UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE ADMINISTRATOR

IN RE	)	
	)	RCRA-85-53-R
LEE BRASS COMPANY	)	
	)	
Respondent	)	

Resource Conservation and Recovery Act - Proper Party - Where two violations cited in the complaint involve tasks that had to be done during the first year of groundwater monitoring and the the named Respondent neither owned the facility in question or was in existence at that time, such violations must be dismissed.

Resource Conservation and Recovery Act - Violation Cited in the Complaint - Where it appears that a violation specified in the complaint was unfounded, the Agency will not be permitted to introduce evidence at the hearing on a related violation not referred to in the complaint.

Resource Conservation and Recovery Act - Discarded Waste - A violation cited in the complaint is dismissed based upon recent court ruling invalidating the Agency rules that supported said violation.

Resource Conservation and Recovery Act - Plan Preparation - Penalties levied for defects in sampling and analysis plan and groundwater assessment program outline.

Resource Conservation and Recovery Act - Groundwater Monitoring Program - Penalty levied for failure of monitoring wells to consistently yield usable samples and upgradient well not always upgradient to one downgradient well.

Appearances:

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For the Complainant

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For the Respondent

INITIAL DECISION

This proceeding under Section 3008 of the Solid Waste Disposal Act, as amended, (RCRA or Act) (42 U.S.C. § 6928) was commenced on August 21, 1985 by the issuance of a complaint order and notice of opportunity for hearing by the Director of the Waste Management Division, Region IV, U.S. Environmental Protection Agency (EPA or Agency) charging Respondent, Lee Brass Company (Lee or Company) with violations of the Act and regulations.

The Complainant proposed a penalty in the amount of $52,500 against the Respondent. The Respondent answered essentially denying the violations as alleged in the complaint and requested a hearing. In addition to the proposed assessment of the above-mentioned penalties, the complaint also seeks to require in the compliance order thereof that the Respondent amend its Part A application to include a sand pile which the Respondent has historically considered not to be under RCRA and which the Agency with equal vigor suggests is covered under the Act. No penalty was proposed in the complaint for the violation as to the issue of the sand pile.

Following a rather lengthy pre-trial exchange and negotiation activity, a hearing was held on this matter in Atlanta, Georgia on October 21-23, 1986. Following the hearing and the availability of the transcript, the parties filed their respective findings of fact and conclusions of law and supporting briefs. The Court has carefully considered the entire record and the filings of the parties and any conclusions or suggestions made therein inconsistent with this decision are hereby rejected.

Factual Background

In this portion of the decision, I will liberally lift the factual background materials provided by the Respondent in its brief since it seems to be prepared in a logical manner and is well documented by references to the transcript.

The Respondent, Lee Brass, purchased a brass foundry located in Anniston, Alabama from Phelps Dodge Brass Company in October 1983. Phelps Dodge had operated the facility for a number of years prior to Respondent's purchase. During its operation of the foundry, Phelps Dodge had accumulated waste materials consisting of construction debris, such as concrete brick and cinder blocks, slag, soil, dust, and sand in the pile located generally in the south-eastern portion of the property. Phelps Dodge had also accumulated a foundry sand pile at its central location on the property. This foundry sand had been used previously in sand molds and as core butts, and as a consequence contained copper, brass, tin, lead and zinc.

In 1979, the Phelps Dodge began to assess the effect of the newly passed RCRA on foundry operations. A Phelps Dodge engineer, Mark Anderson, contacted the State of Alabama in mid-1979 and shortly thereafter in 1980 a State geologist, Paul Moser, and a State compliance engineer, Darrell Baker, inspected the property. Baker believed the material stored on the site might fail the EP toxicity test. Moser surveyed the foundry site visually and based on his observations that the property was elevated on the north side, concluded the groundwater flowed from north to south beneath the site. Moser directed Phelps Dodge to install a series of monitoring wells around the site, with an upgradient well located to the north and down-gradient wells located to the south of both the foundry sand pile and the waste pile.

Phelps Dodge retained the services of a nationally-known environmental engineering consulting firm, Dames and More, to drill the wells and perform a hydrological survey of the foundry site. Phelps Dodge also retained the services of Harmon Engineering, a division of Engineering Science, to perform testing and to develop a plan for closing the waste pile on site. Harmon developed such a plan to dispose of the waste pile on site and to remove the foundry sand pile to a different on-site location, and Phelps Dodge presented the plan orally to the State of Alabama for approval in early 1981.

The plan submitted for State approval presented separate issues with respect to the waste pile and foundry sand pile. Phelps Dodge proposed to enclose the waste pile in an enclosed landfill at the southeastern end of the property. That aspect of the plan also included proposals for a groundwater monitoring system and for a sampling and analysis plan for the landfill.

Phelps Dodge also proposed to collect and relocate the foundry sand to an area adjacent to which it proposed to build and implement its unique and patented technology for reclaiming metal and sand. Before it could implement the metal-sand plant, it was important for Phelps Dodge to determine whether Alabama and EPA would consider this metal-sand pile to be regulated under RCRA. Phelps Dodge intended to build the reclamation plant in Anniston at a cost of $2 million, if the agencies would not regulate the plant or the metal-sand pile. Otherwise, it intended to ship the material to Arizona to be used as a fluxing agent in Phelps Dodge's copper smelter.

In early 1981, the State of Alabama was apparently not sure whether it had the authority to approve the Phelps Dodge plan. In early 1981 and continuing for some time thereafter, the State expressed to Phelps Dodge the notion that it was not sure it had the power to approve the project and that

perhaps it would be best for Phelps Dodge to submit the plan to EPA for its perusal. Following several meeting with EPA personnel during this period and during one of the telephone conversations associated therewith, EPA informed Phelps Dodge that the plan met with its approval.

Specifically, EPA informed Phelps Dodge that the closure plan would be published for public comment and that EPA had determined that the sand-metal pile was not regulated. EPA also told Phelps Dodge that final approval would not come from the Federal agency, but from the State of Alabama. Thereafter, the State indicated its agreement that the metal-sand pile was not a regulated. The State also responded to the Phelps Dodge proposed closure of the waste pile.

In the Fall of 1980, Dames and More drilled the monitoring wells Moser had requested. The engineering firm drilled monitoring well number 1 (MW1) at the northern end of the property to serve as the upgradient well. Dames and More also drilled wells MW2, MW3, MW4 and MW5 to the south of the metal-sand pile and wells MW6, MW7 and MW8 to the south of the waste pile to serve as down-gradient wells. Dames and More measured each well, using a fixed elevation as a reference point to determine the level at which groundwater was encountered and Phelps Dodge verified the Dames and More data by taking depth measurements with reference to its own survey data.

Dames and More used its depth measurements to plot a groundwater profile taking along lines A-A1, as shown in Respondent's Exhibit No. 2, Plates 2 and 6. Those measurements established that well M4 is upgradient to wells MW1 and MW5 to the north and to MW6 and MW8 to the south. Dames and More thus concluded that the groundwater aquifer does not flow from north to south but rather flows from east to west under the foundry with components to the

southwest and northwest. Dames and More's findings with respect to groundwater flow beneath the foundry comports with the regional groundwater flow determination for the Anniston, Alabama area made by the U.S. Geological Survey. Consequently, Dames and More installed MW10 at the eastern end of the premises as a true upgradient well and the other Dames and More's wells were all down-gradient to MW10.

Dames and More's findings show also that the hydrogeological conditions underlying the foundry are complex and non-homogeneous. The geological formations underlying the facility include gravel, sandstone, siltstone, clay, and shale in folded layers. Dames and More, when drilling the wells, encountered those layers at different depths for the various wells. Those non-homogeneous layers caused water flow and the groundwater aquifer to be slow, which in turn results in slow rechargeing in certain wells such as MW3 and 13. The layers also caused turbidity in the aquifer and samples taken from the monitoring wells.

Dames and More also tested the groundwater for pesticides, herbicides, and radiological parameters, as well as for parameters establishing groundwater quality. Dames and More found that, in the fall of 1980, excess lead was present in samples taken from wells MW6, MW7 and MW8, and Phelps Dodge informed the State of that finding. As a consequence of that finding, the State required Phelps Dodge to locate all wells within a one mile radius of the foundry. Sampling of those wells by the State, however, showed no excess lead.

After EPA demanded that Phelps Dodge deal with Alabama, authorities, in July 1981, the State noted a number of objections to locating the proposed landfill for the waste pile at the southeastern corner of the property. The

State determined that groundwater in that area was somewhat artesian and too close to the proposed cell. Accordingly, Phelps Dodge proposed to locate the closed landfill on a western portion of the property, where a layer of clay would separate the landfill cell from the aquifer.

The State geologist visited the property again and performed another cursory hydrological survey. The State, which had a copy of the Dames and More report and knew of all of the Dames and More findings, agreed with Dames and More concerning the direction of groundwater flow in the aquifer beneath the foundry. Based on the Dames and More report, the report of the U.S. Geological Survey, and groundwater surface elevations taken from the monitoring wells drilled after the construction of the landfill, Dr. Harold R. Henry, an expert on hydrology, also agreed that the groundwater aquifer at the foundry flows in a westernly direction, with a southernly component. (See Transcript 526, 528, 548-50.)

The State agreed that locating the landfill on the western portion of the property would cure the deficiencies noted in the proposed southeastern location. Phelps Dodge therefore drafted a modified closure plan and submitted it to the State for approval. The modified plan proposed moving the waste pile into a completely enclosed 2-foot thick clay liner. Phelps Dodge also proposed installing three down-gradient wells being MW11, MW12 and MW13 to the west of the landfill and proposed using MW3 as the upgradient well. Phelps Dodge proposed the precise locations for MW11, MW12 and MW13. It was known at that time that well MW3 was a slow recovery well because it was drilled into silty clay material. It was also well known that the silty materials infiltrated the groundwater and that cloudy wells were common in that area of the country. The State approved the modified plan on October 26, 1981 including the location of each monitoring well.

The modified plan as approved by the State, included a groundwater sampling analysis plan. The State agreed that the only concern was whether metal contamination of the groundwater aquifer might take place. Accordingly, the State did not require testing for herbicides, pesticides and radioactive materials and it deferred the creation of a groundwater quality assessment plan until such time as contamination is found at the landfill. No metal contamination has been detected at any time subsequent to Phelps Dodge closure of the landfill.

After the State approved the modified plan, Phelps Dodge hired BHATE Engineering to install wells MW11, MW12 and MW13 west of the landfill at the approved locations. Also at that time, Phelps Dodge drafted a groundwater sampling plan which outlined the sampling methodology and provided for sample preservation.

In March 1984, approximately 6 months after Lee Brass purchased the property from Phelps Dodge, ADEM issued a compliance order to Respondent for allegedly failing to demonstrate financial assurance for post-closure operations of the landfill. Although Lee Brass had neither opened nor closed the landfill, and although the Respondent thought that Phelps Dodge had taken care of the financial assurance requirements, Respondent nonetheless inquired of ADEM as to the State's concerns. Following conversations with State personnel, Lee Brass entered into a Trust Agreement for the post-closure care of the landfill and submitted the agreement to ADEM in April 1984.

The Complaint and the Penalties Proposed Therein

As discussed above, the complaint proposed the levying of a fine totaling $52,500 against Respondent, Lee Brass Company. This fine is broken down as

follows: failure to maintain at least 3 down-gradient wells - $17,500; failure to demonstrate financial assurance - $9,500; failure to develop a sampling analysis plan minimally in compliance with 40 C.F.R. 265.92(a) and failure to sample for groundwater quality parameters, pesticides, herbicides and so forth during the first year - $6,500; failure to obtain 4 replicate measurements since the first 2 quarters, resulting in a failure to perform the statistical analysis as required - $6,500; failure to perform annual evaluations of groundwater surface elevations - $2,250; and failure to develop a groundwater quality assessment plan outline - $2,250. Also as above noted there was no attempt in the complaint to assess a fine against the Respondent concerning the sand pile but rather merely required in the compliance order thereof that the company's Part A application be modified to include the sand pile as a RCRA regulated unit and to thereafter regulate such facility and unit in accordance with the rules provided by RCRA.

Discussion and Conclusion

Several of the above-mentioned allegations can be disposed of rather quickly. The two $6,500 proposed penalties having to do with the failure to sample for certain parameters and to perform the statistical analysis and obtain 4 replicate measurements during the first two quarters must be dismissed in asmuch as these violations if in fact they occurred, occurred before Respondent, Lee Brass Company, was even in existence and should have been performed if they were not done by Phelps Dodge, Lee Brass' predecessor in title to the property. Therefore, at best, the Agency has the wrong Respondent in court as to these two elements and therefore the violations referred to in paragraphs 11 through 14 of the complaint must be dismissed as having been brought against the wrong party.*

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*This rather obvious flaw points up the perils associated with having non-legal program personnel draft complaints.

The issue which caused a lot of delay in bringing this matter to trial had to do with the status of the metal-sand pile which the Respondent has consistently argued is not covered by RCRA. Subsequent to the bringing of this action, the Agency has been dealing with a variance filed by the Respondent to remove the sand pile from the operation of the regulations and up to the date of the Hearing, the Agency had not made a final determination on that question and negotiations in regard thereto were ongoing. In any event, that portion of the compliance order which seeks to require the Respondent to amend its Part A application to amend its metal-sand pile must be stricken based upon a recent ruling of the U.S. Court of Appeals for the District of Columbia in the case of American Mining Congress v. U.S. Environmental Protection Agency, No. 85-1206, (D.C. Cir. July 31, 1987) which invalidated EPA's definition of the term "solid waste" as used in 40 C.F.R. Part 261. The issue before the court in that case was whether the Agency's definition of the term "discarded material" as used in the statutory definition "solid waste" in 42 U.S.C. § 6903(27) went beyond the language of the statute as well as the intent of Congress. The court, in essence, concluded that the plain and statutory language, the context in which the term "discarded" was used in the statute, and the legislative history all supported its conclusion that the Agency exceeded its statutory authority by attempting to regulate materials re-used within an industry's ongoing production process. As will be discussed below the material contained in the Respondent's metal-sand pile are clearly not discarded as that term is commonly used, but is, in fact, processed and reused both in its Anniston, Alabama facility and certain by-products resulting from its reconstitution are sold commercially to other corporations throughout the United States.

As discussed above, both the State of Alabama and EPA initially approved the plan which Phelps Dodge had for its use of the sand pile and the corporation did, in fact, construct a $2 million facility which the sand pile contents are treated to recover both the valuable components and to render the sand contained therein usable in the foundry process. Without getting into great detail concerning exactly how this system works, it is apparent to the Court that the material contained in the metal-sand pile is not discarded or "thrown away" as an Agency witness testified but is actually re-used and re-cycled within the operation of the facility and has great commercial value. I am therefore of the opinion based on this recent court decision and the testimony produced at the Hearing in this regard that that portion of the compliance order hereinabove referred to attempting to require the Respondent to amend its Part A application to bring the sand-metal pile within the purview of RCRA regulations must be stricken.

Similarly the allegations in the complaint contained in Paragraph 23 having to do with the alleged failure of Lee Brass Company to have financial responsibility documents submitted pursuant to 40 C.F.R. 265 Subpart H must also be dismissed. Although the complaint has 4 subparts under Paragraph 23 the testimony at the Hearing was that the only violation that EPA was able to find upon subsequent review of the records, both at the State level and its own files, was the failure to demonstrate financial assurance for post-closure by the submission of an instrument identical to the wording specified in 40 C.F.R. 264.151.

As noted above, the landfill in question was opened and closed by Lee Brass' predecessor Phelps Dodge pursuant to an approved closure plan submitted to and approved by the State of Alabama. Mr. Allison, the witness who testified in regard to this issue, stated that the regulations require that

the post-closure financial assurance regulation became effective on June 15, 1983 and as stated above, the Respondent in this case was not in existence at that point in time and therefore can not be held responsible for the failure of its predecessor in title to provide the document in question to the State of Alabama. Given the fact that Phelps Dodge is not exactly what one would consider a "mom and pop" operation but rather a large multi-national corporation, it is logical to assume, as Lee Brass did, that all the necessary documentation relative to the closure and post-closure requirements had been properly filed with the State of Alabama before Lee Brass took possession of the premises. It, therefore, came as a surprise to Lee Brass when they were advised by notice of violation from the State of Alabama, in 1984, that the post-closure financial assurance document had, in fact, not been provided to it. Upon being apprised of this fact, Lee Brass immediately entered into a trust agreement with the SouthTrust Bank of Calhoun County, a national bank in the State of Alabama, and filed such trust agreement with the State of Alabama on or about April 18, 1984. This document is identical to its wording to that specified in the above-referenced regulation and for that reason also the allegation concerning the Respondent's failure to provide such documentation must fail. This is true for two reasons--one is that as indicated the person responsible for providing the closure and post-closure assurances was Phelps Dodge Corporation and at the time the document was required to be filed with the State, Lee Brass Company was not even in existence. In any event, as soon as they were advised of this discrepancy they immediately filed the required trust agreement with the State of Alabama. Why EPA was unable to discover this document in its perusal of the Alabama records is one which will never be answered and is certainly not the concern of either the Court or the Respondent. The document which appears as an

exhibit in this proceeding is in fact identical in language as that required by the regulation and the Agency, in a belated attempt to attack its validity, raised at the Hearing concerns about the amount of the money set aside in the trust for the post-closure care. This testimony was disallowed by the Court as being outside of the pleadings and a violation not alleged in the complaint and therefore was in my judgement properly excluded from the record. For these two reasons the allegation in the complaint concerning the failure of the Respondent to provide the necessary financial responsibility documents must be dismissed.

Paragraph 10 of the complaint alleges that the Respondent failed to comply with the sampling analysis requirements found at 40 C.F.R. 265.92(a). Specifically, the complaint alleges that the sampling analysis plan provided to EPA for review on November 19, 1984 contained the following violations: (a) the plan did not address sample preservation and shipment; (b) the plan did not address the chain of custody procedures; (c) specific analytical procedures are not included. Paragraph 10 also contains sub-paragraphs D, E and F, which during the course of the Hearing the EPA witness admitted were not actually required by the regulations and to that extent do not constitute violations. Sub-paragraph F of the complaint states that PH and specific conduction measurements are being conducted in the laboratory. The complaint admits that although not a violation EPA recommends these measures to be performed in the field as samples are taken.

As to this violation, the Respondent argues that: (1) the closure and post-closure plan submitted to the State of Alabama and approved by it addressed these concerns in a general way and that, in any event, subsequent to the bringing of this action a new groundwater sampling analysis plan was prepared on September 18, 1985 and submitted to the Agency which upon perusal

by the Court apparently meets the concerns addressed in the complaint. Further inasmuch as the laboratory where the sample analysis are performed are within 200 feet of the wells in question, the failure of the plan to address sample analysis preservation in shipment and chain of custody do not appear to be serious violations. It is also pointed out by Respondent that during this entire period from the time the waste pile was closed and the post-closure procedures and plan were submitted to the State of Alabama, which had the authority to approve it, no one has suggested to it that there was any deficiencies in the plan or any of the parts thereof until the bringing of this complaint. Since the failure to have a complete sampling analysis in existence is a continuing one, the defense heretofor suggested by the Respondent that it is not responsible for actions not taken by its predecessor in title Phelps Dodge, is not well taken and I find that a violation of this aspect of the complaint exists. I am, however, of the opinion that the gravity of the violation is very small and that it for all practical purposes constitutes almost a de minimus violations of the regulations for the reasons discussed immediately above. My review of the file in this regard and the record associated therewith suggests that a penalty in the amount of $500 is appropriate for the violation involving the failure to have a proper sampling analysis plan in existence at the time EPA inspected the facility.

Paragraph 16 of the complaint alleges that the Respondent failed to prepare a groundwater quality assessment program outline, as required by 40 C.F.R. 265.93(a). For this violation, the Agency suggested a penalty of $2,250. The Agency's rationale for arriving at this figure was that they considered the extent of deviation from the requirements to be major and the potential for harm to be minor, thus picking the mid-range of the penalty matrix in arriving at the above mentioned figure. In regard to this viola-

tion, the record is clear that the EPA and the State of Alabama both knew or certainly in the case of EPA, should have known, that the only contaminant of concern involving the waste pile was lead and that was the primary constituent that the groundwater monitoring system was designed and implemented to detect. This is not to suggest that Phelps Dodge did not also, as indicated previously, monitor in the early stages of its program for the other parameters required by the regulations. The closure and post-closure plans submitted by Phelps Dodge, at the suggestion of EPA, to the State of Alabama indicated that they did not intend to prepare a groundwater quality assessment plan outline unless the groundwater sampling program which it had instituted and had in operation detected the presence of lead in any statistically significant amount and at that time a groundwater monitoring/groundwater quality assessment plan would be provided. The record reveals that at no point in time subsequent to Alabama's approval of this proposal did any Agency, including EPA, raise any questions concerning the failure of either Phelps Dodge or Lee Brass Company to prepare such an outline. It was not until the issuance of the complaint that Lee Brass had any reason to suspect the post-closure plan and closure plan which was approved by the State of Alabama was in any way defective. It should also be noted that at the time of the filing of its answer the Respondent herein attached thereto a groundwater assessment outline which appears to contain the necessary elements referred to in the above mentioned regulation. Under the circumstances in this case, I am of the opinion that the potential for harm and the extent of deviation from the requirements of the regulations are minor in both instances and therefore a penalty in the amount of $500 is appropriate for this violation.

Paragraph 8 of the complaint states that the Respondent failed to evaluate, at least annually, the data on groundwater surface elevations in order to verify proper monitoring well locations, as required by 40 C.F.R. 265.93(f). The complaint goes on to say that the evaluation would have indicated that the existing monitoring wells are improperly placed. This allegation is tied in rather closely with the primary allegation of the complaint for which the largest portion of the penalty was assessed and that is that the groundwater monitoring system put in place by Phelps Dodge was inadequate since the upgradient well was not hydraulically upgradient, a contention which the Respondent vigorously denies.

The Agency witness who testified on the penalty calculations stated that he considered the potential for harm to be minor and the extent of deviation to be major since his analysis of the files would suggest that the Respondent was not able to take annual evaluations of groundwater surface elevations because of the way in which the depth of water in the wells was measured, therefore arriving at a proposed penalty of $2,250 for this violation. As is the case with all calculations made by the Agency in this matter no adjustments either up or down were made for the other aspects of the penalty policy which the regulations recognize.

The regulation which the Agency alleges was violated in this instance reads as follows:

> "Unless the groundwater is monitored to satisfy the requirements of § 265.93(d)(4) at least annually the owner or operator must evaluate the data on groundwater surface elevations obtained under § 265.92(e) to determine whether requirements under § 265.91A for locating the monitoring wells continues to be satified. If the evaluation shows that § 265.91A is no longer satisfied, the owner or operator must immediately modify the number, location or depth of the montioring wells to bring the groundwater monitoring system in compliance with this requirement."

My reading of that regulation suggests that its effect is only triggered when there is reason to believe that there has been some migration of hazardous wastes constituents of concern from the landfill in question and that if that happens then the groundwater monitoring assessment plan previously prepared must be put into effect. My reading of this record suggests that there has been no migration of hazardous wastes constituents from the landfill and therefore the requirements on the part of a facility owner to implement sub-paragraph F of § 265.93 has not been triggered. In any event, there was nothing in the history of the operation of the groundwater's monitoring system in place which would have suggested that the wells were not properly located in this instance. This as I have stated before refers back to the major violation alleged in the complaint and that is that the groundwater monitoring system is in itself defective. Consequently as I read this record and as I view the regulations hereinabove quoted the Agency has proved no violation in regard to this paragraph of the complaint and therefore it must be dismissed. In addition to the reasons hereinabove stated the Agency's notion of the inability of the Respondent to evaluate the groundwater elevations in the wells was incorrect inasmuch as they assumed that the only basis that the Respondent used to measure them was to measure the distance from the surface of the ground to the surface of the water in the wells and that type of measurement is impermissible. The record in its totality shows that this was not the case; that there was in fact a standard elevation used by the Respondent and its predecessor, Phelps Dodge, to locate the wells and to monitor the elevations therein in a manner consistent with the regulations and for this additional reason the allegations in that paragraph of the complaint must fail.

This is borne out by the cross-examination of the EPA witness who testified on this question on pages 53-54 of the transcript wherein he was asked: "You don't doubt that Lee Brass had a reference point relative to the well depth of water, do you?" Answer: "At the time of the review, I doubted it." Question: "Do you have any doubt about it now?" Following some objections by EPA counsel the question was repeated on page 54 of the transcript: "Do you have any doubt that there is a reference point for that depth measurement now?" "At this time?" the witness says. Counsel says: "Yes, sir." The witness answers: "No."

Paragraph 9 of the complaint states that the Respondent failed to comply with the minimum requirements for a groundwater monitoring system as required by 40 C.F.R. 265.91(a). The Agency based this allegation on three factors, the primary one being that historic groundwater elevation data indicates that well W-3 designated as the upgradient well is not hydraulically upgradient. The second aspect is that wells W-3 and W-13 have not consistently yielded enough water for sampling by Respondent. Thirdly, that EPA samples from wells W-11, W-12 and W-13 on November 19, 1984 were turbid and that turbidity is indicative of in adequate well construction and/or design.

Obviously the major element of EPA's concern in this matter has to do with whether or not well W-3 is in fact upgradient from the three wells designated by the Respondent as being down-gradient from the landfill in question. At this juncture it is interesting to note that the EPA regional geological expert on this issue suggested that another well be drilled adjacent to well W-3 even though the Agency's contention is that well W-3 is not properly located upgradient from the landfill. In any event the issue as to whether or not the upgradient well is in fact upgradient turns on the testimony

of two experts namely Mr. Scott Quails, a state geologist from the State of Alabama, and Dr. Harold Henry, the expert retained by the Respondent to testify at the Hearing.

Based on the historic data developed by the two consulting firms, that is Dames and More and Harmon Engineering, it is the Respondent's contention that the direction of flow of groundwater aquifer was from east to west with a southernly and northernly component. Dr. Harold Henry, the above-mentioned Respondent's expert witness, whose credentials are rather impressive, reviewed all of the groundwater data taken from 1984-1986 for wells MW3, MW11, MW12 and MW13, as well as the historic data developed by the Phelps Dodge's consultants in conjunction with the State of Alabama and the U.S. Geological Survey for the Anniston, Alabama area which also suggests that the flow in the area on a regional basis is westernly with a southernly component. Based on his review of all of this data Dr. Henry determined that at the foundry site the groundwater aquifer flows in westernly direction with a southern component. Dr. Henry was present during the time that the EPA witness, Scott Qualls, testified on this issue and the record reflects that Mr. Qualls' conclusion as to direction of flow which he suggests is from north to south was based primarily on the solution to a "3 point problem".* It was also implicit in EPA's testimony that, assuming that the Dames and More data was accurate, for some reason the flow had changed in the 5 or 6 years since Dames and More plotted its data and reached its conclusion as to direction of flow. Dr. Henry emphatically rejected both that notion and the use of the 3 point problem to determine the direction of groundwater flow in the instant case. According to Dr. Henry, solutions to 3 point problems are used only in iso-

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*A description of this process is found on page 142 of the transcript.

lated instances where no data is available other than 3 data points. The solution to such a rather simple problem does not account or take into account dispersion of the flow of the aquifer or for the non-homogeneous geology in which the aquifer flows. As an aside it should be noted at this juncture that EPA would like to believe that subsurface groundwater flows are on a nicely designated incline without any interference and one can quite easily determine upgradient and downgradient wells by the use of rather primitive and simplistic methodology. As indicated above in the background discussion the nature of the subsurface conditions in and around the Respondent's facility does not conform to this rather textbook description of subsurface information of groundwater flow and thus in this case as well as others the results obtained in the operation of a groundwater monitoring system are not always perfect and in many instances do not conform to the precise letter of the Agency's groundwater monitoring regulations. In any event Dr. Henry testified it was inappropriate to use a 3 point solution when data from other wells is available and when boundary conditions such as the direction of regional flow are known. It was Dr. Henry's opinion that the direction of flow determined by solving a 3 point problem will change as more data points are added. On that basis it was Dr. Henry's opinion that the direction of flow that Mr. Qualls arrived at would inevitably change to the west when the additional information is taken into account.

As to EPA's suggestion that the direction of flow might have changed since the Dames and More study Dr. Henry was of the opinion that long term flow direction will stay the same absent the introduction of some new factors in the area such as the introduction of a new industry withdrawing large amounts of water or paving over an area large enough area of ground to effect

the groundwater recharge pattern, all of which could effect the localized direction of flow. There is in this record however no evidence that such change had occurred in the area since Dames and More rendered its opinion.

My review of the totality of the evidence including all of the exhibits and the testimony and the various experts that testified on this question cause me to come to the conclusion that the preponderance of the evidence on the direction of groundwater flow at Lee Brass site is that the groundwater aquifer flows from east to west with a southernly component. That being the case it necessarily follows that monitoring well number 3 is located upgradient to the landfill.

As indicated by the terms of the complaint, EPA has also suggested that monitoring well number 3 is not upgradient and may not be a proper well because the water taken from the well is on occasion turbid and sometimes dry and that on occasions the water in monitoring well number 13 is sometimes higher than the water in monitoring well number 3. The Respondent attempts to explain these concerns by Dr. Henry's description of the aquifer beneath the foundry as being very poor with very low permeability and is very silty with lots of clay. Because of those characteristics, Dr. Henry would expect that on many occasions the water obtained from the monitoring wells would be turbid and would be very slow to fill. EPA's investigator, Mr. Hunter, who by his own admission had little knowledge of the nature of the aquifer underlying the site when he inspected the facility and did not review any of the Alabama monitoring information was quite concerned when he bailed out monitoring well number 3 it did not recharge within the same day and he was thus not able to, in his judgement, obtain a representative sample of the water contained therein. When questioned on this point, Mr. Hunter was of the opinion that even if a well is slow to fill the Agency's procedure is to

attempt to obtain a sample on the same day that the well is purged or bailed and that he did not attempt to obtain a sample from monitoring well number 3 on any day subsequent to the day it was bailed out. An evaluation of the data concerning these wells and the nature of the aquifer underlying the facility would have suggested to Mr. Hunter that it probably would have been prudent to wait until the following day to allow the well to refill to take the sample that he desired rather than to have assumed based on that one day's experience that the well was incapable of producing adequate samples.

There is however evidence in the record to suggest that on many occasions it is not possible to obtain samples from the upgradient and downgradient wells on the same day and thus there are gaps in the data which cause the Agency some concern. As suggested above, it may well be that the very nature of the strata and subsurface formations under the facility will cause this to happen. The appearance of such data in the record is perhaps a ligitimate concern on the part of the Agency and in that vein it should be noted that the Respondent has agreed to relocate its upgradient well and to redevelop the three existing wells at a cost in excess of $15,000. Hopefully, this additional work on the part of the Respondent will allow the wells in question to provide more consistent data and thus satisfy EPA's concerns in that regard.

The Agency witness who testified on the question of the penalty associated with the problems associated with the grounwater monitoring system suggested a penalty of $17,500 which he calculated as follows. He considered the potential for harm in the penalty matrix to be major and the extent of deviation to be moderate, therefore arriving at a matrix cell range of from $15,000 to $19,999. Choosing the mid-point of those figures he arrived at

the above-mentioned $17,500. I view this figure as a little high under the circumstances in this case since in case where there is no groundwater monitoring system in existence at all the total penalty allowable for a 1-day violation which is what the Agency calculated would be $25,000 in the mid-range of that figure would be $22,500. Given the fact that the Respondent and its predecessor expended a great deal of money to develop and operate the groundwater monitoring system in question it occurs to me that a penalty of a lesser amount would be appropriate. Even though I feel that the groundwater aquifer direction flow as suggested by the Respondent may in fact be the proper one the system as it is currently operated does have problems where in many instances one of the downgradient wells does in fact show a higher water elevation that the upgradient well thus raising some concerns about the efficacy of the use of these wells for the purpose envisioned by the regulations. I would therefore characterize the extent of deviation from the requirements to be in the minor range and the potential for harm to be in the moderate range and under the circumstances in this case I feel that the lower figure of the penalty matrix in this regard would be more appropriate, that being $5,000.

ORDER[1]

Pursuant to the Solid Waste Disposal Act, § 3008, as amended, 42 U.S.C. 6928, the following order is entered against Respondent, Lee Brass Company:

1. (a) A civil penalty of $6,000 is assessed against Respondent for violations of the Solid Waste Disposal Act found herein.

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[1]Unless an appeal is taken pursuant to 40 C.F.R. § 22.30, or the Administrator elects to review this Decision on his own motion, the Decision shall become the Final Order of the Administrator. See 40 C.F.R. § 22.27(c).

(b) Payment of the full amount of the civil penalty assessed shall be made within sixty (60) days of the service of the Final Order upon Respondent, Lee Brass Company, by forwarding to the Regional Hearing Clerk, at the following address, a cashiers' check or certified check payable to the Treasurer, United States of America, in such amount.

EPA-Region IV
(Regional Hearing Clerk)
P.O. Box 100142
Atlanta, Georgia 30384

2. To the extent not already accomplished, the Respondent shall within 45 days implement a groundwater monitoring program that complies with the requirements of 40 C.F.R. 265, Subpart F and within 20 days thereafter submit documentation of compliance with said regulation. Such documentation shall be sent to the parties identified in the order portion of the complaint.

DATED: September 30, 1987

Thomas B. Yost
Administrative Law Judge