M E M O R A N D U M
ALAMEDA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
HAZARDOUS MATERIALS DIVISION

DATE: January 15, 1992

TO: Rafat Shahid, Assistant Agency Director

FROM: Scott Seery, Hazardous Materials Specialist

SUBJ: American Brass and Iron Foundry / 6000 S Corporation: foundry sand disposal issue

INTRODUCTION

Since approximately 1988, the City of Fremont Environmental Protection Division (EPD) (formerly known as the Hazardous Materials Division), with technical and oversight assistance provided by the Alameda County Water District (ACWD) and San Francisco Bay Regional Water Quality Control Board (RWQCB), has been overseeing the assessment and cleanup of an approximate 42 acre mixed use commercial and retail property known as the 6000 S Corporation (site). The site is located at 6000 Stevenson Boulevard, southwest of Interstate 880, on the southwestern corner of Albrae Street and Stevenson Boulevard, Fremont.

The site is approximately 75% developed, primarily in the form of commercial and retail buildings, and parking lots. On portions of the undeveloped section of the site are presently found stockpiles of approximately 3,000 - 4,000 cubic yards of foundry sand derived from American Brass and Iron Foundry in Oakland around 1986. Other soil stockpiles are located on-site, derived from other areas of the site. However, the focus of this memorandum will be upon the foundry sands located here.

HISTORY - 6000 S Corporation Property

Site Use

The site was first developed in 1963 by Pullman Trailmobile, a manufacturer of large long-haul and other trailers for the trucking and transportation industry. Several large industrial buildings were constructed by Pullman to house their manufacturing and warehousing facilities. Pullman moved operations to Fresno in 1976.

Mr. Dale Sobek purchased the property in 1978. Between 1978 and 1979, two of the buildings were leased to Polymir Industries, a manufacturer of polyurethane foam products. California Oil Recyclers leased one of the remaining buildings from 1978 until 1981 for waste oil treatment, storage and recycling. Waste oil was apparently mixed with diesel fuel to produce a fuel oil for resale. Waste oil and product was stored in several 12,000 gallon above-ground storage tanks.

Golden Gate Auto Auction leased one building and an extensive yard area from 1978 to 1983 to store 2,000 - 4,000 cars. Golden Gate installed an underground storage tank upon their moving onto the site. Peterbilt Engineers leased one building as an engineering office from 1979 until 1987. From 1980 to 1984, Sobex, Inc., a chemical consulting firm, leased one of the buildings. Raychem Corporation leased one warehouse from 1980 until 1987 to store office furnishings, equipment, and palletized supplies.

Between 1980 and 1987, three additional buildings were constructed to house several businesses, including a number of furniture retailers, a Home Depot store, and other retail outlets, business or administrative offices, including that of the 6000 S Corporation.

Environmental Investigations

In 1987, Mr. Sobek reportedly initiated an environmental characterization of the property, presumably to facilitate approval of a proposal to the City of Fremont to rezone the property, a process began by Mr. Sobek in 1988. Earth Metrics, Inc. issued a report dated January 12, 1988 (revised February 1, 1988) which discussed the site's use history (from which the foregoing site history was gleaned), spill records, areas of potential environmental concern, and proposed actions to address those concerns.

Potential areas of environmental concern identified in this report included, but were not limited to, the following:

- the former California Oil Recyclers site - past spills, PCBs, drum storage areas, tank farm area, "sunken pit," etc.
- former Golden Gate Auto Auction site - underground storage tank site
- remaining above ground tanks
- foundry sands
- drum storage area

This report also incorporates copies of a July 1986 Frederiksen Engineering laboratory analyses report which reportedly documents the analysis of one (1) foundry sand sample for the presence of 17 Title 22 metals. This lab report purportedly reflects the analyses of foundry sand deposited at the 6000 S site, and shows below TTLC values for the target metals. No chain-of-custody documentation is provided.

During 1990, a General Plan Amendment (GPA) was proposed for the property. In accordance with the California Environmental Quality Act, the City of Fremont required that an Environmental Impact Report (EIR) be prepared. The Draft EIR was circulated for public review in March 1990. It is my understanding that the environmental areas of concern essentially paralleled those of the previous report by Earth Metrics. Several rounds of comment letters and internal memos were authored by the city's EPD and Community Development Department, ACWD, RWQCB, and Mr. Sobek, and others to address their concerns regarding the EIR and proposed mitigation measures. The Final EIR document was published in July 1990. Much debate ensued, however, between the agencies and Mr. Sobek regarding the scope of the work to be done, and the timelines for completion of specific assessment and clean up tasks.

During 1990 and 1991, several reports and proposals were written by Harding-Lawson Associates, Levine-Fricke, and ENSCO to address the many environmental concerns raised by the City of Fremont, ACWD, and RWQCB, as outlined in the EIR. One such report by Levine-Fricke, dated July 1990, documents previous work to characterize the foundry sand by ENSCO in 1989, as well as the results of their own characterization sampling of the foundry sands. The ENSCO report indicates that a single sample was analyzed in 1989 for six metals: the soluble **lead** concentration exceeded the state STLC.

The Levine-Fricke report, however, documenting work done by them (Levine-Fricke) in 1990, indicates that twelve "randomly-collected" samples were composited into three: one of the composited samples was analyzed for total and dissolved CAM metals; the other two samples were only analyzed for soluble lead. The results indicate that the total **lead** concentration from one sample (2,500 mg/kg) exceeded the state TTLC.

After review of the cited Levine-Fricke report, the Fremont EPD authored correspondence to Mr. Sobek in July 1990 outlining several options to address the proper disposal, treatment, or encapsulation of the subject foundry sand. Each option required the submittal of a detailed work plan, report of waste discharge (ROWD), and/or risk assessment to address the particular idiosyncracies of each option. Deadlines were set for the submittal of a brief technical report describing the chosen option.

Around this time Mr. Sobek and his attorney began negotiating with ABI to remove the foundry sand from the site. A meeting held in late August 1990, the results of which indicated that ABI and Mr. Sobek have engaged in dialogue, and that the sand would be removed "in the near future."

During September 1990, Mr. Sobek was advised in correspondence from the Fremont EPD that a ROWD was required to be submitted to the RWQCB should he continue to choose to allow the foundry sand to remain on-site, essentially making his site an unpermitted landfill. The Fremont EPD, in correspondence dated November 20, 1990, expressed concern over the continued delays associated with the appropriate disposal of the foundry sand. Mr. Sobek was advised that enforcement action may follow should delays continue.

Finally, in correspondence dated January 10, 1991, the Fremont EPD officially referred the foundry sand issue to ACDEH for oversight, citing Mr. Sobek's continued delays in initiating the appropriate disposition of the foundry sands. A copy of this letter is attached.

ACDEH OVERSIGHT

This Department advised Mr. Sobek, in correspondence dated January 31, 1991, that ACDEH would be the lead agency for oversight of the foundry sand issue (copy attached). He was further advised that the Department would be studying the case in the ensuing weeks, and that the foundry sands should not be manipulated, moved, redistributed, transported, or otherwise handled until such activity was approved by the Department. An oversight deposit of $1340 was requested.

The following month I was in contact with Mr. Sobek's attorney, Larry Lulofs, Esq. Mr. Lulofs confirmed that a lawsuit had been filed against ABI regarding a "sharing of costs" for the proper handling of the foundry sand. He indicated that the reason the sand issue had not been resolved was for a lack of revenues.

During the period of between January and May 1991, I reviewed the (plethora) of facts associated with this case, which included, among others, the following tasks:

- review of the range of regulatory law, standards, and policy, and any applicable exemptions which govern the generation, treatment, and disposal of iron foundry waste streams
- inspection of the source foundry (ABI) to determine their waste handling practices

- review of the air emission permit standards and compliance history of ABI
- interviews with industry and regulatory professionals acquainted with the chemistry of iron foundry waste streams
- review of correspondence pertaining to the subject site
- review of all sampling and contaminant analysis data presented in consultant reports
- review of technical references describing foundry furnace and air pollution abatement equipment technologies

One additional task was to call upon my experience in 1988 while I was working on a federal "Superfund" site in Michigan as a geologist with an environmental consultant. The project involved the assessment of a rural site formerly used as a repository for waste foundry sands. Ground water and soils were impacted not only by the expected heavy metals, but also by certain polyaromatic hydrocarbons (PAH), also known as polynuclear aromatic (PNA) compounds. Many of these compounds are known or suspected human carcinogens. Such compounds are not ordinarily expected to be a component of foundry sands. Yet they were found there.

It was reasoned that other (foundry) waste streams must have been mixed with the foundry sands before disposal. This brought me to study the foundry processes in detail, concentrating on other waste streams created by such a facility.

My research, which included the review of ABI's air emission history archived at the BAAQMD and the study of several volumes of the Encyclopedia of Chemical Technology, Third Edition, uncovered that ABI uses a coke-fueled cupola furnace. An afterburner treats exhaust gases to remove any unburned hydrocarbons before the resultant exhaust is routed to the baghouse for the removal of remaining particulates. Should the afterburner fail to operate, or operate outside its most efficient range of temperatures, the baghouse would be inundated by unburned organic compounds. ABI's air emission compliance record, for the years preceding the delivery of foundry sand to the Fremont site, documents just this type occurrence on numerous occasions, several of which resulted in administrative and civil actions being brought by the BAAQMD.

The inefficient combustion of coke may produce PNA/PAHs, among other compounds. Also, depending upon the chlorine content of the source coke, dioxins may also be produced. Should the baghouse wastes be inundated by these compounds, and then mixed with the foundry sands before their disposal, the sands would be further contaminated by such organics. During an April 1991 inspection of ABI, it was disclosed that ABI traditionally mixed all solid waste streams together before "disposal."

In correspondence dated May 17, 1991, Mr. Sobek was advised that the foundry sands had not been adequately characterized, and that a foundry sand sampling proposal, reflecting Title 22 and U.S. EPA SW-846 sampling/analysis requirements, was to be submitted (copy attached). This sampling proposal, which was to include provisions for the analyses of metals, PNA/PAHs, and dioxins, was due July 1, 1991. Further details of the ACDEH discovery period are also presented in the cited correspondence.

After Mr. Sobek's failure to submit an appropriate sampling proposal, even after an extension, Mr. Sobek was advised, in correspondence dated August 23, 1991, that his case was to be referred to the District Attorney's office for appropriate action. A sampling plan was issued, under cover dated August 30, 1991 from Mr. Sobek's attorney, however, as this case had already been referred to the District Attorney, the plan was not reviewed.

On September 17, 1991, I met with Mr. Dave Robinson, an environmental engineer with ABI, recently hired to address this and other environmental "problems" associated with ABI's operation. He expressed an interest in "controlling" the foundry sands currently at the 6000 S site, and proposed moving it to ABI's facility in Oakland for the duration. He said that an area had already been cleared at their Oakland facility for storage of the material. Although his idea seemed to be a reasonable one, I advised him that it was not clear to me whether or not the state (DTSC) would allow the transport of uncharacterized, potentially hazardous waste to an unlicensed storage and treatment facility (ABI). I encouraged him to "test the water" with DTSC, however, to see if some sort of variance or exemption could be worked out to allow this sand to be transported. I agreed, personally, that bringing the foundry sand back to where it was generated didn't seem to be a big deal. I reiterated that it was up to ABI to investigate and pursue the specific transportation and storage requirements which must be met, and, again, directed him to contact DTSC. He said that he was to be discussing the issue with ABI's attorney later that day.

I met again October 1, 1991 with Mr. Robinson. He reiterated that he hoped to move the sands prior to their characterization from Fremont to ABI in Oakland. The reason for this, he said, was that ABI hoped to screen the sand to remove the big "chunks" (e.g., tires, slag, pipes, etc.) and, in the process, homogenize the waste before analyses are run. This would, in effect, reduce the number of samples required to characterize the waste. He said that he expected that it would take 12-18 months to screen all the foundry sand.

Mr. Robinson went on to say that he had been in contact with Mr. Robert Hoffman, DTSC legal office, regarding the sand issue, and that a letter had been written to Mr. Hoffman describing the situation. Mr. Robinson also mentioned that a settlement "hearing" had been scheduled between ABI and Sobek.

Mr. Robinson called October 11, 1991 indicating that, at the request of the DA's office, the settlement hearing had been rescheduled to sometime in November. He also indicated that the idea of moving the foundry sand from the site in Fremont to ABI is being explored by the parties' attorneys. Mr. Robinson closed by saying that once the legal issues had been resolved, he and I could work out the technical problems.

I spoke with Mr. Robert Hoffman (DTSC-legal) on October 30, 1991. He confirmed that ABI's Mr. Robinson had sent him a letter, dated September 19, 1991. [This letter (copy attached) asked Mr. Hoffman to determine whether the foundry sand could be considered a "recyclable" material by Title 22 standards. Mr. Robinson's only other concern was storage time at ABI's Oakland facility. None of the remaining issues regarding this foundry sand was discussed.] Conceptually, Mr. Hoffman felt it made sense to move the sand back to Oakland; however, he also felt that the permitting and logistical hurdles may be insurmountable.

A response to Mr. Robinson's letter was sent from DTSC, Alternative Technology Division, on October 16, 1992 (copy attached). This letter outlines the multitude of requirements that would need to be met should ABI want to "recycle" this waste stream. Foremost in the eyes of DTSC is that a determination be made whether the foundry sand is a hazardous waste. Further reading of the letter indicates that DTSC was also not aware of the entire scope of this particular foundry sand issue.

On November 7, 1991, I spoke with Ms. Jessie Schnell, the DTSC staff person "assigned" to this case. She indicated that ABI would likely need a variance to store the foundry sand on-site. She also indicated that the transportation issue has to be hammered out with DTSC's Transportation Unit.

I spoke with Ms. Schnell again December 4, 1991 to see if there had been any updates to the ABI case. She said that no contact had been made since the DTSC letter was issued in October.

I spoke with Mr. Robinson on December 12, 1991. He said that he had not dealt with the foundry sand issue since sending his letter to Mr. Hoffman in September. He attempted to rehash issues which we had already discussed in September and October, and offered no schedule for resolving the transportation/characterization dilemna.

DISCUSSION

Mr. Sobek has exhibited the marked ability to dilute and redirect the focus of the environmental cleanup of his site by bringing as many players into the fray as possible. This has been accomplished by generally distorting or miscommunicating the facts, failing to

provide copies of important letters/reports to particular agencies, pitting one agency against the other, missing report deadlines, changing consultants in the middle of a project (effectively buying more time), etc. Presently, our attention regarding the foundry sand has been redirected towards ABI. The fact remains, however, that the sand still resides in Fremont, and a year has passed since this case was taken over by ACDEH.

ABI, on the other hand, seems to be caught in the middle of a potential problem which (I believe) they believe will overwhelm them. Should the foundry sand at the Fremont site prove to be hazardous waste based not only on the heavy metal content, but also on the specific organic compounds cited earlier, their options for treatment, "recycling" and disposal will change dramatically (e.g., the sand may <u>not</u> be classified as a Title 22 "special waste" if it contains any hazardous components other than certain metals, etc.).

<u>RECOMMENDED ACTION</u>

I recommend that a meeting be called between ABI and 6000 S Corporation to resolve the issue of proper characterization and disposal/treatment of the subject foundry sands. This may be somewhat confounded as the parties are currently in litigation, and may not be free to discuss the issues without the added complexity of having council present.