


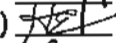
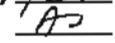


Memorandum

Date April 6, 1992

From Environmental Health Scientist, TSS, ERCB, DHAC, ATSDR (E32)

Subject Health Consultation: Gulf Coast Recycling (4009)
(aka Normandy Park Apartments)
Hillsborough County, Temple Terrace, FL.

To Chuck V. Pietrosewicz
ATSDR Regional Representative
U.S. EPA Region IV
Through: Director, DHAC (E32) 
Chief, ERCB, DHAC (E32) 
Chief, TSS, ERCB (E32) 

BACKGROUND AND STATEMENT OF ISSUES

On February 14, 1992, the Agency for Toxic Substances and Disease Registry (ATSDR) was requested by the Region IV U.S. Environmental Protection Agency (EPA) to comment on preliminary results of environmental sampling for lead at the Normandy Park Apartments in Temple Terrace, Florida [1]. ATSDR was also furnished with blood lead screening results from some of the residents of the apartment complex. ATSDR provided EPA with a verbal response to that request which concluded that the levels of lead in the soil posed a potential health threat and three children had blood lead levels that could be indicative of recent lead exposures. Several recommendations were made including further site characterization, blood lead testing of all children residing at the site, and the initiation of an educational program on the effects of lead exposure for residents [2]. The Hillsborough County Health Department (HCHD) has recently indicated that they are willing to perform additional blood lead testing. However, resources to conduct the recommended testing may be too limited to carry out the process [3].

The Normandy Park Apartments were constructed in the early 1970s. Prior to that, a secondary lead smelting facility occupied the site from the 1950s to 1963. Battery casings were cracked on site and the lead was reclaimed [4]. Government attention to conditions at the site occurred when a resident complained that her three small children had elevated levels of lead in their blood (maximum of 12 ug/dl). Local and state environmental departments then requested the property owner to conduct soil and groundwater sampling to determine the extent of lead contamination.

The site consists of approximately 8.25 acres and is bounded by some undeveloped land, offices, retail outlets, a tile company, another apartment complex, a laundromat, and the Temple Terrace City Hall. The apartment complex is divided into two sections: a southern "adults only" section and a northern "family section". The adults only section contains 64 residential units configured into a rectangle surrounding a courtyard [5]. Within the courtyard is a pool. Except for two bare areas, the remaining area is grass covered. Surrounding the buildings are paved parking areas [5].

The family section has 56 residential units arranged into two rectangles with an interconnecting courtyard. The courtyard contains a playground, pool, tennis court and sandbox. The remaining courtyard area is covered with grass, and the external area is paved and used for parking. Battery casings were found at or near the surface in both residential sections [5].

Surface soil samples (0 to 6 inches) were collected from 16 locations throughout the courtyard areas in October 1991 and analyzed for total lead content. A maximum concentration of 2,075 and 1,683 parts per million (ppm) lead were detected in the adults only and family sections, respectively [6]. Subsurface soil samples were also collected and indicated that lead contamination extended several feet below the surface. Maximum concentrations of 35,000 and 18,800 ppm lead were detected in the subsurface at two feet and four feet, respectively [6].

In December 1991 and January 1992, on-site monitoring wells were sampled for metals, volatile organic compounds (VOCs), pesticides, and polychlorinated biphenyls (PCBs) [5,7]. Lead was measured at a maximum concentration of 22 ppm (sample TW-5). Other contaminants were found below levels of health concern. According to records kept at the Southwest Florida Water Management District, there appear to be no domestic wells within a 1/4 mile downgradient of the site. There is an irrigation well located at the Normandy Park Apartments. Lead was measured in this well at <0.010 ppm.

Additional sampling of the site has been undertaken. However, the results are not yet available for inclusion in this health consultation. The sampling plan included surface soil samples (0 to 3 inches), where physical contact with the soil is likely to occur [8].

Venous blood samples were collected from 53 residents residing at the apartment complex and analyzed for lead content. No breakdown of the ages of those tested was provided. Many of the individuals tested are believed to be adults. Results showed two individuals to have slightly elevated blood lead levels [10, and 12 micrograms per deciliter (ug/dl)]. The remaining samples were <10 ug/dl with the majority falling in the ≤ 5 ug/dl range [9].

Temporary measures have been employed to reduce exposures. High concentration areas were either fenced-off or covered with mulch. At present, the EPA is reviewing removal/remedial options at the site. ATSDR has been requested to participate in a public availability meeting for concerned citizens to be held in Temple Terrace on April 9, 1992.

DISCUSSION

The ATSDR has previously concluded that levels of lead detected in the surface soils represent a potential health threat to the residents of the apartment complex and for neighboring children who may frequent the site [2]. Exposures can occur through the ingestion and inhalation of lead contaminated soil. Lead contaminated dust can also occur inside the residence if contaminated material is tracked indoors on shoes, clothing, or pets.

Susceptible populations include children and developing fetuses who are particularly prone to developmental effects due to lead exposure [10]. Young children (6 to 72 months) also engage in more frequent hand-to-mouth activity increasing the likelihood of ingesting contaminated soil and dust. Nutritional deficiencies (e.g. calcium and iron) may further enhance the adverse effects of lead [11].

Except for the two children that showed slightly elevated levels of blood lead (10 and 12 ug/dl), the preliminary blood data do not indicate that undue exposures have occurred, at least in the recent past. However, it is not certain that all of the children in the complex have been tested for blood lead content.

The grass cover at the site should reduce the potential for exposure to contaminated soil. In addition, temporary measures such as restricting access to, and mulching, areas with high lead concentrations should further reduce the potential for exposure until a permanent solution to the problem can be implemented. Education programs for the residents can also be initiated to address the health concerns

of residents and provide them with practical information to further reduce exposures.

CONCLUSIONS

1. Lead is present in the soil at levels of public health concern.
2. Additional blood lead sampling is needed to identify any exposed children.
3. The site has not been fully characterized with respect to surface soil concentrations (0 to 3 inches) of lead. Additional soil results are pending which may further characterize the health threat.

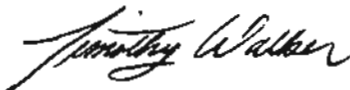
RECOMMENDATIONS

1. Conduct blood lead testing of Normandy Park residents, particularly for children ages 6 to 72 months and pregnant women. Consideration for testing should also be given to children from neighboring areas who can be identified as frequently playing on site. Follow-up testing should be done in accordance with the Centers for Disease Control (CDC) guidelines [11]. If elevated blood levels are detected, all sources of lead exposure may need to be identified (e.g., lead paint, indoor dust).
2. Provide appropriate health information and counseling to the residents. This could include advice about indoor dust controls (e.g. wet mopping) and other activities that would reduce exposures.
3. Continue to restrict access to high lead concentration areas.
4. Ensure that remediation is conducted with appropriate safe guards and air monitoring to prevent lead exposures to residents residing on site and at adjoining properties. The ATSDR is willing to review site safety plans for the planned remediation.

On April 1, 1992, this health consultation was reviewed by the ATSDR Health Activities Recommendation Panel (HARP). Based on the recommendations of the panel, it was proposed that the following statement be included in the health consultation:

A potential public health threat exists at the Normandy Park Apartments due to elevated levels of lead present in the surface soils. The Health Assessment Recommendations Panel (HARP) has determined that blood lead screening for all children residing at the apartment complex is indicated. The Panel also concluded that the potentially exposed population needs assistance understanding their potential for exposure, information on health effects, and measures that can be taken to reduce those exposures. Therefore, HARP has determined that community health education be conducted as a follow-up action. HARP also determined that providing up-to-date health information on lead to area physicians is indicated. ATSDR should interact with the local, state, and federal health officials in providing information and addressing the concerns of the community. An attached Public Health Action Plan has been developed.

If additional information becomes available, or if further clarification is needed, please do not hesitate to contact this office at (404) 639-0616.



Timothy Walker, M.S.P.H.

Attachment

REFERENCES

1. Memo from Chuck McPherson OSC, of EPA Region IV to Chuck Petrosewicz, ATSDR Region IV Representative on February 14, 1992.
2. ATSDR Record of Activity (AROA) concerning Normandy Park Apartments. February 27, 1992.
3. Conversation with Chuck Pietrosewicz of ATSDR Region IV on March 23, 1992.
4. EPA Draft News Release, March 16. 1992
5. Preliminary Soil and Groundwater Investigation, Normandy Park Apartments. Prepared by OHM Remediation Services Corp., February 11, 1992.
6. Assessment of Normandy Park Apartments Conducted by Hazardous Substance & Waste Management Research, Inc., December, 1991.
7. Environmental Solutions and Services, Inc. report on Normandy Park Apartments, January 13, 1992.
8. Sampling Plan, Prepared by: Roy F. Weston, Inc., February 14, 1992.
9. Lab results of blood samples from Normandy Park Apartment residents on January 30, 1992. Analyzed by Industrial Toxicology Inc.
10. ATSDR Toxicological Profile For Lead (DRAFT). October 1991.
11. Centers for Disease Control "Preventing Lead Poisoning in Young Children." October 1991.

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Attachment

**Public Health Action Plan
Gulf Coast Recycling (aka Normandy Park Apartments)
Temple Terrace, Hillsborough County, Florida**

Based on the conclusions and recommendations of this consultation, ATSDR has developed the following Public Health Action Plan:

The ATSDR, EPA, and the Hillsborough County Health Department will be conducting a Public Availability Meeting on April 9, 1992 to provide information and address the concerns of the community.