

INDUSTRIAL/HAZARDOUS WASTE DISPOSAL AND REMEDIATION, WASTE MANAGEMENT, INC.'S AUSTIN COMMUNITY LANDFILL

Robert S. Kier, Ph.D., CPG

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Proposal

Waste Management, Inc. (WMI) has indicated its intent to excavate a large volume of industrial/hazardous waste from an old portion of the Austin Community Landfill (ACL) along an unnamed tributary to Walnut Creek, located approximately five miles east of the intersection of I 35 and US 290 in Austin, Texas, and to relocate the waste on site. WMI has sought permission from the Texas Natural Resource Conservation Commission (TNRCC) to excavate this industrial/hazardous waste without testing to ascertain whether it is characteristically hazardous and to relocate the waste to a portion of ACL originally permitted to receive only non-hazardous municipal solid waste (MSW). WMI also wants to excavate the old industrial/hazardous waste without ascertaining and divulging the lateral and vertical extent of the waste and waste materials. Furthermore, WMI is seeking to perform the excavation and re-interment through the permit modification process, which does not specifically apply to this situation, so as to exclude input from neighboring residences, business, and the general public.

No Public Review or Input

The neighbors and affected parties have a right to know the testing procedures for and the types and characteristics of the industrial/hazardous waste buried at ACL, the volumes of waste and waste materials involved, the mechanisms of waste relocation and any necessary treatment, and the procedures that will be incorporated into the process to safeguard public health, safety, and welfare. The public has a right to know what potentially lethal, explosive, and carcinogenic materials will be exposed by WMI and how the excavation, treatment, and reburial of the industrial/hazardous waste can be accomplished without subjecting human health and the environment to additional hazards. The public has a right to know to where and at what concentrations hazardous constituents have leached from the disposal site.

Issues: Sampling, Testing, Excavation, Work Plan, and Report

- In December 1997, WMI submitted a Work Plan to determine if the industrial/hazardous waste buried in the early 1970's in former acid/solvent/wash water pits and drum disposal areas at ACL needs to be and could be treated and/or stabilized before re-interment on site as part of the ACL MSW landfill. The Work Plan was prepared by OHM Remediation Services, Inc. (OHM), which is thirty-seven percent owned by WMI.
- OHM's Work Plan was approved administratively by the MSW Division of the TNRCC in only twelve days. Despite the rapid approval, or perhaps as a consequence of it, the Work Plan was deficient in numerous respects; OHM's report of the January 1998 investigation carrying out the Work Plan was equally deficient.
- OHM planned to analyze only a single five-gallon composite sample from the area of five of the six former acid/solvent/ industrial process wash water pits and a single five-gallon composite sample from the former drum disposal areas (thought to be two separate areas, but possibly as many as four), in which an estimated 21,000 fifty-five gallon drums, and possibly an excess of 50,000 drums, were buried before the State ordered closure of the site in 1972, in part because of concerns about ground water contamination. This limited number of samples cannot possibly provide for full and complete characterization of the variety of wastes disposed in the former pits and in the drums of chemicals buried at ACL.

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OHM planned to investigate the drum disposal areas by directly pushing a sample probe into the waste (actually the sampler was hammered), seemingly risking rupture of any intact drums and release of the acids, caustics, solvents and possibly phosgene and cyanide-bearing compounds that were reportedly buried in the drums. Cyanide gas is liberated from cyanide salts by even weak acids and is notoriously lethal, causing rapid death by asphyxiation. Phosgene attacks the lungs, causing death by pulmonary edema and asphyxiation or heart failure.

- Release of constituents in the drums could result in explosion, fire, or release of toxic gases.
- Although the Work Plan stated that approximately 24 probes would be advanced in the drum disposal areas, in fact only eleven were advanced, and although OHM intended that twelve probes would be advanced in the acid/solvent/wash water pit area, in fact only five were advanced. The possibility of migration of contaminants outside of the disposal areas, was investigated with only four probes, one of which was actually within the presumed disposal area.
- Based on an examination of the ten boring logs provided in the OHM report for the drum disposal areas (one was omitted) and historic aerial photographs and topographic maps, it is likely that none of the probes penetrated to the actual depths of drums, but instead reached only into or through the MSW that was placed over and around the drums. Thus, the industrial/hazardous waste buried at ACL has neither been characterized nor examined for treatability.
- Of the five probes advanced in the area of the former acid/solvent/wash water pits, two likely missed the disposal area entirely, one was terminated in waste (soft, sandy, with greenish material), and two were terminated in fill (as described on the boring logs). None of the probes extended to a depth to which solvents, particularly chlorinated solvents, which are commonly denser than water and easily penetrate clays, would sink.
- With one possible exception, none of the four supposed perimeter probes penetrated to the same depths investigated within the presumed disposal area and none extended to unweathered shale, along which contaminants might be migrating. Nevertheless, all three probes outside the supposed industrial/hazardous waste disposal site indicate that contaminants have migrated from it. No probes were advanced on the east or north sides of the industrial/hazardous waste area to look for contaminant migration in those directions. Thus, the limits of migration of waste and waste constituents from the industrial/hazardous waste site have not been established.
- Despite the fact that the waste was characterized as hazardous by the previous operator, the Texas Department of Health (TDH), and even by the US EPA, neither the wastes disposed in the drums nor in the soils surrounding the drum disposal areas were analyzed to determine whether they are characteristically hazardous.
- Even though water was encountered in most of the probes advanced at the old industrial/hazardous waste disposal site, no water samples were collected for analysis; the existence of potentially contaminated ground water within the waste and the surrounding soils was ignored. Further, WMI has not reported any ground water monitoring results for the monitoring wells nearest the industrial/hazardous waste disposal site since 1995; contamination of ground water has been indicated since the wells were installed in 1982.
- The OHM report recommends excavation and further examination of the industrial/hazardous waste in 2,000 cubic yard increments. Each 2,000 cubic yard increment would be characterized by a single grab sample. A single grab sample is hardly sufficient to characterize even a smaller increment of waste or waste materials, say 100 cubic yards, let alone an increment of waste and waste materials twenty times greater.
- The OHM report recommends disposal of the excavated/treated industrial/hazardous waste in a Class I industrial waste disposal cell within the ACL landfill. This cell has already been approved by the TNRCC through a permit modification despite the fact that the original MSW permit and subsequent permit amendments precluded acceptance of Class I industrial waste except, perhaps, as a special waste on a case by case, waste-specific basis. Establishment of a Class I industrial waste disposal cell would appear to require a permit amendment, which would be subject to a public hearing.

WMI Site History

- Universal Disposal, owned by Jack Arsenault, received permission from the TDH to operate a MSW landfill on a 108 acre site off Giles Road north of US 290, east of Austin, Texas. The site is currently owned by WMI and operated as ACL.
- Beginning in May 1971, and possibly before, Industrial Waste Materials Management (IWMM), also owned by Jack Arsenault, received permission from the Texas Water Quality Board (TWQB), to dispose of "spent acids, caustics, solvents, hydrocarbons, and contaminated process waste" on 26 acres of the same site off Giles Road.
- Industrial/hazardous wastes were received in bulk solid and liquid form in four to six, apparently unlined acid, solvent and paint residue, and industrial process wash water disposal pits, with a capacity of approximately 1.8 million gallons or more, and in solid and liquid form in fifty-five gallon drums. A minimum of 21,000 drums, and possibly in excess of 50,000 drums, were buried in two, apparently unlined areas. The depths and lateral limits of the pits and the drum disposal areas are not clearly defined in the OHM Work Plan or Evaluation Report or by any public records of the TNRCC Municipal Solid Waste Division, the current State regulatory agency, although, ostensibly, concrete markers were once erected to delineate the lateral limits of the industrial/ hazardous waste disposal area.
- Because of possible ground water contamination, the IWMM site was ordered closed by the TWQB in June 1972. The wastes received by IWMM were characterized as hazardous and as flammable and explosive by the operator and in the municipal solid waste disposal permit issued by TDH in 1977 to Longhorn Disposal Services (Longhorn), which purchased the site in late 1973, and which was in turn purchased by Austin Community Disposal Co., Inc., and then by WMI in August 1981.
- Although the MSW and the chemical waste were to be separately disposed, throughout the operating life of IWMM, and afterwards, MSW was either co-disposed with the drummed and solid industrial waste received or placed over the drum burial areas.
- Despite the ordered closure in June 1972, the disposal pits are evident on aerial photos taken February 4, 1973, along with a new pit, containing a dark fluid, west of the original fluid disposal pits. This new pit, labeled on one map as "Acid Pit #4," was evident on aerial photographs through November 1980, but was obliterated by subsequent MSW filling activities evidenced by another aerial photograph taken in February 1983. When the IWMM site was ordered closed, it was also ordered that the acid pits be neutralized and the contents spread in a thin layer in an excavated area and covered with soil; it is not known whether this was ever done.
- Subsequent to its purchase of the site, Longhorn apparently continued to take industrial-type wastes. Longhorn received requests from several Austin area industries to accept drummed and bulk liquid wastes and apparently was actively soliciting business in Temple, Waco, and San Antonio. TDH denied requests to take industrial-types wastes from outside the Austin area, but did permit disposal of some wastes from Glastron, Robert Hammond & Associates, Inc. (boat manufacturing), Jefferson Chemical, Inc., and the Austin American Statesman. These wastes include: polyester resin sludge, styrene, acetone, methylene chloride, aqueous wastes containing ammonia, methyl alcohol and glycols, oil-based ink and, possibly other chemicals. The industrial-type wastes were placed over or adjacent to, or to the south of the original IWMM site, in an area now known as Phase I of ACL, which is next to and connected with the old Travis County landfill immediately to the south. When WMI took over the site in 1981, the state operating permit precluded acceptance of Class I industrial wastes.
- Repetitive orders were issued by the TWQB to stop contaminated seepage from the IWMM site and to increase the thickness of protective cover. Extensive maintenance efforts and placement of additional soil was still necessary in March 1981. Leachate from the old industrial/hazardous waste site was discovered by a TDH geologist entering an on site creek, which flows across the old Travis County landfill into Walnut Creek, in the spring of 1981.
- The Texas Department of Water Resources (TDWR), a successor agency to the TWQB, also ordered surface and ground water monitoring. Xylene, benzene, and naphthalene were detected in the ground water in 1980.

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Despite the fact that the IWMM site was order closed by the state because of potential ground water contamination and despite the analytical results from two nearest monitoring wells indicating ground water contamination, in 1996, with the approval of the Municipal Solid Waste Division at TNRCC, WMI deleted these wells from the ground water monitoring system for the ACL. No water quality data specific to the old industrial/hazardous landfill have been reported to the TNRCC since September 1995. Water quality analyses from at least one of these wells indicated potential ground water contamination for virtually every sampling event since installation in 1982. For at least some sampling events, the other well also indicated ground water contamination. By memo dated May 13, 1992, the Texas Water Commission (predecessor agency to the TNRCC) urged continued monitoring and detailed analyses of samples from these two wells.

- Carcinogenic chemicals, including tetrachloroethylene and trichloroethylene, have been detected in a monitoring well on the west side of the ACL, remote from other influences. This well was damaged and not sampled for about a year; the replacement well was installed in a different location. Other volatile organic compounds, including dichloroethylene and vinyl chloride, have been detected in another well adjacent to one of the older parts of the ACL MSW landfill. In the 1980's, through 1986, phenolic and chlorinated compounds were detected in every monitoring well within and surrounding the ACL. WMI owns one hundred percent of the laboratory that analyses the samples.
- Despite installation of an extensive landfill gas collection system in 1988, ACL has been plagued by persistent exceedence of the lower explosion limit (5 % methane in air) in several of the gas monitoring probes along its common boundary with the Sunset Farms Landfill, operated by BFI. During January 1998, concentration of methane in one gas monitoring probe reached 60 percent. Although it might be tempting to view this a joint problem between WMI and BFI, landfill gas concentrations in the WMI gas monitoring probes respond directly to changes in operation of the WMI landfill gas collection system. Migration of landfill gas has been linked at other WMI landfills to contamination of ground water with hydrocarbons and chlorinated hydrocarbons.