes that the implementation of a groundwater monitoring system in accordance with 35 Ill. Adm. Code 725.Subpart F to determine the facility's impact on groundwater requires the establishment of background of all parameters listed in Section 725.192(b). In the present context, as Ceco has not clearly demonstrated that the site was used as a monofill for disposal of electric arc furnace dust, it is reasonable for the Agency to include for monitoring the parameters listed at Section 725.192, except for the pesticides and herbicides listed at Section 725.192(b)(1) [Endrin, Lindane, Methoxychlor, Toxaphene, 2,4 - D, 2,4,5 - T].

It should be noted that the groundwater monitoring plan is part of an over-all closure plan. The inclusion of parameters listed at Section 725.192(b) in the monitoring plan does not mean that all of the parameters will be monitored during the entire closure plan period. The monitoring requirements which specify the frequency and the parameters to be monitored will be in accordance with the Agency's condition 2(f), which requires Ceco

to conduct sampling, evaluation and reporting in accordance with 35 Ill. Adm. Code 725.192, 725.193, and 725.194 respectively. In particular, the requirements set forth in Section 725.192(c) requires the background concentration of all parameters listed in Section 725.192(b) to be established over a one year period. During the remaining period of the closure plan, only certain groundwater quality parameters as prescribed in 35 Ill. Adm Code 725.192(b)(2) namely, Chloride, Iron, Manganese, Phenols, Sodium, and sulfate and indicators of groundwater contamination (pH, Specific Conductance, TOC, and TOX) are required to be monitored at annual and semi-annual frequency respectively.

Considering that all of the parameters are monitored to establish background, and only the indicator and groundwater quality parameters are required to be monitored routinely at a very low frequency, the monitoring requirements prescribed by the Agency will not impose a undue burden on Ceco. Therefore, the Board upholds the Agency's condition 2(d) with changes to reflect that all parameters in Section 725.192(b) must be monitored, except for the pesticides and herbicides listed at Section 725.192(b)(1).

Next, the Board will review condition 2(e) of the September 11, 1986 letter. Condition 2(e) requires Ceco to analyze groundwater samples on which metal analysis will be conducted "to be analyzed for total metals (unfiltered)." Ceco in its petition objected to condition 2(e); however, Ceco does not specifically address the issue of analysis for total metals (unfiltered) in its brief or testimony.

The Agency argues that because drinking water standards are "based upon total metals . . . it would be inappropriate to compare a dissolved metals concentration to a total drinking water standard." (Ag. Br. p. 24). Therefore, the Agency required the groundwater be analyzed for total metals.

The Board notes that Ceco, in its April 30, 1985 response to the Agency's March 30, 1985 letter, indicated "chemical analysis results for groundwater" from 1983 as "filtered" as well as "unfiltered". (Pet. Ex. p. 6). Because Ceco did not specifically address its reasons for objection to condition 2(e) the Board has no basis for overturning the condition and, the condition must stand.

#### ISSUE 6

A sixth issue which must be discussed is whether or not Ceco must include the KO61 dust pelletizer (TO4) unit in its closure plan. Conditions 13 and 18 both apply to the TO4 unit on the site. Condition 13 would require Ceco to provide a closure plan including the TO4 unit, while condition 18 would require that the

facility meet the requirements of 35 Ill. Adm. Code 725:Subtitle G, if the facility is to remain open.

The TO4 facility had been identified as belonging to Ceco in two Part A permit applications submitted in 1980 and 1983. (Ag. Br. p.32-33). Testimony by Charles Zeal indicated that those permit applications listed Ceco as the owner of the unit and on the 1983 application listed Thomas Steel as the operator of the unit. (Tr. p. 137). Mr. Zeal testified that: "[Section] 725.210 requires the closure applies [sic.] to both the owner and operator. And we were requesting a closure plan for the TO4 unit from Ceco, unless they could demonstrate that that [sic] unit was not RCRA regulated." (Tr. p. 137). The Agency, in its brief, stated that it took the position that the TO4 unit was RCRA regulated since "Ceco never demonstrated that it wasn't." (Ag. Br. p.37). As a result, the Agency included conditions 13 and 18 in the September 11, 1986 closure plan approval.

Ceco in its petition did not specifically accept conditions 13 and 18; however, when listing the contested conditions in its briefs Ceco only listed condition 13. (Pet. p. 8, Pet. Br. p. 1-2, Pet Reply Br. p. 14). In addition, Ceco did not argue why it was not accepting conditions 13 and 18 in its briefs or testimony. The Stipulation of Facts which was submitted at hearing does indicate that on "February 3, 1983, Ceco sold the steel mill facility to Thomas Steel Company, its current owner". However, this statement was not expanded on in Ceco's briefs or testimony. Therefore, it is not clear who retained title to the TO4 facility. In fact the record of this case contains no arguments by Ceco as to why these conditions are unacceptable. Therefore, the Board finds that conditions 13 and 18 shall remain as conditions for closure.

#### CONCLUSION

Ceco filed this appeal to contest the imposition of Conditions 1, 2 (d-c), 3, 11, 13, 15, 16, 18 and 20 of the September 11, 1986 closure plan. Based on the record before the Board, the Board finds that condition 2(d) should be struck. The Board further finds that the remaining conditions are necessary to insure that the Act and the Board's rules will not be violated.

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

#### ORDER

The Board strikes Condition 2(d) of September 11, 1986 Modified Closure Plan in part and upholds the conditions as modified.

The condition is modified to read:

The parameters listed at 35 Ill. Adm. Code 725.192(b) are to be analyzed , except for the following:


Endrin  
Lindane  
Methoxychlor  
Toxaphene  
2,4 - D  
2,4,5 - T

The Board affirms the imposition of conditions 1, 2(c), 3, 11, 13, 15, 16, 18 and 20.

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1989, ch. 111 $\frac{1}{2}$ , par. 1041, provides for appeal of final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 20th day of December, 1990, by a vote of 7-0.

  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board