ILLINOIS POLLUTION CONTROL BOARD
June 22, 1979

ENVIRONMENTAL PROTECTION AGENCY, Complainant,	)	
v.	)	PCB 78-153
JACK CARLSTROM, d/b/a LOCKPORT TRUCKING COMPANY, Respondent.	)	

MS. ANNE K. MARKEY AND MS. SUSAN N. SEKULER, ASSISTANT ATTORNEYS GENERAL, APPEARED ON BEHALF OF THE COMPLAINANT.

MR. THEODORE J. JARZ, ATTORNEY AT LAW, APPEARED ON BEHALF OF THE RESPONDENT.

OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

This matter comes before the Board upon a complaint and amended complaint filed May 25, 1978 and August 18, 1978 by Complainant Environmental Protection Agency (Agency) against Respondent Jack Carlstrom, d/b/a Lockport Trucking Company (Carlstrom or Respondent). Respondent operates a permitted landfill near Joliet. The complaints allege violations on various dates since March 13, 1975, of Sections 12 and 21 of the Environmental Protection Act (Act) and various Board Rules contained in Chapter 7: Solid Waste. The following is a summary of the allegations of the complaints:

Count	Act/Rule	Gravamen
I, VII	Section 21(e), (f) Rule 310(b)	Accepted hazardous and/or liquid wastes or sludges without a permit.
II	Section 12(a), Rule 313, 314(e)	Allowed deposit of contaminants upon the land . . . so as to create a water pollution hazard in the form of contamination of private wells on adjacent property.
III, VIII	Section 21(b), Rule 305(a)	Failed to place compacted layer of at least six inches of suitable material on all exposed refuse.
IV	Section 21(b) Rule 305(b)	Failed to place compacted layer of twelve inches of suitable material on all surfaces of the site where no additional refuse will be deposited within sixty days.

V	Section 21(b) Rule 303(a)	Failed to deposit refuse into the toe of the fill or bottom of the trench.
VI	Section 21 Rule 302	Failed to operate within the limits specified by permit with regard to liquid wastes, hazardous wastes and other nonconforming substances and has allowed waste material to migrate from the site.

The landfill in question is located on a 9.2 acre site near the intersection of I-80 and Illinois Route 7 near Joliet. It is an abandoned limestone quarry near the Des Plaines River. The quarry was at one time filled with water to a depth of about two hundred feet, but since has been nearly filled with refuse (R. 629). Carlstrom acquired it around 1960 (R. 604). Prior to that time the land was used for unregulated dumping of various materials, including industrial waste, for a fee (R. 606). Carlstrom began dumping waste automobile insulation from the GAF factory immediately after purchasing the site (R. 607, 609). Open sewers ran into the quarry at that time, but these were eliminated when houses were demolished to build I-80 (R. 608). Four storm tiles were laid to carry runoff from an I-80 interchange area into the quarry (R. 616, 618, 666).

The site as it now exists has a wall of exposed rock which appears to be about thirty feet high on the north and east sides (Comp. Ex. 19). The site is more or less level or slopes upward toward the rock as it is approached from the south or west (R. 558, 585). Before 1960, trucks dumped refuse off the rock into standing water (R. 606). Carlstrom, however, filled from the south and west by dumping or pushing refuse into the water until the operation reached the rock wall and there was no more water (R. 620, 629). In 1973 Carlstrom acquired a permit from the Agency when the Solid Waste Rules became applicable. At this time there was still standing water on the site (R. 555; Comp. Ex. 1).

Ms. Jean Larsen, a geologist employed by the Illinois State Geological Survey, testified for the Agency about the landfill site. She is an expert on Will and Lake Counties and her duties include evaluating potential landfill sites for the Agency (R. 393, 398, 431). She had seen the Carlstrom site from the highway and had read survey documents concerning the site, but had not actually visited it (R. 434, 438). This area near the Des Plaines River is described as exposed bedrock, less than two feet of soil covering fractured dolomite (R. 407, 427, 443). Water moves much faster through fractured dolomite than clay (R. 411). There are many sites in northeast Illinois which are covered with clay which is so tight that leachate will not migrate into the ground water (R. 407). Impurities may also be filtered out as water percolates

This was dismissed by Order of the Board on August 24, 1978, because the Board does not accept third party complaints (32 PCB 149). Apparently the state took the drainage easement by eminent domain or some other legal process (R. 668). The Board has no jurisdiction to consider claims against the state for damages to Respondent's property or business.

The following is a summary of the permits issued to Carlstrom for the operation of the site:

73-1 (Comp. Ex. 1) Jan. 1, 1973	Permitted to operate a solid waste disposal site to handle amberlite and automobile insulation, all in accordance with application and plans.
73-6 (Comp. Ex. 2) Feb. 8, 1973	Permitted to accept FCC Catalyst Fines, a fine sand consisting of silica, alumina and carbon, and hot lime sludge containing a large number of miscellaneous impurities. Materials to be mixed together, mixed with earth, dried and used as daily cover.
74-70 (Comp. Ex. 3) May 20, 1974	Permitted to accept calcium sulfate dried sludge. Permitted to use asphalt strips for road material. Strips are to be hauled to site only when required and not to be stockpiled.
75-4 (Comp. Ex. 4) Jan. 8, 1975	Permitted to deposit up to six truck loads of refuse before spreading and compacting. Permission denied for use of fly ash as cover. Permitted to use fly ash on roads to prevent icing, permitted to stockpile forty cubic yards during winter months; all additional fly ash subject to rules and regulations for refuse.
78-1092 (Comp. Ex. 27) June 16, 1978	Permitted change in direction of fill operation, construction of drainage channel.

Four hearings were held in Joliet. On November 30, 1978 and December 14, 1978 Agency inspectors testified. On December 15, 1978 the Agency presented expert testimony on laboratory procedures and hydrogeology. Respondent's witnesses testified on December 18, 1978.

HAZARDOUS OR LIQUID WASTES

Count I charges that Respondent accepted hazardous or liquid wastes or sludges without a permit between June 24, 1977 and May 25, 1978 in violation of Section 21(e) and (f) and Rule 310(b). Agency inspector Mr. Henry Cobo testified that on June 24, 1977 he inspected the site in response to a complaint received the

through soil, but to a lesser extent through rock fractures (R. 413, 414). The fractured dolomite of Will County is the least desirable place to site a landfill (R. 407). However, there is evidence from well pumping rates that the dolomite immediately adjacent to Carlstrom's site is not as highly fractured as some (R. 442). In view of this, the Agency argues that the original permit should never have been issued (Brief, p. 15). However, this question is not placed before the Board by the pleadings.

The original permit was issued in 1973 and allowed Respondent to accept amberlite and automobile insulation. It was granted "all in accordance with the application and plans" prepared by GeoTech, Inc. This application was introduced into evidence as part of Complainant's Exhibit 1, but is not in the exhibits or Complainant's list of exhibits filed March 19, 1979 (R. 585). However, a copy is attached to the complaint. Mr. James Douglas Andrews testified for Respondent concerning the application (R. 550). Mr. Andrews was with the Permit Section of the Agency at the time the permit was issued but is now employed by Respondent through GeoTech as a consulting engineer (R. 553). Carlstrom was permitted to dump into standing water because of the inert nature of the amberlite and automobile insulation (R. 556). The application contained plans to build watercourses to carry the stormwater across the site (R. 557). Paragraph 28.a reads in part:

> The cell construction will be in a north to south direction and the first level of cells will vary in thickness so that the surface of the cells will slope approximately two feet from north to south. This will allow for unrestricted flow across the site for all the storm water that drains into the site. This is important since there are four existing highway culverts that drain into the north end of the site. Drainage swales around the perimeter of the site will also be constructed as the site is developed to convey the storm water runoff to the existing drainage at the south end of the site. Whenever the weather conditions are such that cell construction within the drainage swale is difficult an alternate cell will be used.

The drainage paths were not in fact constructed prior to the filing of the complaint in 1978. Mr. Jack Carlstrom, Jr. testified that it was impossible to build the drainage paths until the fill reached a certain level, which apparently was not reached until 1978 (R. 621, 646, 669). The Agency contends that there was a deliberate misrepresentation in the application. However, this is not charged in the complaint. Carlstrom argues that all his operating problems stem from the highway drains. He attempted to file in this action a third party complaint against the state.

previous day (R. 152). After an initial tour of the site, Mr. Cobo walked south from the site to the Corps of Engineers office which had made the complaint. After speaking with a Mr. Kavato, he returned to the landfill to reexamine a certain area which had been pointed out to him. He found a partially buried barrel filled with what appeared to be oil containing metal fines (R. 153; Comp. Ex. 19A and 19B). Respondent concedes that this violation occurred, but contends it was an isolated, unintentional violation (Closing Arg. 19; R. 635). The Agency does not have to prove intent to establish a violation of landfill operating rules. Respondent was not permitted to accept refuse in general, but is restricted to certain specified industrial waste on account of the danger of groundwater pollution at the site. It is very unlikely that no one noticed the barrel in loading, dumping, spreading and covering. The Board finds Respondent in violation of Section 21(e) and (f) and Rule 310(b) as charged.

Count VII of the amended complaint alleges that Carlstrom accepted hazardous and/or liquid wastes on or about August 18, 1978. Mr. Cobo testified for the Agency concerning inspections made on August 16, 1978 and September 26, 1978 (R. 192, 206). The Agency presented no evidence concerning August 18, 1978, and did not seek to amend its pleading to conform to the proof. Under Procedural Rule 326 proof may depart from the pleadings so long as undue surprise does not result. Respondent did not object to the testimony concerning August 18, 1978 and points to no surprise or prejudicial result. The Board therefore finds that the pleading adequately informed Respondent of the charges.

Complainant contends that chemical analysis of sludge samples taken from the site demonstrates that unpermitted liquid or hazardous wastes or sludges have been dumped at the site (Brief, p. 13). Respondent is permitted to accept hot lime sludge (Comp. Ex. 2). A typical analysis of the sludge is included with the permit application. An Agency inspector collected a sample of sludge from the site on August 16, 1978. The sample was subjected to a leachate test (R. 203; Comp. Ex. 26). The Agency offers no expert testimony to the effect that the analysis of this sample demonstrates that unpermitted materials had been dumped. Comparison of the permit application with the sample from the site does reveal differences. The leachate sample analysis reveals high values for boron, fluoride, mercury and R. O. E. Although the leachate test cannot be directly compared to the sludge analysis, there are unexplained differences. However, these are insufficient to justify a finding that unpermitted materials had been dumped. Count VII is therefore dismissed.

WATER POLLUTION

Count II alleges that on various dates since July 16, 1975, including May 11, 1977 and June 24, 1977, Respondent allowed deposit of contaminants upon the land "in such place and manner so as to create a water pollution hazard in the form of contamination of private wells on adjacent property in violation of Rule 313 of the Solid Waste Rules and . . . Section 12(d) of the Act." Agency Inspector Charles T. Grigalauski took samples from two wells and ponded water on the site on May 11, 1977 (R. 79-92; Ex. 15, 16, 17). The Hearing Officer admitted the tests for the limited purpose of showing delivery, but not validity (R. 92). However, James Dougherty, Unit Manager, Agency Laboratory, subsequently testified to the procedures followed in the tests (R. 322). On June 24, 1977 Agency Inspector Cobo also took samples of ponded water (R. 149, 158, 161; Comp. Ex. 20).

PARTIAL ANALYSIS OF PONDED WATER

	Exhibit 17 May 11, 1977	Exhibit 20 June 24, 1977
Boron	24.x mg/l	17.5 mg/l
COD	3360	*
Chloride	*	1100
Cyanide	.21	.00x
Fluoride	*	2.4
Iron	*	1.4
Phenolics	0.000	.380
R.O.E.	14,000	1160 (sic)
Sodium	*	2000.x
Sulfate	230	*

*Not analyzed.

Mr. Cobo followed a trail of water from one of the I-80 culverts across the site (R. 150; Ex. 19, 20). The water was relatively clear and odor free when it entered the site from the culvert but became more discolored as it flowed across the site. Exhibit 20 was taken from a pool along this trail. The well samples were taken from property adjacent to the site and to the west. These are referred to as the Lopez well and the Aggazzi well. Both wells show ammonia, boron, COD, R.O.E. and sulfate (R. 79, 83, 92; Comp. Ex. 15, 16). The boron and sulfate could be especially indicative of pollution from the site.

Ms. Jean Larsen of the Illinois State Geological Survey testified for the Agency as an expert on hydrogeology (R. 392). Her expertise, experience in evaluating landfill sites and

testimony concerning the water permeability of the surrounding dolomite is discussed above (R. 398, 427-443). Ms. Larsen testified that chemicals in solution in surface ponds such as found in Exhibits 17 and 20 could enter into the groundwater and show up in the wells (R. 457, 461). She testified that it was possible that pollutants from the landfill could enter the pumping cone of the Aggazzi well (R. 467). She had no direct knowledge of the direction of flow of groundwater through the site, but testified at several points as to the general southeast flow at right angles to and toward the Des Plaines River (R. 410, 430, 441, 443, 445, 463, 467). On cross-examination she drew arrows showing the direction of flow on an aerial photograph (R. 475, 477; Resp. Ex. 2).

Mr. Jack Carlstrom, Jr., Respondent's son, testified that the Aggazzi well was not even on the aerial photograph, but was off to the southwest somewhere (R. 651; Resp. Ex. 2). The Aggazzi well appears to be located about a mile southwest of the site and the Lopez well nearly one and one-half miles southwest on the Agency's sketch map of the location of the site and wells (Comp. Ex. 11). These distances are almost at right angles to the southeasterly flow of groundwater. The Board therefore finds that the Carlstrom site has not been shown to be a source of contamination to these wells.

Rule 313 proscribes "water pollution hazards" rather than actual pollution. However, the complaint alleges a "hazard in the form of contamination of private wells on adjacent property." There is no evidence in the record of any wells between the site and the Des Plaines River, in the direction of groundwater flow. There is therefore no hazard. The Agency in its brief points out that the evidence indicates that Respondent's leachate is polluting the River (Brief, p. 14). However, this is not alleged in Count II. The evidence also establishes that on August 25, 1977 water was flowing across Respondent's property, picking up pollutants and exiting the property into a drainage ditch along the south boundary line (R. 173; Comp. Ex. 22 F and G). This again is a violation of Rule 313, but it is not charged in the complaint. The Board will order Respondent to take actions to remedy the situation.

COVER

Counts III and VIII of the complaint allege that on various dates Respondent failed to place a compacted layer of at least six inches of suitable material on all exposed refuse in violation of Section 21(b) of the Act and Rule 305(a). Count IV alleges

that on various dates Respondent failed to place at least twelve inches of suitable material on all surfaces of the site where no additional refuse will be deposited within sixty days in violation of Section 21(b) and Rule 305(b). Mr. Robert Wengrow testified for the Agency concerning an inspection of the site on March 13, 1975 (R. 16, 22, 24). He testified that there were areas of the site in need of daily cover. Respondent's objection to this conclusion was sustained (R. 19). No other evidence of the need for cover on this date appears in the record. The Board finds the evidence inadequate on this date.

Mr. Grigalauski testified for the Agency concerning an inspection of the site on April 15, 1976 (R. 34, 98; Comp. Ex. 5). The inspection was made in the afternoon hours (R. 99). He testified that the method of determining when the materials were desposited was by visual observation of the amount of exposed refuse (R. 36). More than one acre was uncovered, but he could not estimate the depth (R. 38, 40). In the opinion of the witness, there was more than one day's worth of uncovered material at the site (R. 37). He did not know how much area an ordinary day's operation would involve (R. 103). One crawler tractor was operating at the site (R. 38). He did not know how much it could spread in one day (R. 103). Mr. Grigalauski again inspected the site on May 11, 1977 in response to a complaint (R. 72; Comp. Ex. 10). There was one acre of exposed refuse and one to two acres with less than six inches cover (R. 73).

The Agency has not shown lack of adequate daily cover by any of the following methods: the presence of uncovered refuse when the site opened in the morning; more than one day's volume uncovered; or, more refuse present than the available equipment could cover in one day. Although the witness testified that there was more than one day's refuse, he was unable to give any specifics that would be necessary to form this opinion. In addition, his ability to estimate areas is in doubt. He testified that more than an acre was not covered. On cross-examination he said the area was three hundred yards square (R. 38, 98). Three hundred square yards is less than one tenth of an acre and three hundred yards square is about nineteen acres. Either way, it impeaches his ability to judge an acre. The Board cannot base a finding of lack of daily cover on this evidence.

Mr. Cobo testified for the Agency concerning an inspection of the site made in the afternoon on June 24, 1977 (R. 137, 252; Comp. Ex. 19). There was a thirty by fifty foot area of automobile insulation, tarpaper and wood covered with less than six inches of fly ash (R. 148). The area was fifty to sixty feet from the fill face and there was a large depression where water would flow through

between the area and fill face (R. 149). On December 4, 1974, Respondent requested a permit to use fly ash as cover material (Comp. Ex. 4). This request was denied, although Respondent was permitted to store up to forty cubic yards of fly ash on the site during winter months for use on roads to prevent icing. On cross-examination, the witness described the fly ash as spread out with tractor marks in it (R. 253). Mr. Jack Carlstrom, Jr. testified for Respondent that fly ash was, rarely, used on the fill face in wintertime when equipment got stuck (R. 645). He also testified that the site operated only one fill face at a time (R. 622, 671).

Rule 305(a) requires that a compacted layer of at least six inches of suitable material be placed on all exposed refuse at the end of each day of operation. Because of the distance from the fill face, the Board is satisfied that the material was deposited more than twenty-four hours before the inspection and was in need of daily cover. In addition, the Board finds that Respondent deliberately covered the refuse with fly ash since the material was spread out over an area with equipment. The Board rejects Mr. Carlstrom's explanation that it was used for deicing by noting that the inspection took place in June, months after any need for deicing. The Board therefore finds Respondent in violation of Section 21(b) and Rule 305(a) on June 24, 1977 as charged in Count III of the complaint.

Count IV charges that Respondent failed to apply twelve inches of suitable cover material to surfaces where no additional refuse is to be deposited within sixty days in violation of Section 21(b) and Rule 305(b). One violation is alleged to have occurred on June 24, 1977, based on the same event as the use of fly ash for daily cover. Mr. Cobo testified that in his opinion the filling operation would not return to the area for more than sixty days (R. 147). Respondent's objection to this was sustained. The record before the Board is inadequate to establish a violation of the intermediate cover rule as of this date. Intermediate cover is also alleged to be lacking on April 15, 1976, July 13, August 25, and December 13, 1977. No evidence of these violations appears in the record. Therefore, Count IV is dismissed.

Mr. Cobo testified for the Agency concerning an inspection of the site in the afternoon on July 13, 1977 (R. 164, 263, 274; Comp. Ex. 21). There was a large volume of refuse including a ten by twenty foot area of hot lime sludge which was cool enough to cover (R. 167). Respondent is permitted to accept hot lime sludge and to use it as cover material mixed with catalyst sand and dirt (R. 637; Comp. Ex. 2). Mixing and cooling is to take place in a berm area in the north (northeast) end of the site

(R. 275). The sludge in question was piled in the northwest corner, near the fill face and away from the berm (R. 165, 275). It is clear that the permit contemplated that the sludge should remain uncovered for a period of time, but whether this is hours, days or weeks is not clear. Respondent was permitted to stockpile the cool mixed sludge for use as cover. The Agency did not establish that the sludge in question had not been prepared for use as cover. The Board cannot therefore find a violation of the daily cover requirement.

Respondent is permitted to accept up to six loads before spreading and compacting (Comp. Ex. 4). Rule 303(b) would otherwise require spreading and compacting as rapidly as refuse is deposited on the fill face. The Agency granted this supplemental permit to enable Respondent to operate more efficiently in face of a small volume of non-putrescible refuse that arrived at irregular intervals. The equipment operator hauls until there are six loads to spread and compact (R. 519). Much of the testimony concerns whether there were more or less than six loads present on July 13, 1977. However, the complaint does not allege violation of permit conditions by failing to spread and compact. The record is inadequate to establish the need for daily cover on the refuse of July 13, 1977.

Mr. Cobo testified concerning an inspection of the site in the afternoon on August 25, 1977 (R. 171, 276; Comp. Ex. 22). The filling operation was proceeding in the extreme northwest end of the site. There was a large quantity of asphalt and concrete material in the extreme southwest or southeast portion of the site, in the state the trucks had deposited it (R. 172, 175; Comp. Ex. 22 A-D). Respondent is not permitted to accept such material for disposal. Respondent was permitted to use asphalt tar strips as road building material, but was not permitted to store them on the site (Comp. Ex. 3). Respondent attempted to establish on cross-examination that the material in question was the tar strips (R. 276). Mr. Cobo testified that the tar strips were a waste product from the manufacture of roofing shingles and distinct from the asphalt material observed. Review of the testimony of Respondent's witnesses discloses that the material may have been stockpiled for construction of the drainage way (R. 647). However, this relates to mitigation under Section 33(c). The Board finds that the asphalt and concrete were in need of daily cover, based on the quantity present, its distance from the landfill and the manner in which it was dumped.

Mr. Cobo testified concerning an inspection of the site in the afternoon of December 13, 1977 (R. 177, 287; Comp. Ex. 23). Snow had fallen on the previous day but not on that day (R. 179, 242). The witness observed a fifty by twenty-five foot area of

snow covered asphalt, shingle roofing, automobile insulation, etc. (R. 180). To the north equipment was in operation spreading and compacting similar material (R. 181). He observed two large trucks depositing fly ash on top of the refuse (R. 181, 183; Comp. Ex. 23 C). The ash was spread to a depth of several inches and was more than needed to prevent icing (R. 183). Mr. Cobo observed the operation for over one hour (R. 287), and saw at least two loads of fly ash dumped (R. 181; Comp. Ex. 23 A, B). Mr. Cobo testified that the fly ash was being used for cover and not deicing (R. 183). The trucks were driving over a level area to the west of the fill face and dumping five to ten feet off an abrupt drop to where the spreading and compacting was occurring (R. 182). The trucks were not operating over the area where the fly ash was being used. The Board therefore finds that Respondent used an unsuitable material, fly ash, for daily cover on December 13, 1977 in violation of Rule 305(a) as alleged in Count III.

Mr. Cobo also observed snow covered refuse to the south of the active fill face on the afternoon of December 13, 1977 (R. 179, 287; Comp. Ex. 23). It had snowed the previous day but not on that day (R. 179). There is no testimony about what time of day it snowed. Respondent contends that the evidence is inadequate to establish the need for daily cover because he operates a twenty-four hour dump (R. 521, 610, 666). He contends that Rule 305(a) requires only that refuse not go more than twenty-four hours uncovered in the case of a twenty-four hour operation. The Board accepts this interpretation of Rule 305(a) for purposes of argument only.

Mr. Cobo was not aware that the site was operating on a twenty-four hour schedule although he had inspected the site many times (R. 234). Respondent has offered no evidence that the site on this occasion operated all night. Mr. Barz, Respondent's equipment operator, testified without exception that his day started at 6:00 in the morning and ended at 4:30 in the afternoon (R. 519, 541). However, he agreed that there was a twenty-four hour operation. Mr. Jack Carlstrom, Jr., could not give specifics on how many people would ordinarily be on the site all night (R. 665). It was not true that the only time the site operated after 4:30 p.m. was on special request from a waste generator (R. 666). The reason the site operated in the evening hours was "if we had an operational problem during the day which would necessitate us

to stay that evening" (R. 666). Mr. Carlstrom could not state how many times per week the site operated in the evening (R. 666). The Board concludes that this evidence is inadequate to establish that there was twenty-four hour operation. In addition, Respondent is estopped to assert twenty-four hour operation because of the representations found in the original permit application (Comp. Ex. 1, Complaint, Ex. A). It says in paragraph 28.b that trucks will unload from 8:00 a.m. to 4:30 p.m. and that daily cover will be applied after the last truck for the day has unloaded. The Board therefore finds that there was refuse in need of daily cover on the site on December 13, 1977.

Count VIII of the amended complaint charges daily cover violations on and since June 28, 1978. Mr. Cobo inspected the site in the morning on August 16, 1978 (R. 192, 243, 298; Comp. Ex. 25). The Agency has not sought to amend the complaint to conform to the proof. However, Respondent did not object to Mr. Cobo's testimony and raises no objection in the closing argument. The Board therefore finds that the pleadings adequately informed Respondent of the violation alleged on August 16, 1978. Mr. Cobo testified that the landfill had recently changed its direction of operation in accordance with the supplemental permit (R. 193; Comp. Ex. 27). The operation had been proceeding from the north to south but was now operating from west to east. The former working face was in the extreme north end of the site. The new was in the extreme northwest. There appear to be at least two errors in directions in either the testimony or the transcript (R. 194, 195). The Agency seems to be attempting to establish the need for cover by demonstrating that the operations had proceeded sufficiently past a certain point without covering. However, the record is insufficient to find lack of cover on this basis.

Mr. Cobo testified that it had not rained on that day (R. 198). He observed four categories of refuse (R. 193-195):

1. Spread, compacted and covered;
2. Spread, compacted, uncovered and wet;
3. Unspread, uncovered and wet;
4. Unspread, uncovered and dry.

Trucks were dumping dry refuse. On direct examination, Mr. Cobo testified that the equipment operator was spreading and compacting. However, on cross-examination he retracted this testimony (R. 301). It is the Agency's contention that the presence of wet refuse demonstrates the need for daily cover. The inspection seems to have occurred at 9:15-9:30 in the morning (Comp. Ex. 25). There is no direct testimony to this effect, but the time of day is filled in on the photographs. Mr. Cobo was permitted to testify over

Respondent's objection that it had not rained that day (R. 198). On cross-examination he could not recall whether he had been in Joliet overnight (R. 243). However, it appears that he was in the general vicinity (R. 239). Respondent offers no evidence that it had rained immediately before the early morning inspection. The photographs disclose generally blue skies with scattered clouds but overcast toward the east (Comp. Ex. 25). However, Respondent asserts that Mr. Cobo had no idea how the material got wet (R. 244). Mr. Cobo testified that Mr. Carlstrom, Sr. and Mr. Carlstrom, Jr. informed him at the time that it had rained the day before (R. 245). The site was covered with several inches of water, indicating rain (R. 196, 247). On cross-examination, Mr. Cobo stated that although there was water that had come from the direction of the culverts, there was no water draining out of the culverts (R. 246). Mr. Carlstrom, Jr. testified that even a slight rain can flood the entire site and that, when it rains and the culverts operate, it is like a high pressure fire hose (R. 618, 628). Considering all of the above, the Board concludes that the material was wet because it had been out in the rain either the day before or overnight.

Respondent offers two further arguments. The first is that the material may have been left out overnight in trucks (Closing Argument 6). Mr. Jack Carlstrom, Jr. did testify that on occasion trucks are left at the GAF factory to be loaded overnight (R. 613). However, there is no evidence that this happened on this occasion. Respondent's second argument is that since he has a twenty-four hour operation, the daily cover rule only requires that the refuse not go more than twenty-four hours uncovered (Resp. Arg. 4). The Agency's evidence is insufficient to establish that it had not rained in the twenty-four hour period preceding the inspection. However, the Board rejects Respondent's contention that he is running a twenty-four hour operation, for the reasons discussed above in connection with the violation found on December 13, 1977. Respondent only rarely operates twenty-four hours and there is no evidence that he did on this occasion. The Board therefore finds that on August 16, 1978 there was refuse uncovered on the site which was in need of daily cover, in violation of Section 21(b) and Rule 305(a) as charged in Count VIII of the complaint.

Respondent devotes four pages of his closing argument to a discussion of Mr. Cobo's testimony (Closing Argument 8-12). On direct examination Mr. Cobo testified that the bulldozer was spreading and compacting (R. 196). However, when confronted with his testimony on deposition, he retracted this statement (R. 301). It does not make any difference whether the bulldozer was operating or not to establish the violation. However, it does raise some question about Mr. Cobo's memory. The Hearing Officer found all the witnesses to be credible except in so far as disclosed in the

record. The Board finds that the difference in testimony here is slight and on a collateral matter and that the witness's testimony is otherwise credible.

TOE OF FILL

Count V charges that Carlstrom failed to deposit refuse into the toe of the fill or bottom of the trench in violation of Section 21(b) of the Act and Rule 303(a) since April 15, 1976 and in particular on July 13, 1977 and August 25, 1977. Mr. Grigalauski testified for the Agency that on April 15, 1976 he observed refuse being spread and compacted downhill or from the top of the slope and that this was in violation of the accepted procedure (R. 35, 111; Comp. Ex. 5 A). Mr. Cobo testified for the Agency concerning inspection made on July 13 and August 25, 1977, but the record contains no clear reference to whether refuse was being deposited in the toe on these dates (R. 164, 171).

Mr. Jack Carlstrom, Jr. testified for Respondent concerning Exhibit 5 A (R. 633, 634). He confirmed that the bulldozer was spreading and compacting downhill. He explained that this was done when the site was too wet for the trucks to dump at the toe of the fill. The operator had to either dump at the top of the fill, on top of the last cell, or dump at the gate, which would involve bulldozing the refuse a considerable distance to the fill area. He adjudged dumping at the top of the fill to be the more reasonable alternative.

Reasonableness may be a defense under Section 33(c). However, Respondent is operating a permitted landfill. Rules and permit conditions would be meaningless if they could be violated routinely because it was reasonable to do so. Mr. Carlstrom does not testify that the change in operating procedure was brought about by an extraordinary rainfall. The record is full of evidence suggesting that standing water was a chronic problem at the site. Mr. Carlstrom testified that a normal rainfall will cause problems. The original permit application provided in paragraph 26 that an alternate cell would be used whenever weather conditions were difficult (Comp. Ex. 1; Complaint, Ex. A). Respondent has applied for four supplemental permits for various reasons since the original permit was issued. It would not have been an undue burden to require him to have applied for a permit to fill from the top in wet weather. The Board therefore finds that Respondent is in violation as charged in Count V and rejects the Section 33(c) defense. However, these same factors will be considered in mitigation in assessing a penalty.

PERMIT CONDITIONS

Count VI charges that since March 14, 1975 and in particular on May 11, 1977, Respondent has failed to operate within the limits set by the permit by accepting liquid wastes, hazardous wastes and other nonconforming substances and by allowing waste to migrate from the site. Respondent has exceeded the permit limits by accepting the barrel of oil with metal fines as found in Count I. However, this is really the same violation found in Count I and it is unnecessary to find another violation based on the same facts. Evidence of nonconforming liquids or sludges was considered and rejected with the discussion of Count I. On June 24, 1977 and August 16, 1978, the Agency inspectors testified that there were wooden pallets present near the fill face (R. 144, 194; Comp. Ex. 19 J, K and 25 E). Respondent is not permitted to accept wooden pallets.

Count VI also alleges violation of permit conditions by permitting waste to migrate from the site. The Agency has shown that on August 25, 1977 water having unnatural color and oily film was allowed to pond on the site and to drain off of the site toward the Des Plaines River (R. 173; Comp. Ex. 22 F and G). Not permitting waste to migrate from the site is not an express condition of the original permit. However, that permit was granted "all according to the application and plans," which included the provision for drainage quoted at length above. This contains a representation that all construction would provide for unrestricted flow across the site and eventually for drainage swales around the site. Even if, as Respondent argues, it was impossible to construct the swales prior to 1978, the permit contained express provision for unrestricted flow across the site. Respondent instead allowed the water to pond in areas of inadequately covered refuse, to pick up contaminants and to flow out of the site. The Board therefore finds that Respondent has violated conditions of his permit as alleged in Count VI.

PENALTY

The Board will consider Section 33(c) in assessing a penalty for these violations. There are a number of recurring Section 33(c) issues which will be discussed together before the individual violations. The unsuitability of the site is discussed above at length with the description of the site and in connection with Count II. It is assumed that the supplemental permits allowing chemical wastes and alternative cover material were issued because of Carlstrom's assurances that good operating procedures would be used and that the materials were innocuous. The chemical analyses

raise serious questions as to whether the materials are really innocuous and the record as a whole reveals careless operating procedures.

There are mitigating factors in connection with the suitability of the site. The abandoned quarry was at one time a public nuisance (R. 502). Carlstrom's operation has eliminated this. The site appears to be fairly isolated in an industrial section, bounded by the Des Plaines River and I-80. However, there appear to be residential buildings in the background of some of the photographs (Comp. Ex. 22 B; Resp. Ex. 2).

There is no question that the site has social and economic value. However, it has not been shown essential to Joliet's economy. There are other sites in northeast Illinois which could accept this waste and which would be more suitable (R. 407). Respondent has offered no evidence that he is not financially able to carry out an Order of the Board. It appears that Lockport Trucking Company is a well-established business and that the landfill is only a part of its operations (R. 660). The original and supplemental permit applications contain plans and representations which would have resulted in disposal of the waste without creating an undue public hazard. Presumably these representations were economically reasonable and technically practicable. The Board recognizes that operation of a landfill in compliance with its rules is more expensive than operation out of compliance. However, compliance is necessary to protect the public health. It is unfair to Carlstrom's competitors to allow him greater profits by operating out of compliance.

In Count I Respondent was found to have accepted without a permit a barrel apparently containing oil with metal fines. The Board finds that it is technically practicable and economically reasonable to require an operator holding a limited permit to monitor the waste he receives to assure that obviously unpermitted materials are not dumped.

In Count II Respondent was found to have deposited contaminants upon the land so as to create a water pollution hazard. Since the complaint alleged only contamination of particular wells and the Agency failed to establish this contamination, no penalty will be assessed. However, the evidence clearly established a water pollution hazard. Therefore, remedial measures will be ordered. Much of the water pollution hazard will be eliminated when the drainage has been redirected. Respondent will be ordered to complete this. The parties spent much of the hearing discussing

whether it was possible to build the ditch. Since no penalty is assessed for past violations, the Board will not consider whether or not it was possible. It is possible now and there is testimony that construction of the drainage path has already begun (R. 561, 646; Comp. Ex. 27).

Supplemental permits #73-6, #74-70 and #75-4 will be revoked in so far as they permit Carlstrom to accept or use FCC catalyst fines, hot lime sludge, calcium sulfate sludge and fly ash. Permits for these materials should not be reissued by the Agency until Respondent has made an adequate showing that the drainage situation is under control and that the materials can be disposed of without posing any danger to the public. Respondent will be permitted to continue to accept automobile insulation and other permitted innocuous material.

In Count III Respondent was found to have had broken concrete and asphalt on the site which was in need of cover on August 25, 1977. Broken concrete and asphalt provides habitat for rats and other disease vectors and therefore requires cover. However, from the manner in which it was dumped and the testimony, Respondent was stockpiling for a specific, immediate use. There is social and economic value in reusing waste. Therefore, no penalty will be assessed for this violation.

In Count III Respondent was found to have used fly ash as a cover material on June 24, 1977 and December 13, 1977. There is a large potential for injury to the public from the use of fly ash as a cover material. Daily cover is intended, among other things, to separate refuse cells with a layer which water will not penetrate. This should help prevent the formation of leachate in the future. Respondent has special need for cover because of the chemical waste he is burying and the unsuitability of the site with its large inflow of surface water and danger of groundwater pollution moving into the permeable, fractured dolomite. Clay is the cover material of choice, fly ash is one of the worst. The Board notes that fly ash produces leachates, including boron which is toxic to plants and found in water on the Carlstrom site. The Board has considered the problems associated with fly ash in the boron exception for Illinois Power, 30 PCB 351. Respondent appears to have a chronic problem with finding cover material. He is using hot lime sludge mixed with FCC catalyst fines and dirt for cover. He has also applied to use road shoulder repair material and fly ash for cover (Comp. Ex. 2, 3, 4, 27). Ms. Larsen testified that there is less than two feet of soil over bedrock in the area (R. 428). Respondent has no doubt received a considerable economic benefit through noncompliance. He charges for disposing of the fly ash and does not have to obtain and transport suitable cover material.

Respondent's request for a supplemental permit to use fly ash for daily cover was denied on January 8, 1975 (Comp. Ex. 4). He was given written notice not to use fly ash for daily cover on May 25, 1977 (Comp. Ex. 18). He therefore had ample notice that he was in violation prior to the June 24, 1977 inspection. Witnesses, including Mr. Carlstrom, Jr., testified that the Agency practice was to discuss violations with the operators during the inspection and to subsequently write a letter notifying the operator of the violations found (R. 14, 667). Although such a letter was not introduced into evidence, the Board concludes from the Agency practice that the inspection of June 24, 1977 provided Carlstrom with additional notice that the use of fly ash for cover was forbidden. The second fly ash violation of December 13, 1977 therefore indicates a serious disregard for the necessity of not using fly ash for cover.

In Count III Respondent was found to have had uncovered refuse present on the site on December 13, 1977 and August 15, 1978. The mitigating factors are largely the same as for the fly ash violations with the exception of the character and degree of injury to the health and welfare It is questionable whether it is better to cover with fly ash or not to cover at all. Fly ash creates harmful leachates and thus fails one of the purposes of cover, to prevent leachate. On the other hand, it does fill the voids in the refuse, which aids in compaction and prevents use as vector habitat. It probably also helps prevent litter, although there is a possibility that the fly ash itself could blow. On the balance, the Board concludes that failure to cover does not pose such a severe harm to the public as covering with fly ash, although there is still a substantial risk of public harm.

Carlstrom received written notice that uncovered refuse was found on the site on August 20, 1976 and May 25, 1977 (Comp. Ex. 9, 18). He thus had ample notice that he was in violation prior to the inspection of December 13, 1977. From the Agency practice, the Board concludes that the inspection itself served as additional notice prior to the second violation of August 16, 1978, although there is no direct evidence of this in the record (R. 14, 667). In addition, this second violation occurred about two and one-half months after the original complaint was filed. That complaint also charged cover violations and served as additional notice to Respondent of the need for daily cover.

In Count V Respondent was found to have filled from the top of the fill rather than the toe in violation of Rule 303(a). Failure to deposit refuse into the toe increases the danger of groundwater pollution. Refuse is supposed to be spread and compacted into cells not more than two feet thick with six inches of impermeable cover between cells. If this is properly done, sur-

face water should not penetrate cells to produce leachate. Mr. Jack Carlstrom, Jr. confirmed that operation of equipment over previously filled areas breaks up the cover (R. 670). The failure to fill from the toe thus aggravates the already serious danger of groundwater pollution from the site.

In Count VI Respondent was found to be in violation of permit conditions by accepting wooden pallets. These will rot in time. The action of anaerobic bacteria on putrescible material in the completed fill may result in gas and leachate discharge and pose a danger to public health. Carlstrom was granted the permit for the site only to accept innocuous, nonputrescible waste. Respondent also violated permit conditions by permitting waste to migrate from the site in the form of water carrying contaminants and flowing across the site into a drainage ditch at the south boundary of the site (R. 173; Comp. Ex. 22 F and G). This water had unnatural color and floating oil and posed an immediate danger to public welfare. This could have been prevented by construction of the drainage ways as outlined in the original application. Even granting that the ditch outlined may have proved impossible to build, Respondent should have applied for a supplemental permit after realizing this. Maintenance of proper cover and utilization of proper operating procedures would have reduced the danger to the public health. Respondent will be ordered to take steps to correct this situation. Having considered Section 33(c), the Board concludes that a penalty of $1500 is necessary to aid enforcement of the Act.

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

ORDER

It is the Order of the Pollution Control Board that:

1. Respondent Jack Carlstrom d/b/a Lockport Trucking Co., is in violation of Section 21(b), (e), (f) of the Act and Board Rules 303(a), 305(a) and 310(b) of Chapter 7: Solid Waste.

2. Respondent shall cease and desist from further violations of the Act and Board Rules.

3. Respondent shall do any and all acts reasonably necessary to control the conduit of influent water to prevent ponding of water on the site.

4. Respondent shall install and operate leachate monitoring wells around the site with the approval of the Agency.

5. Thirty days from the date of this Order the Agency is directed to revoke Respondent's permits #73-6, #74-70 and #75-4 in so far as they permit Respondent to accept FCC catalyst fines, hot lime sludge, calcium sulfate dried sludge and fly ash and thereafter Respondent shall not accept at the site the materials listed above until such time as the Agency shall issue supplemental permits covering the materials.

6. Within thirty-five days of the date of this Order, Respondent shall, by certified check or money order payable to the State of Illinois, pay a civil penalty of $1500 which is to be sent to:

State of Illinois
Fiscal Services Division
Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22ND day of June 1979 by a vote of 5-0.

Christan L. Moffett
Christan L. Moffett, Clerk
Illinois Pollution Control Board